

APPENDIX D: LAB DATA PACKAGES

ANALYTICAL REPORT

Job Number: 280-123183-1

Job Description: Leidos RFP# 001088 - Ravenna AAP-66

For:

Leidos, Inc.

Picatinny Arsenal

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Dover, NJ 07801

Attention: Rita Schmon-Stasik



Approved for release.
Donna R Rydberg
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5/23/2019 5:37 PM

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05/23/2019

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is 4025.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

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Definitions/Glossary

Client: Leidos, Inc.
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

Job ID: 280-123183-1

Qualifiers

Metals

Qualifier

Qualifier Description

B	Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank.
D	The reported value is from a dilution.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

Glossary

Abbreviation

These commonly used abbreviations may or may not be present in this report.

α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

CASE NARRATIVE

Client: Leidos, Inc.

Project: Leidos RFP# 001088 - Ravenna AAP-66

Report Number: 280-123183-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 4/30/2019 at 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.9° C.

TOTAL METALS (ICP)

Samples DA2mw-115-190401-GW (280-123183-1) and DA2mw-115-190402-GW (280-123183-2) were analyzed for Total Metals (ICP) in accordance with 6010C. The samples were prepared on 05/08/2019 and analyzed on 05/11/2019 and 05/14/2019.

Iron was detected in method blank MB 280-457068/1-A at a level that was less than the LOQ and LOD but was greater than 1/2 the LOQ. Associated samples were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

The interference check standard solution (ICSA) associated with the following samples showed results for Sodium at a level greater than the limit of detection (LOD). It is believed that the solution contains trace impurities of this element and the results are not due to matrix interference. These results are consistent with those found by the laboratory analysis by ICP-MS of the ICSA solution.

DA2mw-115-190401-GW (280-123183-1), DA2mw-115-190401-GWMS (280-123183-1[MS]), DA2mw-115-190401-GWMSD (280-123183-1[MSD]), DA2mw-115-190402-GW (280-123183-2), (ICSA 280-457811/17), (LCS 280-457068/2-A), (LCSD 280-457068/3-A), (MB 280-457068/1-A), (280-123159-A-20-A), (280-123159-A-20-B MS), (280-123159-A-20-C MSD), (280-123159-A-20-A PDS) and (280-123159-A-20-A SD ^5)

Analytical batch: 280-457811
Method:3010/6010C_DOD Q5
Prep:280-457068

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP/MS)

Samples DA2mw-115-190401-GW (280-123183-1) and DA2mw-115-190402-GW (280-123183-2) were analyzed for total metals (ICP/MS) in accordance with 6020A. The samples were prepared on 05/08/2019 and analyzed on 05/13/2019.

Manganese and Silver were detected in method blank MB 280-457077/1-A at levels that were less than one half the LOQ; therefore, corrective action was deemed unnecessary. The values should be considered estimates, and have been flagged "J" in accordance with the DoD QSM.

The interference check standard solution (ICSA) associated with batch 280-458080 had results for one or more elements at a level greater than the limit of detection (LOD). The initial ICSA result(0.22 ppb) was > LOD (0.2 ppb) for Cobalt, and the closing ICSA result(0.257 ppb) was > LOD (0.2 ppb) for Cobalt. We believe that this The vendor element is a trace impurities in the CPI ICSA standard. These results are not indicative of a matrix interference.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY

Samples DA2mw-115-190401-GW (280-123183-1) and DA2mw-115-190402-GW (280-123183-2) were analyzed for total mercury in accordance with 7470A. The samples were prepared and analyzed on 05/13/2019.

Mercury failed the recovery criteria low for the MSD of sample DA2mw-115-190401-GWMSDMSD (280-123183-1) in batch 280-458130. The associated LCS and LCSD samples were in control and provide evidence that operating procedures were in control.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Leidos, Inc.
 Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

Job ID: 280-123183-1

Client Sample ID: DA2mw-115-190401-GW

Lab Sample ID: 280-123183-1

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	21	J	300	70	18	ug/L	1		6010C	Total/NA
Calcium	100000		1000	160	78	ug/L	1		6010C	Total/NA
Iron	840	B	100	85	22	ug/L	1		6010C	Total/NA
Magnesium	28000		500	60	26	ug/L	1		6010C	Total/NA
Potassium	3300		3000	940	240	ug/L	1		6010C	Total/NA
Sodium	12000	Q	5000	160	54	ug/L	1		6010C	Total/NA
Arsenic	1.7	J	5.0	1.0	0.33	ug/L	1		6020A	Total/NA
Barium	23		3.0	0.95	0.29	ug/L	1		6020A	Total/NA
Manganese	99		3.5	0.95	0.31	ug/L	1		6020A	Total/NA

Client Sample ID: DA2mw-115-190402-GW

Lab Sample ID: 280-123183-2

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Calcium	100000		1000	160	78	ug/L	1		6010C	Total/NA
Iron	820	B	100	85	22	ug/L	1		6010C	Total/NA
Magnesium	28000		500	60	26	ug/L	1		6010C	Total/NA
Potassium	3400		3000	940	240	ug/L	1		6010C	Total/NA
Sodium	12000	Q	5000	160	54	ug/L	1		6010C	Total/NA
Beryllium	0.18	J	1.0	0.30	0.080	ug/L	1		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Leidos, Inc.
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

Job ID: 280-123183-1

Method: 6010C - Metals (ICP)

Client Sample ID: DA2mw-115-190401-GW

Date Collected: 04/29/19 10:30

Date Received: 04/30/19 09:30

Lab Sample ID: 280-123183-1

Matrix: Water

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Aluminum	21	J	300	70	18	ug/L		05/11/19 02:40	1
Calcium	100000		1000	160	78	ug/L		05/11/19 02:40	1
Iron	840	B	100	85	22	ug/L		05/11/19 02:40	1
Magnesium	28000		500	60	26	ug/L		05/11/19 02:40	1
Potassium	3300		3000	940	240	ug/L		05/11/19 02:40	1
Sodium	12000	Q	5000	160	54	ug/L		05/14/19 05:41	1

Client Sample ID: DA2mw-115-190402-GW

Date Collected: 04/29/19 10:30

Date Received: 04/30/19 09:30

Lab Sample ID: 280-123183-2

Matrix: Water

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Aluminum	70	U	300	70	18	ug/L		05/11/19 02:51	1
Calcium	100000		1000	160	78	ug/L		05/11/19 02:51	1
Iron	820	B	100	85	22	ug/L		05/11/19 02:51	1
Magnesium	28000		500	60	26	ug/L		05/11/19 02:51	1
Potassium	3400		3000	940	240	ug/L		05/11/19 02:51	1
Sodium	12000	Q	5000	160	54	ug/L		05/11/19 02:51	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: DA2mw-115-190401-GW

Date Collected: 04/29/19 10:30

Date Received: 04/30/19 09:30

Lab Sample ID: 280-123183-1

Matrix: Water

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Antimony	1.0	U	6.0	1.0	0.40	ug/L		05/13/19 17:06	1
Arsenic	1.7	J	5.0	1.0	0.33	ug/L		05/13/19 17:06	1
Barium	23		3.0	0.95	0.29	ug/L		05/13/19 17:06	1
Beryllium	0.30	U	1.0	0.30	0.080	ug/L		05/13/19 17:06	1
Cadmium	1.0	U	1.0	1.0	0.27	ug/L		05/13/19 17:06	1
Chromium	1.8	U	10	1.8	0.50	ug/L		05/13/19 17:06	1
Cobalt	0.20	U Q	1.0	0.20	0.054	ug/L		05/13/19 17:06	1
Copper	1.8	U	2.0	1.8	0.56	ug/L		05/13/19 17:06	1
Lead	0.70	U	3.0	0.70	0.18	ug/L		05/13/19 17:06	1
Manganese	99		3.5	0.95	0.31	ug/L		05/13/19 17:06	1
Nickel	1.0	U	3.0	1.0	0.30	ug/L		05/13/19 17:06	1
Selenium	1.0	U	5.0	1.0	0.37	ug/L		05/13/19 17:06	1
Silver	0.10	U	5.0	0.10	0.033	ug/L		05/13/19 17:06	1
Thallium	0.20	U	1.0	0.20	0.089	ug/L		05/13/19 17:06	1
Vanadium	3.0	U	6.0	3.0	1.2	ug/L		05/13/19 17:06	1
Zinc	8.0	U	20	8.0	2.0	ug/L		05/13/19 17:06	1

Client Sample ID: DA2mw-115-190402-GW

Date Collected: 04/29/19 10:30

Date Received: 04/30/19 09:30

Lab Sample ID: 280-123183-2

Matrix: Water

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Antimony	1.0	U	6.0	1.0	0.40	ug/L		05/13/19 17:23	1
Arsenic	1.0	U	5.0	1.0	0.33	ug/L		05/13/19 17:23	1
Barium	0.95	U	3.0	0.95	0.29	ug/L		05/13/19 17:23	1
Beryllium	0.18	J	1.0	0.30	0.080	ug/L		05/13/19 17:23	1
Cadmium	1.0	U	1.0	1.0	0.27	ug/L		05/13/19 17:23	1

Client Sample Results

Client: Leidos, Inc.
 Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

Job ID: 280-123183-1

Method: 6020A - Metals (ICP/MS) (Continued)

Client Sample ID: DA2mw-115-190402-GW

Date Collected: 04/29/19 10:30

Date Received: 04/30/19 09:30

Lab Sample ID: 280-123183-2

Matrix: Water

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chromium	1.8	U	10	1.8	0.50	ug/L		05/13/19 17:23	1
Cobalt	0.20	U Q	1.0	0.20	0.054	ug/L		05/13/19 17:23	1
Copper	1.8	U	2.0	1.8	0.56	ug/L		05/13/19 17:23	1
Lead	0.70	U	3.0	0.70	0.18	ug/L		05/13/19 17:23	1
Manganese	0.95	U	3.5	0.95	0.31	ug/L		05/13/19 17:23	1
Nickel	1.0	U	3.0	1.0	0.30	ug/L		05/13/19 17:23	1
Selenium	1.0	U	5.0	1.0	0.37	ug/L		05/13/19 17:23	1
Silver	0.10	U	5.0	0.10	0.033	ug/L		05/13/19 17:23	1
Thallium	0.20	U	1.0	0.20	0.089	ug/L		05/13/19 17:23	1
Vanadium	3.0	U	6.0	3.0	1.2	ug/L		05/13/19 17:23	1
Zinc	8.0	U	20	8.0	2.0	ug/L		05/13/19 17:23	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: DA2mw-115-190401-GW

Date Collected: 04/29/19 10:30

Date Received: 04/30/19 09:30

Lab Sample ID: 280-123183-1

Matrix: Water

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Mercury	0.080	U J1	0.20	0.080	0.027	ug/L		05/13/19 21:28	1

Client Sample ID: DA2mw-115-190402-GW

Date Collected: 04/29/19 10:30

Date Received: 04/30/19 09:30

Lab Sample ID: 280-123183-2

Matrix: Water

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.080	0.027	ug/L		05/13/19 21:34	1

Default Detection Limits

Client: Leidos, Inc.
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

Job ID: 280-123183-1

Method: 6010C - Metals (ICP)

Prep: 3010A

Analyte	LOQ	DL	Units
Aluminum	300	18	ug/L
Calcium	1000	78	ug/L
Iron	100	22	ug/L
Magnesium	500	26	ug/L
Potassium	3000	240	ug/L
Sodium	5000	54	ug/L

Method: 6020A - Metals (ICP/MS)

Prep: 3020A

Analyte	LOQ	DL	Units
Antimony	6.0	0.40	ug/L
Arsenic	5.0	0.33	ug/L
Barium	3.0	0.29	ug/L
Beryllium	1.0	0.080	ug/L
Cadmium	1.0	0.27	ug/L
Chromium	10	0.50	ug/L
Cobalt	1.0	0.054	ug/L
Copper	2.0	0.56	ug/L
Lead	3.0	0.18	ug/L
Manganese	3.5	0.31	ug/L
Nickel	3.0	0.30	ug/L
Selenium	5.0	0.37	ug/L
Silver	5.0	0.033	ug/L
Thallium	1.0	0.089	ug/L
Vanadium	6.0	1.2	ug/L
Zinc	20	2.0	ug/L

Method: 7470A - Mercury (CVAA)

Prep: 7470A

Analyte	LOQ	DL	Units
Mercury	0.20	0.027	ug/L

QC Sample Results

Client: Leidos, Inc.
 Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

Job ID: 280-123183-1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 280-457068/1-A
Matrix: Water
Analysis Batch: 457811

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 457068

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Aluminum	70	U	300	70	18	ug/L		05/11/19 01:51	1
Calcium	160	U	1000	160	78	ug/L		05/11/19 01:51	1
Iron	65.1	J	100	85	22	ug/L		05/11/19 01:51	1
Magnesium	60	U	500	60	26	ug/L		05/11/19 01:51	1
Potassium	940	U	3000	940	240	ug/L		05/11/19 01:51	1
Sodium	160	U Q	5000	160	54	ug/L		05/11/19 01:51	1

Lab Sample ID: LCS 280-457068/2-A
Matrix: Water
Analysis Batch: 457811

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 457068

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	10000	10200		ug/L		102	86 - 115
Calcium	50000	50200		ug/L		100	87 - 113
Iron	10000	10300		ug/L		103	87 - 115
Magnesium	50000	48300		ug/L		97	85 - 113
Potassium	50000	50600		ug/L		101	86 - 114
Sodium	50000	51500	Q	ug/L		103	87 - 115

Lab Sample ID: LCSD 280-457068/3-A
Matrix: Water
Analysis Batch: 457811

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 457068

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	10000	10200		ug/L		102	86 - 115	0	20
Calcium	50000	50100		ug/L		100	87 - 113	0	20
Iron	10000	9990		ug/L		100	87 - 115	3	20
Magnesium	50000	48300		ug/L		97	85 - 113	0	20
Potassium	50000	50600		ug/L		101	86 - 114	0	20
Sodium	50000	51700	Q	ug/L		103	87 - 115	1	20

Lab Sample ID: 280-123183-1 MS
Matrix: Water
Analysis Batch: 457811

Client Sample ID: DA2mw-115-190401-GWMS
Prep Type: Total/NA
Prep Batch: 457068

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	21	J	10000	9920		ug/L		99	86 - 115
Calcium	100000		50000	152000		ug/L		98	87 - 113
Iron	840	B	10000	10700		ug/L		99	87 - 115
Magnesium	28000		50000	74700		ug/L		94	85 - 113
Potassium	3300		50000	54200		ug/L		102	86 - 114

Lab Sample ID: 280-123183-1 MS
Matrix: Water
Analysis Batch: 458076

Client Sample ID: DA2mw-115-190401-GWMS
Prep Type: Total/NA
Prep Batch: 457068

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sodium	12000	Q	50000	63900	Q	ug/L		104	87 - 115

QC Sample Results

Client: Leidos, Inc.
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

Job ID: 280-123183-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 280-123183-1 MSD
Matrix: Water
Analysis Batch: 457811

Client Sample ID: DA2mw-115-190401-GWMSD
Prep Type: Total/NA
Prep Batch: 457068

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
Aluminum	21	J	10000	9800		ug/L		98	86 - 115	1	20
Calcium	100000		50000	148000		ug/L		89	87 - 113	3	20
Iron	840	B	10000	10400		ug/L		95	87 - 115	3	20
Magnesium	28000		50000	72900		ug/L		91	85 - 113	2	20
Potassium	3300		50000	53200		ug/L		100	86 - 114	2	20

Lab Sample ID: 280-123183-1 MSD
Matrix: Water
Analysis Batch: 458076

Client Sample ID: DA2mw-115-190401-GWMSD
Prep Type: Total/NA
Prep Batch: 457068

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
Sodium	12000	Q	50000	65000	Q	ug/L		106	87 - 115	2	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 280-457077/1-A
Matrix: Water
Analysis Batch: 458080

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 457077

Analyte	MB	MB	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	1.0	U	6.0	1.0	0.40	ug/L		05/13/19 15:52	1
Arsenic	1.0	U	5.0	1.0	0.33	ug/L		05/13/19 15:52	1
Barium	0.95	U	3.0	0.95	0.29	ug/L		05/13/19 15:52	1
Beryllium	0.30	U	1.0	0.30	0.080	ug/L		05/13/19 15:52	1
Cadmium	1.0	U	1.0	1.0	0.27	ug/L		05/13/19 15:52	1
Chromium	1.8	U	10	1.8	0.50	ug/L		05/13/19 15:52	1
Cobalt	0.20	U Q	1.0	0.20	0.054	ug/L		05/13/19 15:52	1
Copper	1.8	U	2.0	1.8	0.56	ug/L		05/13/19 15:52	1
Lead	0.70	U	3.0	0.70	0.18	ug/L		05/13/19 15:52	1
Manganese	0.465	J	3.5	0.95	0.31	ug/L		05/13/19 15:52	1
Nickel	1.0	U	3.0	1.0	0.30	ug/L		05/13/19 15:52	1
Selenium	1.0	U	5.0	1.0	0.37	ug/L		05/13/19 15:52	1
Silver	0.0480	J	5.0	0.10	0.033	ug/L		05/13/19 15:52	1
Thallium	0.20	U	1.0	0.20	0.089	ug/L		05/13/19 15:52	1
Vanadium	3.0	U	6.0	3.0	1.2	ug/L		05/13/19 15:52	1
Zinc	8.0	U	20	8.0	2.0	ug/L		05/13/19 15:52	1

Lab Sample ID: LCS 280-457077/2-A
Matrix: Water
Analysis Batch: 458080

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 457077

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
		Result	Qualifier					
Antimony	40.0	39.3		ug/L		98	85 - 117	
Arsenic	40.0	36.2		ug/L		91	84 - 116	
Barium	40.0	40.8		ug/L		102	86 - 114	
Beryllium	40.0	39.3		ug/L		98	83 - 121	
Cadmium	40.0	37.8		ug/L		95	87 - 115	
Chromium	40.0	38.1		ug/L		95	85 - 116	
Cobalt	40.0	38.3	Q	ug/L		96	86 - 115	

QC Sample Results

Client: Leidos, Inc.
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

Job ID: 280-123183-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 280-457077/2-A
Matrix: Water
Analysis Batch: 458080

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 457077
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Copper	40.0	38.7		ug/L		97	85 - 118
Lead	40.0	37.5		ug/L		94	88 - 115
Manganese	40.0	40.2		ug/L		101	87 - 115
Nickel	40.0	38.9		ug/L		97	85 - 117
Selenium	40.0	37.9		ug/L		95	80 - 120
Silver	40.0	38.9		ug/L		97	85 - 116
Thallium	40.0	36.5		ug/L		91	82 - 116
Vanadium	40.0	37.7		ug/L		94	86 - 115
Zinc	40.0	38.8		ug/L		97	83 - 119

Lab Sample ID: 280-123183-1 MS
Matrix: Water
Analysis Batch: 458080

Client Sample ID: DA2mw-115-190401-GWMS
Prep Type: Total/NA
Prep Batch: 457077
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	1.0	U	40.0	40.9		ug/L		102	85 - 117
Arsenic	1.7	J	40.0	39.2		ug/L		94	84 - 116
Barium	23		40.0	66.1		ug/L		107	86 - 114
Beryllium	0.30	U	40.0	39.9		ug/L		100	83 - 121
Cadmium	1.0	U	40.0	37.5		ug/L		94	87 - 115
Chromium	1.8	U	40.0	39.0		ug/L		97	85 - 116
Cobalt	0.20	U Q	40.0	38.6	Q	ug/L		97	86 - 115
Copper	1.8	U	40.0	37.9		ug/L		95	85 - 118
Lead	0.70	U	40.0	38.8		ug/L		97	88 - 115
Manganese	99		40.0	138		ug/L		97	87 - 115
Nickel	1.0	U	40.0	38.0		ug/L		95	85 - 117
Selenium	1.0	U	40.0	39.6		ug/L		99	80 - 120
Silver	0.10	U	40.0	38.4		ug/L		96	85 - 116
Thallium	0.20	U	40.0	38.2		ug/L		95	82 - 116
Vanadium	3.0	U	40.0	38.0		ug/L		95	86 - 115
Zinc	8.0	U	40.0	37.1		ug/L		93	83 - 119

Lab Sample ID: 280-123183-1 MSD
Matrix: Water
Analysis Batch: 458080

Client Sample ID: DA2mw-115-190401-GWMSD
Prep Type: Total/NA
Prep Batch: 457077
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	1.0	U	40.0	42.8		ug/L		107	85 - 117	4	20
Arsenic	1.7	J	40.0	39.8		ug/L		95	84 - 116	1	20
Barium	23		40.0	66.7		ug/L		108	86 - 114	1	20
Beryllium	0.30	U	40.0	40.3		ug/L		101	83 - 121	1	20
Cadmium	1.0	U	40.0	40.7		ug/L		102	87 - 115	8	20
Chromium	1.8	U	40.0	40.2		ug/L		100	85 - 116	3	20
Cobalt	0.20	U Q	40.0	38.7	Q	ug/L		97	86 - 115	0	20
Copper	1.8	U	40.0	37.8		ug/L		95	85 - 118	0	20
Lead	0.70	U	40.0	40.3		ug/L		101	88 - 115	4	20
Manganese	99		40.0	142		ug/L		108	87 - 115	3	20
Nickel	1.0	U	40.0	38.3		ug/L		96	85 - 117	1	20
Selenium	1.0	U	40.0	39.2		ug/L		98	80 - 120	1	20

QC Sample Results

Client: Leidos, Inc.
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

Job ID: 280-123183-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 280-123183-1 MSD
Matrix: Water
Analysis Batch: 458080

Client Sample ID: DA2mw-115-190401-GWMSD
Prep Type: Total/NA
Prep Batch: 457077

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Silver	0.10	U	40.0	40.2		ug/L		100	85 - 116	4	20
Thallium	0.20	U	40.0	38.6		ug/L		96	82 - 116	1	20
Vanadium	3.0	U	40.0	38.7		ug/L		97	86 - 115	2	20
Zinc	8.0	U	40.0	37.8		ug/L		94	83 - 119	2	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 280-457916/1-A
Matrix: Water
Analysis Batch: 458130

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 457916

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.080	0.027	ug/L		05/13/19 21:01	1

Lab Sample ID: LCS 280-457916/2-A
Matrix: Water
Analysis Batch: 458130

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 457916

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	5.00	4.40		ug/L		88	82 - 119

Lab Sample ID: LCSD 280-457916/3-A
Matrix: Water
Analysis Batch: 458130

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 457916

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	5.00	4.80		ug/L		96	82 - 119	9	20

Lab Sample ID: 280-123183-1 MS
Matrix: Water
Analysis Batch: 458130

Client Sample ID: DA2mw-115-190401-GWMS
Prep Type: Total/NA
Prep Batch: 457916

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.080	U J1	5.00	4.76		ug/L		95	82 - 119

Lab Sample ID: 280-123183-1 MSD
Matrix: Water
Analysis Batch: 458130

Client Sample ID: DA2mw-115-190401-GWMSD
Prep Type: Total/NA
Prep Batch: 457916

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.080	U J1	5.00	4.05	J1	ug/L		81	82 - 119	16	20

QC Association Summary

Client: Leidos, Inc.
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

Job ID: 280-123183-1

Metals

Prep Batch: 457068

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-123183-1	DA2mw-115-190401-GW	Total/NA	Water	3010A	
280-123183-2	DA2mw-115-190402-GW	Total/NA	Water	3010A	
MB 280-457068/1-A	Method Blank	Total/NA	Water	3010A	
LCS 280-457068/2-A	Lab Control Sample	Total/NA	Water	3010A	
LCSD 280-457068/3-A	Lab Control Sample Dup	Total/NA	Water	3010A	
280-123183-1 MS	DA2mw-115-190401-GWMS	Total/NA	Water	3010A	
280-123183-1 MSD	DA2mw-115-190401-GWMSD	Total/NA	Water	3010A	

Prep Batch: 457077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-123183-1	DA2mw-115-190401-GW	Total/NA	Water	3020A	
280-123183-2	DA2mw-115-190402-GW	Total/NA	Water	3020A	
MB 280-457077/1-A	Method Blank	Total/NA	Water	3020A	
LCS 280-457077/2-A	Lab Control Sample	Total/NA	Water	3020A	
280-123183-1 MS	DA2mw-115-190401-GWMS	Total/NA	Water	3020A	
280-123183-1 MSD	DA2mw-115-190401-GWMSD	Total/NA	Water	3020A	

Analysis Batch: 457811

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-123183-1	DA2mw-115-190401-GW	Total/NA	Water	6010C	457068
280-123183-2	DA2mw-115-190402-GW	Total/NA	Water	6010C	457068
MB 280-457068/1-A	Method Blank	Total/NA	Water	6010C	457068
LCS 280-457068/2-A	Lab Control Sample	Total/NA	Water	6010C	457068
LCSD 280-457068/3-A	Lab Control Sample Dup	Total/NA	Water	6010C	457068
280-123183-1 MS	DA2mw-115-190401-GWMS	Total/NA	Water	6010C	457068
280-123183-1 MSD	DA2mw-115-190401-GWMSD	Total/NA	Water	6010C	457068

Prep Batch: 457916

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-123183-1	DA2mw-115-190401-GW	Total/NA	Water	7470A	
280-123183-2	DA2mw-115-190402-GW	Total/NA	Water	7470A	
MB 280-457916/1-A	Method Blank	Total/NA	Water	7470A	
LCS 280-457916/2-A	Lab Control Sample	Total/NA	Water	7470A	
LCSD 280-457916/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	
280-123183-1 MS	DA2mw-115-190401-GWMS	Total/NA	Water	7470A	
280-123183-1 MSD	DA2mw-115-190401-GWMSD	Total/NA	Water	7470A	

Analysis Batch: 458076

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-123183-1	DA2mw-115-190401-GW	Total/NA	Water	6010C	457068
280-123183-1 MS	DA2mw-115-190401-GWMS	Total/NA	Water	6010C	457068
280-123183-1 MSD	DA2mw-115-190401-GWMSD	Total/NA	Water	6010C	457068

Analysis Batch: 458080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-123183-1	DA2mw-115-190401-GW	Total/NA	Water	6020A	457077
280-123183-2	DA2mw-115-190402-GW	Total/NA	Water	6020A	457077
MB 280-457077/1-A	Method Blank	Total/NA	Water	6020A	457077
LCS 280-457077/2-A	Lab Control Sample	Total/NA	Water	6020A	457077
280-123183-1 MS	DA2mw-115-190401-GWMS	Total/NA	Water	6020A	457077
280-123183-1 MSD	DA2mw-115-190401-GWMSD	Total/NA	Water	6020A	457077

QC Association Summary

Client: Leidos, Inc.
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

Job ID: 280-123183-1

Metals

Analysis Batch: 458130

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-123183-1	DA2mw-115-190401-GW	Total/NA	Water	7470A	457916
280-123183-2	DA2mw-115-190402-GW	Total/NA	Water	7470A	457916
MB 280-457916/1-A	Method Blank	Total/NA	Water	7470A	457916
LCS 280-457916/2-A	Lab Control Sample	Total/NA	Water	7470A	457916
LCSD 280-457916/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	457916
280-123183-1 MS	DA2mw-115-190401-GWMS	Total/NA	Water	7470A	457916
280-123183-1 MSD	DA2mw-115-190401-GWMSD	Total/NA	Water	7470A	457916

Lab Chronicle

Client: Leidos, Inc.
 Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

Job ID: 280-123183-1

Client Sample ID: DA2mw-115-190401-GW

Lab Sample ID: 280-123183-1

Date Collected: 04/29/19 10:30

Matrix: Water

Date Received: 04/30/19 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			50 mL	50 mL	457068	05/08/19 05:45	MRJ	TAL DEN
Total/NA	Analysis	6010C		1			458076	05/14/19 05:41	SJS	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	457068	05/08/19 05:45	MRJ	TAL DEN
Total/NA	Analysis	6010C		1			457811	05/11/19 02:40	CML	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	457077	05/08/19 18:00	DAL	TAL DEN
Total/NA	Analysis	6020A		1			458080	05/13/19 17:06	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	457916	05/13/19 12:45	CML	TAL DEN
Total/NA	Analysis	7470A		1			458130	05/13/19 21:28	CML	TAL DEN

Client Sample ID: DA2mw-115-190402-GW

Lab Sample ID: 280-123183-2

Date Collected: 04/29/19 10:30

Matrix: Water

Date Received: 04/30/19 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			50 mL	50 mL	457068	05/08/19 05:45	MRJ	TAL DEN
Total/NA	Analysis	6010C		1			457811	05/11/19 02:51	CML	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	457077	05/08/19 18:00	DAL	TAL DEN
Total/NA	Analysis	6020A		1			458080	05/13/19 17:23	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	457916	05/13/19 12:45	CML	TAL DEN
Total/NA	Analysis	7470A		1			458130	05/13/19 21:34	CML	TAL DEN

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: Leidos, Inc.
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

Job ID: 280-123183-1

Laboratory: Eurofins TestAmerica, Denver

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
A2LA	DoD		2907.01	10-31-19

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
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Method Summary

Client: Leidos, Inc.
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

Job ID: 280-123183-1

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL DEN
6020A	Metals (ICP/MS)	SW846	TAL DEN
7470A	Mercury (CVAA)	SW846	TAL DEN
3010A	Preparation, Total Metals	SW846	TAL DEN
3020A	Preparation, Total Metals	SW846	TAL DEN
7470A	Preparation, Mercury	SW846	TAL DEN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Leidos, Inc.
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

Job ID: 280-123183-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-123183-1	DA2mw-115-190401-GW	Water	04/29/19 10:30	04/30/19 09:30
280-123183-2	DA2mw-115-190402-GW	Water	04/29/19 10:30	04/30/19 09:30

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
Hg Biwk ICV_00273	05/14/19	04/30/19	1% HNO3, Lot K23022	100 mL	Hg ICV Stock_00011	0.4 mL	Mercury	0.4 mg/L
.Hg ICV Stock 00011	09/05/19		Inorganic Ventures, Lot M2-HG659091		(Purchased Reagent)		Mercury	100 mg/L
Hg Daily Spk_02406	05/14/19	05/13/19	1% HNO3, Lot K23022	100 mL	Hg Mnth Spike 00140	1 mL	Mercury	0.1 mg/L
.Hg Mnth Spike 00140	05/30/19	04/30/19	1% HNO3, Lot K23022	100 mL	Hg Ultra Prim 00014	1 mL	Mercury	10 mg/L
..Hg Ultra Prim 00014	09/08/19		Ultra Scientific, Lot CR-3231		(Purchased Reagent)		Mercury	1000 mg/L
ICP CCV_00377	06/04/19	05/13/19	5%/5% HCL/HNO3, Lot SEE LOGBOOK	500 mL	ICP ICAL1A_00837	250 mL	Aluminum	0.5 mg/L
							Calcium	5 mg/L
							Iron	2.5 mg/L
							Magnesium	20 mg/L
							Potassium	50 mg/L
							Sodium	5 mg/L
.ICP ICAL1A_00837	06/04/19	05/13/19	5%/5% HCL/HNO3, Lot SEE LOGBOOK	1000 mL	Icp cal std 3_00018	10 mL	Aluminum	1 mg/L
							Calcium	10 mg/L
							Iron	5 mg/L
							Magnesium	40 mg/L
							Potassium	100 mg/L
							Sodium	10 mg/L
..Icp cal std 3_00018	08/23/19		Inorganic Ventures, Lot M2-MEB663620		(Purchased Reagent)		Aluminum	100 mg/L
							Calcium	1000 mg/L
							Iron	500 mg/L
							Magnesium	4000 mg/L
							Potassium	10000 mg/L
							Sodium	1000 mg/L
ICP CCV_52_00033	06/04/19	05/09/19	5%/5% HCL/HNO3, Lot SEE LOGBOOK	500 mL	10000 Na_00070	1 mL	Sodium	25 mg/L
					ICP ICAL1A_00836	250 mL	Aluminum	0.5 mg/L
							Calcium	5 mg/L
							Iron	2.5 mg/L
							Magnesium	20 mg/L
							Potassium	50 mg/L
							Sodium	25 mg/L
.10000 Na_00070	03/06/20		CPI, Lot 752887-20		(Purchased Reagent)		Sodium	10000 mg/L
.ICP ICAL1A_00836	06/04/19	05/08/19	5%/5% HCL/HNO3, Lot SEE LOGBOOK	1000 mL	Icp cal std 3_00018	10 mL	Aluminum	1 mg/L
							Calcium	10 mg/L
							Iron	5 mg/L
							Magnesium	40 mg/L
							Potassium	100 mg/L
							Sodium	10 mg/L
..Icp cal std 3_00018	08/23/19		Inorganic Ventures, Lot M2-MEB663620		(Purchased Reagent)		Aluminum	100 mg/L
							Calcium	1000 mg/L
							Iron	500 mg/L
							Magnesium	4000 mg/L
							Potassium	10000 mg/L
							Sodium	1000 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration		
					Reagent ID	Volume Added				
ICP CCVH_00637	06/07/19	05/08/19	5%/5% HCL/HNO3, Lot SEE LOGBOOK	500 mL	ICP ICAL2A_00537	250 mL	Aluminum	50 mg/L		
							Iron	50 mg/L		
							Sodium	250 mg/L		
.ICP ICAL2A_00537	06/07/19	05/08/19	5%HCl/5% HNO3, Lot see reagent log	1000 mL	10000 Al_00018	10 mL	Aluminum	100 mg/L		
							10000 Fe_00022	10 mL	Iron	100 mg/L
							10000 Na_00070	50 mL	Sodium	500 mg/L
..10000 Al_00018	06/26/19	Inorganic Ventures, Lot K2-AL		(Purchased Reagent)		Aluminum	10000 mg/L			
..10000 Fe_00022	02/18/20	Inorganic Ventures, Lot M2-FE659835		(Purchased Reagent)		Iron	10000 mg/L			
..10000 Na_00070	03/06/20	CPI, Lot 752887-20		(Purchased Reagent)		Sodium	10000 mg/L			
ICP CCVH_00639	06/07/19	05/13/19	5%/5% HCL/HNO3, Lot SEE LOGBOOK	500 mL	ICP ICAL2A_00538	250 mL	Aluminum	50 mg/L		
							Iron	50 mg/L		
							Sodium	250 mg/L		
.ICP ICAL2A_00538	06/07/19	05/13/19	5%HCl/5% HNO3, Lot see reagent log	1000 mL	10000 Al_00018	10 mL	Aluminum	100 mg/L		
							10000 Fe_00022	10 mL	Iron	100 mg/L
							10000 Na_00070	50 mL	Sodium	500 mg/L
..10000 Al_00018	06/26/19	Inorganic Ventures, Lot K2-AL		(Purchased Reagent)		Aluminum	10000 mg/L			
..10000 Fe_00022	02/18/20	Inorganic Ventures, Lot M2-FE659835		(Purchased Reagent)		Iron	10000 mg/L			
..10000 Na_00070	03/06/20	CPI, Lot 752887-20		(Purchased Reagent)		Sodium	10000 mg/L			
ICP ICSA_00185	03/18/20	05/03/19	5%/5% HCL/HNO3, Lot SEE LOGBOOK	250 mL	Icp stk ICSA_00029	25 mL	Aluminum	500 mg/L		
							Calcium	500 mg/L		
							Iron	200 mg/L		
.Icp stk ICSA_00029	03/18/20		CPI, Lot 982821-1		(Purchased Reagent)		Aluminum	5000 mg/L		
							Calcium	5000 mg/L		
							Iron	2000 mg/L		
ICP ICSAB_00211	06/03/19	05/01/19	5%/5% HCL/HNO3, Lot SEE LOGBOOK	250 mL	1000 Li_00040	0.25 mL	Li	1 mg/L		
							ICP ICSAB_1_00001	2.5 mL	Antimony	1 mg/L
									Mo	1 mg/L
					Si	10 mg/L				
					Sn	1 mg/L				
					Ti	1 mg/L				
					ICP ICSAB_2_00001	2.5 mL	Arsenic	1 mg/L		
							B	10 mg/L		
							Barium	1 mg/L		
							Beryllium	0.5 mg/L		
							Cadmium	1 mg/L		
							Chromium	1 mg/L		
							Cobalt	1 mg/L		
					Copper	1 mg/L				
					Lead	1 mg/L				
Manganese	1 mg/L									

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Nickel	1 mg/L
							P	10 mg/L
							Potassium	10 mg/L
							Selenium	1 mg/L
							Silver	1 mg/L
							Sodium	10 mg/L
							Sr	1 mg/L
							Thallium	1 mg/L
							Vanadium	1 mg/L
							Zinc	1 mg/L
					Icp stk ICSA_00029	25 mL	Aluminum	500 mg/L
							Calcium	500 mg/L
							Iron	200 mg/L
							Magnesium	500 mg/L
.1000 Li 00040	05/16/20		CPI, Lot 751942-43		(Purchased Reagent)		Li	1000 mg/L
.ICP ICSAB 1_00001	06/03/19		CPI, Lot 990624-2		(Purchased Reagent)		Antimony	100 mg/L
							Mo	100 mg/L
							Si	1000 mg/L
							Sn	100 mg/L
							Ti	100 mg/L
.ICP ICSAB 2_00001	06/03/19		CPI, Lot 990626-2		(Purchased Reagent)		Arsenic	100 mg/L
							B	1000 mg/L
							Barium	100 mg/L
							Beryllium	50 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Cobalt	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Manganese	100 mg/L
							Nickel	100 mg/L
							P	1000 mg/L
							Potassium	1000 mg/L
							Selenium	100 mg/L
							Silver	100 mg/L
							Sodium	1000 mg/L
							Sr	100 mg/L
							Thallium	100 mg/L
							Vanadium	100 mg/L
							Zinc	100 mg/L
.Icp stk ICSA_00029	03/18/20		CPI, Lot 982821-1		(Purchased Reagent)		Aluminum	5000 mg/L
							Calcium	5000 mg/L
							Iron	2000 mg/L
							Magnesium	5000 mg/L
ICP ICV_00811	10/01/19	05/10/19	5%HNO3/5% HCl, Lot SEE LOGBOOK	100 mL	ICP CAL STD 4_00002	0.25 mL	Aluminum	0.25 ppm
							Calcium	2.5 ppm
							Iron	1.25 ppm

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Magnesium	10 ppm
							Potassium	25 ppm
							Sodium	12.5 ppm
.ICP CAL STD 4_00002	09/22/20		CPI, Lot 10094465-2		(Purchased Reagent)		Aluminum	100 mg/L
							Calcium	1000 mg/L
							Iron	500 mg/L
							Magnesium	4000 mg/L
							Potassium	10000 mg/L
							Sodium	5000 mg/L
ICP ICV_00813	10/01/19	05/13/19	5%HNO3/5% HCl, Lot SEE LOGBOOK	100 mL	ICP CAL STD 4_00002	0.25 mL	Aluminum	0.25 ppm
							Calcium	2.5 ppm
							Iron	1.25 ppm
							Magnesium	10 ppm
							Potassium	25 ppm
							Sodium	12.5 ppm
.ICP CAL STD 4_00002	09/22/20		CPI, Lot 10094465-2		(Purchased Reagent)		Aluminum	100 mg/L
							Calcium	1000 mg/L
							Iron	500 mg/L
							Magnesium	4000 mg/L
							Potassium	10000 mg/L
							Sodium	5000 mg/L
ICP ICVH_00931	11/01/19	05/13/19	5%HNO3/5% HCl, Lot SEE LOGBOOK	100 mL	Icp ICVH_00851	1 mL	Aluminum	40 mg/L
							Iron	80 mg/L
							Sodium	40 mg/L
.Icp ICVH_00851	04/19/20		CPI, Lot 10091556-1		(Purchased Reagent)		Aluminum	4000 mg/L
							Iron	8000 mg/L
							Sodium	4000 mg/L
ICP ICVH_52_00105	07/09/19	05/10/19	5%HNO3/5% HCl, Lot SEE LOGBOOK	100 mL	10000 Na (HP)_00002	0.4 mL	Sodium	80 mg/L
					Icp ICVH_00920	1 mL	Aluminum	40 mg/L
							Iron	80 mg/L
							Sodium	80 mg/L
.10000 Na (HP) 00002	07/09/19		High Purity, Lot 1721911		(Purchased Reagent)		Sodium	10000 mg/L
.Icp ICVH_00920	06/22/20		CPI, Lot 10091556-1		(Purchased Reagent)		Aluminum	4000 mg/L
							Iron	8000 mg/L
							Sodium	4000 mg/L
ICP LLCCV_02538	05/11/19	05/10/19	5%HNO3/5% HCl, Lot SEE LOGBOOK	100 mL	ICP LLCCV-4_00010	1 mL	Aluminum	100 ppb
							Calcium	200 ppb
							Iron	100 ppb
							Magnesium	200 ppb
							Potassium	3000 ppb
							Sodium	1000 ppb
.ICP LLCCV-4_00010	05/19/19		CPI, Lot 10088791-2		(Purchased Reagent)		Aluminum	10 mg/L
							Calcium	20 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Iron	10 mg/L
							Magnesium	20 mg/L
							Potassium	300 mg/L
							Sodium	100 mg/L
ICP LLCCV_02540	05/14/19	05/13/19	5%HNO3/5% HCl, Lot SEE LOGBOOK	100 mL	ICP LLCCV-4_00010	1 mL	Aluminum	100 ppb
							Calcium	200 ppb
							Iron	100 ppb
							Magnesium	200 ppb
							Potassium	3000 ppb
							Sodium	1000 ppb
.ICP LLCCV-4_00010	05/19/19		CPI, Lot 10088791-2		(Purchased Reagent)		Aluminum	10 mg/L
							Calcium	20 mg/L
							Iron	10 mg/L
							Magnesium	20 mg/L
							Potassium	300 mg/L
							Sodium	100 mg/L
ms 77 RL_01925	05/14/19	05/13/19	2%HNO3/0.5% HCl, Lot 216908/217157	50 mL	ms 77 cal std_02032	0.5 mL	Antimony	1 ppb
							Arsenic	1 ppb
							Beryllium	1 ppb
							Cadmium	1 ppb
							Chromium	1 ppb
							Cobalt	1 ppb
							Lead	1 ppb
							Selenium	1 ppb
							Thallium	1 ppb
							Vanadium	1 ppb
							Silver	1 ppb
.ms 77 cal std_02032	05/14/19	05/13/19	2%HNO3/0.5% HCl, Lot 216908/217157	250 mL	MS CALSTD-1_00132	0.25 mL	Antimony	100 ug/L
							Arsenic	100 ug/L
							Beryllium	100 ug/L
							Cadmium	100 ug/L
							Chromium	100 ug/L
							Cobalt	100 ug/L
							Lead	100 ug/L
							Selenium	100 ug/L
							Thallium	100 ug/L
							Vanadium	100 ug/L
							Silver	100 ug/L
..MS CALSTD-1_00132	04/10/20		CPI, Lot 982731-1		MS CALSTD-4_00001	0.25 mL	Antimony	100 mg/L
					(Purchased Reagent)		Arsenic	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Cobalt	100 mg/L
							Lead	100 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Selenium	100 mg/L
							Thallium	100 mg/L
							Vanadium	100 mg/L
.MS CALSTD-4_00001	05/21/20		CPI, Lot 10088633-9			(Purchased Reagent)	Silver	100 mg/L
ms 77 cal std_02032	05/14/19	05/13/19	2%HNO3/0.5% HCl, Lot 216908/217157	250 mL	MS CALSTD-1_00132	0.25 mL	Antimony	100 ug/L
							Arsenic	100 ug/L
							Barium	100 ug/L
							Beryllium	100 ug/L
							Cadmium	100 ug/L
							Chromium	100 ug/L
							Cobalt	100 ug/L
							Copper	100 ug/L
							Lead	100 ug/L
							Manganese	100 ug/L
							Nickel	100 ug/L
							Selenium	100 ug/L
							Thallium	100 ug/L
							Vanadium	100 ug/L
					MS CALSTD-4_00001	0.25 mL	Silver	100 ug/L
							Zinc	100 ug/L
.MS CALSTD-1_00132	04/10/20		CPI, Lot 982731-1			(Purchased Reagent)	Antimony	100 mg/L
							Arsenic	100 mg/L
							Barium	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Cobalt	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Manganese	100 mg/L
							Nickel	100 mg/L
							Selenium	100 mg/L
							Thallium	100 mg/L
							Vanadium	100 mg/L
.MS CALSTD-4_00001	05/21/20		CPI, Lot 10088633-9			(Purchased Reagent)	Silver	100 mg/L
							Zinc	100 mg/L
ms 77 ccv_02043	05/14/19	05/13/19	2%HNO3/0.5% HCl, Lot 216908/217157	200 mL	ms 77 cal std_02032	100 mL	Antimony	50 ug/L
							Arsenic	50 ug/L
							Barium	50 ug/L
							Beryllium	50 ug/L
							Cadmium	50 ug/L
							Chromium	50 ug/L
							Cobalt	50 ug/L
							Copper	50 ug/L
Lead	50 ug/L							

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Manganese	50 ug/L
							Nickel	50 ug/L
							Selenium	50 ug/L
							Thallium	50 ug/L
							Vanadium	50 ug/L
							Silver	50 ug/L
							Zinc	50 ug/L
.ms 77 cal std_02032	05/14/19	05/13/19	2%HNO3/0.5% HCl, Lot 216908/217157	250 mL	MS CALSTD-1_00132	0.25 mL	Antimony	100 ug/L
							Arsenic	100 ug/L
							Barium	100 ug/L
							Beryllium	100 ug/L
							Cadmium	100 ug/L
							Chromium	100 ug/L
							Cobalt	100 ug/L
							Copper	100 ug/L
							Lead	100 ug/L
							Manganese	100 ug/L
							Nickel	100 ug/L
							Selenium	100 ug/L
							Thallium	100 ug/L
							Vanadium	100 ug/L
					MS CALSTD-4_00001	0.25 mL	Silver	100 ug/L
							Zinc	100 ug/L
..MS CALSTD-1_00132	04/10/20		CPI, Lot 982731-1			(Purchased Reagent)	Antimony	100 mg/L
							Arsenic	100 mg/L
							Barium	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Cobalt	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Manganese	100 mg/L
							Nickel	100 mg/L
							Selenium	100 mg/L
							Thallium	100 mg/L
							Vanadium	100 mg/L
..MS CALSTD-4_00001	05/21/20		CPI, Lot 10088633-9			(Purchased Reagent)	Silver	100 mg/L
							Zinc	100 mg/L
ms 77 icsa_00418	05/17/19	05/10/19	2%HNO3/0.5% HCl, Lot 200458/198300	100 mL	MS ICSA STOCK_00033	10 mL	Mo	2 mg/L
.MS ICSA STOCK_00033	07/24/21		cpi, Lot 992328-1			(Purchased Reagent)	Mo	20 mg/L
ms 77 icsab_00418	05/17/19	05/10/19	2%HNO3/0.5% HCl, Lot 200458/198300	100 mL	MS ICSA STOCK_00033	10 mL	Mo	2.1 mg/L
					MS ICVMIX--4_00001	0.1 mL	Silver	0.1 mg/L
							Zinc	0.1 mg/L
					MS icvMIX-1_00001	0.1 mL	Antimony	0.1 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Arsenic	0.1 mg/L
							Barium	0.1 mg/L
							Beryllium	0.1 mg/L
							Cadmium	0.1 mg/L
							Chromium	0.1 mg/L
							Cobalt	0.1 mg/L
							Copper	0.1 mg/L
							Lead	0.1 mg/L
							Manganese	0.1 mg/L
							Mo	2.1 mg/L
							Nickel	0.1 mg/L
							Selenium	0.1 mg/L
							Thallium	0.1 mg/L
							Vanadium	0.1 mg/L
.MS ICSA STOCK 00033	07/24/21		cpi, Lot 992328-1			(Purchased Reagent)	Mo	20 mg/L
.MS ICVMIX--4_00001	05/21/20		CPI, Lot 10088633-10			(Purchased Reagent)	Silver	100 mg/L
							Zinc	100 mg/L
.MS icvMIX-1_00001	04/15/20		CPI, Lot 982733-1			(Purchased Reagent)	Antimony	100 mg/L
							Arsenic	100 mg/L
							Barium	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Cobalt	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Manganese	100 mg/L
							Mo	100 mg/L
							Nickel	100 mg/L
							Selenium	100 mg/L
							Thallium	100 mg/L
							Vanadium	100 mg/L
ms 77 icv_02039	05/14/19	05/13/19	2%HNO3/0.5% HCl, Lot 216908/217157	250 mL	MS ICVMIX--4_00001	0.1 mL	Silver	40 ug/L
							Zinc	40 ug/L
					MS icvMIX-1_00001	0.1 mL	Antimony	40 ug/L
							Arsenic	40 ug/L
							Barium	40 ug/L
							Beryllium	40 ug/L
							Cadmium	40 ug/L
							Chromium	40 ug/L
							Cobalt	40 ug/L
							Copper	40 ug/L
							Lead	40 ug/L
							Manganese	40 ug/L
							Nickel	40 ug/L
							Selenium	40 ug/L
							Thallium	40 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MS ICVMIX--4_00001	05/21/20		CPI, Lot 10088633-10			(Purchased Reagent)	Vanadium	40 ug/L
							Silver	100 mg/L
							Zinc	100 mg/L
.MS icvMIX-1_00001	04/15/20		CPI, Lot 982733-1			(Purchased Reagent)	Antimony	100 mg/L
							Arsenic	100 mg/L
							Barium	100 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Cobalt	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Manganese	100 mg/L
							Nickel	100 mg/L
							Selenium	100 mg/L
							Thallium	100 mg/L
							Vanadium	100 mg/L
MS 77 LLCCV_01846	05/14/19	05/13/19	2%HNO3/0.5% HCl, Lot 216908/217157	100 mL	MS LLCCV_00001	1 mL	Antimony	0.002 mg/L
							Arsenic	0.005 mg/L
							Barium	0.001 mg/L
							Beryllium	0.001 mg/L
							Cadmium	0.001 mg/L
							Chromium	0.002 mg/L
							Cobalt	0.001 mg/L
							Copper	0.002 mg/L
							Lead	0.001 mg/L
							Manganese	0.001 mg/L
							Nickel	0.0015 mg/L
							Selenium	0.005 mg/L
							Silver	0.005 mg/L
							Thallium	0.001 mg/L
							Vanadium	0.005 mg/L
							Zinc	0.01 mg/L
.MS LLCCV_00001	05/15/20		CPI, Lot 10088633-8			(Purchased Reagent)	Antimony	0.2 mg/L
							Arsenic	0.5 mg/L
							Barium	0.1 mg/L
							Beryllium	0.1 mg/L
							Cadmium	0.1 mg/L
							Chromium	0.2 mg/L
							Cobalt	0.1 mg/L
							Copper	0.2 mg/L
							Lead	0.1 mg/L
							Manganese	0.1 mg/L
							Nickel	0.15 mg/L
							Selenium	0.5 mg/L
							Silver	0.5 mg/L
							Thallium	0.1 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Vanadium	0.5 mg/L
							Zinc	1 mg/L
MS CALSTD-1_00136	04/01/20		Inorganic Ventures, Lot P2-MEB675675		(Purchased Reagent)		Arsenic	20 mg/L
							Barium	20 mg/L
							Beryllium	20 mg/L
							Cadmium	20 mg/L
							Chromium	20 mg/L
							Cobalt	20 mg/L
							Copper	20 mg/L
							Lead	20 mg/L
							Manganese	20 mg/L
							Nickel	20 mg/L
							Selenium	20 mg/L
							Silver	20 mg/L
							Th	20 mg/L
							Thallium	20 mg/L
U	20 mg/L							
Vanadium	20 mg/L							
Zinc	20 mg/L							
MS PDS IV_00009	12/04/19		Inorganic Ventures, Lot n2-meb672324		(Purchased Reagent)		Arsenic	20 mg/L
							Barium	20 mg/L
							Beryllium	20 mg/L
							Cadmium	20 mg/L
							Chromium	20 mg/L
							Cobalt	20 mg/L
							Copper	20 mg/L
							Lead	20 mg/L
							Manganese	20 mg/L
							Nickel	20 mg/L
							Selenium	20 mg/L
							Silver	5 mg/L
							Thallium	20 mg/L
							Vanadium	20 mg/L
Zinc	20 mg/L							
MS PDS 2A_00006	04/05/20		Inorganic Ventures, Lot m2-meb659076		(Purchased Reagent)		Antimony	20 mg/L
MS spike 2_00080	07/06/19	04/26/19	1% HNO3, Lot 192582	250 mL	1000 B_00017	5 mL	B	20 mg/L
					1000 Li_00040	10 mL	Li	40 mg/L
					1000 Mo_00013	5 mL	Mo	20 mg/L
					1000 Sb_00019	5 mL	Antimony	20 mg/L
					1000 Sn_00016	5 mL	Sn	20 mg/L
					1000 Sr_00011	5 mL	Sr	20 mg/L
					1000 W_IV_00014	5 mL	W	20 mg/L
					1000 Zr_00019	5 mL	Zr	20 mg/L
					10000 Al_00019	5 mL	Aluminum	200 mg/L
					10000 Fe_00021	5 mL	Iron	200 mg/L
.1000 B_00017	07/25/19		Inorganic Ventures, Lot M2-B663296		(Purchased Reagent)		B	1000 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.1000 Li 00040	05/16/20		CPI, Lot 751942-43			(Purchased Reagent)	Li	1000 mg/L
.1000 Mo 00013	08/31/19		Inorganic Ventures, Lot M2-M0657085			(Purchased Reagent)	Mo	1000 mg/L
.1000 Sb 00019	11/30/19		Inorganic Ventures, Lot N2-SB665459			(Purchased Reagent)	Antimony	1000 mg/L
.1000 Sn 00016	07/06/21		Inorganic Ventures, Lot M2-SN659324			(Purchased Reagent)	Sn	1000 mg/L
.1000 Sr 00011	08/24/19		Inorganic Ventures, Lot M2-SR658331			(Purchased Reagent)	Sr	1000 mg/L
.1000 W IV 00014	07/06/19		Inorganic Ventures, Lot n2-w664865			(Purchased Reagent)	W	1000 mg/L
.1000 Zr 00019	12/11/19		CPI, Lot 171418-22			(Purchased Reagent)	Zr	1000 mg/L
.10000 Al 00019	04/15/20		Inorganic Ventures, Lot K2-AL653003			(Purchased Reagent)	Aluminum	10000 mg/L
.10000 Fe 00021	08/08/19		Inorganic Ventures, Lot M2-FE659835			(Purchased Reagent)	Iron	10000 mg/L
PREP SPK 1_00007	04/17/20		CPI, Lot 993218-1			(Purchased Reagent)	Arsenic	200 mg/L
							Barium	200 mg/L
							Beryllium	100 mg/L
							Cadmium	100 mg/L
							Chromium	100 mg/L
							Cobalt	100 mg/L
							Copper	100 mg/L
							Lead	100 mg/L
							Li	100 mg/L
							Manganese	100 mg/L
							Mo	100 mg/L
							Nickel	100 mg/L
							Selenium	200 mg/L
							Si	200 mg/L
							SiO2	428 mg/L
							Sn	200 mg/L
							Sr	100 mg/L
							Thallium	200 mg/L
							Ti	100 mg/L
							Vanadium	100 mg/L
PREP SPK 2_00003	04/17/20		CPI, Lot 982744-1			(Purchased Reagent)	Aluminum	1000 mg/L
							Calcium	5000 mg/L
							Iron	1000 mg/L
							Magnesium	5000 mg/L
							Potassium	5000 mg/L
							Sodium	5000 mg/L
PREP SPK 3_00003	04/17/20		CPI, Lot 982745-1			(Purchased Reagent)	P	2000 mg/L
							Sulfur	1000 mg/L
							U	200 mg/L
							W	100 mg/L
PREP SPK 4_00003	04/16/20		CPI, Lot 10094085-1			(Purchased Reagent)	B	100 mg/L
							Bi	200 mg/L
							Th	100 mg/L
							Zinc	50 mg/L
							Zr	50 mg/L

Reagent

1000 B_00017

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.869.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 18, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- December 18, 2021

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

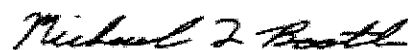
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control



Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

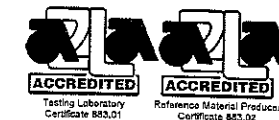


CERTIFICATE OF ANALYSIS

300 Technology Drive - Christiansburg, VA 24073 - USA
Tel: 800.869.6799 - Fax: 540.585.3012
www.inorganicventures.com
info@inorganicventures.com

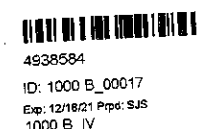
1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution
Catalog Number: CGB1
Lot Number: M2-B663296
Matrix: H2O
Value / Analyte(s): 1 000 µg/mL ea:
Boron
Starting Material: Recrystallized Boric Acid
Starting Material Lot#: M2-B02142
Starting Material Purity: 100.0000%



3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1000 ± 5 µg/mL
Density: 1.001 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 998 ± 4 µg/mL
ICP Assay NIST SRM 3107 Lot Number: 110830
Assay Method #2 1004 ± 5 µg/mL
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$$

X_a = mean of Assay Method A with standard uncertainty $u_{char a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$$w_a = (1/u_{char a})^2 / ((1/u_{char a})^2 + (1/u_{char b})^2)$$

$$w_b = (1/u_{char b})^2 / ((1/u_{char a})^2 + (1/u_{char b})^2)$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char a \& b} = [(w_a)^2 (u_{char a})^2 + (w_b)^2 (u_{char b})^2]^{1/2}$ where $u_{char a}$ and $u_{char b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = \text{mean of Assay Method A with standard uncertainty } u_{char a}$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag < 0.000108	M Eu < 0.000108	O Na < 0.006144	M Se < 0.001738	M Zn < 0.000509
O Al < 0.030720	M Fe < 0.004779	M Nb < 0.000108	O Si < 0.001028	M Zr < 0.000217
M As < 0.000869	M Ga < 0.000108	M Nd < 0.000108	M Sm < 0.000108	
M Au < 0.000108	M Gd < 0.000108	M Ni < 0.001303	M Sn < 0.000325	
s B <	M Ge < 0.000434	M Os < 0.003039	M Sr < 0.000108	
M Ba < 0.000217	M Hf < 0.000108	i P < 0.000001	M Ta < 0.000108	
O Be < 0.000409	M Hg < 0.000217	M Pb < 0.000108	M Tb < 0.000108	
M Bi < 0.000108	M Ho < 0.000108	M Pd < 0.000108	M Te < 0.000325	
O Ca < 0.000864	M In < 0.000108	M Pr < 0.000108	M Th < 0.000108	
M Cd < 0.000108	M Ir < 0.000108	M Pt < 0.000108	M Ti < 0.000651	
M Ce < 0.000108	O K < 0.010240	M Rb < 0.000108	M Tl < 0.000108	
M Co < 0.000108	M La < 0.000108	M Re < 0.000108	M Tm < 0.000108	
M Cr < 0.000434	M Li < 0.000108	M Rh < 0.000108	M U < 0.000108	
M Cs < 0.000108	M Lu < 0.000108	M Ru < 0.000108	M V < 0.004128	
M Cu < 0.000434	O Mg < 0.000019	i S < 0.000001	M W < 0.000108	
M Dy < 0.000108	M Mn < 0.000217	M Sb < 0.000434	M Y < 0.000108	
M Er < 0.000108	M Mo < 0.000217	M Sc < 0.001955	M Yb < 0.000108	

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT.

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 10.81 +3 4 B(OH)3 and B(OH)4-1

Chemical Compatibility -Moderately soluble in HCl, HNO3, H2SO4 and HF aqueous matrices and very soluble in NH4OH. Stable with all metals and inorganic anions at low to moderate ppm levels.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-1,000 ppm solutions chemically stable for years in 1% HNO3 / LDPE container. 1000 -10,000 ppm stable for years in dilute NH4OH / LDPE container.

B Containing Samples (Preparation and Solution) -Metal (Crystalline form is scarcely attacked by acids or alkaline solutions; amorphous form is soluble in conc. HNO3 or H2SO4); B(OH)3 (water soluble); Ores(avoid acid digestions and use caustic fusions in PtE); Organic Matrices (dry ash mixed with Na2CO3 in PtE at 450EC then increase heat to 1000EC to fuse; or perform a Na2O2 fusion in a NiE crucible / Parr bomb).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 11 amu	700 ppt	N/A	
ICP-OES 208.959 nm	0.007/0.0005 µg/mL	1	Mo
ICP-OES 249.678 nm	0.004/0.003 µg/mL	1	Os, W, Co, Cr, Hf
ICP-OES 249.773 nm	0.003/0.001 µg/mL	1	W, Ce, Co, Th, Ta, Mn, Mo, Fe

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

Reagent

1000 Li_00040



CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: TA-1000291

SE Std Lithium (Li) – 1000 µg/mL

Lot #: 751942-43

Matrix: 5% HNO₃

5658289
 ID: 1000 LI_00040
 Exp: 05/16/20 PpP: CRP Opm: 03/26/19
 1000 LI CPI

Element	Certified Concentration & Uncertainty
Li	1002 ± 3 µg/mL (w/v)
	993 ± 3 µg/g (w/w)

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This CRM was prepared to a nominal concentration of 1000 µg/mL by gravimetric methods using 99.999% pure lithium carbonate (Li₂CO₃) dissolved in high purity nitric acid (HNO₃) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to NIST SRM 3129a, lot #100714. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Indicative Values: ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)													
Ag	35	Co	<1	Ge	<0.5	Mg	<5	Pd	<0.5	Si	<100	V	<1
Al	9	Cs	7	Hf	<0.2	Mn	<1	Pr	<0.2	Sm	<0.2	W	<0.5
As	<2	Cr	<0.5	Hg	30	Mo	<0.5	Pt	<0.5	Sn	<0.5	Y	<0.5
Au	<0.5	Cu	<1	Ho	<0.2	Na	<25	Rb	2	Sr	<1	Yb	<0.2
B	<5	Dy	<0.2	In	nd	Nb	<0.5	Re	<0.2	Ta	<0.5	Zn	<2
Ba	2	Er	<0.2	Ir	<0.2	Nd	<0.2	Rh	<0.5	Tb	<0.5		
Bi	<0.2	Eu	<0.2	K	<25	Ni	<2	Ru	<0.5	Te	<1		
Ca	<25	Fe	<10	La	<0.5	Os	<0.5	Sb	<0.5	Ti	<2		
Cd	<0.5	Ga	<0.5	Li	MAJOR	P	<100	Sc	<5	Tl	<0.5		
Ce	<0.2	Gd	<0.2	Lu	<0.2	Pb	<1	Se	<2	Tm	<0.2		

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for 18 months from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

November 16, 2018
 Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

USA
 5580 Skylane Boulevard P: 707.525.5788
 Santa Rosa, CA 95403 P: 800.878.7654
 F: 707.545.7901

www.cpiinternational.com
 Page 1 of 2

Europe
 Nieuwe Hemweg 7P P: +31 20 638 05 97
 1013BG Amsterdam F: +31 20 420 28 36
 The Netherlands

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Quality Manual Rev: No. 5, 03/01/2013

Further Information: Please contact CPI International for further information about this CRM.

Quality Certifications: This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
 - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

Reagent

1000 Mo_00013

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution
Catalog Number: CGAS1
Lot Number: M2-AS657780
Matrix: 2% (v/v) HNO3
Value / Analyte(s): 1 000 µg/mL ea:
Arsenic
Starting Material: As Metal
Starting Material Lot#: 1971 and 1851
Starting Material Purity: 99.9991%

4938580
ID: 1000 As_00020
Exp: 05/24/21 Pipet: SJS
1000 As IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 999 ± 5 µg/mL
Certified Density: 1.011 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 999 ± 4 µg/mL
ICP Assay NIST SRM 3103a Lot Number: 100818

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$$

X_a = mean of Assay Method A with standard uncertainty $u_{char a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$$w_a = (1/u_{char a})^2 / ((1/u_{char a})^2 + (1/u_{char b})^2)$$

$$w_b = (1/u_{char b})^2 / ((1/u_{char a})^2 + (1/u_{char b})^2)$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char a \& b} = [(w_a)^2 (u_{char a})^2 + (w_b)^2 (u_{char b})^2]^{1/2}$ where $u_{char a}$ and $u_{char b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = \text{mean of Assay Method A with standard uncertainty } u_{char a}$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O Ag < 0.002234	M Eu < 0.000466	O Na < 0.000767	M Se < 0.002797	O Zn < 0.000370
O Al < 0.001986	O Fe < 0.000079	O Nb < 0.005585	O Si < 0.004236	M Zr < 0.001865
s As <	M Ga < 0.000466	M Nd < 0.000466	M Sm < 0.000466	
M Au < 0.002796	M Gd < 0.000466	M Ni < 0.000486	M Sn < 0.000932	
O B < 0.000556	M Ge < 0.000932	M Os < 0.000466	M Sr < 0.001865	
O Ba < 0.000670	M Hf < 0.000466	O P < 0.027925	M Ta < 0.000466	
O Be < 0.000111	M Hg < 0.009321	M Pb < 0.002797	M Tb < 0.000466	
M Bi < 0.000466	M Ho < 0.000466	M Pd < 0.000466	M Te < 0.004663	
O Ca < 0.000503	M In < 0.023315	M Pr < 0.000466	M Th < 0.000466	
M Cd < 0.000466	M Ir < 0.000466	M Pt < 0.000466	O Ti < 0.000052	
M Ce < 0.000466	O K < 0.000185	M Rb < 0.001865	M Tl < 0.000466	
M Co < 0.000466	M La < 0.000466	M Re < 0.000466	M Tm < 0.000466	
O Cr < 0.002122	O Li < 0.000111	M Rh < 0.000466	M U < 0.000466	
M Cs < 0.000932	M Lu < 0.000466	M Ru < 0.000466	M V < 0.001865	
O Cu < 0.002904	O Mg < 0.000034	O S < 0.017872	M W < 0.004663	
M Dy < 0.000466	O Mn < 0.000018	M Sb < 0.000466	O Y < 0.000558	
M Er < 0.000466	M Mo < 0.000466	O Sc < 0.001005	M Yb < 0.000466	

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.659.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 24, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **May 24, 2021**

- The date after which this CRM/RM should not be used.
- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

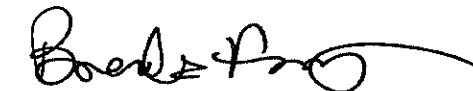
11.3 Period of Validity

- Sealed TCT Bag Open Date: _____
- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Brenda Francis
Product Documentation Technician



Certificate Approved By:

Michael Booth
Supervisor, Quality Control



Certifying Officer:

Paul Gaines
CEO, Senior Technical Director



6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 74.92 ; mix of +3 and +5 ; 6 ; H3AsO4 and HAsO2

Chemical Compatibility - Arsenic has no cationic chemistry. It is soluble in HCl, HNO3, H3PO4, H2SO4 and HF aqueous matrices water and NH4OH . It is stable with most inorganic anions (forms arsenate when boiled with chromate) but many cationic metals form the insoluble arsenates under pH neutral conditions. When fluorinated and / or under acidic conditions arsenate formation is typically not a problem at moderate to low concentrations.

Stability - 2-100 ppb levels stable for months alone or mixed with other elements at equivalent levels in 1% HNO3 / LDPE container.

As Containing Samples (Preparation and Solution) - Metal (soluble in 1:1 H2O / HNO3); Oxides (the oxide exists in crystalline and amorphous forms where the amorphous form is more water soluble. The oxides typically dissolve in dilute acidic solutions when boiled); Minerals (one gram of powdered sample is fused in a Ni crucible with 10 grams of a 1:1 mix of K2CO3 and KNO3 and the melt extracted with hot water); Organic Matrices (0.2 to 0.5 grams of sample are fused with 15 grams of a 1:1 Na2CO3 / Na2O2 mix in a Ni crucible. The fuseate is extracted with water and acidified with HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 75 amu	20 ppt	N/A	40Ar35Cl, 59Co16O, 36Ar38Ar1H,8Ar37C I,Ar39K, 150Nd2+,150Sm2+
ICP-OES 189.042 nm	0.05/0.005 µg/mL	1	Cr
ICP-OES 193.696 nm	0.1/0.01 µg/mL	1	V, Ge
ICP-OES 228.812 nm	0.1/0.01 µg/mL	1	Cd, Pt, Ir, Co

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$$

X_a = mean of Assay Method A with standard uncertainty $u_{char a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$$w_a = (1/u_{char a})^2 / ((1/u_{char a})^2 + (1/u_{char b})^2)$$

$$w_b = (1/u_{char b})^2 / ((1/u_{char a})^2 + (1/u_{char b})^2)$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k(u_{char a \& b}^2 + u_{bb}^2 + u_{its}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char a \& b} = [(w_a)^2(u_{char a})^2 + (w_b)^2(u_{char b})^2]^{1/2}$ where $u_{char a}$ and $u_{char b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = \text{mean of Assay Method A with standard uncertainty } u_{char a}$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k(u_{char a}^2 + u_{bb}^2 + u_{its}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O Ag < 0.002234	M Eu < 0.000466	O Na < 0.000767	M Se < 0.002797	O Zn < 0.000370
O Al < 0.001986	O Fe < 0.000079	O Nb < 0.005585	O Si < 0.004236	M Zr < 0.001865
s As <	M Ga < 0.000466	M Nd < 0.000466	M Sm < 0.000466	
M Au < 0.002796	M Gd < 0.000466	M Ni < 0.000486	M Sn < 0.000932	
O B < 0.000556	M Ge < 0.000932	M Os < 0.000466	M Sr < 0.001865	
O Ba < 0.000670	M Hf < 0.000466	O P < 0.027925	M Ta < 0.000466	
O Be < 0.000111	M Hg < 0.009321	M Pb < 0.002797	M Tb < 0.000466	
M Bi < 0.000466	M Ho < 0.000466	M Pd < 0.000466	M Te < 0.004663	
O Ca < 0.000503	M In < 0.023315	M Pr < 0.000466	M Th < 0.000466	
M Cd < 0.000466	M Ir < 0.000466	M Pt < 0.000466	O Ti < 0.000052	
M Ce < 0.000466	O K < 0.000185	M Rb < 0.001865	M Tl < 0.000466	
M Co < 0.000466	M La < 0.000466	M Re < 0.000466	M Tm < 0.000466	
O Cr < 0.002122	O Li < 0.000111	M Rh < 0.000466	M U < 0.000466	
M Cs < 0.000932	M Lu < 0.000466	M Ru < 0.000466	M V < 0.001865	
O Cu < 0.002904	O Mg < 0.000034	O S < 0.017872	M W < 0.004663	
M Dy < 0.000466	O Mn < 0.000018	M Sb < 0.000466	O Y < 0.000558	
M Er < 0.000466	M Mo < 0.000466	O Sc < 0.001005	M Yb < 0.000466	

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution
Catalog Number: CGAS1
Lot Number: M2-AS657780
Matrix: 2% (v/v) HNO3
Value / Analyte(s): 1 000 µg/mL ea:
Arsenic
Starting Material: As Metal
Starting Material Lot#: 1971 and 1851
Starting Material Purity: 99.9991%

4938580
ID: 1000 As_00020
Exp: 05/24/21 Ppd: SJS
1000 As IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 999 ± 5 µg/mL
Certified Density: 1.011 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 999 ± 4 µg/mL
ICP Assay NIST SRM 3103a Lot Number: 100818

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Reagent

1000 Sb_00019

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 02, 2018

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- March 02, 2022

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director



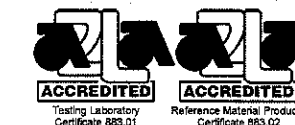
300 Technology Drive
Christiansburg, VA 24073 USA
800.669.6799

CERTIFICATE OF ANALYSIS

540.585.3030
Fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution
Catalog Number: CGSB1
Lot Number: N2-SB665459
Matrix: 1% (v/v) HNO3
3% (v/v) Tartaric Acid
Value / Analyte(s): 1 000 µg/mL ea:
Antimony
Starting Material: Sb Metal
Starting Material Lot#: 2382
Starting Material Purity: 99.9861%

5108868
ID: 1000 Sb_00019
Exp: 03/02/22 Prep: SJS
1000 Sb IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1002 ± 7 µg/mL
Density: 1.020 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 1003 ± 4 µg/mL
ICP Assay NIST SRM 3102a Lot Number: 140911
Assay Method #2 999 ± 5 µg/mL
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$$

X_a = mean of Assay Method A with standard uncertainty $u_{char a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$$w_a = (1/u_{char a}^2) / ((1/u_{char a}^2) + (1/u_{char b}^2))$$

$$w_b = (1/u_{char b}^2) / ((1/u_{char a}^2) + (1/u_{char b}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a\&b}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char a\&b} = [(w_a)^2 (u_{char a}^2) + (w_b)^2 (u_{char b}^2)]^{1/2}$ where $u_{char a}$ and $u_{char b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = \text{mean of Assay Method A with standard uncertainty } u_{char a}$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

-While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 121.75 +3 6 Sb(O)C4H4O6-1
Chemical Compatibility -Stable in conc. HCl, dilute or conc. HF. Stable in dilute HNO3 as the fluoride or tartrate complex. Avoid basic media. Stable with most metals and inorganic anions in acidic media as the tartrate provided the acidity is not too high or the acid is oxidizing causing loss of the stabilizing tartrate ion. The fluoride complex of antimony is stable in strong acid but you should only mix with other metals that are fluorinated.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-2% HNO3 / LDPE container.

Sb Containing Samples (Preparation and Solution) -Metal and alloys (Soluble in H2O / HF / HNO3 mixture); Oxides (Soluble in HCl and tartaric acid or H2O / HF / HNO3 mixtures); Ores (fusion with Na2CO3 in Pt0 followed by dissolving the fuseate in a H2O / HF / HNO3 mixture); Organic based (sulfuric acid / hydrogen peroxide digestion)

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 121 amu	5 ppt	N/A	105Pd16O, 89Y16O2
ICP-OES 206.833 nm	0.03/0.003 µg/mL	1	Ta, Cr, Ge, Hf
ICP-OES 217.581 nm	0.05/0.005 µg/mL	1	Nb, W, Re, Fe
ICP-OES 231.147 nm	0.06/0.006 µg/mL	1	Ni, Co, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag < 0.000100	M Eu < 0.000100	O Na 0.004839	M Se < 0.003417	M Zn 0.000488
O Al < 0.003189	O Fe 0.001979	M Nb < 0.004623	O Si 0.004179	M Zr < 0.003417
M As < 0.011256	M Ga < 0.000100	M Nd < 0.000100	M Sm < 0.000100	
M Au < 0.001006	M Gd < 0.000100	M Ni 0.000696	M Sn < 0.003015	
O B 0.000879	M Ge < 0.000502	M Os < 0.000100	M Sr < 0.000100	
O Ba < 0.000956	M Hf < 0.001407	O P 0.062145	M Ta < 0.003417	
O Be < 0.000212	M Hg < 0.000402	M Pb < 0.000402	M Tb < 0.000100	
M Bi < 0.000402	M Ho < 0.000100	M Pd < 0.000100	M Te < 0.000402	
O Ca 0.000769	M In < 0.000100	M Pr < 0.000804	M Th < 0.000100	
M Cd < 0.000100	M Ir < 0.001006	M Pt < 0.000100	M Ti 0.001279	
M Ce < 0.008241	O K 0.056755	M Rb < 0.003216	M Tl < 0.000100	
M Co < 0.000100	O La < 0.004252	M Re < 0.000100	M Tm < 0.000100	
O Cr 0.010229	O Li < 0.000053	M Rh < 0.000100	M U < 0.000100	
M Cs < 0.000603	M Lu < 0.000100	M Ru < 0.000402	M V < 0.000100	
M Cu < 0.000301	O Mg 0.000219	n S <	M W < 0.001809	
M Dy < 0.000100	M Mn 0.000187	s Sb <	M Y < 0.000100	
M Er < 0.000100	M Mo 0.000332	O Sc < 0.000744	M Yb < 0.000100	

Reagent

1000 Sn_00016

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.869.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 06, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- July 06, 2021

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

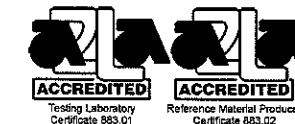


300 Technology Drive
Christiansburg, VA 24073 - USA
Inorganic Ventures, Inc.

CERTIFICATE OF ANALYSIS

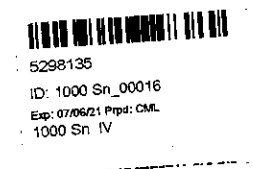
1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution
Catalog Number: CGSN1
Lot Number: M2-SN659324
Matrix: tr. HNO3
tr. HF
Value / Analyte(s): 1 000 µg/mL ea:
Tin
Starting Material: Sn shot
Starting Material Lot#: 1789
Starting Material Purity: 99.9976%



3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 998 ± 6 µg/mL
Density: 1.001 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 998 ± 3 µg/mL
ICP Assay NIST SRM 3161a Lot Number: 140917

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$$

X_a = mean of Assay Method A with standard uncertainty $u_{char a}$
 X_b = mean of Assay Method B with standard uncertainty $u_{char b}$
 w_a and w_b = the weighing factors for each method calculated using the inverse square of the variance:
 $w_a = (1/u_{char a}^2) / ((1/u_{char a}^2) + (1/u_{char b}^2))$
 $w_b = (1/u_{char b}^2) / ((1/u_{char a}^2) + (1/u_{char b}^2))$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k(u_{char a\&b}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2 in all cases at Inorganic Ventures
 $u_{char a\&b} = [(w_a)^2(u_{char a}^2) + (w_b)^2(u_{char b}^2)]^{1/2}$ where $u_{char a}$ and $u_{char b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume
 u_{bb} = bottle to bottle homogeneity standard uncertainty
 u_{lts} = long term stability standard uncertainty (storage)
 u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = \text{mean of Assay Method A with standard uncertainty } u_{char a}$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k(u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2 in all cases at Inorganic Ventures
 $u_{char a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume
 u_{bb} = bottle to bottle homogeneity standard uncertainty
 u_{lts} = long term stability standard uncertainty (storage)
 u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag < 0.000100	M Eu < 0.000100	O Na < 0.000683	M Se < 0.005701	O Zn < 0.000308
O Al < 0.004116	O Fe < 0.000989	M Nb < 0.000200	O Si < 0.012513	O Zr < 0.000514
M As < 0.001100	M Ga < 0.000100	M Nd < 0.000100	M Sm < 0.000100	
M Au < 0.000199	M Gd < 0.000500	O Ni < 0.001234	s Sn <	
O B < 0.001296	M Ge < 0.000700	M Os < 0.000099	O Sr < 0.000025	
O Ba < 0.000246	M Hf < 0.001600	O P < 0.020580	O Ta < 0.009261	
O Be < 0.000102	M Hg < 0.000996	M Pb < 0.003700	M Tb < 0.000100	
M Bi < 0.000337	M Ho < 0.000100	M Pd < 0.000100	M Te < 0.001800	
O Ca < 0.000470	O In < 0.005468	M Pr < 0.006001	M Th < 0.000100	
O Cd < 0.000284	M Ir < 0.000099	M Pt < 0.000200	O Ti < 0.000514	
M Ce < 0.010001	O K < 0.003447	M Rb < 0.000500	M Tl < 0.000100	
O Co < 0.001337	O La < 0.001025	M Re < 0.000100	M Tm < 0.000100	
O Cr < 0.001029	O Li < 0.000077	M Rh < 0.000100	M U < 0.000100	
M Cs < 0.030005	M Lu < 0.000200	M Ru < 0.000099	M V < 0.000500	
O Cu < 0.002058	O Mg < 0.000037	n S <	M W < 0.000100	
M Dy < 0.000100	M Mn < 0.000100	O Sb < 0.020580	M Y < 0.000100	
M Er < 0.000100	M Mo < 0.000100	O Sc < 0.000164	M Yb < 0.000100	

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 118.71 +4 4,5, 6,7,8 Sn(OH)xFy2-

Chemical Compatibility -Soluble in HCl and dilute HF / HNO3. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away. (i.e. Do not mix with Alkaline or Rare Earths or high levels of transition elements unless they are fluorinated.) Stable with most inorganic anions provided it is in the chemical form shown above.

Stability - 2-100 ppb levels stable (alone or mixed with all other metals that are at comparable levels) as the Sn(OH)xFy2- for 1 year in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the Sn(OH)xFy2- chemically stable for years in 2-5% HNO3 / trace HF in a LDPE container.

Sn Containing Samples (Preparation and Solution) - Metal (Soluble in HF / HNO3 or HCl); Oxides - SnO (soluble in HCl), SnO2 -very resistant to all acids including HF(Fusion with equal parts of Na2CO3 and S. It is then soluble in water or dilute acids as the thiostannate.); Alloys (Treat first 0.1 g with 10 mL conc. H2SO4 to boiling until the alloy disintegrates and nearly all of the sulfuric acid is expelled. Then add 100 mL O2 free water and 50 mL of conc HCl or transfer to a plastic container and add 1 mL HF in either case warming gently to bring about solution.); Organic Matrices (Volatility and precipitation of the insoluble stannic oxide are problems. Consultation of the literature should be made for individual matrices / Sn compounds.)

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 120 amu	5 ppt	N/A	120Te, 104Ru16O, 104Pd16O
ICP-OES 189.989 nm	0.03 / 0.003 µg/mL	1	
ICP-OES 242.949 nm	0.1 / 0.01 µg/mL	1	W, Mo, Rh, Ta, Co

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

Reagent

1000 Sr_00011

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.569.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 14, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- June 14, 2021

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

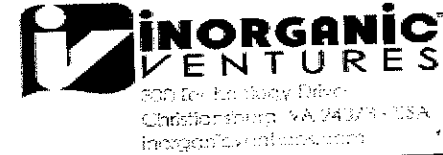
12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

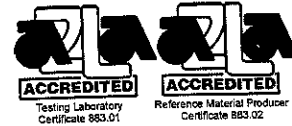


CERTIFICATE OF ANALYSIS

USE 800-569-6799 - 540-585-3030
Fax: 540-585-3012
info@inorganicventures.com

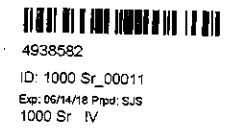
1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution
Catalog Number: CGSR1
Lot Number: M2-SR658331
Matrix: 0.1% (v/v) HNO3
Value / Analyte(s): 1 000 µg/mL ea:
Strontium
Starting Material: SrCO3
Starting Material Lot#: 1716 1967 1966
Starting Material Purity: 99.9937%



3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1002 ± 5 µg/mL
Density: 1.001 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 1002 ± 3 µg/mL
ICP Assay NIST SRM 3153a Lot Number: 990906
Assay Method #2 1001 ± 3 µg/mL
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$$

X_a = mean of Assay Method A with standard uncertainty $u_{char a}$
 X_b = mean of Assay Method B with standard uncertainty $u_{char b}$
 w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$$w_a = (1/u_{char a}^2) / ((1/u_{char a}^2) + (1/u_{char b}^2))$$

$$w_b = (1/u_{char b}^2) / ((1/u_{char a}^2) + (1/u_{char b}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{ts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2 in all cases at Inorganic Ventures

$$u_{char a \& b} = [(w_a)^2 (u_{char a}^2) + (w_b)^2 (u_{char b}^2)]^{1/2}$$

where $u_{char a}$ and $u_{char b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{ts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = \text{mean of Assay Method A with standard uncertainty } u_{char a}$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{ts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{ts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O Ag < 0.003318	M Eu < 0.000995	O Na 0.000474	M Se < 0.023047	O Zn 0.000121
O Al 0.000486	O Fe 0.000826	M Nb < 0.000497	O Si 0.001483	M Zr < 0.007967
M As < 0.001493	M Ga < 0.001991	M Nd < 0.000497	M Sm < 0.000497	
M Au < 0.005394	M Gd < 0.002987	M Ni 0.001357	M Sn 0.000306	
O B < 0.005530	M Ge < 0.004979	M Os < 0.000490	s Sr <	
M Ba 0.104336	M Hf < 0.000497	O P < 0.033180	M Ta < 0.000497	
O Be < 0.000132	M Hg < 0.000980	M Pb 0.001160	M Tb < 0.000497	
M Bi 0.000350	M Ho < 0.000497	M Pd < 0.002451	O Te < 0.022120	
O Ca 0.003185	M In < 0.000497	M Pr < 0.000995	M Th < 0.000497	
M Cd 0.000153	M Ir < 0.000490	M Pt < 0.002987	M Ti 0.000186	
M Ce 0.001193	O K 0.001945	M Rb < 0.006971	M Tl < 0.000497	
M Co 0.000153	M La < 0.003983	M Re < 0.000497	M Tm < 0.000497	
O Cr < 0.005530	O Li < 0.004202	O Rh < 0.006636	M U < 0.000497	
M Cs < 0.001991	M Lu < 0.000497	M Ru < 0.000980	M V < 0.001991	
O Cu < 0.006636	O Mg 0.000126	O S < 0.055300	M W < 0.001493	
M Dy < 0.000497	M Mn 0.000120	M Sb < 0.003983	O Y < 0.003318	
M Er < 0.000497	M Mo < 0.006971	O Sc < 0.003318	M Yb 0.000043	

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 87.62 +2 6 Sr(H₂O)₆+2
Chemical Compatibility - Soluble in HCl, and HNO₃. Avoid H₂SO₄, HF and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate and tungstate in neutral aqueous media.

Stability - 2-100 ppb levels stable for months in 1% HNO₃ / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1 - 3.5% HNO₃ / LDPE container.

Sr Containing Samples (Preparation and Solution) -Metal (Best dissolved in diluted HNO₃); Ores (Carbonate fusion in PtO followed by HCl dissolution); Organic Matrices (Dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 88 amu	1200 ppt	N/A	72Ge16O, 176Yb+2, 176Lu+2, 176Hf+2
ICP-OES 407.771 nm	0.0004 / 0.00006 µg/mL	.1	U, Ce
ICP-OES 421.552 nm	0.0008 / 0.00004 µg/mL	1	Rb
ICP-OES 460.733 nm	0.07 / 0.003 µg/mL	1	Ce

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

Reagent

1000 W IV_00014



300 Technology Drive
 Christiansburg, VA 24073 - USA
 inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
 fax: 540.585.3012
 info@inorganicventures.com

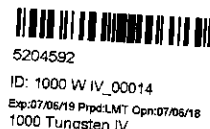
1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution
 Catalog Number: CGW1
 Lot Number: N2-W664865
 Matrix: 0.2% (v/v) HNO₃
 2% (v/v) HF
 Value / Analyte(s): 1 000 µg/mL ea:
 Tungsten
 Starting Material: W Powder
 Starting Material Lot#: 1898
 Starting Material Purity: 99.9941%



3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 998 ± 6 µg/mL
 Density: 1.007 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **999 ± 6 µg/mL**
 ICP Assay NIST SRM 3163 Lot Number: 140606

Assay Method #2 **997 ± 7 µg/mL**
 Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$$

X_a = mean of Assay Method A with standard uncertainty $u_{char a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$$w_a = (1/u_{char a})^2 / ((1/u_{char a})^2 + (1/u_{char b})^2)$$

$$w_b = (1/u_{char b})^2 / ((1/u_{char a})^2 + (1/u_{char b})^2)$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a \& b}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char a \& b} = [(w_a)^2 (u_{char a})^2 + (w_b)^2 (u_{char b})^2]^{1/2}$ where $u_{char a}$ and $u_{char b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = \text{mean of Assay Method A with standard uncertainty } u_{char a}$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag < 0.001202	M Eu < 0.000200	O Na < 0.001960	M Se < 0.004000	M Zn < 0.002074
O Al < 0.033570	M Fe < 0.079372	M Nb < 0.180390	i Si <	O Zr < 0.005595
M As < 0.010422	M Ga < 0.000200	M Nd < 0.000200	M Sm < 0.000200	
M Au < 0.030804	M Gd < 0.000200	M Ni < 0.017638	M Sn < 0.000266	
M B < 0.003808	M Ge < 0.001403	M Os < 0.000200	M Sr < 0.000801	
M Ba < 0.002004	M Hf < 0.000288	i P <	M Ta < 0.011947	
M Be < 0.000601	i Hg <	M Pb < 0.005612	M Tb < 0.000200	
M Bi < 0.009219	M Ho < 0.000200	M Pd < 0.001800	M Te < 0.001603	
O Ca < 0.004290	M In < 0.000200	M Pr < 0.000601	M Th < 0.012426	
M Cd < 0.000200	M Ir < 0.000200	M Pt < 0.001603	M Ti < 0.004115	
M Ce < 0.000200	O K < 0.039229	M Rb < 0.001603	M Tl < 0.003206	
M Co < 0.000200	M La < 0.000200	M Re < 0.300651	M Tm < 0.000200	
O Cr < 0.011190	O Li < 0.000434	M Rh < 0.000200	M U < 0.001202	
M Cs < 0.000088	M Lu < 0.000200	M Ru < 0.000200	M V < 0.009219	
M Cu < 0.003607	M Mg < 0.000632	i S <	s W <	
M Dy < 0.000200	M Mn < 0.005211	M Sb < 0.008819	M Y < 0.000200	
M Er < 0.000200	M Mo < 0.000232	O Sc < 0.000543	M Yb < 0.000200	

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 183.85 +6 6,7,8,9
WOF5-2(chemical form as received)

Chemical Compatibility -W is very readily hydrolyzed requiring 0.1 to 1% HF solutions for stable acidic solutions. The [WOF5]-2 is soluble in % levels of HCl and HNO3 provided it is in the [WOF5]-2 form. Stable at ppm levels with some metals provided it is fluorinated. <U>Do not mix with Alkaline or Rare Earths</U>. W is best to be mixed only with other fluorinated metals (Ti, Zr, Hf, Nb, Ta, Mo, Si, Sn, Ge). Look for yellow WO3 precipitate if mixed with other transitions at higher levels indicating instability. The yellow WO3 will form over a period of weeks even in trace HF, therefore, <U>HF levels of W multi-element blends should be ∼ 1%</U>.

Stability - 2-100 ppb levels stable (alone or mixed with all other metals that are at comparable levels) as the [WOF5]-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the [WOF5]-2 chemically stable for years in 1% HF in a LDPE container.

W Containing Samples (Preparation and Solution) -Metal (Soluble in HF / HNO3); Oxide (soluble in HF or NH4OH) ; Organic Matrices (dry ash at 450 0C in Pt0 and dissolve oxide with HF).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 182 amu	5 ppt	N/A	<u>166Er</u> 160
ICP-OES 207.911 nm	0.03/0.001 µg/mL	1	<u>Ru</u> , In
ICP-OES 209.475 nm	0.05/0.008 µg/mL	1	<u>Mo</u>
ICP-OES 224.875 nm	0.05/0.005 µg/mL	1	<u>Co</u> , Rh, Ag

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 19, 2018

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **February 19, 2022**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Brenda Francis
Product Documentation Technician



Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

Reagent

1000 Zr_00019

REPORT OF ANALYSIS

Single-Element Aqueous RM

Product #: S4400-1000691

Zirconium (Zr) – 1000 µg/mL

Lot #: 171418-22

Matrix: 2% HNO₃

Element	Certified Concentration
Zr	1001 µg/mL (w/v)
	996 µg/g (w/w)

Intended Use: This solution is intended for use as a reference material (RM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This RM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to ISO 9001, ISO Guide 34, and ISO/IEC 17025. This RM was prepared to a nominal concentration of 1000 µg/mL by gravimetric methods using 99.994% pure zirconium dinitrate oxide hydrate (N₂O₇Zr·xH₂O) dissolved in high purity nitric acid (HNO₃) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this RM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration was determined based upon gravimetric procedures. Secondary verification of the certified concentration was performed using ICP-OES and is traceable to NIST SRM 3169. The uncertainty associated with the certified concentration is ±0.5% relative, which is the sum of the estimated errors due to the purity of the raw materials, the gravimetric preparation of the solution, and transpiration through the container. This represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Indicative Values: ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)													
Ag	8	Ce	<0.2	Gd	<0.2	Lu	2	Pb	<1	Se	<2	Tl	<0.5
Al	23	Co	<1	Ge	<0.5	Mg	<5	Pd	<0.5	Si	<100	Tm	<0.2
As	<2	Cs	<0.5	Hf	28	Mn	<1	Pr	<0.2	Sm	<0.2	U	<0.5
Au	<0.5	Cr	2	Hg	<0.5	Mo	<0.5	Pt	<0.5	Sn	<0.5	V	<1
B	<5	Cu	<1	Ho	<0.2	Na	<25	Rb	<0.5	Sr	<1	W	<0.5
Ba	<1	Dy	<0.2	In	nd	Nb	0.9	Re	<0.2	Ta	<0.5	Y	<0.5
Be	<0.5	Er	<0.2	Ir	<0.2	Nd	<0.2	Rh	<0.5	Tb	<0.5	Yb	<0.2
Bi	<0.2	Eu	<0.2	K	<25	Ni	<2	Ru	<0.5	Te	<1	Zn	<2
Ca	<25	Fe	22	La	<0.5	Os	<0.5	Sb	<0.5	Th	<0.5	Zr	MAJOR
Cd	<0.5	Ga	<0.5	Li	<2	P	<100	Sc	<10	Ti	<2		

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the RM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original RM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for 18 months from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.



Chuck Goudreau, Certifying Officer

November 16, 2018
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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The Netherlands

Reagent

10000 A1_00018

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.869.6799; 540.585.3030; Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 08, 2016

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- November 08, 2020

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director



300 Technology Drive
Christiansburg, VA 24073 - USA
info@inorganicventures.com

CERTIFICATE OF ANALYSIS

300 Technology Drive
Christiansburg, VA 24073 - USA
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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution
Catalog Number: CGAL10
Lot Number: K2-AL653003
Matrix: 7% (v/v) HNO3
Value / Analyte(s): 10 000 µg/mL ea:
Aluminum

Starting Material: Al Shot
Starting Material Lot#: 1834
Starting Material Purity: 99.9965%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10030 ± 33 µg/mL
Certified Density: 1.083 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 10008 ± 39 µg/mL
ICP Assay NIST SRM 3101a Lot Number: 140903
Assay Method #2 10039 ± 26 µg/mL
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

4785865
ID: 10000 AL_00018
Exp: 11/08/20 Prpd: CML
10000 Al IV

Characterization of CRM by two independent methods

Characterization of CRM by one method

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$$

X_a = mean of Assay Method A with standard uncertainty $u_{char a}$
 X_b = mean of Assay Method B with standard uncertainty $u_{char b}$
 w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$$w_a = (1/u_{char a}^2) / ((1/u_{char a}^2) + (1/u_{char b}^2))$$

$$w_b = (1/u_{char b}^2) / ((1/u_{char a}^2) + (1/u_{char b}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (z) = U_{CRM/RM} = k(u_{char a}^2 + u_{char b}^2 + u_{bb}^2 + u_{ts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char a \& b} = [(w_a)^2(u_{char a}^2) + (w_b)^2(u_{char b}^2)]^{1/2}$ where $u_{char a}$ and $u_{char b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{ts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = \text{mean of Assay Method A with standard uncertainty } u_{char a}$$

$$CRM/RM \text{ Expanded Uncertainty } (z) = U_{CRM/RM} = k(u_{char a}^2 + u_{bb}^2 + u_{ts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{ts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag < 0.000521	M Eu < 0.000521	O Na 0.039566	M Se < 0.003648	M Zn 0.030987
s Al < 0.000521	O Fe 0.031494	M Nb < 0.000521	O Si 0.185691	O Zr 0.000399
M As < 0.012509	M Ga 0.002264	M Nd 0.004290	M Sm < 0.002085	
M Au < 0.000518	M Gd < 0.004170	O Ni < 0.012890	M Sn < 0.005212	
O B 0.008253	M Ge < 0.002606	M Os < 0.000518	O Sr 0.000202	
O Ba < 0.000659	M Hf < 0.000521	n P < 0.000521	M Ta < 0.000521	
O Be < 0.000258	M Hg < 0.001555	M Pb 0.001549	M Tb < 0.000521	
M Bi < 0.005212	M Ho < 0.000521	M Pd < 0.000521	M Te < 0.014072	
O Ca 0.013185	M In < 0.002085	M Pr 0.000953	M Th < 0.007297	
M Cd < 0.004170	M Ir < 0.000518	M Pt < 0.000521	O Ti 0.001589	
M Ce 0.011680	O K 0.026175	M Rb < 0.000521	M Tl 0.003099	
M Co < 0.000521	O La 0.007115	M Re < 0.000521	M Tm < 0.000521	
O Cr 0.001038	O Li < 0.000103	M Rh < 0.000521	M U < 0.005212	
M Cs < 0.000521	M Lu < 0.000521	M Ru < 0.000518	M V 0.001549	
O Cu 0.030608	O Mg 0.016615	i S < 0.000521	M W < 0.000521	
M Dy < 0.003127	O Mn 0.000589	M Sb < 0.018763	O Y < 0.002578	
M Er 0.000834	M Mo < 0.002085	O Sc 0.000548	M Yb < 0.000521	

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 26.98 +3 6 Al(H₂O)₆+3

Chemical Compatibility -Soluble in HCl, HNO₃, HF and H₂SO₄. Avoid neutral media. Soluble in strongly basic NaOH forming the Al(OH)₄(H₂O)₂- species. Stable with most metals and inorganic anions. The phosphate is insoluble in water and only slightly soluble in acid.

Stability - 2-100 ppb levels stable for months in 1% HNO₃ / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO₃ / LDPE container.

Al Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO₃); a- Al₂O₃ (Na₂CO₃ fusion in Pt0);

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 27 amu	30 ppt	N/A	12C15N, 13C14N, 1H12C14N, 11B16O, 54Cr2+, 54Fe2+
ICP-OES 167.078 nm	0.1/0.009 µg/mL	1	Fe
ICP-OES 394.401 nm	0.05/0.006 µg/mL	1	U, Ce
ICP-OES 396.152 nm	0.03/0.006 µg/mL	1	Mo, Zr, Ce

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

Reagent

10000 A1_00019

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT-EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 08, 2016

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- November 08, 2020

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director



CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution
Catalog Number: CGAL10
Lot Number: K2-AL653003
Matrix: 7% (v/v) HNO3
Value / Analyte(s): 10 000 µg/mL ea:
Aluminum

5203473
ID: 10000 AL_00019
Exp: 11/08/20 Ppdt: SJS
10000 Al IV

Starting Material: Al Shot

Starting Material Lot#: 1834

Starting Material Purity: 99.9965%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10030 ± 33 µg/mL
Certified Density: 1.083 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 10008 ± 39 µg/mL
ICP Assay NIST SRM 3101a Lot Number: 140903
Assay Method #2 10039 ± 26 µg/mL
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$$

X_a = mean of Assay Method A with standard uncertainty $u_{char a}$
 X_b = mean of Assay Method B with standard uncertainty $u_{char b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$$w_a = (1/u_{char a}^2) / ((1/u_{char a}^2) + (1/u_{char b}^2))$$

$$w_b = (1/u_{char b}^2) / ((1/u_{char a}^2) + (1/u_{char b}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a\&b}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char a\&b} = [(w_a)^2 (u_{char a}^2) + (w_b)^2 (u_{char b}^2)]^{1/2}$ where $u_{char a}$ and $u_{char b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty
 u_{lts} = long term stability standard uncertainty (storage)
 u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = \text{mean of Assay Method A with standard uncertainty } u_{char a}$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty
 u_{lts} = long term stability standard uncertainty (storage)
 u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag < 0.000521	M Eu < 0.000521	O Na 0.039566	M Se < 0.003648	M Zn 0.030987
s Al <	O Fe 0.031494	M Nb < 0.000521	O Si 0.185691	O Zr 0.000399
M As < 0.012509	M Ga 0.002264	M Nd 0.004290	M Sm < 0.002085	
M Au < 0.000518	M Gd < 0.004170	O Ni < 0.012890	M Sn < 0.005212	
O B 0.008253	M Ge < 0.002606	M Os < 0.000518	O Sr 0.000202	
O Ba < 0.000659	M Hf < 0.000521	n P <	M Ta < 0.000521	
O Be < 0.000258	M Hg < 0.001555	M Pb 0.001549	M Tb < 0.000521	
M Bi < 0.005212	M Ho < 0.000521	M Pd < 0.000521	M Te < 0.014072	
O Ca 0.013185	M In < 0.002085	M Pr 0.000953	M Th < 0.007297	
M Cd < 0.004170	M Ir < 0.000518	M Pt < 0.000521	O Ti 0.001589	
M Ce 0.011680	O K 0.026175	M Rb < 0.000521	M Tl 0.003099	
M Co < 0.000521	O La 0.007115	M Re < 0.000521	M Tm < 0.000521	
O Cr 0.001038	O Li < 0.000103	M Rh < 0.000521	M U < 0.005212	
M Cs < 0.000521	M Lu < 0.000521	M Ru < 0.000518	M V 0.001549	
O Cu 0.030608	O Mg 0.016615	i S <	M W < 0.000521	
M Dy < 0.003127	O Mn 0.000589	M Sb < 0.018763	O Y < 0.002578	
M Er 0.000834	M Mo < 0.002085	O Sc 0.000548	M Yb < 0.000521	

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 26.98 +3 6 Al(H₂O)₆+3

Chemical Compatibility -Soluble in HCl, HNO₃, HF and H₂SO₄. Avoid neutral media. Soluble in strongly basic NaOH forming the Al(OH)₄(H₂O)₂- species. Stable with most metals and inorganic anions. The phosphate is insoluble in water and only slightly soluble in acid.

Stability - 2-100 ppb levels stable for months in 1% HNO₃ / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO₃ / LDPE container.

Al Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO₃); a- Al₂O₃ (Na₂CO₃ fusion in Pt0);

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 27 amu	30 ppt	N/A	12C15N, 13C14N, 1H12C14N, 11B16O, 54Cr2+, 54Fe2+
ICP-OES 167.078 nm	0.1/0.009 µg/mL	1	Fe
ICP-OES 394.401 nm	0.05/0.006 µg/mL	1	U, Ce
ICP-OES 396.152 nm	0.03/0.006 µg/mL	1	Mo, Zr, Ce

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

Reagent

10000 Fe_00021

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 12, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- July 12, 2021

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director



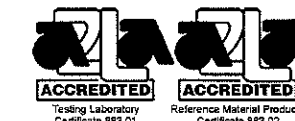
300 Technology Drive
Christiansburg, VA 24073 - USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

TEL: 800.669.6799 - 540.585.3030
FAX: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution
Catalog Number: CGFE10
Lot Number: M2-FE659835
Matrix: 5% (v/v) HNO3
Value / Analyte(s): 10 000 µg/mL ea:
Iron
Starting Material: Iron Metal
Starting Material Lot#: 2031 & 2146
Starting Material Purity: 99.9919%

4954179
ID: 10000 Fe_00021
Exp: 07/12/21 Ppfd: SJS
10000 Fe IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9993 ± 25 µg/mL
Density: 1.040 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 10014 ± 52 µg/mL
ICP Assay NIST SRM 3126a Lot Number: 140812
Assay Method #2 9988 ± 25 µg/mL
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$$

X_a = mean of Assay Method A with standard uncertainty $u_{char a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$$w_a = (1/u_{char a})^2 / ((1/u_{char a})^2 + (1/u_{char b})^2)$$

$$w_b = (1/u_{char b})^2 / ((1/u_{char a})^2 + (1/u_{char b})^2)$$

$$CRM/RM \text{ Expanded Uncertainty } (k) = U_{CRM/RM} = k(u_{char a\&b}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char a\&b} = [(w_a)^2(u_{char a})^2 + (w_b)^2(u_{char b})^2]^{1/2}$ where $u_{char a}$ and $u_{char b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = \text{mean of Assay Method A with standard uncertainty } u_{char a}$$

$$CRM/RM \text{ Expanded Uncertainty } (k) = U_{CRM/RM} = k(u_{char a}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag < 0.000607	M Eu < 0.000607	O Na 0.009866	M Se < 0.032805	O Zn 0.119626
M Al 0.009492	s Fe < 0.000607	M Nb < 0.000607	O Si 0.035517	M Zr < 0.002430
M As 0.060562	M Ga < 0.048601	M Nd < 0.000607	M Sm < 0.000607	
M Au < 0.008508	M Gd < 0.000607	O Ni 0.182522	M Sn < 0.012150	
M B < 0.015187	M Ge 0.060202	M Os < 0.001215	O Sr < 0.000997	
O Ba < 0.002494	M Hf < 0.000607	i P < 0.000001	M Ta < 0.000607	
M Be < 0.000607	M Hg < 0.001215	M Pb 0.001321	M Tb < 0.000607	
M Bi < 0.000607	M Ho < 0.000607	M Pd < 0.000607	M Te < 0.001822	
O Ca 0.022445	M In < 0.000607	M Pr < 0.000607	M Th < 0.001215	
M Cd < 0.000607	M Ir < 0.006685	M Pt < 0.000607	M Ti < 0.009720	
M Ce < 0.000607	O K 0.003453	M Rb < 0.000607	M Tl < 0.000607	
O Co 0.254052	M La < 0.000607	M Re < 0.000607	M Tm < 0.000607	
O Cr 0.034284	O Li < 0.000124	M Rh < 0.000607	M U < 0.002430	
M Cs < 0.000607	M Lu < 0.000607	M Ru < 0.000607	M V < 0.003645	
O Cu 0.019732	O Mg 0.001973	O S 0.032064	M W < 0.003645	
M Dy < 0.000607	O Mn 0.073995	M Sb 0.043139	M Y < 0.000607	
M Er < 0.000607	M Mo 0.012016	M Sc < 0.001822	M Yb < 0.000607	

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 55.85 +3 6 Fe(H2O)63+
Chemical Compatibility -Stable in HCl, HNO3, H2SO4 ,HF and H3PO4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

Fe Containing Samples (Preparation and Solution) - Metal (Soluble in HCl); Oxides (If the oxide has been at high temperature then Na2CO3 fusion in Pt0 followed by HCl dissolution otherwise dissolve in dilute HCl); Ores (See Oxides above using only the fusion approach).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 56 amu	970 ppt	N/A	40Ar15N1H, 40Ar16O, 36Ar17O1H , 38Ar18O, 37Cl18O1H, 40Ca16O
ICP-OES 238.204 nm	0.005/0.001 µg/mL	1	Ru, Co
ICP-OES 239.562 nm	0.005/0.001 µg/mL	1	Co, W, Cr
ICP-OES 259.940 nm	0.006/0.001 µg/mL	1	Hf, Nb

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

Reagent

10000 Fe_00022

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 12, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- July 12, 2021

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director



CERTIFICATE OF ANALYSIS

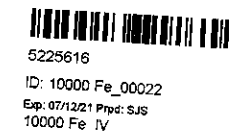
1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution
Catalog Number: CGFE10
Lot Number: M2-FE659835
Matrix: 5% (v/v) HNO3
Value / Analyte(s): 10 000 µg/mL ea:
Iron
Starting Material: Iron Metal
Starting Material Lot#: 2031 & 2146
Starting Material Purity: 99.9919%



3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9993 ± 25 µg/mL
Density: 1.040 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 10014 ± 52 µg/mL
ICP Assay NIST SRM 3126a Lot Number: 140812
Assay Method #2 9988 ± 25 µg/mL
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods—Characterization of CRM by one method

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$$

X_a = mean of Assay Method A with standard uncertainty $u_{char a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$$w_a = (1/u_{char a})^2 / ((1/u_{char a})^2 + (1/u_{char b})^2)$$

$$w_b = (1/u_{char b})^2 / ((1/u_{char a})^2 + (1/u_{char b})^2)$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{its}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char a \& b} = [(w_a)^2 (u_{char a})^2 + (w_b)^2 (u_{char b})^2]^{1/2}$ where $u_{char a}$ and $u_{char b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = \text{mean of Assay Method A with standard uncertainty } u_{char a}$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{its}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char a} = \text{square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume}$

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag < 0.000607	M Eu < 0.000607	M Na < 0.009866	M Se < 0.032805	O Zn < 0.119626
M Al < 0.009492	s Fe < 0.000607	M Nb < 0.000607	O Si < 0.035517	M Zr < 0.002430
M As < 0.060562	M Ga < 0.048601	M Nd < 0.000607	M Sm < 0.000607	
M Au < 0.008508	M Gd < 0.000607	O Ni < 0.182522	M Sn < 0.012150	
M B < 0.015187	M Ge < 0.060202	M Os < 0.001215	O Sr < 0.000997	
O Ba < 0.002494	M Hf < 0.000607	i P < 0.000001	M Ta < 0.000607	
M Be < 0.000607	M Hg < 0.001215	M Pb < 0.001321	M Tb < 0.000607	
M Bi < 0.000607	M Ho < 0.000607	M Pd < 0.000607	M Te < 0.001822	
O Ca < 0.022445	M In < 0.000607	Pr < 0.000607	M Th < 0.001215	
M Cd < 0.000607	M Ir < 0.008885	M Pt < 0.000607	M Ti < 0.009720	
M Ce < 0.000607	O K < 0.003453	M Rb < 0.000607	M Tl < 0.000607	
O Co < 0.254052	M La < 0.000607	M Re < 0.000607	M Tm < 0.000607	
O Cr < 0.034284	O Li < 0.000124	M Rh < 0.000607	M U < 0.002430	
M Cs < 0.000607	M Lu < 0.000607	M Ru < 0.000607	M V < 0.003645	
O Cu < 0.019732	O Mg < 0.001973	O S < 0.032064	M W < 0.003645	
M Dy < 0.000607	O Mn < 0.073995	M Sb < 0.043139	M Y < 0.000607	
M Er < 0.000607	M Mo < 0.012016	M Sc < 0.001822	M Yb < 0.000607	

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 55.85 +3 6 Fe(H2O)63+

Chemical Compatibility - Stable in HCl, HNO3, H2SO4, HF and H3PO4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

Fe Containing Samples (Preparation and Solution) - Metal (Soluble in HCl); Oxides (If the oxide has been at high temperature then Na2CO3 fusion in PtO followed by HCl dissolution otherwise dissolve in dilute HCl); Ores (See Oxides above using only the fusion approach).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 56 amu	970 ppt	N/A	40Ar15N1H, 40Ar16O, 36Ar17O1H, 38Ar18O, 37Cl18O1H, 40Ca16O
ICP-OES 238.204 nm	0.005/0.001 µg/mL	1	Ru, Co
ICP-OES 239.562 nm	0.005/0.001 µg/mL	1	Co, W, Cr
ICP-OES 259.940 nm	0.006/0.001 µg/mL	1	Hf, Nb

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

Reagent

10000 Na (HP) _00002

Certificate of Analysis

Certified Reference Material



Product Description:

5206983
ID: 10000 Na (HP)_00002
Exp: 07/09/19 Prpd: Opn: 07/10/18
10000 Na HP

Sodium

ISO Guide 34:2009 (RMP) Accreditation
Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Product Number:
Lot Number:
Matrix:

10M52-2
1721911
1% (v/v) HCl

Certified Value:

Element	($\mu\text{g/mL}$)	SRM ID	SRM Lot#
Sodium	10,000 \pm 30	3152a	120715

The Certified value is based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

* Refer to Traceability Information, Section d

Density: 1.018 g/mL \pm 0.002 g/mL @ 20.0° C \pm 0.3 °C

Uncertified Values:

Trace Metal Impurity Scan: The data reported are based upon a scan of this specific lot via ICP-OES/ICP-MS analysis. The values are reported in $\mu\text{g/L}$.

Ag < 0.1	Cu < 0.5	Li < 0.1	Rb < 0.1	Th < 0.1
Al < 5	Dy < 0.1	Lu < 0.1	Re < 0.1	Ti < 0.1
As < 0.3	Er < 0.1	Mg 3	Rh < 0.1	Tl < 0.1
Au < 0.1	Eu < 0.1	Mn < 0.3	Ru < 0.1	Tm < 0.1
B < 5	Fe 60	Mo < 0.1	Sb < 0.1	U < 0.3
Ba < 0.1	Ga < 0.1	Na M	Sc < 0.1	V < 0.3
Be < 0.1	Gd < 0.1	Nb < 0.1	Se < 0.5	W < 0.1
Bi < 0.1	Ge < 0.1	Nd < 0.1	Si < 10	Y < 0.1
Ca 40	Hf < 0.1	Ni < 0.1	Sm < 0.1	Yb < 0.1
Cd < 0.1	Ho < 0.1	Os < 0.1	Sn < 3	Zn < 0.1
Ce < 0.1	In < 0.1	Pb < 0.3	Sr < 0.1	Zr < 0.1
Co < 0.3	Ir < 0.1	Pd < 0.1	Ta < 0.1	
Cr < 0.3	K < 50	Pr < 0.1	Tb < 0.1	
Cs < 0.1	La < 0.1	Pt < 0.1	Te < 0.1	

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for **eighteen** months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: July 2018

Certificate Issue Date: October 9, 2017

Moven Mututuvvari
Moven Mututuvvari, Ph. D, Laboratory Manager

Preparation Information:

This standard is prepared using 99.999% pure **Sodium Chloride** which was purchased from a qualified vendor per ISO 9001:2008 guidelines and assayed by analytical methods for conformity prior to use. This standard was manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water. Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. Standard Weight and Analytical Balance

The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.

The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. Volumetric Device

The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. Thermometer

The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. Calibration Standards:

The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If an SRM is not available, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High-Purity Standards.

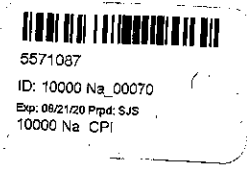
Reagent

10000 Na_00070



CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM
SE Std Sodium (Na) – 10,000 µg/mL
 Matrix: 5% HNO₃



Product #: TA-10M521
 Lot #: 752887-20

Element	Certified Concentration & Uncertainty
Na	10,070 ± 20 µg/mL (w/v)
	9771 ± 24 µg/g (w/w)

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to a nominal concentration of 10,000 µg/mL by gravimetric methods using 99.997% pure sodium carbonate (Na₂CO₃) dissolved in high purity nitric acid (HNO₃) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3152a, lot #120715**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Indicative Values: ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)									
Ag <5	Co <10	Ge <5	Mg <50	Pd <5	Si <1000	V <10			
Al <20	Cs 11	Hf <2	Mn <10	Pr <2	Sm <2	W <5			
As <20	Cr <5	Hg <5	Mo <5	Pt <5	Sn <5	Y <5			
Au <5	Cu <10	Ho <2	Na MAJOR	Rb 70	Sr 14	Yb <2			
B <50	Dy <2	In nd	Nb <5	Re <2	Ta <5	Zn <20			
Ba 26	Er <2	Ir <2	Nd <2	Rh <5	Tb <5				
Bi <2	Eu <2	K <250	Ni <20	Ru <5	Te <10				
Ca <250	Fe <100	La <5	Os <5	Sb <5	Ti <20				
Cd <5	Ga <5	Li <20	P <1000	Sc <50	Tl <5				
Ce <2	Gd <2	Lu <2	Pb <10	Se <20	Tm <2				

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

 Chuck Goudreau, Certifying Officer

February 21, 2019

 Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

USA
 5580 Skylane Boulevard P: 707.525.5788
 Santa Rosa, CA 95403 P: 800.878.7654
 F: 707.545.7901

Europe
 Nieuwe Hemweg 7P P: +31 20 638 05 97
 1013BG Amsterdam F: +31 20 420 28 36
 The Netherlands

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Quality Manual Rev: No. 5, 03/01/2013

Further Information: Please contact CPI International for further information about this CRM.

Quality Certifications: This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
 - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

Reagent

Hg ICV Stock_00011

Standard Verification Form

Standard Information			
Vendor Standard Name	MSHG-100PPM		
Vendor	INORGANIC VENTURES		
Lot number	M2-HG659091		
Initial Verification	<input type="checkbox"/>	Re-Verification	<input checked="" type="checkbox"/>

TALS "Reagent" Information	
TALS Standard ID	H ₂ IGV STOCK (00011)
COA Reviewed against what is in TALS	<input checked="" type="checkbox"/>

Verification Information and Data			
Verified by	MS	Instrument ID	033
Verification Date	3/1/19	Method Reference	7470A
ID of Standard Used for Verification	H ₂ ULTRA PRIM (00014)	Batch # / Chrom Work List #	445491

Attach to this form: formulary report, COA and data used for verification
Attach to standard in TALS: this form and all supporting documentation including the original CoA

See Acceptance Criteria Below:

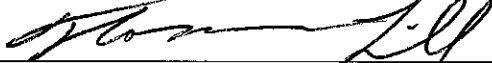
Approved for Use	<input checked="" type="checkbox"/>	Not Approved for Use	<input type="checkbox"/>
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New expiration date can be no greater than 1/2 the designated standards shelf life from the date of re-verification. Standards can only be re-verified one time.

New Expiration Date:	
----------------------	--

1st Level Review MS Date: 3/5/19

2nd Level Review DB Date: 3/5/19

QA Review (Re-verification only)		Date: <u>3/5/19</u>
----------------------------------	--------------------------------------------------------------------------------------	---------------------

Acceptance Criteria		
Department	Standard Analytes	Poor Performers* and Esterified Analytes
GC/HPLC	≤ 15 %D	≤ 35 %D or ≤ 50 %D for dinoseb
GCMS/LCMS	≤ 35 %D	≤ 55 %D
MSVOA	≤ 25 %D	≤ 55 %D
Metals	≤ 8 %D	NA
Wet Chemistry	≤ 5 %D	NA

*See analytical SOP for details on poor performing analytes.



320 Tech Center Way
 Christchurch, NZ 8013
 info@inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 602.469.6779 - 542.552.3030
 fax: 542.552.3012
 info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Mass Spec Solution
 Catalog Number: MSHG-100PPM
 Lot Number: M2-HG659091
 Matrix: 10% (v/v) HCl
 Value / Analyte(s): 100 µg/mL ea:
 Mercury
 Starting Material: Hg metal
 Starting Material Lot#: 05214TX, R307HGA1, 1780
 Starting Material Purity: 99.9994%

4064659
 ID: Hg ICV Stock_00010
 Exp: 06/19/21 Prep: CDH
 Hg ICV Stock Inorganic Ve

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 100.10 ± 0.43 µg/mL
 Density: 1.021 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Hg	ICP Assay	3133	061204
Hg	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods Characterization of CRM by one method

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$$X_{CRM/RM} = [(w_a)(X_a)] + (w_b)(X_b)]$$

X_a = mean of Assay Method A with standard uncertainty $u_{char a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char b}$

w_a and w_b = the weighing factors for each method calculated using the inverse square of the variance:

$$w_a = (1/u_{char a})^2 / ((1/u_{char a})^2 + (1/u_{char b})^2)$$

$$w_b = (1/u_{char b})^2 / ((1/u_{char a})^2 + (1/u_{char b})^2)$$

$$CRM/RM \text{ Expanded Uncertainty } (\hat{x}) = U_{CRM/RM} = k(u^2_{char a \& b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char a \& b} = [(w_a)^2(u_{char a})^2 + (w_b)^2(u_{char b})^2]^{1/2}$ where $u_{char a}$ and $u_{char b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = \text{mean of Assay Method A with standard uncertainty } u_{char a}$$

$$CRM/RM \text{ Expanded Uncertainty } (\hat{x}) = U_{CRM/RM} = k(u^2_{char a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag	0.000171	M Eu	< 0.000203	O Na	0.000076	M Se	< 0.013813	O Zn	0.000012
O Al	0.000016	O Fe	0.000014	M Nb	< 0.000203	O Si	0.000044	M Zr	< 0.001218
M As	< 0.002844	M Ga	< 0.000203	M Nd	< 0.000203	M Sm	< 0.000203		
O Au	< 0.003219	M Gd	< 0.000203	O Ni	< 0.001812	M Sn	< 0.000203		
O B	< 0.002478	M Ge	< 0.000609	M Os	< 0.000201	O Sr	< 0.000152		
M Ba	< 0.000203	M Hf	< 0.000203	O P	< 0.010730	M Ta	< 0.000203		
O Be	< 0.000321	s Hg	< 0.000203	M Pb	< 0.000203	M Tb	< 0.000203		
M Bi	< 0.013001	M Ho	< 0.000203	M Pd	< 0.000403	M Te	< 0.001422		
O Ca	0.000177	M In	< 0.004062	M Pr	< 0.000203	M Th	< 0.000203		
M Cd	0.000007	M Ir	< 0.000201	M Pt	< 0.000203	O Tl	< 0.000530		
M Ce	< 0.000203	M K	0.000043	M Rb	< 0.001218	O Tl	< 0.002787		
M Co	< 0.000406	M La	< 0.000203	M Re	< 0.001015	M Tm	< 0.000203		
O Cr	0.000016	O Li	< 0.000180	M Rh	< 0.000203	M U	< 0.000812		
M Cs	< 0.000203	M Lu	< 0.000203	M Ru	< 0.000201	M V	< 0.000406		
M Cu	< 0.000406	O Mg	0.000037	O S	< 0.023508	M W	< 0.000609		
M Dy	< 0.000203	M Mn	< 0.000203	O Sb	< 0.009657	M Y	< 0.000203		
M Er	< 0.000203	O Mo	< 0.002152	M Sc	< 0.000406	M Yb	< 0.000203		

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 200.59 +2 4 Hg(OH)(aq) 1+
Chemical Compatibility - Stable in HNO₃. Avoid basic media forming insoluble carbonate. The sulfide, basic carbonate, oxalate, phosphate, arsenite, arsenate and iodide are insoluble in water.

Stability - 2-100 ppb levels not stable in 1% HNO₃ / LDPE container, stable in 10% HNO₃ packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO₃ packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO₃ / LDPE container.

Hg Containing Samples (Preparation and Solution) - Metal (soluble in HNO₃); Oxide (Soluble in HNO₃); Ores and Organic based (The literature has more references to the preparation of Hg containing samples than any other element. Please consult the literature for your specific sample type, since such preparations are prone to error. Or e-mail our technical staff and we will contact you to discuss your particular sample preparation questions in further detail.).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 202 amu	9 ppt	n/a	186W16O
ICP-OES 184.950 nm	0.03 / 0.005 µg/mL	1	
ICP-OES 194.227 nm	0.03 / 0.005 µg/mL	1	V
ICP-OES 253.652 nm	0.1 / 0.03 µg/mL	1	Ta, Co, Th, Rh, Fe, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 19, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 19, 2021**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control



Certifying Officer:

Paul Gaines
CEO, Senior Technical Director





Reagent ID: Hg Biwk ICV_00268

Description:	Hg Biweekly 400ppb ICV Intermediate	Expiration Date:	03/05/2019
No. of Bottles:	1	Laboratory:	TestAmerica Denver
Storage Location:	Mercury	Prepared By:	Perry, Tara H
Reagent Volume:	100.000 mL	Solvent:	1% HNO3
Creation Date:	02/19/2019	Solvent Lot:	K23022
Open Date:			
Container(s):	5555669		
Comment:	Use 0.4ml of Hg ICV Stock into 100ml of 1% HNO3.		

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
Hg	Hg ICV Stock_00010	03/05/2019	100.00000	mg/L	0.40000	mg/L

Source Reagents

Reagent	Description	Type	Expiration	Vendor	Vendor Lot #	Vendor Cat Lot #	Volume Used	Volume Units
Hg ICV Stock_00010	Hg ICV Stock Inorganic Ventures 100PPM	ASTD	03/05/19	Inorganic Ventures	H2-HG02113R	MSHG-100PPM	0.40000	mL

Report Generated By CETAC QuickTrace

Analyst: denmet

Worksheet file: C:\Program Files\QuickTrace\Worksheets\190301-33a.wsz

Date Started: 3/1/2019 11:58:39 AM

Comment:

Results

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt. ODF	Vol.
IC 280-449351/1-A	STD	03/01/19 02:06:05 pm	0.000	17	15.15		1.00 1.00	1.00
IC 280-449351/2-A	STD	03/01/19 02:08:18 pm	0.060	1184	0.20		1.00 1.00	1.00
IC 280-449351/3-A	STD	03/01/19 02:10:32 pm	0.120	2386	0.27		1.00 1.00	1.00
IC 280-449351/4-A	STD	03/01/19 02:12:47 pm	0.300	5831	0.10		1.00 1.00	1.00
IC 280-449351/5-A	STD	03/01/19 02:15:02 pm	0.600	11824	0.13		1.00 1.00	1.00
IC 280-449351/6-A	STD	03/01/19 02:17:17 pm	1.200	23145	0.19		1.00 1.00	1.00
IC 280-449351/7-A	STD	03/01/19 02:19:34 pm	3.000	57866	0.14		1.00 1.00	1.00
IC 280-449351/8-A	STD	03/01/19 02:21:50 pm	6.000	114226	0.15		1.00 1.00	1.00

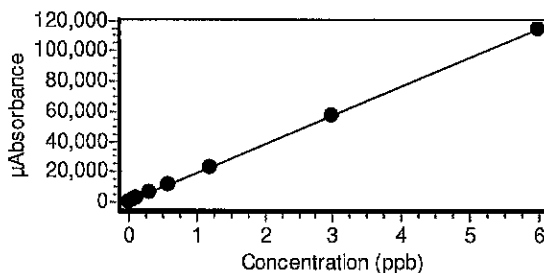
Calibration

Equation: $A = 195.561 + 19052.700C$

R2: 0.99996

SEE: 277.2932

Flags:



ICV 280-449351/9-A	ICV	03/01/19 02:24:30 pm	2.361	45185	0.47		1.00 1.00	1.00
% Recovery								
ICB 280-449351/10-A	ICB	03/01/19 02:26:43 pm	-0.011	-8	40.57		1.00 1.00	1.00

Handwritten: ICV STOCK 0.0010 (4964859)

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt. ODF	Vol.
CRA 280-449351/11-A % Recovery 96.05	CRDL	03/01/19 02:28:57 pm	0.115	2392	0.31		1.00 1.00	1.00
CCV 280-449351/12-A % Recovery 100.91	CCV	03/01/19 02:31:13 pm	3.027	57873	0.18		1.00 1.00	1.00
CCB 280-449351/13-A	CCB	03/01/19 02:33:26 pm	-0.011	-14	10.09		1.00 1.00	1.00
MB 280-449327/1-A	UNK	03/01/19 02:35:38 pm	-0.009	22	8.05		1.00 1.00	1.00
280-120453-C-1-A MDLV	UNK	03/01/19 02:37:50 pm	0.039	942	0.30		1.00 1.00	1.00
280-120453-A-2-A MDLV	UNK	03/01/19 02:40:02 pm	0.041	971	0.17		1.00 1.00	1.00
280-120453-A-3-A LOQV	UNK	03/01/19 02:42:15 pm	0.113	2347	0.26		1.00 1.00	1.00
MB 280-449346/1-A	UNK	03/01/19 02:44:28 pm	-0.009	21	13.48		1.00 1.00	1.00
LCS 280-449346/2-A	UNK	03/01/19 02:46:41 pm	3.052	58349	0.23		1.00 1.00	1.00
280-120566-A-2-E	UNK	03/01/19 02:48:55 pm	-0.010	12	11.46		1.00 1.00	1.00
280-120566-A-3-E	UNK	03/01/19 02:51:09 pm	-0.009	33	7.40		1.00 1.00	1.00
280-120566-C-5-C	UNK	03/01/19 02:53:23 pm	-0.008	35	3.65		1.00 1.00	1.00
280-120566-A-6-C	UNK	03/01/19 02:55:38 pm	-0.009	30	6.75		1.00 1.00	1.00
CCV 280-449351/12-A % Recovery 101.38	CCV	03/01/19 02:57:54 pm	3.041	58141	0.43		1.00 1.00	1.00
CCB 280-449351/13-A	CCB	03/01/19 03:00:06 pm	-0.010	-2	70.91		1.00 1.00	1.00
280-120566-A-7-C	UNK	03/01/19 03:02:21 pm	-0.007	68	10.51		1.00 1.00	1.00
280-120566-A-7-D MS	UNK	03/01/19 03:04:37 pm	2.979	56960	0.53		1.00 1.00	1.00

Reagent

Hg Ultra Prim_00014

Standard Verification Form

Standard Information			
Vendor Standard Name	MERCURY STANDARD ICP-080		
Vendor	ULTRA		
Lot number	CR-3231		
Initial Verification	<input type="checkbox"/>	Re-Verification	<input checked="" type="checkbox"/>

TALS "Reagent" Information	
TALS Standard ID	H ₂ ULTRAPRIM (00014)
COA Reviewed against what is in TALS	<input checked="" type="checkbox"/>

Verification Information and Data			
Verified by	MJ	Instrument ID	033
Verification Date	3/1/19	Method Reference	7470A
ID of Standard Used for Verification	H ₂ ICP STOCK (00011)	Batch # / Chrom Work List #	449491

Attach to this form: formulary report , COA and data used for verification
Attach to standard in TALS: this form and all supporting documentation including the original CoA

See Acceptance Criteria Below:

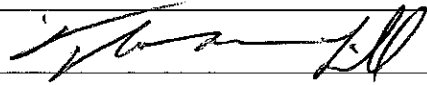
Approved for Use	<input checked="" type="checkbox"/>	Not Approved for Use	<input type="checkbox"/>
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New expiration date can be no greater than 1/2 the designated standards shelf life from the date of re-verification. Standards can only be re-verified one time.

New Expiration Date:	
----------------------	--

1st Level Review MJ Date: 3/5/19

2nd Level Review DG Date: 3/5/19

QA Review (Re-verification only)		Date: <u> 3/5/19 </u>
----------------------------------	-------------------------------------------------------------------------------------	-----------------------------

Acceptance Criteria		
Department	Standard Analytes	Poor Performers* and Esterified Analytes
GC/HPLC	≤ 15 %D	≤ 35 %D or ≤ 50 %D for dinoseb
GCMS/LCMS	≤ 35 %D	≤ 55 %D
MSVOA	≤ 25 %D	≤ 55 %D
Metals	≤ 8 %D	NA
Wet Chemistry	≤ 5 %D	NA

*See analytical SOP for details on poor performing analytes.

Certificate of Analysis



ISO Guide 34 Reference Material

Product Number: ICP-080
Lot Number: CR-3231

Lot Issue Date: 14-Jul 2017
Expiration Date: 31-Aug 2024

Product Name: Mercury ICP Standard

Description:

This Reference Material (RM) was gravimetrically prepared in accordance with ISO Guide 34 and under ULTRA Scientific's ISO 9001 registered quality system. The neat materials used for this product have been verified by ULTRA's ISO 17025 laboratory and under ULTRA's ISO Guide 34 accreditation. The analyte concentrations were verified by ULTRA's ISO 17025 accredited laboratory. For each analyte, the true value, with its uncertainty value calculated at the 95% confidence level, is reported below.

Analyte	Starting Material	Lot Number	Purity (%)	Calculated Value	Traceability & Method
mercury	*mercuric nitrate	RM11214	99.999%	1002 ± 2 µg/mL	NIST SRM 3133; ICP-OES

*light sensitive

Solvent: 2% nitric acid in low TOC water (< 50 ppb)

Non-Certified Values:

Density: 1.0101 g/mL @ 20.00 ± 0.05°C

Trace Metallic Impurities in Solution Standard in µg/mL

* __ Al <0.005 ND	* __ Ga <0.005 ND	n __ Nb	n __ S
* __ Sb <0.005 ND	n __ Ge	n __ Os	n __ Ta
* __ As <0.005 ND	n __ Au	* __ Pd <0.005 ND	n __ Te
* __ Ba <0.005 ND	n __ Hf	* __ P <0.005 ND	n __ Tb
* __ Be <0.005 ND	n __ Ho	* __ Pt <0.005 ND	n __ Tl
* __ Bi <0.005 ND	* __ In <0.005 ND	* __ K <0.005 ND	* __ Th <0.005 ND
* __ B <0.005 ND	n __ Ir	n __ Pr	n __ Tm
* __ Cd <0.005 ND	* __ Fe <0.005 ND	n __ Re	* __ Sn <0.005 ND
* __ Cs <0.005 ND	* __ La <0.005 ND	n __ Rh	* __ Tl <0.005 ND
* __ Ca <0.005 ND	* __ Pb <0.005 ND	n __ Rb	n __ W
n __ Ce	* __ Li <0.005 ND	n __ Ru	n __ U
* __ Cr <0.005 ND	n __ Lu	n __ Sm	* __ V <0.005 ND
* __ Co <0.005 ND	* __ Mg <0.005 ND	n __ Sc	n __ Yb
* __ Cu <0.005 ND	* __ Mn <0.005 ND	* __ Se <0.005 ND	n __ Y
n __ Dy	s __ Hg	* __ Si <0.005 ND	* __ Zn <0.005 ND
* __ Er <0.005 ND	* __ Mo <0.005 ND	* __ Ag <0.005 ND	n __ Zr
* __ Eu <0.005 ND	n __ Nd	* __ Na <0.005 ND	
* __ Gd <0.005 ND	* __ Ni <0.005 ND	* __ Sr <0.005 ND	

* - element checked; l - spectral interference; n - element not checked; D - element detected; ND - element not detected; s - standard element



ISO 9001 Registered Quality System - TUV USA

Page 1 of 2

Certificate of Analysis



ISO Guide 34 Reference Material

Product Number: ICP-080
Lot Number: CR-3231

Lot Issue Date: 14-Jul 2017
Expiration Date: 31-Aug 2024

Storage: Store at Room Temperature (15° to 30°C).

Traceability:

Traceability has been established through an unbroken chain of comparisons, each having stated uncertainties. Comparisons are based on appropriate physical or chemical measurements, including gravimetric or volumetric dilution, where the mass or volume of a solution before and after dilution is measured. The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1, ISO 9001, ISO 17025, and ISO Guide 34. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 819.

Estimation of Uncertainties:

The true value is reported, with its uncertainty value calculated at the 95% confidence level.

Homogeneity:

This RM was formulated and unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:

This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods and continuing calibration verification.

Instructions for Use:

Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening and should be processed without delay for the true value to be valid within the stated uncertainties. Do not pipet from the bottle. Do not return any material removed for pipetting to the bottle. Tightly cap the bottle after removing any material and store according to the instructions noted above.

Hazards:


Refer to the Safety Data Sheet for information regarding this RM.


Expiration of Certification:

The certification of this RM is valid, within the measurement uncertainty specified, until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:

The real-time, long term stability of the RM may be monitored over the lifetime of the certification. If substantive changes occur that affect the certification before the expiration of this certificate, ULTRA Scientific will notify the purchaser.


John Russo
President


Monica Bourgeois
Director of QA/RA



ISO 9001 Registered Quality System – TUV USA

Page 2 of 2



Reagent ID: Hg Mnth Spike_00137

Description:	Hg Monthly 10mg/L Spike stock	Expiration Date:	03/04/2019
No. of Bottles:	1	Laboratory:	TestAmerica Denver
Storage Location:	Mercury	Prepared By:	Jones, Micaela R
Reagent Volume:	100.000 mL	Solvent:	1% HNO3
Creation Date:	02/04/2019	Solvent Lot:	K23022
Open Date:			
Container(s):	5537382		
Comment:	1ml Ultra Primary source into 100ml of 1% HNO3		

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
Hg	Hg Ultra Prim_00012	03/09/2019	1000.00000	mg/L	10.00000	mg/L

Source Reagents

Reagent	Description	Type	Expiration	Vendor	Vendor Lot #	Vendor Cat Lot #	Volume Used	Volume Units
Hg Ultra Prim_00012	Ultra 1000 ppm Hg primary stock	ASTD	03/09/19	Ultra Scientific	T00602	ICP-080	1.00000	mL



Reagent ID: Hg Daily Spk_02362

Description:	Hg Daily Spike Solution	Expiration Date:	03/02/2019
No. of Bottles:	1	Laboratory:	TestAmerica Denver
Storage Location:	Mercury	Prepared By:	Jones, Micaela R
Reagent Volume:	100.000 mL	Solvent:	1% HNO3
Creation Date:	03/01/2019	Solvent Lot:	K23022
Open Date:			
Container(s):	5568730		
Comment:	1ml of 10ppm Hg Mnth Spike into 100ml 1% HNO3		

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
Hg	Hg Mnth Spike_00137	03/04/2019	10.00000	mg/L	0.10000	mg/L

Source Reagents

Reagent	Description	Type	Expiration	Vendor	Vendor Lot #	Vendor Cat Lot #	Volume Used	Volume Units
Hg Mnth Spike_00137	Hg Monthly 10mg/L Spike stock		03/04/19				1.00000	mL

Report Generated By CETAC QuickTrace

Analyst: denmet

Worksheet file: C:\Program Files\QuickTrace\Worksheets\190301-33a.wsz

Date Started: 3/1/2019 11:58:39 AM

Comment:

Results

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
IC 280-449351/1-A	STD	03/01/19 02:06:05 pm	0.000	17	15.15		1.00	1.00
IC 280-449351/2-A	STD	03/01/19 02:08:18 pm	0.060	1184	0.20		1.00	1.00
IC 280-449351/3-A	STD	03/01/19 02:10:32 pm	0.120	2386	0.27		1.00	1.00
IC 280-449351/4-A	STD	03/01/19 02:12:47 pm	0.300	5831	0.10		1.00	1.00
IC 280-449351/5-A	STD	03/01/19 02:15:02 pm	0.600	11824	0.13		1.00	1.00
IC 280-449351/6-A	STD	03/01/19 02:17:17 pm	1.200	23145	0.19		1.00	1.00
IC 280-449351/7-A	STD	03/01/19 02:19:34 pm	3.000	57866	0.14		1.00	1.00
IC 280-449351/8-A	STD	03/01/19 02:21:50 pm	6.000	114226	0.15		1.00	1.00

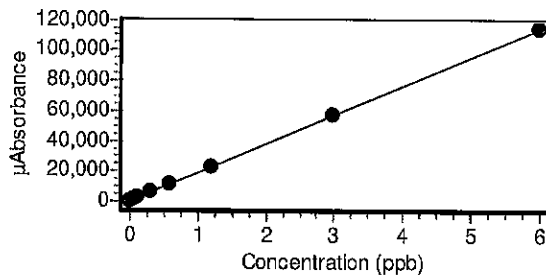
Calibration

Equation: $A = 195.561 + 19052.700C$

R2: 0.99996

SEE: 277.2932

Flags:



ICV 280-449351/9-A	ICV	03/01/19 02:24:30 pm	2.361	45185	0.47		1.00	1.00
% Recovery							98.39	1.00
ICB 280-449351/10-A	ICB	03/01/19 02:26:43 pm	-0.011	-8	40.57		1.00	1.00

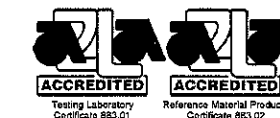
Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt. ODF	Vol.
CRA 280-449351/11-A % Recovery 96.05	CRDL	03/01/19 02:28:57 pm	0.115	2392	0.31		1.00 1.00	1.00
CCV 280-449351/12-A % Recovery 100.91	CCV	03/01/19 02:31:13 pm	3.027	57873	0.18		1.00 1.00	1.00
CCB 280-449351/13-A	CCB	03/01/19 02:33:26 pm	-0.011	-14	10.09		1.00 1.00	1.00
MB 280-449327/1-A	UNK	03/01/19 02:35:38 pm	-0.009	22	8.05		1.00 1.00	1.00
280-120453-C-1-A MDLV	UNK	03/01/19 02:37:50 pm	0.039	942	0.30		1.00 1.00	1.00
280-120453-A-2-A MDLV	UNK	03/01/19 02:40:02 pm	0.041	971	0.17		1.00 1.00	1.00
280-120453-A-3-A LOQV	UNK	03/01/19 02:42:15 pm	0.113	2347	0.26		1.00 1.00	1.00
MB 280-449346/1-A	UNK	03/01/19 02:44:28 pm	-0.009	21	13.48		1.00 1.00	1.00
LCS 280-449346/2-A	UNK	03/01/19 02:46:41 pm	3.052	58349	0.23		1.00 1.00	1.00
280-120566-A-2-E	UNK	03/01/19 02:48:55 pm	-0.010	12	11.46		1.00 1.00	1.00
280-120566-A-3-E	UNK	03/01/19 02:51:09 pm	-0.009	33	7.40		1.00 1.00	1.00
280-120566-C-5-C	UNK	03/01/19 02:53:23 pm	-0.008	35	3.65		1.00 1.00	1.00
280-120566-A-6-C	UNK	03/01/19 02:55:38 pm	-0.009	30	6.75		1.00 1.00	1.00
CCV 280-449351/12-A % Recovery 101.38	CCV	03/01/19 02:57:54 pm	3.041	58141	0.43		1.00 1.00	1.00
CCB 280-449351/13-A	CCB	03/01/19 03:00:06 pm	-0.010	-2	70.91		1.00 1.00	1.00
280-120566-A-7-C	UNK	03/01/19 03:02:21 pm	-0.007	68	10.51		1.00 1.00	1.00
280-120566-A-7-D MS	UNK	03/01/19 03:04:37 pm	2.979	56960	0.53		1.00 1.00	1.00

Reagent

Icp cal std 3_00018

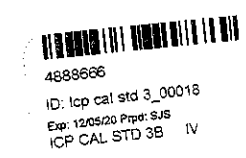
1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
 Catalog Number: STLDEN-STD-3B
 Lot Number: M2-MEB663620
 Matrix: 5% (v/v) HNO3
 Value / Analyte(s): 10 000 µg/mL ea:
 Potassium,
 4 000 µg/mL ea:
 Magnesium,
 1 000 µg/mL ea:
 Calcium, Sodium,
 500 µg/mL ea:
 Iron,
 200 µg/mL ea:
 Lithium, Phosphorus,
 100 µg/mL ea:
 Strontium, Vanadium, Zinc,
 Manganese, Cadmium, Cobalt,
 Chromium, Copper, Silver,
 Aluminum, Boron, Barium,
 Beryllium, Nickel



3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	100.0 ± 0.5 µg/mL	Barium, Ba	100.0 ± 0.5 µg/mL
Beryllium, Be	100.0 ± 0.7 µg/mL	Boron, B	100.0 ± 0.6 µg/mL
Cadmium, Cd	100.0 ± 0.5 µg/mL	Calcium, Ca	1 000 ± 4 µg/mL
Chromium, Cr	100.0 ± 0.6 µg/mL	Cobalt, Co	100.0 ± 0.5 µg/mL
Copper, Cu	100.0 ± 0.4 µg/mL	Iron, Fe	500.0 ± 2.0 µg/mL
Lithium, Li	200.0 ± 0.7 µg/mL	Magnesium, Mg	4 000 ± 16 µg/mL
Manganese, Mn	100.0 ± 0.4 µg/mL	Nickel, Ni	100.0 ± 0.4 µg/mL
Phosphorus, P	200.0 ± 0.9 µg/mL	Potassium, K	10 000.0 ± 40.0 µg/mL
Silver, Ag	100.0 ± 0.4 µg/mL	Sodium, Na	1 000 ± 4 µg/mL
Strontium, Sr	100.0 ± 0.4 µg/mL	Vanadium, V	100.0 ± 0.4 µg/mL
Zinc, Zn	100.0 ± 0.4 µg/mL		

Density: 1.074 g/mL (measured at 20 ± 4 °C)

Assay Information:

Characterization of CRM by two independent methods Characterization of CRM by one method

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$$

X_a = mean of Assay Method A with standard uncertainty $u_{char a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$$w_a = (1/u_{char a})^2 / ((1/u_{char a})^2 + (1/u_{char b})^2)$$

$$w_b = (1/u_{char b})^2 / ((1/u_{char a})^2 + (1/u_{char b})^2)$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a \& b}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char a \& b} = [(w_a)^2 (u_{char a})^2 + (w_b)^2 (u_{char b})^2]^{1/2}$ where $u_{char a}$ and $u_{char b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = \text{mean of Assay Method A with standard uncertainty } u_{char a}$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ($\mu\text{g/mL}$)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 05, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- December 05, 2020

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
B	ICP Assay	3107	110830
Ba	ICP Assay	3104a	070222
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr	ICP Assay	3112a	030730Cr3
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Sr	EDTA	928	928
Sr	ICP Assay	3153a	990906
V	EDTA	928	928
V	ICP Assay	3165	992706
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Reagent

ICP CAL STD 4_00002



5617886
 ID: ICP CAL STD 4_00002
 Exp: 09/22/19 Prpd: SJS
 ICP CAL STD 4 SECONDARY

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-CM-FEB19-DEN1-SS

Custom ISO G34 Second Source Standard

Lot #: 10094465-2

Matrix: 2% HNO₃

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Ag	100.0 ± 0.5 µg/mL	Ca	999.9 ± 5.0 µg/mL	Na	5000 ± 25 µg/mL
Al	99.98 ± 0.50 µg/mL	Fe	500.1 ± 2.5 µg/mL	Zn	100.0 ± 0.5 µg/mL
B	100.0 ± 0.5 µg/mL	K	10,000 ± 50 µg/mL	Zr	100.0 ± 0.5 µg/mL
Bi	200.0 ± 1.0 µg/mL	Mg	4000 ± 20 µg/mL		

Intended Use: This solution is intended for use as a second source certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to **ISO 9001, ISO 17034, and ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO₃) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

March 22, 2019
 Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

USA
 5580 Skylane Boulevard P: 707.525.5788
 Santa Rosa, CA 95403 P: 800.878.7654
 F: 707.545.7901

Europe
 Nieuwe Hemweg 7P P: +31 20 638 05 97
 1013BG Amsterdam F: +31 20 420 28 36
 The Netherlands

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Quality Manual Rev: No. 5, 03/01/2013

Further Information: Please contact CPI International for further information about this CRM.

Quality Certifications: This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
 - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM
Ag	3151	1077a	Hf	3122	—	S	3154	2770
Al	3101a	1075a	Hg	3133	3133	Sb	3102a	3102a
As	3103a	3103a	Ho	3123a	—	Sc	3148a	3148a
Au	3121	—	In	3124a	3124a	Se	3149	3149
B	3107	3107	K	3141a	3141a	Si	3150	1066a
Ba	3104a	1051b	La	3127a	3127a	Sm	3147a	—
Be	3105a	3105a	Li	3129a	3129a	Sn	3161a	1057b
Bi	3106	3106	Lu	3130a	—	SO ₄ ²⁻	3181	—
Br	3184	—	Mg	3131a	3131a	Sr	3153a	3153a
Ca	3109a	3109a	Mn	3132	3132	Ta	3155	—
Cd	3108	1053a	Mo	3134	3134	Tb	3157a	—
Ce	3110	3110	Na	3152a	3152a	Te	3156	—
Cl	3182	1818a	Nb	3137	—	Th	3159	—
Co	3113	3113	Nd	3135a	—	Ti	3162a	3162a
Cr	3112a	1078b	Ni	3136	1065b	Tl	3158	3158
Cs	3111a	—	NO ₃ ⁻	3185	—	Tm	3160a	—
Cu	3114	1080a	P	3139a	3139a	U	3164	—
Dy	3115a	—	Pb	3128	3128	V	3165	1052b
Er	3116a	—	Pd	3138	—	W	3163	3163
Eu	3117a	—	PO ₄ ³⁻	3186	—	Y	3167a	3167a
F	3183	—	Pr	3142a	—	Yb	3166a	—
Fe	3126a	1079b	Pt	3140	3140	Zn	3168a	3168a
Ga	3119a	—	Rb	3145a	—	Zr	3169	3169
Gd	3118a	—	Re	3143	—			
Ge	3120a	—	Rh	3144	3144			

Reagent

ICP ICSAB 1_00001



CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-ICP-ICSAB-1

ICP ICSAB Mix Solution 1



5471540
ID: ICP ICSAB 1_00001
Exp: 06/03/19 Prpd: SJS
ICP ICSAB 1 CPI

Lot #: 990624-2

Matrix: 5% HNO₃/0.5% HF

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Mo	100.0 ± 0.5 mg/L	Si	1000 ± 5 mg/L	Ti	100.0 ± 0.5 mg/L
Sb	100.0 ± 0.5 mg/L	Sn	100.0 ± 0.5 mg/L		

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to NIST SRMs (see reverse side). The solution was stabilized using high purity nitric acid (HNO₃), hydrofluoric acid (HF) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against NIST SRMs (see reverse side). The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for 18 months from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

December 3, 2018
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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Europe
Nieuwe Hemweg 7P P: +31 20 638 05 97
1013BG Amsterdam F: +31 20 420 28 36
The Netherlands

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the instructions for Use, as doing so will invalidate the certified values and uncertainties.

Quality Manual Rev: No. 5, 03/01/2013

Further Information: Please contact CPI International for further information about this CRM.

Quality Certifications: This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
 - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM
Ag	3151	1077a	Hf	3122	—	S	3154	2770
Al	3101a	1075a	Hg	3133	3133	Sb	3102a	3102a
As	3103a	3103a	Ho	3123a	—	Sc	3148a	3148a
Au	3121	—	In	3124a	3124a	Se	3149	3149
B	3107	3107	K	3141a	3141a	Si	3150	1066a
Ba	3104a	1051b	La	3127a	3127a	Sm	3147a	—
Be	3105a	3105a	Li	3129a	3129a	Sn	3161a	1057b
Bi	3106	3106	Lu	3130a	—	SO ₄ ²⁻	3181	—
Br	3184	—	Mg	3131a	3131a	Sr	3153a	3153a
Ca	3109a	3109a	Mn	3132	3132	Ta	3155	—
Cd	3108	1053a	Mo	3134	3134	Tb	3157a	—
Ce	3110	3110	Na	3152a	3152a	Te	3156	—
Cl	3182	1818a	Nb	3137	—	Th	3159	—
Co	3113	3113	Nd	3135a	—	Ti	3162a	3162a
Cr	3112a	1078b	Ni	3136	1065b	Tl	3158	3158
Cs	3111a	—	NO ₃ ⁻	3185	—	Tm	3160a	—
Cu	3114	1080a	P	3139a	3139a	U	3164	—
Dy	3115a	—	Pb	3128	3128	V	3165	1052b
Er	3116a	—	Pd	3138	—	W	3163	3163
Eu	3117a	—	PO ₄ ³⁻	3186	—	Y	3167a	3167a
F	3183	—	Pr	3142a	—	Yb	3166a	—
Fe	3126a	1079b	Pt	3140	3140	Zn	3168a	3168a
Ga	3119a	—	Rb	3145a	—	Zr	3169	3169
Gd	3118a	—	Re	3143	—			
Ge	3120a	—	Rh	3144	3144			

Standard Verification Form

Standard Information			
Vendor Standard Name	TA-ICP-IC5AB-1		
Vendor	CPI		
Lot number	990624-2		
Initial Verification	<input checked="" type="checkbox"/>	Re-Verification	<input type="checkbox"/>

TALS "Reagent" Information	
TALS Standard ID	ICP IC5AB 1-00001
COA Reviewed against what is in TALS	<input checked="" type="checkbox"/>

Verification Information and Data			
Verified by	CR	Instrument ID	MT-025
Verification Date	1/30/19	Method Reference	U010B
ID of Standard Used for Verification	5528932/5528182	Batch # / Chrom Work List #	445975

Attach to this form: formulary report , COA and data used for verification
Attach to standard in TALS: this form and all supporting documentation including the original CoA

See Acceptance Criteria Below:

Approved for Use	<input checked="" type="checkbox"/>	Not Approved for Use	<input type="checkbox"/>
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New expiration date can be no greater than 1/2 the designated standards shelf life from the date of re-verification. Standards can only be re-verified one time.

New Expiration Date: N/A

1 st Level Review	<u>CL</u>	Date:	<u>1/31/19</u>
2 nd Level Review	<u>DB</u>	Date:	<u>1/31/19</u>

QA Review (Re-verification only)	Date:
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Acceptance Criteria		
Department	Standard Analytes	Poor Performers* and Esterified Analytes
GC/HPLC	≤ 15 %D	≤ 35 %D or ≤ 50 %D for dinoseb
GCMS/LCMS	≤ 35 %D	≤ 55 %D
MSVOA	≤ 25 %D	≤ 55 %D
Metals	≤ 8 %D	NA
Wet Chemistry	≤ 5 %D	NA

*See analytical SOP for details on poor performing analytes.



Reagent ID: ICP ICSAB 1_00001

Type: ASTD
 Description: ICP ICSAB 1 CPI
 No. of Bottles: 1
 Storage Location: ICP
 Reagent Volume: 250.000 mL
 Creation Date: 12/21/2017
 Open Date: 01/29/2019
 Container(s): 5471540
 Comment:

Expiration Date: 06/03/2019
 Laboratory: TestAmerica Denver
 Prepared By: Scott, Samantha J
 Vendor: CPI
 Vendor Lot #: 990624-2
 Vendor Cat #: TA-ICP-ICSAB-1

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
Mo					100.00000	mg/L
Sb					100.00000	mg/L
Si					1000.00000	mg/L
Sn					100.00000	mg/L
Ti					100.00000	mg/L

Sample Name: xlCSAB sol 1 100x Acquired: 1/30/2019 11:16:24 Type: Unk

Method: 6500_025(v9) Mode: CONC Corr. Factor: 1.000000

User: rhoadesc Prep Date: Custom ID2: Custom ID3:

Comment: reagent bottle check

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 {74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00056	.02433	.01266	.01718	.01887	.00044	.02174	.47181	.00071
Stddev	.00004	.00024	.00489	.00084	.00010	.00012	.00685	.00076	.00006
%RSD	7.0663	.98064	38.631	4.8888	.52301	27.840	31.508	.16192	8.4479
#1	.00053	.02450	.01612	.01658	.01880	.00035	.02659	.47235	.00067
#2	.00058	.02416	.00920	.01777	.01894	.00052	.01690	.47127	.00076

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	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 {44}	670.784 {50}	279.079 {121}	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00410	.00242	.00153	.02006	.56757	.01037	.47512	.00496	1.0133
Stddev	.00010	.00025	.00005	.00110	.03642	.00435	.00725	.00001	.0039
%RSD	2.5510	10.211	3.1263	5.4797	6.4175	42.012	1.5261	.23393	.38063
#1	.00417	.00225	.00150	.02084	.54181	.00729	.47000	.00497	1.0160
#2	.00403	.00260	.00157	.01928	.59333	.01345	.48025	.00496	1.0106

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

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 {57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.49431	.00430	.08410	.01084	.03507	.99570	.01580	9.9173	21.223
Stddev	.00501	.00053	.00063	.00088	.00283	.00482	.00254	.0370	.079
%RSD	1.0130	12.416	.75155	8.1609	8.0821	.48413	16.067	.37264	.37264
#1	.49077	.00468	.08455	.01146	.03707	.99230	.01760	9.8912	21.167
#2	.49785	.00392	.08365	.01021	.03306	.99911	.01401	9.9434	21.279

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

Elem	Sn1899	Sr4077	Th2837	Ti3349	Ti1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 {83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 {91}	292.402 {115}	206.200 {163}	339.198 {99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.0648	.00964	.01036	1.0237	.01971	.02237	.00551	.00635	.00546
Stddev	.0013	.00014	.00233	.0003	.00077	.01226	.00033	.00030	.00002
%RSD	.12116	1.4717	22.449	.02853	3.9220	54.809	6.0687	4.7932	.32279
#1	1.0658	.00954	.00871	1.0239	.02026	.03104	.00575	.00656	.00548
#2	1.0639	.00974	.01200	1.0235	.01916	.01370	.00527	.00613	.00545

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

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 {94}	377.433 {89}
Units	Cts/S	Cts/S	Cts/S
Avg	4001.5	55629.	4846.2
Stddev	8.9	65.	20.9
%RSD	.22316	.11631	.43220
#1	3995.2	55583.	4861.0
#2	4007.8	55674.	4831.4

Reagent

ICP ICSAB 2_00001

Standard Verification Form

Standard Information			
Vendor Standard Name	TA-ICP-ICSAB-2		
Vendor	CPI		
Lot number	990626-2		
Initial Verification	<input checked="" type="checkbox"/>	Re-Verification	<input type="checkbox"/>

TALS "Reagent" Information	
TALS Standard ID	ICP ICSAB 2-00001
COA Reviewed against what is in TALS	<input checked="" type="checkbox"/>

Verification Information and Data			
Verified by	CL/CR	Instrument ID	MT052 MT05
Verification Date	1/21/19 1/29/19	Method Reference	WD103
ID of Standard Used for Verification	Calibration STDs	Batch # / Chrom Work List #	444958/445894

Attach to this form: formulary report , COA and data used for verification
Attach to standard in TALS: this form and all supporting documentation including the original CoA

See Acceptance Criteria Below:

Approved for Use	<input checked="" type="checkbox"/>	Not Approved for Use	<input type="checkbox"/>
<p>New expiration date can be no greater than 1/2 the designated standards shelf life from the date of re-verification. Standards can only be re-verified one time.</p>			
New Expiration Date:			

1st Level Review CL Date: 1/31/19
 2nd Level Review DB Date: 1/31/19

QA Review (Re-verification only)	Date:
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Acceptance Criteria		
Department	Standard Analytes	Poor Performers* and Esterified Analytes
GC/HPLC	≤ 15 %D	≤ 35 %D or ≤ 50 %D for dinoseb
GCMS/LCMS	≤ 35 %D	≤ 55 %D
MSVOA	≤ 25 %D	≤ 55 %D
Metals	≤ 8 %D	NA
Wet Chemistry	≤ 5 %D	NA

*See analytical SOP for details on poor performing analytes.



Reagent ID: ICP ICSAB 2_00001

Type: ASTD
 Description: ICP ICSAB 2 CPI
 No. of Bottles: -1
 Storage Location: ICP
 Reagent Volume: 250.000 mL
 Creation Date: 12/21/2017
 Open Date: 01/29/2019
 Container(s): 5471537
 Comment:

Expiration Date: 06/03/2019
 Laboratory: TestAmerica Denver
 Prepared By: Scott, Samantha J
 Vendor: CPI
 Vendor Lot #: 990626-2
 Vendor Cat #: TA-ICP-ICSAB-2

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
Ag					100.00000	mg/L
As					100.00000	mg/L
B					1000.00000	mg/L
Ba					100.00000	mg/L
Be					50.00000	mg/L
Cd					100.00000	mg/L
Co					100.00000	mg/L
Cr					100.00000	mg/L
Cu					100.00000	mg/L
K					1000.00000	mg/L
Mn					100.00000	mg/L
Na					1000.00000	mg/L
Ni					100.00000	mg/L
P					1000.00000	mg/L
Pb					100.00000	mg/L
Se					100.00000	mg/L
Sr					100.00000	mg/L
Tl					100.00000	mg/L
V					100.00000	mg/L
Zn					100.00000	mg/L

Sample Name: ICSAB 2

100X

Date: 1/21/2019 2:07:16 PM

Rack:Tube: 1:90

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
✓ Ag (328.068 nm)	0.966867	ppm	0.002732	0.28	27113.200000	Y 377.433
Al (394.401 nm)	-0.018589 u	ppm	0.000377	2.03	120.753000	Y 377.433
Al H (396.152 nm)	-0.080631 u	ppm	0.000855	1.06	12.478800	Y_R 377.433
✓ As (188.980 nm)	0.937518	ppm	0.002548	0.27	1229.410000	Y 242.219
✓ B (249.678 nm)	9.446880	ppm	0.011734	0.12	33938.900000	Y 242.219
✓ Ba (493.408 nm)	0.969569	ppm	0.001606	0.17	87740.300000	Y_R 488.368
✓ Be (234.861 nm)	0.466384	ppm	0.000072	0.02	26151.800000	Y_R 488.368
Bi (223.061 nm)	0.001837	ppm	0.002483	> 100.00	44.091400	Y 377.433
Ca (315.887 nm)	-0.003106 u	ppm	0.007441	> 100.00	18.818785	Y_R 377.433
✓ Cd (214.439 nm)	0.974802	ppm	0.002985	0.31	25402.900000	Y 377.433
✓ Co (228.615 nm)	0.978758	ppm	0.004920	0.50	20392.400000	Y 242.219
✓ Cr (205.560 nm)	0.948655	ppm	0.001917	0.20	3826.770000	Y 377.433
✓ Cu (324.754 nm)	0.971137	ppm	0.002614	0.27	45503.100000	Y 377.433
Fe (238.204 nm)	-0.000041 u	ppm	0.005163	> 100.00	10.116548	Y_R 377.433
Fe H (259.940 nm)	-0.222218 u	ppm	0.000618	0.28	1.482800	Y_R 377.433
✓ K (766.491 nm)	9.955440	ppm	0.046489	0.47	11734.600000	Y_R2 488.368
Li (670.783 nm)	0.002338	ppm	0.002398	> 100.00	-636.367000	Y_R2 488.368
Mg (279.078 nm)	-0.004893 u	ppm	0.001386	28.33	1.042300	Y 377.433
✓ Mn (257.610 nm)	0.984512	ppm	0.002227	0.23	189159.000000	Y 377.433
Mo (202.032 nm)	0.000102 u	ppm	0.000717	> 100.00	21.118500	Y 377.433
✓ Na (589.592 nm)	9.389940	ppm	0.127054	1.35	4480.750000	Y_R2 488.368
Na H (589.593 nm)	7.370639 u	ppm	0.011086	0.15	3061.539033	Y_R4
✓ Ni (231.604 nm)	0.972725	ppm	0.002305	0.24	3493.420000	Y 377.433
✓ P (213.618 nm)	9.363070	ppm	0.023289	0.25	9381.970000	Y 242.219
✓ Pb (220.353 nm)	0.994713	ppm	0.002048	0.21	2187.470000	Y 242.219
S (181.972 nm)	-0.017508 u	ppm	0.000015	0.09	2.280092	Y 377.433
Sb (206.834 nm)	0.001746 u	ppm	0.003005	> 100.00	29.044800	Y 377.433
X Se (196.026 nm)	0.894485	ppm	0.006733	0.75	1281.770000	Y 242.219
Si (288.158 nm)	-0.001748 u	ppm	0.000507	29.01	377.617000	Y 377.433
Sn (189.925 nm)	-0.004588 u	ppm	0.000168	3.65	-1.654320	Y 377.433
✓ Sr (421.552 nm)	0.967161	ppm	0.001611	0.17	106421.982008	Y_R 488.368
Th (288.505 nm)	-0.048933 u	ppm	0.005261	10.75	-112.903000	Y 377.433
Ti (336.122 nm)	0.000456	ppm	0.000097	21.34	-304.249000	Y 377.433
✓ Tl (190.794 nm)	0.993837	ppm	0.000436	0.04	568.452000	Y 377.433
U (409.013 nm)	0.002082 u	ppm	0.006736	> 100.00	238.011000	Y 377.433
✓ V (292.401 nm)	0.964201	ppm	0.002968	0.31	41257.400000	Y 377.433
✓ Zn (206.200 nm)	0.992230	ppm	0.004980	0.50	3092.660000	Y 377.433
✓ Zr (343.823 nm)	0.000098 u	ppm	0.000260	> 100.00	-51.254600	Y 377.433

Sample Name: ICSAB Sol 2 Acquired: 1/29/2019 15:38:12 Type: Unk
 Method: 6500_025(v9) Mode: CONC Corr. Factor: 1.000000
 User: rhoadesc Prep Date: Custom ID2: Custom ID3:
 Comment: 100x

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 {74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W .96906	-.00340	1.0112	9.4842	1.0100	.49999	.00175	-.06604	.95028
Stddev	.00070	.00005	.0084	.0140	.0002	.00072	.00805	.00493	.00089
%RSD	.07261	1.5359	.83124	.14767	.02300	.14445	460.44	7.4694	.09328
#1	.96857	-.00336	1.0053	9.4941	1.0102	.50051	.00744	-.06255	.95091
#2	.96956	-.00344	1.0172	9.4743	1.0099	.49948	-.00394	-.06953	.94966
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000								
Low Limit	-.02000								

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 {44}	670.784 {50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.97510	.98255	1.0095	-.00152	10.088	.00379	-.00580	.91712	.00092
Stddev	.00391	.00157	.0019	.00267	.030	.00092	.00435	.00154	.00057
%RSD	.40132	.16023	.18807	175.43	.29831	24.241	75.007	.16823	61.615
#1	.97787	.98367	1.0108	-.00342	10.109	.00443	-.00887	.91821	.00052
#2	.97233	.98144	1.0081	.00037	10.067	.00314	-.00272	.91603	.00133
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Line	589.592 {57}	818.326 {41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.062	W 10.363	.97101	9.3122	.99342	.01022	-.00250	1.0041	-.01800
Stddev	.003	.128	.00214	.0214	.00289	.00320	.00030	.0007	.00696
%RSD	.02670	1.2361	.22005	.22968	.29093	31.312	12.156	.06617	38.635
#1	10.060	10.273	.97252	9.3273	.99546	.01248	-.00271	1.0037	-.02292
#2	10.064	10.454	.96950	9.2970	.99137	.00795	-.00228	1.0046	-.01309
Check ?	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		500.00							
Low Limit		11.000							

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Ti1908	U_3701	V_2924	Zn2062
Line	288.158 {117}2	189.989 {477}	407.771 {83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 {91}	292.402 {115}	206.200 {163}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.03853	-.00056	1.0257	.00369	.00020	1.0532	.01005	.92759	.89480
Stddev	.01489	.00053	.0020	.00219	.00018	.0029	.01643	.00224	.00413
%RSD	38.635	93.658	.19274	59.457	90.526	.27479	163.59	.24111	.46200
#1	-.04905	-.00019	1.0271	.00524	.00032	1.0552	-.00157	.92917	.89772
#2	-.02800	-.00094	1.0243	.00214	.00007	1.0511	.02166	.92601	.89188
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Zr3391
Line	339.198 {99}
Units	ppm
Avg	.00366
Stddev	.00163
%RSD	44.615
#1	.00251
#2	.00482
Check ?	Chk Pass
High Limit	
Low Limit	



CERTIFICATE OF ANALYSIS

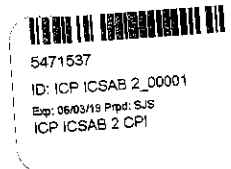
Multi-Element Aqueous CRM

Product #: TA-ICP-ICSAB-2

ICP ICSAB Mix Solution 2

Lot #: 990626-2

Matrix: 5% HNO₃



Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Ag ✓	100.0 ± 0.5 mg/L	Cr ✓	99.98 ± 0.50 mg/L	Pb ✓	100.0 ± 0.5 mg/L
As ✓	100.0 ± 0.5 mg/L	Cu ✓	100.0 ± 0.5 mg/L	Se ✓	100.0 ± 0.5 mg/L
B ✓	1000 ± 5 mg/L	K ✓	1000 ± 5 mg/L	Sr ✓	100.0 ± 0.5 mg/L
Ba ✓	100.1 ± 0.5 mg/L	Mn ✓	100.1 ± 0.5 mg/L	Tl ✓	100.0 ± 0.5 mg/L
Be ✓	50.02 ± 0.25 mg/L	Na ✓	1000 ± 5 mg/L	V ✓	100.0 ± 0.5 mg/L
Cd ✓	100.0 ± 0.5 mg/L	Ni ✓	100.1 ± 0.5 mg/L	Zn ✓	100.1 ± 0.5 mg/L
Co ✓	100.0 ± 0.5 mg/L	P ✓	1000 ± 5 mg/L		

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to NIST SRMs (see reverse side). The solution was stabilized using high purity nitric acid (HNO₃) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against NIST SRMs (see reverse side). The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for 18 months from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

December 3, 2018
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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1013BG Amsterdam F: +31 20 420 28 36
The Netherlands

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the instructions for Use, as doing so will invalidate the certified values and uncertainties.

Quality Manual Rev: No. 5, 03/01/2013

Further Information: Please contact CPI International for further information about this CRM.

Quality Certifications: This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
 - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM
Ag	3151	1077a	Hf	3122	—	S	3154	2770
Al	3101a	1075a	Hg	3133	3133	Sb	3102a	3102a
As	3103a	3103a	Ho	3123a	—	Sc	3148a	3148a
Au	3121	—	In	3124a	3124a	Se	3149	3149
B	3107	3107	K	3141a	3141a	Si	3150	1066a
Ba	3104a	1051b	La	3127a	3127a	Sm	3147a	—
Be	3105a	3105a	Li	3129a	3129a	Sn	3161a	1057b
Bi	3106	3106	Lu	3130a	—	SO ₄ ²⁻	3181	—
Br	3184	—	Mg	3131a	3131a	Sr	3153a	3153a
Ca	3109a	3109a	Mn	3132	3132	Ta	3155	—
Cd	3108	1053a	Mo	3134	3134	Tb	3157a	—
Ce	3110	3110	Na	3152a	3152a	Te	3156	—
Cf	3182	1818a	Nb	3137	—	Th	3159	—
Co	3113	3113	Nd	3135a	—	Tl	3162a	3162a
Cr	3112a	1078b	Ni	3136	1065b	Tl	3158	3158
Cs	3111a	—	NO ₃ ⁻	3185	—	Tm	3160a	—
Cu	3114	1080a	P	3139a	3139a	U	3164	—
Dy	3115a	—	Pb	3128	3128	V	3165	1052b
Er	3116a	—	Pd	3138	—	W	3163	3163
Eu	3117a	—	PO ₄ ³⁻	3186	—	Y	3167a	3167a
F	3183	—	Pr	3142a	—	Yb	3166a	—
Fe	3126a	1079b	Pt	3140	3140	Zn	3168a	3168a
Ga	3119a	—	Rb	3145a	—	Zr	3169	3169
Gd	3118a	—	Re	3143	—			
Ge	3120a	—	Rh	3144	3144			

Reagent

Icp ICVH_00851



5531815
 ID: Icp ICVH_00851
 Exp: 07/22/19 Prpd: SJS
 ICP ICVH CPI

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-CM-OCT18-DEN2-250

Custom ICP ICVH Second Source

Lot #: 10091556-1

Matrix: 2% HNO₃

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Al	4000 ± 20 µg/mL	Na	3999 ± 20 µg/mL	U	500.1 ± 2.5 µg/mL
Bi	50.05 ± 0.25 µg/mL	S	400.0 ± 2.0 µg/mL		
Fe	8000 ± 40 µg/mL	Th	300.1 ± 1.5 µg/mL		

Intended Use: This solution is intended for use as a second source certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to NIST SRMs (see reverse side). The solution was stabilized using high purity nitric acid (HNO₃) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against NIST SRMs (see reverse side). The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for 18 months from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

January 22, 2019

Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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Europe
 Nieuwe Hemweg 7P P: +31 20 638 05 97
 1013BG Amsterdam F: +31 20 420 28 36
 The Netherlands

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Quality Manual Rev: No. 5, 03/01/2013

Further Information: Please contact CPI International for further information about this CRM.

Quality Certifications: This CRM was prepared under a quality management system that is registered/accredited to the following:

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This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM
Ag	3151	1077a	Hf	3122	—	S	3154	2770
Al	3101a	1075a	Hg	3133	3133	Sb	3102a	3102a
As	3103a	3103a	Ho	3123a	—	Sc	3148a	3148a
Au	3121	—	In	3124a	3124a	Se	3149	3149
B	3107	3107	K	3141a	3141a	Si	3150	1066a
Ba	3104a	1051b	La	3127a	3127a	Sm	3147a	—
Be	3105a	3105a	Li	3129a	3129a	Sn	3161a	1057b
Bi	3106	3106	Lv	3130a	—	SO ₄ ²⁻	3181	—
Br	3184	—	Mg	3131a	3131a	Sr	3153a	3153a
Ca	3109a	3109a	Mn	3132	3132	Ta	3155	—
Cd	3108	1053a	Mo	3134	3134	Tb	3157a	—
Ce	3110	3110	Na	3152a	3152a	Te	3156	—
Cl	3182	1818a	Nb	3137	—	Th	3159	—
Co	3113	3113	Nd	3135a	—	Ti	3162a	3162a
Cr	3112a	1078b	Ni	3136	1065b	Tl	3158	3158
Cs	3111a	—	NO ₃ ⁻	3185	—	Tm	3160a	—
Cu	3114	1080a	P	3139a	3139a	U	3164	—
Dy	3115a	—	Pb	3128	3128	V	3165	1052b
Er	3116a	—	Pd	3138	—	W	3163	3163
Eu	3117a	—	PO ₄ ³⁻	3186	—	Y	3167a	3167a
F	3183	—	Pr	3142a	—	Yb	3166a	—
Fe	3126a	1079b	Pt	3140	3140	Zn	3168a	3168a
Ga	3119a	—	Rb	3145a	—	Zr	3169	3169
Gd	3118a	—	Re	3143	—			
Ge	3120a	—	Rh	3144	3144			

Reagent

Icp ICVH_00920



5531815
 ID: Icp ICVH_00851
 Exp: 07/22/19 Prpd: SJS
 ICP ICVH CPI

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-CM-OCT18-DEN2-250

Custom ICP ICVH Second Source

Lot #: 10091556-1

Matrix: 2% HNO₃

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Al	4000 ± 20 µg/mL	Na	3999 ± 20 µg/mL	U	500.1 ± 2.5 µg/mL
Bi	50.05 ± 0.25 µg/mL	S	400.0 ± 2.0 µg/mL		
Fe	8000 ± 40 µg/mL	Th	300.1 ± 1.5 µg/mL		

Intended Use: This solution is intended for use as a second source certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

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Chuck Goudreau

Chuck Goudreau, Certifying Officer

January 22, 2019

Certification Date

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 The Netherlands

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Quality Manual Rev: No. 5, 03/01/2013

Further Information: Please contact CPI International for further information about this CRM.

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This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM
Ag	3151	1077a	Hf	3122	—	S	3154	2770
Al	3101a	1075a	Hg	3133	3133	Sb	3102a	3102a
As	3103a	3103a	Ho	3123a	—	Sc	3148a	3148a
Au	3121	—	In	3124a	3124a	Se	3149	3149
B	3107	3107	K	3141a	3141a	Si	3150	1066a
Ba	3104a	1051b	La	3127a	3127a	Sm	3147a	—
Be	3105a	3105a	Li	3129a	3129a	Sn	3161a	1057b
Bi	3106	3106	Lv	3130a	—	SO ₄ ²⁻	3181	—
Br	3184	—	Mg	3131a	3131a	Sr	3153a	3153a
Ca	3109a	3109a	Mn	3132	3132	Ta	3155	—
Cd	3108	1053a	Mo	3134	3134	Tb	3157a	—
Ce	3110	3110	Na	3152a	3152a	Te	3156	—
Cl	3182	1818a	Nb	3137	—	Th	3159	—
Co	3113	3113	Nd	3135a	—	Ti	3162a	3162a
Cr	3112a	1078b	Ni	3136	1065b	Tl	3158	3158
Cs	3111a	—	NO ₃ ⁻	3185	—	Tm	3160a	—
Cu	3114	1080a	P	3139a	3139a	U	3164	—
Dy	3115a	—	Pb	3128	3128	V	3165	1052b
Er	3116a	—	Pd	3138	—	W	3163	3163
Eu	3117a	—	PO ₄ ³⁻	3186	—	Y	3167a	3167a
F	3183	—	Pr	3142a	—	Yb	3166a	—
Fe	3126a	1079b	Pt	3140	3140	Zn	3168a	3168a
Ga	3119a	—	Rb	3145a	—	Zr	3169	3169
Gd	3118a	—	Re	3143	—			
Ge	3120a	—	Rh	3144	3144			

Reagent

ICP LLCCV-4_00010



5448272
 ID: ICP LLCCV-4_00010
 Exp: 05/19/19 Prpd: SJS
 ICP LLCCV STD 4 CPI

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous RM

Product #: TA-CM-OCT18-DEN6-250

ICP LLCCV STD 4

Lot #: 10088791-2

Matrix: 2% HNO₃

Element	Certified Concentration	Element	Certified Concentration	Element	Certified Concentration
Ag	1.0 µg/mL	Cr	1.0 µg/mL	Pb	0.9 µg/mL
Al	10.0 µg/mL	Cu	1.5 µg/mL	Se	2.0 µg/mL
As	1.5 µg/mL	Fe	10.0 µg/mL	Sr	1.0 µg/mL
Ba	1.0 µg/mL	K	300 µg/mL	Th	1.5 µg/mL
Be	0.1 µg/mL	Li	2.0 µg/mL	Tl	1.5 µg/mL
Bi	10.0 µg/mL	Mg	20.0 µg/mL	U	6.0 µg/mL
Ca	20.0 µg/mL	Mn	1.0 µg/mL	V	1.0 µg/mL
Cd	0.5 µg/mL	Na	100 µg/mL	Zn	2.0 µg/mL
Co	1.0 µg/mL	Ni	4.0 µg/mL		

Intended Use: This solution is intended for use as a reference material (RM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This RM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This RM was prepared to the certified concentrations shown above by gravimetric methods using single-element concentrates, and was stabilized using high purity nitric acid (HNO₃), and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this RM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with the certified concentration is ±0.5% relative, which is the sum of the estimated errors due to the purity of the raw materials, the gravimetric preparation of the solution, and transpiration through the container. This represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the RM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original RM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

November 19, 2018

Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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 5580 Skylane Boulevard P: 707.525.5788
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 F: 707.545.7901

Europe
 Nieuwe Hemweg 7P P: +31 20 638 05 97
 1013BG Amsterdam F: +31 20 420 28 36
 The Netherlands

This RM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM
Ag	3151	1077a	Hf	3122	—	S	3154	2770
Al	3101a	1075a	Hg	3133	3133	Sb	3102a	3102a
As	3103a	3103a	Ho	3123a	—	Sc	3148a	3148a
Au	3121	—	In	3124a	3124a	Se	3149	3149
B	3107	3107	K	3141a	3141a	Si	3150	1066a
Ba	3104a	1051b	La	3127a	3127a	Sm	3147a	—
Be	3105a	3105a	Li	3129a	3129a	Sn	3161a	1057b
Bi	3106	3106	Lu	3130a	—	SO ₄ ⁻²	3181	—
Br	3184	—	Mg	3131a	3131a	Sr	3153a	3153a
Ca	3109a	3109a	Mn	3132	3132	Ta	3155	—
Cd	3108	1053a	Mo	3134	3134	Tb	3157a	—
Ce	3110	3110	Na	3152a	3152a	Te	3156	—
Cl	3182	1818a	Nb	3137	—	Th	3159	—
Co	3113	3113	Nd	3135a	—	Ti	3162a	3162a
Cr	3112a	1078b	Ni	3136	1065b	Tl	3158	3158
Cs	3111a	—	NO ₃ ⁻	3185	—	Tm	3160a	—
Cu	3114	1080a	P	3139a	3139a	U	3164	—
Dy	3115a	—	Pb	3128	3128	V	3165	1052b
Er	3116a	—	Pd	3138	—	W	3163	3163
Eu	3117a	—	PO ₄ ⁻³	3186	—	Y	3167a	3167a
F	3183	—	Pr	3142a	—	Yb	3166a	—
Fe	3126a	1079b	Pt	3140	3140	Zn	3168a	3168a
Ga	3119a	—	Rb	3145a	—	Zr	3169	3169
Gd	3118a	—	Re	3143	—			
Ge	3120a	—	Rh	3144	3144			

Standard Verification Form

TA-CM-OCT18-PEN6-250

Standard Information			
Vendor Standard Name	ICP LLCCV STD4		
Vendor	CPI International		
Lot number	10088791-2		
Initial Verification	<input checked="" type="checkbox"/>	Re-Verification	<input type="checkbox"/>

TALS "Reagent" Information	
TALS Standard ID	ICP LLCCV4-00010
COA Reviewed against what is in TALS	<input checked="" type="checkbox"/>

Verification Information and Data			
Verified by	SS/CR	Instrument ID	MT-25
Verification Date	1/30/19	Method Reference	6010C
ID of Standard Used for Verification	ICP LLCCV4-00010	Batch # / Chrom Work List #	445975

Attach to this form: formulary report, COA and data used for verification
 Attach to standard in TALS: this form and all supporting documentation including the original CoA

See Acceptance Criteria Below:

Approved for Use	<input checked="" type="checkbox"/>	Not Approved for Use	<input type="checkbox"/>
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New expiration date can be no greater than 1/2 the designated standards shelf life from the date of re-verification. Standards can only be re-verified one time.

New Expiration Date:	5/19/19
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1st Level Review SS Date: 5/31/19 1/30/19 SS

2nd Level Review DB Date: 1/31/19

QA Review (Re-verification only)		Date:
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Acceptance Criteria		
Department	Standard Analytes	Poor Performers* and Esterified Analytes
GC/HPLC	≤ 15 %D	≤ 35 %D or ≤ 50 %D for dinoseb
GCMS/LCMS	≤ 35 %D	≤ 55 %D
MSVOA	≤ 25 %D	≤ 55 %D
Metals	≤ 8 %D	NA
Wet Chemistry	≤ 5 %D	NA

*See analytical SOP for details on poor performing analytes.

Sample Name: LLCCV-4 Acquired: 1/30/2019 16:34:39 Type: Unk

Method: 6500_025(v9) Mode: CONC Corr. Factor: 1.000000

User: rhoadesc Prep Date: Custom ID2: Custom ID3:

Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 {74}
Units	ppm	ppm	ppm	ppm	ppm
Avg	W .10444	1.0770	.15491	.00436	.10385
Stddev	.00008	.0083	.00077	.00005	.00084
%RSD	.07667	.77261	.49700	1.2239	.81065
#1	.10450	1.0829	.15436	.00432	.10444
#2	.10439	1.0711	.15545	.00439	.10325
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000				
Low Limit	-.02000				

Elem	Be3130	Bi2230	Ca3179	Cd2288	Co2286
Line	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}	228.616 {447}
Units	ppm	ppm	ppm	ppm	ppm
Avg	.01007	1.0873	2.0962	.05041	.10400
Stddev	.00012	.0087	.0181	.00018	.00136
%RSD	1.2342	.79880	.86391	.36036	1.3032
#1	.01016	1.0934	2.1090	.05029	.10496
#2	.00998	1.0812	2.0834	.05054	.10304
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Elem	Cr2055	Cu3247	Fe2599	K_7664	Li6707
Line	205.560 {464}	324.754 {104}	259.940 {130}	766.490 {44}	670.784 {50}
Units	ppm	ppm	ppm	ppm	ppm
Avg	.10513	.15740	1.0755	31.340	.21501
Stddev	.00039	.00034	.0096	.070	.00615
%RSD	.37429	.21799	.89562	.22379	2.8606
#1	.10541	.15715	1.0824	31.390	.21066
#2	.10485	.15764	1.0687	31.291	.21936
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Sample Name: LLCCV-4 Acquired: 1/30/2019 16:34:39 Type: Unk

Method: 6500_025(v9) Mode: CONC Corr. Factor: 1.000000

User: rhoadesc Prep Date: Custom ID2: Custom ID3:

Comment:

Elem	Mg2790	Mn2576	Mo2020	Na5895	Na8183
Line	279.079 {121}2	257.610 {131}	202.030 {467}	589.592 { 57}	818.326 { 41}
Units	ppm	ppm	ppm	ppm	ppm
Avg	1.9724	.10039	-.00029	10.378	11.231
Stddev	.0049	.00001	.00006	.077	.282
%RSD	.24616	.01362	19.643	.73919	2.5141

#1	1.9758	.10038	-.00025	10.432	11.431
#2	1.9689	.10040	-.00033	10.323	11.031

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

Elem	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Line	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}
Units	ppm	ppm	ppm	ppm	ppm
Avg	.41560	.00327	.09509	.00383	.00245
Stddev	.00231	.00163	.00143	.00325	.00131
%RSD	.55688	49.724	1.5072	84.660	53.508

#1	.41723	.00443	.09408	.00613	.00152
#2	.41396	.00212	.09610	.00154	.00338

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

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077
Line	196.090 {472}	288.158 {117}	288.158 {117}2	189.989 {477}	407.771 { 83}
Units	ppm	ppm	ppm	ppm	ppm
Avg	.20995	.10074	.21559	.00091	.10697
Stddev	.00459	.02585	.05533	.00056	.00056
%RSD	2.1854	25.663	25.663	62.403	.52225

#1	.21319	.11903	.25471	.00130	.10736
#2	.20670	.08246	.17647	.00051	.10657

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

Sample Name: LLCCV-4 Acquired: 1/30/2019 16:34:39 Type: Unk
 Method: 6500_025(v9) Mode: CONC Corr. Factor: 1.000000
 User: rhoadesc Prep Date: Custom ID2: Custom ID3:
 Comment:

Elem	Th2837	Ti3349	Ti1908	U_3701	V_2924
Line	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}
Units	ppm	ppm	ppm	ppm	ppm
Avg	.15615	-.00015	.16046	.63137	.10163
Stddev	.00112	.00019	.00021	.01468	.00020
%RSD	.71651	127.79	.13168	2.3245	.19995
#1	.15536	-.00001	.16032	.62100	.10178
#2	.15694	-.00028	.16061	.64175	.10149
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Elem	Zn2062	Zr3391
Line	206.200 {163}	339.198 { 99}
Units	ppm	ppm
Avg	.21345	.00215
Stddev	.00064	.00183
%RSD	.30047	84.858
#1	.21300	.00086
#2	.21390	.00344
Check ?	Chk Pass	Chk Pass
High Limit		
Low Limit		

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	3736.2	53615.	4683.8
Stddev	32.5	7.	20.1
%RSD	.86976	.01221	.42907
#1	3759.2	53610.	4669.6
#2	3713.2	53619.	4698.0

Reagent

Icp stk ICSEA_00029



5514208
 ID: Icp stk ICESA_00027
 Exp: 07/08/19 Ppd: SJS
 ICP stock ICESA solution

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-ICP-ICSA

ICP ICESA Mix

Lot #: 982821-1

Matrix: 5% HNO₃

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Al	5000 ± 25 mg/L	Fe	2000 ± 10 mg/L
Ca	5000 ± 25 mg/L	Mg	5000 ± 25 mg/L

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO₃) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

January 8, 2019
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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 1013BG Amsterdam F: +31 20 420 28 36
 The Netherlands

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Quality Manual Rev: No. 5, 03/01/2013

Further Information: Please contact CPI International for further information about this CRM.

Quality Certifications: This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
 - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM
Ag	3151	1077a	Hf	3122	—	S	3154	2770
Al	3101a	1075a	Hg	3133	3133	Sb	3102a	3102a
As	3103a	3103a	Ho	3123a	—	Sc	3148a	3148a
Au	3121	—	In	3124a	3124a	Se	3149	3149
B	3107	3107	K	3141a	3141a	Si	3150	1066a
Ba	3104a	1051b	La	3127a	3127a	Sm	3147a	—
Be	3105a	3105a	Li	3129a	3129a	Sn	3161a	1057b
Bi	3106	3106	Lu	3130a	—	SO ₄ ²⁻	3181	—
Br	3184	—	Mg	3131a	3131a	Sr	3153a	3153a
Ca	3109a	3109a	Mn	3132	3132	Ta	3155	—
Cd	3108	1053a	Mo	3134	3134	Tb	3157a	—
Ce	3110	3110	Na	3152a	3152a	Te	3156	—
Cl	3182	1818a	Nb	3137	—	Th	3159	—
Co	3113	3113	Nd	3135a	—	Tl	3162a	3162a
Cr	3112a	1078b	Ni	3136	1065b	Tl	3158	3158
Cs	3111a	—	NO ₃ ⁻	3185	—	Tm	3160a	—
Cu	3114	1080a	P	3139a	3139a	U	3164	—
Dy	3115a	—	Pb	3128	3128	V	3165	1052b
Er	3116a	—	Pd	3138	—	W	3163	3163
Eu	3117a	—	PO ₄ ³⁻	3186	—	Y	3167a	3167a
F	3183	—	Pr	3142a	—	Yb	3166a	—
Fe	3126a	1079b	Pt	3140	3140	Zn	3168a	3168a
Ga	3119a	—	Rb	3145a	—	Zr	3169	3169
Gd	3118a	—	Re	3143	—			
Ge	3120a	—	Rh	3144	3144			

Reagent

MS CALSTD-1_00132

Standard Verification Form

Standard Information			
Vendor Standard Name	ICP ICPMS CAL Mix 1		
Vendor	CPI		
Lot number	982731-1		
Initial Verification	<input checked="" type="checkbox"/>	Re-Verification	<input type="checkbox"/>

TALS "Reagent" Information	
TALS Standard ID	MS CAL STD 1 5364523
COA Reviewed against what is in TALS	<input checked="" type="checkbox"/>

Verification Information and Data			
Verified by	LW	Instrument ID	078
Verification Date	12/26/18	Method Reference	6020
ID of Standard Used for Verification	5495405	Batch # / Chrom Work List #	442617

Attach to this form: formulary report, COA and data used for verification
 Attach to standard in TALS: this form and all supporting documentation including the original CoA

See Acceptance Criteria Below:

Approved for Use	<input checked="" type="checkbox"/>	Not Approved for Use	<input type="checkbox"/>
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New expiration date can be no greater than 1/2 the designated standards shelf life from the date of re-verification. Standards can only be re-verified one time.

New Expiration Date:	4/10/20
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1st Level Review LW Date: 1/10/19

2nd Level Review DB Date: 1/22/19

QA Review (Re-verification only)	ML	Date:	ML
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Acceptance Criteria		
Department	Standard Analytes	Poor Performers* and Esterified Analytes
GC/HPLC	≤ 15 %D	≤ 35 %D or ≤ 50 %D for dinoseb
GCMS/LCMS	≤ 35 %D	≤ 55 %D
MSVOA	≤ 25 %D	≤ 55 %D
Metals	≤ 8 %D	NA
Wet Chemistry	≤ 5 %D	NA

*See analytical SOP for details on poor performing analytes.



5364523
 ID: MS CALSTD-1_00132
 Exp: 04/10/20 Prp: LMT Opn: 12/26/18
 ICP-MS Cal Std 1 CPI new

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-CAL1

ICP ICMS CAL Mix # 1

Lot #: 982731-1

Matrix: 5% HNO₃/tr. HF

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
As	100.0 ± 0.5 mg/L	Li	100.0 ± 0.5 mg/L ✓	Si	1000 ± 5 mg/L
Ba	100.0 ± 0.5 mg/L	Mn	100.0 ± 0.5 mg/L	Sn	100.0 ± 0.5 mg/L
Be	100.0 ± 0.5 mg/L ✓	Mo	100.0 ± 0.5 mg/L	Sr	100.0 ± 0.5 mg/L
Cd	100.0 ± 0.5 mg/L	Ni	100.0 ± 0.5 mg/L	Ti	100.0 ± 0.5 mg/L
Co	100.0 ± 0.5 mg/L	Pb	100.0 ± 0.5 mg/L	Tl	100.0 ± 0.5 mg/L
Cr	100.0 ± 0.5 mg/L	Sb	100.0 ± 0.5 mg/L	V	100.0 ± 0.5 mg/L
Cu	100.0 ± 0.5 mg/L	Se	100.0 ± 0.5 mg/L		

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to NIST SRMs (see reverse side). The solution was stabilized using high purity nitric acid (HNO₃), trace hydrofluoric acid (HF) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against NIST SRMs (see reverse side). The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

October 15, 2018
 Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

USA
 5580 Skylane Boulevard P: 707.525.5788
 Santa Rosa, CA 95403 P: 800.878.7654
 F: 707.545.7901

Europe
 Nieuwe Hemweg 7P P: +31 20 638 05 97
 1013BG Amsterdam F: +31 20 420 28 36
 The Netherlands

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Quality Manual Rev: No. 5, 03/01/2013

Further Information: Please contact CPI International for further information about this CRM.

Quality Certifications: This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
 - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM
						S	3154	2770
Ag	3151	1077a	Hf	3122	—	Sb	3102a	3102a
Al	3101a	1075a	Hg	3133	3133	Sc	3148a	3148a
As	3103a	3103a	Ho	3123a	—	Se	3149	3149
Au	3121	—	In	3124a	3124a	Si	3150	1066a
B	3107	3107	K	3141a	3141a	Sm	3147a	—
Ba	3104a	1051b	La	3127a	3127a	Sn	3161a	1057b
Be	3105a	3105a	Li	3129a	3129a	SO ₄ ²⁻	3181	—
Bi	3106	3106	Lu	3130a	—	Sr	3153a	3153a
Br	3184	—	Mg	3131a	3131a	Ta	3155	—
Ca	3109a	3109a	Mn	3132	3132	Tb	3157a	—
Cd	3108	1053a	Mo	3134	3134	Te	3156	—
Ce	3110	3110	Na	3152a	3152a	Th	3159	—
Cf	3182	1818a	Nb	3137	—	Ti	3162a	3162a
Co	3113	3113	Nd	3135a	—	Tl	3158	3158
Cr	3112a	1078b	Ni	3136	1065b	Tm	3160a	—
Cs	3111a	—	NO ₃ ⁻	3185	—	U	3164	—
Cu	3114	1080a	P	3139a	3139a	V	3165	1052b
Dy	3115a	—	Pb	3128	3128	W	3163	3163
Er	3116a	—	Pd	3138	—	Y	3167a	3167a
Eu	3117a	—	PO ₄ ³⁻	3186	—	Yb	3166a	—
F	3183	—	Pr	3142a	—	Zn	3168a	3168a
Fe	3126a	1079b	Pt	3140	3140	Zr	3169	3169
Ga	3119a	—	Rb	3145a	—			
Gd	3118a	—	Re	3143	—			
Ge	3120a	—	Rh	3144	3144			

Sample Report

Sample Table

Sample Name cal1
 Data File Name 177SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\122618.b
 Acq Date Time 2018-12-26T21:08:53-07:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment
 ISTD Ref FileName 164CALB.d
 Sample QC Pass/Fail Pass
 ISTD Pass/Fail Pass

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QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	3656.659	ppb	3656.659	0.97	178199631	40000	
Be	9	1	6	4104.053	ppb	4104.053	2.27	2518534	2000	
B	11	1	6	1.443	ppb	1.443	4.96	2157	100	
Na	23	2	45	-25.683	ppb	-25.683	-3.93	11114	400000	
Mg	24	2	45	11.194	ppb	11.194	5.15	1677	400000	
Al	27	2	45	2.536	ppb	2.536	94.42	140	400000	
K	39	2	45	-9.489	ppb	-9.489	-46.57	10160	400000	
Ca	44	2	45	19667.739	ppb	19667.739	0.99	49593	400000	
V	51	2	72	3850.769	ppb	3850.769	1.06	3549417	2000	
Cr	52	2	72	3947.393	ppb	3947.393	2.04	5055126	5000	
Mn	55	2	72	3973.583	ppb	3973.583	5.01	1778426	10000	
Fe	57	2	72	1.993	ppb	1.993	108.99	557	400000	
Co	59	2	72	4006.204	ppb	4006.204	1.12	8550236	2000	
Ni	60	2	72	3991.592	ppb	3991.592	2.74	2407006	5000	
Cu	63	2	72	3956.112	ppb	3956.112	1.44	6450613	5000	
Zn	66	2	72	1.671	ppb	1.671	60.92	660	5000	
As	75	2	72	3781.400	ppb	3781.400	1.01	403912	2000	
Se	78	1	72	3858.347	ppb	3858.347	2.18	984849	2000	
Sr	88	2	45	3810.250	ppb	3810.250	0.68	1300429	2000	
Zr	90	2	72	102.619	ppb	102.619	11.55	1013	1000	
Zr	90	1	72	89.059	ppb	89.059	6.20	8217	1000	
Nb	93	2	72	6.334	ppb	6.334	5.73	14663	200	
Mo	95	2	115	4101.023	ppb	4101.023	4.33	2627054	2000	
Pd	105	2	115	0.170	ppb	0.170	29.69	180	100	
Ag	107	2	115	0.038	ppb	0.038	56.18	117	100	
Cd	111	2	115	3904.623	ppb	3904.623	2.56	1123583	2000	
Sn	120	2	115	4152.508	ppb	4152.508	3.13	2889403	2000	
Sb	121	2	115	3857.277	ppb	3857.277	3.57	2118745	1000	
Ba	137	2	115	3955.072	ppb	3955.072	1.60	660045	5000	
W	182	2	165	0.176	ppb	0.176	26.98	4411	100	
Pt	195	2	165	0.012	ppb	0.012	73.88	57	100	
Tl	205	2	165	3768.212	ppb	3768.212	2.99	18233940	2000	
Pb	208	2	165	3883.063	ppb	3883.063	1.80	25197106	5000	
Th	232	2	165	0.179	ppb	0.179	26.01	1390	2000	
U	238	2	165	0.034	ppb	0.034	21.98	417	2000	

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← CA

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QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2277422	1.61	2264630	100.56	60	125	
Sc (IS)	45	2	HMI He	757188	1.10	770564	98.26	60	125	
Sc IS)	45	3	No Gas	61785173	2.25	62537764	98.80	60	120	
Ge Internal Standard	72	1	HMI H2	9382082	2.59	9691882	96.80	60	125	
Ge Internal Standard	72	2	HMI He	728700	0.48	743556	98.00	60	125	
In Internal standard	115	2	HMI He	2024639	2.69	2135768	94.80	60	125	
Ho-165	165	2	HMI He	9887949	3.02	10135539	97.56	60	125	

Sample Report

Sample Table

Sample Name .5 cal1
 Data File Name 176SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\122618.b
 Acq Date Time 2018-12-26T21:05:34-07:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment
 ISTD Ref FileName 164CALB.d
 Sample QC Pass/Fail Pass
 ISTD Pass/Fail Pass

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QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	1927.607	ppb	1927.607	1.91	98157988	40000	
Be	9	1	6	2162.993	ppb	2162.993	0.78	1299482	2000	
B	11	1	6	2.351	ppb	2.351	4.25	2844	100	
Na	23	2	45	1.780	ppb	1.780	105.22	19130	400000	
Mg	24	2	45	10.108	ppb	10.108	9.80	1560	400000	
Al	27	2	45	10.303	ppb	10.303	43.10	340	400000	
K	39	2	45	1.654	ppb	1.654	265.64	10800	400000	
Ca	44	2	45	10262.338	ppb	10262.338	2.78	26183	400000	
V	51	2	72	1926.097	ppb	1926.097	1.87	1801873	2000	
Cr	52	2	72	1984.423	ppb	1984.423	1.99	2577377	5000	
Mn	55	2	72	1967.446	ppb	1967.446	0.14	893162	10000	
Fe	57	2	72	10.043	ppb	10.043	27.74	757	400000	
Co	59	2	72	1997.099	ppb	1997.099	1.47	4322680	2000	
Ni	60	2	72	1943.056	ppb	1943.056	1.84	1188332	5000	
Cu	63	2	72	2037.175	ppb	2037.175	2.28	3369610	5000	
Zn	66	2	72	1.060	ppb	1.060	61.25	547	5000	
As	75	2	72	1901.973	ppb	1901.973	0.16	206065	2000	
Se	78	1	72	1951.779	ppb	1951.779	3.65	512950	2000	
Sr	88	2	45	1913.794	ppb	1913.794	1.32	660590	2000	
Zr	90	2	72	70.916	ppb	70.916	17.67	723	1000	
Zr	90	1	72	62.326	ppb	62.326	9.16	6958	1000	
Nb	93	2	72	18.706	ppb	18.706	2.67	40649	200	
Mo	95	2	115	1995.992	ppb	1995.992	0.83	1282919	2000	
Pd	105	2	115	0.113	ppb	0.113	22.29	120	100	
Ag	107	2	115	0.050	ppb	0.050	21.12	143	100	
Cd	111	2	115	2008.362	ppb	2008.362	1.01	579689	2000	
Sn	120	2	115	2029.472	ppb	2029.472	1.84	1416369	2000	
Sb	121	2	115	1935.049	ppb	1935.049	0.21	1066124	1000	
Ba	137	2	115	2024.602	ppb	2024.602	2.05	338820	5000	
W	182	2	165	0.025	ppb	0.025	325.32	4011	100	
Pt	195	2	165	0.042	ppb	0.042	32.38	130	100	
Ti	205	2	165	1937.107	ppb	1937.107	3.49	9432943	2000	
Pb	208	2	165	1989.796	ppb	1989.796	4.29	12990802	5000	
Th	232	2	165	0.362	ppb	0.362	11.34	2594	2000	
U	238	2	165	0.156	ppb	0.156	6.94	1380	2000	

96.3

95.6

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2229335	1.63	2264630	98.44	60	125	
Sc (IS)	45	2	HMI He	765674	0.83	770564	99.37	60	125	
Sc IS)	45	3	No Gas	60082696	0.95	62537764	96.07	60	120	
Ge Internal Standard	72	1	HMI H2	9660685	2.04	9691882	99.68	60	125	
Ge Internal Standard	72	2	HMI He	739034	0.62	743556	99.39	60	125	
In Internal standard	115	2	HMI He	2029970	0.90	2135768	95.05	60	125	
Ho-165	165	2	HMI He	9948227	1.43	10135539	98.15	60	125	

Reagent

MS CALSTD-1_00136

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
 Catalog Number: ICPMS-CALSTD-1
 Lot Number: P2-MEB675675
 Matrix: 5% (v/v) HNO3
 Value / Analyte(s): 20 µg/mL ea:
 Silver, Arsenic, Barium,
 Beryllium, Cadmium, Cobalt,
 Chromium, Copper, Manganese,
 Nickel, Lead, Selenium,
 Thorium, Thallium, Uranium,
 Vanadium, Zinc

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	20.01 ± 0.16 µg/mL	Barium, Ba	20.01 ± 0.10 µg/mL
Beryllium, Be	20.00 ± 0.12 µg/mL	Cadmium, Cd	20.00 ± 0.12 µg/mL
Chromium, Cr	20.01 ± 0.11 µg/mL	Cobalt, Co	20.01 ± 0.11 µg/mL
Copper, Cu	20.01 ± 0.10 µg/mL	Lead, Pb	20.01 ± 0.11 µg/mL
Manganese, Mn	20.01 ± 0.10 µg/mL	Nickel, Ni	20.01 ± 0.11 µg/mL
Selenium, Se	20.00 ± 0.12 µg/mL	Silver, Ag	20.00 ± 0.14 µg/mL
Thallium, Tl	20.00 ± 0.14 µg/mL	Thorium, Th	20.00 ± 0.10 µg/mL
Uranium, U	19.99 ± 0.10 µg/mL	Vanadium, V	20.01 ± 0.11 µg/mL
Zinc, Zn	20.01 ± 0.11 µg/mL		

Density: 1.025 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999c	999c
As	ICP Assay	3103a	100818
As	Calculated		See Sec. 4.2
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr	ICP Assay	3112a	030730Cr3
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	011017
Cu	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Th	EDTA	928	928
Th	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	993012
Tl	Calculated		See Sec. 4.2
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2
V	EDTA	928	928
V	ICP Assay	3165	992706
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i) (X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

u_{char} = $[\sum(w_i)^2 (u_{char i})^2]^{1/2}$ where $u_{char i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

X_a = mean of Assay Method A with

$u_{char a}$ = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

<u>Isotope</u>	<u>Atom %</u>
Uranium 238U	99.7 ± 0.1
Uranium 235U	0.28 ± 0.05

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

Uranium Note: If uranium is present in this standard, it is natural abundance unless specified in Section 3

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 21, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 21, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control



Certifying Officer:

Paul Gaines
CEO, Senior Technical Director



Reagent

MS CALSTD-4_00001

Standard Verification Form

Standard Information			
Vendor Standard Name	ICP-ICPMS CAL 4 Solution A		
Vendor	CPI		
Lot number	10073633-9		
Initial Verification	<input checked="" type="checkbox"/>	Re-Verification	<input type="checkbox"/>

TALS "Reagent" Information	
TALS Standard ID MS CAL STD 4	5364671
COA Reviewed against what is in TALS	<input checked="" type="checkbox"/>

Verification Information and Data			
Verified by	LMT	Instrument ID	078
Verification Date	12/20/19, 1/13/20	Method Reference	6020
ID of Standard Used for Verification	5495405	Batch # / Chrom Work List #	442617, 443241

Attach to this form: formulary report, COA and data used for verification
 Attach to standard in TALS: this form and all supporting documentation including the original CoA

See Acceptance Criteria Below:

Approved for Use	<input checked="" type="checkbox"/>	Not Approved for Use	<input type="checkbox"/>
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New expiration date can be no greater than 1/2 the designated standards shelf life from the date of re-verification. Standards can only be re-verified one time.

New Expiration Date: 11/10/19 4 7/21/20

1 st Level Review	<u>1/10/19</u>	Date:	<u>LMT</u>
2 nd Level Review	<u>1/22/19</u>	Date:	<u>DB</u>

QA Review (Re-verification only)	<u>me</u>	Date:	<u>me</u>
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Acceptance Criteria		
Department	Standard Analytes	Poor Performers* and Esterified Analytes
GC/HPLC	≤ 15 %D	≤ 35 %D or ≤ 50 %D for dinoseb
GCMS/LCMS	≤ 35 %D	≤ 55 %D
MSVOA	≤ 25 %D	≤ 55 %D
Metals	≤ 8 %D	NA
Wet Chemistry	≤ 5 %D	NA

*See analytical SOP for details on poor performing analytes.



5364671
 ID: MS CALSTD-4_00001
 Exp:07/21/20 Ppd:LMT Opn:12/26/18
 ICP-MS Cal Std 4 CPI new

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-CM-OCT18-DEN9-A

Custom ICP ICPMS Cal 4 Solution A

Lot #: 10088633-9

Matrix: 5% HNO₃

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Ag	100.0 ± 0.5 µg/mL	Nd	100.2 ± 0.5 µg/mL	Th	99.94 ± 0.50 µg/mL
Dy	100.0 ± 0.5 µg/mL	Pd	100.2 ± 0.5 µg/mL	Zn	100.1 ± 0.5 µg/mL
Gd	99.87 ± 0.50 µg/mL	Sm	100.1 ± 0.5 µg/mL		
Li	100.2 ± 0.5 µg/mL	Sr	100.1 ± 0.5 µg/mL		

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO₃) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

November 21, 2018

Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

USA
 5580 Skylane Boulevard P: 707.525.5788
 Santa Rosa, CA 95403 P: 800.878.7654
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Europe
 Nieuwe Hemweg 7P P: +31 20 638 05 97
 1013BG Amsterdam F: +31 20 420 28 36
 The Netherlands

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Quality Manual Rev: No. 5, 03/01/2013

Further Information: Please contact CPI International for further information about this CRM.

Quality Certifications: This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
 - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM
Ag	3151	1077a	Hf	3122	—	S	3154	2770
Al	3101a	1075a	Hg	3133	3133	Sb	3102a	3102a
As	3103a	3103a	Ho	3123a	—	Sc	3148a	3148a
Au	3121	—	In	3124a	3124a	Se	3149	3149
B	3107	3107	K	3141a	3141a	Si	3150	1066a
Ba	3104a	1051b	La	3127a	3127a	Sm	3147a	—
Be	3105a	3105a	Li	3129a	3129a	Sn	3161a	1057b
Bi	3106	3106	Lu	3130a	—	SO ₄ ²⁻	3181	—
Br	3184	—	Mg	3131a	3131a	Sr	3153a	3153a
Ca	3109a	3109a	Mn	3132	3132	Ta	3155	—
Cd	3108	1053a	Mo	3134	3134	Tb	3157a	—
Ce	3110	3110	Na	3152a	3152a	Te	3156	—
Cl	3182	1818a	Nb	3137	—	Th	3159	—
Co	3113	3113	Nd	3135a	—	Ti	3162a	3162a
Cr	3112a	1078b	Ni	3136	1065b	Tl	3158	3158
Cs	3111a	—	NO ₃ ⁻	3185	—	Tm	3160a	—
Cu	3114	1080a	P	3139a	3139a	U	3164	—
Dy	3115a	—	Pb	3128	3128	V	3165	1052b
Er	3116a	—	Pd	3138	—	W	3163	3163
Eu	3117a	—	PO ₄ ³⁻	3186	—	Y	3167a	3167a
F	3183	—	Pr	3142a	—	Yb	3166a	—
Fe	3126a	1079b	Pt	3140	3140	Zn	3168a	3168a
Ga	3119a	—	Rb	3145a	—	Zr	3169	3169
Gd	3118a	—	Re	3143	—			
Ge	3120a	—	Rh	3144	3144			

Sample Report

Sample Table

Sample Name .5 cal4
 Data File Name 194SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\122618.b
 Acq Date Time 2018-12-26T22:06:31-07:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment
 ISTD Ref FileName 164CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

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QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	1892.448	ppb	1892.448	1.08	99105181	40000	
Be	9	1	6	0.064	ppb	0.064	39.93	45	2000	
B	11	1	6	-0.216	ppb	-0.216	-22.81	807	100	
Na	23	2	45	-25.159	ppb	-25.159	-5.85	11300	400000	
Mg	24	2	45	1.215	ppb	1.215	43.82	443	400000	
Al	27	2	45	1.742	ppb	1.742	124.68	120	400000	
K	39	2	45	3.179	ppb	3.179	424.46	10790	400000	
Ca	44	2	45	10256.373	ppb	10256.373	1.95	25966	400000	
V	51	2	72	-0.497	ppb	-0.497	-10.82	2134	2000	
Cr	52	2	72	-0.012	ppb	-0.012	-716.67	657	5000	
Mn	55	2	72	0.191	ppb	0.191	47.89	180	10000	
Fe	57	2	72	-2.339	ppb	-2.339	-345.44	470	400000	
Co	59	2	72	0.056	ppb	0.056	3.45	163	2000	
Ni	60	2	72	-0.030	ppb	-0.030	-86.16	113	5000	
Cu	63	2	72	0.205	ppb	0.205	92.76	2634	5000	
Zn	66	2	72	1849.661	ppb	1849.661	1.76	378813	5000	
As	75	2	72	79.107	ppb	79.107	1.52	8779	2000	
Se	78	1	72	32.233	ppb	32.233	2.24	8471	2000	
Sr	88	2	45	1900.126	ppb	1900.126	1.01	650743	2000	
Zr	90	2	72	-0.084	ppb	-0.084	-1802.57	43	1000	
Zr	90	1	72	-0.423	ppb	-0.423	-1579.52	3427	1000	
Nb	93	2	72	2.548	ppb	2.548	7.90	7128	200	
Mo	95	2	115	0.081	ppb	0.081	101.31	97	2000	
Pd	105	2	115	2108.446	ppb	2108.446	3.69	2308092	100	>LDR
Ag	107	2	115	1673.734	ppb	1673.734	4.46	3973117	100	>LDR
Cd	111	2	115	0.056	ppb	0.056	34.88	17	2000	
Sn	120	2	115	0.247	ppb	0.247	37.80	253	2000	
Sb	121	2	115	0.354	ppb	0.354	47.82	243	1000	
Ba	137	2	115	0.080	ppb	0.080	125.57	30	5000	
W	182	2	165	-0.103	ppb	-0.103	-34.61	3647	100	
Pt	195	2	165	0.059	ppb	0.059	24.64	173	100	
Tl	205	2	165	0.022	ppb	0.022	49.88	203	2000	
Pb	208	2	165	1.660	ppb	1.660	5.00	11393	5000	
Th	232	2	165	1901.230	ppb	1901.230	2.82	12397459	2000	
U	238	2	165	0.225	ppb	0.225	5.62	1927	2000	

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92 CAS -SC

95

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95

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2312935	2.26	2264630	102.13	60	125	
Sc (IS)	45	2	HMI He	759751	0.37	770564	98.60	60	125	
Sc IS)	45	3	No Gas	61617794	0.84	62537764	98.53	60	120	
Ge Internal Standard	72	1	HMI H2	9634264	0.77	9691882	99.41	60	125	
Ge Internal Standard	72	2	HMI He	754257	0.98	743556	101.44	60	125	
In Internal standard	115	2	HMI He	2096516	0.66	2135768	98.16	60	125	
Ho-165	165	2	HMI He	9946093	1.99	10135539	98.13	60	125	

Sample Report

Sample Table

Sample Name cal4
 Data File Name 196SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\122618.b
 Acq Date Time 2018-12-26T22:13:15-07:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment
 ISTD Ref FileName 164CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

25

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	3719.415	ppb	3719.415	1.25	177395399	40000	
Be	9	1	6	0.051	ppb	0.051	63.74	37	2000	
B	11	1	6	-0.157	ppb	-0.157	-72.49	853	100	
Na	23	2	45	-25.738	ppb	-25.738	-5.09	10920	400000	
Mg	24	2	45	0.519	ppb	0.519	81.46	350	400000	
Al	27	2	45	0.234	ppb	0.234	166.44	80	400000	
K	39	2	45	1.120	ppb	1.120	760.34	10485	400000	
Ca	44	2	45	20216.490	ppb	20216.490	1.40	50162	400000	← Ca
V	51	2	72	-0.489	ppb	-0.489	-16.92	2167	2000	
Cr	52	2	72	-0.033	ppb	-0.033	-165.84	637	5000	
Mn	55	2	72	0.151	ppb	0.151	39.09	163	10000	
Fe	57	2	72	-1.639	ppb	-1.639	-228.93	493	400000	
Co	59	2	72	0.053	ppb	0.053	42.75	160	2000	
Ni	60	2	72	-0.037	ppb	-0.037	-269.16	110	5000	
Cu	63	2	72	0.218	ppb	0.218	77.49	2690	5000	
Zn	66	2	72	3511.506	ppb	3511.506	1.19	727327	5000	← Zn
As	75	2	72	148.447	ppb	148.447	0.59	16639	2000	← As
Se	78	1	72	62.105	ppb	62.105	2.32	16280	2000	
Sr	88	2	45	3718.659	ppb	3718.659	1.70	1248766	2000	
Zr	90	2	72	2.559	ppb	2.559	204.66	70	1000	
Zr	90	1	72	0.873	ppb	0.873	548.06	3497	1000	
Nb	93	2	72	0.787	ppb	0.787	3.77	3424	200	
Mo	95	2	115	0.084	ppb	0.084	12.48	97	2000	
Pd	105	2	115	4207.383	ppb	4207.383	3.79	4539940	100	>LDR
Ag	107	2	115	2750.341	ppb	2750.341	39.33	6454403	100	>LDR
Cd	111	2	115	0.067	ppb	0.067	86.60	20	2000	
Sn	120	2	115	0.242	ppb	0.242	55.26	247	2000	
Sb	121	2	115	0.205	ppb	0.205	34.48	157	1000	
Ba	137	2	115	0.435	ppb	0.435	40.61	90	5000	
W	182	2	165	-0.191	ppb	-0.191	-36.22	3317	100	
Pt	195	2	165	0.050	ppb	0.050	52.03	147	100	
Tl	205	2	165	0.023	ppb	0.023	36.49	200	2000	
Pb	208	2	165	3.205	ppb	3.205	6.75	20969	5000	
Th	232	2	165	3884.781	ppb	3884.781	1.16	24763166	2000	
U	238	2	165	0.382	ppb	0.382	14.43	3097	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2308058	1.34	2264630	101.92	60	125	
Sc (IS)	45	2	HMI He	745023	0.65	770564	96.69	60	125	
Sc (IS)	45	3	No Gas	60556976	2.18	62537764	96.83	60	120	
Ge Internal Standard	72	1	HMI H2	9623230	2.30	9691882	99.29	60	125	
Ge Internal Standard	72	2	HMI He	763121	1.11	743556	102.63	60	125	
In Internal standard	115	2	HMI He	2066816	1.49	2135768	96.77	60	125	
Ho-165	165	2	HMI He	9721044	2.10	10135539	95.91	60	125	

Sample Report

Sample Table

Sample Name cal 4
 Data File Name 0655SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\010319.b
 Acq Date Time 2019-01-03T15:23:54-07:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment
 ISTD Ref FileName 008CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	3853.739	ppb	3853.739	0.75	186572939	40000	
Be	9	1	6	-0.017	ppb	-0.017	-79.73	15	2000	
B	11	1	6	0.741	ppb	0.741	22.39	1107	100	
Na	23	2	45	-28.535	ppb	-28.535	-1.03	9333	400000	
Mg	24	2	45	-0.341	ppb	-0.341	-154.59	243	400000	
Al	27	2	45	5.234	ppb	5.234	37.93	223	400000	
K	39	2	45	-25.388	ppb	-25.388	-54.49	8619	400000	
Ca	44	2	45	21710.665	ppb	21710.665	2.19	47668	400000	
V	51	2	72	0.628	ppb	0.628	19.21	2960	2000	
Cr	52	2	72	0.103	ppb	0.103	155.05	1113	5000	
Mn	55	2	72	-0.109	ppb	-0.109	-42.49	70	10000	
Fe	57	2	72	1.660	ppb	1.660	351.34	780	400000	
Co	59	2	72	0.059	ppb	0.059	8.61	173	2000	
Ni	60	2	72	0.061	ppb	0.061	96.46	160	5000	
Cu	63	2	72	0.412	ppb	0.412	10.08	2180	5000	
Zn	66	2	72	3652.135	ppb	3652.135	0.75	679214	5000	
As	75	2	72	159.418	ppb	159.418	0.78	16200	2000	
Se	78	1	72	59.768	ppb	59.768	3.10	15191	2000	
Sr	88	2	45	4001.498	ppb	4001.498	0.76	1087166	2000	
Zr	90	2	72	6.961	ppb	6.961	154.88	57	1000	
Zr	90	1	72	16.694	ppb	16.694	17.67	3758	1000	
Nb	93	2	72	0.266	ppb	0.266	18.39	643	200	
Mo	95	2	115	-0.004	ppb	-0.004	-916.67	37	2000	
Pd	105	2	115	3803.259	ppb	3803.259	1.92	4057890	100	>LDR
Ag	107	2	115	982.634	ppb	982.634	119.18	2279325	100	>LDR
Cd	111	2	115	0.037	ppb	0.037	173.21	10	2000	
Sn	120	2	115	0.028	ppb	0.028	8.12	150	2000	
Sb	121	2	115	0.029	ppb	0.029	260.08	47	1000	
Ba	137	2	115	0.188	ppb	0.188	224.25	40	5000	
W	182	2	165	-0.044	ppb	-0.044	-119.19	1037	100	
Pt	195	2	165	0.008	ppb	0.008	30.36	27	100	
Tl	205	2	165	0.004	ppb	0.004	183.59	113	2000	
Pb	208	2	165	3.092	ppb	3.092	4.26	16925	5000	
Th	232	2	165	3969.656	ppb	3969.656	2.13	21090547	2000	
U	238	2	165	0.376	ppb	0.376	0.97	2644	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2229288	2.69	2393764	93.13	60	125	
Sc (IS)	45	2	HMI He	759297	0.33	794153	95.61	60	125	
Sc IS)	45	3	No Gas	60769814	0.88	68188743	89.12	60	120	
Ge Internal Standard	72	1	HMI H2	9950137	1.00	10812425	92.03	60	125	
Ge Internal Standard	72	2	HMI He	760102	0.59	764342	99.45	60	125	
In Internal standard	115	2	HMI He	1931618	0.97	2000530	96.56	60	125	
Ho-165	165	2	HMI He	9201344	2.63	10096939	91.13	60	125	

Reagent

MS ICSEA STOCK_00033



5830301
 ID: MS ICSA STOCK_00033
 Exp: 07/24/21 Prod: LMT Opn: 01/13/19
 ICP-MS ICS-0A STOCK SOLUT

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-ICPMS-ICSA

ICPMS ICSA Mix

Lot #: 992328-1

Matrix: 2% HNO₃

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Al	1000 ± 5 mg/L	Fe	1000 ± 5 mg/L	Na	999.9 ± 5.0 mg/L
C	1999 ± 10.0 mg/L	K	1000 ± 5 mg/L	P	1000 ± 5 mg/L
Ca	1000 ± 5 mg/L	Mg	1000 ± 5 mg/L	S	1000 ± 5 mg/L
Cl	9999 ± 50.0 mg/L	Mo	20.01 ± 0.10 mg/L	Ti	19.99 ± 0.10 mg/L

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to NIST SRMs (see reverse side). The solution was stabilized using high purity nitric acid (HNO₃) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against NIST SRMs (see reverse side). The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

January 3, 2019

Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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 F: 707.545.7901

Europe
 Nieuwe Hemweg 7P P: +31 20 638 05 97
 1013BG Amsterdam F: +31 20 420 28 36
 The Netherlands

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Quality Manual Rev: No. 5, 03/01/2013

Further Information: Please contact CPI International for further information about this CRM.

Quality Certifications: This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
 - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM
Ag	3151	1077a	Hf	3122	—	S	3154	2770
Al	3101a	1075a	Hg	3133	3133	Sb	3102a	3102a
As	3103a	3103a	Ho	3123a	—	Sc	3148a	3148a
Au	3121	—	In	3124a	3124a	Se	3149	3149
B	3107	3107	K	3141a	3141a	Si	3150	1066a
Ba	3104a	1051b	La	3127a	3127a	Sm	3147a	—
Be	3105a	3105a	Li	3129a	3129a	Sn	3161a	1057b
Bi	3106	3106	Lu	3130a	—	SO ₄ ²⁻	3181	—
Br	3184	—	Mg	3131a	3131a	Sr	3153a	3153a
Ca	3109a	3109a	Mn	3132	3132	Ta	3155	—
Cd	3108	1053a	Mo	3134	3134	Tb	3157a	—
Ce	3110	3110	Na	3152a	3152a	Te	3156	—
Cl	3182	1818a	Nb	3137	—	Th	3159	—
Co	3113	3113	Nd	3135a	—	Ti	3162a	3162a
Cr	3112a	1078b	Ni	3136	1065b	Tl	3158	3158
Cs	3111a	—	NO ₃ ⁻	3185	—	Tm	3160a	—
Cu	3114	1080a	P	3139a	3139a	U	3164	—
Dy	3115a	—	Pb	3128	3128	V	3165	1052b
Er	3116a	—	Pd	3138	—	W	3163	3163
Eu	3117a	—	PO ₄ ³⁻	3186	—	Y	3167a	3167a
F	3183	—	Pr	3142a	—	Yb	3166a	—
Fe	3126a	1079b	Pt	3140	3140	Zn	3168a	3168a
Ga	3119a	—	Rb	3145a	—	Zr	3169	3169
Gd	3118a	—	Re	3143	—			
Ge	3120a	—	Rh	3144	3144			

Reagent

MS ICVMIX--4_00001

Standard Verification Form

Standard Information			
Vendor Standard Name	ICP ICPMS ARL 4 solution A		
Vendor	CPI		
Lot number	10088633-10		
Initial Verification	<input checked="" type="checkbox"/>	Re-Verification	<input type="checkbox"/>

TALS "Reagent" Information	
TALS Standard ID MS ICPMS 4	5499604
COA Reviewed against what is in TALS	<input checked="" type="checkbox"/>

Verification Information and Data			
Verified by	LMS	Instrument ID	077
Verification Date	1/21/19, 1/31/19, 1/11/19	Method Reference	6020
ID of Standard Used for Verification	5500268, 5501313, 5599805	Batch # / Chrom Work List #	443117, 443253, 444142

Attach to this form: formulary report, COA and data used for verification
 Attach to standard in TALS: this form and all supporting documentation including the original CoA

See Acceptance Criteria Below:

Approved for Use	<input type="checkbox"/>	Not Approved for Use	<input type="checkbox"/>
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New expiration date can be no greater than 1/2 the designated standards shelf life from the date of re-verification. Standards can only be re-verified one time.

New Expiration Date: 1/5/20

1 st Level Review	<u>LM</u>	Date:	<u>1/15/19</u>
2 nd Level Review	<u>DB</u>	Date:	<u>1/22/19</u>

QA Review (Re-verification only)	<u>LM</u>	Date:	<u>LM</u>
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Acceptance Criteria		
Department	Standard Analytes	Poor Performers* and Esterified Analytes
GC/HPLC	≤ 15 %D	≤ 35 %D or ≤ 50 %D for dinoseb
GCMS/LCMS	≤ 35 %D	≤ 55 %D
MSVOA	≤ 25 %D	≤ 55 %D
Metals	≤ 8 %D	NA
Wet Chemistry	≤ 5 %D	NA

*See analytical SOP for details on poor performing analytes.



5499604
 ID: MS ICMIX-4_00001
 Exp:05/15/20 Prp:1MT Opn:11/15/18
 ICP-MS ICV Std 4 CPI new

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-CM-OCT18-DEN9-A-SS

Custom ICP ICPMS Cal 4 Solution A

Lot #: 10088633-10

Matrix: 5% HNO₃

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Ag	100.0 ± 0.5 µg/mL	Nd	100.0 ± 0.5 µg/mL	Th	100.1 ± 0.5 µg/mL
Dy	100.0 ± 0.5 µg/mL	Pd	100.0 ± 0.5 µg/mL	Zn	100.0 ± 0.5 µg/mL
Gd	100.1 ± 0.5 µg/mL	Sm	100.0 ± 0.5 µg/mL		
Li	100.1 ± 0.5 µg/mL	Sr	100.0 ± 0.5 µg/mL		

Intended Use: This solution is intended for use as a second source certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO₃) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

November 21, 2018
 Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

USA
 5580 Skylane Boulevard P: 707.525.5788
 Santa Rosa, CA 95403 P: 800.878.7654
 F: 707.545.7901

Europe
 Nieuwe Hemweg 7P P: +31 20 638 05 97
 1013BG Amsterdam F: +31 20 420 28 36
 The Netherlands

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Quality Manual Rev: No. 5, 03/01/2013

Further Information: Please contact CPI International for further information about this CRM.

Quality Certifications: This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
 - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM
Ag	3151	1077a	Hf	3122	—	S	3154	2770
Al	3101a	1075a	Hg	3133	3133	Sb	3102a	3102a
As	3103a	3103a	Ho	3123a	—	Sc	3148a	3148a
Au	3121	—	In	3124a	3124a	Se	3149	3149
B	3107	3107	K	3141a	3141a	Si	3150	1066a
Ba	3104a	1051b	La	3127a	3127a	Sm	3147a	—
Be	3105a	3105a	Li	3129a	3129a	Sn	3161a	1057b
Bi	3106	3106	Lu	3130a	—	SO ₄ ²⁻	3181	—
Br	3184	—	Mg	3131a	3131a	Sr	3153a	3153a
Ca	3109a	3109a	Mn	3132	3132	Ta	3155	—
Cd	3108	1053a	Mo	3134	3134	Tb	3157a	—
Ce	3110	3110	Na	3152a	3152a	Te	3156	—
Cl	3182	1818a	Nb	3137	—	Th	3159	—
Co	3113	3113	Nd	3135a	—	Ti	3162a	3162a
Cr	3112a	1078b	Ni	3136	1065b	Tl	3158	3158
Cs	3111a	—	NO ₃ ⁻	3185	—	Tm	3160a	—
Cu	3114	1080a	P	3139a	3139a	U	3164	—
Dy	3115a	—	Pb	3128	3128	V	3165	1052b
Er	3116a	—	Pd	3138	—	W	3163	3163
Eu	3117a	—	PO ₄ ³⁻	3186	—	Y	3167a	3167a
F	3183	—	Pr	3142a	—	Yb	3166a	—
Fe	3126a	1079b	Pt	3140	3140	Zn	3168a	3168a
Ga	3119a	—	Rb	3145a	—	Zr	3169	3169
Gd	3118a	—	Re	3143	—			
Ge	3120a	—	Rh	3144	3144			

Sample Report

Sample Table

Sample Name 0.5 cal 4
 Data File Name 0795MPL.d
 Data Path Name D:\MassHunter Data\1010319.b
 Acq Date Time 2019-01-03T15:53:12-07:00
 Analyst Trudell, Lynn-Anne
 Sample Type Sample
 Dilution 1
 Comment
 ISTD Ref FileName 045CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	2235.052	ppb	2235.052	0.74	1206191	500000	
Li	7	2	45	1988.199	ppb	1988.199	4.16	43678	500000	
Li	7	3	45	1935.877	ppb	1935.877	1.40	66978526	50000	92
Be	9	1	6	-0.013	ppb	-0.013	-194.39	7	2000	
B	11	1	6	-2.156	ppb	-2.156	-4.81	980	2000	
Na	23	1	45	-2.190	ppb	-2.190	-22.95	257447	2000	
Na	23	2	45	1.558	ppb	1.558	120.56	19000	400000	
Mg	24	2	45	5.800	ppb	5.800	29.64	863	400000	
Al	27	2	45	1.676	ppb	1.676	87.78	183	400000	
K	39	1	45	55.098	ppb	55.098	24.28	11113468	400000	
K	39	2	45	32.649	ppb	32.649	69.35	16140	400000	
Ca	40	1	45	14.395	ppb	14.395	1.30	157444	400000	
Ca	44	2	45	7512.628	ppb	7512.628	3.00	15736	400000	
Ti	47	2	45	0.347	ppb	0.347	86.64	7	4000	
V	51	2	72	0.484	ppb	0.484	13.35	4664	2000	
Cr	52	2	72	-0.047	ppb	-0.047	-85.59	613	5000	
Mn	55	2	72	0.065	ppb	0.065	180.71	130	10000	
Fe	57	2	72	1.669	ppb	1.669	145.13	153	400000	
Co	59	2	72	0.030	ppb	0.030	100.61	97	2000	
Ni	60	2	72	0.017	ppb	0.017	695.51	133	5000	
Cu	63	2	72	0.069	ppb	0.069	81.28	1650	5000	
Zn	66	2	72	1898.208	ppb	1898.208	1.88	368763	5000	95
As	75	2	72	47.224	ppb	47.224	1.74	6328	2000	
Se	78	1	72	14.757	ppb	14.757	5.61	3308	2000	92
Sr	88	2	72	1832.418	ppb	1832.418	1.46	624785	4000	
Zr	90	2	72	5.054	ppb	5.054	122.78	47	1000	
Nb	93	2	72	1.873	ppb	1.873	10.30	5081	200	
Mo	95	2	115	0.216	ppb	0.216	37.27	187	2000	106
Pd	105	2	115	2124.068	ppb	2124.068	1.59	2033658	100	>LDR
Ag	107	2	115	320.338	ppb	320.338	42.18	676624	100	
Cd	111	2	115	0.041	ppb	0.041	101.30	10	2000	
Sn	120	2	115	0.164	ppb	0.164	18.56	197	2000	
Sb	121	2	115	0.183	ppb	0.183	36.72	207	1000	
Ba	137	2	115	0.170	ppb	0.170	54.21	50	5000	
W	182	2	165	0.227	ppb	0.227	13.74	1130	100	
Pt	195	2	165	0.025	ppb	0.025	42.47	87	100	
Tl	205	2	165	0.012	ppb	0.012	93.15	137	2000	
Pb	208	2	165	1.814	ppb	1.814	1.76	13455	5000	
Tn	232	2	165	1985.702	ppb	1985.702	0.35	16643854	2000	98
U	238	2	165	0.439	ppb	0.439	4.57	4098	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1341204	2.03	1460232	91.85	60	120	
Sc (IS)	45	1	HMI H2	21968819	0.28	23361340	94.04	60	120	
Sc (IS)	45	2	HMI He	609709	2.60	650472	93.73	60	120	
Sc (IS)	45	3	No Gas	58744191	1.43	59100497	99.40	60	120	
Ge Internal Standard	72	1	HMI H2	8439859	1.26	8906732	94.76	60	120	
Ge Internal Standard	72	2	HMI He	699773	2.64	726696	96.30	60	120	
In Internal Standard	115	2	HMI He	1897438	2.19	2021111	93.88	60	120	
Ho-165	165	2	HMI He	9657634	0.71	9971317	96.85	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name mix icv4
 Data File Name 036_ICV.d
 Data Path Name D:\MassHunter Data\i011119.b
 Acq Date Time 2019-01-11T12:14:08-07:00
 Sample Type ICV
 Dilution 1
 Comment
 ISTD Ref File Name 007CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	101.040	ppb	2.028	145094	400	25.3	90	110	>+ -10%
Li	7	2	45	64.631	ppb	22.030	4908	400	16.2	90	110	>+ -10%
Li	7	3	45	102.135	ppb	5.522	6714897	400	25.5	90	110	>+ -10%
Be	9	1	6	36.475	ppb	3.259	15455	40	91.2	90	110	
B	11	1	6	0.992	ppb	14.143	673	40	2.5	90	110	>+ -10%
Na	23	1	45	796.792	ppb	1.576	2902103	4000	19.9	90	110	>+ -10%
Na	23	2	45	758.122	ppb	0.050	181885	4000	19.0	90	110	>+ -10%
Mg	24	2	45	785.126	ppb	2.200	75308	4000	19.6	90	110	>+ -10%
Al	27	2	45	803.056	ppb	3.708	20191	4000	20.1	90	110	>+ -10%
K	39	1	45	827.187	ppb	6.648	13275137	4000	20.7	90	110	>+ -10%
K	39	2	45	755.697	ppb	1.944	57848	4000	18.9	90	110	>+ -10%
Ca	40	1	45	797.681	ppb	0.292	3954537	4000	19.9	90	110	>+ -10%
Ca	44	2	45	1019.954	ppb	5.646	2637	4000	25.5	90	110	>+ -10%
Ti	47	2	45	40.374	ppb	20.032	823	40	100.9	90	110	
V	51	2	72	39.383	ppb	2.732	40414	40	98.5	90	110	
Cr	52	2	72	39.033	ppb	4.284	47907	40	97.6	90	110	
Mn	55	2	72	39.281	ppb	3.607	17575	40	98.2	90	110	
Fe	57	2	72	766.275	ppb	3.291	16714	4000	19.2	90	110	>+ -10%
Co	59	2	72	38.441	ppb	1.997	80876	40	96.1	90	110	
Ni	60	2	72	37.733	ppb	1.235	22542	40	94.3	90	110	
Cu	63	2	72	37.908	ppb	2.984	63956	40	94.8	90	110	
Zn	66	2	72	37.521	ppb	3.126	8730	40	93.8	90	110	
As	75	2	72	38.921	ppb	0.703	6273	40	97.3	90	110	
Se	78	1	72	38.237	ppb	0.310	9837	40	95.6	90	110	
Sr	88	2	72	74.761	ppb	0.814	31633	40	186.9	90	110	>+ -10%
Zr	90	2	72	12.166	ppb	67.581	163	40	30.4	90	110	>+ -10%
Nb	93	2	72	34.320	ppb	0.845	88077	80	42.9	90	110	>+ -10%
Mo	95	2	115	38.298	ppb	1.977	27361	40	95.7	90	110	
Pd	105	2	115	39.283	ppb	1.690	43368	40	98.2	90	110	
Ag	107	2	115	37.416	ppb	1.898	92934	40	93.5	90	110	
Cd	111	2	115	35.945	ppb	1.794	10608	40	89.9	90	110	>+ -10%
Sn	120	2	115	38.819	ppb	2.135	29573	40	97.0	90	110	
Sb	121	2	115	39.097	ppb	1.525	27919	40	97.7	90	110	
Ba	137	2	115	35.674	ppb	5.519	8123	40	89.2	90	110	>+ -10%
W	182	2	165	39.423	ppb	1.412	129976	40	98.6	90	110	
Pt	195	2	165	38.027	ppb	0.974	110386	40	95.1	90	110	
Tl	205	2	165	38.875	ppb	1.262	224845	40	97.2	90	110	
Pb	208	2	165	39.281	ppb	0.650	297886	40	98.2	90	110	
Th	232	2	165	39.391	ppb	0.920	345501	40	98.5	90	110	
U	238	2	165	38.466	ppb	1.225	364061	40	96.2	90	110	

942

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	765246	0.50	749074	102.16	60	120	
Sc (IS)	45	1	HMI H2	27061203	1.68	28055669	96.46	60	120	
Sc (IS)	45	2	HMI He	826154	0.84	868713	95.10	60	120	
Sc (IS)	45	3	No Gas	62668627	1.51	63264234	99.06	60	120	
Ge Internal Standard	72	1	HMI H2	10511209	0.94	10773765	97.56	60	120	
Ge Internal Standard	72	2	HMI He	929574	1.02	971069	95.73	60	120	
In Internal Standard	115	2	HMI He	2471344	1.52	2542617	97.20	60	120	
Ho-165	165	2	HMI He	11548876	0.38	11767270	98.14	60	120	

Reagent

MS icvMIX-1_00001

Standard Verification Form

Standard Information			
Vendor Standard Name	TCP-ELPHS CAL MLX #1 (SS)		
Vendor	LPI		
Lot number	932733-1		
Initial Verification	<input checked="" type="checkbox"/>	Re-Verification	<input type="checkbox"/>

TALS "Reagent" Information	
TALS Standard ID	MSICV MLX 1 5499585
COA Reviewed against what is in TALS	<input checked="" type="checkbox"/>

Verification Information and Data			
Verified by	LWR	Instrument ID	077
Verification Date	1/2/19 + 1/3/19	Method Reference	6020
ID of Standard Used for Verification	5500268, 5501313	Batch # / Chrom Work List #	443112, 443253

Attach to this form: formulary report, COA and data used for verification.
 Attach to standard in TALS: this form and all supporting documentation including the original CoA

See Acceptance Criteria Below:

Approved for Use	<input checked="" type="checkbox"/>	Not Approved for Use	<input type="checkbox"/>
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New expiration date can be no greater than 1/2 the designated standards shelf life from the date of re-verification. Standards can only be re-verified one time.

New Expiration Date:	
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1st Level Review 1/10/19 Date: LWR
 2nd Level Review DS Date: 1/22/19

QA Review (Re-verification only)	<u>W</u>	Date:	<u>W</u>
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Acceptance Criteria		
Department	Standard Analytes	Poor Performers* and Esterified Analytes
GC/HPLC	≤ 15 %D	≤ 35 %D or ≤ 50 %D for dinoseb
GCMS/LCMS	≤ 35 %D	≤ 55 %D
MSVOA	≤ 25 %D	≤ 55 %D
Metals	≤ 8 %D	NA
Wet Chemistry	≤ 5 %D	NA

*See analytical SOP for details on poor performing analytes.



5499585
 ID: MS icvMIX-1_00001
 Exp:04/15/20 Ppd:LMT Opn:12/31/18
 ICP-MS ICV Std 1 CPI new

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-CAL1-SS

ICP ICPMS CAL Mix # 1

Lot #: 982733-1

Matrix: 5% HNO₃/tr. HF

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
As	100.0 ± 0.5 mg/L	Li	100.0 ± 0.5 mg/L	Si	1000 ± 5 mg/L
Ba	100.0 ± 0.5 mg/L	Mn	100.0 ± 0.5 mg/L	Sn	100.1 ± 0.5 mg/L
Be	100.0 ± 0.5 mg/L	Mo	100.0 ± 0.5 mg/L	Sr	100.0 ± 0.5 mg/L
Cd	100.1 ± 0.5 mg/L	Ni	100.0 ± 0.5 mg/L	Ti	100.1 ± 0.5 mg/L
Co	100.0 ± 0.5 mg/L	Pb	100.0 ± 0.5 mg/L	Tl	100.0 ± 0.5 mg/L
Cr	100.0 ± 0.5 mg/L	Sb	100.0 ± 0.5 mg/L	V	100.0 ± 0.5 mg/L
Cu	100.1 ± 0.5 mg/L	Se	100.0 ± 0.5 mg/L		

Intended Use: This solution is intended for use as a second source certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO₃), trace hydrofluoric acid (HF) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

October 15, 2018
 Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

USA
 5580 Skylane Boulevard P: 707.525.5788
 Santa Rosa, CA 95403 P: 800.878.7654
 F: 707.545.7901

Europe
 Nieuwe Hemweg 7P P: +31 20 638 05 97
 1013BG Amsterdam F: +31 20 420 28 36
 The Netherlands

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Quality Manual Rev: No. 5, 03/01/2013

Further Information: Please contact CPI International for further information about this CRM.

Quality Certifications: This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
 - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM
Ag	3151	1077a	Hf	3122	—	S	3154	2770
Al	3101a	1075a	Hg	3133	3133	Sb	3102a	3102a
As	3103a	3103a	Ho	3123a	—	Sc	3148a	3148a
Au	3121	—	In	3124a	3124a	Se	3149	3149
B	3107	3107	K	3141a	3141a	Si	3150	1066a
Ba	3104a	1051b	La	3127a	3127a	Sm	3147a	—
Be	3105a	3105a	Li	3129a	3129a	Sn	3161a	1057b
Bi	3106	3106	Lu	3130a	—	SO ₄ ²⁻	3181	—
Br	3184	—	Mg	3131a	3131a	Sr	3153a	3153a
Ca	3109a	3109a	Mn	3132	3132	Ta	3155	—
Cd	3108	1053a	Mo	3134	3134	Tb	3157a	—
Ce	3110	3110	Na	3152a	3152a	Te	3156	—
Cl	3182	1818a	Nb	3137	—	Th	3159	—
Co	3113	3113	Nd	3135a	—	Ti	3162a	3162a
Cr	3112a	1078b	Ni	3136	1065b	Tl	3158	3158
Cs	3111a	—	NO ₃ ⁻	3185	—	Tm	3160a	—
Cu	3114	1080a	P	3139a	3139a	U	3164	—
Dy	3115a	—	Pb	3128	3128	V	3165	1052b
Er	3116a	—	Pd	3138	—	W	3163	3163
Eu	3117a	—	PO ₄ ³⁻	3186	—	Y	3167a	3167a
F	3183	—	Pr	3142a	—	Yb	3166a	—
Fe	3126a	1079b	Pt	3140	3140	Zn	3168a	3168a
Ga	3119a	—	Rb	3145a	—	Zr	3169	3169
Gd	3118a	—	Re	3143	—			
Ge	3120a	—	Rh	3144	3144			

Sample Report

Sample Table

Sample Name 1/2 icv1
 Data File Name 128SMPL.d
 Data Path Name D:\MassHunter Data\1010219.b
 Acq Date Time 2019-01-02T20:13:16-07:00
 Analyst Trudeli, Lynn-Anne
 Sample Type Sample
 Dilution 1
 Comment
 ISTD Ref FileName 123CALB.d
 Sample QC Pass/Fail Pass
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	2131.302	ppb	2131.302	0.52	893573	500000	
Li	7	2	45	2190.875	ppb	2190.875	0.73	36893	500000	
Li	7	3	45	2144.899	ppb	2144.899	0.61	55409866	50000	
Be	9	1	6	2181.610	ppb	2181.610	1.68	895435	2000	
B	11	1	6	0.537	ppb	0.537	25.76	467	2000	
Na	23	1	45	40.146	ppb	40.146	2.08	317607	2000	
Na	23	2	45	35.895	ppb	35.895	6.93	22244	400000	
Mg	24	2	45	24.298	ppb	24.298	4.69	2024	400000	
Al	27	2	45	3.653	ppb	3.653	78.66	153	400000	
K	39	1	45	143.486	ppb	143.486	16.77	12138795	400000	
K	39	2	45	39.408	ppb	39.408	35.25	20328	400000	
Ca	40	1	45	20.792	ppb	20.792	1.26	174568	400000	
Ca	44	2	45	7496.627	ppb	7496.627	3.91	13851	400000	
Ti	47	2	45	2081.178	ppb	2081.178	2.78	33844	4000	
V	51	2	72	2103.775	ppb	2103.775	0.61	1479396	2000	
Cr	52	2	72	2142.216	ppb	2142.216	0.75	1997199	5000	
Mn	55	2	72	2100.650	ppb	2100.650	0.53	683461	10000	
Fe	57	2	72	4.103	ppb	4.103	123.67	267	400000	
Co	59	2	72	2154.829	ppb	2154.829	0.33	3441202	2000	
Ni	60	2	72	2141.059	ppb	2141.059	0.45	985280	5000	
Cu	63	2	72	2177.279	ppb	2177.279	1.71	2761027	5000	
Zn	66	2	72	8.271	ppb	8.271	6.24	1794	5000	
As	75	2	72	2062.375	ppb	2062.375	0.26	270663	2000	
Se	78	1	72	2099.682	ppb	2099.682	1.29	442691	2000	
Sr	88	2	72	2010.297	ppb	2010.297	0.56	627849	4000	
Zr	90	2	72	194.763	ppb	194.763	28.66	1053	1000	
Nb	93	2	72	7.246	ppb	7.246	3.18	14875	200	
Mo	95	2	115	2092.001	ppb	2092.001	0.04	1107580	2000	
Pd	105	2	115	0.059	ppb	0.059	70.43	57	100	
Ag	107	2	115	0.012	ppb	0.012	157.41	57	100	
Cd	111	2	115	2031.378	ppb	2031.378	0.13	462568	2000	
Sn	120	2	115	2114.286	ppb	2114.286	0.12	1185309	2000	
Sb	121	2	115	1973.874	ppb	1973.874	0.84	1128911	1000	
Ba	137	2	115	2126.759	ppb	2126.759	1.43	350675	5000	
W	182	2	165	0.229	ppb	0.229	9.83	933	100	
Pt	195	2	165	0.008	ppb	0.008	228.63	57	100	
Tl	205	2	165	2072.703	ppb	2072.703	0.69	9287762	2000	
Pb	208	2	165	2157.692	ppb	2157.692	1.19	12763099	5000	
Th	232	2	165	0.389	ppb	0.389	0.47	2917	2000	
U	238	2	165	0.027	ppb	0.027	5.50	293	2000	

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QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	865332	1.45	940696	91.99	60	120	
Sc (IS)	45	1	HMI H2	18615746	0.90	19547458	95.23	60	120	
Sc (IS)	45	2	HMI He	541142	1.00	565551	95.68	60	120	
Sc (IS)	45	3	No Gas	57007854	0.56	58209461	97.94	60	120	
Ge Internal Standard	72	1	HMI H2	7252257	1.19	7625779	95.10	60	120	
Ge Internal Standard	72	2	HMI He	623330	1.66	643482	96.87	60	120	
In Internal Standard	115	2	HMI He	1653021	1.01	1772604	93.25	60	120	
Ho-165	165	2	HMI He	7947601	1.76	8323784	95.48	60	120	

Sample Report

Sample Table

Sample Name 0.5 cal 1
 Data File Name 0835MPL.d
 Data Path Name D:\MassHunter Data\j010319.b
 Acq Date Time 2019-01-03T16:08:15-07:00
 Analyst Trudell, Lynn-Anne
 Sample Type Sample
 Dilution 1
 Comment
 ISTD Ref FileName 045CALB.d
 Sample QC Pass/Fail Pass
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	2295.818	ppb	2295.818	1.75	1232071	500000	
Li	7	2	45	1971.812	ppb	1971.812	2.64	42755	500000	
Li	7	3	45	1919.101	ppb	1919.101	1.00	65608362	50000	
Be	9	1	6	2075.180	ppb	2075.180	2.30	967801	2000	104
B	11	1	6	-2.135	ppb	-2.135	-9.81	1007	2000	
Na	23	1	45	-23.273	ppb	-23.273	-2.60	188399	2000	
Na	23	2	45	-18.792	ppb	-18.792	-21.52	14751	400000	
Mg	24	2	45	2.716	ppb	2.716	37.25	590	400000	
Al	27	2	45	-2.073	ppb	-2.073	-137.36	100	400000	
K	39	1	45	45.662	ppb	45.662	9.96	11063136	400000	
K	39	2	45	48.866	ppb	48.866	46.17	16537	400000	
Ca	40	1	45	2.723	ppb	2.723	1.90	105594	400000	
Ca	44	2	45	7367.778	ppb	7367.778	3.96	15222	400000	
Ti	47	2	45	1823.088	ppb	1823.088	0.83	34174	4000	
V	51	2	72	1974.576	ppb	1974.576	0.86	1539982	2000	99
Cr	52	2	72	1945.853	ppb	1945.853	0.17	1987045	5000	97
Mn	55	2	72	1955.541	ppb	1955.541	0.71	699224	10000	98
Fe	57	2	72	2.457	ppb	2.457	63.22	163	400000	
Co	59	2	72	2008.781	ppb	2008.781	0.90	3553515	2000	100
Ni	60	2	72	1967.405	ppb	1967.405	1.00	1003576	5000	98
Cu	63	2	72	1951.783	ppb	1951.783	0.79	2798080	5000	98
Zn	66	2	72	0.706	ppb	0.706	80.36	480	5000	
As	75	2	72	1874.522	ppb	1874.522	0.46	243707	2000	94
Se	78	1	72	1923.366	ppb	1923.366	0.71	424960	2000	96
Sr	88	2	72	1867.184	ppb	1867.184	0.30	620403	4000	93
Zr	90	2	72	165.973	ppb	165.973	17.88	697	1000	
Nb	93	2	72	12.919	ppb	12.919	1.84	29585	200	
Mo	95	2	115	1978.096	ppb	1978.096	1.67	1148225	2000	99
Pd	105	2	115	0.591	ppb	0.591	8.95	563	100	
Ag	107	2	115	1.394	ppb	1.394	6.71	2970	100	
Cd	111	2	115	1934.200	ppb	1934.200	0.88	473412	2000	97
Sr	120	2	115	1946.106	ppb	1946.106	1.35	1211542	2000	97
Sb	121	2	115	1817.314	ppb	1817.314	1.24	1102340	1000	
Ba	137	2	115	1923.614	ppb	1923.614	1.48	349776	5000	91
W	182	2	165	0.170	ppb	0.170	11.10	933	100	96
Pt	195	2	165	0.008	ppb	0.008	111.52	37	100	
Tl	205	2	165	1971.565	ppb	1971.565	1.17	10286219	2000	99
Pb	208	2	165	2020.165	ppb	2020.165	0.47	13893654	5000	101
Th	232	2	165	6.843	ppb	6.843	3.31	60301	2000	
U	238	2	165	0.008	ppb	0.008	39.68	163	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1361493	1.40	1460232	93.24	60	120	
Sc (IS)	45	1	HMI H2	21922628	1.52	23361340	93.84	60	120	
Sc (IS)	45	2	HMI He	601201	1.64	650472	92.43	60	120	
Sc (IS)	45	3	No Gas	57965567	0.56	59100497	98.08	60	120	
Ge Internal Standard	72	1	HMI H2	8368218	1.63	8906732	93.95	60	120	
Ge Internal Standard	72	2	HMI He	681884	2.05	726696	93.83	60	120	
In Internal Standard	115	2	HMI He	1879428	2.71	2021111	92.99	60	120	
Ho-165	165	2	HMI He	9489083	1.49	9971317	95.16	60	120	

Sample Report

Sample Table

Sample Name cal 1
 Data File Name 085SMPL.d
 Data Path Name D:\MassHunter Data\1010319.b
 Acq Date Time 2019-01-03T16:15:46-07:00
 Analyst Trudell, Lynn-Anne
 Sample Type Sample
 Dilution 1
 Comment
 ISTD Ref FileName 045CALB.d
 Sample QC Pass/Fail Pass
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	4523.704	ppb	4523.704	2.53	2210410	500000	
Li	7	2	45	3872.972	ppb	3872.972	0.19	77041	500000	
Li	7	3	45	3910.811	ppb	3910.811	0.94	121990722	50000	
Be	9	1	6	4470.593	ppb	4470.593	2.72	1957205	2000	
B	11	1	6	-2.081	ppb	-2.081	-4.83	977	2000	
Na	23	1	45	-22.814	ppb	-22.814	-4.59	184110	2000	
Na	23	2	45	-20.412	ppb	-20.412	-15.53	14274	400000	
Mg	24	2	45	7.162	ppb	7.162	3.67	957	400000	
Al	27	2	45	-0.321	ppb	-0.321	-331.32	137	400000	
K	39	1	45	13.199	ppb	13.199	238.86	10636370	400000	
K	39	2	45	76.322	ppb	76.322	27.65	17401	400000	
Ca	40	1	45	-1.282	ppb	-1.282	-7.19	85233	400000	
Ca	44	2	45	14541.255	ppb	14541.255	1.11	29661	400000	
Ti	47	2	45	3564.588	ppb	3564.588	2.04	66054	4000	
V	51	2	72	3974.955	ppb	3974.955	0.43	3018385	2000	
Cr	52	2	72	3816.843	ppb	3816.843	1.69	3798923	5000	
Mn	55	2	72	4081.935	ppb	4081.935	1.42	1422985	10000	
Fe	57	2	72	0.608	ppb	0.608	262.57	127	400000	
Co	59	2	72	3896.835	ppb	3896.835	1.08	6717539	2000	
Ni	60	2	72	3943.981	ppb	3943.981	1.12	1961473	5000	
Cu	63	2	72	3789.718	ppb	3789.718	1.46	5294789	5000	
Zn	66	2	72	0.636	ppb	0.636	62.97	457	5000	
As	75	2	72	3783.675	ppb	3783.675	0.59	479546	2000	
Se	78	1	72	3857.391	ppb	3857.391	1.59	829435	2000	
Sr	88	2	72	3760.189	ppb	3760.189	1.10	1218067	4000	
Zr	90	2	72	140.259	ppb	140.259	25.33	580	1000	
Nb	93	2	72	5.164	ppb	5.164	4.28	11976	200	
Mo	95	2	115	4068.248	ppb	4068.248	1.80	2279603	2000	
Pd	105	2	115	0.284	ppb	0.284	7.85	263	100	
Ag	107	2	115	0.850	ppb	0.850	12.87	1770	100	
Cd	111	2	115	3929.482	ppb	3929.482	1.77	928310	2000	
Sn	120	2	115	4031.035	ppb	4031.035	1.10	2422317	2000	
Sb	121	2	115	3795.231	ppb	3795.231	1.75	2222125	1000	
Ba	137	2	115	3856.448	ppb	3856.448	2.34	676896	5000	
W	182	2	165	0.341	ppb	0.341	9.30	1454	100	
Pt	195	2	165	0.000	ppb	0.000	638.43	17	100	
Tl	205	2	165	3888.170	ppb	3888.170	1.49	20175915	2000	
Pb	208	2	165	3928.308	ppb	3928.308	1.51	26867073	5000	
Th	232	2	165	1.111	ppb	1.111	5.17	13047	2000	
U	238	2	165	0.013	ppb	0.013	108.46	210	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1278779	1.92	1460232	87.57	60	120	
Sc (IS)	45	1	HMI H2	21255401	0.75	23361340	90.99	60	120	
Sc (IS)	45	2	HMI He	594445	1.89	650472	91.39	60	120	
Sc (IS)	45	3	No Gas	57135856	0.80	59100497	96.68	60	120	
Ge Internal Standard	72	1	HMI H2	8144118	0.44	8906732	91.44	60	120	
Ge Internal Standard	72	2	HMI He	664819	1.87	726696	91.49	60	120	
In Internal Standard	115	2	HMI He	1813792	0.34	2021111	89.74	60	120	
Ho-165	165	2	HMI He	9438284	2.23	9971317	94.65	60	120	

Reagent

MS LLCCV_00001

Standard Verification Form

Standard Information			
Vendor Standard Name	ICP-MS low level CCV		
Vendor	CPI		
Lot number	100778 10077633-8 w-1/10/19		
Initial Verification	<input checked="" type="checkbox"/>	Re-Verification	<input type="checkbox"/>

TALS "Reagent" Information	
TALS Standard ID	MS LCCV 549633
COA Reviewed against what is in TALS	<input checked="" type="checkbox"/>

Verification Information and Data			
Verified by	LM	Instrument ID	077
Verification Date	1/2/19, 1/3/19	Method Reference	6020
ID of Standard Used for Verification	5500268, 550133	Batch # / Chrom Work List #	443112, 443253

Attach to this form: formulary report, COA and data used for verification
 Attach to standard in TALS: this form and all supporting documentation including the original CoA

See Acceptance Criteria Below:

Approved for Use	<input checked="" type="checkbox"/>	Not Approved for Use	<input type="checkbox"/>
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New expiration date can be no greater than 1/2 the designated standards shelf life from the date of re-verification. Standards can only be re-verified one time.

New Expiration Date:	5/5/20
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1st Level Review LM Date: 1/14/19
 2nd Level Review DB Date: 1/22/19

QA Review (Re-verification only)	<u>M</u>	Date:	<u> </u>
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Acceptance Criteria		
Department	Standard Analytes	Poor Performers* and Esterified Analytes
GC/HPLC	≤ 15 %D	≤ 35 %D or ≤ 50 %D for dinoseb
GCMS/LCMS	≤ 35 %D	≤ 55 %D
MSVOA	≤ 25 %D	≤ 55 %D
Metals	≤ 8 %D	NA
Wet Chemistry	≤ 5 %D	NA

*See analytical SOP for details on poor performing analytes.



5499633
 ID: MS LLCCV_00001
 Exp:05/15/20 Pppl:MT Opn:12/31/19
 LOW LEVEL CCV1 CPI

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous RM

Product #: TA-CM-OCT18-DEN8-250

ICP-MS low level CCV

Lot #: 10088633-8

Matrix: 2% HNO₃/tr. HF

Element	Certified Concentration	Element	Certified Concentration	Element	Certified Concentration
Ag	0.5 µg/mL	Fe	5.0 µg/mL	Sn	1.0 µg/mL
Al	5.0 µg/mL	K	10.0 µg/mL	Sr	0.1 µg/mL
As	0.5 µg/mL	Li	1.0 µg/mL	Th	0.2 µg/mL
B	0.1 µg/mL	Mg	5.0 µg/mL	Ti	0.1 µg/mL
Ba	0.1 µg/mL	Mn	0.1 µg/mL	Tl	0.1 µg/mL
Be	0.1 µg/mL	Mo	0.2 µg/mL	U	0.1 µg/mL
Ca	5.0 µg/mL	Na	5.0 µg/mL	V	0.5 µg/mL
Cd	0.1 µg/mL	Ni	0.15 µg/mL	W	0.5 µg/mL
Co	0.1 µg/mL	Pb	0.1 µg/mL	Zn	1.0 µg/mL
Cr	0.2 µg/mL	Sb	0.2 µg/mL		
Cu	0.2 µg/mL	Se	0.5 µg/mL		

Intended Use: This solution is intended for use as a reference material (RM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This RM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This RM was prepared to the certified concentrations shown above by gravimetric methods using single-element concentrates, and was stabilized using high purity nitric acid (HNO₃), trace hydrofluoric acid (HF) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this RM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against NIST SRMs (see reverse side). The uncertainty associated with the certified concentration is ±0.5% relative, which is the sum of the estimated errors due to the purity of the raw materials, the gravimetric preparation of the solution, and transpiration through the container. This represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the RM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original RM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

November 21, 2018

Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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 The Netherlands

This RM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM
Ag	3151	1077a	Hf	3122	—	S	3154	2770
Al	3101a	1075a	Hg	3133	3133	Sb	3102a	3102a
As	3103a	3103a	Ho	3123a	—	Sc	3148a	3148a
Au	3121	—	In	3124a	3124a	Se	3149	3149
B	3107	3107	K	3141a	3141a	Si	3150	1066a
Ba	3104a	1051b	La	3127a	3127a	Sm	3147a	—
Be	3105a	3105a	Li	3129a	3129a	Sn	3161a	1057b
Bi	3106	3106	Lu	3130a	—	SO ₄ ²⁻	3181	—
Br	3184	—	Mg	3131a	3131a	Sr	3153a	3153a
Ca	3109a	3109a	Mn	3132	3132	Ta	3155	—
Cd	3108	1053a	Mo	3134	3134	Tb	3157a	—
Ce	3110	3110	Na	3152a	3152a	Te	3156	—
Cl ⁻	3182	1818a	Nb	3137	—	Th	3159	—
Co	3113	3113	Nd	3135a	—	Ti	3162a	3162a
Cr	3112a	1078b	Ni	3136	1065b	Tl	3158	3158
Cs	3111a	—	NO ₃ ⁻	3185	—	Tm	3160a	—
Cu	3114	1080a	P	3139a	3139a	U	3164	—
Dy	3115a	—	Pb	3128	3128	V	3165	1052b
Er	3116a	—	Pd	3138	—	W	3163	3163
Eu	3117a	—	PO ₄ ³⁻	3186	—	Y	3167a	3167a
F ⁻	3183	—	Pr	3142a	—	Yb	3166a	—
Fe	3126a	1079b	Pt	3140	3140	Zn	3168a	3168a
Ga	3119a	—	Rb	3145a	—	Zr	3169	3169
Gd	3118a	—	Re	3143	—			
Ge	3120a	—	Rh	3144	3144			

Sample Report

env Co, Ba, Pb

Sample Table

Sample Name cpi cvl
 Data File Name 079SMPL.d
 Data Path Name D:\MassHunter Data\1010219.b
 Acq Date Time 2019-01-02T17:07:26-07:00
 Analyst Trudell, Lynn-Anne
 Sample Type Sample
 Dilution 1
 Comment
 ISTD Ref FileName 060CALB.d
 Sample QC Pass/Fail Pass
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	96.147	ppb	96.147	4.14	167064	500000	
Li	7	2	45	105.670	ppb	105.670	12.67	6625	500000	
Li	7	3	45	109.757	ppb	109.757	5.87	9716842	50000	
Be	9	1	6	9.675	ppb	9.675	7.08	4661	2000	97
B	11	1	6	7.494	ppb	7.494	7.33	4254	2000	
Na	23	1	45	552.697	ppb	552.697	2.49	1894750	2000	
Na	23	2	45	511.267	ppb	511.267	0.32	115761	400000	
Mg	24	2	45	519.361	ppb	519.361	2.74	42639	400000	
Al	27	2	45	504.216	ppb	504.216	2.19	10688	400000	101
K	39	1	45	824.296	ppb	824.296	1.47	15270916	400000	
K	39	2	45	1031.729	ppb	1031.729	5.03	61935	400000	
Ca	40	1	45	540.243	ppb	540.243	2.00	2333215	400000	
Ca	44	2	45	525.756	ppb	525.756	2.97	1180	400000	
Ti	47	2	45	7.783	ppb	7.783	27.48	157	4000	
V	51	2	72	53.728	ppb	53.728	0.38	44566	2000	107
Cr	52	2	72	21.503	ppb	21.503	6.01	21918	5000	
Mn	55	2	72	10.764	ppb	10.764	10.65	3774	10000	107.5
Fe	57	2	72	517.900	ppb	517.900	0.92	9407	400000	108
Co	59	2	72	10.983	ppb	10.983	3.62	18469	2000	109
Ni	60	2	72	15.793	ppb	15.793	1.42	7946	5000	105
Cu	63	2	72	21.536	ppb	21.536	3.14	31261	5000	102
Zn	66	2	72	108.325	ppb	108.325	4.55	20415	5000	108
As	75	2	72	51.507	ppb	51.507	2.47	7191	2000	103
Se	78	1	72	51.720	ppb	51.720	1.50	11736	2000	103
Sr	88	2	72	10.216	ppb	10.216	7.71	3341	4000	102
Zr	90	2	72	10.958	ppb	10.958	35.92	73	1000	
Nb	93	2	72	1.159	ppb	1.159	12.38	2884	200	
Mo	95	2	115	21.377	ppb	21.377	1.76	12239	2000	107
Pd	105	2	115	0.011	ppb	0.011	231.29	13	100	
Ag	107	2	115	52.289	ppb	52.289	2.36	103127	100	105
Cd	111	2	115	9.857	ppb	9.857	5.13	2347	2000	99
Sn	120	2	115	103.864	ppb	103.864	2.43	60392	2000	104
Sb	121	2	115	19.639	ppb	19.639	7.14	11966	1000	98
Ba	137	2	115	11.307	ppb	11.307	13.42	1987	5000	113
W	182	2	165	51.018	ppb	51.018	0.48	136563	100	102
Pt	195	2	165	0.005	ppb	0.005	43.83	37	100	
Tl	205	2	165	10.385	ppb	10.385	1.52	48289	2000	104
Pb	208	2	165	10.866	ppb	10.866	1.75	67022	5000	109
Th	232	2	165	21.061	ppb	21.061	1.21	151119	2000	105
U	238	2	165	10.568	ppb	10.568	1.13	80585	2000	106

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
LI-6 Internal Standard	6	1	HMI H2	929764	2.73	916378	101.46	60	120	
Sc (IS)	45	1	HMI H2	19911408	0.73	19585204	101.67	60	120	
Sc (IS)	45	2	HMI He	580698	1.77	580572	100.02	60	120	
Sc (IS)	45	3	No Gas	57455584	0.65	58883081	97.58	60	120	
Ge Internal Standard	72	1	HMI H2	7730261	1.28	7580333	101.98	60	120	
Ge Internal Standard	72	2	HMI He	642543	1.54	640198	100.37	60	120	
In Internal Standard	115	2	HMI He	1743624	1.50	1731804	100.68	60	120	
Hc-165	165	2	HMI He	8160846	0.49	8087692	100.90	60	120	

Sample Report

1077

Sample Table

Sample Name: cpi cvl
 Data File Name: 072SMPL.d
 Data Path Name: D:\MassHunter Data\1010319.b
 Acq Date Time: 2019-01-03T15:26:53-07:00
 Analyst: Trudell, Lynn-Anne
 Sample Type: Sample
 Dilution: 1
 Comment:
 ISTD Ref FileName: 045CALB.d
 Sample QC Pass/Fail: Fail
 ISTD Pass/Fail: Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	935.927	ppb	935.927	0.59	620168	500000	
Li	7	2	45	905.191	ppb	905.191	1.72	24327	500000	
Li	7	3	45	934.659	ppb	934.659	1.45	37542571	50000	
Be	9	1	6	98.892	ppb	98.892	1.42	47111	2000	
B	11	1	6	63.809	ppb	63.809	1.00	40700	2000	
Na	23	1	45	4854.995	ppb	4854.995	0.52	16780336	2000	
Na	23	2	45	4581.226	ppb	4581.226	1.50	968948	400000	
Mg	24	2	45	4866.558	ppb	4866.558	0.87	438396	400000	
Al	27	2	45	4946.249	ppb	4946.249	2.21	112736	400000	
K	39	1	45	8070.188	ppb	8070.188	0.74	35519157	400000	
K	39	2	45	9756.666	ppb	9756.666	1.37	414267	400000	
Ca	40	1	45	4857.729	ppb	4857.729	0.58	22535366	400000	
Ca	44	2	45	5133.159	ppb	5133.159	2.89	11228	400000	
Ti	47	2	45	102.298	ppb	102.298	14.72	2030	4000	
V	51	2	72	486.537	ppb	486.537	0.39	399219	2000	
Cr	52	2	72	194.899	ppb	194.899	0.65	208265	5000	
Mn	55	2	72	96.555	ppb	96.555	3.55	36133	10000	
Fe	57	2	72	4956.037	ppb	4956.037	1.60	95456	400000	
Co	59	2	72	100.113	ppb	100.113	1.37	184748	2000	100
Ni	60	2	72	141.914	ppb	141.914	1.54	75665	5000	
Cu	63	2	72	199.770	ppb	199.770	1.37	300229	5000	
Zn	66	2	72	973.948	ppb	973.948	0.82	192596	5000	
As	75	2	72	478.667	ppb	478.667	1.10	64954	2000	
Se	78	1	72	491.255	ppb	491.255	0.71	113459	2000	
Sr	88	2	72	97.391	ppb	97.391	2.10	33785	4000	
Zr	90	2	72	24.419	ppb	24.419	100.11	130	1000	
Nb	93	2	72	0.649	ppb	0.649	14.17	2314	200	
Mo	95	2	115	203.276	ppb	203.276	0.93	122053	2000	
Pd	105	2	115	0.007	ppb	0.007	147.92	10	100	
Ag	107	2	115	493.404	ppb	493.404	0.59	1067058	100	
Cd	111	2	115	101.952	ppb	101.952	3.71	25791	2000	
Sn	120	2	115	967.040	ppb	967.040	1.26	622458	2000	
Sb	121	2	115	179.548	ppb	179.548	0.58	112680	1000	
Ba	137	2	115	95.653	ppb	95.653	1.28	17999	5000	96
W	182	2	165	503.021	ppb	503.021	0.20	1602375	100	>LDR
Pt	195	2	165	0.017	ppb	0.017	102.68	67	100	
Tl	205	2	165	97.077	ppb	97.077	1.03	524983	2000	
Pb	208	2	165	101.550	ppb	101.550	1.30	724551	5000	102
Th	232	2	165	213.310	ppb	213.310	0.88	1824306	2000	
U	238	2	165	97.137	ppb	97.137	0.08	901420	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1390711	1.34	1460232	95.24	60	120	
Sc (IS)	45	1	HMI H2	22939901	0.18	23361340	98.20	60	120	
Sc (IS)	45	2	HMI He	635529	2.43	650472	97.70	60	120	
Sc (IS)	45	3	No Gas	59029641	1.27	59100497	99.88	60	120	
Ge Internal Standard	72	1	HMI H2	8745705	0.12	8906732	98.19	60	120	
Ge Internal Standard	72	2	HMI He	711479	0.83	726696	97.91	60	120	
In Internal Standard	115	2	HMI He	1942532	0.58	2021111	96.11	60	120	
Ho-165	165	2	HMI He	9834166	0.87	9971317	98.62	60	120	

Reagent

PREP SPK 1_00007



5643138
 ID: PREP SPK 1_00007
 Exp: 08/22/20 Prep: MRJ
 Metals Prep Spike Mix 1 C

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-SPIKE1+

Spike Mix # 1

Lot #: 993218-1

Matrix: 5% HNO₃/tr. HF

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
As	200.0 ± 1.0 mg/L	Li	100.0 ± 0.5 mg/L	Sn	200.0 ± 1.0 mg/L
Ba	200.0 ± 1.0 mg/L	Mn	100.1 ± 0.5 mg/L	Sr	100.0 ± 0.5 mg/L
Be	100.0 ± 0.5 mg/L	Mo	100.0 ± 0.5 mg/L	Ti	100.0 ± 0.5 mg/L
Cd	100.0 ± 0.5 mg/L	Ni	100.0 ± 0.5 mg/L	Tl	200.0 ± 1.0 mg/L
Co	100.0 ± 0.5 mg/L	Pb	100.1 ± 0.5 mg/L	V	100.0 ± 0.5 mg/L
Cr	100.0 ± 0.5 mg/L	Se	200.0 ± 1.0 mg/L		
Cu	100.0 ± 0.5 mg/L	Si	200.0 ± 1.0 mg/L		

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to NIST SRMs (see reverse side). The solution was stabilized using high purity nitric acid (HNO₃), trace hydrofluoric acid (HF) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against NIST SRMs (see reverse side). The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for 18 months from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

February 22, 2019
 Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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 1013BG Amsterdam F: +31 20 420 28 36
 The Netherlands

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Quality Manual Rev: No. 5, 03/01/2013

Further Information: Please contact CPI International for further information about this CRM.

Quality Certifications: This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
 - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM
Ag	3151	1077a	Hf	3122	—	S	3154	2770
Al	3101a	1075a	Hg	3133	3133	Sb	3102a	3102a
As	3103a	3103a	Ho	3123a	—	Sc	3148a	3148a
Au	3121	—	In	3124a	3124a	Se	3149	3149
B	3107	3107	K	3141a	3141a	Si	3150	1066a
Ba	3104a	1051b	La	3127a	3127a	Sm	3147a	—
Be	3105a	3105a	Li	3129a	3129a	Sn	3161a	1057b
Bi	3106	3106	Lu	3130a	—	SO ₄ ²⁻	3181	—
Br	3184	—	Mg	3131a	3131a	Sr	3153a	3153a
Ca	3109a	3109a	Mn	3132	3132	Ta	3155	—
Cd	3108	1053a	Mo	3134	3134	Tb	3157a	—
Ce	3110	3110	Na	3152a	3152a	Te	3156	—
Cl	3182	1818a	Nb	3137	—	Th	3159	—
Co	3113	3113	Nd	3135a	—	Ti	3162a	3162a
Cr	3112a	1078b	Ni	3136	1065b	Tl	3158	3158
Cs	3111a	—	NO ₃ ⁻	3185	—	Tm	3160a	—
Cu	3114	1080a	P	3139a	3139a	U	3164	—
Dy	3115a	—	Pb	3128	3128	V	3165	1052b
Er	3116a	—	Pd	3138	—	W	3163	3163
Eu	3117a	—	PO ₄ ³⁻	3186	—	Y	3167a	3167a
F	3183	—	Pr	3142a	—	Yb	3166a	—
Fe	3126a	1079b	Pt	3140	3140	Zn	3168a	3168a
Ga	3119a	—	Rb	3145a	—	Zr	3169	3169
Gd	3118a	—	Re	3143	—			
Ge	3120a	—	Rh	3144	3144			

Reagent

PREP SPK 2_00003



5643180
 ID: PREP SPK 2_00003
 Exp: 08/22/20 Prep: MRJ
 Metals Prep Spike 2 CPI

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-SPIKE2

Spike Mix # 2

Lot #: 982744-1

Matrix: 5% HNO₃

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Al	1000 ± 5 mg/L	Fe	1000 ± 5 mg/L	Mg	5000 ± 25 mg/L
Ca	5000 ± 25 mg/L	K	5000 ± 25 mg/L	Na	5000 ± 25 mg/L

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO₃) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

February 22, 2019
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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 The Netherlands

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Quality Manual Rev: No. 5, 03/01/2013

Further Information: Please contact CPI International for further information about this CRM.

Quality Certifications: This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
 - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM
Ag	3151	1077a	Hf	3122	—	S	3154	2770
Al	3101a	1075a	Hg	3133	3133	Sb	3102a	3102a
As	3103a	3103a	Ho	3123a	—	Sc	3148a	3148a
Au	3121	—	In	3124a	3124a	Se	3149	3149
B	3107	3107	K	3141a	3141a	Si	3150	1066a
Ba	3104a	1051b	La	3127a	3127a	Sm	3147a	—
Be	3105a	3105a	Li	3129a	3129a	Sn	3161a	1057b
Bi	3106	3106	Lu	3130a	—	SO ₄ ²⁻	3181	—
Br	3184	—	Mg	3131a	3131a	Sr	3153a	3153a
Ca	3109a	3109a	Mn	3132	3132	Ta	3155	—
Cd	3108	1053a	Mo	3134	3134	Tb	3157a	—
Ce	3110	3110	Na	3152a	3152a	Te	3156	—
Cf	3182	1818a	Nb	3137	—	Th	3159	—
Co	3113	3113	Nd	3135a	—	Ti	3162a	3162a
Cr	3112a	1078b	Ni	3136	1065b	Tl	3158	3158
Cs	3111a	—	NO ₃ ⁻	3185	—	Tm	3160a	—
Cu	3114	1080a	P	3139a	3139a	U	3164	—
Dy	3115a	—	Pb	3128	3128	V	3165	1052b
Er	3116a	—	Pd	3138	—	W	3163	3163
Eu	3117a	—	PO ₄ ³⁻	3186	—	Y	3167a	3167a
F	3183	—	Pr	3142a	—	Yb	3166a	—
Fe	3126a	1079b	Pt	3140	3140	Zn	3168a	3168a
Ga	3119a	—	Rb	3145a	—	Zr	3169	3169
Gd	3118a	—	Re	3143	—			
Ge	3120a	—	Rh	3144	3144			

Reagent

PREP SPK 3_00003



5643181
 ID: PREP SPK 3_00003
 Exp: 08/22/20 Prod: MRJ
 Metals Prep Spike 3 CPI

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-SPIKE3

Spike Mix # 3

Lot #: 982745-1

Matrix: 5% HNO₃/tr. HF

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
P	2000 ± 10 mg/L	U	200.0 ± 1.0 mg/L
S	1000 ± 5 mg/L	W	100.0 ± 0.5 mg/L

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to ISO 9001, ISO 17034, and ISO/IEC 17025. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to NIST SRMs (see reverse side). The solution was stabilized using high purity nitric acid (HNO₃), trace hydrofluoric acid (HF) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against NIST SRMs (see reverse side). The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

February 22, 2019
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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 1013BG Amsterdam F: +31 20 420 28 36
 The Netherlands

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Quality Manual Rev: No. 5, 03/01/2013

Further Information: Please contact CPI International for further information about this CRM.

Quality Certifications: This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
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 - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM
Ag	3151	1077a	Hf	3122	—	S	3154	2770
Al	3101a	1075a	Hg	3133	3133	Sb	3102a	3102a
As	3103a	3103a	Ho	3123a	—	Sc	3148a	3148a
Au	3121	—	In	3124a	3124a	Se	3149	3149
B	3107	3107	K	3141a	3141a	Si	3150	1066a
Ba	3104a	1051b	La	3127a	3127a	Sm	3147a	—
Be	3105a	3105a	Li	3129a	3129a	Sn	3161a	1057b
Bi	3106	3106	Lu	3130a	—	SO ₄ ²⁻	3181	—
Br	3184	—	Mg	3131a	3131a	Sr	3153a	3153a
Ca	3109a	3109a	Mn	3132	3132	Ta	3155	—
Cd	3108	1053a	Mo	3134	3134	Tb	3157a	—
Ce	3110	3110	Na	3152a	3152a	Te	3156	—
Cl	3182	1818a	Nb	3137	—	Th	3159	—
Co	3113	3113	Nd	3135a	—	Tl	3162a	3162a
Cr	3112a	1078b	Ni	3136	1065b	Tl	3158	3158
Cs	3111a	—	NO ₃ ⁻	3185	—	Tm	3160a	—
Cu	3114	1080a	P	3139a	3139a	U	3164	—
Dy	3115a	—	Pb	3128	3128	V	3165	1052b
Er	3116a	—	Pd	3138	—	W	3163	3163
Eu	3117a	—	PO ₄ ³⁻	3186	—	Y	3167a	3167a
F	3183	—	Pr	3142a	—	Yb	3166a	—
Fe	3126a	1079b	Pt	3140	3140	Zn	3168a	3168a
Ga	3119a	—	Rb	3145a	—	Zr	3169	3169
Gd	3118a	—	Re	3143	—			
Ge	3120a	—	Rh	3144	3144			

Reagent

PREP SPK 4_00003



5643187
 ID: PREP SPK 4_00003
 Exp: 09/28/20 Ppdt: MRJ
 Metals Prep Spike 4 CPI

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-CM-OCT18-DEN-A

Custom Spike Solution A

Lot #: 10094085-1

Matrix: 2% HNO₃

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
B	100.0 ± 0.5 µg/mL	Th	100.1 ± 0.5 µg/mL	Zr	50.08 ± 0.25 µg/mL
Bi	200.0 ± 1.0 µg/mL	Zn	49.95 ± 0.25 µg/mL		

Intended Use: This solution is intended for use as a second source certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO₃) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

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Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

March 28, 2019
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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Quality Manual Rev: No. 5, 03/01/2013

Further Information: Please contact CPI International for further information about this CRM.

Quality Certifications: This CRM was prepared under a quality management system that is registered/accredited to the following:

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- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
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Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM
Ag	3151	1077a	Hf	3122	—	S	3154	2770
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Au	3121	—	In	3124a	3124a	Se	3149	3149
B	3107	3107	K	3141a	3141a	Si	3150	1066a
Ba	3104a	1051b	La	3127a	3127a	Sm	3147a	—
Be	3105a	3105a	Li	3129a	3129a	Sn	3161a	1057b
Bi	3106	3106	Lu	3130a	—	SO ₄ ²⁻	3181	—
Br	3184	—	Mg	3131a	3131a	Sr	3153a	3153a
Ca	3109a	3109a	Mn	3132	3132	Ta	3155	—
Cd	3108	1053a	Mo	3134	3134	Tb	3157a	—
Ce	3110	3110	Na	3152a	3152a	Te	3156	—
Cl	3182	1818a	Nb	3137	—	Th	3159	—
Co	3113	3113	Nd	3135a	—	Ti	3162a	3162a
Cr	3112a	1078b	Ni	3136	1065b	Tl	3158	3158
Cs	3111a	—	NO ₃ ⁻	3185	—	Tm	3160a	—
Cu	3114	1080a	P	3139a	3139a	U	3164	—
Dy	3115a	—	Pb	3128	3128	V	3165	1052b
Er	3116a	—	Pd	3138	—	W	3163	3163
Eu	3117a	—	PO ₄ ³⁻	3186	—	Y	3167a	3167a
F	3183	—	Pr	3142a	—	Yb	3166a	—
Fe	3126a	1079b	Pt	3140	3140	Zn	3168a	3168a
Ga	3119a	—	Rb	3145a	—	Zr	3169	3169
Gd	3118a	—	Re	3143	—			
Ge	3120a	—	Rh	3144	3144			

METALS

COVER PAGE
METALS

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-123183-1

SDG No.: _____

Project: Leidos RFP# 001088 - Ravenna AAP-66

Client Sample ID	Lab Sample ID
<u>DA2mw-115-190401-GW</u>	<u>280-123183-1</u>
<u>DA2mw-115-190402-GW</u>	<u>280-123183-2</u>

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: DA2mw-115-190401-GW

Lab Sample ID: 280-123183-1

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG ID.:

Matrix: Water

Date Sampled: 04/29/2019 10:30

Reporting Basis: WET

Date Received: 04/30/2019 09:30

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Aluminum	21	300	70	18	ug/L	J		1	6010C
Calcium	100000	1000	160	78	ug/L			1	6010C
Iron	840	100	85	22	ug/L		B	1	6010C
Magnesium	28000	500	60	26	ug/L			1	6010C
Potassium	3300	3000	940	240	ug/L			1	6010C
Sodium	12000	5000	160	54	ug/L		Q	1	6010C
Antimony	1.0	6.0	1.0	0.40	ug/L	U		1	6020A
Arsenic	1.7	5.0	1.0	0.33	ug/L	J		1	6020A
Barium	23	3.0	0.95	0.29	ug/L			1	6020A
Beryllium	0.30	1.0	0.30	0.080	ug/L	U		1	6020A
Cadmium	1.0	1.0	1.0	0.27	ug/L	U		1	6020A
Chromium	1.8	10	1.8	0.50	ug/L	U		1	6020A
Cobalt	0.20	1.0	0.20	0.054	ug/L	U	Q	1	6020A
Copper	1.8	2.0	1.8	0.56	ug/L	U		1	6020A
Lead	0.70	3.0	0.70	0.18	ug/L	U		1	6020A
Manganese	99	3.5	0.95	0.31	ug/L			1	6020A
Nickel	1.0	3.0	1.0	0.30	ug/L	U		1	6020A
Selenium	1.0	5.0	1.0	0.37	ug/L	U		1	6020A
Silver	0.10	5.0	0.10	0.033	ug/L	U		1	6020A
Thallium	0.20	1.0	0.20	0.089	ug/L	U		1	6020A
Vanadium	3.0	6.0	3.0	1.2	ug/L	U		1	6020A
Zinc	8.0	20	8.0	2.0	ug/L	U		1	6020A
Mercury	0.080	0.20	0.080	0.027	ug/L	U	J1	1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: DA2mw-115-190402-GW

Lab Sample ID: 280-123183-2

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG ID.:

Matrix: Water

Date Sampled: 04/29/2019 10:30

Reporting Basis: WET

Date Received: 04/30/2019 09:30

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Aluminum	70	300	70	18	ug/L	U		1	6010C
Calcium	100000	1000	160	78	ug/L			1	6010C
Iron	820	100	85	22	ug/L		B	1	6010C
Magnesium	28000	500	60	26	ug/L			1	6010C
Potassium	3400	3000	940	240	ug/L			1	6010C
Sodium	12000	5000	160	54	ug/L		Q	1	6010C
Antimony	1.0	6.0	1.0	0.40	ug/L	U		1	6020A
Arsenic	1.0	5.0	1.0	0.33	ug/L	U		1	6020A
Barium	0.95	3.0	0.95	0.29	ug/L	U		1	6020A
Beryllium	0.18	1.0	0.30	0.080	ug/L	J		1	6020A
Cadmium	1.0	1.0	1.0	0.27	ug/L	U		1	6020A
Chromium	1.8	10	1.8	0.50	ug/L	U		1	6020A
Cobalt	0.20	1.0	0.20	0.054	ug/L	U	Q	1	6020A
Copper	1.8	2.0	1.8	0.56	ug/L	U		1	6020A
Lead	0.70	3.0	0.70	0.18	ug/L	U		1	6020A
Manganese	0.95	3.5	0.95	0.31	ug/L	U		1	6020A
Nickel	1.0	3.0	1.0	0.30	ug/L	U		1	6020A
Selenium	1.0	5.0	1.0	0.37	ug/L	U		1	6020A
Silver	0.10	5.0	0.10	0.033	ug/L	U		1	6020A
Thallium	0.20	1.0	0.20	0.089	ug/L	U		1	6020A
Vanadium	3.0	6.0	3.0	1.2	ug/L	U		1	6020A
Zinc	8.0	20	8.0	2.0	ug/L	U		1	6020A
Mercury	0.080	0.20	0.080	0.027	ug/L	U		1	7470A

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

ICV Source: ICP ICVH_00931 Concentration Units: ug/L

CCV Source: ICP CCVH_00639

Analyte	ICVH 280-458076/6 05/13/2019 11:34				ICVH 280-458076/7 05/13/2019 11:38				CCVH 280-458076/159 05/14/2019 05:17			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Sodium	40900		40000	102	40400		40000	101	243000		250000	97
<i>Aluminum</i>	40100		40000	100	40000		40000	100	49600		50000	99
<i>Iron</i>	80400		80000	100	80200		80000	100	49800		50000	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

ICV Source: ICP ICVH_00931 Concentration Units: ug/L

CCV Source: ICP CCVH_00639

Analyte	CCVH 280-458076/172 05/14/2019 06:01											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Sodium	242000		250000	97								
<i>Aluminum</i>	49600		50000	99								
<i>Iron</i>	49800		50000	100								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

ICV Source: ICP ICV_00813 Concentration Units: ug/L

CCV Source: ICP CCV_00377

Analyte	ICV 280-458076/8 05/13/2019 11:42				ICV 280-458076/9 05/13/2019 11:45				CCV 280-458076/160 05/14/2019 05:20			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Sodium	12000		12500	96	12000		12500	96	4730	J	5000	95
<i>Aluminum</i>	230	J	250	92	232	J	250	93	473		500	95
<i>Calcium</i>	2480		2500	99	2490		2500	100	4980		5000	100
<i>Iron</i>	1230		1250	99	1230		1250	98	2450		2500	98
<i>Magnesium</i>	9710		10000	97	9710		10000	97	19200		20000	96
<i>Potassium</i>	24600		25000	98	24500		25000	98	47700		50000	95

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

ICV Source: ICP ICV_00813 Concentration Units: ug/L

CCV Source: ICP CCV_00377

Analyte	CCV 280-458076/173 05/14/2019 06:04											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Sodium	4730	J	5000	95								
<i>Aluminum</i>	468		500	94								
<i>Calcium</i>	4990		5000	100								
<i>Iron</i>	2440		2500	98								
<i>Magnesium</i>	19300		20000	96								
<i>Potassium</i>	47700		50000	95								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

ICV Source: ICP LLCCV_02540 Concentration Units: ug/L

CCV Source: ICP LLCCV_02540

Analyte	ICVL 280-458076/10 05/13/2019 12:05				CCVL 280-458076/162 05/14/2019 05:27				CCVL 280-458076/175 05/14/2019 06:11			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Sodium	1020	J	1000	102	959	J	1000	96	954	J	1000	95
<i>Aluminum</i>	94.2	J	100	94	90.1	J	100	90	91.7	J	100	92
<i>Calcium</i>	209	J	200	105	223	J	200	112	219	J	200	109
<i>Iron</i>	98.9	J	100	99	103		100	103	103		100	103
<i>Magnesium</i>	190	J	200	95	189	J	200	95	193	J	200	96
<i>Potassium</i>	2980	J	3000	99	2880	J	3000	96	2960	J	3000	99

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

ICV Source: ICP ICVH_52_00105 Concentration Units: ug/L

CCV Source: ICP CCVH_00637

Analyte	ICVH 280-457811/8 05/10/2019 11:02				ICVH 280-457811/9 05/10/2019 11:06				CCVH 280-457811/66 05/11/2019 01:33			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	40100		40000	100	40400		40000	101	48300		50000	97
Iron	80000		80000	100	78500		80000	98	48300		50000	97
Sodium	82200		80000	103	82600		80000	103	239000		250000	96

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

ICV Source: ICP ICVH_52_00105 Concentration Units: ug/L

CCV Source: ICP CCVH_00637

Analyte	CCVH 280-457811/80 05/11/2019 02:23				CCVH 280-457811/94 05/11/2019 03:12							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	48700		50000	97	48600		50000	97				
Iron	47400		50000	95	47400		50000	95				
Sodium	245000		250000	98	245000		250000	98				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

ICV Source: ICP ICV_00811 Concentration Units: ug/L

CCV Source: ICP CCV_52_00033

Analyte	ICV 280-457811/10 05/10/2019 11:09				ICV 280-457811/11 05/10/2019 11:13				CCV 280-457811/67 05/11/2019 01:37			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	246	J	250	98	245	J	250	98	489		500	98
Calcium	2470		2500	99	2470		2500	99	4890		5000	98
Iron	1220		1250	98	1220		1250	98	2410		2500	96
Magnesium	9730		10000	97	9670		10000	97	18800		20000	94
Potassium	24600		25000	99	24500		25000	98	48300		50000	97
Sodium	12400		12500	99	12400		12500	99	24900		25000	99

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

ICV Source: ICP ICV_00811 Concentration Units: ug/L

CCV Source: ICP CCV_52_00033

Analyte	CCV 280-457811/81 05/11/2019 02:26				CCV 280-457811/95 05/11/2019 03:15							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	493		500	99	488		500	98				
Calcium	4890		5000	98	4870		5000	97				
Iron	2400		2500	96	2400		2500	96				
Magnesium	18900		20000	95	18900		20000	94				
Potassium	48300		50000	97	48200		50000	96				
Sodium	24900		25000	100	24700		25000	99				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

ICV Source: ICP LLCCV_02538 Concentration Units: ug/L

CCV Source: ICP LLCCV_02538

Analyte	ICVL 280-457811/12 05/10/2019 11:21				CCVL 280-457811/69 05/11/2019 01:44				CCVL 280-457811/83 05/11/2019 02:33			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	104	J	100	104	101	J	100	101	101	J	100	101
Calcium	204	J	200	102	213	J	200	106	212	J	200	106
Iron	97.7	J	100	98	100		100	100	94.9	J	100	95
Magnesium	202	J	200	101	196	J	200	98	195	J	200	98
Potassium	3080		3000	103	2790	J	3000	93	2660	J	3000	89
Sodium	1140	J	1000	114	1100	J	1000	110	1080	J	1000	108

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

ICV Source: ICP LLCCV_02538 Concentration Units: ug/L

CCV Source: ICP LLCCV_02538

Analyte	CCVL 280-457811/97 05/11/2019 03:22											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	102	J	100	102								
Calcium	201	J	200	101								
Iron	95.2	J	100	95								
Magnesium	194	J	200	97								
Potassium	2670	J	3000	89								
Sodium	1060	J	1000	106								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

ICV Source: ms 77 icv_02039 Concentration Units: ug/L

CCV Source: ms 77 ccv_02043

Analyte	ICV 280-458080/27 05/13/2019 12:40				CCV 280-458080/70 05/13/2019 15:41				CCV 280-458080/83 05/13/2019 16:27			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	40.6		40.0	102	50.7		50.0	101	52.3		50.0	105
Arsenic	41.4		40.0	104	49.2		50.0	98	49.8		50.0	100
Barium	40.4		40.0	101	50.0		50.0	100	52.2		50.0	104
Beryllium	40.5		40.0	101	48.8		50.0	98	49.3		50.0	99
Cadmium	40.1		40.0	100	50.7		50.0	101	51.5		50.0	103
Chromium	40.7		40.0	102	48.3		50.0	97	48.3		50.0	97
Cobalt	40.7		40.0	102	48.5		50.0	97	49.1		50.0	98
Copper	40.9		40.0	102	47.4		50.0	95	48.8		50.0	98
Lead	38.0		40.0	95	48.2		50.0	96	46.6		50.0	93
Manganese	41.7		40.0	104	49.6		50.0	99	49.9		50.0	100
Nickel	40.3		40.0	101	47.5		50.0	95	48.6		50.0	97
Selenium	41.4		40.0	103	52.6		50.0	105	52.5		50.0	105
Silver	39.5		40.0	99	49.9		50.0	100	50.3		50.0	101
Thallium	37.4		40.0	94	45.6		50.0	91	46.2		50.0	92
Vanadium	41.3		40.0	103	48.9		50.0	98	48.9		50.0	98
Zinc	40.0		40.0	100	47.7		50.0	95	49.4		50.0	99

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

ICV Source: ms 77 icv_02039 Concentration Units: ug/L

CCV Source: ms 77 ccv_02043

Analyte	CCV 280-458080/91 05/13/2019 16:55				CCV 280-458080/101 05/13/2019 17:31							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	50.2		50.0	100	50.6		50.0	101				
Arsenic	49.3		50.0	99	49.7		50.0	99				
Barium	52.1		50.0	104	50.7		50.0	101				
Beryllium	49.9		50.0	100	50.5		50.0	101				
Cadmium	50.2		50.0	100	51.5		50.0	103				
Chromium	48.1		50.0	96	47.6		50.0	95				
Cobalt	49.1		50.0	98	48.7		50.0	97				
Copper	48.1		50.0	96	48.6		50.0	97				
Lead	48.5		50.0	97	51.8		50.0	104				
Manganese	50.0		50.0	100	49.9		50.0	100				
Nickel	49.2		50.0	98	49.6		50.0	99				
Selenium	54.2		50.0	108	53.1		50.0	106				
Silver	48.9		50.0	98	48.8		50.0	98				
Thallium	47.2		50.0	94	49.9		50.0	100				
Vanadium	48.1		50.0	96	48.9		50.0	98				
Zinc	48.4		50.0	97	49.0		50.0	98				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

ICV Source: MS 77 LLCCV_01846 Concentration Units: ug/L

CCV Source: MS 77 LLCCV_01846

Analyte	ICVL 280-458080/29 05/13/2019 12:49				CCVL 280-458080/72 05/13/2019 15:48				CCVL 280-458080/85 05/13/2019 16:34			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	2.06	J	2.00	103	2.02	J	2.00	101	2.01	J	2.00	100
Arsenic	4.71	J	5.00	94	4.61	J	5.00	92	4.56	J	5.00	91
Barium	0.962	J	1.00	96	1.09	J	1.00	109	1.00	J	1.00	100
Beryllium	0.910	J	1.00	91	0.862	J	1.00	86	0.878	J	1.00	88
Cadmium	1.04		1.00	104	0.982	J	1.00	98	1.03		1.00	103
Chromium	2.00	J	2.00	100	1.95	J	2.00	98	1.97	J	2.00	98
Cobalt	1.10		1.00	110	0.959	J	1.00	96	0.900	J	1.00	90
Copper	1.94	J	2.00	97	1.88	J	2.00	94	2.03		2.00	102
Lead	0.953	J	1.00	95	0.935	J	1.00	94	0.936	J	1.00	94
Manganese	0.996	J	1.00	100	1.05	J	1.00	105	1.03	J	1.00	103
Nickel	1.47	J	1.50	98	1.43	J	1.50	95	1.38	J	1.50	92
Selenium	5.19		5.00	104	4.93	J	5.00	99	5.00		5.00	100
Silver	5.00		5.00	100	4.73	J	5.00	95	4.95	J	5.00	99
Thallium	0.900	J	1.00	90	0.861	J	1.00	86	0.923	J	1.00	92
Vanadium	5.35	J	5.00	107	5.22	J	5.00	104	4.26	J	5.00	85
Zinc	9.72	J	10.0	97	9.23	J	10.0	92	9.36	J	10.0	94

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

ICV Source: MS 77 LLCCV_01846 Concentration Units: ug/L

CCV Source: MS 77 LLCCV_01846

Analyte	CCVL 280-458080/93 05/13/2019 17:02				CCVL 280-458080/103 05/13/2019 17:38							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	1.95	J	2.00	98	1.96	J	2.00	98				
Arsenic	4.81	J	5.00	96	4.56	J	5.00	91				
Barium	1.04	J	1.00	104	1.09	J	1.00	109				
Beryllium	0.871	J	1.00	87	0.897	J	1.00	90				
Cadmium	1.03		1.00	103	1.09		1.00	109				
Chromium	2.00	J	2.00	100	1.77	J	2.00	88				
Cobalt	0.938	J	1.00	94	0.905	J	1.00	91				
Copper	1.92	J	2.00	96	1.76	J	2.00	88				
Lead	0.987	J	1.00	99	0.917	J	1.00	92				
Manganese	1.05	J	1.00	105	0.961	J	1.00	96				
Nickel	1.40	J	1.50	94	1.25	J	1.50	83				
Selenium	4.92	J	5.00	98	5.10		5.00	102				
Silver	4.85	J	5.00	97	4.99	J	5.00	100				
Thallium	0.917	J	1.00	92	0.943	J	1.00	94				
Vanadium	4.37	J	5.00	87	4.28	J	5.00	86				
Zinc	9.30	J	10.0	93	9.13	J	10.0	91				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

ICV Source: Hg Biwk ICV_00273 Concentration Units: ug/L

CCV Source: Hg Daily Spk_02406

Analyte	ICV 280-457940/9-A 05/13/2019 16:33				CCV 280-457940/12-A 05/13/2019 20:45				CCV 280-457940/12-A 05/13/2019 21:12			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	3.94		4.00	99	5.01		5.00	100	5.00		5.00	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2A-IN
 CALIBRATION VERIFICATIONS
 METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

ICV Source: Hg Biwk ICV_00273 Concentration Units: ug/L

CCV Source: Hg Daily Spk_02406

Analyte	CCV 280-457940/12-A 05/13/2019 21:39											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	4.98		5.00	100								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
 Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1
 SDG No.: _____
 Method: 6010C Instrument ID: MT_051
 Lab Sample ID: CRI 280-458076/14 Concentration Units: ug/L
 CRQL Check Standard Source: ICP LLCCV_02540

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Aluminum	100	92.9	J	93	80-120
Calcium	200	205	J	102	80-120
Iron	100	101		101	80-120
Magnesium	200	191	J	95	80-120
Potassium	3000	2950	J	98	80-120
Sodium	1000	1040	J	104	80-120

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1
 SDG No.: _____
 Method: 6010C Instrument ID: MT_052
 Lab Sample ID: CRI 280-457811/16 Concentration Units: ug/L
 CRQL Check Standard Source: ICP LLCCV_02538

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Aluminum	100	103	J	103	80-120
Calcium	200	207	J	103	80-120
Iron	100	97.6	J	98	80-120
Magnesium	200	200	J	100	80-120
Potassium	3000	3000		100	80-120
Sodium	1000	1130	J	113	80-120

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1
 SDG No.: _____
 Method: 6020A Instrument ID: MT_078
 Lab Sample ID: CRI 280-458080/30 Concentration Units: ug/L
 CRQL Check Standard Source: ms 77 RL_01925

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	1.00	1.05	J	105	80-120
Arsenic	1.00	1.06	J	106	80-120
Beryllium	1.00	1.14		114	80-120
Cadmium	1.00	0.958	J	96	80-120
Chromium	1.00	1.06	J	106	80-120
Cobalt	1.00	1.05		105	80-120
Lead	1.00	1.07	J	107	80-120
Selenium	1.00	1.01	J	101	80-120
Silver	1.00	1.03	J	103	80-120
Thallium	1.00	0.928	J	93	80-120
Vanadium	1.00	3.0	U	101	80-120

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

Concentration Units: ug/L

Analyte	RL	ICB 280-458076/13 05/13/2019 12:15		CCB 280-458076/161 05/14/2019 05:24		CCB 280-458076/174 05/14/2019 06:08		Found	C
		Found	C	Found	C	Found	C		
Sodium	5000	106	J	160	U	160	U		
<i>Aluminum</i>	300	70	U	70	U	70	U		
<i>Calcium</i>	1000	160	U	160	U	160	U		
<i>Iron</i>	100	85	U	85	U	85	U		
<i>Magnesium</i>	500	60	U	60	U	60	U		
<i>Potassium</i>	3000	940	U	940	U	940	U		

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

Concentration Units: ug/L

Analyte	RL	ICB 280-457811/15 05/10/2019 11:32		CCB 280-457811/68 05/11/2019 01:41		CCB 280-457811/82 05/11/2019 02:30		CCB 280-457811/96 05/11/2019 03:19	
		Found	C	Found	C	Found	C	Found	C
Aluminum	300	70	U	70	U	70	U	70	U
Calcium	1000	160	U	160	U	160	U	160	U
Iron	100	85	U	85	U	85	U	85	U
Magnesium	500	60	U	60	U	60	U	60	U
Potassium	3000	940	U	940	U	940	U	940	U
Sodium	5000	160	U	73.2	J	160	U	160	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG No.: _____

Concentration Units: ug/L

Analyte	RL	ICB 280-458080/28 05/13/2019 12:46		CCB 280-458080/71 05/13/2019 15:45		CCB 280-458080/84 05/13/2019 16:31		CCB 280-458080/92 05/13/2019 16:59	
		Found	C	Found	C	Found	C	Found	C
Antimony	6.0	0.748	J	1.0	U	1.0	U	1.0	U
Arsenic	5.0	1.0	U	1.0	U	1.0	U	1.0	U
Barium	3.0	0.95	U	0.95	U	0.95	U	0.95	U
Beryllium	1.0	0.30	U	0.30	U	0.30	U	0.30	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	10	1.8	U	1.8	U	1.8	U	1.8	U
Cobalt	1.0	0.20	U	0.20	U	0.20	U	0.20	U
Copper	2.0	1.8	U	0.642	J	0.719	J	1.8	U
Lead	3.0	0.70	U	0.70	U	0.70	U	0.70	U
Manganese	3.5	0.95	U	0.95	U	0.95	U	0.95	U
Nickel	3.0	1.0	U	1.0	U	1.0	U	1.0	U
Selenium	5.0	1.0	U	1.0	U	1.0	U	1.0	U
Silver	5.0	0.10	U	0.10	U	0.10	U	0.10	U
Thallium	1.0	0.20	U	0.20	U	0.20	U	0.20	U
Vanadium	6.0	3.0	U	3.0	U	3.0	U	3.0	U
Zinc	20	8.0	U	8.0	U	8.0	U	8.0	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG No.: _____

Concentration Units: ug/L

Analyte	RL	CCB 280-458080/102 05/13/2019 17:34							
		Found	C	Found	C	Found	C	Found	C
Antimony	6.0	1.0	U						
Arsenic	5.0	1.0	U						
Barium	3.0	0.95	U						
Beryllium	1.0	0.30	U						
Cadmium	1.0	1.0	U						
Chromium	10	1.8	U						
Cobalt	1.0	0.20	U						
Copper	2.0	1.8	U						
Lead	3.0	0.70	U						
Manganese	3.5	0.95	U						
Nickel	3.0	1.0	U						
Selenium	5.0	1.0	U						
Silver	5.0	0.10	U						
Thallium	1.0	0.20	U						
Vanadium	6.0	3.0	U						
Zinc	20	8.0	U						

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

Concentration Units: ug/L

Analyte	RL	ICB 280-457940/10-A 05/13/2019 16:35		CCB 280-457940/13-A 05/13/2019 20:48		CCB 280-457940/13-A 05/13/2019 21:14		CCB 280-457940/13-A 05/13/2019 21:41	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.080	U	0.080	U	0.080	U	0.080	U

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG No.: _____

Concentration Units: ug/L

Lab Sample ID: MB 280-457068/1-A

Instrument Code: MT_052

Batch No.: 457811

CAS No.	Analyte	Concentration	C	Q	Method
7429-90-5	Aluminum	70	U		6010C_DOD5
7440-70-2	Calcium	160	U		6010C_DOD5
7439-89-6	Iron	65.1	J		6010C_DOD5
7439-95-4	Magnesium	60	U		6010C_DOD5
7440-09-7	Potassium	940	U		6010C_DOD5
7440-23-5	Sodium	160	U	Q	6010C_DOD5

3-IN
METHOD BLANK
METALS

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG No.: _____

Concentration Units: ug/L

Lab Sample ID: MB 280-457077/1-A

Instrument Code: MT_078

Batch No.: 458080

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	1.0	U		6020A_DOD5
7440-38-2	Arsenic	1.0	U		6020A_DOD5
7440-39-3	Barium	0.95	U		6020A_DOD5
7440-41-7	Beryllium	0.30	U		6020A_DOD5
7440-43-9	Cadmium	1.0	U		6020A_DOD5
7440-47-3	Chromium	1.8	U		6020A_DOD5
7440-48-4	Cobalt	0.20	U	Q	6020A_DOD5
7440-50-8	Copper	1.8	U		6020A_DOD5
7439-92-1	Lead	0.70	U		6020A_DOD5
7439-96-5	Manganese	0.465	J		6020A_DOD5
7440-02-0	Nickel	1.0	U		6020A_DOD5
7782-49-2	Selenium	1.0	U		6020A_DOD5
7440-22-4	Silver	0.0480	J		6020A_DOD5
7440-28-0	Thallium	0.20	U		6020A_DOD5
7440-62-2	Vanadium	3.0	U		6020A_DOD5
7440-66-6	Zinc	8.0	U		6020A_DOD5

3-IN
METHOD BLANK
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

Concentration Units: ug/L Lab Sample ID: MB 280-457916/1-A

Instrument Code: MT_033 Batch No.: 458130

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.080	U		7470A_DOD5

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG No.: _____

Lab Sample ID: ICSA 280-458076/15

Instrument ID: MT_051

Lab File ID: 51a051319bb.csv

ICS Source: ICP ICSA_00185

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Sodium		253	
<i>Aluminum</i>	<i>500000</i>	<i>524198</i>	<i>105</i>
<i>Antimony</i>		<i>-9.16</i>	
<i>Arsenic</i>		<i>1.57</i>	
<i>Barium</i>		<i>1.50</i>	
<i>Boron</i>		<i>11.3</i>	
<i>Cadmium</i>		<i>0.359</i>	
<i>Calcium</i>	<i>500000</i>	<i>486743</i>	<i>97</i>
<i>Cobalt</i>		<i>-1.04</i>	
<i>Copper</i>		<i>-5.81</i>	
<i>Iron</i>	<i>200000</i>	<i>194049</i>	<i>97</i>
<i>Lead</i>		<i>1.80</i>	
<i>Lithium</i>		<i>7.38</i>	
<i>Magnesium</i>	<i>500000</i>	<i>498935</i>	<i>100</i>
<i>Manganese</i>		<i>3.06</i>	
<i>Molybdenum</i>		<i>0.495</i>	
<i>Nickel</i>		<i>-1.57</i>	
<i>Phosphorus</i>		<i>20.5</i>	
<i>Potassium</i>		<i>-56.3</i>	
<i>Selenium</i>		<i>-1.22</i>	
<i>Silicon</i>		<i>47.2</i>	
<i>Silver</i>		<i>0.542</i>	
<i>Thallium</i>		<i>2.12</i>	
<i>Tin</i>		<i>6.54</i>	
<i>Titanium</i>		<i>1.33</i>	
<i>Vanadium</i>		<i>2.19</i>	
<i>Zinc</i>		<i>3.82</i>	

Calculations are performed before rounding to avoid round-off errors in calculated results.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG No.: _____

Lab Sample ID: ICSAB 280-458076/16

Instrument ID: MT_051

Lab File ID: 51a051319bb.csv

ICS Source: ICP ICSAB_00211

Concentration Units: ug/L

Analyte	True	Found	Percent Recovery
	Solution AB	Solution AB	
Sodium	10000	11087	111
<i>Aluminum</i>	<i>500000</i>	<i>528479</i>	<i>106</i>
<i>Antimony</i>	<i>1000</i>	<i>976</i>	<i>98</i>
<i>Arsenic</i>	<i>1000</i>	<i>1024</i>	<i>102</i>
<i>Barium</i>	<i>1000</i>	<i>1013</i>	<i>101</i>
<i>Beryllium</i>	<i>500</i>	<i>493</i>	<i>99</i>
<i>Boron</i>	<i>10000</i>	<i>10347</i>	<i>103</i>
<i>Cadmium</i>	<i>1000</i>	<i>924</i>	<i>92</i>
<i>Calcium</i>	<i>500000</i>	<i>486940</i>	<i>97</i>
<i>Chromium</i>	<i>1000</i>	<i>959</i>	<i>96</i>
<i>Cobalt</i>	<i>1000</i>	<i>896</i>	<i>90</i>
<i>Copper</i>	<i>1000</i>	<i>1028</i>	<i>103</i>
<i>Iron</i>	<i>200000</i>	<i>194322</i>	<i>97</i>
<i>Lead</i>	<i>1000</i>	<i>947</i>	<i>95</i>
<i>Lithium</i>	<i>1000</i>	<i>1031</i>	<i>103</i>
<i>Lithium</i>	<i>1000</i>	<i>1090</i>	<i>109</i>
<i>Magnesium</i>	<i>500000</i>	<i>503650</i>	<i>101</i>
<i>Manganese</i>	<i>1000</i>	<i>963</i>	<i>96</i>
<i>Molybdenum</i>	<i>1000</i>	<i>959</i>	<i>96</i>
<i>Nickel</i>	<i>1000</i>	<i>890</i>	<i>89</i>
<i>Phosphorus</i>	<i>10000</i>	<i>9764</i>	<i>98</i>
<i>Potassium</i>	<i>10000</i>	<i>11473</i>	<i>115</i>
<i>Selenium</i>	<i>1000</i>	<i>1037</i>	<i>104</i>
<i>Silicon</i>	<i>10000</i>	<i>10280</i>	<i>103</i>
<i>Silver</i>	<i>1000</i>	<i>1102</i>	<i>110</i>
<i>Strontium</i>	<i>1000</i>	<i>1019</i>	<i>102</i>
<i>Thallium</i>	<i>1000</i>	<i>992</i>	<i>99</i>
<i>Tin</i>	<i>1000</i>	<i>1025</i>	<i>102</i>
<i>Titanium</i>	<i>1000</i>	<i>1008</i>	<i>101</i>
<i>Vanadium</i>	<i>1000</i>	<i>984</i>	<i>98</i>
<i>Zinc</i>	<i>1000</i>	<i>908</i>	<i>91</i>

Calculations are performed before rounding to avoid round-off errors in calculated results.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG No.: _____

Lab Sample ID: ICSA 280-457811/17

Instrument ID: MT_052

Lab File ID: 52A051019C.csv

ICS Source: ICP ICSA_00185

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Aluminum	500000	517216	103
Calcium	500000	483287	97
Iron	200000	189436	95
Magnesium	500000	494288	99
Potassium		-72.3	
Sodium		248	
<i>Antimony</i>		-1.83	
<i>Barium</i>		1.96	
<i>Cadmium</i>		1.09	
<i>Cobalt</i>		1.43	
<i>Copper</i>		-1.26	
<i>Lead</i>		8.47	
<i>Lithium</i>		-0.608	
<i>Manganese</i>		1.15	
<i>Molybdenum</i>		1.24	
<i>Nickel</i>		-4.28	
<i>Phosphorus</i>		16.3	
<i>Selenium</i>		7.04	
<i>Silicon</i>		45.7	
<i>Silver</i>		2.23	
<i>Thallium</i>		10.7	
<i>Tin</i>		-3.89	
<i>Titanium</i>		-0.798	
<i>Vanadium</i>		2.36	
<i>Zinc</i>		1.40	

Calculations are performed before rounding to avoid round-off errors in calculated results.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG No.: _____

Lab Sample ID: ICSAB 280-457811/18

Instrument ID: MT_052

Lab File ID: 52A051019C.csv

ICS Source: ICP ICSAB_00211

Concentration Units: ug/L

Analyte	True	Found	Percent Recovery
	Solution AB	Solution AB	
Aluminum	500000	521059	104
Calcium	500000	485774	97
Iron	200000	190638	95
Magnesium	500000	496619	99
Potassium	10000	11316	113
Sodium	10000	11977	120
<i>Antimony</i>	<i>1000</i>	<i>973</i>	<i>97</i>
<i>Arsenic</i>	<i>1000</i>	<i>1060</i>	<i>106</i>
<i>Barium</i>	<i>1000</i>	<i>1008</i>	<i>101</i>
<i>Beryllium</i>	<i>500</i>	<i>504</i>	<i>101</i>
<i>Boron</i>	<i>10000</i>	<i>10223</i>	<i>102</i>
<i>Cadmium</i>	<i>1000</i>	<i>949</i>	<i>95</i>
<i>Chromium</i>	<i>1000</i>	<i>964</i>	<i>96</i>
<i>Cobalt</i>	<i>1000</i>	<i>916</i>	<i>92</i>
<i>Copper</i>	<i>1000</i>	<i>1027</i>	<i>103</i>
<i>Lead</i>	<i>1000</i>	<i>961</i>	<i>96</i>
<i>Lithium</i>	<i>1000</i>	<i>1081</i>	<i>108</i>
<i>Manganese</i>	<i>1000</i>	<i>967</i>	<i>97</i>
<i>Molybdenum</i>	<i>1000</i>	<i>969</i>	<i>97</i>
<i>Nickel</i>	<i>1000</i>	<i>908</i>	<i>91</i>
<i>Phosphorus</i>	<i>10000</i>	<i>9755</i>	<i>98</i>
<i>Selenium</i>	<i>1000</i>	<i>1062</i>	<i>106</i>
<i>Silicon</i>	<i>10000</i>	<i>10310</i>	<i>103</i>
<i>Silver</i>	<i>1000</i>	<i>1103</i>	<i>110</i>
<i>Strontium</i>	<i>1000</i>	<i>1012</i>	<i>101</i>
<i>Thallium</i>	<i>1000</i>	<i>1027</i>	<i>103</i>
<i>Tin</i>	<i>1000</i>	<i>1045</i>	<i>104</i>
<i>Titanium</i>	<i>1000</i>	<i>1004</i>	<i>100</i>
<i>Vanadium</i>	<i>1000</i>	<i>987</i>	<i>99</i>
<i>Zinc</i>	<i>1000</i>	<i>940</i>	<i>94</i>

Calculations are performed before rounding to avoid round-off errors in calculated results.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1
 SDG No.: _____
 Lab Sample ID: ICSA 280-458080/33 Instrument ID: MT_078
 Lab File ID: 033ICSA.d ICS Source: ms 77 icsa_00418
 Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		0.188	
Arsenic		0.0970	
Barium		0.723	
Beryllium		-0.0030	
Cadmium		0.715	
Chromium		1.40	
Cobalt		0.220	
Copper		0.240	
Lead		0.255	
Manganese		0.628	
Nickel		0.222	
Selenium		0.0660	
Silver		0.0400	
Thallium		0.0040	
Vanadium		0.405	
Zinc		0.865	
<i>Molybdenum</i>	<i>2000</i>	<i>2067</i>	<i>103</i>

Calculations are performed before rounding to avoid round-off errors in calculated results.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1
 SDG No.: _____
 Lab Sample ID: ICSAB 280-458080/34 Instrument ID: MT_078
 Lab File ID: 034ICSB.d ICS Source: ms 77 icsab_00418
 Concentration Units: ug/L

Analyte	True	Found	Percent Recovery
	Solution AB	Solution AB	
Antimony	100	109	109
Arsenic	100	103	103
Barium	100	103	103
Beryllium	100	94.7	95
Cadmium	100	102	102
Chromium	100	96.5	97
Cobalt	100	95.0	95
Copper	100	94.2	94
Lead	100	92.1	92
Manganese	100	101	101
Nickel	100	95.9	96
Selenium	100	106	106
Silver	100	100	100
Thallium	100	91.7	92
Vanadium	100	101	101
Zinc	100	95.6	96
<i>Molybdenum</i>	<i>2100</i>	<i>2145</i>	<i>102</i>

Calculations are performed before rounding to avoid round-off errors in calculated results.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1
 SDG No.: _____
 Lab Sample ID: ICSA 280-458080/145 Instrument ID: MT_078
 Lab File ID: 145ICSA.d ICS Source: ms 77 icsa_00418
 Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		0.148	
Arsenic		0.123	
Barium		0.814	
Beryllium		0.0180	
Cadmium		0.719	
Chromium		1.32	
Cobalt		0.257	
Copper		0.302	
Lead		0.279	
Manganese		0.538	
Nickel		0.229	
Selenium		0.111	
Silver		0.0490	
Thallium		0.0120	
Vanadium		-0.157	
Zinc		0.785	
<i>Molybdenum</i>	<i>2000</i>	<i>1989</i>	<i>99</i>

Calculations are performed before rounding to avoid round-off errors in calculated results.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG No.: _____

Lab Sample ID: ICSAB 280-458080/146

Instrument ID: MT_078

Lab File ID: 146ICSB.d

ICS Source: ms 77 icsab_00418

Concentration Units: ug/L

Analyte	True	Found	Percent Recovery
	Solution AB	Solution AB	
Antimony	100	103	103
Arsenic	100	102	102
Barium	100	98.5	98
Beryllium	100	92.5	93
Cadmium	100	96.8	97
Chromium	100	97.8	98
Cobalt	100	95.4	95
Copper	100	91.8	92
Lead	100	91.7	92
Manganese	100	99.6	100
Nickel	100	93.1	93
Selenium	100	95.4	95
Silver	100	96.1	96
Thallium	100	93.9	94
Vanadium	100	98.4	98
Zinc	100	95.4	95
<i>Molybdenum</i>	<i>2100</i>	<i>2023</i>	<i>96</i>

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE SAMPLE RECOVERY
 METALS

Client ID: DA2mw-115-190401-GWMS MS

Lab ID: 280-123183-1 MS

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG No.: _____

Matrix: Water

Concentration Units: ug/L

% Solids: _____

Analyte	SSR C	Sample Result (SR) C		Spike Added (SA)	%R	Control Limit %R	Q	Method
Aluminum	9920	21	J	10000	99	86-115		6010C
Calcium	152000	100000		50000	98	87-113		6010C
Iron	10700	840		10000	99	87-115		6010C
Magnesium	74700	28000		50000	94	85-113		6010C
Potassium	54200	3300		50000	102	86-114		6010C
Sodium	63900	12000		50000	104	87-115	Q	6010C
Antimony	40.9	1.0	U	40.0	102	85-117		6020A
Arsenic	39.2	1.7	J	40.0	94	84-116		6020A
Barium	66.1	23		40.0	107	86-114		6020A
Beryllium	39.9	0.30	U	40.0	100	83-121		6020A
Cadmium	37.5	1.0	U	40.0	94	87-115		6020A
Chromium	39.0	1.8	U	40.0	97	85-116		6020A
Cobalt	38.6	0.20	U	40.0	97	86-115	Q	6020A
Copper	37.9	1.8	U	40.0	95	85-118		6020A
Lead	38.8	0.70	U	40.0	97	88-115		6020A
Manganese	138	99		40.0	97	87-115		6020A
Nickel	38.0	1.0	U	40.0	95	85-117		6020A
Selenium	39.6	1.0	U	40.0	99	80-120		6020A
Silver	38.4	0.10	U	40.0	96	85-116		6020A
Thallium	38.2	0.20	U	40.0	95	82-116		6020A
Vanadium	38.0	3.0	U	40.0	95	86-115		6020A
Zinc	37.1	8.0	U	40.0	93	83-119		6020A
Mercury	4.76	0.080	U	5.00	95	82-119		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

5A-IN
 MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
 METALS

Client ID: DA2mw-115-190401-GWMSD MSD

Lab ID: 280-123183-1 MSD

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG No.: _____

Matrix: Water

Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Aluminum	9800	10000	98	86-115	1	20		6010C
Calcium	148000	50000	89	87-113	3	20		6010C
Iron	10400	10000	95	87-115	3	20		6010C
Magnesium	72900	50000	91	85-113	2	20		6010C
Potassium	53200	50000	100	86-114	2	20		6010C
Sodium	65000	50000	106	87-115	2	20	Q	6010C
Antimony	42.8	40.0	107	85-117	4	20		6020A
Arsenic	39.8	40.0	95	84-116	1	20		6020A
Barium	66.7	40.0	108	86-114	1	20		6020A
Beryllium	40.3	40.0	101	83-121	1	20		6020A
Cadmium	40.7	40.0	102	87-115	8	20		6020A
Chromium	40.2	40.0	100	85-116	3	20		6020A
Cobalt	38.7	40.0	97	86-115	0	20	Q	6020A
Copper	37.8	40.0	95	85-118	0	20		6020A
Lead	40.3	40.0	101	88-115	4	20		6020A
Manganese	142	40.0	108	87-115	3	20		6020A
Nickel	38.3	40.0	96	85-117	1	20		6020A
Selenium	39.2	40.0	98	80-120	1	20		6020A
Silver	40.2	40.0	100	85-116	4	20		6020A
Thallium	38.6	40.0	96	82-116	1	20		6020A
Vanadium	38.7	40.0	97	86-115	2	20		6020A
Zinc	37.8	40.0	94	83-119	2	20		6020A
Mercury	4.05	5.00	81	82-119	16	20	J1	7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

5B-IN
 POST DIGESTION SPIKE SAMPLE RECOVERY
 METALS

Client ID: DA2mw-115-190401-GW PDS

Lab ID: 280-123183-1 PDS

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG No.: _____

Matrix: Water

Concentration Units: ug/L

Analyte	SSR C	Sample Result (SR) C		Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	223	1.0	U	200	112	80-120		6020A
Arsenic	197	1.7	J	200	98	80-120		6020A
Barium	245	23		200	111	80-120		6020A
Beryllium	209	0.30	U	200	104	80-120		6020A
Cadmium	206	1.0	U	200	103	80-120		6020A
Chromium	202	1.8	U	200	101	80-120		6020A
Cobalt	208	0.20	U	200	104	80-120	Q	6020A
Copper	198	1.8	U	200	99	80-120		6020A
Lead	212	0.70	U	200	106	80-120		6020A
Manganese	307	99		200	104	80-120		6020A
Nickel	195	1.0	U	200	97	80-120		6020A
Selenium	203	1.0	U	200	102	80-120		6020A
Silver	41.7	0.10	U	50.0	83	80-120		6020A
Thallium	200	0.20	U	200	100	80-120		6020A
Vanadium	204	3.0	U	200	102	80-120		6020A
Zinc	201	8.0	U	200	101	80-120		6020A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 280-457068/2-A

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

Sample Matrix: Water

LCS Source: PREP SPK 2_00003

Analyte	Water (ug/L)							
	True	Found	C	%R	Limits		Q	Method
Aluminum	10000	10200		102	86	115		6010C
Calcium	50000	50200		100	87	113		6010C
Iron	10000	10300		103	87	115		6010C
Magnesium	50000	48300		97	85	113		6010C
Potassium	50000	50600		101	86	114		6010C
Sodium	50000	51500		103	87	115	Q	6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
 LAB CONTROL SAMPLE DUPLICATE
 METALS

Lab ID: LCSD 280-457068/3-A

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

Sample Matrix: Water

LCS Source: PREP SPK 2_00003

Analyte	(SDR) C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Aluminum	10200	10000	102	86-115	0	20		6010C
Calcium	50100	50000	100	87-113	0	20		6010C
Iron	9990	10000	100	87-115	3	20		6010C
Magnesium	48300	50000	97	85-113	0	20		6010C
Potassium	50600	50000	101	86-114	0	20		6010C
Sodium	51700	50000	103	87-115	1	20	Q	6010C

SDR = Spike Duplicate Results

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 280-457077/2-A

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

Sample Matrix: Water

LCS Source: MS spike 2_00080

Analyte	Water (ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	40.0	39.3		98	85	117		6020A
Arsenic	40.0	36.2		91	84	116		6020A
Barium	40.0	40.8		102	86	114		6020A
Beryllium	40.0	39.3		98	83	121		6020A
Cadmium	40.0	37.8		95	87	115		6020A
Chromium	40.0	38.1		95	85	116		6020A
Cobalt	40.0	38.3		96	86	115	Q	6020A
Copper	40.0	38.7		97	85	118		6020A
Lead	40.0	37.5		94	88	115		6020A
Manganese	40.0	40.2		101	87	115		6020A
Nickel	40.0	38.9		97	85	117		6020A
Selenium	40.0	37.9		95	80	120		6020A
Silver	40.0	38.9		97	85	116		6020A
Thallium	40.0	36.5		91	82	116		6020A
Vanadium	40.0	37.7		94	86	115		6020A
Zinc	40.0	38.8		97	83	119		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
 LAB CONTROL SAMPLE
 METALS

Lab ID: LCS 280-457916/2-A

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

Sample Matrix: Water

LCS Source: Hg Daily Spk_02406

Analyte	Water (ug/L)						
	True	Found	C	%R	Limits	Q	Method
Mercury	5.00	4.40		88	82	119	7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
 LAB CONTROL SAMPLE DUPLICATE
 METALS

Lab ID: LCSD 280-457916/3-A

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

Sample Matrix: Water

LCS Source: Hg Daily Spk_02406

Analyte	(SDR) C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	4.80	5.00	96	82-119	9	20		7470A

SDR = Spike Duplicate Results

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS

Lab ID: 280-123183-1

SDG No: _____

Lab Name: Eurofins TestAmerica, Denver

Job No: 280-123183-1

Matrix: Water

Concentration Units: ug/L

Analyte	Initial Sample		Serial		% Difference	Q	Method
	Result (I)	C	Result (S)	C			
Antimony	1.0	U	5.0	U	NC		6020A
Arsenic	1.7	J	1.78	J	NC	D	6020A
Barium	23		23.2		NC	D	6020A
Beryllium	0.30	U	1.5	U	NC		6020A
Cadmium	1.0	U	5.0	U	NC		6020A
Chromium	1.8	U	9.0	U	NC		6020A
Cobalt	0.20	U	1.0	U	NC	Q	6020A
Copper	1.8	U	9.0	U	NC		6020A
Lead	0.70	U	3.5	U	NC		6020A
Manganese	99		99.1		NC	D	6020A
Nickel	1.0	U	5.0	U	NC		6020A
Selenium	1.0	U	5.0	U	NC		6020A
Silver	0.10	U	0.50	U	NC		6020A
Thallium	0.20	U	1.0	U	NC		6020A
Vanadium	3.0	U	15	U	NC		6020A
Zinc	8.0	U	40	U	NC		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-123183-1
SDG Number: _____
Matrix: Water Instrument ID: MT_051
Method: 6010C DL Date: 02/03/2019 00:00
Prep Method: 3010A

Analyte	Wavelength/ Mass	LOQ (ug/L)	DL (ug/L)
Sodium	589.5	5000	54.3

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-123183-1
SDG Number: _____
Matrix: Water Instrument ID: MT_051
Method: 6010C XMDL Date: 02/03/2019 00:00

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Sodium		5000	54.3

9-IN
DETECTION LIMITS
METALS

Lab Name: Eurofins TestAmerica, Denver

Job Number: 280-123183-1

SDG Number: _____

Matrix: Water

Instrument ID: MT_052

Method: 6010C

DL Date: 02/03/2019 00:00

Prep Method: 3010A

Analyte	Wavelength/ Mass	LOQ (ug/L)	DL (ug/L)
Aluminum	167	300	18
Calcium	317.9	1000	77.8
Iron	259.9	100	22
Magnesium	279	500	26.4
Potassium	766.4	3000	237
Sodium	589.5	5000	54.3

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: Eurofins TestAmerica, Denver

Job Number: 280-123183-1

SDG Number: _____

Matrix: Water

Instrument ID: MT_052

Method: 6010C

XMDL Date: 02/03/2019 00:00

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Aluminum		300	18
Calcium		1000	77.8
Iron		100	22
Magnesium		500	26.4
Potassium		3000	237
Sodium		5000	54.3

9-IN
DETECTION LIMITS
METALS

Lab Name: Eurofins TestAmerica, Denver

Job Number: 280-123183-1

SDG Number: _____

Matrix: Water

Instrument ID: MT_078

Method: 6020A

DL Date: 02/03/2019 00:00

Prep Method: 3020A

Analyte	Wavelength/ Mass	LOQ (ug/L)	DL (ug/L)
Antimony	121	6	0.4
Arsenic	75	5	0.33
Barium	137	3	0.29
Beryllium	9	1	0.08
Cadmium	111	1	0.265
Chromium	52	10	0.5
Cobalt	59	1	0.054
Copper	63	2	0.56
Lead	208	3	0.18
Manganese	55	3.5	0.31
Nickel	60	3	0.3
Selenium	78	5	0.373
Silver	107	5	0.033
Thallium	205	1	0.089
Vanadium	51	6	1.24
Zinc	66	20	2

9-IN
 CALIBRATION BLANK DETECTION LIMITS
 METALS

Lab Name: Eurofins TestAmerica, Denver

Job Number: 280-123183-1

SDG Number: _____

Matrix: Water

Instrument ID: MT_078

Method: 6020A

XMDL Date: 02/03/2019 00:00

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony		6	0.4
Arsenic		5	0.33
Barium		3	0.29
Beryllium		1	0.08
Cadmium		1	0.265
Chromium		10	0.5
Cobalt		1	0.054
Copper		2	0.56
Lead		3	0.18
Manganese		3.5	0.31
Nickel		3	0.3
Selenium		5	0.373
Silver		5	0.033
Thallium		1	0.089
Vanadium		6	1.24
Zinc		20	2

9-IN
DETECTION LIMITS
METALS

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-123183-1
SDG Number: _____
Matrix: Water Instrument ID: MT_033
Method: 7470A DL Date: 08/09/2015 00:00
Prep Method: 7470A

Analyte	Wavelength/ Mass	LOQ (ug/L)	DL (ug/L)
Mercury	253.7	0.2	0.027

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-123183-1
SDG Number: _____
Matrix: Water Instrument ID: MT_033
Method: 7470A XMDL Date: 02/16/2014 00:00

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury		0.2	0.027

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-123183-1

SDG No.: _____

ICP-AES Instrument ID: MT_051 Date: 12/15/2018

Analyte	Wave Length	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K
Aluminum	167.019													0.0012	
Aluminum	396.152								0.000173						
Antimony	206.834		-0.000027									0.011394		-0.000086	
Arsenic	188.98													-0.000007	
Barium	493.408			-0.000045			0.000255		0.000002					0.000008	
Beryllium	234.861							0.000015						0.000104	
Bismuth	223.061													0.000065	
Boron	249.678										0.001755			-0.00006	
Cadmium	214.439										0.000016			0.000016	
Calcium	315.887									0.000711					
Chromium	205.56						-0.00057							-0.000018	
Cobalt	237.863														
Copper	324.754		0.000007						-0.000011					0.000016	
Iron	238.204														
Iron	259.94														
Lead	220.353		-0.000113											0.00003	
Lithium	670.783														
Magnesium	279.078													-0.000291	
Manganese	257.61														
Molybdenum	202.032														
Nickel	231.604													0.000006	
Phosphorus	213.618														
Potassium	766.491														
Selenium	196.026		0.000015											-0.000195	
Silicon	288.158														
Silver	328.066														
Sodium	589.592						0.30644								
Sodium	589.593						0.2566								
Strontium	407.771														
Sulfur	181.972									0					

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-123183-1

SDG No.: _____

ICP-AES Instrument ID: MT_051 Date: 12/15/2018

Analyte	Wave Length	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K
Thallium	190.794										0.001808			-0.000012	
Thorium	288.505						-0.00997							-0.00002	
Tin	189.925														
Titanium	336.122								0.000022						
Uranium	409.013								-0.000042					0.000203	
Vanadium	292.401											-0.00679			
Zinc	206.2														
Zirconium	343.823													0.000022	

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-123183-1

SDG No.: _____

ICP-AES Instrument ID: MT_051 Date: 12/15/2018

Analyte	Wave Length	Li	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Se	Si	Sn	Sr
Aluminum	396.152				0.031769										
Aluminum	167.019														
Antimony	206.834				-0.00208									0.000337	
Arsenic	188.98														
Barium	493.408														
Beryllium	234.861				-0.00022										
Bismuth	223.061														
Boron	249.678														
Cadmium	214.439														
Calcium	315.887														
Chromium	205.56				-0.00012										
Cobalt	237.863														
Copper	324.754				0.000505										
Iron	238.204														
Iron	259.94														
Lead	220.353				-0.00158										
Lithium	670.783														
Magnesium	279.078														
Manganese	257.61														
Molybdenum	202.032														
Nickel	231.604														
Phosphorus	213.618														
Potassium	766.491														
Selenium	196.026			.000816											
Silicon	288.158														
Silver	328.066														
Sodium	589.593														
Sodium	589.592														
Strontium	407.771														
Sulfur	181.972			0.00474											

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-123183-1

SDG No.: _____

ICP-AES Instrument ID: MT_051 Date: 12/15/2018

Analyte	Wave Length	Li	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Se	Si	Sn	Sr
Thallium	190.794				-0.00112										
Thorium	288.505			0.00783											
Tin	189.925														
Titanium	336.122														
Uranium	409.013														
Vanadium	292.401				-0.000580										
Zinc	206.2														
Zirconium	343.823														

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-123183-1

SDG No.: _____

ICP-AES Instrument ID: MT_051 Date: 12/15/2018

Analyte	Wave Length	Th	Ti	Tl	U	V	Zn	Zr							
Aluminum	167.019														
Aluminum	396.152														
Antimony	206.834		0.000287		-0.0011			-0.00142							
Arsenic	188.98														
Barium	493.408														
Beryllium	234.861														
Bismuth	223.061														
Boron	249.678														
Cadmium	214.439														
Calcium	315.887														
Chromium	205.56														
Cobalt	237.863		0.001949												
Copper	324.754	0.00368	-0.00033		-0.00136										
Iron	238.204														
Iron	259.94														
Lead	220.353				0.0010										
Lithium	670.783														
Magnesium	279.078				-0.00469										
Manganese	257.61														
Molybdenum	202.032														
Nickel	231.604			0.000176											
Phosphorus	213.618														
Potassium	766.491														
Selenium	196.026														
Silicon	288.158														
Silver	328.066				-0.00053	-0.0046		0.0047							
Sodium	589.592														
Sodium	589.593														
Strontium	407.771														
Sulfur	181.972														

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-123183-1

SDG No.: _____

ICP-AES Instrument ID: MT_051 Date: 12/15/2018

Analyte	Wave Length	Th	Ti	Tl	U	V	Zn	Zr							
Thallium	190.794		-0.002												
Thorium	288.505				0.007837	0.01457									
Tin	189.925														
Titanium	336.122														
Uranium	409.013							-0.01707							
Vanadium	292.401	0.002372	0.000675		-0.00164										
Zinc	206.2														
Zirconium	343.823														

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-123183-1

SDG No.: _____

ICP-AES Instrument ID: MT_052 Date: 03/22/2019

Analyte	Wave Length	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K
Aluminum	394.401														
Aluminum	396.152								-0.000104					-0.000023	
Antimony	206.834											0.004372		0.00005	
Arsenic	188.980													-0.000018	
Barium	493.408													0.000008	
Beryllium	234.861													-0.000043	
Bismuth	223.061													0.000079	0.000001
Boron	249.678													-0.000081	
Cadmium	214.439													0.000011	
Calcium	315.887		0.000314												
Chromium	205.560		-0.000004				-0.00014								
Cobalt	228.615													0	
Copper	324.754		0.000005						-0.000012						
Iron	238.204														
Iron	259.940														
Lead	220.353		-0.000052									-0.00051			
Lithium	670.783														
Magnesium	279.078													-0.000401	
Manganese	257.610														
Molybdenum	202.032														
Nickel	231.604								0					0	
Phosphorus	213.618												-0.16455		
Potassium	766.491														
Selenium	196.026													-0.000171	
Silicon	288.158													0	
Silver	328.068														
Sodium	589.592						-0.030677	-							
Sodium	589.593						-0.275847								
Strontium	421.552													0.000001	
Sulfur	181.972								0.000105					-	

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-123183-1

SDG No.: _____

ICP-AES Instrument ID: MT_052 Date: 03/22/2019

Analyte	Wave Length	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K
Thallium	190.794		0.00001118						-0.000017		0.00204			-0.000053	
Thorium	288.505						-0.00596		-0.000014					-0.000047	
Tin	189.925														
Titanium	336.122								0.000026					-	
Uranium	409.013								-0.000041					0.000232	
Vanadium	292.401											-0.00709			
Zinc	206.200													0.000031	
Zirconium	343.823													0	

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-123183-1

SDG No.: _____

ICP-AES Instrument ID: MT_052 Date: 03/22/2019

Analyte	Wave Length	Li	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Se	Si	Sn	Sr
Aluminum	396.152				0.040824										0.190657
Aluminum	394.401														0.02099
Antimony	206.834				-0.00389									-0.00029	
Arsenic	188.980														
Barium	493.408														
Beryllium	234.861														
Bismuth	223.061														
Boron	249.678														
Cadmium	214.439														
Calcium	315.887														
Chromium	205.560				-0.0007		-0.00029								
Cobalt	228.615						0.0001								
Copper	324.754				0.000286										
Iron	238.204														
Iron	259.940														
Lead	220.353				-0.000822										
Lithium	670.783														
Magnesium	279.078														
Manganese	257.610														
Molybdenum	202.032														
Nickel	231.604														
Phosphorus	213.618				-0.023999										
Potassium	766.491														
Selenium	196.026			0.000916	0.000109										
Silicon	288.158														
Silver	328.068														
Sodium	589.593														
Sodium	589.592														
Strontium	421.552														
Sulfur	181.972			0.006869											

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-123183-1

SDG No.: _____

ICP-AES Instrument ID: MT_052 Date: 03/22/2019

Analyte	Wave Length	Li	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Se	Si	Sn	Sr
Thallium	190.794				-0.00234										
Thorium	288.505			0.011354											
Tin	189.925														
Titanium	336.122						0.000067								
Uranium	409.013														
Vanadium	292.401				-0.0014										
Zinc	206.200														
Zirconium	343.823														

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-123183-1

SDG No.: _____

ICP-AES Instrument ID: MT_052 Date: 03/22/2019

Analyte	Wave Length	Th	Ti	Tl	U	V	Zn	Zr							
Aluminum	394.401	-0.021133			0.011488										
Aluminum	396.152														
Antimony	206.834		0.00261					-0.00114							
Arsenic	188.980														
Barium	493.408														
Beryllium	234.861														
Bismuth	223.061														
Boron	249.678														
Cadmium	214.439														
Calcium	315.887														
Chromium	205.560														
Cobalt	228.615		0.001881												
Copper	324.754	0.004174	-0.000232		-0.00125										
Iron	238.204														
Iron	259.940														
Lead	220.353		-0.00043		0.000755										
Lithium	670.783														
Magnesium	279.078				-0.00486										
Manganese	257.610														
Molybdenum	202.032														
Nickel	231.604			0.000222											
Phosphorus	213.618														
Potassium	766.491														
Selenium	196.026														
Silicon	288.158														
Silver	328.068				-0.000389	-0.011329		0.0060693							
Sodium	589.592														
Sodium	589.593														
Strontium	421.552														
Sulfur	181.972														

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-123183-1

SDG No.: _____

ICP-AES Instrument ID: MT_052 Date: 03/22/2019

Analyte	Wave Length	Th	Ti	Tl	U	V	Zn	Zr							
Thallium	190.794		-0.00212												
Thorium	288.505		-		0.002914	-0.06422									
Tin	189.925														
Titanium	336.122														
Uranium	409.013							-0.039324							
Vanadium	292.401	0.002016	0.000703		-0.0001										
Zinc	206.200														
Zirconium	343.823														

11-IN
LINEAR RANGES
METALS

Lab Name: Eurofins TestAmerica, Denver

Job No: 280-123183-1

SDG No.: _____

Instrument ID: MT_051

Date: 04/09/2019 07:05

Analyte	Integ. Time (Sec.)	Concentration (mg/L)	Method
Sodium		1000	6010C

11-IN
LINEAR RANGES
METALS

Lab Name: Eurofins TestAmerica, Denver

Job No: 280-123183-1

SDG No.: _____

Instrument ID: MT_052

Date: 04/09/2019 07:05

Analyte	Integ. Time (Sec.)	Concentration (mg/L)	Method
Aluminum		1000	6010C
Calcium		2000	6010C
Iron		500	6010C
Magnesium		1000	6010C
Potassium		500	6010C
Sodium		2500	6010C

11-IN
LINEAR RANGES
METALS

Lab Name: Eurofins TestAmerica, Denver

Job No: 280-123183-1

SDG No.: _____

Instrument ID: MT_078

Date: 04/09/2019 07:08

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony			6020A
Arsenic			6020A
Barium			6020A
Beryllium			6020A
Cadmium			6020A
Chromium			6020A
Cobalt			6020A
Copper			6020A
Lead			6020A
Manganese			6020A
Nickel			6020A
Selenium			6020A
Silver			6020A
Thallium			6020A
Vanadium			6020A
Zinc			6020A

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG No.: _____

Prep Method: 3010A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 280-457068/1-A	05/08/2019 05:45	457068		50	50
LCS 280-457068/2-A	05/08/2019 05:45	457068		50	50
LCSD 280-457068/3-A	05/08/2019 05:45	457068		50	50
280-123183-1	05/08/2019 05:45	457068		50	50
280-123183-1 MS	05/08/2019 05:45	457068		50	50
280-123183-1 MSD	05/08/2019 05:45	457068		50	50
280-123183-2	05/08/2019 05:45	457068		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG No.: _____

Prep Method: 3020A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 280-457077/1-A	05/08/2019 18:00	457077		50	50
LCS 280-457077/2-A	05/08/2019 18:00	457077		50	50
280-123183-1	05/08/2019 18:00	457077		50	50
280-123183-1 MS	05/08/2019 18:00	457077		50	50
280-123183-1 MSD	05/08/2019 18:00	457077		50	50
280-123183-2	05/08/2019 18:00	457077		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG No.: _____

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 280-457916/1-A	05/13/2019 12:45	457916		30	50
LCS 280-457916/2-A	05/13/2019 12:45	457916		30	50
LCSD 280-457916/3-A	05/13/2019 12:45	457916		30	50
280-123183-1	05/13/2019 12:45	457916		30	50
280-123183-1 MS	05/13/2019 12:45	457916		30	50
280-123183-1 MSD	05/13/2019 12:45	457916		30	50
280-123183-2	05/13/2019 12:45	457916		30	50

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG No.: _____

Instrument ID: MT_051

Analysis Method: 6010C

Start Date: 05/13/2019 11:15

End Date: 05/14/2019 07:43

Lab Sample Id	D/F	Type	Time	Analytes																											
				Na																											
ICIS 280-458076/1	1		11:15	X																											
IC 280-458076/2			11:18	X																											
IC 280-458076/3			11:22	X																											
ZZZZZZ			11:25																												
ZZZZZZ			11:28																												
ICVH 280-458076/6	1		11:34	X																											
ICVH 280-458076/7	1		11:38	X																											
ICV 280-458076/8	1		11:42	X																											
ICV 280-458076/9	1		11:45	X																											
ICVL 280-458076/10	1		12:05	X																											
CCVH 280-458076/11			12:08																												
CCV 280-458076/12			12:11																												
ICB 280-458076/13	1		12:15	X																											
CRI 280-458076/14	1		12:18	X																											
ICSA 280-458076/15	1		12:21	X																											
ICSAB 280-458076/16	1		12:25	X																											
LRA 280-458076/17			12:28																												
CCVH 280-458076/18			13:15																												
CCV 280-458076/19			13:18																												
CCB 280-458076/20			13:21																												
CCVL 280-458076/21			13:25																												
CCVH 280-458076/22			21:10																												
CCV 280-458076/23			21:14																												
CCB 280-458076/24			21:17																												
CCVL 280-458076/25			21:21																												
ZZZZZZ			21:48																												
ZZZZZZ			21:51																												
ZZZZZZ			21:54																												
CCVH 280-458076/29			21:58																												
CCV 280-458076/30			22:01																												
CCB 280-458076/31			22:04																												
CCVL 280-458076/32			22:08																												
ZZZZZZ			22:11																												
ZZZZZZ			22:15																												
ZZZZZZ			22:18																												
ZZZZZZ			22:21																												
ZZZZZZ			22:25																												
ZZZZZZ			22:28																												
ZZZZZZ			22:31																												
ZZZZZZ			22:35																												
ZZZZZZ			22:38																												
ZZZZZZ			22:42																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG No.: _____

Instrument ID: MT_051

Analysis Method: 6010C

Start Date: 05/13/2019 11:15

End Date: 05/14/2019 07:43

Lab Sample Id	D/F	Type	Time	Analytes																											
				Na																											
CCVH 280-458076/43			22:45																												
CCV 280-458076/44			22:48																												
CCB 280-458076/45			22:52																												
CCVL 280-458076/46			22:55																												
ZZZZZZ			22:58																												
ZZZZZZ			23:02																												
ZZZZZZ			23:05																												
ZZZZZZ			23:08																												
ZZZZZZ			23:12																												
ZZZZZZ			23:15																												
ZZZZZZ			23:19																												
ZZZZZZ			23:22																												
ZZZZZZ			23:25																												
ZZZZZZ			23:29																												
CCVH 280-458076/57			23:32																												
CCV 280-458076/58			23:35																												
CCB 280-458076/59			23:39																												
CCVL 280-458076/60			23:42																												
ZZZZZZ			23:46																												
ZZZZZZ			23:49																												
ZZZZZZ			23:52																												
ZZZZZZ			23:56																												
ZZZZZZ			23:59																												
ZZZZZZ			00:02																												
ZZZZZZ			00:06																												
ZZZZZZ			00:09																												
ZZZZZZ			00:13																												
ZZZZZZ			00:16																												
CCVH 280-458076/71			00:19																												
CCV 280-458076/72			00:23																												
CCB 280-458076/73			00:26																												
CCVL 280-458076/74			00:29																												
ZZZZZZ			00:33																												
ZZZZZZ			00:36																												
ZZZZZZ			00:40																												
ZZZZZZ			00:43																												
ZZZZZZ			00:46																												
ZZZZZZ			00:50																												
ZZZZZZ			00:53																												
ZZZZZZ			00:56																												
ZZZZZZ			01:00																												
ZZZZZZ			01:03																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG No.: _____

Instrument ID: MT_051

Analysis Method: 6010C

Start Date: 05/13/2019 11:15

End Date: 05/14/2019 07:43

Lab Sample Id	D/F	Type	Time	Analytes																											
				Na																											
CCVH 280-458076/85			01:07																												
CCV 280-458076/86			01:10																												
CCB 280-458076/87			01:13																												
CCVL 280-458076/88			01:17																												
ZZZZZZ			01:20																												
ZZZZZZ			01:23																												
ZZZZZZ			01:27																												
ZZZZZZ			01:30																												
ZZZZZZ			01:34																												
ZZZZZZ			01:37																												
ZZZZZZ			01:40																												
ZZZZZZ			01:44																												
ZZZZZZ			01:47																												
ZZZZZZ			01:50																												
CCVH 280-458076/99			01:54																												
CCV 280-458076/100			01:57																												
CCB 280-458076/101			02:01																												
CCVL 280-458076/102			02:04																												
ZZZZZZ			02:07																												
ZZZZZZ			02:11																												
ZZZZZZ			02:14																												
ZZZZZZ			02:17																												
ZZZZZZ			02:21																												
ZZZZZZ			02:24																												
ZZZZZZ			02:28																												
ZZZZZZ			02:31																												
ZZZZZZ			02:34																												
ZZZZZZ			02:38																												
CCVH 280-458076/113			02:41																												
CCV 280-458076/114			02:44																												
CCB 280-458076/115			02:48																												
CCVL 280-458076/116			02:51																												
ZZZZZZ			02:55																												
ZZZZZZ			02:58																												
ZZZZZZ			03:01																												
ZZZZZZ			03:05																												
ZZZZZZ			03:08																												
ZZZZZZ			03:11																												
ZZZZZZ			03:15																												
ZZZZZZ			03:18																												
ZZZZZZ			03:21																												
ZZZZZZ			03:25																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG No.: _____

Instrument ID: MT_051

Analysis Method: 6010C

Start Date: 05/13/2019 11:15

End Date: 05/14/2019 07:43

Lab Sample Id	D/F	T y p e	Time	N a	Analytes																								
CCVH 280-458076/127			03:28																										
CCV 280-458076/128			03:32																										
CCB 280-458076/129			03:35																										
CCVL 280-458076/130			03:38																										
ZZZZZZ			03:42																										
ZZZZZZ			03:45																										
ZZZZZZ			03:49																										
ZZZZZZ			03:52																										
ZZZZZZ			03:55																										
ZZZZZZ			03:59																										
ZZZZZZ			04:02																										
ZZZZZZ			04:06																										
ZZZZZZ			04:09																										
ZZZZZZ			04:12																										
CCVH 280-458076/141			04:16																										
CCV 280-458076/142			04:19																										
CCB 280-458076/143			04:23																										
CCVL 280-458076/144			04:26																										
ZZZZZZ			04:29																										
ZZZZZZ			04:33																										
CCVH 280-458076/147			04:36																										
CCV 280-458076/148			04:40																										
CCB 280-458076/149			04:43																										
CCVL 280-458076/150			04:46																										
ZZZZZZ			04:50																										
ZZZZZZ			04:53																										
ZZZZZZ			04:57																										
ZZZZZZ			05:00																										
ZZZZZZ			05:03																										
ZZZZZZ			05:07																										
ZZZZZZ			05:10																										
ZZZZZZ			05:14																										
CCVH 280-458076/159		1	05:17	X																									
CCV 280-458076/160		1	05:20	X																									
CCB 280-458076/161		1	05:24	X																									
CCVL 280-458076/162		1	05:27	X																									
ZZZZZZ			05:31																										
ZZZZZZ			05:34																										
ZZZZZZ			05:37																										
280-123183-1		1	T	05:41	X																								
280-123183-1 MS		1	T	05:44	X																								
280-123183-1 MSD		1	T	05:47	X																								

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

Instrument ID: MT_051 Analysis Method: 6010C

Start Date: 05/13/2019 11:15 End Date: 05/14/2019 07:43

Lab Sample Id	D/F	Type	Time	Analytes																											
				Na																											
ZZZZZZ			05:51																												
ZZZZZZ			05:54																												
ZZZZZZ			05:58																												
CCVH 280-458076/172	1		06:01	X																											
CCV 280-458076/173	1		06:04	X																											
CCB 280-458076/174	1		06:08	X																											
CCVL 280-458076/175	1		06:11	X																											
ZZZZZZ			06:15																												
ZZZZZZ			06:18																												
ZZZZZZ			06:21																												
ZZZZZZ			06:25																												
ZZZZZZ			06:28																												
ZZZZZZ			06:32																												
ZZZZZZ			06:35																												
ZZZZZZ			06:38																												
ZZZZZZ			06:42																												
ZZZZZZ			06:45																												
CCVH 280-458076/186			06:49																												
CCV 280-458076/187			06:52																												
CCB 280-458076/188			06:55																												
CCVL 280-458076/189			06:59																												
ZZZZZZ			07:02																												
ZZZZZZ			07:06																												
ZZZZZZ			07:09																												
ZZZZZZ			07:12																												
ZZZZZZ			07:16																												
ZZZZZZ			07:19																												
ZZZZZZ			07:23																												
ZZZZZZ			07:26																												
ZZZZZZ			07:29																												
CCVH 280-458076/199			07:33																												
CCV 280-458076/200			07:36																												
CCB 280-458076/201			07:40																												
CCVL 280-458076/202			07:43																												

Prep Types: _____
T = Total/NA

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG No.: _____

Instrument ID: MT_052

Analysis Method: 6010C

Start Date: 05/10/2019 10:33

End Date: 05/11/2019 08:40

Lab Sample Id	D/F	Type	Time	Analytes															
				Al	Ca	Fe	K	Mg	Na										
ICIS 280-457811/1	1		10:33	X	X	X	X	X	X										
IC 280-457811/2			10:36	X	X	X	X	X	X										
IC 280-457811/3			10:40	X	X	X	X	X	X										
IC 280-457811/4			10:44	X	X	X	X	X	X										
ZZZZZZ			10:51																
ZZZZZZ			10:54																
ZZZZZZ			10:58																
ICVH 280-457811/8	1		11:02	X	X	X	X	X	X										
ICVH 280-457811/9	1		11:06	X	X	X	X	X	X										
ICV 280-457811/10	1		11:09	X	X	X	X	X	X										
ICV 280-457811/11	1		11:13	X	X	X	X	X	X										
ICVL 280-457811/12	1		11:21	X	X	X	X	X	X										
CCVH 280-457811/13			11:25																
CCV 280-457811/14			11:29																
ICB 280-457811/15	1		11:32	X	X	X	X	X	X										
CRI 280-457811/16	1		11:35	X	X	X	X	X	X										
ICSA 280-457811/17	1		11:45	X	X	X	X	X	X										
ICSAB 280-457811/18	1		11:55	X	X	X	X	X	X										
LRA 280-457811/19			12:05																
CCVH 280-457811/20			12:10																
CCV 280-457811/21			12:14																
CCB 280-457811/22			12:18																
CCVL 280-457811/23			12:21																
CCVH 280-457811/24			23:06																
CCV 280-457811/25			23:09																
CCB 280-457811/26			23:13																
CCVL 280-457811/27			23:16																
ZZZZZZ			23:20																
ZZZZZZ			23:23																
ZZZZZZ			23:27																
ZZZZZZ			23:30																
ZZZZZZ			23:34																
ZZZZZZ			23:37																
ZZZZZZ			23:41																
ZZZZZZ			23:44																
ZZZZZZ			23:48																
ZZZZZZ			23:51																
CCVH 280-457811/38			23:55																
CCV 280-457811/39			23:59																
CCB 280-457811/40			00:02																
CCVL 280-457811/41			00:05																
ZZZZZZ			00:09																

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ANALYSIS RUN LOG
METALS

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG No.: _____

Instrument ID: MT_052

Analysis Method: 6010C

Start Date: 05/10/2019 10:33

End Date: 05/11/2019 08:40

Lab Sample Id	D/F	Type	Time	Analytes																											
				Al	Ca	Fe	K	Mg	Na																						
ZZZZZZ			00:12																												
ZZZZZZ			00:16																												
ZZZZZZ			00:20																												
ZZZZZZ			00:23																												
ZZZZZZ			00:27																												
ZZZZZZ			00:30																												
ZZZZZZ			00:34																												
ZZZZZZ			00:37																												
ZZZZZZ			00:41																												
CCVH 280-457811/52			00:44																												
CCV 280-457811/53			00:48																												
CCB 280-457811/54			00:52																												
CCVL 280-457811/55			00:55																												
ZZZZZZ			00:58																												
ZZZZZZ			01:02																												
ZZZZZZ			01:05																												
ZZZZZZ			01:09																												
ZZZZZZ			01:12																												
ZZZZZZ			01:16																												
ZZZZZZ			01:19																												
ZZZZZZ			01:23																												
ZZZZZZ			01:26																												
ZZZZZZ			01:30																												
CCVH 280-457811/66	1		01:33	X	X	X	X	X	X																						
CCV 280-457811/67	1		01:37	X	X	X	X	X	X																						
CCB 280-457811/68	1		01:41	X	X	X	X	X	X																						
CCVL 280-457811/69	1		01:44	X	X	X	X	X	X																						
ZZZZZZ			01:47																												
MB 280-457068/1-A	1	T	01:51	X	X	X	X	X	X																						
LCS 280-457068/2-A	1	T	01:54	X	X	X	X	X	X																						
LCSD 280-457068/3-A	1	T	01:58	X	X	X	X	X	X																						
ZZZZZZ			02:02																												
ZZZZZZ			02:05																												
ZZZZZZ			02:08																												
ZZZZZZ			02:12																												
ZZZZZZ			02:15																												
ZZZZZZ			02:19																												
CCVH 280-457811/80	1		02:23	X	X	X	X	X	X																						
CCV 280-457811/81	1		02:26	X	X	X	X	X	X																						
CCB 280-457811/82	1		02:30	X	X	X	X	X	X																						
CCVL 280-457811/83	1		02:33	X	X	X	X	X	X																						
ZZZZZZ			02:36																												

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ANALYSIS RUN LOG
METALS

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG No.: _____

Instrument ID: MT_052

Analysis Method: 6010C

Start Date: 05/10/2019 10:33

End Date: 05/11/2019 08:40

Lab Sample Id	D/F	Type	Time	Analytes																											
				A	C	F	K	M	N																						
280-123183-1	1	T	02:40	X	X	X	X	X																							
280-123183-1 MS	1	T	02:44	X	X	X	X	X																							
280-123183-1 MSD	1	T	02:47	X	X	X	X	X																							
280-123183-2	1	T	02:51	X	X	X	X	X	X																						
ZZZZZZ			02:54																												
ZZZZZZ			02:58																												
ZZZZZZ			03:01																												
ZZZZZZ			03:05																												
ZZZZZZ			03:08																												
CCVH 280-457811/94	1		03:12	X	X	X	X	X	X																						
CCV 280-457811/95	1		03:15	X	X	X	X	X	X																						
CCB 280-457811/96	1		03:19	X	X	X	X	X	X																						
CCVL 280-457811/97	1		03:22	X	X	X	X	X	X																						
ZZZZZZ			03:25																												
ZZZZZZ			03:29																												
ZZZZZZ			03:33																												
ZZZZZZ			03:36																												
ZZZZZZ			03:40																												
ZZZZZZ			03:43																												
ZZZZZZ			03:47																												
ZZZZZZ			03:50																												
ZZZZZZ			03:54																												
ZZZZZZ			03:58																												
CCVH 280-457811/108			04:01																												
CCV 280-457811/109			04:05																												
CCB 280-457811/110			04:08																												
CCVL 280-457811/111			04:12																												
ZZZZZZ			04:15																												
ZZZZZZ			04:19																												
ZZZZZZ			04:22																												
ZZZZZZ			04:26																												
ZZZZZZ			04:29																												
ZZZZZZ			04:33																												
ZZZZZZ			04:36																												
ZZZZZZ			04:40																												
ZZZZZZ			04:43																												
ZZZZZZ			04:47																												
CCVH 280-457811/122			04:51																												
CCV 280-457811/123			04:54																												
CCB 280-457811/124			04:58																												
CCVL 280-457811/125			05:01																												
ZZZZZZ			05:05																												

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ANALYSIS RUN LOG
METALS

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG No.: _____

Instrument ID: MT_052

Analysis Method: 6010C

Start Date: 05/10/2019 10:33

End Date: 05/11/2019 08:40

Lab Sample Id	D/F	Type	Time	Analytes																											
				Al	Ca	F	K	Mg	Na																						
ZZZZZZ			05:08																												
ZZZZZZ			05:12																												
ZZZZZZ			05:16																												
ZZZZZZ			05:19																												
ZZZZZZ			05:23																												
ZZZZZZ			05:26																												
ZZZZZZ			05:29																												
ZZZZZZ			05:33																												
ZZZZZZ			05:37																												
CCVH 280-457811/136			05:40																												
CCV 280-457811/137			05:44																												
CCB 280-457811/138			05:48																												
CCVL 280-457811/139			05:51																												
ZZZZZZ			05:54																												
ZZZZZZ			05:58																												
ZZZZZZ			06:01																												
ZZZZZZ			06:05																												
ZZZZZZ			06:08																												
ZZZZZZ			06:12																												
ZZZZZZ			06:15																												
ZZZZZZ			06:19																												
ZZZZZZ			06:22																												
ZZZZZZ			06:26																												
CCVH 280-457811/150			06:30																												
CCV 280-457811/151			06:34																												
CCB 280-457811/152			06:37																												
CCVL 280-457811/153			06:41																												
ZZZZZZ			06:44																												
ZZZZZZ			06:48																												
ZZZZZZ			06:51																												
ZZZZZZ			06:55																												
ZZZZZZ			06:59																												
ZZZZZZ			07:03																												
ZZZZZZ			07:06																												
ZZZZZZ			07:10																												
ZZZZZZ			07:14																												
ZZZZZZ			07:17																												
CCVH 280-457811/164			07:20																												
CCV 280-457811/165			07:24																												
CCB 280-457811/166			07:28																												
CCVL 280-457811/167			07:31																												
ZZZZZZ			07:35																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

Instrument ID: MT_052 Analysis Method: 6010C

Start Date: 05/10/2019 10:33 End Date: 05/11/2019 08:40

Lab Sample Id	D/F	Type	Time	Analytes																											
				Al	Ca	Fe	K	Mg	Na																						
ZZZZZZ			07:38																												
ZZZZZZ			07:42																												
ZZZZZZ			07:45																												
ZZZZZZ			07:48																												
ZZZZZZ			07:52																												
ZZZZZZ			07:56																												
ZZZZZZ			07:59																												
ZZZZZZ			08:04																												
ZZZZZZ			08:08																												
CCVH 280-457811/178			08:11																												
CCV 280-457811/179			08:15																												
CCB 280-457811/180			08:19																												
CCVL 280-457811/181			08:22																												
ZZZZZZ			08:26																												
CCVH 280-457811/183			08:29																												
CCV 280-457811/184			08:33																												
CCB 280-457811/185			08:36																												
CCVL 280-457811/186			08:40																												

Prep Types: _____
T = Total/NA

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG No.: _____

Instrument ID: MT_078

Analysis Method: 6020A

Start Date: 05/13/2019 10:59

End Date: 05/14/2019 08:28

Lab Sample Id	D/F	Type	Time	Analytes																											
				A g	A s	B a	B e	C d	C o	C r	C u	M n	N i	P b	S b	S e	T l	V z													
RINSE 280-458080/1			10:59																												
RINSE 280-458080/2			11:02																												
RINSE 280-458080/3			11:06																												
RINSE 280-458080/4			11:09																												
RINSE 280-458080/5			11:13																												
RINSE 280-458080/6			11:16																												
ICIS 280-458080/7			11:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
IC 280-458080/8			11:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
ICV 280-458080/9			11:27																												
ICB 280-458080/10			11:31																												
ICVL 280-458080/11			11:35																												
RINSE 280-458080/12			11:40																												
RINSE 280-458080/13			11:43																												
RINSE 280-458080/14			11:47																												
RINSE 280-458080/15			11:50																												
ICIS 280-458080/16			11:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
IC 280-458080/17			11:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
ICV 280-458080/18			12:01																												
ICB 280-458080/19			12:05																												
ICVL 280-458080/20			12:15																												
RINSE 280-458080/21			12:19																												
RINSE 280-458080/22			12:23																												
RINSE 280-458080/23			12:26																												
RINSE 280-458080/24			12:30																												
ICIS 280-458080/25			12:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
IC 280-458080/26	1		12:37	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
ICV 280-458080/27	1		12:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
ICB 280-458080/28	1		12:46	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
ICVL 280-458080/29	1		12:49	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CRI 280-458080/30	1		12:58	X	X		X	X	X	X					X	X	X	X	X												
CRI 280-458080/31			13:06																												
ZZZZZZ			13:10																												
ICSA 280-458080/33	1		13:14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
ICSAB 280-458080/34	1		13:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
RINSE 280-458080/35			13:21																												
LRA 280-458080/36			13:24																												
RINSE 280-458080/37			13:28																												
RINSE 280-458080/38			13:31																												
CCV 280-458080/39			13:35																												
CCB 280-458080/40			13:38																												
CCVL 280-458080/41			13:44																												
ZZZZZZ			13:47																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG No.:

Instrument ID: MT_078

Analysis Method: 6020A

Start Date: 05/13/2019 10:59

End Date: 05/14/2019 08:28

Lab Sample Id	D/F	T y p e	Time	Analytes																												
				A g	A s	B a	B e	C d	C o	C r	C u	M n	N i	P b	S b	S e	T l	V z	n													
ZZZZZZ			13:51																													
ZZZZZZ			13:54																													
ZZZZZZ			13:58																													
CCV 280-458080/46			14:01																													
CCB 280-458080/47			14:08																													
CCVL 280-458080/48			14:11																													
ZZZZZZ			14:15																													
ZZZZZZ			14:18																													
ZZZZZZ			14:22																													
ZZZZZZ			14:25																													
ZZZZZZ			14:29																													
ZZZZZZ			14:32																													
ZZZZZZ			14:36																													
ZZZZZZ			14:39																													
CCV 280-458080/57			14:43																													
CCB 280-458080/58			14:46																													
CCVL 280-458080/59			14:50																													
ZZZZZZ			14:53																													
ZZZZZZ			14:57																													
ZZZZZZ			15:00																													
ZZZZZZ			15:04																													
ZZZZZZ			15:07																													
ZZZZZZ			15:11																													
ZZZZZZ			15:14																													
ZZZZZZ			15:18																													
ZZZZZZ			15:21																													
ZZZZZZ			15:38																													
CCV 280-458080/70		1	15:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CCB 280-458080/71		1	15:45	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CCVL 280-458080/72		1	15:48	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
MB 280-457077/1-A		1 T	15:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
LCS 280-457077/2-A		1 T	15:56	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ			15:59																													
ZZZZZZ			16:03																													
ZZZZZZ			16:06																													
ZZZZZZ			16:10																													
ZZZZZZ			16:13																													
ZZZZZZ			16:17																													
ZZZZZZ			16:20																													
ZZZZZZ			16:24																													
CCV 280-458080/83		1	16:27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CCB 280-458080/84		1	16:31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG No.: _____

Instrument ID: MT_078

Analysis Method: 6020A

Start Date: 05/13/2019 10:59

End Date: 05/14/2019 08:28

Lab Sample Id	D/F	Type	Time	Analytes																																								
				A g	A s	B a	B e	C d	C o	C r	C u	M n	N i	P b	S b	S e	T l	V n																										
CCVL 280-458080/85	1		16:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																								
ZZZZZZ			16:38																																									
ZZZZZZ			16:41																																									
ZZZZZZ			16:45																																									
ZZZZZZ			16:48																																									
ZZZZZZ			16:52																																									
CCV 280-458080/91	1		16:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
CCB 280-458080/92	1		16:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCVL 280-458080/93	1		17:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
280-123183-1	1	T	17:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
280-123183-1 SD	5	T	17:09	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
280-123183-1 MS	1	T	17:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
280-123183-1 MSD	1	T	17:16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
280-123183-1 PDS	1	T	17:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
280-123183-2	1	T	17:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
ZZZZZZ			17:27																																									
CCV 280-458080/101	1		17:31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
CCB 280-458080/102	1		17:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCVL 280-458080/103	1		17:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			17:41																																									
ZZZZZZ			17:45																																									
ZZZZZZ			17:48																																									
ZZZZZZ			17:52																																									
ZZZZZZ			17:55																																									
ZZZZZZ			17:59																																									
ZZZZZZ			18:03																																									
ZZZZZZ			18:07																																									
CCV 280-458080/112			18:10																																									
CCB 280-458080/113			18:14																																									
CCVL 280-458080/114			18:17																																									
ZZZZZZ			18:21																																									
ZZZZZZ			18:24																																									
ZZZZZZ			18:28																																									
ZZZZZZ			18:31																																									
ZZZZZZ			18:35																																									
ZZZZZZ			18:38																																									
ZZZZZZ			18:42																																									
CCV 280-458080/122			18:46																																									
CCB 280-458080/123			18:49																																									
CCVL 280-458080/124			18:53																																									
ZZZZZZ			18:56																																									
ZZZZZZ			19:00																																									

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

Instrument ID: MT_078 Analysis Method: 6020A

Start Date: 05/13/2019 10:59 End Date: 05/14/2019 08:28

Lab Sample Id	D/F	Type	Time	Analytes																																		
				A g	A s	B a	B e	C d	C o	C r	C u	M n	N i	P b	S b	S e	T l	V n	Z n																			
ZZZZZZ			19:03																																			
ZZZZZZ			19:07																																			
ZZZZZZ			19:10																																			
ZZZZZZ			19:14																																			
ZZZZZZ			19:17																																			
ZZZZZZ			19:21																																			
CCV 280-458080/133			07:28																																			
CCB 280-458080/134			07:32																																			
CCVL 280-458080/135			07:35																																			
RINSE 280-458080/136			07:39																																			
RINSE 280-458080/137			07:42																																			
RINSE 280-458080/138			07:46																																			
RINSE 280-458080/139			07:50																																			
ICIS 280-458080/140			07:53	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
IC 280-458080/141			07:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CCV 280-458080/142			08:00																																			
CCB 280-458080/143			08:04																																			
CCVL 280-458080/144			08:07																																			
ICSA 280-458080/145		1	08:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
ICSAB 280-458080/146		1	08:14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
RINSE 280-458080/147			08:18																																			
CCV 280-458080/148			08:21																																			
CCB 280-458080/149			08:25																																			
CCVL 280-458080/150			08:28																																			

Prep Types: _____
T = Total/NA

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG No.: _____

Instrument ID: MT_033

Analysis Method: 7470A

Start Date: 05/13/2019 16:14

End Date: 05/14/2019 12:01

Lab Sample Id	D/F	Type	Time	Hg	Analytes																											
IC 280-457940/1-A			16:14	X																												
IC 280-457940/2-A			16:16	X																												
IC 280-457940/3-A			16:18	X																												
IC 280-457940/4-A			16:20	X																												
IC 280-457940/5-A			16:22	X																												
IC 280-457940/6-A			16:25	X																												
IC 280-457940/7-A			16:27	X																												
IC 280-457940/8-A			16:29	X																												
ICV 280-457940/9-A	1		16:33	X																												
ICB 280-457940/10-A	1		16:35	X																												
CRA 280-457940/11-A			16:37																													
CCV 280-457940/12-A			16:39																													
CCB 280-457940/13-A			16:41																													
ZZZZZZ			16:44																													
ZZZZZZ			16:46																													
ZZZZZZ			16:48																													
ZZZZZZ			16:50																													
ZZZZZZ			16:53																													
ZZZZZZ			16:57																													
ZZZZZZ			16:59																													
ZZZZZZ			17:01																													
ZZZZZZ			17:04																													
ZZZZZZ			17:07																													
CCV 280-457940/12-A			17:09																													
CCB 280-457940/13-A			17:11																													
ZZZZZZ			17:13																													
ZZZZZZ			17:15																													
ZZZZZZ			17:18																													
ZZZZZZ			17:20																													
ZZZZZZ			17:22																													
ZZZZZZ			17:24																													
ZZZZZZ			17:27																													
ZZZZZZ			17:29																													
ZZZZZZ			17:31																													
CCV 280-457940/12-A			17:33																													
CCB 280-457940/13-A			17:35																													
ZZZZZZ			17:38																													
ZZZZZZ			17:40																													
ZZZZZZ			17:42																													
ZZZZZZ			17:44																													
ZZZZZZ			17:47																													
ZZZZZZ			17:49																													

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

Instrument ID: MT_033 Analysis Method: 7470A

Start Date: 05/13/2019 16:14 End Date: 05/14/2019 12:01

Lab Sample Id	D/F	Type	Time	Analytes																											
				H	g																										
ZZZZZZ			17:51																												
ZZZZZZ			17:53																												
ZZZZZZ			17:55																												
ZZZZZZ			17:58																												
CCV 280-457940/12-A			18:00																												
CCB 280-457940/13-A			18:02																												
ZZZZZZ			18:04																												
ZZZZZZ			18:07																												
ZZZZZZ			18:09																												
ZZZZZZ			18:11																												
ZZZZZZ			18:13																												
ZZZZZZ			18:15																												
ZZZZZZ			18:18																												
ZZZZZZ			18:20																												
ZZZZZZ			18:22																												
ZZZZZZ			18:26																												
CCV 280-457940/12-A			18:28																												
CCB 280-457940/13-A			18:31																												
ZZZZZZ			18:33																												
ZZZZZZ			18:35																												
ZZZZZZ			18:37																												
ZZZZZZ			18:39																												
ZZZZZZ			18:42																												
CCV 280-457940/12-A			18:44																												
CCB 280-457940/13-A			18:46																												
ZZZZZZ			18:48																												
ZZZZZZ			18:51																												
ZZZZZZ			18:53																												
ZZZZZZ			18:55																												
ZZZZZZ			18:57																												
ZZZZZZ			18:59																												
CCV 280-457940/12-A			19:02																												
CCB 280-457940/13-A			19:04																												
ZZZZZZ			19:06																												
ZZZZZZ			19:08																												
ZZZZZZ			19:11																												
ZZZZZZ			19:13																												
ZZZZZZ			19:15																												
ZZZZZZ			19:17																												
ZZZZZZ			19:19																												
ZZZZZZ			19:22																												
ZZZZZZ			19:24																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins TestAmerica, Denver

Job No.: 280-123183-1

SDG No.: _____

Instrument ID: MT_033

Analysis Method: 7470A

Start Date: 05/13/2019 16:14

End Date: 05/14/2019 12:01

Lab Sample Id	D/F	Type	Time	Analytes																											
				H	g																										
CCV 280-457940/12-A			19:26																												
CCB 280-457940/13-A			19:28																												
ZZZZZZ			19:31																												
ZZZZZZ			19:33																												
ZZZZZZ			19:35																												
ZZZZZZ			19:37																												
ZZZZZZ			19:39																												
ZZZZZZ			19:42																												
ZZZZZZ			19:44																												
ZZZZZZ			19:46																												
ZZZZZZ			19:48																												
ZZZZZZ			19:52																												
CCV 280-457940/12-A			19:54																												
CCB 280-457940/13-A			19:56																												
ZZZZZZ			19:58																												
ZZZZZZ			20:01																												
ZZZZZZ			20:03																												
ZZZZZZ			20:05																												
ZZZZZZ			20:07																												
ZZZZZZ			20:10																												
ZZZZZZ			20:12																												
ZZZZZZ			20:14																												
ZZZZZZ			20:16																												
CCV 280-457940/12-A			20:19																												
CCB 280-457940/13-A			20:21																												
ZZZZZZ			20:23																												
ZZZZZZ			20:25																												
ZZZZZZ			20:27																												
ZZZZZZ			20:30																												
ZZZZZZ			20:32																												
ZZZZZZ			20:34																												
ZZZZZZ			20:36																												
ZZZZZZ			20:39																												
ZZZZZZ			20:41																												
ZZZZZZ			20:43																												
CCV 280-457940/12-A		1	20:45	X																											
CCB 280-457940/13-A		1	20:48	X																											
ZZZZZZ			20:50																												
ZZZZZZ			20:52																												
ZZZZZZ			20:54																												
ZZZZZZ			20:56																												
ZZZZZZ			20:59																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.:

Instrument ID: MT_033 Analysis Method: 7470A

Start Date: 05/13/2019 16:14 End Date: 05/14/2019 12:01

Lab Sample Id	D/F	Type	Time	Hg	Analytes																		
MB 280-457916/1-A	1	T	21:01	X																			
LCS 280-457916/2-A	1	T	21:03	X																			
LCSD 280-457916/3-A	1	T	21:05	X																			
ZZZZZZ			21:08																				
ZZZZZZ			21:10																				
CCV 280-457940/12-A	1		21:12	X																			
CCB 280-457940/13-A	1		21:14	X																			
ZZZZZZ			21:17																				
ZZZZZZ			21:19																				
ZZZZZZ			21:21																				
ZZZZZZ			21:23																				
ZZZZZZ			21:25																				
280-123183-1	1	T	21:28	X																			
280-123183-1 MS	1	T	21:30	X																			
280-123183-1 MSD	1	T	21:32	X																			
280-123183-2	1	T	21:34	X																			
ZZZZZZ			21:37																				
CCV 280-457940/12-A	1		21:39	X																			
CCB 280-457940/13-A	1		21:41	X																			
ZZZZZZ			21:43																				
ZZZZZZ			21:46																				
ZZZZZZ			21:48																				
ZZZZZZ			21:50																				
ZZZZZZ			21:52																				
ZZZZZZ			21:54																				
ZZZZZZ			21:57																				
ZZZZZZ			21:59																				
ZZZZZZ			22:01																				
CCV 280-457940/12-A			22:03																				
CCB 280-457940/13-A			22:06																				
ZZZZZZ			22:08																				
ZZZZZZ			22:10																				
ZZZZZZ			22:12																				
ZZZZZZ			22:15																				
ZZZZZZ			22:17																				
ZZZZZZ			22:19																				
ZZZZZZ			22:21																				
ZZZZZZ			22:24																				
ZZZZZZ			22:26																				
ZZZZZZ			22:28																				
CCV 280-457940/12-A			22:30																				
CCB 280-457940/13-A			22:32																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

Instrument ID: MT_033 Analysis Method: 7470A

Start Date: 05/13/2019 16:14 End Date: 05/14/2019 12:01

Lab Sample Id	D/F	Type	Time	Analytes																											
				H	g																										
ZZZZZZ			22:35																												
ZZZZZZ			22:37																												
ZZZZZZ			22:39																												
ZZZZZZ			22:41																												
ZZZZZZ			22:44																												
ZZZZZZ			22:46																												
ZZZZZZ			22:48																												
ZZZZZZ			22:50																												
ZZZZZZ			22:53																												
ZZZZZZ			22:55																												
CCV 280-457940/12-A			22:57																												
CCB 280-457940/13-A			22:59																												
ZZZZZZ			23:02																												
ZZZZZZ			23:04																												
ZZZZZZ			23:06																												
ZZZZZZ			23:08																												
ZZZZZZ			23:11																												
ZZZZZZ			23:13																												
ZZZZZZ			23:15																												
ZZZZZZ			23:17																												
ZZZZZZ			23:20																												
ZZZZZZ			23:22																												
CCV 280-457940/12-A			23:24																												
CCB 280-457940/13-A			23:26																												
ZZZZZZ			23:29																												
ZZZZZZ			23:31																												
ZZZZZZ			23:33																												
ZZZZZZ			23:35																												
ZZZZZZ			23:38																												
ZZZZZZ			23:40																												
CCV 280-457940/12-A			23:42																												
CCB 280-457940/13-A			23:44																												
ZZZZZZ			23:47																												
ZZZZZZ			23:49																												
ZZZZZZ			23:51																												
ZZZZZZ			23:53																												
ZZZZZZ			23:56																												
CCV 280-457940/12-A			23:58																												
CCB 280-457940/13-A			00:00																												
CCV 280-457940/12-A			07:49																												
CCB 280-457940/13-A			07:51																												
ZZZZZZ			07:53																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

Instrument ID: MT_033 Analysis Method: 7470A

Start Date: 05/13/2019 16:14 End Date: 05/14/2019 12:01

Lab Sample Id	D/F	Type	Time	Analytes																											
				H	g																										
ZZZZZZ			07:55																												
ZZZZZZ			07:57																												
ZZZZZZ			08:00																												
ZZZZZZ			08:02																												
ZZZZZZ			08:04																												
ZZZZZZ			08:06																												
ZZZZZZ			08:09																												
ZZZZZZ			08:11																												
ZZZZZZ			08:13																												
CCV 280-457940/12-A			08:15																												
CCB 280-457940/13-A			08:17																												
ZZZZZZ			08:20																												
ZZZZZZ			08:22																												
ZZZZZZ			08:24																												
ZZZZZZ			08:26																												
ZZZZZZ			08:29																												
ZZZZZZ			08:31																												
ZZZZZZ			08:33																												
ZZZZZZ			08:35																												
ZZZZZZ			08:37																												
ZZZZZZ			08:40																												
CCV 280-457940/12-A			08:42																												
CCB 280-457940/13-A			08:44																												
ZZZZZZ			08:46																												
ZZZZZZ			08:49																												
ZZZZZZ			08:51																												
ZZZZZZ			08:53																												
ZZZZZZ			08:55																												
ZZZZZZ			08:57																												
ZZZZZZ			09:00																												
ZZZZZZ			09:02																												
ZZZZZZ			09:04																												
ZZZZZZ			09:06																												
CCV 280-457940/12-A			09:09																												
CCB 280-457940/13-A			09:11																												
ZZZZZZ			09:13																												
ZZZZZZ			09:15																												
ZZZZZZ			09:17																												
ZZZZZZ			09:20																												
ZZZZZZ			09:22																												
ZZZZZZ			09:24																												
ZZZZZZ			09:26																												

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

Instrument ID: MT_033 Analysis Method: 7470A

Start Date: 05/13/2019 16:14 End Date: 05/14/2019 12:01

Lab Sample Id	D/F	Type	Time	Analytes																											
				H	g																										
ZZZZZZ			09:29																												
ZZZZZZ			09:31																												
ZZZZZZ			09:33																												
CCV 280-457940/12-A			09:35																												
CCB 280-457940/13-A			09:37																												
ZZZZZZ			09:40																												
ZZZZZZ			09:42																												
ZZZZZZ			09:44																												
ZZZZZZ			09:46																												
ZZZZZZ			09:49																												
ZZZZZZ			09:51																												
ZZZZZZ			09:53																												
ZZZZZZ			09:55																												
ZZZZZZ			09:58																												
ZZZZZZ			10:00																												
CCV 280-457940/12-A			10:02																												
CCB 280-457940/13-A			10:04																												
ZZZZZZ			10:06																												
ZZZZZZ			10:09																												
ZZZZZZ			10:11																												
ZZZZZZ			10:13																												
ZZZZZZ			10:15																												
ZZZZZZ			10:18																												
ZZZZZZ			10:20																												
ZZZZZZ			10:22																												
ZZZZZZ			10:24																												
ZZZZZZ			10:26																												
CCV 280-457940/12-A			10:29																												
CCB 280-457940/13-A			10:31																												
ZZZZZZ			11:56																												
CCV 280-457940/12-A			11:58																												
CCB 280-457940/13-A			12:01																												

Prep Types: _____
T = Total/NA

15-IN
ICP INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

ICP Instrument ID: MT_051 Start Date: 05/13/2019 End Date: 05/14/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Y 242.219	Q	Element Y 377.433	Q	Element Y 488.368	Q	Element	Q	Element	Q
ICIS 280-458076/1	11:15										
ICVH 280-458076/6	11:34	101		101		101					
ICVH 280-458076/7	11:38	100		101		102					
ICV 280-458076/8	11:42	100		100		100					
ICV 280-458076/9	11:45	99		99		100					
ICVL 280-458076/10	12:05	99		100		100					
ICB 280-458076/13	12:15	98		99		100					
CRI 280-458076/14	12:18	99		100		100					
ICSA 280-458076/15	12:21	89		90		94					
ICSAB 280-458076/16	12:25	88		89		93					
CCVH 280-458076/159	05:17	98		98		101					
CCV 280-458076/160	05:20	100		101		102					
CCB 280-458076/161	05:24	101		101		102					
CCVL 280-458076/162	05:27	102		102		105					
280-123183-1	05:41	98		100		101					
280-123183-1 MS	05:44	97		98		102					
280-123183-1 MSD	05:47	97		99		102					
CCVH 280-458076/172	06:01	97		96		100					
CCV 280-458076/173	06:04	98		99		101					
CCB 280-458076/174	06:08	99		99		102					
CCVL 280-458076/175	06:11	100		100		101					

15-IN
ICP INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

ICP Instrument ID: MT_052 Start Date: 05/10/2019 End Date: 05/11/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Y 242.219	Q	Element Y 377.433	Q	Element Y 488.368	Q	Element	Q	Element	Q
ICIS 280-457811/1	10:33										
ICVH 280-457811/8	11:02	102		102		102					
ICVH 280-457811/9	11:06	98		98		99					
ICV 280-457811/10	11:09	100		100		99					
ICV 280-457811/11	11:13	101		101		100					
ICVL 280-457811/12	11:21	104		104		102					
ICB 280-457811/15	11:32	103		103		102					
CRI 280-457811/16	11:35	103		103		102					
ICSA 280-457811/17	11:45	90		91		95					
ICSAB 280-457811/18	11:55	90		91		94					
CCVH 280-457811/66	01:33	106		107		109					
CCV 280-457811/67	01:37	105		106		106					
CCB 280-457811/68	01:41	109		110		110					
CCVL 280-457811/69	01:44	111		112		113					
MB 280-457068/1-A	01:51	108		109		109					
LCS 280-457068/2-A	01:54	102		104		103					
LCSD 280-457068/3-A	01:58	102		104		104					
CCVH 280-457811/80	02:23	100		102		103					
CCV 280-457811/81	02:26	102		103		102					
CCB 280-457811/82	02:30	105		106		104					
CCVL 280-457811/83	02:33	106		107		106					
280-123183-1	02:40	103		105		105					
280-123183-1 MS	02:44	99		102		103					
280-123183-1 MSD	02:47	99		102		103					
280-123183-2	02:51	103		105		106					
CCVH 280-457811/94	03:12	102		104		105					
CCV 280-457811/95	03:15	104		105		104					
CCB 280-457811/96	03:19	107		108		107					
CCVL 280-457811/97	03:22	107		108		106					

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

ICP-MS Instrument ID: MT_078 Start Date: 05/13/2019 End Date: 05/14/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc/1	Q	Element Sc/2	Q	Element Ge/1	Q	Element Ge/2	Q
IC 280-458080/26	12:37	98		101		98		103		100	
ICV 280-458080/27	12:40	100		101		100		101		98	
ICB 280-458080/28	12:46	99		101		99		99		98	
ICVL 280-458080/29	12:49	101		99		100		99		98	
CRI 280-458080/30	12:58	100		100		100		101		98	
ICSA 280-458080/33	13:14	95		93		94		94		94	
ICSAB 280-458080/34	13:17	91		94		96		93		95	
CCV 280-458080/70	15:41	90		93		95		93		99	
CCB 280-458080/71	15:45	90		94		92		95		95	
CCVL 280-458080/72	15:48	90		96		91		94		96	
MB 280-457077/1-A	15:52	87		94		95		93		99	
LCS 280-457077/2-A	15:56	89		94		94		95		99	
CCV 280-458080/83	16:27	87		98		93		99		101	
CCB 280-458080/84	16:31	85		96		94		99		102	
CCVL 280-458080/85	16:34	83		91		91		94		97	
CCV 280-458080/91	16:55	82		93		94		95		100	
CCB 280-458080/92	16:59	81		94		93		96		98	
CCVL 280-458080/93	17:02	81		92		92		94		95	
280-123183-1	17:06	76		88		91		90		96	
280-123183-1 SD	17:09	80		91		93		95		99	
280-123183-1 MS	17:13	76		89		91		89		95	
280-123183-1 MSD	17:16	76		91		92		91		95	
280-123183-1 PDS	17:20	76		90		90		91		95	
280-123183-2	17:23	80		92		91		93		96	
CCV 280-458080/101	17:31	79		92		87		93		96	
CCB 280-458080/102	17:34	80		91		89		91		98	
CCVL 280-458080/103	17:38	78		88		84		90		96	
ICSA 280-458080/145	08:11	95		96		99		96		98	
ICSAB 280-458080/146	08:14	99		100		102		101		100	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

ICP-MS Instrument ID: MT_078 Start Date: 05/13/2019 End Date: 05/14/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element In	Q	Element Ho-165	Q	Element	Q	Element	Q	Element	Q
IC 280-458080/26	12:37	97		97							
ICV 280-458080/27	12:40	99		101							
ICB 280-458080/28	12:46	99		103							
ICVL 280-458080/29	12:49	99		102							
CRI 280-458080/30	12:58	100		99							
ICSA 280-458080/33	13:14	92		100							
ICSAB 280-458080/34	13:17	93		99							
CCV 280-458080/70	15:41	98		104							
CCB 280-458080/71	15:45	99		104							
CCVL 280-458080/72	15:48	99		106							
MB 280-457077/1-A	15:52	99		104							
LCS 280-457077/2-A	15:56	101		105							
CCV 280-458080/83	16:27	101		113							
CCB 280-458080/84	16:31	102		108							
CCVL 280-458080/85	16:34	100		108							
CCV 280-458080/91	16:55	102		110							
CCB 280-458080/92	16:59	99		107							
CCVL 280-458080/93	17:02	99		108							
280-123183-1	17:06	98		108							
280-123183-1 SD	17:09	101		111							
280-123183-1 MS	17:13	100		107							
280-123183-1 MSD	17:16	97		106							
280-123183-1 PDS	17:20	100		110							
280-123183-2	17:23	100		108							
CCV 280-458080/101	17:31	100		104							
CCB 280-458080/102	17:34	99		106							
CCVL 280-458080/103	17:38	98		108							
ICSA 280-458080/145	08:11	96		103							
ICSAB 280-458080/146	08:14	100		106							

METALS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

Batch Number: 457068 Batch Start Date: 05/08/19 05:45 Batch Analyst: Jones, Micaela R

Batch Method: 3010A Batch End Date: 05/08/19 11:59

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	PREP SPK 1 00007	PREP SPK 2 00003	PREP SPK 3 00003
MB 280-457068/1		3010A, 6010C			50 mL	50 mL			
LCS 280-457068/2		3010A, 6010C			50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL
LCSD 280-457068/3		3010A, 6010C			50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL
280-123183-A-1	DA2mw-115-190401 -GW	3010A, 6010C	T	<2 SU	50 mL	50 mL			
280-123183-A-1 MS	DA2mw-115-190401 -GWMS	3010A, 6010C	T	<2 SU	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL
280-123183-A-1 MSD	DA2mw-115-190401 -GWMSD	3010A, 6010C	T	<2 SU	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL
280-123183-A-2	DA2mw-115-190402 -GW	3010A, 6010C	T	<2 SU	50 mL	50 mL			

Lab Sample ID	Client Sample ID	Method Chain	Basis	PREP SPK 4 00003					
MB 280-457068/1		3010A, 6010C							
LCS 280-457068/2		3010A, 6010C		0.5 mL					
LCSD 280-457068/3		3010A, 6010C		0.5 mL					
280-123183-A-1	DA2mw-115-190401 -GW	3010A, 6010C	T						
280-123183-A-1 MS	DA2mw-115-190401 -GWMS	3010A, 6010C	T	0.5 mL					
280-123183-A-1 MSD	DA2mw-115-190401 -GWMSD	3010A, 6010C	T	0.5 mL					
280-123183-A-2	DA2mw-115-190402 -GW	3010A, 6010C	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

Batch Number: 457068 Batch Start Date: 05/08/19 05:45 Batch Analyst: Jones, Micaela R

Batch Method: 3010A Batch End Date: 05/08/19 11:59

Batch Notes	
Temperature - Corrected - End	95 Degrees C
Temperature - Corrected - Start	91 Degrees C
Digestion End Time	05/08/2019 11:59
Digestion Start Time	05/08/2019 05:45
Digestion Unit ID	11
Hydrochloric Acid ID	0000217157-05/03
Nitric Acid ID	0000216908-05/03
Pipette/Syringe/Dispenser ID	MET-116
Analyst ID - Spike Analyst	MJ
Sufficient Volume for Batch QC	YES
Thermometer ID	MT-2050
Digestion Tube/Cup ID	1808354
Temperature - Uncorrected - End	95 Degrees C
Temperature - Uncorrected - Start	91 Degrees C

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

Batch Number: 457077 Batch Start Date: 05/08/19 18:00 Batch Analyst: Lodl, Dagmara A

Batch Method: 3020A Batch End Date: 05/08/19 23:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	MS CALSTD-1 00136	MS spike 2 00080	
MB 280-457077/1		3020A, 6020A			50 mL	50 mL			
LCS 280-457077/2		3020A, 6020A			50 mL	50 mL	0.1 mL	0.1 mL	
280-123183-A-1	DA2mw-115-190401 -GW	3020A, 6020A	T	<2	50 mL	50 mL			
280-123183-A-1 MS	DA2mw-115-190401 -GWMS	3020A, 6020A	T	<2	50 mL	50 mL	0.1 mL	0.1 mL	
280-123183-A-1 MSD	DA2mw-115-190401 -GWMSD	3020A, 6020A	T	<2	50 mL	50 mL	0.1 mL	0.1 mL	
280-123183-A-2	DA2mw-115-190402 -GW	3020A, 6020A	T	<2	50 mL	50 mL			

Batch Notes	
Temperature - Corrected - End	95 Degrees C
Temperature - Corrected - Start	92 Degrees C
Digestion End Time	2330
Digestion Start Time	18:00
Digestion Unit ID	06
Lot # of Nitric Acid	0000216908-05/03
Pipette/Syringe/Dispenser ID	MET-88
Sufficient Volume for Batch QC	QA-51
Thermometer ID	QA-49
Digestion Tube/Cup ID	1808354
Temperature - Uncorrected - End	96 Degrees C
Temperature - Uncorrected - Start	93 Degrees C

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

Batch Number: 457916 Batch Start Date: 05/13/19 12:45 Batch Analyst: Lackey, Cara M

Batch Method: 7470A Batch End Date: 05/13/19 14:45

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	Hg Daily Spk 02406		
MB 280-457916/1		7470A, 7470A		<2 SU	30 mL	50 mL			
LCS 280-457916/2		7470A, 7470A		<2 SU	30 mL	50 mL	1.5 mL		
LCSD 280-457916/3		7470A, 7470A		<2 SU	30 mL	50 mL	1.5 mL		
280-123183-A-1	DA2mw-115-190401 -GW	7470A, 7470A	T	<2 SU	30 mL	50 mL			
280-123183-A-1 MS	DA2mw-115-190401 -GWMS	7470A, 7470A	T	<2 SU	30 mL	50 mL	1.5 mL		
280-123183-A-1 MSD	DA2mw-115-190401 -GWMSD	7470A, 7470A	T	<2 SU	30 mL	50 mL	1.5 mL		
280-123183-A-2	DA2mw-115-190402 -GW	7470A, 7470A	T	<2 SU	30 mL	50 mL			

Batch Notes	
Batch Comment	DV-MT-0017, a4
Temperature - Corrected - End	94 Degrees C
Temperature - Corrected - Start	95 Degrees C
Digestion End Time	1445
Digestion Start Time	1245
Digestion Unit ID	14
Sulfuric Acid ID	211749-04/18/20
Nitric Acid ID	216908-04/10/20
Hydroxylamine ID	183734-05/13/20
Potassium Persulfate ID	182397-05/13/20
Potassium Permanganate ID	211877-05/13/20
Pipette/Syringe/Dispenser ID	MET-114
Thermometer ID	QA-16
Digestion Tube/Cup ID	1808349
Temperature - Uncorrected - End	93 Degrees C
Temperature - Uncorrected - Start	94 Degrees C

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

Batch Number: 457916 Batch Start Date: 05/13/19 12:45 Batch Analyst: Lackey, Cara M

Batch Method: 7470A Batch End Date: 05/13/19 14:45

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123183-1

SDG No.: _____

Batch Number: 457940 Batch Start Date: 05/13/19 12:45 Batch Analyst: Lackey, Cara M

Batch Method: 245.1 Batch End Date: 05/13/19 14:45

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	Hg Biwk ICV 00273	Hg Daily Spk 02406	
ICV 280-457940/9		245.1, 7470A		<2	30 mL	50 mL	0.3 mL		
ICB 280-457940/10		245.1, 7470A		<2	30 mL	50 mL			
CCV 280-457940/12		245.1, 7470A		<2	30 mL	50 mL		1.5 mL	
CCB 280-457940/13		245.1, 7470A		<2	30 mL	50 mL			

Batch Notes	
Batch Comment	dv-mt-0015, D5
Temperature - Corrected - End	95 Degrees C
Temperature - Corrected - Start	95 Degrees C
Digestion End Time	05/13/2019 14:45
Digestion Start Time	05/13/2019 12:45
Digestion Unit ID	12
Sulfuric Acid Lot Number	211749-04/18/20
Nitric Acid ID	216908-04/10/20
Hydroxylamine ID	183734-05/13/20
Potassium Persulfate ID	182397-05/13/20
Potassium Permanganate ID	11877-05/13/20
Pipette/Syringe/Dispenser ID	met-114
Thermometer ID	908002329
Digestion Tube/Cup ID	1808349
Temperature - Uncorrected - End	95 Degrees C
Temperature - Uncorrected - Start	95 Degrees C

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

51a051319.esws

User: denmet

Tuesday, May 14, 2019 8:17 AM

Workstation: DENPC462

Path: D:\My Results\51a051319.esws

Date created: 5/13/2019 10:20:12 AM

Instrument used: MY14490005

Software Version : 7.3.1.9507

Firmware Version : 3442

Notes:

Sample Name: icis

Date: 5/13/2019 11:15:25 AM

Rack:Tube: S1:5

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.000000	ppm	N/A	N/A	-2337.781134	Y_R 488.368
Ag (328.068 nm)	0.000000	ppm	N/A	N/A	-349.169000	Y 377.433
Al (167.019 nm)	0.000000	ppm	N/A	N/A	0.332614	Y_R 377.433
Al H (396.152 nm)	0.000000	ppm	N/A	N/A	21.644407	Y_R 377.433
As (188.980 nm)	0.000000	ppm	N/A	N/A	-0.044400	Y 242.219
B (249.678 nm)	0.000000	ppm	N/A	N/A	67.582500	Y 242.219
Ba (493.408 nm)	0.000000	ppm	N/A	N/A	601.968000	Y_R 488.368
Be (234.861 nm)	0.000000	ppm	N/A	N/A	-21.110600	Y_R 488.368
Bi (223.061 nm)	0.000000	ppm	N/A	N/A	20.751900	Y 377.433
Ca (315.887 nm)	0.000000	ppm	N/A	N/A	-96.962486	Y_R 377.433
Cd (214.439 nm)	0.000000	ppm	N/A	N/A	0.223704	Y 377.433
Co (228.615 nm)	0.000000	ppm	N/A	N/A	-39.845300	Y 242.219
Cr (205.560 nm)	0.000000	ppm	N/A	N/A	-2.012610	Y 377.433
Cu (324.754 nm)	0.000000	ppm	N/A	N/A	597.977000	Y 377.433
Fe (238.204 nm)	0.000000	ppm	N/A	N/A	15.851107	Y_R 377.433
Fe H (259.940 nm)	0.000000	ppm	N/A	N/A	7.019800	Y_R 377.433
K (766.491 nm)	0.000000	ppm	N/A	N/A	-688.756000	Y_R2 488.368
Li (670.783 nm)	0.000000	ppm	N/A	N/A	-1005.340000	Y_R2 488.368
Mg (279.078 nm)	0.000000	ppm	N/A	N/A	22.440100	Y 377.433
Mn (257.610 nm)	0.000000	ppm	N/A	N/A	74.690800	Y 377.433
Mo (202.032 nm)	0.000000	ppm	N/A	N/A	-2.404690	Y 377.433
Na (589.592 nm)	0.000000	ppm	N/A	N/A	883.679000	Y_R2 488.368
Na H (589.593 nm)	0.000000	ppm	N/A	N/A	13957.018408	Y_R 488.368
Ni (231.604 nm)	0.000000	ppm	N/A	N/A	-2.910600	Y 377.433
P (213.618 nm)	0.000000	ppm	N/A	N/A	16.700500	Y 242.219
Pb (220.353 nm)	0.000000	ppm	N/A	N/A	7.491000	Y 242.219
S (181.972 nm)	0.000000	ppm	N/A	N/A	23.153238	Y 377.433
Sb (206.834 nm)	0.000000	ppm	N/A	N/A	-30.910800	Y 377.433
Se (196.026 nm)	0.000000	ppm	N/A	N/A	10.723700	Y 242.219
Si (288.158 nm)	0.000000	ppm	N/A	N/A	836.067000	Y 377.433
Sn (189.925 nm)	0.000000	ppm	N/A	N/A	8.210870	Y 377.433
Sr (421.552 nm)	0.000000	ppm	N/A	N/A	115.986846	Y_R 488.368
Th (288.505 nm)	0.000000	ppm	N/A	N/A	52.313400	Y 377.433
Ti (336.122 nm)	0.000000	ppm	N/A	N/A	-194.554000	Y 377.433
Tl (190.794 nm)	0.000000	ppm	N/A	N/A	-2.220620	Y 377.433
U (409.013 nm)	0.000000	ppm	N/A	N/A	-113.625000	Y 377.433
V (292.401 nm)	0.000000	ppm	N/A	N/A	19.521200	Y 377.433
Zn (206.200 nm)	0.000000	ppm	N/A	N/A	1.769490	Y 377.433
Zr (343.823 nm)	0.000000	ppm	N/A	N/A	37.727000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.000000	17934.030678	0.000000	0.00
Y 377.433	1.000000	975241.704426	0.000000	0.00
Y_R 377.433	1.000000	71943.500000	0.000000	0.00
Y_R 488.368	1.000000	39518.100000	0.000000	0.00
Y_R2 488.368	1.000000	76169.646202	0.000000	0.00

Sample Name: ic1

Date: 5/13/2019 11:18:48 AM

Rack:Tube: 3:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	2.000000	ppm	N/A	N/A	2544.204924	Y_R 488.368
Ag (328.068 nm)	1.000000	ppm	N/A	N/A	46594.100000	Y 377.433
Al (167.019 nm)	1.000000	ppm	N/A	N/A	598.366000	Y_R 377.433
Al H (396.152 nm)	1.000000	ppm	N/A	N/A	2871.336999	Y_R 377.433
As (188.980 nm)	2.000000	ppm	N/A	N/A	2395.630000	Y 242.219
B (249.678 nm)	1.000000	ppm	N/A	N/A	24809.200000	Y 242.219
Ba (493.408 nm)	1.000000	ppm	N/A	N/A	112399.000000	Y_R 488.368
Be (234.861 nm)	1.000000	ppm	N/A	N/A	289325.000000	Y_R 488.368
Bi (223.061 nm)		ppm	N/A	N/A	14.477500	Y 377.433
Ca (315.887 nm)	10.000000	ppm	N/A	N/A	8337.549645	Y_R 377.433
Cd (214.439 nm)	1.000000	ppm	N/A	N/A	60961.800000	Y 377.433
Co (228.615 nm)	1.000000	ppm	N/A	N/A	19916.800000	Y 242.219
Cr (205.560 nm)	1.000000	ppm	N/A	N/A	14905.600000	Y 377.433
Cu (324.754 nm)	1.000000	ppm	N/A	N/A	66760.100000	Y 377.433
Fe (238.204 nm)	5.000000	ppm	N/A	N/A	18390.416787	Y_R 377.433
Fe H (259.940 nm)	5.000000	ppm	N/A	N/A	9709.070000	Y_R 377.433
K (766.491 nm)	100.000000	ppm	N/A	N/A	113112.000000	Y_R2 488.368
Li (670.783 nm)	2.000000	ppm	N/A	N/A	60359.500000	Y_R2 488.368
Mg (279.078 nm)	40.000000	ppm	N/A	N/A	236631.000000	Y 377.433
Mn (257.610 nm)	1.000000	ppm	N/A	N/A	253371.000000	Y 377.433
Mo (202.032 nm)	1.000000	ppm	N/A	N/A	8720.140000	Y 377.433
Na (589.592 nm)	10.000000	ppm	N/A	N/A	65982.800000	Y_R2 488.368
Na H (589.593 nm)	10.000000	ppm	N/A	N/A	49504.157625	Y_R 488.368
Ni (231.604 nm)	1.000000	ppm	N/A	N/A	7412.950000	Y 377.433
P (213.618 nm)	2.000000	ppm	N/A	N/A	4588.030000	Y 242.219
Pb (220.353 nm)	2.000000	ppm	N/A	N/A	6116.360000	Y 242.219
S (181.972 nm)		ppm	N/A	N/A	20.299799	Y 377.433
Sb (206.834 nm)	2.000000	ppm	N/A	N/A	5325.560000	Y 377.433
Se (196.026 nm)	2.000000	ppm	N/A	N/A	1873.440000	Y 242.219
Si (288.158 nm)	10.000000	ppm	N/A	N/A	88808.700000	Y 377.433
Sn (189.925 nm)	2.000000	ppm	N/A	N/A	4249.280000	Y 377.433
Sr (421.552 nm)	1.000000	ppm	N/A	N/A	211412.976952	Y_R 488.368
Th (288.505 nm)		ppm	N/A	N/A	114.064000	Y 377.433
Ti (336.122 nm)	1.000000	ppm	N/A	N/A	143430.000000	Y 377.433
Tl (190.794 nm)	2.000000	ppm	N/A	N/A	4616.350000	Y 377.433
U (409.013 nm)		ppm	N/A	N/A	-139.965000	Y 377.433
V (292.401 nm)	1.000000	ppm	N/A	N/A	42300.200000	Y 377.433
Zn (206.200 nm)	1.000000	ppm	N/A	N/A	5214.330000	Y 377.433
Zr (343.823 nm)	1.000000	ppm	N/A	N/A	135928.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.973137	17452.274437	0.000371	0.04
Y 377.433	0.980757	956474.783024	0.001020	0.10
Y_R 377.433	0.982897	70713.000000	0.002334	0.24
Y_R 488.368	0.987792	39035.600000	0.002552	0.26
Y_R2 488.368	0.997178	75954.697415	0.005261	0.53

Sample Name: ic2

Date: 5/13/2019 11:22:12 AM

Rack:Tube: 3:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)		ppm	N/A	N/A	-2011.483704	Y_R 488.368
Ag (328.068 nm)		ppm	N/A	N/A	-874.401000	Y 377.433
Al (167.019 nm)	100.000000	ppm	N/A	N/A	46841.900000	Y_R 377.433
Al H (396.152 nm)	100.000000	ppm	N/A	N/A	254850.614519	Y_R 377.433
As (188.980 nm)		ppm	N/A	N/A	5.038420	Y 242.219
B (249.678 nm)		ppm	N/A	N/A	-44.189100	Y 242.219
Ba (493.408 nm)		ppm	N/A	N/A	1188.360000	Y_R 488.368
Be (234.861 nm)		ppm	N/A	N/A	3567.890000	Y_R 488.368
Bi (223.061 nm)	2.000000	ppm	N/A	N/A	5175.260000	Y 377.433
Ca (315.887 nm)		ppm	N/A	N/A	-65.391845	Y_R 377.433
Cd (214.439 nm)		ppm	N/A	N/A	253.885000	Y 377.433
Co (228.615 nm)		ppm	N/A	N/A	133.582000	Y 242.219
Cr (205.560 nm)		ppm	N/A	N/A	12.352400	Y 377.433
Cu (324.754 nm)		ppm	N/A	N/A	2512.270000	Y 377.433
Fe (238.204 nm)	100.000000	ppm	N/A	N/A	354984.545615	Y_R 377.433
Fe H (259.940 nm)	100.000000	ppm	N/A	N/A	187108.000000	Y_R 377.433
K (766.491 nm)		ppm	N/A	N/A	-289.658000	Y_R2 488.368
Li (670.783 nm)		ppm	N/A	N/A	-708.352000	Y_R2 488.368
Mg (279.078 nm)		ppm	N/A	N/A	-277.085000	Y 377.433
Mn (257.610 nm)		ppm	N/A	N/A	1554.760000	Y 377.433
Mo (202.032 nm)		ppm	N/A	N/A	18.263400	Y 377.433
Na (589.592 nm)	500.000000	ppm	N/A	N/A	3081550.000000	Y_R2 488.368
Na H (589.593 nm)	500.000000	ppm	N/A	N/A	1942651.743678	Y_R 488.368
Ni (231.604 nm)		ppm	N/A	N/A	79.339900	Y 377.433
P (213.618 nm)		ppm	N/A	N/A	10.957600	Y 242.219
Pb (220.353 nm)		ppm	N/A	N/A	69.032100	Y 242.219
S (181.972 nm)	10.000000	ppm	N/A	N/A	4394.495451	Y 377.433
Sb (206.834 nm)		ppm	N/A	N/A	-122.977000	Y 377.433
Se (196.026 nm)		ppm	N/A	N/A	-1.160130	Y 242.219
Si (288.158 nm)		ppm	N/A	N/A	1609.630000	Y 377.433
Sn (189.925 nm)		ppm	N/A	N/A	30.059400	Y 377.433
Sr (421.552 nm)		ppm	N/A	N/A	1015.754646	Y_R 488.368
Th (288.505 nm)	10.000000	ppm	N/A	N/A	29334.200000	Y 377.433
Ti (336.122 nm)		ppm	N/A	N/A	533.830000	Y 377.433
Tl (190.794 nm)		ppm	N/A	N/A	-13.796100	Y 377.433
U (409.013 nm)	20.000000	ppm	N/A	N/A	94036.300000	Y 377.433
V (292.401 nm)		ppm	N/A	N/A	45.504300	Y 377.433
Zn (206.200 nm)		ppm	N/A	N/A	63.381300	Y 377.433
Zr (343.823 nm)		ppm	N/A	N/A	-390.093000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.949088	17020.980921	0.000689	0.07
Y 377.433	0.944741	921351.189388	0.001033	0.11
Y_R 377.433	0.963216	69297.100000	0.002621	0.27
Y_R 488.368	0.974813	38522.700000	0.002906	0.30
Y_R2 488.368	0.993259	75656.184969	0.011705	1.18

Sample Name: S1-5699799

Date: 5/13/2019 11:25:36 AM

Rack:Tube: 3:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.996552	ppm	0.017963	0.90	2535.789274	Y_R 488.368
Ag (328.068 nm)	1.000740	ppm	0.000869	0.09	46682.200000	Y 377.433
Al (167.019 nm)	0.994301	ppm	0.003737	0.38	598.676000	Y_R 377.433
Al H (396.152 nm)	0.997494	ppm	0.005859	0.59	2950.389805	Y_R 377.433
As (188.980 nm)	1.981040	ppm	0.012249	0.62	2372.880000	Y 242.219
B (249.678 nm)	0.996875	ppm	0.000597	0.06	24767.500000	Y 242.219
Ba (493.408 nm)	0.997405	ppm	0.002204	0.22	112134.000000	Y_R 488.368
Be (234.861 nm)	0.994547	ppm	0.005103	0.51	287838.000000	Y_R 488.368
Bi (223.061 nm)	-0.004701 u	ppm	0.002075	44.14	9.504450	Y 377.433
Ca (315.887 nm)	9.949867	ppm	0.027910	0.28	8295.864767	Y_R 377.433
Cd (214.439 nm)	1.000580	ppm	0.001521	0.15	61003.100000	Y 377.433
Co (228.615 nm)	0.997349	ppm	0.000659	0.07	19902.800000	Y 242.219
Cr (205.560 nm)	1.005700	ppm	0.003143	0.31	14978.900000	Y 377.433
Cu (324.754 nm)	0.997804	ppm	0.000094	0.01	66625.300000	Y 377.433
Fe (238.204 nm)	5.012950	ppm	0.017578	0.35	18438.006365	Y_R 377.433
Fe H (259.940 nm)	4.980780	ppm	0.006486	0.13	9673.170000	Y_R 377.433
K (766.491 nm)	99.836100	ppm	0.316897	0.32	112926.000000	Y_R2 488.368
Li (670.783 nm)	2.005570	ppm	0.006264	0.31	60530.500000	Y_R2 488.368
Mg (279.078 nm)	40.003600	ppm	0.052372	0.13	236643.000000	Y 377.433
Mn (257.610 nm)	1.001460	ppm	0.000421	0.04	253742.000000	Y 377.433
Mo (202.032 nm)	1.002090	ppm	0.000666	0.07	8738.390000	Y 377.433
Na (589.592 nm)	10.054000	ppm	0.008110	0.08	68324.600000	Y_R2 488.368
Na H (589.593 nm)	10.901767 Q	ppm	0.103254	0.95	53977.186825 Q	Y_R 488.368
Ni (231.604 nm)	1.001600	ppm	0.000123	0.01	7427.690000	Y 377.433
P (213.618 nm)	1.982350	ppm	0.011949	0.60	4547.690000	Y 242.219
Pb (220.353 nm)	1.991570	ppm	0.001416	0.07	6085.890000	Y 242.219
S (181.972 nm)	-0.008072 u	ppm	0.003814	47.26	21.700546	Y 377.433
Sb (206.834 nm)	2.000110	ppm	0.001759	0.09	5347.660000	Y 377.433
Se (196.026 nm)	1.985610	ppm	0.001366	0.07	1860.130000	Y 242.219
Si (288.158 nm)	9.947520	ppm	0.064809	0.65	88347.000000	Y 377.433
Sn (189.925 nm)	2.007440	ppm	0.009747	0.49	4265.050000	Y 377.433
Sr (421.552 nm)	0.998989	ppm	0.002453	0.25	211199.263446	Y_R 488.368
Th (288.505 nm)	0.011440	ppm	0.003014	26.34	122.275000	Y 377.433
Ti (336.122 nm)	1.000560	ppm	0.000496	0.05	143542.000000	Y 377.433
Tl (190.794 nm)	2.002340	ppm	0.002458	0.12	4618.560000	Y 377.433
U (409.013 nm)	0.017785	ppm	0.005032	28.29	-107.489000	Y 377.433
V (292.401 nm)	0.999896	ppm	0.000206	0.02	42010.800000	Y 377.433
Zn (206.200 nm)	0.997691	ppm	0.000257	0.03	5202.300000	Y 377.433
Zr (343.823 nm)	1.002210	ppm	0.000484	0.05	136244.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.975428	17493.363944	0.000030	0.00
Y 377.433	0.980200	955931.522424	0.000739	0.08
Y_R 377.433	0.986619	70980.800000	0.004573	0.46
Y_R 488.368	0.991996	39201.800000	0.005299	0.53
Y_R2 488.368	1.005855	76615.605693	0.001240	0.12

Sample Name: S2-5699816

Date: 5/13/2019 11:28:59 AM

Rack:Tube: 3:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.138030	ppm	0.003979	2.88	-2000.850217	Y_R 488.368
Ag (328.068 nm)	-0.000239 u	ppm	0.000011	4.40	-860.142000	Y 377.433
Al (167.019 nm)	77.458100 o	ppm	0.031652	0.04	46394.500000	Y_R 377.433
Al H (396.152 nm)	99.694479	ppm	0.267392	0.27	254073.152178	Y_R 377.433
As (188.980 nm)	0.005089	ppm	0.003156	62.01	5.214760	Y 242.219
B (249.678 nm)	0.002445	ppm	0.000589	24.09	-19.653400	Y 242.219
Ba (493.408 nm)	0.004355	ppm	0.000051	1.16	1178.020000	Y_R 488.368
Be (234.861 nm)	0.001796	ppm	0.000105	5.83	3509.170000	Y_R 488.368
Bi (223.061 nm)	1.992130	ppm	0.004830	0.24	5171.710000	Y 377.433
Ca (315.887 nm)	0.016774	ppm	0.008645	51.54	-82.811327	Y_R 377.433
Cd (214.439 nm)	0.002570	ppm	0.000002	0.07	254.223000	Y 377.433
Co (228.615 nm)	0.008699	ppm	0.000061	0.70	133.908000	Y 242.219
Cr (205.560 nm)	0.002923	ppm	0.000091	3.11	14.781900	Y 377.433
Cu (324.754 nm)	0.016682	ppm	0.000165	0.99	2496.720000	Y 377.433
Fe (238.204 nm)	96.344837 o	ppm	0.305249	0.32	354074.756585	Y_R 377.433
Fe H (259.940 nm)	99.904700	ppm	0.170781	0.17	186930.000000	Y_R 377.433
K (766.491 nm)	0.327345	ppm	0.061668	18.84	-316.236000	Y_R2 488.368
Li (670.783 nm)	0.012521	ppm	0.000323	2.58	-621.177000	Y_R2 488.368
Mg (279.078 nm)	0.070226	ppm	0.000328	0.47	-288.381000	Y 377.433
Mn (257.610 nm)	0.005832	ppm	0.000060	1.03	1552.000000	Y 377.433
Mo (202.032 nm)	0.001533	ppm	0.000006	0.38	10.966700	Y 377.433
Na (589.592 nm)	472.014000 o	ppm	1.796130	0.38	3073660.000000	Y_R2 488.368
Na H (589.593 nm)	494.920676	ppm	1.145099	0.23	1923031.179828	Y_R 488.368
Ni (231.604 nm)	0.010386	ppm	0.001716	16.52	78.554300	Y 377.433
P (213.618 nm)	-0.001502 u	ppm	0.002894	> 100.00	13.267600	Y 242.219
Pb (220.353 nm)	0.007331	ppm	0.003474	47.39	65.727100	Y 242.219
S (181.972 nm)	9.951042	ppm	0.030211	0.30	4373.107229	Y 377.433
Sb (206.834 nm)	0.001270	ppm	0.000187	14.69	-116.673000	Y 377.433
Se (196.026 nm)	0.005897	ppm	0.000732	12.41	-0.503908	Y 242.219
Si (288.158 nm)	0.085860	ppm	0.001244	1.45	1591.400000	Y 377.433
Sn (189.925 nm)	0.011175	ppm	0.000060	0.54	31.907500	Y 377.433
Sr (421.552 nm)	0.004131	ppm	0.000053	1.27	988.824707	Y_R 488.368
Th (288.505 nm)	10.027000	ppm	0.025651	0.26	29867.300000	Y 377.433
Ti (336.122 nm)	0.005012	ppm	0.000027	0.54	525.608000	Y 377.433
Tl (190.794 nm)	-0.002457 u	ppm	0.000353	14.37	-10.645800	Y 377.433
U (409.013 nm)	20.002100	ppm	0.007073	0.04	94141.500000	Y 377.433
V (292.401 nm)	0.009699	ppm	0.000240	2.48	50.077100	Y 377.433
Zn (206.200 nm)	0.008708	ppm	0.000157	1.81	47.159100	Y 377.433
Zr (343.823 nm)	-0.005179 u	ppm	0.000072	1.40	-367.842000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.959292	17203.964722	0.004417	0.46
Y 377.433	0.953821	930205.587116	0.004657	0.49
Y_R 377.433	0.977630	70334.100000	0.001715	0.18
Y_R 488.368	0.993230	39250.600000	0.006025	0.61
Y_R2 488.368	0.988899	75324.068599	0.006958	0.70

Sample Name: ICVH-5699387

Date: 5/13/2019 11:34:54 AM

Rack:Tube: 3:5

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.110801	ppm	0.017677	15.95	-2067.316365	Y_R 488.368
Ag (328.068 nm)	-0.000982 u	ppm	0.000258	26.32	-519.076000	Y 377.433
Al (167.019 nm)	34.594800 o	ppm	0.146213	0.42	20746.800000	Y_R 377.433
Al H (396.152 nm)	40.143903	ppm	0.134202	0.33	102502.178412	Y_R 377.433
As (188.980 nm)	0.000312 u	ppm	0.001536	> 100.00	-0.343983	Y 242.219
B (249.678 nm)	0.000513	ppm	0.000108	21.03	-38.891400	Y 242.219
Ba (493.408 nm)	0.000460	ppm	0.000400	87.09	725.196000	Y_R 488.368
Be (234.861 nm)	-0.000670 u	ppm	0.000016	2.35	2202.950000	Y_R 488.368
Bi (223.061 nm)	0.480355	ppm	0.002249	0.47	1272.200000	Y 377.433
Ca (315.887 nm)	0.011965	ppm	0.001166	9.75	-86.869605	Y_R 377.433
Cd (214.439 nm)	-0.000339 u	ppm	0.000078	22.90	57.875000	Y 377.433
Co (228.615 nm)	0.000209 u	ppm	0.000345	> 100.00	-35.680500	Y 242.219
Cr (205.560 nm)	0.000213	ppm	0.000152	71.54	-20.386600	Y 377.433
Cu (324.754 nm)	0.003451	ppm	0.000103	2.98	1190.930000	Y 377.433
Fe (238.204 nm)	77.553213 o	ppm	0.313411	0.40	285017.172266	Y_R 377.433
Fe H (259.940 nm)	80.352300	ppm	0.368863	0.46	150419.000000	Y_R 377.433
K (766.491 nm)	0.059862	ppm	0.056382	94.19	-620.634000	Y_R2 488.368
Li (670.783 nm)	0.004490	ppm	0.001750	38.98	-867.566000	Y_R2 488.368
Mg (279.078 nm)	-0.012952 u	ppm	0.000030	0.23	-329.452000	Y 377.433
Mn (257.610 nm)	0.000599	ppm	0.000021	3.45	226.362000	Y 377.433
Mo (202.032 nm)	-0.000205 u	ppm	0.000367	> 100.00	-4.194740	Y 377.433
Na (589.592 nm)	39.479000 o	ppm	0.199262	0.50	257888.000000	Y_R2 488.368
Na H (589.593 nm)	40.935206	ppm	0.236965	0.58	169024.306886	Y_R 488.368
Ni (231.604 nm)	0.000585	ppm	0.000034	5.80	5.001740	Y 377.433
P (213.618 nm)	-0.005813 u	ppm	0.001087	18.71	3.414450	Y 242.219
Pb (220.353 nm)	-0.000687 u	ppm	0.001002	> 100.00	13.977300	Y 242.219
S (181.972 nm)	3.672470 Q	ppm	0.006569	0.18	1628.516895 Q	Y 377.433
Sb (206.834 nm)	-0.000119 u	ppm	0.000994	> 100.00	-67.208700	Y 377.433
Se (196.026 nm)	0.001626	ppm	0.000865	53.21	-1.779880	Y 242.219
Si (288.158 nm)	0.003480	ppm	0.000072	2.08	866.682000	Y 377.433
Sn (189.925 nm)	0.000937	ppm	0.001074	> 100.00	10.197000	Y 377.433
Sr (421.552 nm)	0.000401	ppm	0.000079	19.84	200.636609	Y_R 488.368
Th (288.505 nm)	2.966100	ppm	0.006625	0.22	8846.590000	Y 377.433
Ti (336.122 nm)	0.000584	ppm	0.000019	3.25	-110.637000	Y 377.433
Tl (190.794 nm)	-0.002974 u	ppm	0.001729	58.15	-11.311000	Y 377.433
U (409.013 nm)	5.042220	ppm	0.008014	0.16	23699.400000	Y 377.433
V (292.401 nm)	0.001530	ppm	0.000226	14.79	32.520500	Y 377.433
Zn (206.200 nm)	0.000629	ppm	0.000144	22.91	5.050260	Y 377.433
Zr (343.823 nm)	-0.002572 u	ppm	0.000093	3.60	-71.705000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.007406	18066.846498	0.001066	0.11
Y 377.433	1.013548	988453.997145	0.000215	0.02
Y_R 377.433	1.006290	72396.400000	0.008358	0.83
Y_R 488.368	1.013570	40054.400000	0.001970	0.19
Y_R2 488.368	1.028688	78354.805993	0.000926	0.09

Sample Name: ICVH-5699387

Date: 5/13/2019 11:38:45 AM

Rack:Tube: 3:5

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.101555	ppm	0.003464	3.41	-2089.886058	Y_R 488.368
Ag (328.068 nm)	-0.001127 u	ppm	0.000288	25.53	-525.833000	Y 377.433
Al (167.019 nm)	34.191300 o	ppm	0.127653	0.37	20505.400000	Y_R 377.433
Al H (396.152 nm)	40.017844	ppm	0.116345	0.29	102181.340675	Y_R 377.433
As (188.980 nm)	-0.000114 u	ppm	0.001336	> 100.00	-0.852359	Y 242.219
B (249.678 nm)	0.000350	ppm	0.000359	> 100.00	-42.712000	Y 242.219
Ba (493.408 nm)	0.000298	ppm	0.000120	40.49	706.930000	Y_R 488.368
Be (234.861 nm)	-0.000745 u	ppm	0.000019	2.56	2177.010000	Y_R 488.368
Bi (223.061 nm)	0.481481	ppm	0.001575	0.33	1275.080000	Y 377.433
Ca (315.887 nm)	-0.000187 u	ppm	0.007059	> 100.00	-97.119474	Y_R 377.433
Cd (214.439 nm)	-0.000294 u	ppm	0.000005	1.68	60.469100	Y 377.433
Co (228.615 nm)	0.000230	ppm	0.000044	19.27	-35.265100	Y 242.219
Cr (205.560 nm)	0.000394	ppm	0.000074	18.70	-17.651900	Y 377.433
Cu (324.754 nm)	0.003195	ppm	0.000213	6.67	1175.440000	Y 377.433
Fe (238.204 nm)	77.401558 o	ppm	0.170822	0.22	284459.853911	Y_R 377.433
Fe H (259.940 nm)	80.239400	ppm	0.118843	0.15	150208.000000	Y_R 377.433
K (766.491 nm)	0.005216 u	ppm	0.032300	> 100.00	-682.821000	Y_R2 488.368
Li (670.783 nm)	0.003967	ppm	0.002574	64.90	-883.627000	Y_R2 488.368
Mg (279.078 nm)	-0.014197 u	ppm	0.000167	1.17	-336.435000	Y 377.433
Mn (257.610 nm)	0.000576	ppm	0.000016	2.81	220.514000	Y 377.433
Mo (202.032 nm)	0.000277	ppm	0.000024	8.79	0.009980	Y 377.433
Na (589.592 nm)	39.378900 o	ppm	0.079238	0.20	257236.000000	Y_R2 488.368
Na H (589.593 nm)	40.350053	ppm	0.286513	0.71	166763.388994	Y_R 488.368
Ni (231.604 nm)	0.000788	ppm	0.000506	64.25	6.495280	Y 377.433
P (213.618 nm)	-0.003282 u	ppm	0.001395	42.50	9.198230	Y 242.219
Pb (220.353 nm)	-0.000961 u	ppm	0.000269	28.01	13.152200	Y 242.219
S (181.972 nm)	3.650693 Q	ppm	0.001771	0.05	1618.997350 Q	Y 377.433
Sb (206.834 nm)	-0.003437 u	ppm	0.001571	45.71	-76.038800	Y 377.433
Se (196.026 nm)	-0.001805 u	ppm	0.004976	> 100.00	-4.951040	Y 242.219
Si (288.158 nm)	0.004251	ppm	0.001680	39.51	873.469000	Y 377.433
Sn (189.925 nm)	0.000465	ppm	0.000650	> 100.00	9.196610	Y 377.433
Sr (421.552 nm)	0.000132	ppm	0.000060	45.37	143.883128	Y_R 488.368
Th (288.505 nm)	2.958470	ppm	0.006414	0.22	8824.170000	Y 377.433
Ti (336.122 nm)	0.000618	ppm	0.000051	8.29	-105.774000	Y 377.433
Tl (190.794 nm)	-0.004579 u	ppm	0.000452	9.87	-15.014900	Y 377.433
U (409.013 nm)	5.035250	ppm	0.003339	0.07	23666.400000	Y 377.433
V (292.401 nm)	0.001329	ppm	0.000078	5.84	24.813800	Y 377.433
Zn (206.200 nm)	0.000604	ppm	0.000516	85.42	4.917760	Y 377.433
Zr (343.823 nm)	-0.002618 u	ppm	0.000221	8.44	-78.448900	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.003189	17991.227172	0.000269	0.03
Y 377.433	1.008190	983228.759988	0.000404	0.04
Y_R 377.433	1.011620	72779.300000	0.001663	0.16
Y_R 488.368	1.020320	40321.000000	0.004462	0.44
Y_R2 488.368	1.034082	78765.691763	0.003828	0.37

Sample Name: ICV-5699388

Date: 5/13/2019 11:42:08 AM

Rack:Tube: 3:6

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.294725 Q	ppm	0.011550	3.92	-1618.359969 Q	Y_R 488.368
Ag (328.068 nm)	0.246409	ppm	0.000183	0.07	11231.100000	Y 377.433
Al (167.019 nm)	0.230229 Q	ppm	0.005917	2.57	138.931000 Q	Y_R 377.433
Al H (396.152 nm)	0.147384 u	ppm	0.004838	3.28	722.168117	Y_R 377.433
As (188.980 nm)	0.239315	ppm	0.000067	0.03	286.605000	Y 242.219
B (249.678 nm)	0.242288	ppm	0.000002	0.00	6070.790000	Y 242.219
Ba (493.408 nm)	0.248450	ppm	0.000405	0.16	28385.400000	Y_R 488.368
Be (234.861 nm)	0.247731	ppm	0.000750	0.30	71683.500000	Y_R 488.368
Bi (223.061 nm)	0.486555	ppm	0.004692	0.96	1274.940000	Y 377.433
Ca (315.887 nm)	2.482479	ppm	0.002636	0.11	1997.035761	Y_R 377.433
Cd (214.439 nm)	0.246728	ppm	0.000233	0.09	15042.600000	Y 377.433
Co (228.615 nm)	0.243376	ppm	0.000823	0.34	4826.590000	Y 242.219
Cr (205.560 nm)	0.245955	ppm	0.001095	0.45	3661.680000	Y 377.433
Cu (324.754 nm)	0.239956	ppm	0.000140	0.06	16475.100000	Y 377.433
Fe (238.204 nm)	1.231521	ppm	0.001589	0.13	4541.584634	Y_R 377.433
Fe H (259.940 nm)	1.079770 u	ppm	0.006959	0.64	2388.600000	Y_R 377.433
K (766.491 nm)	24.618200	ppm	0.091995	0.37	27326.900000	Y_R2 488.368
Li (670.783 nm)	0.254205	ppm	0.001855	0.73	6794.270000	Y_R2 488.368
Mg (279.078 nm)	9.711920	ppm	0.007849	0.08	57468.500000	Y 377.433
Mn (257.610 nm)	0.250365	ppm	0.000073	0.03	63491.100000	Y 377.433
Mo (202.032 nm)	0.245656	ppm	0.000932	0.38	2140.340000	Y 377.433
Na (589.592 nm)	12.012700 o	ppm	0.010433	0.09	79581.400000	Y_R2 488.368
Na H (589.593 nm)	11.923825	ppm	0.002598	0.02	57183.506242	Y_R 488.368
Ni (231.604 nm)	0.246591	ppm	0.000591	0.24	1826.150000	Y 377.433
P (213.618 nm)	1.986480	ppm	0.005172	0.26	4557.120000	Y 242.219
Pb (220.353 nm)	0.241977	ppm	0.003115	1.29	745.423000	Y 242.219
S (181.972 nm)	-0.018549 u	ppm	0.000253	1.36	15.563210	Y 377.433
Sb (206.834 nm)	0.249906	ppm	0.001528	0.61	643.503000	Y 377.433
Se (196.026 nm)	0.238817	ppm	0.001216	0.51	233.176000	Y 242.219
Si (288.158 nm)	2.458820 Q	ppm	0.009493	0.39	22467.000000 Q	Y 377.433
Sn (189.925 nm)	0.242651	ppm	0.000363	0.15	522.762000	Y 377.433
Sr (421.552 nm)	0.247247	ppm	0.000220	0.09	52358.599922	Y_R 488.368
Th (288.505 nm)	-0.001059 u	ppm	0.001697	> 100.00	58.005800	Y 377.433
Ti (336.122 nm)	0.245180	ppm	0.000242	0.10	35027.100000	Y 377.433
Tl (190.794 nm)	0.245126	ppm	0.002625	1.07	563.060000	Y 377.433
U (409.013 nm)	-0.003474 u	ppm	0.001078	31.02	-148.874000	Y 377.433
V (292.401 nm)	0.244656	ppm	0.000129	0.05	10293.700000	Y 377.433
Zn (206.200 nm)	0.246166	ppm	0.000783	0.32	1284.930000	Y 377.433
Zr (343.823 nm)	0.244837	ppm	0.000050	0.02	33312.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.997474	17888.724011	0.001934	0.19
Y 377.433	1.004743	979866.801468	0.002233	0.22
Y_R 377.433	0.997899	71792.300000	0.000558	0.06
Y_R 488.368	1.002120	39601.700000	0.000810	0.08
Y_R2 488.368	1.017691	77517.134228	0.000023	0.00

Sample Name: ICV-5699388

Date: 5/13/2019 11:45:32 AM

Rack:Tube: 3:6

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.311242 Q	ppm	0.009244	2.97	-1578.040809 Q	Y_R 488.368
Ag (328.068 nm)	0.245213	ppm	0.000515	0.21	11174.900000	Y 377.433
Al (167.019 nm)	0.231924 Q	ppm	0.001252	0.54	139.943000 Q	Y_R 377.433
Al H (396.152 nm)	0.147562 u	ppm	0.002524	1.71	722.604398	Y_R 377.433
As (188.980 nm)	0.240349	ppm	0.001040	0.43	287.844000	Y 242.219
B (249.678 nm)	0.242858	ppm	0.000168	0.07	6084.900000	Y 242.219
Ba (493.408 nm)	0.246962	ppm	0.000902	0.37	28219.000000	Y_R 488.368
Be (234.861 nm)	0.244668	ppm	0.000944	0.39	70797.100000	Y_R 488.368
Bi (223.061 nm)	0.485215	ppm	0.000273	0.06	1271.490000	Y 377.433
Ca (315.887 nm)	2.487598	ppm	0.009287	0.37	2001.351956	Y_R 377.433
Cd (214.439 nm)	0.245301	ppm	0.000008	0.00	14955.600000	Y 377.433
Co (228.615 nm)	0.243749	ppm	0.000747	0.31	4834.020000	Y 242.219
Cr (205.560 nm)	0.245212	ppm	0.000241	0.10	3650.630000	Y 377.433
Cu (324.754 nm)	0.238845	ppm	0.000378	0.16	16402.000000	Y 377.433
Fe (238.204 nm)	1.228454	ppm	0.006808	0.55	4530.314641	Y_R 377.433
Fe H (259.940 nm)	1.071070 u	ppm	0.002904	0.27	2372.350000	Y_R 377.433
K (766.491 nm)	24.457200	ppm	0.028431	0.12	27143.700000	Y_R2 488.368
Li (670.783 nm)	0.252509	ppm	0.000407	0.16	6742.240000	Y_R2 488.368
Mg (279.078 nm)	9.711980	ppm	0.021465	0.22	57468.800000	Y 377.433
Mn (257.610 nm)	0.250356	ppm	0.000305	0.12	63488.900000	Y 377.433
Mo (202.032 nm)	0.245459	ppm	0.001155	0.47	2138.620000	Y 377.433
Na (589.592 nm)	11.980900 o	ppm	0.003601	0.03	79370.600000	Y_R2 488.368
Na H (589.593 nm)	11.772953 Q	ppm	0.069831	0.59	56598.880784 Q	Y_R 488.368
Ni (231.604 nm)	0.245302	ppm	0.000131	0.05	1816.590000	Y 377.433
P (213.618 nm)	1.994070	ppm	0.001038	0.05	4574.470000	Y 242.219
Pb (220.353 nm)	0.245263	ppm	0.001832	0.75	755.460000	Y 242.219
S (181.972 nm)	-0.024600 u	ppm	0.001403	5.70	12.917911	Y 377.433
Sb (206.834 nm)	0.244071	ppm	0.001807	0.74	627.864000	Y 377.433
Se (196.026 nm)	0.240516	ppm	0.004941	2.05	234.758000	Y 242.219
Si (288.158 nm)	2.430870 Q	ppm	0.007806	0.32	22221.100000 Q	Y 377.433
Sn (189.925 nm)	0.242922	ppm	0.000198	0.08	523.336000	Y 377.433
Sr (421.552 nm)	0.245530	ppm	0.000807	0.33	51995.688994	Y_R 488.368
Th (288.505 nm)	0.001289 u	ppm	0.003173	> 100.00	64.946900	Y 377.433
Ti (336.122 nm)	0.244770	ppm	0.000177	0.07	34968.200000	Y 377.433
Tl (190.794 nm)	0.245599	ppm	0.003200	1.30	564.154000	Y 377.433
U (409.013 nm)	-0.004059 u	ppm	0.004720	> 100.00	-151.617000	Y 377.433
V (292.401 nm)	0.244413	ppm	0.000143	0.06	10283.700000	Y 377.433
Zn (206.200 nm)	0.246303	ppm	0.002456	1.00	1285.640000	Y 377.433
Zr (343.823 nm)	0.244712	ppm	0.000168	0.07	33295.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.985535	17674.609520	0.007532	0.76
Y 377.433	0.994496	969874.034252	0.008032	0.81
Y_R 377.433	0.995327	71607.300000	0.002165	0.22
Y_R 488.368	1.003620	39661.300000	0.002960	0.29
Y_R2 488.368	1.020377	77721.772318	0.006208	0.61

Sample Name: ICVL-5699389

Date: 5/13/2019 12:05:06 PM

Rack:Tube: 3:7

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.087744 Q	ppm	0.011069	12.62	-2123.597961 Q	Y_R 488.368
Ag (328.068 nm)	0.009253	ppm	0.000170	1.84	85.237100	Y 377.433
Al (167.019 nm)	0.094177	ppm	0.004203	4.46	56.726800	Y_R 377.433
Al H (396.152 nm)	-0.016370 u	ppm	0.004192	25.61	285.990531	Y_R 377.433
As (188.980 nm)	0.011327	ppm	0.000243	2.15	13.523100	Y 242.219
B (249.678 nm)	0.094934	ppm	0.000221	0.23	2416.640000	Y 242.219
Ba (493.408 nm)	0.009428	ppm	0.000050	0.53	1656.040000	Y_R 488.368
Be (234.861 nm)	0.000952	ppm	0.000017	1.82	256.671000	Y_R 488.368
Bi (223.061 nm)	0.096721	ppm	0.001567	1.62	270.045000	Y 377.433
Ca (315.887 nm)	0.209261	ppm	0.002441	1.17	79.542105	Y_R 377.433
Cd (214.439 nm)	0.004944	ppm	0.000029	0.59	301.736000	Y 377.433
Co (228.615 nm)	0.010246	ppm	0.000050	0.48	164.973000	Y 242.219
Cr (205.560 nm)	0.009913	ppm	0.000060	0.60	145.705000	Y 377.433
Cu (324.754 nm)	0.014900	ppm	0.000077	0.52	1583.690000	Y 377.433
Fe (238.204 nm)	0.098915	ppm	0.000766	0.77	379.353757	Y_R 377.433
Fe H (259.940 nm)	-0.091390 u	ppm	0.004493	4.92	201.618000	Y_R 377.433
K (766.491 nm)	2.981100	ppm	0.036584	1.23	2703.750000	Y_R2 488.368
Li (670.783 nm)	0.025029	ppm	0.000089	0.36	-237.383000	Y_R2 488.368
Mg (279.078 nm)	0.190314	ppm	0.000641	0.34	1147.250000	Y 377.433
Mn (257.610 nm)	0.010125	ppm	0.000014	0.14	2639.380000	Y 377.433
Mo (202.032 nm)	0.018464	ppm	0.000271	1.47	158.648000	Y 377.433
Na (589.592 nm)	1.018870	ppm	0.015658	1.54	7536.280000	Y_R2 488.368
Na H (589.593 nm)	0.714697 u	ppm	0.014774	2.07	13639.631716	Y_R 488.368
Ni (231.604 nm)	0.040099	ppm	0.001313	3.27	294.478000	Y 377.433
P (213.618 nm)	2.749370 o	ppm	0.003502	0.13	6300.830000	Y 242.219
Pb (220.353 nm)	0.008184	ppm	0.000800	9.78	32.457500	Y 242.219
S (181.972 nm)	0.071930	ppm	0.001424	1.98	54.616991	Y 377.433
Sb (206.834 nm)	0.021486	ppm	0.001204	5.60	26.765500	Y 377.433
Se (196.026 nm)	0.019276	ppm	0.001503	7.80	28.668800	Y 242.219
Si (288.158 nm)	0.528198	ppm	0.014681	2.78	5482.760000	Y 377.433
Sn (189.925 nm)	0.096996	ppm	0.000825	0.85	213.895000	Y 377.433
Sr (421.552 nm)	0.009922	ppm	0.000219	2.21	2212.525119	Y_R 488.368
Th (288.505 nm)	0.012675	ppm	0.000834	6.58	90.661100	Y 377.433
Ti (336.122 nm)	0.009574	ppm	0.000047	0.49	1181.070000	Y 377.433
Tl (190.794 nm)	0.013495	ppm	0.000402	2.98	28.890400	Y 377.433
U (409.013 nm)	0.054285	ppm	0.001549	2.85	141.155000	Y 377.433
V (292.401 nm)	0.009426	ppm	0.000115	1.22	413.935000	Y 377.433
Zn (206.200 nm)	0.020000	ppm	0.000224	1.12	106.023000	Y 377.433
Zr (343.823 nm)	0.010649	ppm	0.000194	1.82	1485.120000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.989210	17740.513866	0.002390	0.24
Y 377.433	0.999222	974482.869482	0.001357	0.14
Y_R 377.433	0.997828	71787.200000	0.001335	0.13
Y_R 488.368	1.001780	39588.500000	0.000153	0.02
Y_R2 488.368	1.020829	77756.191525	0.000244	0.02

Sample Name: CCVH-5699817

Date: 5/13/2019 12:08:30 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.096882	ppm	0.016722	17.26	-2101.293735	Y_R 488.368
Ag (328.068 nm)	-0.000253 u	ppm	0.000065	25.50	-610.857000	Y 377.433
Al (167.019 nm)	41.837700 o	ppm	0.124136	0.30	25056.300000	Y_R 377.433
Al H (396.152 nm)	49.617595	ppm	0.090985	0.18	126615.081162	Y_R 377.433
As (188.980 nm)	0.004579	ppm	0.001405	30.68	5.024110	Y 242.219
B (249.678 nm)	0.000518	ppm	0.000491	94.70	6.852260	Y 242.219
Ba (493.408 nm)	0.002001	ppm	0.000185	9.23	870.031000	Y_R 488.368
Be (234.861 nm)	0.000941	ppm	0.000020	2.08	1749.800000	Y_R 488.368
Bi (223.061 nm)	0.985809	ppm	0.000869	0.09	2569.750000	Y 377.433
Ca (315.887 nm)	0.003115	ppm	0.002154	69.13	-94.333488	Y_R 377.433
Cd (214.439 nm)	0.001114	ppm	0.000050	4.52	116.596000	Y 377.433
Co (228.615 nm)	0.004498	ppm	0.000045	0.99	49.959000	Y 242.219
Cr (205.560 nm)	0.001205	ppm	0.000210	17.46	2.628790	Y 377.433
Cu (324.754 nm)	0.008431	ppm	0.000417	4.95	1545.330000	Y 377.433
Fe (238.204 nm)	47.965337 o	ppm	0.034888	0.07	176284.297247	Y_R 377.433
Fe H (259.940 nm)	49.796100	ppm	0.046521	0.09	93359.500000	Y_R 377.433
K (766.491 nm)	0.111971	ppm	0.040046	35.76	-561.332000	Y_R2 488.368
Li (670.783 nm)	0.007415	ppm	0.000244	3.29	-777.827000	Y_R2 488.368
Mg (279.078 nm)	0.027426	ppm	0.000689	2.51	-177.572000	Y 377.433
Mn (257.610 nm)	0.002795	ppm	0.000019	0.69	782.615000	Y 377.433
Mo (202.032 nm)	0.000475	ppm	0.000125	26.36	1.737650	Y 377.433
Na (589.592 nm)	239.061000 o	ppm	1.556110	0.65	1557150.000000	Y_R2 488.368
Na H (589.593 nm)	249.974579	ppm	1.030929	0.41	976663.701133	Y_R 488.368
Ni (231.604 nm)	0.004723	ppm	0.000868	18.38	34.326100	Y 377.433
P (213.618 nm)	-0.002066 u	ppm	0.000317	15.32	11.978800	Y 242.219
Pb (220.353 nm)	0.000679 u	ppm	0.001281	> 100.00	27.474200	Y 242.219
S (181.972 nm)	4.820506	ppm	0.000297	0.01	2130.367507	Y 377.433
Sb (206.834 nm)	-0.002810 u	ppm	0.003126	> 100.00	-82.906400	Y 377.433
Se (196.026 nm)	0.003714	ppm	0.001459	39.28	5.859490	Y 242.219
Si (288.158 nm)	0.038826	ppm	0.000665	1.71	1177.630000	Y 377.433
Sn (189.925 nm)	0.004567	ppm	0.002195	48.05	17.896100	Y 377.433
Sr (421.552 nm)	0.002012	ppm	0.000074	3.66	541.024652	Y_R 488.368
Th (288.505 nm)	4.970430	ppm	0.003607	0.07	14833.300000	Y 377.433
Ti (336.122 nm)	0.002249	ppm	0.000003	0.14	128.576000	Y 377.433
Tl (190.794 nm)	-0.003231 u	ppm	0.000035	1.07	-11.047900	Y 377.433
U (409.013 nm)	10.079400	ppm	0.019772	0.20	47382.600000	Y 377.433
V (292.401 nm)	0.004828	ppm	0.000109	2.26	31.356800	Y 377.433
Zn (206.200 nm)	0.003954	ppm	0.000110	2.78	22.377600	Y 377.433
Zr (343.823 nm)	-0.003111 u	ppm	0.000019	0.62	-236.504000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.957944	17179.790661	0.000180	0.02
Y 377.433	0.958870	935130.298645	0.000736	0.08
Y_R 377.433	0.967247	69587.100000	0.005572	0.58
Y_R 488.368	0.971675	38398.700000	0.010597	1.09
Y_R2 488.368	1.003242	76416.609656	0.005679	0.57

Sample Name: CCV-5699804

Date: 5/13/2019 12:11:52 PM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.026151	ppm	0.014981	1.46	167.045724	Y_R 488.368
Ag (328.068 nm)	0.490282	ppm	0.000841	0.17	22692.100000	Y 377.433
Al (167.019 nm)	0.471217	ppm	0.001176	0.25	283.950000	Y_R 377.433
Al H (396.152 nm)	0.421352 u	ppm	0.001790	0.42	1440.527986	Y_R 377.433
As (188.980 nm)	0.972130	ppm	0.000931	0.10	1164.390000	Y 242.219
B (249.678 nm)	0.491232	ppm	0.000276	0.06	12239.100000	Y 242.219
Ba (493.408 nm)	0.491352	ppm	0.000516	0.11	55545.900000	Y_R 488.368
Be (234.861 nm)	0.487094	ppm	0.000320	0.07	140962.000000	Y_R 488.368
Bi (223.061 nm)	-0.004148 u	ppm	0.001566	37.75	10.485800	Y 377.433
Ca (315.887 nm)	4.951542	ppm	0.014119	0.29	4079.717242	Y_R 377.433
Cd (214.439 nm)	0.493066	ppm	0.000071	0.01	30061.200000	Y 377.433
Co (228.615 nm)	0.494211	ppm	0.003491	0.71	9842.080000	Y 242.219
Cr (205.560 nm)	0.495021	ppm	0.000733	0.15	7371.830000	Y 377.433
Cu (324.754 nm)	0.486788	ppm	0.001180	0.24	32808.700000	Y 377.433
Fe (238.204 nm)	2.444564	ppm	0.005279	0.22	8999.412694	Y_R 377.433
Fe H (259.940 nm)	2.353890 u	ppm	0.000551	0.02	4767.830000	Y_R 377.433
K (766.491 nm)	48.875900	ppm	0.228647	0.47	54932.400000	Y_R2 488.368
Li (670.783 nm)	0.994231	ppm	0.001907	0.19	29500.100000	Y_R2 488.368
Mg (279.078 nm)	19.399000	ppm	0.026096	0.13	114768.000000	Y 377.433
Mn (257.610 nm)	0.494547	ppm	0.000163	0.03	125342.000000	Y 377.433
Mo (202.032 nm)	0.492455	ppm	0.001007	0.20	4293.060000	Y 377.433
Na (589.592 nm)	4.870910	ppm	0.006347	0.13	33572.500000	Y_R2 488.368
Na H (589.593 nm)	5.137208 u	ppm	0.026166	0.51	31203.274796	Y_R 488.368
Ni (231.604 nm)	0.497822	ppm	0.000890	0.18	3690.280000	Y 377.433
P (213.618 nm)	0.962718	ppm	0.001306	0.14	2217.150000	Y 242.219
Pb (220.353 nm)	0.984903	ppm	0.001477	0.15	3013.480000	Y 242.219
S (181.972 nm)	-0.010317 u	ppm	0.001258	12.20	19.668087	Y 377.433
Sb (206.834 nm)	1.005370	ppm	0.001557	0.15	2672.450000	Y 377.433
Se (196.026 nm)	0.961402	ppm	0.004834	0.50	906.188000	Y 242.219
Si (288.158 nm)	4.833780	ppm	0.046078	0.95	43360.100000	Y 377.433
Sn (189.925 nm)	0.980132	ppm	0.000662	0.07	2086.620000	Y 377.433
Sr (421.552 nm)	0.490777	ppm	0.000417	0.08	103815.683832	Y_R 488.368
Th (288.505 nm)	0.002351	ppm	0.002562	> 100.00	77.117000	Y 377.433
Ti (336.122 nm)	0.493154	ppm	0.000458	0.09	70650.200000	Y 377.433
Tl (190.794 nm)	0.993484	ppm	0.004321	0.43	2290.460000	Y 377.433
U (409.013 nm)	0.006289	ppm	0.004387	69.76	-121.957000	Y 377.433
V (292.401 nm)	0.491273	ppm	0.000421	0.09	20650.200000	Y 377.433
Zn (206.200 nm)	0.490097	ppm	0.000742	0.15	2556.430000	Y 377.433
Zr (343.823 nm)	0.490391	ppm	0.000918	0.19	66684.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.981310	17598.840805	0.001733	0.18
Y 377.433	0.991055	966518.415875	0.002251	0.23
Y_R 377.433	0.984599	70835.500000	0.001989	0.20
Y_R 488.368	0.990694	39150.300000	0.001512	0.15
Y_R2 488.368	1.010914	77000.975100	0.002372	0.23

Sample Name: ICB

Date: 5/13/2019 12:15:14 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.081167 Z	ppm	0.009824	12.10	-2139.653525 Z	Y_R 488.368
Ag (328.068 nm)	0.000212 u	ppm	0.000392	> 100.00	-339.109000	Y 377.433
Al (167.019 nm)	0.007737	ppm	0.001429	18.47	4.962730	Y_R 377.433
Al H (396.152 nm)	-0.113712 Zu	ppm	0.006699	5.89	36.671572 Z	Y_R 377.433
As (188.980 nm)	-0.000917 u	ppm	0.001787	> 100.00	-1.142560	Y 242.219
B (249.678 nm)	0.000107	ppm	0.000141	> 100.00	70.234900	Y 242.219
Ba (493.408 nm)	-0.000517 u	ppm	0.000259	50.20	544.204000	Y_R 488.368
Be (234.861 nm)	-0.000005 u	ppm	0.000011	> 100.00	-22.361700	Y_R 488.368
Bi (223.061 nm)	0.000047 u	ppm	0.001339	> 100.00	20.872500	Y 377.433
Ca (315.887 nm)	0.002457 u	ppm	0.006364	> 100.00	-94.889894	Y_R 377.433
Cd (214.439 nm)	0.000020	ppm	0.000023	> 100.00	1.458560	Y 377.433
Co (228.615 nm)	0.000669	ppm	0.000224	33.44	-26.500800	Y 242.219
Cr (205.560 nm)	0.000078 u	ppm	0.000172	> 100.00	-0.853819	Y 377.433
Cu (324.754 nm)	0.000018 u	ppm	0.000263	> 100.00	598.443000	Y 377.433
Fe (238.204 nm)	0.003966	ppm	0.000518	13.06	30.424576	Y_R 377.433
Fe H (259.940 nm)	-0.191418 u	ppm	0.000302	0.16	14.830400	Y_R 377.433
K (766.491 nm)	-0.072336 u	ppm	0.030588	42.29	-771.075000	Y_R2 488.368
Li (670.783 nm)	0.002682	ppm	0.001420	52.96	-923.052000	Y_R2 488.368
Mg (279.078 nm)	0.001821	ppm	0.000551	30.27	33.335200	Y 377.433
Mn (257.610 nm)	-0.000040 u	ppm	0.000013	33.24	64.489100	Y 377.433
Mo (202.032 nm)	0.000042	ppm	0.000036	86.23	-2.036330	Y 377.433
Na (589.592 nm)	0.105947	ppm	0.008842	8.35	1572.120000	Y_R2 488.368
Na H (589.593 nm)	-0.407634 u	ppm	0.027660	6.79	9292.944935	Y_R 488.368
Ni (231.604 nm)	0.000358 u	ppm	0.000960	> 100.00	-0.253977	Y 377.433
P (213.618 nm)	-0.001348 u	ppm	0.000658	48.84	13.620100	Y 242.219
Pb (220.353 nm)	0.000056 u	ppm	0.000695	> 100.00	7.651280	Y 242.219
S (181.972 nm)	-0.024708 u	ppm	0.002268	9.18	12.352612	Y 377.433
Sb (206.834 nm)	0.001385	ppm	0.001506	> 100.00	-27.193200	Y 377.433
Se (196.026 nm)	-0.000274 u	ppm	0.001801	> 100.00	10.467400	Y 242.219
Si (288.158 nm)	-0.004284 u	ppm	0.000582	13.57	798.378000	Y 377.433
Sn (189.925 nm)	-0.000320 u	ppm	0.000611	> 100.00	7.532800	Y 377.433
Sr (421.552 nm)	0.000159	ppm	0.000093	58.45	149.574864	Y_R 488.368
Th (288.505 nm)	-0.002676 u	ppm	0.002731	> 100.00	44.369200	Y 377.433
Ti (336.122 nm)	-0.000011 u	ppm	0.000106	> 100.00	-196.094000	Y 377.433
Tl (190.794 nm)	-0.001080 u	ppm	0.000071	6.53	-4.712130	Y 377.433
U (409.013 nm)	-0.002876 u	ppm	0.003649	> 100.00	-127.161000	Y 377.433
V (292.401 nm)	-0.000079 u	ppm	0.000085	> 100.00	16.050900	Y 377.433
Zn (206.200 nm)	-0.000393 u	ppm	0.000026	6.61	-0.281628	Y 377.433
Zr (343.823 nm)	0.000203	ppm	0.000024	11.60	65.375200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.981037	17593.946744	0.000051	0.01
Y 377.433	0.991808	967252.268717	0.001289	0.13
Y_R 377.433	0.983255	70738.800000	0.000170	0.02
Y_R 488.368	1.003510	39656.600000	0.007167	0.71
Y_R2 488.368	1.005267	76570.868552	0.000016	0.00

Sample Name: CRI-5699389

Date: 5/13/2019 12:18:36 PM

Rack:Tube: 3:8

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.075251 Q	ppm	0.013730	18.25	-2154.094781 Q	Y_R 488.368
Ag (328.068 nm)	0.008772	ppm	0.000086	0.98	62.578400	Y 377.433
Al (167.019 nm)	0.092945	ppm	0.002232	2.40	55.991200	Y_R 377.433
Al H (396.152 nm)	-0.008898 u	ppm	0.001156	12.99	305.019674	Y_R 377.433
As (188.980 nm)	0.011155 Q	ppm	0.000549	4.92	13.316900 Q	Y 242.219
B (249.678 nm)	0.094985	ppm	0.000122	0.13	2417.900000	Y 242.219
Ba (493.408 nm)	0.009503	ppm	0.000090	0.94	1664.520000	Y_R 488.368
Be (234.861 nm)	0.000946	ppm	0.000024	2.54	254.885000	Y_R 488.368
Bi (223.061 nm)	0.097088	ppm	0.001002	1.03	270.990000	Y 377.433
Ca (315.887 nm)	0.204956	ppm	0.007067	3.45	75.911053	Y_R 377.433
Cd (214.439 nm)	0.004915	ppm	0.000053	1.08	299.964000	Y 377.433
Co (228.615 nm)	0.010244	ppm	0.000132	1.29	164.940000	Y 242.219
Cr (205.560 nm)	0.009683	ppm	0.000015	0.15	142.272000	Y 377.433
Cu (324.754 nm)	0.014820	ppm	0.000168	1.13	1577.600000	Y 377.433
Fe (238.204 nm)	0.100549	ppm	0.001935	1.92	385.359678	Y_R 377.433
Fe H (259.940 nm)	-0.093193 u	ppm	0.001998	2.14	198.251000	Y_R 377.433
K (766.491 nm)	2.952940	ppm	0.024290	0.82	2671.720000	Y_R2 488.368
Li (670.783 nm)	0.023650	ppm	0.000815	3.44	-279.715000	Y_R2 488.368
Mg (279.078 nm)	0.190628	ppm	0.001291	0.68	1148.990000	Y 377.433
Mn (257.610 nm)	0.010133	ppm	0.000026	0.26	2641.260000	Y 377.433
Mo (202.032 nm)	0.018596	ppm	0.000018	0.10	159.798000	Y 377.433
Na (589.592 nm)	1.041150	ppm	0.002772	0.27	7680.380000	Y_R2 488.368
Na H (589.593 nm)	0.455655 u	ppm	0.006876	1.51	12638.326651	Y_R 488.368
Ni (231.604 nm)	0.040132	ppm	0.000370	0.92	294.721000	Y 377.433
P (213.618 nm)	2.730920 o	ppm	0.008687	0.32	6258.670000	Y 242.219
Pb (220.353 nm)	0.007438	ppm	0.000212	2.86	30.189500	Y 242.219
S (181.972 nm)	0.059888 Q	ppm	0.002020	3.37	49.353046 Q	Y 377.433
Sb (206.834 nm)	0.020800	ppm	0.001850	8.90	24.910300	Y 377.433
Se (196.026 nm)	0.018706	ppm	0.006277	33.55	28.138500	Y 242.219
Si (288.158 nm)	0.526432	ppm	0.020282	3.85	5467.230000	Y 377.433
Sn (189.925 nm)	0.096450	ppm	0.000721	0.75	212.736000	Y 377.433
Sr (421.552 nm)	0.009671	ppm	0.000031	0.32	2159.425431	Y_R 488.368
Th (288.505 nm)	0.015630	ppm	0.002773	17.74	99.400800	Y 377.433
Ti (336.122 nm)	0.009559	ppm	0.000117	1.22	1178.800000	Y 377.433
Tl (190.794 nm)	0.013928	ppm	0.000469	3.37	29.887500	Y 377.433
U (409.013 nm)	0.058665	ppm	0.003333	5.68	161.778000	Y 377.433
V (292.401 nm)	0.009404	ppm	0.000269	2.86	412.548000	Y 377.433
Zn (206.200 nm)	0.019988	ppm	0.000207	1.03	105.958000	Y 377.433
Zr (343.823 nm)	0.010522 Q	ppm	0.000296	2.82	1467.930000 Q	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.988623	17729.987220	0.001046	0.11
Y 377.433	0.999002	974268.378162	0.000574	0.06
Y_R 377.433	0.990439	71255.600000	0.002036	0.21
Y_R 488.368	0.999683	39505.500000	0.001186	0.12
Y_R2 488.368	1.011419	77039.458546	0.006178	0.61

Sample Name: ICSA-5681701

Date: 5/13/2019 12:21:59 PM

Rack:Tube: 3:9

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	-0.066965 Ku	ppm	0.005088	7.60	-2501.242601 K	Y_R 488.368
Ag (328.068 nm)	0.000542	ppm	0.000304	56.12	-323.788000	Y 377.433
Al (167.019 nm)	203.687000 o	ppm	0.280413	0.14	121948.000000	Y_R 377.433
Al H (396.152 nm)	524.197637 o	ppm	1.456494	0.28	1334753.291832	Y_R 377.433
As (188.980 nm)	0.001569	ppm	0.002134	> 100.00	0.243814	Y 242.219
B (249.678 nm)	0.011316	ppm	0.000003	0.03	65.807200	Y 242.219
Ba (493.408 nm)	0.001503	ppm	0.000130	8.62	1049.230000	Y_R 488.368
Be (234.861 nm)	-0.001945 Ku	ppm	0.000162	8.32	5127.600000 K	Y_R 488.368
Bi (223.061 nm)	-0.009837 u	ppm	0.000010	0.11	27.195300	Y 377.433
Ca (315.887 nm)	486.743100 o	ppm	0.163494	0.03	410447.098468	Y_R 377.433
Cd (214.439 nm)	0.000359	ppm	0.000195	54.44	207.226000	Y 377.433
Co (228.615 nm)	-0.001042 u	ppm	0.000123	11.84	-60.595100	Y 242.219
Cr (205.560 nm)	0.005121 K	ppm	0.000269	5.25	23.389100 K	Y 377.433
Cu (324.754 nm)	-0.005813 u	ppm	0.000244	4.19	303.963000	Y 377.433
Fe (238.204 nm)	183.272350 o	ppm	0.442969	0.24	673525.818650	Y_R 377.433
Fe H (259.940 nm)	194.049000	ppm	0.433791	0.22	362732.000000	Y_R 377.433
K (766.491 nm)	-0.056331 u	ppm	0.033910	60.20	-752.861000	Y_R2 488.368
Li (670.783 nm)	0.007379	ppm	0.000113	1.54	-778.944000	Y_R2 488.368
Mg (279.078 nm)	498.935000 o	ppm	0.344924	0.07	2951010.000000	Y 377.433
Mn (257.610 nm)	0.003064 K	ppm	0.000031	1.01	850.671000 K	Y 377.433
Mo (202.032 nm)	0.000495	ppm	0.000319	64.30	1.917240	Y 377.433
Na (589.592 nm)	0.253480	ppm	0.026391	10.41	2540.020000	Y_R2 488.368
Na H (589.593 nm)	1.692591 u	ppm	0.001311	0.08	17411.011751	Y_R 488.368
Ni (231.604 nm)	-0.001570 u	ppm	0.000356	22.64	-6.104520	Y 377.433
P (213.618 nm)	0.020509	ppm	0.003681	17.95	63.578100	Y 242.219
Pb (220.353 nm)	0.001801	ppm	0.000511	28.35	-150.354000	Y 242.219
S (181.972 nm)	0.005806	ppm	0.003406	58.67	25.697719	Y 377.433
Sb (206.834 nm)	-0.009157 u	ppm	0.001622	17.71	-136.398000	Y 377.433
Se (196.026 nm)	-0.001219 u	ppm	0.002017	> 100.00	-17.562300	Y 242.219
Si (288.158 nm)	0.047200	ppm	0.000186	0.39	1251.300000	Y 377.433
Sn (189.925 nm)	0.006536	ppm	0.000519	7.94	22.070100	Y 377.433
Sr (421.552 nm)	0.009418 K	ppm	0.000187	1.99	2106.016050 K	Y_R 488.368
Th (288.505 nm)	-0.002806 u	ppm	0.000186	6.63	33.565600	Y 377.433
Ti (336.122 nm)	0.001330	ppm	0.000009	0.66	1543.730000	Y 377.433
Tl (190.794 nm)	0.002118	ppm	0.000897	42.33	-2.595570	Y 377.433
U (409.013 nm)	-0.004426 u	ppm	0.001530	34.56	-50.200700	Y 377.433
V (292.401 nm)	0.002189	ppm	0.000090	4.11	111.673000	Y 377.433
Zn (206.200 nm)	0.003822	ppm	0.000054	1.41	21.691500	Y 377.433
Zr (343.823 nm)	-0.000539 u	ppm	0.000070	12.95	531.869000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.887577	15917.838730	0.001299	0.15
Y 377.433	0.899273	877008.193063	0.001210	0.13
Y_R 377.433	0.936131	67348.500000	0.003034	0.32
Y_R 488.368	0.942837	37259.100000	0.000228	0.02
Y_R2 488.368	0.958375	72999.096102	0.006531	0.68

Sample Name: ICSAB-5676207

Date: 5/13/2019 12:25:23 PM

Rack:Tube: 3:10

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.030941	ppm	0.006968	0.68	178.739238	Y_R 488.368
Ag (328.068 nm)	1.102440 o	ppm	0.001848	0.17	51449.900000	Y 377.433
Al (167.019 nm)	206.181000 o	ppm	1.147930	0.56	123439.000000	Y_R 377.433
Al H (396.152 nm)	528.478585 o	ppm	0.017935	0.00	1345726.999599	Y_R 377.433
As (188.980 nm)	1.024050	ppm	0.002978	0.29	1225.010000	Y 242.219
B (249.678 nm)	10.347200 o	ppm	0.000753	0.01	255833.000000	Y 242.219
Ba (493.408 nm)	1.013260	ppm	0.003265	0.32	114168.000000	Y_R 488.368
Be (234.861 nm)	0.492636	ppm	0.000887	0.18	148157.000000	Y_R 488.368
Bi (223.061 nm)	0.992241	ppm	0.005551	0.56	2609.700000	Y 377.433
Ca (315.887 nm)	486.939601 o	ppm	0.336709	0.07	410613.392039	Y_R 377.433
Cd (214.439 nm)	0.923837	ppm	0.002411	0.26	56504.200000	Y 377.433
Co (228.615 nm)	0.895591	ppm	0.000012	0.00	17872.000000	Y 242.219
Cr (205.560 nm)	0.958638	ppm	0.000270	0.03	14232.500000	Y 377.433
Cu (324.754 nm)	1.027630	ppm	0.001511	0.15	69144.300000	Y 377.433
Fe (238.204 nm)	182.698038 o	ppm	0.163958	0.09	671415.271446	Y_R 377.433
Fe H (259.940 nm)	194.322000	ppm	0.089719	0.05	363241.000000	Y_R 377.433
K (766.491 nm)	11.472800	ppm	0.002693	0.02	12367.400000	Y_R2 488.368
Li (670.783 nm)	1.089560	ppm	0.002265	0.21	32425.100000	Y_R2 488.368
Mg (279.078 nm)	503.650000 o	ppm	1.854760	0.37	2978900.000000	Y 377.433
Mn (257.610 nm)	0.962532	ppm	0.002117	0.22	243880.000000	Y 377.433
Mo (202.032 nm)	0.959102	ppm	0.002344	0.24	8363.400000	Y 377.433
Na (589.592 nm)	11.087200 o	ppm	0.031626	0.29	75086.500000	Y_R2 488.368
Na H (589.593 nm)	12.902650	ppm	0.031326	0.24	61725.623617	Y_R 488.368
Ni (231.604 nm)	0.890469	ppm	0.000837	0.09	6610.410000	Y 377.433
P (213.618 nm)	9.764330 o	ppm	0.009622	0.10	22334.700000	Y 242.219
Pb (220.353 nm)	0.947370	ppm	0.001627	0.17	2731.650000	Y 242.219
S (181.972 nm)	9.992820 G	ppm	0.016690	0.17	4393.347964 G	Y 377.433
Sb (206.834 nm)	0.975511	ppm	0.001601	0.16	2521.580000	Y 377.433
Se (196.026 nm)	1.036680	ppm	0.000768	0.07	950.255000	Y 242.219
Si (288.158 nm)	10.280300	ppm	0.041940	0.41	91274.500000	Y 377.433
Sn (189.925 nm)	1.024680	ppm	0.004228	0.41	2181.090000	Y 377.433
Sr (421.552 nm)	1.019468	ppm	0.003463	0.34	215526.407849	Y_R 488.368
Th (288.505 nm)	1.997280	ppm	0.002369	0.12	5940.830000	Y 377.433
Ti (336.122 nm)	1.008390	ppm	0.001781	0.18	146183.000000	Y 377.433
Tl (190.794 nm)	0.992345	ppm	0.002543	0.26	2280.790000	Y 377.433
U (409.013 nm)	-0.006828 u	ppm	0.002153	31.53	-139.629000	Y 377.433
V (292.401 nm)	0.983892	ppm	0.002749	0.28	41537.100000	Y 377.433
Zn (206.200 nm)	0.908037	ppm	0.001172	0.13	4734.970000	Y 377.433
Zr (343.823 nm)	0.961708	ppm	0.002677	0.28	131290.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.881597	15810.582278	0.002804	0.32
Y 377.433	0.892056	869970.165837	0.004254	0.48
Y_R 377.433	0.930063	66911.900000	0.005482	0.59
Y_R 488.368	0.930540	36773.200000	0.002786	0.30
Y_R2 488.368	0.944369	71932.230287	0.006069	0.64

Sample Name: LRA-5681702

Date: 5/13/2019 12:28:46 PM

Rack:Tube: 3:11

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	-0.010001 u	ppm	0.015344	> 100.00	-2362.193193	Y_R 488.368
Ag (328.068 nm)	-0.010228 u	ppm	0.000480	4.69	-2487.570000	Y 377.433
Al (167.019 nm)	-0.048037 u	ppm	0.001802	3.75	319.314000	Y_R 377.433
Al H (396.152 nm)	-0.079986 u	ppm	0.000119	0.15	520.394886	Y_R 377.433
As (188.980 nm)	9.672880 o	ppm	0.002216	0.02	11582.400000	Y 242.219
B (249.678 nm)	10.029200 o	ppm	0.025728	0.26	247704.000000	Y 242.219
Ba (493.408 nm)	12.306100 o	ppm	0.001713	0.01	1376770.000000	Y_R 488.368
Be (234.861 nm)	-0.006285 u	ppm	0.000447	7.11	12423.100000	Y_R 488.368
Bi (223.061 nm)	-0.025912 u	ppm	0.006287	24.26	35.137400	Y 377.433
Ca (315.887 nm)	0.053358	ppm	0.003256	6.10	-50.775732	Y_R 377.433
Cd (214.439 nm)	1.957720 o	ppm	0.003165	0.16	119824.000000	Y 377.433
Co (228.615 nm)	5.005180 o	ppm	0.005855	0.12	100227.000000	Y 242.219
Cr (205.560 nm)	9.854990 o	ppm	0.011531	0.12	146773.000000	Y 377.433
Cu (324.754 nm)	10.286000 o	ppm	0.024429	0.24	681606.000000	Y 377.433
Fe (238.204 nm)	468.102450 o	ppm	0.830244	0.18	1720251.695390	Y_R 377.433
Fe H (259.940 nm)	487.174000	ppm	0.808572	0.17	910101.000000	Y_R 377.433
K (766.491 nm)	-0.102608 u	ppm	0.020850	20.32	-805.525000	Y_R2 488.368
Li (670.783 nm)	0.003796	ppm	0.001647	43.39	-888.876000	Y_R2 488.368
Mg (279.078 nm)	0.004715	ppm	0.003036	64.40	-785.656000	Y 377.433
Mn (257.610 nm)	9.669740 o	ppm	0.006347	0.07	2449380.000000	Y 377.433
Mo (202.032 nm)	4.919480 o	ppm	0.001609	0.03	42908.000000	Y 377.433
Na (589.592 nm)	-0.746859 u	ppm	0.006709	0.90	20602.700000	Y_R2 488.368
Na H (589.593 nm)	-1.224498 u	ppm	0.068940	5.63	18353.445357	Y_R 488.368
Ni (231.604 nm)	10.082600 o	ppm	0.002008	0.02	74796.400000	Y 377.433
P (213.618 nm)	0.252289	ppm	0.005626	2.23	593.349000	Y 242.219
Pb (220.353 nm)	10.124700 o	ppm	0.011095	0.11	30953.600000	Y 242.219
S (181.972 nm)	-0.048678 u	ppm	0.004666	9.59	21.923123	Y 377.433
Sb (206.834 nm)	0.006793	ppm	0.002785	41.00	149.235000	Y 377.433
Se (196.026 nm)	4.872510 o	ppm	0.000216	0.00	4470.740000	Y 242.219
Si (288.158 nm)	46.921300 o	ppm	0.330320	0.70	413615.000000	Y 377.433
Sn (189.925 nm)	-0.000322 u	ppm	0.000881	> 100.00	7.527690	Y 377.433
Sr (421.552 nm)	10.098136 o	ppm	0.078631	0.78	2133821.723533	Y_R 488.368
Th (288.505 nm)	-0.003559 u	ppm	0.005170	> 100.00	659.617000	Y 377.433
Ti (336.122 nm)	9.755210 o	ppm	0.004921	0.05	1400900.000000	Y 377.433
Tl (190.794 nm)	4.978100 o	ppm	0.005537	0.11	11443.300000	Y 377.433
U (409.013 nm)	-0.034075 u	ppm	0.001621	4.76	187.669000	Y 377.433
V (292.401 nm)	9.867470 o	ppm	0.002303	0.02	414543.000000	Y 377.433
Zn (206.200 nm)	9.525620 o	ppm	0.002106	0.02	49654.700000	Y 377.433
Zr (343.823 nm)	0.003803	ppm	0.000867	22.78	2003.070000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.965152	17309.064487	0.000297	0.03
Y 377.433	0.982695	958365.417068	0.001101	0.11
Y_R 377.433	0.992662	71415.500000	0.004124	0.42
Y_R 488.368	0.994620	39305.500000	0.002002	0.20
Y_R2 488.368	1.008480	76815.571078	0.002477	0.25

Sample Name: CCVH-5699817

Date: 5/13/2019 1:15:02 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.090955	ppm	0.009620	10.58	-2115.759984	Y_R 488.368
Ag (328.068 nm)	-0.000181 u	ppm	0.000093	51.25	-607.777000	Y 377.433
Al (167.019 nm)	42.149000 o	ppm	0.279348	0.66	25242.400000	Y_R 377.433
Al H (396.152 nm)	49.600846	ppm	0.061236	0.12	126572.447865	Y_R 377.433
As (188.980 nm)	0.003051	ppm	0.000970	31.81	3.194620	Y 242.219
B (249.678 nm)	0.001144	ppm	0.000315	27.56	22.397100	Y 242.219
Ba (493.408 nm)	0.001850	ppm	0.000147	7.95	853.202000	Y_R 488.368
Be (234.861 nm)	0.000858	ppm	0.000033	3.84	1724.540000	Y_R 488.368
Bi (223.061 nm)	0.979852	ppm	0.002101	0.21	2554.390000	Y 377.433
Ca (315.887 nm)	0.005659 u	ppm	0.011885	> 100.00	-92.188220	Y_R 377.433
Cd (214.439 nm)	0.001191	ppm	0.000036	3.06	121.251000	Y 377.433
Co (228.615 nm)	0.004472	ppm	0.000112	2.50	49.445900	Y 242.219
Cr (205.560 nm)	0.001273	ppm	0.000278	21.88	3.643290	Y 377.433
Cu (324.754 nm)	0.008814	ppm	0.000023	0.26	1564.730000	Y 377.433
Fe (238.204 nm)	47.914805 o	ppm	0.144087	0.30	176098.598468	Y_R 377.433
Fe H (259.940 nm)	49.589000	ppm	0.063628	0.13	92972.700000	Y_R 377.433
K (766.491 nm)	0.093872	ppm	0.016887	17.99	-581.929000	Y_R2 488.368
Li (670.783 nm)	0.008668	ppm	0.000089	1.03	-739.385000	Y_R2 488.368
Mg (279.078 nm)	0.030265	ppm	0.001172	3.87	-161.067000	Y 377.433
Mn (257.610 nm)	0.002828	ppm	0.000021	0.73	791.017000	Y 377.433
Mo (202.032 nm)	0.000468	ppm	0.000039	8.41	1.678500	Y 377.433
Na (589.592 nm)	237.869000 o	ppm	1.117490	0.47	1549390.000000	Y_R2 488.368
Na H (589.593 nm)	246.074107	ppm	1.021794	0.42	961592.845030	Y_R 488.368
Ni (231.604 nm)	0.005120	ppm	0.000243	4.74	37.271300	Y 377.433
P (213.618 nm)	-0.001597 u	ppm	0.000942	59.00	13.049400	Y 242.219
Pb (220.353 nm)	0.003118	ppm	0.001063	34.10	34.964400	Y 242.219
S (181.972 nm)	4.800547	ppm	0.022431	0.47	2121.643014	Y 377.433
Sb (206.834 nm)	-0.000397 u	ppm	0.000378	95.06	-76.475700	Y 377.433
Se (196.026 nm)	0.001648	ppm	0.002250	> 100.00	3.943510	Y 242.219
Si (288.158 nm)	0.038096	ppm	0.000902	2.37	1171.210000	Y 377.433
Sn (189.925 nm)	0.004767	ppm	0.000076	1.60	18.320400	Y 377.433
Sr (421.552 nm)	0.001962	ppm	0.000050	2.55	530.559186	Y_R 488.368
Th (288.505 nm)	4.960140	ppm	0.015864	0.32	14803.400000	Y 377.433
Ti (336.122 nm)	0.002345	ppm	0.000007	0.29	142.332000	Y 377.433
Tl (190.794 nm)	-0.002100 u	ppm	0.001593	75.87	-8.434930	Y 377.433
U (409.013 nm)	10.085900	ppm	0.002425	0.02	47413.300000	Y 377.433
V (292.401 nm)	0.004705	ppm	0.000064	1.36	23.389900	Y 377.433
Zn (206.200 nm)	0.003915	ppm	0.000583	14.90	22.178200	Y 377.433
Zr (343.823 nm)	-0.003092 u	ppm	0.000078	2.51	-234.155000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.954314	17114.699301	0.000351	0.04
Y 377.433	0.954700	931063.019306	0.000995	0.10
Y_R 377.433	0.965255	69443.800000	0.004797	0.50
Y_R 488.368	0.980285	38739.000000	0.000641	0.07
Y_R2 488.368	0.987138	75189.968777	0.000763	0.08

Sample Name: CCV-5699804

Date: 5/13/2019 1:18:24 PM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.007455	ppm	0.007914	0.79	121.410051	Y_R 488.368
Ag (328.068 nm)	0.488254	ppm	0.000371	0.08	22597.000000	Y 377.433
Al (167.019 nm)	0.477930	ppm	0.000796	0.17	287.963000	Y_R 377.433
Al H (396.152 nm)	0.415422 u	ppm	0.008443	2.03	1425.435544	Y_R 377.433
As (188.980 nm)	0.972260	ppm	0.005130	0.53	1164.550000	Y 242.219
B (249.678 nm)	0.492327	ppm	0.000739	0.15	12266.200000	Y 242.219
Ba (493.408 nm)	0.489898	ppm	0.001464	0.30	55383.400000	Y_R 488.368
Be (234.861 nm)	0.487704	ppm	0.003854	0.79	141138.000000	Y_R 488.368
Bi (223.061 nm)	-0.003567 u	ppm	0.000916	25.70	11.982500	Y 377.433
Ca (315.887 nm)	4.935987	ppm	0.011859	0.24	4066.597285	Y_R 377.433
Cd (214.439 nm)	0.493055	ppm	0.000432	0.09	30060.600000	Y 377.433
Co (228.615 nm)	0.494150	ppm	0.001192	0.24	9840.900000	Y 242.219
Cr (205.560 nm)	0.493339	ppm	0.001863	0.38	7346.750000	Y 377.433
Cu (324.754 nm)	0.488496	ppm	0.000907	0.19	32922.500000	Y 377.433
Fe (238.204 nm)	2.441258	ppm	0.004002	0.16	8987.260918	Y_R 377.433
Fe H (259.940 nm)	2.352100 u	ppm	0.010144	0.43	4764.490000	Y_R 377.433
K (766.491 nm)	48.729400	ppm	0.050028	0.10	54765.700000	Y_R2 488.368
Li (670.783 nm)	0.987978	ppm	0.002553	0.26	29308.200000	Y_R2 488.368
Mg (279.078 nm)	19.368000	ppm	0.007983	0.04	114584.000000	Y 377.433
Mn (257.610 nm)	0.493980	ppm	0.000529	0.11	125198.000000	Y 377.433
Mo (202.032 nm)	0.492468	ppm	0.001171	0.24	4293.170000	Y 377.433
Na (589.592 nm)	4.804080	ppm	0.007473	0.16	33135.000000	Y_R2 488.368
Na H (589.593 nm)	4.690370 u	ppm	0.021459	0.46	29475.711008	Y_R 488.368
Ni (231.604 nm)	0.498384	ppm	0.000601	0.12	3694.440000	Y 377.433
P (213.618 nm)	0.961743	ppm	0.002827	0.29	2214.920000	Y 242.219
Pb (220.353 nm)	0.984416	ppm	0.000401	0.04	3011.990000	Y 242.219
S (181.972 nm)	-0.019966 u	ppm	0.002859	14.32	15.449342	Y 377.433
Sb (206.834 nm)	1.006660	ppm	0.000808	0.08	2675.880000	Y 377.433
Se (196.026 nm)	0.968438	ppm	0.006668	0.69	912.741000	Y 242.219
Si (288.158 nm)	4.876840	ppm	0.010339	0.21	43738.900000	Y 377.433
Sn (189.925 nm)	0.980696	ppm	0.002539	0.26	2087.810000	Y 377.433
Sr (421.552 nm)	0.489334	ppm	0.001549	0.32	103510.706401	Y_R 488.368
Th (288.505 nm)	0.005473	ppm	0.000838	15.32	86.212700	Y 377.433
Ti (336.122 nm)	0.493643	ppm	0.000034	0.01	70720.400000	Y 377.433
Tl (190.794 nm)	0.993974	ppm	0.002585	0.26	2291.590000	Y 377.433
U (409.013 nm)	-0.004645 u	ppm	0.002080	44.77	-173.474000	Y 377.433
V (292.401 nm)	0.491183	ppm	0.000566	0.12	20647.200000	Y 377.433
Zn (206.200 nm)	0.489786	ppm	0.000983	0.20	2554.810000	Y 377.433
Zr (343.823 nm)	0.490526	ppm	0.000820	0.17	66703.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.978030	17540.011405	0.002291	0.23
Y 377.433	0.989038	964550.895015	0.000352	0.04
Y_R 377.433	0.976052	70220.500000	0.005619	0.58
Y_R 488.368	0.986069	38967.500000	0.007221	0.73
Y_R2 488.368	0.995363	75816.418841	0.001139	0.11

Sample Name: CCB

Date: 5/13/2019 1:21:47 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.055645 Z	ppm	0.003995	7.18	-2201.952081 Z	Y_R 488.368
Ag (328.068 nm)	-0.000027 u	ppm	0.000092	> 100.00	-350.268000	Y 377.433
Al (167.019 nm)	0.005394	ppm	0.002066	38.30	3.561580	Y_R 377.433
Al H (396.152 nm)	-0.118775 Zu	ppm	0.004827	4.06	23.775485 Z	Y_R 377.433
As (188.980 nm)	-0.001164 u	ppm	0.002500	> 100.00	-1.438180	Y 242.219
B (249.678 nm)	0.000566	ppm	0.000017	3.06	81.563100	Y 242.219
Ba (493.408 nm)	-0.000386 u	ppm	0.000451	> 100.00	558.857000	Y_R 488.368
Be (234.861 nm)	0.000004 u	ppm	0.000025	> 100.00	-19.843500	Y_R 488.368
Bi (223.061 nm)	0.000221	ppm	0.000104	46.96	21.321000	Y 377.433
Ca (315.887 nm)	0.002936	ppm	0.000300	10.21	-94.485959	Y_R 377.433
Cd (214.439 nm)	-0.000058 u	ppm	0.000042	72.19	-3.332900	Y 377.433
Co (228.615 nm)	0.000338	ppm	0.000206	60.95	-33.115900	Y 242.219
Cr (205.560 nm)	0.000145	ppm	0.000057	39.71	0.143885	Y 377.433
Cu (324.754 nm)	0.000047 u	ppm	0.000328	> 100.00	601.258000	Y 377.433
Fe (238.204 nm)	0.004008	ppm	0.000882	21.99	30.581559	Y_R 377.433
Fe H (259.940 nm)	-0.193362 u	ppm	0.002773	1.43	11.200400	Y_R 377.433
K (766.491 nm)	-0.065890 u	ppm	0.003803	5.77	-763.740000	Y_R2 488.368
Li (670.783 nm)	0.002540	ppm	0.001039	40.89	-927.398000	Y_R2 488.368
Mg (279.078 nm)	0.000970	ppm	0.001063	> 100.00	28.326800	Y 377.433
Mn (257.610 nm)	-0.000013 u	ppm	0.000015	> 100.00	71.368500	Y 377.433
Mo (202.032 nm)	0.000011 u	ppm	0.000045	> 100.00	-2.309770	Y 377.433
Na (589.592 nm)	0.045678	ppm	0.009816	21.49	1180.430000	Y_R2 488.368
Na H (589.593 nm)	-0.769244 u	ppm	0.026626	3.46	7896.163545	Y_R 488.368
Ni (231.604 nm)	0.000234	ppm	0.000032	13.75	-1.175920	Y 377.433
P (213.618 nm)	-0.001170 u	ppm	0.001120	95.72	14.026700	Y 242.219
Pb (220.353 nm)	-0.000812 u	ppm	0.000806	99.24	4.992420	Y 242.219
S (181.972 nm)	-0.023952 u	ppm	0.000081	0.34	12.682963	Y 377.433
Sb (206.834 nm)	0.003454	ppm	0.000280	8.10	-21.640700	Y 377.433
Se (196.026 nm)	0.001936	ppm	0.001454	75.13	12.525900	Y 242.219
Si (288.158 nm)	-0.003959 u	ppm	0.000547	13.80	801.239000	Y 377.433
Sn (189.925 nm)	-0.000286 u	ppm	0.000419	> 100.00	7.605410	Y 377.433
Sr (421.552 nm)	-0.000014 u	ppm	0.000098	> 100.00	112.989742	Y_R 488.368
Th (288.505 nm)	0.001459	ppm	0.000893	61.19	56.454100	Y 377.433
Ti (336.122 nm)	0.000031	ppm	0.000025	82.85	-190.181000	Y 377.433
Tl (190.794 nm)	0.000419 u	ppm	0.001548	> 100.00	-1.252280	Y 377.433
U (409.013 nm)	-0.003149 u	ppm	0.001994	63.33	-128.446000	Y 377.433
V (292.401 nm)	-0.000140 u	ppm	0.000022	15.74	13.822700	Y 377.433
Zn (206.200 nm)	-0.000370 u	ppm	0.000092	24.90	-0.159211	Y 377.433
Zr (343.823 nm)	0.000142	ppm	0.000078	55.37	56.973000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.981419	17600.790359	0.001217	0.12
Y 377.433	0.992572	967997.165283	0.001906	0.19
Y_R 377.433	0.983355	70745.900000	0.003692	0.38
Y_R 488.368	0.987209	39012.600000	0.007593	0.77
Y_R2 488.368	1.004023	76476.114319	0.002273	0.23

Sample Name: CCVL-5699389

Date: 5/13/2019 1:25:09 PM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.075346 Q	ppm	0.000583	0.77	-2153.861095 Q	Y_R 488.368
Ag (328.068 nm)	0.008843	ppm	0.000146	1.65	65.878500	Y 377.433
Al (167.019 nm)	0.092503	ppm	0.000611	0.66	55.726700	Y_R 377.433
Al H (396.152 nm)	-0.016758 u	ppm	0.000666	3.98	284.997714	Y_R 377.433
As (188.980 nm)	0.013094	ppm	0.001487	11.36	15.639200	Y 242.219
B (249.678 nm)	0.095790	ppm	0.000552	0.58	2437.820000	Y 242.219
Ba (493.408 nm)	0.009310	ppm	0.000309	3.32	1642.870000	Y_R 488.368
Be (234.861 nm)	0.000930	ppm	0.000020	2.11	250.267000	Y_R 488.368
Bi (223.061 nm)	0.097490	ppm	0.001668	1.71	272.026000	Y 377.433
Ca (315.887 nm)	0.201261	ppm	0.005016	2.49	72.794501	Y_R 377.433
Cd (214.439 nm)	0.005062	ppm	0.000020	0.39	308.892000	Y 377.433
Co (228.615 nm)	0.010425	ppm	0.000128	1.23	168.540000	Y 242.219
Cr (205.560 nm)	0.010136	ppm	0.000061	0.60	149.023000	Y 377.433
Cu (324.754 nm)	0.015027	ppm	0.000537	3.58	1591.470000	Y 377.433
Fe (238.204 nm)	0.099920	ppm	0.000719	0.72	383.050225	Y_R 377.433
Fe H (259.940 nm)	-0.093357 u	ppm	0.000762	0.82	197.945000	Y_R 377.433
K (766.491 nm)	2.989830	ppm	0.019854	0.66	2713.700000	Y_R2 488.368
Li (670.783 nm)	0.024820	ppm	0.000023	0.09	-243.814000	Y_R2 488.368
Mg (279.078 nm)	0.192791	ppm	0.001158	0.60	1161.810000	Y 377.433
Mn (257.610 nm)	0.010186	ppm	0.000029	0.29	2654.790000	Y 377.433
Mo (202.032 nm)	0.018482	ppm	0.000106	0.57	158.802000	Y 377.433
Na (589.592 nm)	0.970875	ppm	0.008953	0.92	7222.980000	Y_R2 488.368
Na H (589.593 nm)	0.018369 u	ppm	0.023116	> 100.00	10948.902621	Y_R 488.368
Ni (231.604 nm)	0.041037	ppm	0.000829	2.02	301.435000	Y 377.433
P (213.618 nm)	2.738700 o	ppm	0.012089	0.44	6276.440000	Y 242.219
Pb (220.353 nm)	0.008830	ppm	0.001849	20.94	34.440600	Y 242.219
S (181.972 nm)	0.054778 Q	ppm	0.002010	3.67	47.119444 Q	Y 377.433
Sb (206.834 nm)	0.019623	ppm	0.001027	5.23	21.770500	Y 377.433
Se (196.026 nm)	0.016597	ppm	0.001217	7.34	26.174300	Y 242.219
Si (288.158 nm)	0.536691	ppm	0.017102	3.19	5557.480000	Y 377.433
Sn (189.925 nm)	0.096733	ppm	0.000973	1.01	213.337000	Y 377.433
Sr (421.552 nm)	0.009765	ppm	0.000057	0.59	2179.331598	Y_R 488.368
Th (288.505 nm)	0.013890	ppm	0.000370	2.66	94.291100	Y 377.433
Ti (336.122 nm)	0.009543	ppm	0.000017	0.17	1176.470000	Y 377.433
Tl (190.794 nm)	0.013403	ppm	0.000718	5.35	28.678800	Y 377.433
U (409.013 nm)	0.055260	ppm	0.003357	6.07	145.752000	Y 377.433
V (292.401 nm)	0.009391	ppm	0.000203	2.16	412.022000	Y 377.433
Zn (206.200 nm)	0.019959	ppm	0.000955	4.79	105.809000	Y 377.433
Zr (343.823 nm)	0.010681	ppm	0.000207	1.94	1489.540000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.989131	17739.102851	0.002717	0.27
Y 377.433	0.998860	974129.857970	0.003574	0.36
Y_R 377.433	0.992588	71410.200000	0.000514	0.05
Y_R 488.368	1.003770	39667.200000	0.000793	0.08
Y_R2 488.368	1.015395	77342.273832	0.006362	0.63

Sample Name: 280-123135-C-1-O@5

Date: 5/13/2019 1:28:32 PM

Rack:Tube: 1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.034949 n	ppm	0.009266	26.51	-2252.471563	Y_R 488.368
Ag (328.068 nm)	0.000384	ppm	0.000060	15.74	-329.761000	Y 377.433
Al (167.019 nm)	0.012984	ppm	0.002074	15.98	8.763940	Y_R 377.433
Al H (396.152 nm)	-0.092330 u	ppm	0.006191	6.71	99.151075	Y_R 377.433
As (188.980 nm)	0.014462	ppm	0.002538	17.55	17.271300	Y 242.219
B (249.678 nm)	1.556320 o	ppm	0.000454	0.03	38572.100000	Y 242.219
Ba (493.408 nm)	0.106964	ppm	0.000187	0.18	12565.100000	Y_R 488.368
Be (234.861 nm)	0.000002 u	ppm	0.000017	> 100.00	7.269810	Y_R 488.368
Bi (223.061 nm)	-0.004036 u	ppm	0.002241	55.52	10.505400	Y 377.433
Ca (315.887 nm)	18.160075 o	ppm	0.037835	0.21	15220.174892	Y_R 377.433
Cd (214.439 nm)	-0.000010 u	ppm	0.000020	> 100.00	0.526280	Y 377.433
Co (228.615 nm)	0.005461	ppm	0.000129	2.37	71.867600	Y 242.219
Cr (205.560 nm)	0.019652	ppm	0.000412	2.09	290.695000	Y 377.433
Cu (324.754 nm)	0.001527	ppm	0.000104	6.84	686.777000	Y 377.433
Fe (238.204 nm)	0.896686	ppm	0.000068	0.01	3311.096039	Y_R 377.433
Fe H (259.940 nm)	0.729378 u	ppm	0.008258	1.13	1734.290000	Y_R 377.433
K (766.491 nm)	67.292300	ppm	0.009180	0.01	75890.400000	Y_R2 488.368
Li (670.783 nm)	0.005330	ppm	0.001317	24.71	-841.816000	Y_R2 488.368
Mg (279.078 nm)	21.382800	ppm	0.021489	0.10	126505.000000	Y 377.433
Mn (257.610 nm)	0.257096	ppm	0.000338	0.13	65196.100000	Y 377.433
Mo (202.032 nm)	0.000423	ppm	0.000096	22.57	1.288040	Y 377.433
Na (589.592 nm)	228.598000 o	ppm	0.050563	0.02	1489250.000000	Y_R2 488.368
Na H (589.593 nm)	238.540313	ppm	1.287561	0.54	932591.479389	Y_R 488.368
Ni (231.604 nm)	0.017914	ppm	0.000058	0.32	129.981000	Y 377.433
P (213.618 nm)	1.051090	ppm	0.003470	0.33	2419.140000	Y 242.219
Pb (220.353 nm)	-0.000345 u	ppm	0.001115	> 100.00	6.493740	Y 242.219
S (181.972 nm)	2.939472	ppm	0.000146	0.00	1308.629497	Y 377.433
Sb (206.834 nm)	0.000364 u	ppm	0.001276	> 100.00	-29.625700	Y 377.433
Se (196.026 nm)	-0.000750 u	ppm	0.002322	> 100.00	10.070800	Y 242.219
Si (288.158 nm)	4.559530	ppm	0.011420	0.25	40947.400000	Y 377.433
Sn (189.925 nm)	0.001316	ppm	0.000648	49.28	11.001600	Y 377.433
Sr (421.552 nm)	0.274725	ppm	0.001098	0.40	58164.654051	Y_R 488.368
Th (288.505 nm)	0.000588 u	ppm	0.001850	> 100.00	60.735700	Y 377.433
Ti (336.122 nm)	0.072204	ppm	0.000089	0.12	10233.300000	Y 377.433
Tl (190.794 nm)	-0.000275 u	ppm	0.001743	> 100.00	-3.188280	Y 377.433
U (409.013 nm)	-0.016772 u	ppm	0.005986	35.69	-197.169000	Y 377.433
V (292.401 nm)	0.022701	ppm	0.000297	1.31	976.498000	Y 377.433
Zn (206.200 nm)	0.006307	ppm	0.000141	2.23	34.642600	Y 377.433
Zr (343.823 nm)	0.023641	ppm	0.000122	0.51	3253.060000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.949955	17036.519603	0.001682	0.18
Y 377.433	0.957964	934246.250248	0.002891	0.30
Y_R 377.433	0.963765	69336.600000	0.004723	0.49
Y_R 488.368	0.969354	38307.000000	0.001720	0.18
Y_R2 488.368	0.982651	74848.171852	0.000063	0.01

Sample Name: 280-123135-C-1-Asd@25

Date: 5/13/2019 1:31:54 PM

Rack:Tube: 1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.047266 n	ppm	0.000158	0.33	-2222.406042	Y_R 488.368
Ag (328.068 nm)	-0.000051 u	ppm	0.000163	> 100.00	-351.245000	Y 377.433
Al (167.019 nm)	0.004310	ppm	0.000539	12.50	3.044030	Y_R 377.433
Al H (396.152 nm)	-0.118927 u	ppm	0.001577	1.33	25.085677	Y_R 377.433
As (188.980 nm)	0.003700	ppm	0.002434	65.78	4.385560	Y 242.219
B (249.678 nm)	0.317380	ppm	0.000545	0.17	7919.790000	Y 242.219
Ba (493.408 nm)	0.022181	ppm	0.000440	1.98	3082.700000	Y_R 488.368
Be (234.861 nm)	-0.000002 u	ppm	0.000006	> 100.00	-16.128100	Y_R 488.368
Bi (223.061 nm)	-0.003356 u	ppm	0.001007	30.02	12.134700	Y 377.433
Ca (315.887 nm)	3.839788	ppm	0.005139	0.13	3141.711719	Y_R 377.433
Cd (214.439 nm)	0.000015 u	ppm	0.000069	> 100.00	1.311080	Y 377.433
Co (228.615 nm)	0.001372	ppm	0.000290	21.14	-11.926400	Y 242.219
Cr (205.560 nm)	0.004191	ppm	0.000040	0.96	60.407700	Y 377.433
Cu (324.754 nm)	0.000270	ppm	0.000078	28.84	612.067000	Y 377.433
Fe (238.204 nm)	0.180455	ppm	0.000661	0.37	679.007588	Y_R 377.433
Fe H (259.940 nm)	-0.010765 u	ppm	0.003885	36.09	352.174000	Y_R 377.433
K (766.491 nm)	13.941000	ppm	0.024234	0.17	15176.200000	Y_R2 488.368
Li (670.783 nm)	0.005344	ppm	0.001095	20.49	-841.371000	Y_R2 488.368
Mg (279.078 nm)	4.484810	ppm	0.005573	0.12	26550.800000	Y 377.433
Mn (257.610 nm)	0.054054	ppm	0.000035	0.06	13766.300000	Y 377.433
Mo (202.032 nm)	0.000222	ppm	0.000113	50.73	-0.468777	Y 377.433
Na (589.592 nm)	49.087600 o	ppm	0.067653	0.14	320484.000000	Y_R2 488.368
Na H (589.593 nm)	50.229638	ppm	0.069223	0.14	204956.492868	Y_R 488.368
Ni (231.604 nm)	0.003840	ppm	0.000277	7.22	25.569500	Y 377.433
P (213.618 nm)	0.212698	ppm	0.000708	0.33	502.857000	Y 242.219
Pb (220.353 nm)	-0.000699 u	ppm	0.000423	60.43	5.359730	Y 242.219
S (181.972 nm)	0.573047	ppm	0.002410	0.42	273.763461	Y 377.433
Sb (206.834 nm)	0.001169 u	ppm	0.002664	> 100.00	-27.708500	Y 377.433
Se (196.026 nm)	-0.002427 u	ppm	0.003467	> 100.00	8.474240	Y 242.219
Si (288.158 nm)	0.931226	ppm	0.002224	0.24	9028.300000	Y 377.433
Sn (189.925 nm)	-0.000588 u	ppm	0.000954	> 100.00	6.964250	Y 377.433
Sr (421.552 nm)	0.057736	ppm	0.000042	0.07	12315.439104	Y_R 488.368
Th (288.505 nm)	-0.001644 u	ppm	0.001900	> 100.00	48.851300	Y 377.433
Ti (336.122 nm)	0.014986	ppm	0.000026	0.17	1969.800000	Y 377.433
Tl (190.794 nm)	-0.001244 u	ppm	0.001204	96.81	-5.162690	Y 377.433
U (409.013 nm)	-0.005126 u	ppm	0.004594	89.62	-138.703000	Y 377.433
V (292.401 nm)	0.004499	ppm	0.000076	1.68	208.700000	Y 377.433
Zn (206.200 nm)	0.001592	ppm	0.000382	24.00	10.066600	Y 377.433
Zr (343.823 nm)	0.004813	ppm	0.000009	0.19	692.357000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.977058	17522.594629	0.001242	0.13
Y 377.433	0.987040	962602.954254	0.001487	0.15
Y_R 377.433	0.982595	70691.300000	0.002385	0.24
Y_R 488.368	0.986743	38994.200000	0.000037	0.00
Y_R2 488.368	1.013073	77165.398026	0.001316	0.13

Sample Name: 280-123135-C-1-B MS@5

Date: 5/13/2019 1:35:16 PM

Rack:Tube: 1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.228184 n	ppm	0.004327	1.90	-1780.785687	Y_R 488.368
Ag (328.068 nm)	0.010671	ppm	0.000117	1.09	128.323000	Y 377.433
Al (167.019 nm)	1.832220	ppm	0.006092	0.33	1098.170000	Y_R 377.433
Al H (396.152 nm)	1.934052	ppm	0.008348	0.43	5277.772057	Y_R 377.433
As (188.980 nm)	0.419503	ppm	0.003937	0.94	502.428000	Y 242.219
B (249.678 nm)	1.845040 o	ppm	0.002200	0.12	45721.100000	Y 242.219
Ba (493.408 nm)	0.507985	ppm	0.001299	0.26	57405.800000	Y_R 488.368
Be (234.861 nm)	0.198547	ppm	0.000225	0.11	57505.000000	Y_R 488.368
Bi (223.061 nm)	0.386444	ppm	0.001608	0.42	1017.210000	Y 377.433
Ca (315.887 nm)	29.139914 o	ppm	0.021924	0.08	24481.250993	Y_R 377.433
Cd (214.439 nm)	0.196552	ppm	0.000324	0.16	11985.400000	Y 377.433
Co (228.615 nm)	0.203822	ppm	0.000599	0.29	4038.610000	Y 242.219
Cr (205.560 nm)	0.222240	ppm	0.000880	0.40	3308.210000	Y 377.433
Cu (324.754 nm)	0.206331	ppm	0.000172	0.08	14246.200000	Y 377.433
Fe (238.204 nm)	2.842197	ppm	0.000639	0.02	10460.678749	Y_R 377.433
Fe H (259.940 nm)	2.770040 u	ppm	0.009598	0.35	5544.940000	Y_R 377.433
K (766.491 nm)	81.281000	ppm	0.274447	0.34	91809.700000	Y_R2 488.368
Li (670.783 nm)	0.212013	ppm	0.000030	0.01	5499.730000	Y_R2 488.368
Mg (279.078 nm)	32.453600	ppm	0.018569	0.06	191977.000000	Y 377.433
Mn (257.610 nm)	0.467665	ppm	0.000460	0.10	118532.000000	Y 377.433
Mo (202.032 nm)	0.199749	ppm	0.000062	0.03	1739.920000	Y 377.433
Na (589.592 nm)	250.744000 o	ppm	0.889719	0.35	1634220.000000	Y_R2 488.368
Na H (589.593 nm)	261.373431	ppm	1.593412	0.61	1021205.870834	Y_R 488.368
Ni (231.604 nm)	0.215747	ppm	0.000184	0.09	1597.680000	Y 377.433
P (213.618 nm)	5.100110 o	ppm	0.005869	0.12	11673.800000	Y 242.219
Pb (220.353 nm)	0.195456	ppm	0.000812	0.42	604.189000	Y 242.219
S (181.972 nm)	4.973620	ppm	0.029522	0.59	2198.261412	Y 377.433
Sb (206.834 nm)	0.000386	ppm	0.000262	67.83	-26.147800	Y 377.433
Se (196.026 nm)	0.386038	ppm	0.002139	0.55	370.188000	Y 242.219
Si (288.158 nm)	4.246110	ppm	0.001324	0.03	38190.200000	Y 377.433
Sn (189.925 nm)	0.391938	ppm	0.002418	0.62	839.330000	Y 377.433
Sr (421.552 nm)	0.485575	ppm	0.001509	0.31	102716.420553	Y_R 488.368
Th (288.505 nm)	0.197908	ppm	0.000496	0.25	654.495000	Y 377.433
Ti (336.122 nm)	0.281158	ppm	0.000246	0.09	40279.200000	Y 377.433
Tl (190.794 nm)	0.386994	ppm	0.000165	0.04	890.415000	Y 377.433
U (409.013 nm)	0.398471	ppm	0.007321	1.84	1750.670000	Y 377.433
V (292.401 nm)	0.225672	ppm	0.000174	0.08	9494.400000	Y 377.433
Zn (206.200 nm)	0.104187	ppm	0.000280	0.27	544.852000	Y 377.433
Zr (343.823 nm)	0.106638	ppm	0.000228	0.21	14537.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.949489	17028.161360	0.001841	0.19
Y 377.433	0.959353	935601.276613	0.000593	0.06
Y_R 377.433	0.972786	69985.600000	0.000354	0.04
Y_R 488.368	0.979933	38725.100000	0.001496	0.15
Y_R2 488.368	0.998517	76056.673901	0.001617	0.16

Sample Name: 280-123135-C-1-C MSD@5

Date: 5/13/2019 1:38:38 PM

Rack:Tube: 1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.263379 n	ppm	0.014224	5.40	-1694.876021	Y_R 488.368
Ag (328.068 nm)	0.010744	ppm	0.000229	2.13	131.552000	Y 377.433
Al (167.019 nm)	1.855990	ppm	0.000344	0.02	1112.470000	Y_R 377.433
Al H (396.152 nm)	1.979441	ppm	0.001991	0.10	5394.238444	Y_R 377.433
As (188.980 nm)	0.422825	ppm	0.001284	0.30	506.406000	Y 242.219
B (249.678 nm)	1.938690 o	ppm	0.001091	0.06	48038.200000	Y 242.219
Ba (493.408 nm)	0.523476	ppm	0.001639	0.31	59138.100000	Y_R 488.368
Be (234.861 nm)	0.202007	ppm	0.000119	0.06	58509.400000	Y_R 488.368
Bi (223.061 nm)	0.396994	ppm	0.003122	0.79	1044.420000	Y 377.433
Ca (315.887 nm)	30.411120 o	ppm	0.098000	0.32	25553.454340	Y_R 377.433
Cd (214.439 nm)	0.200905	ppm	0.000395	0.20	12250.900000	Y 377.433
Co (228.615 nm)	0.207950	ppm	0.000269	0.13	4121.370000	Y 242.219
Cr (205.560 nm)	0.227895	ppm	0.000603	0.26	3392.450000	Y 377.433
Cu (324.754 nm)	0.210643	ppm	0.000649	0.31	14531.400000	Y 377.433
Fe (238.204 nm)	2.958139	ppm	0.010240	0.35	10886.753377	Y_R 377.433
Fe H (259.940 nm)	2.890810 u	ppm	0.010347	0.36	5770.450000	Y_R 377.433
K (766.491 nm)	85.424500	ppm	0.332479	0.39	96525.100000	Y_R2 488.368
Li (670.783 nm)	0.217470	ppm	0.001121	0.52	5667.150000	Y_R2 488.368
Mg (279.078 nm)	33.916100	ppm	0.077015	0.23	200629.000000	Y 377.433
Mn (257.610 nm)	0.486431	ppm	0.001293	0.27	123286.000000	Y 377.433
Mo (202.032 nm)	0.204434	ppm	0.000580	0.28	1780.780000	Y 377.433
Na (589.592 nm)	264.132000 o	ppm	1.723570	0.65	1721400.000000	Y_R2 488.368
Na H (589.593 nm)	277.699391	ppm	1.300257	0.47	1084297.542685	Y_R 488.368
Ni (231.604 nm)	0.221791	ppm	0.001039	0.47	1642.510000	Y 377.433
P (213.618 nm)	5.215840 o	ppm	0.006255	0.12	11938.400000	Y 242.219
Pb (220.353 nm)	0.197752	ppm	0.000518	0.26	611.182000	Y 242.219
S (181.972 nm)	5.210055	ppm	0.020529	0.39	2301.654347	Y 377.433
Sb (206.834 nm)	0.000920 u	ppm	0.001840	> 100.00	-24.618200	Y 377.433
Se (196.026 nm)	0.397126	ppm	0.001025	0.26	380.510000	Y 242.219
Si (288.158 nm)	4.467330	ppm	0.023309	0.52	40136.300000	Y 377.433
Sn (189.925 nm)	0.400457	ppm	0.000394	0.10	857.395000	Y 377.433
Sr (421.552 nm)	0.506880	ppm	0.001375	0.27	107218.156795	Y_R 488.368
Th (288.505 nm)	0.203280	ppm	0.002254	1.11	670.856000	Y 377.433
Ti (336.122 nm)	0.290795	ppm	0.000632	0.22	41667.400000	Y 377.433
Tl (190.794 nm)	0.394481	ppm	0.001036	0.26	907.663000	Y 377.433
U (409.013 nm)	0.399963	ppm	0.001405	0.35	1757.260000	Y 377.433
V (292.401 nm)	0.231501	ppm	0.000711	0.31	9739.580000	Y 377.433
Zn (206.200 nm)	0.108032	ppm	0.001111	1.03	564.894000	Y 377.433
Zr (343.823 nm)	0.110327	ppm	0.000200	0.18	15039.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.944974	16947.193864	0.001451	0.15
Y 377.433	0.953246	929644.937696	0.003078	0.32
Y_R 377.433	0.974853	70134.300000	0.001314	0.13
Y_R 488.368	0.977345	38622.800000	0.001410	0.14
Y_R2 488.368	0.992316	75584.350717	0.014460	1.46

Sample Name: 280-123154-B-4-A@5

Date: 5/13/2019 1:42:01 PM

Rack:Tube: 1:5

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.146524 n	ppm	0.004230	2.89	-1980.116116	Y_R 488.368
Ag (328.068 nm)	0.000460	ppm	0.000174	37.87	-327.709000	Y 377.433
Al (167.019 nm)	0.003183	ppm	0.001937	60.86	2.304730	Y_R 377.433
Al H (396.152 nm)	-0.092616 u	ppm	0.000636	0.69	123.786833	Y_R 377.433
As (188.980 nm)	-0.000386 u	ppm	0.001193	> 100.00	-0.507899	Y 242.219
B (249.678 nm)	0.070138	ppm	0.000550	0.78	1802.770000	Y 242.219
Ba (493.408 nm)	0.001807	ppm	0.000151	8.36	821.057000	Y_R 488.368
Be (234.861 nm)	0.000020 u	ppm	0.000037	> 100.00	-12.549600	Y_R 488.368
Bi (223.061 nm)	-0.002686 u	ppm	0.001056	39.32	13.844800	Y 377.433
Ca (315.887 nm)	75.423078 o	ppm	0.272531	0.36	63518.724522	Y_R 377.433
Cd (214.439 nm)	-0.000004 u	ppm	0.000030	> 100.00	0.066223	Y 377.433
Co (228.615 nm)	0.000110 u	ppm	0.000356	> 100.00	-37.671600	Y 242.219
Cr (205.560 nm)	0.000184	ppm	0.000024	13.30	0.703464	Y 377.433
Cu (324.754 nm)	0.000510	ppm	0.000141	27.70	579.760000	Y 377.433
Fe (238.204 nm)	0.092572	ppm	0.003061	3.31	356.044696	Y_R 377.433
Fe H (259.940 nm)	-0.106223 u	ppm	0.001354	1.27	173.920000	Y_R 377.433
K (766.491 nm)	4.017270	ppm	0.000238	0.01	3882.940000	Y_R2 488.368
Li (670.783 nm)	0.137424	ppm	0.000550	0.40	3211.160000	Y_R2 488.368
Mg (279.078 nm)	47.569300 o	ppm	0.010570	0.02	281405.000000	Y 377.433
Mn (257.610 nm)	0.007560	ppm	0.000028	0.37	1989.570000	Y 377.433
Mo (202.032 nm)	0.000240	ppm	0.000126	52.23	-0.308465	Y 377.433
Na (589.592 nm)	238.524000 o	ppm	0.817328	0.34	1553650.000000	Y_R2 488.368
Na H (589.593 nm)	248.815021	ppm	1.911705	0.77	972183.466722	Y_R 488.368
Ni (231.604 nm)	-0.000894 u	ppm	0.000917	> 100.00	-9.535310	Y 377.433
P (213.618 nm)	0.004439	ppm	0.001128	25.42	26.845600	Y 242.219
Pb (220.353 nm)	0.001230	ppm	0.000545	44.30	11.251600	Y 242.219
S (181.972 nm)	241.243507 bo	ppm	0.448021	0.19	105478.961268	Y 377.433
Sb (206.834 nm)	-0.001036 u	ppm	0.002906	> 100.00	-33.714200	Y 377.433
Se (196.026 nm)	-0.000138 u	ppm	0.002279	> 100.00	10.584100	Y 242.219
Si (288.158 nm)	1.611280	ppm	0.010073	0.63	15010.900000	Y 377.433
Sn (189.925 nm)	0.001900	ppm	0.000004	0.21	12.240800	Y 377.433
Sr (421.552 nm)	1.596616 o	ppm	0.012909	0.81	337476.174982	Y_R 488.368
Th (288.505 nm)	-0.001511 u	ppm	0.001153	76.34	48.163100	Y 377.433
Ti (336.122 nm)	-0.000028 u	ppm	0.000043	> 100.00	41.153100	Y 377.433
Tl (190.794 nm)	0.000950	ppm	0.000782	82.32	-0.029561	Y 377.433
U (409.013 nm)	-0.005145 u	ppm	0.000991	19.26	-152.769000	Y 377.433
V (292.401 nm)	-0.000389 u	ppm	0.000083	21.44	4.164860	Y 377.433
Zn (206.200 nm)	0.001081	ppm	0.000138	12.77	7.405600	Y 377.433
Zr (343.823 nm)	0.000383	ppm	0.000015	3.95	90.108900	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.941473	16884.409339	0.005399	0.57
Y 377.433	0.950879	927336.875961	0.006531	0.69
Y_R 377.433	0.949852	68335.700000	0.002569	0.27
Y_R 488.368	0.958063	37860.800000	0.006895	0.72
Y_R2 488.368	0.974464	74224.567272	0.000466	0.05

Sample Name: MB 280-457024/1-A

Date: 5/13/2019 1:45:23 PM

Rack:Tube: 1:6

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.050987 n	ppm	0.004116	8.07	-2213.321033	Y_R 488.368
Ag (328.068 nm)	-0.000083 u	ppm	0.000192	> 100.00	-353.042000	Y 377.433
Al (167.019 nm)	0.004328	ppm	0.002118	48.93	3.010950	Y_R 377.433
Al H (396.152 nm)	-0.110989 u	ppm	0.002735	2.46	43.616573	Y_R 377.433
As (188.980 nm)	-0.002060 u	ppm	0.001388	67.38	-2.513410	Y 242.219
B (249.678 nm)	0.001948	ppm	0.000420	21.55	115.582000	Y 242.219
Ba (493.408 nm)	-0.000043 u	ppm	0.000121	> 100.00	597.258000	Y_R 488.368
Be (234.861 nm)	-0.000016 u	ppm	0.000022	> 100.00	-22.080500	Y_R 488.368
Bi (223.061 nm)	-0.003283 u	ppm	0.001710	52.10	12.312700	Y 377.433
Ca (315.887 nm)	0.061785	ppm	0.003790	6.13	-44.849894	Y_R 377.433
Cd (214.439 nm)	-0.000033 u	ppm	0.000035	> 100.00	-1.651310	Y 377.433
Co (228.615 nm)	0.000478	ppm	0.000071	14.87	-30.316600	Y 242.219
Cr (205.560 nm)	0.000334	ppm	0.000075	22.59	2.927110	Y 377.433
Cu (324.754 nm)	0.000446	ppm	0.000067	15.01	626.910000	Y 377.433
Fe (238.204 nm)	0.121705	ppm	0.003941	3.24	463.107020	Y_R 377.433
Fe H (259.940 nm)	-0.073595 u	ppm	0.002535	3.44	234.847000	Y_R 377.433
K (766.491 nm)	-0.046028 u	ppm	0.019465	42.29	-741.137000	Y_R2 488.368
Li (670.783 nm)	0.004460	ppm	0.000562	12.61	-868.505000	Y_R2 488.368
Mg (279.078 nm)	0.012953	ppm	0.000193	1.49	98.926300	Y 377.433
Mn (257.610 nm)	0.001367	ppm	0.000018	1.29	420.990000	Y 377.433
Mo (202.032 nm)	0.000106	ppm	0.000102	96.72	-1.480830	Y 377.433
Na (589.592 nm)	0.106447	ppm	0.008849	8.31	1576.110000	Y_R2 488.368
Na H (589.593 nm)	0.305458 u	ppm	0.046331	15.17	12048.385286	Y_R 488.368
Ni (231.604 nm)	0.000087 u	ppm	0.000155	> 100.00	-2.257050	Y 377.433
P (213.618 nm)	-0.001892 u	ppm	0.000247	13.07	12.375700	Y 242.219
Pb (220.353 nm)	-0.000085 u	ppm	0.000481	> 100.00	7.231180	Y 242.219
S (181.972 nm)	0.043489	ppm	0.013923	32.01	42.166708	Y 377.433
Sb (206.834 nm)	0.002801	ppm	0.001805	64.43	-23.427800	Y 377.433
Se (196.026 nm)	0.001263	ppm	0.000448	35.45	11.878000	Y 242.219
Si (288.158 nm)	0.005946	ppm	0.000450	7.57	888.378000	Y 377.433
Sn (189.925 nm)	0.000550 u	ppm	0.001095	> 100.00	9.376770	Y 377.433
Sr (421.552 nm)	0.000334	ppm	0.000061	18.14	186.473032	Y_R 488.368
Th (288.505 nm)	-0.000828 u	ppm	0.000945	> 100.00	49.845500	Y 377.433
Ti (336.122 nm)	0.000150	ppm	0.000063	42.03	-172.968000	Y 377.433
Tl (190.794 nm)	-0.000008 u	ppm	0.001200	> 100.00	-2.242980	Y 377.433
U (409.013 nm)	-0.009383 u	ppm	0.005543	59.07	-157.672000	Y 377.433
V (292.401 nm)	-0.000360 u	ppm	0.000353	98.06	4.068360	Y 377.433
Zn (206.200 nm)	0.002896	ppm	0.000304	10.50	16.866600	Y 377.433
Zr (343.823 nm)	0.000050	ppm	0.000019	37.82	44.925200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.983877	17644.881972	0.001567	0.16
Y 377.433	0.995745	971091.572892	0.001699	0.17
Y_R 377.433	0.984894	70856.700000	0.007416	0.75
Y_R 488.368	0.990644	39148.300000	0.001816	0.18
Y_R2 488.368	1.017044	77467.861009	0.005646	0.56

Sample Name: LCS 280-457024/2-A

Date: 5/13/2019 1:48:45 PM

Rack:Tube: 1:7

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.017801 n	ppm	0.013904	1.37	146.664488	Y_R 488.368
Ag (328.068 nm)	0.050398	ppm	0.000238	0.47	1909.520000	Y 377.433
Al (167.019 nm)	8.997780 o	ppm	0.095303	1.06	5388.630000	Y_R 377.433
Al H (396.152 nm)	10.209104	ppm	0.064319	0.63	26414.153641	Y_R 377.433
As (188.980 nm)	2.007190	ppm	0.013642	0.68	2404.160000	Y 242.219
B (249.678 nm)	0.996067	ppm	0.002031	0.20	24738.200000	Y 242.219
Ba (493.408 nm)	2.015550 o	ppm	0.006331	0.31	225973.000000	Y_R 488.368
Be (234.861 nm)	0.989301	ppm	0.013787	1.39	286480.000000	Y_R 488.368
Bi (223.061 nm)	1.962210	ppm	0.002626	0.13	5079.570000	Y 377.433
Ca (315.887 nm)	50.099412 o	ppm	0.140740	0.28	42160.036889	Y_R 377.433
Cd (214.439 nm)	0.982343	ppm	0.000964	0.10	59896.300000	Y 377.433
Co (228.615 nm)	0.955382	ppm	0.003036	0.32	19065.900000	Y 242.219
Cr (205.560 nm)	0.992992	ppm	0.006547	0.66	14788.100000	Y 377.433
Cu (324.754 nm)	0.971301	ppm	0.004534	0.47	64906.100000	Y 377.433
Fe (238.204 nm)	9.868887 o	ppm	0.032368	0.33	36283.155122	Y_R 377.433
Fe H (259.940 nm)	10.106800	ppm	0.026031	0.26	19245.300000	Y_R 377.433
K (766.491 nm)	50.347300	ppm	0.023784	0.05	56606.900000	Y_R2 488.368
Li (670.783 nm)	1.009750	ppm	0.001987	0.20	29976.300000	Y_R2 488.368
Mg (279.078 nm)	49.386200 o	ppm	0.053034	0.11	292080.000000	Y 377.433
Mn (257.610 nm)	1.000380	ppm	0.002286	0.23	253467.000000	Y 377.433
Mo (202.032 nm)	1.004060	ppm	0.001891	0.19	8755.540000	Y 377.433
Na (589.592 nm)	49.325200 o	ppm	0.062216	0.13	326009.000000	Y_R2 488.368
Na H (589.593 nm)	51.179937	ppm	0.165442	0.32	210604.867456	Y_R 488.368
Ni (231.604 nm)	0.957992	ppm	0.001453	0.15	7104.460000	Y 377.433
P (213.618 nm)	19.735800 o	ppm	0.035811	0.18	45126.100000	Y 242.219
Pb (220.353 nm)	0.976171	ppm	0.003921	0.40	2987.700000	Y 242.219
S (181.972 nm)	9.387604	ppm	0.002515	0.03	4128.867200	Y 377.433
Sb (206.834 nm)	1.028490	ppm	0.006558	0.64	2739.310000	Y 377.433
Se (196.026 nm)	1.958750	ppm	0.011445	0.58	1834.340000	Y 242.219
Si (288.158 nm)	2.105960	ppm	0.015606	0.74	19362.800000	Y 377.433
Sn (189.925 nm)	1.979230	ppm	0.008681	0.44	4205.240000	Y 377.433
Sr (421.552 nm)	0.998102	ppm	0.002496	0.25	211011.983848	Y_R 488.368
Th (288.505 nm)	1.010200	ppm	0.002286	0.23	3092.110000	Y 377.433
Ti (336.122 nm)	1.017480	ppm	0.001230	0.12	146101.000000	Y 377.433
Tl (190.794 nm)	1.973430	ppm	0.007793	0.39	4551.410000	Y 377.433
U (409.013 nm)	2.055280	ppm	0.001036	0.05	9521.100000	Y 377.433
V (292.401 nm)	1.006830	ppm	0.002244	0.22	42266.800000	Y 377.433
Zn (206.200 nm)	0.486681	ppm	0.000150	0.03	2538.620000	Y 377.433
Zr (343.823 nm)	0.500798	ppm	0.000520	0.10	68122.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.960683	17228.917483	0.004626	0.48
Y 377.433	0.969371	945370.851502	0.004254	0.44
Y_R 377.433	0.972799	69986.600000	0.012606	1.30
Y_R 488.368	0.981083	38770.500000	0.011553	1.18
Y_R2 488.368	0.992390	75590.013826	0.008266	0.83

Sample Name: 280-123137-E-1-B

Date: 5/13/2019 1:52:08 PM

Rack:Tube: 1:8

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.019092 n	ppm	0.018490	96.85	-2291.178820	Y_R 488.368
Ag (328.068 nm)	0.000777	ppm	0.000140	18.01	-312.672000	Y 377.433
Al (167.019 nm)	0.839802	ppm	0.000450	0.05	506.920000	Y_R 377.433
Al H (396.152 nm)	0.899107 u	ppm	0.002138	0.24	2657.290138	Y_R 377.433
As (188.980 nm)	0.146678	ppm	0.001968	1.34	175.601000	Y 242.219
B (249.678 nm)	9.727830 o	ppm	0.046807	0.48	240741.000000	Y 242.219
Ba (493.408 nm)	0.410134	ppm	0.007507	1.83	46479.900000	Y_R 488.368
Be (234.861 nm)	-0.000002 u	ppm	0.000012	> 100.00	160.772000	Y_R 488.368
Bi (223.061 nm)	-0.002690 u	ppm	0.001408	52.35	14.836300	Y 377.433
Ca (315.887 nm)	95.586382 o	ppm	0.209100	0.22	80525.487344	Y_R 377.433
Cd (214.439 nm)	0.000105	ppm	0.000141	> 100.00	12.577800	Y 377.433
Co (228.615 nm)	0.025956	ppm	0.000408	1.57	491.343000	Y 242.219
Cr (205.560 nm)	0.151048	ppm	0.000224	0.15	2248.110000	Y 377.433
Cu (324.754 nm)	0.009502	ppm	0.000376	3.95	1161.180000	Y 377.433
Fe (238.204 nm)	5.871406 o	ppm	0.014410	0.25	21592.759280	Y_R 377.433
Fe H (259.940 nm)	5.905460	ppm	0.026395	0.45	11399.900000	Y_R 377.433
K (766.491 nm)	418.211000 o	ppm	0.285716	0.07	475238.000000	Y_R2 488.368
Li (670.783 nm)	0.053672	ppm	0.000455	0.85	641.441000	Y_R2 488.368
Mg (279.078 nm)	98.953500 o	ppm	0.226899	0.23	585344.000000	Y 377.433
Mn (257.610 nm)	1.667040 o	ppm	0.002657	0.16	422330.000000	Y 377.433
Mo (202.032 nm)	0.004995	ppm	0.000239	4.78	41.167300	Y 377.433
Na (589.592 nm)	1210.530000 o	ppm	5.468850	0.45	7882140.000000	Y_R2 488.368
Na H (589.593 nm)	1308.846154	ppm	19.956807	1.52	5068089.108263	Y_R 488.368
Ni (231.604 nm)	0.088135	ppm	0.001026	1.16	650.955000	Y 377.433
P (213.618 nm)	4.755870 o	ppm	0.027286	0.57	10887.000000	Y 242.219
Pb (220.353 nm)	0.002653	ppm	0.000333	12.54	15.763000	Y 242.219
S (181.972 nm)	27.187968 o	ppm	0.035731	0.13	11911.401461	Y 377.433
Sb (206.834 nm)	0.014141	ppm	0.000235	1.67	9.770830	Y 377.433
Se (196.026 nm)	0.003989	ppm	0.005380	> 100.00	14.709500	Y 242.219
Si (288.158 nm)	23.052800 o	ppm	0.141861	0.62	203637.000000	Y 377.433
Sn (189.925 nm)	0.014311	ppm	0.000137	0.96	38.558500	Y 377.433
Sr (421.552 nm)	1.066111	ppm	0.015142	1.42	225381.972854	Y_R 488.368
Th (288.505 nm)	0.003304	ppm	0.001748	52.90	104.525000	Y 377.433
Ti (336.122 nm)	0.341855	ppm	0.000534	0.16	49208.200000	Y 377.433
Tl (190.794 nm)	0.000706 u	ppm	0.001411	> 100.00	-2.232220	Y 377.433
U (409.013 nm)	-0.038928 u	ppm	0.012785	32.84	-316.762000	Y 377.433
V (292.401 nm)	0.107806	ppm	0.000227	0.21	4545.830000	Y 377.433
Zn (206.200 nm)	0.120331	ppm	0.000095	0.08	629.003000	Y 377.433
Zr (343.823 nm)	0.083502	ppm	0.000080	0.10	11403.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.857050	15370.361706	0.001859	0.22
Y 377.433	0.863126	841755.999629	0.000509	0.06
Y_R 377.433	0.894118	64325.900000	0.001364	0.15
Y_R 488.368	0.901242	35615.300000	0.009966	1.11
Y_R2 488.368	0.910494	69351.991797	0.005407	0.59

Sample Name: 280-123151-F-1-C

Date: 5/13/2019 1:55:30 PM

Rack:Tube: 1:9

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.269287 n	ppm	0.018858	7.00	-1680.453091	Y_R 488.368
Ag (328.068 nm)	0.000564	ppm	0.000100	17.81	-322.849000	Y 377.433
Al (167.019 nm)	0.033200	ppm	0.001076	3.24	20.281900	Y_R 377.433
Al H (396.152 nm)	-0.058435 u	ppm	0.008406	14.39	216.202442	Y_R 377.433
As (188.980 nm)	0.003084	ppm	0.001300	42.15	3.648490	Y 242.219
B (249.678 nm)	3.557580 o	ppm	0.004981	0.14	88087.600000	Y 242.219
Ba (493.408 nm)	0.042717	ppm	0.000443	1.04	5397.380000	Y_R 488.368
Be (234.861 nm)	0.000100	ppm	0.000001	1.01	11.774700	Y_R 488.368
Bi (223.061 nm)	-0.002223 u	ppm	0.001312	59.01	15.044100	Y 377.433
Ca (315.887 nm)	87.584689 o	ppm	0.517690	0.59	73776.449563	Y_R 377.433
Cd (214.439 nm)	0.000052	ppm	0.000014	26.32	3.544570	Y 377.433
Co (228.615 nm)	0.000593	ppm	0.000349	58.89	-27.964900	Y 242.219
Cr (205.560 nm)	0.000303	ppm	0.000263	86.93	2.462100	Y 377.433
Cu (324.754 nm)	0.001321	ppm	0.000023	1.75	627.384000	Y 377.433
Fe (238.204 nm)	0.127529	ppm	0.000902	0.71	484.507799	Y_R 377.433
Fe H (259.940 nm)	-0.076690 u	ppm	0.000098	0.13	229.069000	Y_R 377.433
K (766.491 nm)	29.305400	ppm	0.020686	0.07	32661.000000	Y_R2 488.368
Li (670.783 nm)	0.278959	ppm	0.000594	0.21	7553.810000	Y_R2 488.368
Mg (279.078 nm)	109.361000 o	ppm	0.052844	0.05	646916.000000	Y 377.433
Mn (257.610 nm)	0.039215	ppm	0.000063	0.16	10007.700000	Y 377.433
Mo (202.032 nm)	0.000456	ppm	0.000002	0.43	1.576210	Y 377.433
Na (589.592 nm)	534.566000 o	ppm	0.025585	0.00	3480950.000000	Y_R2 488.368
Na H (589.593 nm)	568.454604	ppm	5.781069	1.02	2207173.445093	Y_R 488.368
Ni (231.604 nm)	0.015663	ppm	0.000543	3.47	113.254000	Y 377.433
P (213.618 nm)	0.054625	ppm	0.001031	1.89	141.556000	Y 242.219
Pb (220.353 nm)	0.000077 u	ppm	0.001741	> 100.00	7.695360	Y 242.219
S (181.972 nm)	332.729333 bo	ppm	0.202663	0.06	145470.612162	Y 377.433
Sb (206.834 nm)	0.000311 u	ppm	0.002617	> 100.00	-30.083800	Y 377.433
Se (196.026 nm)	0.001473 u	ppm	0.004322	> 100.00	12.102300	Y 242.219
Si (288.158 nm)	1.168440	ppm	0.026674	2.28	11115.100000	Y 377.433
Sn (189.925 nm)	-0.000290 u	ppm	0.000060	20.72	7.596880	Y 377.433
Sr (421.552 nm)	5.326870 o	ppm	0.039071	0.73	1125667.487331	Y_R 488.368
Th (288.505 nm)	0.000501 u	ppm	0.002320	> 100.00	54.609700	Y 377.433
Ti (336.122 nm)	0.001262	ppm	0.000342	27.14	265.051000	Y 377.433
Tl (190.794 nm)	0.001479	ppm	0.001056	71.38	1.187340	Y 377.433
U (409.013 nm)	-0.032134 u	ppm	0.000100	0.31	-282.209000	Y 377.433
V (292.401 nm)	0.000796	ppm	0.000035	4.37	55.733200	Y 377.433
Zn (206.200 nm)	0.002560	ppm	0.000189	7.37	15.114300	Y 377.433
Zr (343.823 nm)	0.000398	ppm	0.000011	2.79	92.203700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.892980	16014.723328	0.002725	0.31
Y 377.433	0.899947	877665.866959	0.002660	0.30
Y_R 377.433	0.918444	66076.100000	0.006355	0.69
Y_R 488.368	0.922981	36474.400000	0.009246	1.00
Y_R2 488.368	0.933411	71097.619206	0.007976	0.85

Sample Name: 280-123156-S-1-C

Date: 5/13/2019 1:58:53 PM

Rack:Tube: 1:10

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.010515 nu	ppm	0.025817	> 100.00	-2312.113893	Y_R 488.368
Ag (328.068 nm)	0.000447	ppm	0.000097	21.67	-328.195000	Y 377.433
Al (167.019 nm)	0.004403	ppm	0.000890	20.22	2.986480	Y_R 377.433
Al H (396.152 nm)	-0.090561 u	ppm	0.009297	10.27	143.620193	Y_R 377.433
As (188.980 nm)	0.001803 u	ppm	0.003600	> 100.00	2.115040	Y 242.219
B (249.678 nm)	0.039559	ppm	0.000056	0.14	1046.300000	Y 242.219
Ba (493.408 nm)	0.036997	ppm	0.000017	0.04	4762.440000	Y_R 488.368
Be (234.861 nm)	0.000026	ppm	0.000034	> 100.00	-12.694800	Y_R 488.368
Bi (223.061 nm)	-0.003327 u	ppm	0.000396	11.92	12.181400	Y 377.433
Ca (315.887 nm)	108.250732 o	ppm	0.291859	0.27	91207.248607	Y_R 377.433
Cd (214.439 nm)	0.000026 u	ppm	0.000054	> 100.00	1.811440	Y 377.433
Co (228.615 nm)	0.000103 u	ppm	0.000279	> 100.00	-37.793700	Y 242.219
Cr (205.560 nm)	0.000966	ppm	0.000308	31.84	12.383400	Y 377.433
Cu (324.754 nm)	-0.000029 u	ppm	0.000323	> 100.00	520.381000	Y 377.433
Fe (238.204 nm)	0.028183	ppm	0.000534	1.89	119.420649	Y_R 377.433
Fe H (259.940 nm)	-0.168838 u	ppm	0.002613	1.55	56.995500	Y_R 377.433
K (766.491 nm)	0.815620	ppm	0.013139	1.61	239.425000	Y_R2 488.368
Li (670.783 nm)	0.009130	ppm	0.000104	1.14	-725.205000	Y_R2 488.368
Mg (279.078 nm)	40.611100	ppm	0.010542	0.03	240246.000000	Y 377.433
Mn (257.610 nm)	0.000943	ppm	0.000009	0.92	313.566000	Y 377.433
Mo (202.032 nm)	0.000823	ppm	0.000132	15.99	4.770820	Y 377.433
Na (589.592 nm)	4.634130	ppm	0.011063	0.24	31126.400000	Y_R2 488.368
Na H (589.593 nm)	7.244990 u	ppm	0.180995	2.50	38897.231304	Y_R 488.368
Ni (231.604 nm)	-0.001086 u	ppm	0.000664	61.15	-10.961900	Y 377.433
P (213.618 nm)	0.003267	ppm	0.000886	27.11	24.167100	Y 242.219
Pb (220.353 nm)	-0.000220 u	ppm	0.000028	12.77	6.787720	Y 242.219
S (181.972 nm)	19.199459 o	ppm	0.007466	0.04	8415.895781	Y 377.433
Sb (206.834 nm)	0.000483 u	ppm	0.001642	> 100.00	-29.584300	Y 377.433
Se (196.026 nm)	0.000039 u	ppm	0.002340	> 100.00	10.755800	Y 242.219
Si (288.158 nm)	12.043200 o	ppm	0.027215	0.23	106784.000000	Y 377.433
Sn (189.925 nm)	0.000947	ppm	0.000503	53.14	10.219000	Y 377.433
Sr (421.552 nm)	0.100567	ppm	0.000408	0.41	21365.569958	Y_R 488.368
Th (288.505 nm)	-0.000363 u	ppm	0.000369	> 100.00	51.183700	Y 377.433
Ti (336.122 nm)	0.000008 u	ppm	0.000211	> 100.00	150.780000	Y 377.433
Tl (190.794 nm)	0.000121 u	ppm	0.000388	> 100.00	-1.942410	Y 377.433
U (409.013 nm)	-0.012544 u	ppm	0.005296	42.22	-194.172000	Y 377.433
V (292.401 nm)	-0.000018 u	ppm	0.000182	> 100.00	20.035500	Y 377.433
Zn (206.200 nm)	-0.000312 u	ppm	0.000214	68.69	0.143383	Y 377.433
Zr (343.823 nm)	-0.000035 u	ppm	0.000045	> 100.00	33.027000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.944475	16938.240705	0.000865	0.09
Y 377.433	0.958291	934565.611467	0.001392	0.15
Y_R 377.433	0.952387	68518.000000	0.002853	0.30
Y_R 488.368	0.959676	37924.500000	0.005620	0.59
Y_R2 488.368	0.976347	74368.013214	0.001213	0.12

Sample Name: CCVH-5699817

Date: 5/13/2019 2:02:16 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.058182	ppm	0.009637	16.56	-2195.759695	Y_R 488.368
Ag (328.068 nm)	-0.000245 u	ppm	0.000407	> 100.00	-610.604000	Y 377.433
Al (167.019 nm)	41.757900 o	ppm	0.082722	0.20	25008.600000	Y_R 377.433
Al H (396.152 nm)	49.640860	ppm	0.258525	0.52	126674.309037	Y_R 377.433
As (188.980 nm)	0.002320 u	ppm	0.003285	> 100.00	2.317940	Y 242.219
B (249.678 nm)	0.005572	ppm	0.000069	1.24	131.868000	Y 242.219
Ba (493.408 nm)	0.002000	ppm	0.000425	21.23	869.910000	Y_R 488.368
Be (234.861 nm)	0.000950	ppm	0.000067	7.09	1752.490000	Y_R 488.368
Bi (223.061 nm)	0.982602	ppm	0.001609	0.16	2561.490000	Y 377.433
Ca (315.887 nm)	0.014913	ppm	0.001750	11.73	-84.382377	Y_R 377.433
Cd (214.439 nm)	0.001029	ppm	0.000040	3.87	111.384000	Y 377.433
Co (228.615 nm)	0.004407	ppm	0.000260	5.90	48.157500	Y 242.219
Cr (205.560 nm)	0.001186	ppm	0.000061	5.18	2.340640	Y 377.433
Cu (324.754 nm)	0.008507	ppm	0.000260	3.06	1555.610000	Y 377.433
Fe (238.204 nm)	47.959747 o	ppm	0.124741	0.26	176263.754012	Y_R 377.433
Fe H (259.940 nm)	49.620900	ppm	0.111543	0.22	93032.300000	Y_R 377.433
K (766.491 nm)	0.128119	ppm	0.125058	97.61	-542.956000	Y_R2 488.368
Li (670.783 nm)	0.004653	ppm	0.000112	2.41	-862.563000	Y_R2 488.368
Mg (279.078 nm)	0.032826	ppm	0.001065	3.25	-145.801000	Y 377.433
Mn (257.610 nm)	0.002837	ppm	0.000025	0.89	793.345000	Y 377.433
Mo (202.032 nm)	0.000599	ppm	0.000128	21.45	2.816580	Y 377.433
Na (589.592 nm)	237.629000 o	ppm	0.063473	0.03	1547830.000000	Y_R2 488.368
Na H (589.593 nm)	250.526198	ppm	1.109511	0.44	978794.042638	Y_R 488.368
Ni (231.604 nm)	0.005193	ppm	0.000032	0.62	37.807200	Y 377.433
P (213.618 nm)	-0.001036 u	ppm	0.000379	36.57	14.332300	Y 242.219
Pb (220.353 nm)	0.001965	ppm	0.000654	33.27	31.410800	Y 242.219
S (181.972 nm)	4.809667	ppm	0.019570	0.41	2125.629403	Y 377.433
Sb (206.834 nm)	-0.001400 u	ppm	0.001091	77.93	-79.144700	Y 377.433
Se (196.026 nm)	0.002610	ppm	0.000270	10.34	4.831970	Y 242.219
Si (288.158 nm)	0.066663	ppm	0.000559	0.84	1422.520000	Y 377.433
Sn (189.925 nm)	0.004948	ppm	0.000642	12.97	18.702600	Y 377.433
Sr (421.552 nm)	0.002044	ppm	0.000070	3.42	547.982569	Y_R 488.368
Th (288.505 nm)	4.995480	ppm	0.005165	0.10	14906.800000	Y 377.433
Ti (336.122 nm)	0.002208	ppm	0.000087	3.95	122.608000	Y 377.433
Tl (190.794 nm)	-0.001310 u	ppm	0.000137	10.50	-6.613290	Y 377.433
U (409.013 nm)	10.081300	ppm	0.008521	0.08	47391.800000	Y 377.433
V (292.401 nm)	0.004567	ppm	0.000698	15.28	22.270300	Y 377.433
Zn (206.200 nm)	0.003377	ppm	0.000140	4.15	19.372000	Y 377.433
Zr (343.823 nm)	-0.003147 u	ppm	0.000081	2.57	-241.483000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.942571	16904.098215	0.000276	0.03
Y 377.433	0.944187	920810.160799	0.001635	0.17
Y_R 377.433	0.950778	68402.300000	0.000287	0.03
Y_R 488.368	0.955088	37743.200000	0.009332	0.98
Y_R2 488.368	0.959236	73064.697557	0.011726	1.22

Sample Name: CCV-5699804

Date: 5/13/2019 2:05:38 PM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.983738	ppm	0.002771	0.28	63.515483	Y_R 488.368
Ag (328.068 nm)	0.488698	ppm	0.001079	0.22	22617.900000	Y 377.433
Al (167.019 nm)	0.476230	ppm	0.005223	1.10	286.949000	Y_R 377.433
Al H (396.152 nm)	0.421907 u	ppm	0.005113	1.21	1442.142833	Y_R 377.433
As (188.980 nm)	0.973496	ppm	0.005365	0.55	1166.030000	Y 242.219
B (249.678 nm)	0.494084	ppm	0.000172	0.03	12309.800000	Y 242.219
Ba (493.408 nm)	0.493541	ppm	0.001573	0.32	55790.800000	Y_R 488.368
Be (234.861 nm)	0.489556	ppm	0.000809	0.17	141674.000000	Y_R 488.368
Bi (223.061 nm)	-0.004296 u	ppm	0.000854	19.87	10.104500	Y 377.433
Ca (315.887 nm)	4.962860	ppm	0.019134	0.39	4089.265106	Y_R 377.433
Cd (214.439 nm)	0.494986	ppm	0.000616	0.12	30178.300000	Y 377.433
Co (228.615 nm)	0.496451	ppm	0.002459	0.50	9886.860000	Y 242.219
Cr (205.560 nm)	0.497843	ppm	0.000697	0.14	7413.870000	Y 377.433
Cu (324.754 nm)	0.489202	ppm	0.000618	0.13	32968.700000	Y 377.433
Fe (238.204 nm)	2.445073	ppm	0.007650	0.31	9001.281018	Y_R 377.433
Fe H (259.940 nm)	2.351500 u	ppm	0.005750	0.24	4763.370000	Y_R 377.433
K (766.491 nm)	48.719100	ppm	0.018484	0.04	54754.000000	Y_R2 488.368
Li (670.783 nm)	0.986815	ppm	0.003701	0.38	29272.500000	Y_R2 488.368
Mg (279.078 nm)	19.480400	ppm	0.022901	0.12	115249.000000	Y 377.433
Mn (257.610 nm)	0.496540	ppm	0.000608	0.12	125846.000000	Y 377.433
Mo (202.032 nm)	0.494787	ppm	0.000717	0.15	4313.390000	Y 377.433
Na (589.592 nm)	4.869110	ppm	0.011947	0.25	33566.500000	Y_R2 488.368
Na H (589.593 nm)	6.143699 u	ppm	0.050893	0.83	35094.783193	Y_R 488.368
Ni (231.604 nm)	0.500561	ppm	0.000588	0.12	3710.590000	Y 377.433
P (213.618 nm)	0.952606	ppm	0.001159	0.12	2194.040000	Y 242.219
Pb (220.353 nm)	0.986683	ppm	0.000671	0.07	3018.910000	Y 242.219
S (181.972 nm)	-0.003977 u	ppm	0.004842	> 100.00	22.443401	Y 377.433
Sb (206.834 nm)	1.009620	ppm	0.003782	0.37	2683.900000	Y 377.433
Se (196.026 nm)	0.960946	ppm	0.002097	0.22	905.765000	Y 242.219
Si (288.158 nm)	4.961130	ppm	0.008698	0.18	44480.400000	Y 377.433
Sn (189.925 nm)	0.984712	ppm	0.000108	0.01	2096.330000	Y 377.433
Sr (421.552 nm)	0.491459	ppm	0.000602	0.12	103959.765023	Y_R 488.368
Th (288.505 nm)	0.002609 u	ppm	0.004359	> 100.00	77.913200	Y 377.433
Ti (336.122 nm)	0.494932	ppm	0.000844	0.17	70905.600000	Y 377.433
Tl (190.794 nm)	0.997854	ppm	0.000320	0.03	2300.540000	Y 377.433
U (409.013 nm)	-0.002110 u	ppm	0.001764	83.63	-161.656000	Y 377.433
V (292.401 nm)	0.492500	ppm	0.000701	0.14	20701.400000	Y 377.433
Zn (206.200 nm)	0.492594	ppm	0.002268	0.46	2569.450000	Y 377.433
Zr (343.823 nm)	0.492123	ppm	0.001000	0.20	66920.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.955521	17136.350889	0.000482	0.05
Y 377.433	0.962791	938953.877157	0.000649	0.07
Y_R 377.433	0.953454	68594.800000	0.002288	0.24
Y_R 488.368	0.957588	37842.000000	0.001353	0.14
Y_R2 488.368	0.976548	74383.312298	0.001910	0.20

Sample Name: CCB

Date: 5/13/2019 2:09:00 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.019153 Z	ppm	0.024245	> 100.00	-2291.028722 Z	Y_R 488.368
Ag (328.068 nm)	0.000266	ppm	0.000030	11.29	-336.678000	Y 377.433
Al (167.019 nm)	0.005073	ppm	0.000778	15.33	3.368660	Y_R 377.433
Al H (396.152 nm)	-0.114730 Zu	ppm	0.003670	3.20	34.071916 Z	Y_R 377.433
As (188.980 nm)	-0.000356 u	ppm	0.000490	> 100.00	-0.470631	Y 242.219
B (249.678 nm)	0.003427	ppm	0.000154	4.50	152.372000	Y 242.219
Ba (493.408 nm)	-0.000208 u	ppm	0.000042	20.29	578.725000	Y_R 488.368
Be (234.861 nm)	0.000008	ppm	0.000007	91.21	-18.721600	Y_R 488.368
Bi (223.061 nm)	-0.001832 u	ppm	0.002088	> 100.00	16.031000	Y 377.433
Ca (315.887 nm)	0.003980	ppm	0.002902	72.91	-93.605813	Y_R 377.433
Cd (214.439 nm)	-0.000019 u	ppm	0.000081	> 100.00	-0.907001	Y 377.433
Co (228.615 nm)	0.000483	ppm	0.000091	18.79	-30.224000	Y 242.219
Cr (205.560 nm)	0.000199	ppm	0.000141	70.76	0.955567	Y 377.433
Cu (324.754 nm)	0.000061 u	ppm	0.000167	> 100.00	601.222000	Y 377.433
Fe (238.204 nm)	0.002809	ppm	0.000774	27.56	26.172528	Y_R 377.433
Fe H (259.940 nm)	-0.190918 u	ppm	0.000113	0.06	15.763900	Y_R 377.433
K (766.491 nm)	-0.004252 u	ppm	0.021942	> 100.00	-693.595000	Y_R2 488.368
Li (670.783 nm)	0.000588	ppm	0.000520	88.41	-987.300000	Y_R2 488.368
Mg (279.078 nm)	0.002466	ppm	0.000980	39.74	37.009600	Y 377.433
Mn (257.610 nm)	-0.000044 u	ppm	0.000001	1.49	63.440300	Y 377.433
Mo (202.032 nm)	-0.000019 u	ppm	0.000137	> 100.00	-2.567160	Y 377.433
Na (589.592 nm)	0.110168	ppm	0.013715	12.45	1600.500000	Y_R2 488.368
Na H (589.593 nm)	0.344592 u	ppm	0.039546	11.48	12199.663820	Y_R 488.368
Ni (231.604 nm)	0.000527	ppm	0.000240	45.51	0.998412	Y 377.433
P (213.618 nm)	-0.003527 u	ppm	0.000619	17.56	8.638810	Y 242.219
Pb (220.353 nm)	0.000249 u	ppm	0.001608	> 100.00	8.251260	Y 242.219
S (181.972 nm)	-0.015091 u	ppm	0.005994	39.72	16.556196	Y 377.433
Sb (206.834 nm)	0.000268 u	ppm	0.000595	> 100.00	-30.186000	Y 377.433
Se (196.026 nm)	-0.000852 u	ppm	0.001749	> 100.00	9.929740	Y 242.219
Si (288.158 nm)	0.019263	ppm	0.002484	12.90	1005.530000	Y 377.433
Sn (189.925 nm)	0.000829	ppm	0.001101	> 100.00	9.969800	Y 377.433
Sr (421.552 nm)	-0.000022 u	ppm	0.000262	> 100.00	111.425456	Y_R 488.368
Th (288.505 nm)	-0.000448 u	ppm	0.002461	> 100.00	51.006000	Y 377.433
Ti (336.122 nm)	0.000012 u	ppm	0.000070	> 100.00	-192.902000	Y 377.433
Tl (190.794 nm)	-0.000409 u	ppm	0.001141	> 100.00	-3.164030	Y 377.433
U (409.013 nm)	0.000484 u	ppm	0.004480	> 100.00	-111.349000	Y 377.433
V (292.401 nm)	-0.000099 u	ppm	0.000064	64.98	14.916500	Y 377.433
Zn (206.200 nm)	-0.000457 u	ppm	0.000068	14.88	-0.611521	Y 377.433
Zr (343.823 nm)	0.000181	ppm	0.000056	30.95	62.334300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.965512	17315.516474	0.003808	0.39
Y 377.433	0.975381	951231.955818	0.002499	0.26
Y_R 377.433	0.966489	69532.500000	0.000099	0.01
Y_R 488.368	0.973807	38483.000000	0.005529	0.57
Y_R2 488.368	0.980823	74708.964637	0.007278	0.74

Sample Name: CCVL-5699389

Date: 5/13/2019 2:12:24 PM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.055092 Q	ppm	0.011740	21.31	-2203.300949 Q	Y_R 488.368
Ag (328.068 nm)	0.009057	ppm	0.000024	0.26	75.890900	Y 377.433
Al (167.019 nm)	0.090056	ppm	0.000658	0.73	54.265200	Y_R 377.433
Al H (396.152 nm)	-0.014654 u	ppm	0.004802	32.77	290.350276	Y_R 377.433
As (188.980 nm)	0.013640	ppm	0.001471	10.79	16.292800	Y 242.219
B (249.678 nm)	0.098710	ppm	0.000660	0.67	2510.070000	Y 242.219
Ba (493.408 nm)	0.009604	ppm	0.000535	5.57	1675.700000	Y_R 488.368
Be (234.861 nm)	0.000932	ppm	0.000009	0.94	250.896000	Y_R 488.368
Bi (223.061 nm)	0.096699	ppm	0.002474	2.56	269.988000	Y 377.433
Ca (315.887 nm)	0.204950	ppm	0.009824	4.79	75.906173	Y_R 377.433
Cd (214.439 nm)	0.004943	ppm	0.000219	4.42	301.678000	Y 377.433
Co (228.615 nm)	0.010319	ppm	0.000060	0.58	166.437000	Y 242.219
Cr (205.560 nm)	0.010179	ppm	0.000161	1.58	149.665000	Y 377.433
Cu (324.754 nm)	0.015286	ppm	0.000499	3.27	1608.520000	Y 377.433
Fe (238.204 nm)	0.102382	ppm	0.000874	0.85	392.097804	Y_R 377.433
Fe H (259.940 nm)	-0.091226 u	ppm	0.000288	0.32	201.925000	Y_R 377.433
K (766.491 nm)	2.976770	ppm	0.063468	2.13	2698.830000	Y_R2 488.368
Li (670.783 nm)	0.024705	ppm	0.000429	1.74	-247.335000	Y_R2 488.368
Mg (279.078 nm)	0.194466	ppm	0.000347	0.18	1171.690000	Y 377.433
Mn (257.610 nm)	0.010211	ppm	0.000058	0.57	2661.070000	Y 377.433
Mo (202.032 nm)	0.018416	ppm	0.000178	0.97	158.227000	Y 377.433
Na (589.592 nm)	1.030620	ppm	0.005937	0.58	7612.210000	Y_R2 488.368
Na H (589.593 nm)	0.972462 u	ppm	0.039879	4.10	14635.244137	Y_R 488.368
Ni (231.604 nm)	0.041883	ppm	0.000886	2.12	307.714000	Y 377.433
P (213.618 nm)	2.763710 o	ppm	0.012909	0.47	6333.600000	Y 242.219
Pb (220.353 nm)	0.007526	ppm	0.000512	6.80	30.462600	Y 242.219
S (181.972 nm)	0.070831	ppm	0.002976	4.20	54.136765	Y 377.433
Sb (206.834 nm)	0.020059	ppm	0.000341	1.70	22.940200	Y 377.433
Se (196.026 nm)	0.020983	ppm	0.000078	0.37	30.258100	Y 242.219
Si (288.158 nm)	0.571344	ppm	0.013654	2.39	5862.330000	Y 377.433
Sn (189.925 nm)	0.098459	ppm	0.000022	0.02	216.997000	Y 377.433
Sr (421.552 nm)	0.009963	ppm	0.000029	0.29	2221.114582	Y_R 488.368
Th (288.505 nm)	0.016174	ppm	0.001365	8.44	101.013000	Y 377.433
Ti (336.122 nm)	0.009715	ppm	0.000101	1.04	1201.220000	Y 377.433
Tl (190.794 nm)	0.016107	ppm	0.001445	8.97	34.922700	Y 377.433
U (409.013 nm)	0.058114	ppm	0.001725	2.97	159.176000	Y 377.433
V (292.401 nm)	0.009336	ppm	0.000093	1.00	409.621000	Y 377.433
Zn (206.200 nm)	0.020546	ppm	0.000271	1.32	108.864000	Y 377.433
Zr (343.823 nm)	0.010669	ppm	0.000253	2.37	1487.880000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.965705	17318.980282	0.004738	0.49
Y 377.433	0.976789	952605.824913	0.005579	0.57
Y_R 377.433	0.972503	69965.300000	0.008229	0.85
Y_R 488.368	0.981992	38806.400000	0.002936	0.30
Y_R2 488.368	0.993669	75687.401364	0.003875	0.39

Sample Name: 280-123157-S-1-B

Date: 5/13/2019 2:15:46 PM

Rack:Tube: 1:11

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.167700 n	ppm	0.036246	21.61	-1928.427652	Y_R 488.368
Ag (328.068 nm)	0.000804	ppm	0.000517	64.24	-314.393000	Y 377.433
Al (167.019 nm)	0.142451	ppm	0.003938	2.76	88.457000	Y_R 377.433
Al H (396.152 nm)	0.089966 u	ppm	0.001725	1.92	631.755589	Y_R 377.433
As (188.980 nm)	0.042131	ppm	0.002145	5.09	50.387500	Y 242.219
B (249.678 nm)	28.837500 o	ppm	0.014631	0.05	713547.000000	Y 242.219
Ba (493.408 nm)	0.379295	ppm	0.003329	0.88	43048.000000	Y_R 488.368
Be (234.861 nm)	-0.000001 u	ppm	0.000016	> 100.00	101.241000	Y_R 488.368
Bi (223.061 nm)	-0.001040 u	ppm	0.000134	12.89	18.755300	Y 377.433
Ca (315.887 nm)	171.707989 o	ppm	0.372859	0.22	144730.348807	Y_R 377.433
Cd (214.439 nm)	0.000025	ppm	0.000002	6.01	5.746580	Y 377.433
Co (228.615 nm)	0.014574	ppm	0.000158	1.08	254.567000	Y 242.219
Cr (205.560 nm)	0.048677	ppm	0.000053	0.11	722.534000	Y 377.433
Cu (324.754 nm)	0.006703	ppm	0.000244	3.64	924.138000	Y 377.433
Fe (238.204 nm)	3.952326	ppm	0.010270	0.26	14540.304798	Y_R 377.433
Fe H (259.940 nm)	3.915790 u	ppm	0.029146	0.74	7684.460000	Y_R 377.433
K (766.491 nm)	302.172000 o	ppm	0.138321	0.05	343185.000000	Y_R2 488.368
Li (670.783 nm)	0.169831	ppm	0.001827	1.08	4205.480000	Y_R2 488.368
Mg (279.078 nm)	297.759000 o	ppm	1.604920	0.54	1761330.000000	Y 377.433
Mn (257.610 nm)	0.177681	ppm	0.000532	0.30	45080.600000	Y 377.433
Mo (202.032 nm)	0.007604	ppm	0.000109	1.44	63.918900	Y 377.433
Na (589.592 nm)	1769.510000 o	ppm	10.441000	0.59	11521000.000000	Y_R2 488.368
Na H (589.593 nm)	1909.466794	ppm	8.411290	0.44	7388596.763313	Y_R 488.368
Ni (231.604 nm)	0.112181	ppm	0.000502	0.45	829.189000	Y 377.433
P (213.618 nm)	3.249310 o	ppm	0.016947	0.52	7443.520000	Y 242.219
Pb (220.353 nm)	0.001470	ppm	0.000003	0.22	12.221800	Y 242.219
S (181.972 nm)	403.947471 bo	ppm	0.901753	0.22	176602.785022	Y 377.433
Sb (206.834 nm)	0.000618	ppm	0.000543	87.97	-28.869300	Y 377.433
Se (196.026 nm)	-0.003064 u	ppm	0.000624	20.35	7.290730	Y 242.219
Si (288.158 nm)	21.898000 o	ppm	0.024431	0.11	193479.000000	Y 377.433
Sn (189.925 nm)	0.009285	ppm	0.000238	2.57	27.899500	Y 377.433
Sr (421.552 nm)	1.263233 o	ppm	0.005209	0.41	267033.357339	Y_R 488.368
Th (288.505 nm)	0.008531	ppm	0.002085	24.44	83.559700	Y 377.433
Ti (336.122 nm)	0.095182	ppm	0.000140	0.15	14021.800000	Y 377.433
Tl (190.794 nm)	-0.000229 u	ppm	0.000486	> 100.00	-3.248640	Y 377.433
U (409.013 nm)	-0.048953 u	ppm	0.001532	3.13	-376.783000	Y 377.433
V (292.401 nm)	0.057227	ppm	0.000288	0.50	2429.970000	Y 377.433
Zn (206.200 nm)	0.079419	ppm	0.000470	0.59	415.744000	Y 377.433
Zr (343.823 nm)	0.031209	ppm	0.000181	0.58	4290.970000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.821541	14733.549270	0.003906	0.48
Y 377.433	0.831841	811245.853425	0.006352	0.76
Y_R 377.433	0.891593	64144.300000	0.002124	0.24
Y_R 488.368	0.895532	35389.700000	0.005168	0.58
Y_R2 488.368	0.910846	69378.851131	0.007503	0.82

Sample Name: 280-123175-P-1-D

Date: 5/13/2019 2:19:09 PM

Rack:Tube: 1:12

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.068741 n	ppm	0.020759	30.20	-2169.986027	Y_R 488.368
Ag (328.068 nm)	0.000521	ppm	0.000112	21.47	-326.098000	Y 377.433
Al (167.019 nm)	0.270914	ppm	0.001185	0.44	164.011000	Y_R 377.433
Al H (396.152 nm)	0.225298 u	ppm	0.000285	0.13	950.571550	Y_R 377.433
As (188.980 nm)	0.067497	ppm	0.001955	2.90	80.786100	Y 242.219
B (249.678 nm)	5.896140 o	ppm	0.000511	0.01	145945.000000	Y 242.219
Ba (493.408 nm)	0.775090	ppm	0.001061	0.14	87281.700000	Y_R 488.368
Be (234.861 nm)	0.000029	ppm	0.000011	38.33	55.995800	Y_R 488.368
Bi (223.061 nm)	-0.004394 u	ppm	0.001768	40.24	9.814400	Y 377.433
Ca (315.887 nm)	112.726846 o	ppm	0.237577	0.21	94982.632966	Y_R 377.433
Cd (214.439 nm)	0.000088	ppm	0.000032	36.41	7.870420	Y 377.433
Co (228.615 nm)	0.025850	ppm	0.000185	0.71	490.412000	Y 242.219
Cr (205.560 nm)	0.167023	ppm	0.000399	0.24	2487.250000	Y 377.433
Cu (324.754 nm)	0.005139	ppm	0.000109	2.12	855.359000	Y 377.433
Fe (238.204 nm)	2.240945	ppm	0.002052	0.09	8251.128226	Y_R 377.433
Fe H (259.940 nm)	2.131180 u	ppm	0.008264	0.39	4351.960000	Y_R 377.433
K (766.491 nm)	150.994000 o	ppm	0.523253	0.35	171144.000000	Y_R2 488.368
Li (670.783 nm)	0.065479	ppm	0.001496	2.28	1003.720000	Y_R2 488.368
Mg (279.078 nm)	106.509000 o	ppm	0.064448	0.06	630044.000000	Y 377.433
Mn (257.610 nm)	0.877702	ppm	0.000838	0.10	222393.000000	Y 377.433
Mo (202.032 nm)	0.013704	ppm	0.000116	0.85	117.132000	Y 377.433
Na (589.592 nm)	1483.470000 o	ppm	7.706180	0.52	9659660.000000	Y_R2 488.368
Na H (589.593 nm)	1581.420880	ppm	5.185944	0.33	6121561.177343	Y_R 488.368
Ni (231.604 nm)	0.114471	ppm	0.000870	0.76	846.095000	Y 377.433
P (213.618 nm)	8.378990 o	ppm	0.055128	0.66	19168.200000	Y 242.219
Pb (220.353 nm)	-0.000019 u	ppm	0.001836	> 100.00	7.433730	Y 242.219
S (181.972 nm)	189.697763 bo	ppm	0.162631	0.09	82948.358528	Y 377.433
Sb (206.834 nm)	0.007331	ppm	0.001013	13.81	-7.110300	Y 377.433
Se (196.026 nm)	0.004391	ppm	0.000035	0.79	15.164400	Y 242.219
Si (288.158 nm)	14.035700 o	ppm	0.066114	0.47	124312.000000	Y 377.433
Sn (189.925 nm)	0.040339	ppm	0.000792	1.96	93.750300	Y 377.433
Sr (421.552 nm)	1.261877 o	ppm	0.001750	0.14	266746.895570	Y_R 488.368
Th (288.505 nm)	0.009607	ppm	0.000334	3.48	105.928000	Y 377.433
Ti (336.122 nm)	0.372359	ppm	0.000303	0.08	53643.700000	Y 377.433
Tl (190.794 nm)	0.000328 u	ppm	0.000990	> 100.00	-3.164450	Y 377.433
U (409.013 nm)	-0.048364 u	ppm	0.001594	3.30	-368.932000	Y 377.433
V (292.401 nm)	0.128869	ppm	0.000767	0.60	5432.510000	Y 377.433
Zn (206.200 nm)	0.020215	ppm	0.000484	2.39	107.142000	Y 377.433
Zr (343.823 nm)	0.092976	ppm	0.000292	0.31	12679.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.855687	15345.923254	0.001383	0.16
Y 377.433	0.865675	844242.662916	0.001462	0.17
Y_R 377.433	0.920181	66201.000000	0.002865	0.31
Y_R 488.368	0.924659	36540.700000	0.001446	0.16
Y_R2 488.368	0.925469	70492.659022	0.001106	0.12

Sample Name: 280-123175-P-1-Dsd@5

Date: 5/13/2019 2:22:32 PM

Rack:Tube: 1:13

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.035024 n	ppm	0.008387	23.95	-2252.288841	Y_R 488.368
Ag (328.068 nm)	0.000486	ppm	0.000245	50.35	-326.597000	Y 377.433
Al (167.019 nm)	0.059907	ppm	0.001928	3.22	36.503200	Y_R 377.433
Al H (396.152 nm)	-0.042555 u	ppm	0.004851	11.40	227.888181	Y_R 377.433
As (188.980 nm)	0.012430	ppm	0.001119	9.01	14.840500	Y 242.219
B (249.678 nm)	1.128140 o	ppm	0.000190	0.02	27979.100000	Y 242.219
Ba (493.408 nm)	0.150479	ppm	0.000715	0.47	17430.500000	Y_R 488.368
Be (234.861 nm)	0.000001	ppm	0.000002	> 100.00	-6.428860	Y_R 488.368
Bi (223.061 nm)	-0.004822 u	ppm	0.002529	52.45	8.404150	Y 377.433
Ca (315.887 nm)	22.505308 o	ppm	0.088857	0.39	18885.166593	Y_R 377.433
Cd (214.439 nm)	0.000026 u	ppm	0.000112	> 100.00	2.267860	Y 377.433
Co (228.615 nm)	0.005229	ppm	0.000164	3.14	67.218200	Y 242.219
Cr (205.560 nm)	0.032920	ppm	0.000131	0.40	488.613000	Y 377.433
Cu (324.754 nm)	0.001708	ppm	0.000301	17.60	694.729000	Y 377.433
Fe (238.204 nm)	0.462847	ppm	0.000914	0.20	1716.772445	Y_R 377.433
Fe H (259.940 nm)	0.277355 u	ppm	0.001302	0.47	890.197000	Y_R 377.433
K (766.491 nm)	27.808200	ppm	0.034365	0.12	30957.200000	Y_R2 488.368
Li (670.783 nm)	0.014818	ppm	0.001786	12.05	-550.692000	Y_R2 488.368
Mg (279.078 nm)	20.708200	ppm	0.004951	0.02	122515.000000	Y 377.433
Mn (257.610 nm)	0.174605	ppm	0.000027	0.02	44301.400000	Y 377.433
Mo (202.032 nm)	0.001984	ppm	0.000358	18.04	14.898000	Y 377.433
Na (589.592 nm)	312.950000 o	ppm	0.334483	0.11	2038460.000000	Y_R2 488.368
Na H (589.593 nm)	332.469735	ppm	0.930120	0.28	1295536.852028	Y_R 488.368
Ni (231.604 nm)	0.022736	ppm	0.000164	0.72	165.721000	Y 377.433
P (213.618 nm)	1.597760	ppm	0.007822	0.49	3668.640000	Y 242.219
Pb (220.353 nm)	-0.000970 u	ppm	0.002181	> 100.00	4.515230	Y 242.219
S (181.972 nm)	35.867314 o	ppm	0.004373	0.01	15702.345164	Y 377.433
Sb (206.834 nm)	0.001336	ppm	0.000171	12.83	-26.495000	Y 377.433
Se (196.026 nm)	0.000371 u	ppm	0.000908	> 100.00	11.134700	Y 242.219
Si (288.158 nm)	2.656600	ppm	0.016646	0.63	24206.900000	Y 377.433
Sn (189.925 nm)	0.008534	ppm	0.000247	2.89	26.306600	Y 377.433
Sr (421.552 nm)	0.245174	ppm	0.000861	0.35	51920.409835	Y_R 488.368
Th (288.505 nm)	0.001161	ppm	0.000661	56.90	60.634800	Y 377.433
Ti (336.122 nm)	0.072119	ppm	0.000054	0.07	10234.900000	Y 377.433
Tl (190.794 nm)	0.001183	ppm	0.000329	27.81	0.188958	Y 377.433
U (409.013 nm)	-0.016098 u	ppm	0.001680	10.44	-194.827000	Y 377.433
V (292.401 nm)	0.024862	ppm	0.000111	0.45	1063.850000	Y 377.433
Zn (206.200 nm)	0.006057	ppm	0.000093	1.54	33.344000	Y 377.433
Zr (343.823 nm)	0.017903	ppm	0.000008	0.04	2471.960000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.935798	16782.628573	0.004037	0.43
Y 377.433	0.944186	920809.582126	0.002772	0.29
Y_R 377.433	0.953980	68632.600000	0.004290	0.45
Y_R 488.368	0.961481	37995.900000	0.009314	0.97
Y_R2 488.368	0.966825	73642.742884	0.004838	0.50

Sample Name: 280-123175-P-1-E MS

Date: 5/13/2019 2:25:56 PM

Rack:Tube: 1:14

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.138344 n	ppm	0.006090	0.54	440.908716	Y_R 488.368
Ag (328.068 nm)	0.055176	ppm	0.000180	0.33	2112.410000	Y 377.433
Al (167.019 nm)	8.947090 o	ppm	0.001953	0.02	5359.870000	Y_R 377.433
Al H (396.152 nm)	10.744268	ppm	0.010532	0.10	27824.330583	Y_R 377.433
As (188.980 nm)	2.162810	ppm	0.001791	0.08	2590.550000	Y 242.219
B (249.678 nm)	6.805090 o	ppm	0.005167	0.08	168461.000000	Y 242.219
Ba (493.408 nm)	2.783760 o	ppm	0.005296	0.19	311882.000000	Y_R 488.368
Be (234.861 nm)	0.984756	ppm	0.005387	0.55	285231.000000	Y_R 488.368
Bi (223.061 nm)	2.024990	ppm	0.004637	0.23	5241.740000	Y 377.433
Ca (315.887 nm)	159.330928 o	ppm	0.373554	0.23	134291.476714	Y_R 377.433
Cd (214.439 nm)	0.956702	ppm	0.000266	0.03	58335.300000	Y 377.433
Co (228.615 nm)	0.996286	ppm	0.000853	0.09	19896.800000	Y 242.219
Cr (205.560 nm)	1.147610 o	ppm	0.005585	0.49	17092.600000	Y 377.433
Cu (324.754 nm)	1.070570	ppm	0.007785	0.73	71386.800000	Y 377.433
Fe (238.204 nm)	11.958018 o	ppm	0.004946	0.04	43960.528207	Y_R 377.433
Fe H (259.940 nm)	12.336300	ppm	0.008212	0.07	23408.600000	Y_R 377.433
K (766.491 nm)	201.144000 o	ppm	0.599912	0.30	228215.000000	Y_R2 488.368
Li (670.783 nm)	1.136980	ppm	0.007736	0.68	33880.100000	Y_R2 488.368
Mg (279.078 nm)	153.805000 o	ppm	0.287860	0.19	909734.000000	Y 377.433
Mn (257.610 nm)	1.841740 o	ppm	0.002725	0.15	466579.000000	Y 377.433
Mo (202.032 nm)	0.999832	ppm	0.000098	0.01	8718.670000	Y 377.433
Na (589.592 nm)	1494.870000 o	ppm	1.261820	0.08	9737900.000000	Y_R2 488.368
Na H (589.593 nm)	1594.870852	ppm	17.841699	1.12	6175520.269844	Y_R 488.368
Ni (231.604 nm)	1.066760	ppm	0.001242	0.12	7910.960000	Y 377.433
P (213.618 nm)	28.921300 o	ppm	0.008479	0.03	66121.100000	Y 242.219
Pb (220.353 nm)	0.956181	ppm	0.001570	0.16	2926.670000	Y 242.219
S (181.972 nm)	195.229527 bo	ppm	0.267473	0.14	85368.480375	Y 377.433
Sb (206.834 nm)	1.068430	ppm	0.002303	0.22	2850.390000	Y 377.433
Se (196.026 nm)	2.024210	ppm	0.000508	0.03	1895.660000	Y 242.219
Si (288.158 nm)	13.978700 o	ppm	0.032128	0.23	123810.000000	Y 377.433
Sn (189.925 nm)	1.972460	ppm	0.002759	0.14	4190.890000	Y 377.433
Sr (421.552 nm)	2.242266 o	ppm	0.004754	0.21	473900.139109	Y_R 488.368
Th (288.505 nm)	0.993338	ppm	0.000284	0.03	3067.710000	Y 377.433
Ti (336.122 nm)	1.394730 o	ppm	0.001637	0.12	200630.000000	Y 377.433
Tl (190.794 nm)	1.832100	ppm	0.002830	0.15	4223.430000	Y 377.433
U (409.013 nm)	2.049410	ppm	0.005520	0.27	9473.730000	Y 377.433
V (292.401 nm)	1.134470 o	ppm	0.002518	0.22	47629.700000	Y 377.433
Zn (206.200 nm)	0.507512	ppm	0.001164	0.23	2647.210000	Y 377.433
Zr (343.823 nm)	0.501466	ppm	0.000673	0.13	68219.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.863878	15492.821249	0.004324	0.50
Y 377.433	0.877089	855374.140212	0.004453	0.51
Y_R 377.433	0.923730	66456.400000	0.000395	0.04
Y_R 488.368	0.930753	36781.600000	0.000677	0.07
Y_R2 488.368	0.922832	70291.759467	0.008113	0.88

Sample Name: 280-123175-P-1-F MSD

Date: 5/13/2019 2:29:19 PM

Rack:Tube: 1:15

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.137809 n	ppm	0.005812	0.51	439.603626	Y_R 488.368
Ag (328.068 nm)	0.055124	ppm	0.000040	0.07	2109.920000	Y 377.433
Al (167.019 nm)	8.932110 o	ppm	0.065887	0.74	5350.940000	Y_R 377.433
Al H (396.152 nm)	10.737366	ppm	0.045328	0.42	27807.933708	Y_R 377.433
As (188.980 nm)	2.178080	ppm	0.001352	0.06	2608.840000	Y 242.219
B (249.678 nm)	6.839910 o	ppm	0.005368	0.08	169323.000000	Y 242.219
Ba (493.408 nm)	2.806930 o	ppm	0.006972	0.25	314472.000000	Y_R 488.368
Be (234.861 nm)	0.974361	ppm	0.007582	0.78	282223.000000	Y_R 488.368
Bi (223.061 nm)	2.046490	ppm	0.004437	0.22	5297.150000	Y 377.433
Ca (315.887 nm)	159.922740 o	ppm	0.568615	0.36	134790.647533	Y_R 377.433
Cd (214.439 nm)	0.967327	ppm	0.000930	0.10	58983.100000	Y 377.433
Co (228.615 nm)	1.004480	ppm	0.000425	0.04	20060.700000	Y 242.219
Cr (205.560 nm)	1.168810 o	ppm	0.003548	0.30	17408.700000	Y 377.433
Cu (324.754 nm)	1.075590	ppm	0.002703	0.25	71719.700000	Y 377.433
Fe (238.204 nm)	11.991411 o	ppm	0.046398	0.39	44083.245185	Y_R 377.433
Fe H (259.940 nm)	12.370600	ppm	0.037732	0.31	23472.600000	Y_R 377.433
K (766.491 nm)	202.297000 o	ppm	0.357245	0.18	229527.000000	Y_R2 488.368
Li (670.783 nm)	1.140780	ppm	0.001974	0.17	33996.600000	Y_R2 488.368
Mg (279.078 nm)	155.113000 o	ppm	0.067990	0.04	917476.000000	Y 377.433
Mn (257.610 nm)	1.852900 o	ppm	0.003362	0.18	469406.000000	Y 377.433
Mo (202.032 nm)	1.011190	ppm	0.001870	0.18	8817.740000	Y 377.433
Na (589.592 nm)	1500.550000 o	ppm	4.259550	0.28	9774920.000000	Y_R2 488.368
Na H (589.593 nm)	1602.714207	ppm	12.098251	0.75	6205846.723306	Y_R 488.368
Ni (231.604 nm)	1.077370	ppm	0.000540	0.05	7989.660000	Y 377.433
P (213.618 nm)	28.980600 o	ppm	0.011606	0.04	66256.500000	Y 242.219
Pb (220.353 nm)	0.964627	ppm	0.004343	0.45	2952.440000	Y 242.219
S (181.972 nm)	195.474181 bo	ppm	0.023881	0.01	85475.450471	Y 377.433
Sb (206.834 nm)	1.044010	ppm	0.001491	0.14	2785.620000	Y 377.433
Se (196.026 nm)	2.016230	ppm	0.005208	0.26	1888.240000	Y 242.219
Si (288.158 nm)	14.091500 o	ppm	0.004049	0.03	124803.000000	Y 377.433
Sn (189.925 nm)	1.991480	ppm	0.007184	0.36	4231.220000	Y 377.433
Sr (421.552 nm)	2.264029 o	ppm	0.007423	0.33	478498.476847	Y_R 488.368
Th (288.505 nm)	1.003160	ppm	0.005363	0.53	3097.550000	Y 377.433
Ti (336.122 nm)	1.401570 o	ppm	0.002033	0.15	201614.000000	Y 377.433
Tl (190.794 nm)	1.850280	ppm	0.002577	0.14	4265.370000	Y 377.433
U (409.013 nm)	2.054350	ppm	0.003623	0.18	9496.280000	Y 377.433
V (292.401 nm)	1.144640 o	ppm	0.002168	0.19	48053.000000	Y 377.433
Zn (206.200 nm)	0.515468	ppm	0.001380	0.27	2688.680000	Y 377.433
Zr (343.823 nm)	0.509059	ppm	0.001137	0.22	69251.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.847549	15199.964458	0.001302	0.15
Y 377.433	0.859617	838334.179663	0.000658	0.08
Y_R 377.433	0.924577	66517.300000	0.009849	1.07
Y_R 488.368	0.929340	36725.700000	0.009740	1.05
Y_R2 488.368	0.937879	71437.915881	0.005601	0.60

Sample Name: 280-123175-P-1-D@10

Date: 5/13/2019 2:32:42 PM

Rack:Tube: 1:16

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.002486 nu	ppm	0.007630	> 100.00	-2331.712755	Y_R 488.368
Ag (328.068 nm)	0.000209	ppm	0.000080	38.25	-339.325000	Y 377.433
Al (167.019 nm)	0.031961	ppm	0.001434	4.49	19.617700	Y_R 377.433
Al H (396.152 nm)	-0.073689 u	ppm	0.001551	2.11	143.543356	Y_R 377.433
As (188.980 nm)	0.006013	ppm	0.000544	9.05	7.156600	Y 242.219
B (249.678 nm)	0.555093	ppm	0.000127	0.02	13801.200000	Y 242.219
Ba (493.408 nm)	0.075257	ppm	0.000827	1.10	9018.130000	Y_R 488.368
Be (234.861 nm)	0.000027	ppm	0.000013	48.43	-6.378190	Y_R 488.368
Bi (223.061 nm)	-0.005288 u	ppm	0.000480	9.07	7.163960	Y 377.433
Ca (315.887 nm)	11.106360 o	ppm	0.002099	0.02	9270.710268	Y_R 377.433
Cd (214.439 nm)	0.000071	ppm	0.000019	26.19	4.788530	Y 377.433
Co (228.615 nm)	0.002729	ppm	0.000035	1.26	15.953600	Y 242.219
Cr (205.560 nm)	0.016305	ppm	0.000162	0.99	240.993000	Y 377.433
Cu (324.754 nm)	0.001063	ppm	0.000057	5.38	660.051000	Y 377.433
Fe (238.204 nm)	0.231082	ppm	0.001242	0.54	865.058469	Y_R 377.433
Fe H (259.940 nm)	0.039200 u	ppm	0.002764	7.05	445.476000	Y_R 377.433
K (766.491 nm)	13.533200	ppm	0.005479	0.04	14712.100000	Y_R2 488.368
Li (670.783 nm)	0.006899	ppm	0.000171	2.48	-793.651000	Y_R2 488.368
Mg (279.078 nm)	10.259700	ppm	0.015882	0.15	60710.400000	Y 377.433
Mn (257.610 nm)	0.086812	ppm	0.000036	0.04	22063.700000	Y 377.433
Mo (202.032 nm)	0.001430	ppm	0.000094	6.55	10.070500	Y 377.433
Na (589.592 nm)	154.632000 o	ppm	0.097191	0.06	1007670.000000	Y_R2 488.368
Na H (589.593 nm)	168.340470	ppm	1.240004	0.74	661337.595739	Y_R 488.368
Ni (231.604 nm)	0.011099	ppm	0.000639	5.75	79.412600	Y 377.433
P (213.618 nm)	0.778420	ppm	0.002244	0.29	1795.910000	Y 242.219
Pb (220.353 nm)	-0.000960 u	ppm	0.001044	> 100.00	4.531070	Y 242.219
S (181.972 nm)	17.486201 o	ppm	0.002955	0.02	7667.149767	Y 377.433
Sb (206.834 nm)	0.002270	ppm	0.000072	3.16	-24.408200	Y 377.433
Se (196.026 nm)	0.001598	ppm	0.001256	78.62	12.244000	Y 242.219
Si (288.158 nm)	1.297290	ppm	0.006127	0.47	12248.700000	Y 377.433
Sn (189.925 nm)	0.003334	ppm	0.001129	33.85	15.280200	Y 377.433
Sr (421.552 nm)	0.120815	ppm	0.001096	0.91	25643.762627	Y_R 488.368
Th (288.505 nm)	0.000373 u	ppm	0.002952	> 100.00	55.725800	Y 377.433
Ti (336.122 nm)	0.035555	ppm	0.000010	0.03	4947.170000	Y 377.433
Tl (190.794 nm)	0.001559	ppm	0.002196	> 100.00	1.217450	Y 377.433
U (409.013 nm)	-0.013694 u	ppm	0.000474	3.46	-180.768000	Y 377.433
V (292.401 nm)	0.012116	ppm	0.000050	0.41	528.435000	Y 377.433
Zn (206.200 nm)	0.003316	ppm	0.000206	6.20	19.053600	Y 377.433
Zr (343.823 nm)	0.009058	ppm	0.000014	0.16	1269.380000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.929673	16672.782666	0.000898	0.10
Y 377.433	0.937337	914129.689234	0.001364	0.15
Y_R 377.433	0.931238	66996.500000	0.002013	0.22
Y_R 488.368	0.936957	37026.700000	0.009780	1.04
Y_R2 488.368	0.944378	71932.950231	0.008068	0.85

Sample Name: 280-123175-P-1-Dsd@50

Date: 5/13/2019 2:36:04 PM

Rack:Tube: 1:17

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	-0.024625 nu	ppm	0.007922	32.17	-2397.891541	Y_R 488.368
Ag (328.068 nm)	0.000249	ppm	0.000068	27.43	-337.453000	Y 377.433
Al (167.019 nm)	0.008684	ppm	0.004332	49.88	5.565240	Y_R 377.433
Al H (396.152 nm)	-0.117196 u	ppm	0.003217	2.74	28.848921	Y_R 377.433
As (188.980 nm)	0.000152 u	ppm	0.003544	> 100.00	0.137788	Y 242.219
B (249.678 nm)	0.128014	ppm	0.000266	0.21	3234.780000	Y 242.219
Ba (493.408 nm)	0.016393	ppm	0.000102	0.62	2435.240000	Y_R 488.368
Be (234.861 nm)	0.000012	ppm	0.000009	71.20	-15.950800	Y_R 488.368
Bi (223.061 nm)	-0.001266 u	ppm	0.000254	20.09	17.497100	Y 377.433
Ca (315.887 nm)	2.432083	ppm	0.018063	0.74	1954.380838	Y_R 377.433
Cd (214.439 nm)	0.000004 u	ppm	0.000020	> 100.00	0.531677	Y 377.433
Co (228.615 nm)	0.000815	ppm	0.000124	15.18	-23.302700	Y 242.219
Cr (205.560 nm)	0.003555	ppm	0.000057	1.61	50.969300	Y 377.433
Cu (324.754 nm)	0.000434	ppm	0.000116	26.70	624.163000	Y 377.433
Fe (238.204 nm)	0.053027	ppm	0.000445	0.84	210.721959	Y_R 377.433
Fe H (259.940 nm)	-0.142764 u	ppm	0.001157	0.81	105.684000	Y_R 377.433
K (766.491 nm)	2.915390	ppm	0.053250	1.83	2628.990000	Y_R2 488.368
Li (670.783 nm)	0.002805	ppm	0.000134	4.79	-919.277000	Y_R2 488.368
Mg (279.078 nm)	2.223730	ppm	0.005850	0.26	13176.300000	Y 377.433
Mn (257.610 nm)	0.019146	ppm	0.000041	0.21	4924.230000	Y 377.433
Mo (202.032 nm)	-0.000078 u	ppm	0.000020	26.33	-3.083420	Y 377.433
Na (589.592 nm)	34.597300 o	ppm	0.010121	0.03	226143.000000	Y_R2 488.368
Na H (589.593 nm)	39.705006	ppm	0.008042	0.02	164288.343857	Y_R 488.368
Ni (231.604 nm)	0.002752	ppm	0.000728	26.44	17.498900	Y 377.433
P (213.618 nm)	0.165059	ppm	0.001135	0.69	393.971000	Y 242.219
Pb (220.353 nm)	-0.001295 u	ppm	0.000215	16.61	3.525850	Y 242.219
S (181.972 nm)	3.703875	ppm	0.002049	0.06	1642.282894	Y 377.433
Sb (206.834 nm)	0.001458	ppm	0.000614	42.15	-26.902700	Y 377.433
Se (196.026 nm)	0.000251 u	ppm	0.003180	> 100.00	10.964400	Y 242.219
Si (288.158 nm)	0.281070	ppm	0.000206	0.07	3308.710000	Y 377.433
Sn (189.925 nm)	0.000744	ppm	0.000021	2.78	9.788030	Y 377.433
Sr (421.552 nm)	0.026453	ppm	0.000103	0.39	5705.350447	Y_R 488.368
Th (288.505 nm)	0.000365	ppm	0.000098	26.75	53.837000	Y 377.433
Ti (336.122 nm)	0.007617	ppm	0.000105	1.38	907.023000	Y 377.433
Tl (190.794 nm)	-0.000751 u	ppm	0.000545	72.58	-3.989240	Y 377.433
U (409.013 nm)	-0.007691 u	ppm	0.002295	29.83	-150.395000	Y 377.433
V (292.401 nm)	0.002638	ppm	0.000174	6.59	130.080000	Y 377.433
Zn (206.200 nm)	0.001877	ppm	0.000124	6.61	11.555800	Y 377.433
Zr (343.823 nm)	0.001900	ppm	0.000143	7.52	296.031000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.934565	16760.513955	0.001641	0.18
Y 377.433	0.942222	918893.784214	0.002966	0.31
Y_R 377.433	0.926972	66689.600000	0.001905	0.21
Y_R 488.368	0.930975	36790.300000	0.003262	0.35
Y_R2 488.368	0.948932	72279.777024	0.006366	0.67

Sample Name: 280-123175-P-1-E MS@10

Date: 5/13/2019 2:39:26 PM

Rack:Tube: 1:18

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.071077 n	ppm	0.014021	19.73	-2164.282955	Y_R 488.368
Ag (328.068 nm)	0.005389	ppm	0.000269	4.99	-108.251000	Y 377.433
Al (167.019 nm)	0.915774	ppm	0.010477	1.14	548.880000	Y_R 377.433
Al H (396.152 nm)	0.913438	ppm	0.002591	0.28	2666.030684	Y_R 377.433
As (188.980 nm)	0.198090	ppm	0.001033	0.52	237.226000	Y 242.219
B (249.678 nm)	0.639984	ppm	0.001114	0.17	15904.300000	Y 242.219
Ba (493.408 nm)	0.268421	ppm	0.002117	0.79	30617.000000	Y_R 488.368
Be (234.861 nm)	0.098037	ppm	0.000409	0.42	28377.000000	Y_R 488.368
Bi (223.061 nm)	0.180990	ppm	0.003714	2.05	487.417000	Y 377.433
Ca (315.887 nm)	15.889785 o	ppm	0.032774	0.21	13305.354636	Y_R 377.433
Cd (214.439 nm)	0.097648	ppm	0.000284	0.29	5954.320000	Y 377.433
Co (228.615 nm)	0.100833	ppm	0.000254	0.25	1977.570000	Y 242.219
Cr (205.560 nm)	0.114739	ppm	0.000231	0.20	1707.130000	Y 377.433
Cu (324.754 nm)	0.100434	ppm	0.000203	0.20	7240.970000	Y 377.433
Fe (238.204 nm)	1.191929	ppm	0.002048	0.17	4396.087200	Y_R 377.433
Fe H (259.940 nm)	1.040700 u	ppm	0.005495	0.53	2315.640000	Y_R 377.433
K (766.491 nm)	18.341500	ppm	0.057063	0.31	20184.000000	Y_R2 488.368
Li (670.783 nm)	0.102690	ppm	0.000020	0.02	2145.440000	Y_R2 488.368
Mg (279.078 nm)	14.908800	ppm	0.006915	0.05	88204.900000	Y 377.433
Mn (257.610 nm)	0.184070	ppm	0.000190	0.10	46699.000000	Y 377.433
Mo (202.032 nm)	0.098932	ppm	0.000140	0.14	860.531000	Y 377.433
Na (589.592 nm)	158.013000 o	ppm	0.298728	0.19	1030070.000000	Y_R2 488.368
Na H (589.593 nm)	169.701478	ppm	1.906447	1.12	666788.156916	Y_R 488.368
Ni (231.604 nm)	0.108605	ppm	0.000522	0.48	802.791000	Y 377.433
P (213.618 nm)	2.724450 o	ppm	0.005622	0.21	6243.880000	Y 242.219
Pb (220.353 nm)	0.096214	ppm	0.000274	0.29	301.120000	Y 242.219
S (181.972 nm)	18.088895 o	ppm	0.016191	0.09	7930.809143	Y 377.433
Sb (206.834 nm)	0.101392	ppm	0.002320	2.29	242.773000	Y 377.433
Se (196.026 nm)	0.183026	ppm	0.003498	1.91	181.152000	Y 242.219
Si (288.158 nm)	1.323260	ppm	0.012742	0.96	12477.100000	Y 377.433
Sn (189.925 nm)	0.195397	ppm	0.000598	0.31	422.558000	Y 377.433
Sr (421.552 nm)	0.217586	ppm	0.001067	0.49	46091.165996	Y_R 488.368
Th (288.505 nm)	0.094856	ppm	0.005889	6.21	339.641000	Y 377.433
Ti (336.122 nm)	0.134306	ppm	0.000015	0.01	19145.500000	Y 377.433
Tl (190.794 nm)	0.191758	ppm	0.002108	1.10	440.117000	Y 377.433
U (409.013 nm)	0.186380	ppm	0.000647	0.35	758.006000	Y 377.433
V (292.401 nm)	0.110778	ppm	0.000283	0.26	4669.780000	Y 377.433
Zn (206.200 nm)	0.053027	ppm	0.001414	2.67	278.176000	Y 377.433
Zr (343.823 nm)	0.047494	ppm	0.000265	0.56	6495.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.917894	16461.536899	0.000655	0.07
Y 377.433	0.923957	901081.224694	0.000636	0.07
Y_R 377.433	0.920967	66257.500000	0.002407	0.26
Y_R 488.368	0.923967	36513.400000	0.004841	0.52
Y_R2 488.368	0.936008	71295.383794	0.008256	0.88

Sample Name: 280-123175-P-1-F MSD@10

Date: 5/13/2019 2:42:47 PM

Rack:Tube: 1:19

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.074245 n	ppm	0.004877	6.57	-2156.550197	Y_R 488.368
Ag (328.068 nm)	0.005223	ppm	0.000093	1.78	-116.373000	Y 377.433
Al (167.019 nm)	0.941134	ppm	0.001032	0.11	564.095000	Y_R 377.433
Al H (396.152 nm)	0.937240	ppm	0.000261	0.03	2727.114436	Y_R 377.433
As (188.980 nm)	0.204326	ppm	0.001240	0.61	244.695000	Y 242.219
B (249.678 nm)	0.659336	ppm	0.000002	0.00	16383.100000	Y 242.219
Ba (493.408 nm)	0.278082	ppm	0.001272	0.46	31697.400000	Y_R 488.368
Be (234.861 nm)	0.101537	ppm	0.000670	0.66	29391.400000	Y_R 488.368
Bi (223.061 nm)	0.191416	ppm	0.001286	0.67	514.297000	Y 377.433
Ca (315.887 nm)	16.408281 o	ppm	0.038401	0.23	13742.682650	Y_R 377.433
Cd (214.439 nm)	0.101354	ppm	0.000046	0.05	6180.300000	Y 377.433
Co (228.615 nm)	0.104258	ppm	0.000019	0.02	2046.100000	Y 242.219
Cr (205.560 nm)	0.118666	ppm	0.000370	0.31	1765.610000	Y 377.433
Cu (324.754 nm)	0.104011	ppm	0.000163	0.16	7477.710000	Y 377.433
Fe (238.204 nm)	1.257189	ppm	0.009414	0.75	4635.909833	Y_R 377.433
Fe H (259.940 nm)	1.097160 u	ppm	0.002093	0.19	2421.070000	Y_R 377.433
K (766.491 nm)	18.878400	ppm	0.038402	0.20	20795.000000	Y_R2 488.368
Li (670.783 nm)	0.111260	ppm	0.001700	1.53	2408.380000	Y_R2 488.368
Mg (279.078 nm)	15.324800	ppm	0.003832	0.03	90665.300000	Y 377.433
Mn (257.610 nm)	0.190252	ppm	0.000261	0.14	48264.800000	Y 377.433
Mo (202.032 nm)	0.102345	ppm	0.000064	0.06	890.304000	Y 377.433
Na (589.592 nm)	163.135000 o	ppm	0.033509	0.02	1063430.000000	Y_R2 488.368
Na H (589.593 nm)	173.649669	ppm	1.397555	0.80	682051.850449	Y_R 488.368
Ni (231.604 nm)	0.112176	ppm	0.001037	0.92	829.287000	Y 377.433
P (213.618 nm)	2.807500 o	ppm	0.003458	0.12	6433.690000	Y 242.219
Pb (220.353 nm)	0.098734	ppm	0.001543	1.56	308.823000	Y 242.219
S (181.972 nm)	18.566859 o	ppm	0.044734	0.24	8139.756890	Y 377.433
Sb (206.834 nm)	0.104627	ppm	0.000020	0.02	251.496000	Y 377.433
Se (196.026 nm)	0.191354	ppm	0.000004	0.00	188.902000	Y 242.219
Si (288.158 nm)	1.347080	ppm	0.002510	0.19	12686.700000	Y 377.433
Sn (189.925 nm)	0.202702	ppm	0.000724	0.36	438.048000	Y 377.433
Sr (421.552 nm)	0.224811	ppm	0.001042	0.46	47617.846436	Y_R 488.368
Th (288.505 nm)	0.099468	ppm	0.000399	0.40	353.538000	Y 377.433
Ti (336.122 nm)	0.138674	ppm	0.000030	0.02	19774.500000	Y 377.433
Tl (190.794 nm)	0.198815	ppm	0.001075	0.54	456.396000	Y 377.433
U (409.013 nm)	0.195560	ppm	0.013276	6.79	800.996000	Y 377.433
V (292.401 nm)	0.114802	ppm	0.000353	0.31	4838.710000	Y 377.433
Zn (206.200 nm)	0.059962	ppm	0.004330	7.22	314.323000	Y 377.433
Zr (343.823 nm)	0.049948	ppm	0.000136	0.27	6829.120000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.920887	16515.218982	0.000247	0.03
Y 377.433	0.927004	904053.291300	0.001111	0.12
Y_R 377.433	0.925563	66588.200000	0.000540	0.06
Y_R 488.368	0.930184	36759.100000	0.004815	0.52
Y_R2 488.368	0.937802	71432.032103	0.003768	0.40

Sample Name: 280-123175-P-2-B

Date: 5/13/2019 2:46:10 PM

Rack:Tube: 1:20

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	-0.048547 nu	ppm	0.021081	43.42	-2456.284263	Y_R 488.368
Ag (328.068 nm)	0.001141	ppm	0.000083	7.28	-297.289000	Y 377.433
Al (167.019 nm)	0.261745	ppm	0.008215	3.14	158.492000	Y_R 377.433
Al H (396.152 nm)	0.213898 u	ppm	0.000557	0.26	921.367642	Y_R 377.433
As (188.980 nm)	0.065752	ppm	0.000758	1.15	78.697200	Y 242.219
B (249.678 nm)	5.813010 o	ppm	0.018100	0.31	143888.000000	Y 242.219
Ba (493.408 nm)	0.767788	ppm	0.002120	0.28	86465.300000	Y_R 488.368
Be (234.861 nm)	0.000058	ppm	0.000035	60.78	63.126700	Y_R 488.368
Bi (223.061 nm)	-0.001850 u	ppm	0.002561	> 100.00	16.364900	Y 377.433
Ca (315.887 nm)	112.722733 o	ppm	0.187549	0.17	94979.163448	Y_R 377.433
Cd (214.439 nm)	0.000124	ppm	0.000098	78.94	10.017400	Y 377.433
Co (228.615 nm)	0.025618	ppm	0.000532	2.08	484.098000	Y 242.219
Cr (205.560 nm)	0.157168	ppm	0.000338	0.22	2340.350000	Y 377.433
Cu (324.754 nm)	0.003702	ppm	0.000100	2.71	761.662000	Y 377.433
Fe (238.204 nm)	2.190561	ppm	0.003492	0.16	8065.972411	Y_R 377.433
Fe H (259.940 nm)	2.070310 u	ppm	0.003268	0.16	4238.280000	Y_R 377.433
K (766.491 nm)	149.798000 o	ppm	0.150610	0.10	169782.000000	Y_R2 488.368
Li (670.783 nm)	0.062207	ppm	0.002684	4.31	903.321000	Y_R2 488.368
Mg (279.078 nm)	107.037000 o	ppm	0.362307	0.34	633168.000000	Y 377.433
Mn (257.610 nm)	0.875986	ppm	0.003699	0.42	221958.000000	Y 377.433
Mo (202.032 nm)	0.011440	ppm	0.000313	2.74	97.382000	Y 377.433
Na (589.592 nm)	1495.740000 o	ppm	3.195030	0.21	9739530.000000	Y_R2 488.368
Na H (589.593 nm)	1609.921665	ppm	5.908658	0.37	6231669.319144	Y_R 488.368
Ni (231.604 nm)	0.114439	ppm	0.000967	0.85	845.856000	Y 377.433
P (213.618 nm)	8.272160 o	ppm	0.047020	0.57	18924.100000	Y 242.219
Pb (220.353 nm)	-0.000327 u	ppm	0.001443	> 100.00	6.519240	Y 242.219
S (181.972 nm)	186.567116 bo	ppm	0.866447	0.46	81579.842053	Y 377.433
Sb (206.834 nm)	0.007095	ppm	0.000397	5.60	-8.030440	Y 377.433
Se (196.026 nm)	0.002404	ppm	0.002242	93.27	13.310200	Y 242.219
Si (288.158 nm)	13.736800 o	ppm	0.062492	0.45	121682.000000	Y 377.433
Sn (189.925 nm)	0.033800	ppm	0.001139	3.37	79.885100	Y 377.433
Sr (421.552 nm)	1.251396 o	ppm	0.000491	0.04	264532.284807	Y_R 488.368
Th (288.505 nm)	0.009014	ppm	0.001334	14.80	104.224000	Y 377.433
Ti (336.122 nm)	0.329308	ppm	0.001419	0.43	47460.500000	Y 377.433
Tl (190.794 nm)	-0.001253 u	ppm	0.001343	> 100.00	-6.610950	Y 377.433
U (409.013 nm)	-0.048464 u	ppm	0.000794	1.64	-369.343000	Y 377.433
V (292.401 nm)	0.128503	ppm	0.000617	0.48	5418.800000	Y 377.433
Zn (206.200 nm)	0.020906	ppm	0.000662	3.17	110.742000	Y 377.433
Zr (343.823 nm)	0.091658	ppm	0.000401	0.44	12500.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.816434	14641.953262	0.001792	0.22
Y 377.433	0.819919	799619.597944	0.001309	0.16
Y_R 377.433	0.861570	61984.300000	0.001561	0.18
Y_R 488.368	0.869445	34358.800000	0.001472	0.17
Y_R2 488.368	0.869425	66223.811335	0.001134	0.13

Sample Name: CCVH-5699817

Date: 5/13/2019 2:49:32 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.021257	ppm	0.009261	43.57	-2285.893481	Y_R 488.368
Ag (328.068 nm)	-0.000037 u	ppm	0.000085	> 100.00	-601.035000	Y 377.433
Al (167.019 nm)	41.785300 o	ppm	0.024356	0.06	25025.000000	Y_R 377.433
Al H (396.152 nm)	49.802049	ppm	0.110937	0.22	127084.560668	Y_R 377.433
As (188.980 nm)	0.001094 u	ppm	0.002567	> 100.00	0.850485	Y 242.219
B (249.678 nm)	0.014899	ppm	0.000743	4.99	362.715000	Y 242.219
Ba (493.408 nm)	0.002344	ppm	0.000166	7.07	908.335000	Y_R 488.368
Be (234.861 nm)	0.000923	ppm	0.000058	6.24	1743.000000	Y_R 488.368
Bi (223.061 nm)	0.979743	ppm	0.004587	0.47	2554.110000	Y 377.433
Ca (315.887 nm)	0.009949	ppm	0.006505	65.38	-88.569877	Y_R 377.433
Cd (214.439 nm)	0.001153	ppm	0.000056	4.87	118.894000	Y 377.433
Co (228.615 nm)	0.004270	ppm	0.000095	2.23	45.419500	Y 242.219
Cr (205.560 nm)	0.001581	ppm	0.000205	12.99	8.239600	Y 377.433
Cu (324.754 nm)	0.008112	ppm	0.000333	4.11	1524.660000	Y 377.433
Fe (238.204 nm)	47.910632 o	ppm	0.083615	0.17	176083.263091	Y_R 377.433
Fe H (259.940 nm)	49.687300	ppm	0.000515	0.00	93156.300000	Y_R 377.433
K (766.491 nm)	0.175049	ppm	0.041964	23.97	-489.549000	Y_R2 488.368
Li (670.783 nm)	0.005034	ppm	0.001102	21.89	-850.900000	Y_R2 488.368
Mg (279.078 nm)	0.033267	ppm	0.002069	6.22	-143.342000	Y 377.433
Mn (257.610 nm)	0.002821	ppm	0.000041	1.44	789.117000	Y 377.433
Mo (202.032 nm)	0.000418	ppm	0.000255	61.11	1.241780	Y 377.433
Na (589.592 nm)	238.941000 o	ppm	0.612161	0.26	1556370.000000	Y_R2 488.368
Na H (589.593 nm)	255.695994	ppm	0.550795	0.22	998768.323283	Y_R 488.368
Ni (231.604 nm)	0.005495	ppm	0.000968	17.61	40.043900	Y 377.433
P (213.618 nm)	-0.003467 u	ppm	0.000928	26.77	8.775670	Y 242.219
Pb (220.353 nm)	0.003195	ppm	0.000262	8.20	35.135200	Y 242.219
S (181.972 nm)	4.799906	ppm	0.016674	0.35	2121.362533	Y 377.433
Sb (206.834 nm)	-0.003045 u	ppm	0.001125	36.93	-83.578400	Y 377.433
Se (196.026 nm)	0.005000	ppm	0.000866	17.32	7.069790	Y 242.219
Si (288.158 nm)	0.075169	ppm	0.002656	3.53	1497.350000	Y 377.433
Sn (189.925 nm)	0.005169	ppm	0.000198	3.83	19.172500	Y 377.433
Sr (421.552 nm)	0.001941	ppm	0.000107	5.51	526.083018	Y_R 488.368
Th (288.505 nm)	4.979750	ppm	0.052725	1.06	14860.900000	Y 377.433
Ti (336.122 nm)	0.002226	ppm	0.000078	3.51	125.171000	Y 377.433
Tl (190.794 nm)	-0.002530 u	ppm	0.000896	35.43	-9.430970	Y 377.433
U (409.013 nm)	10.091200	ppm	0.025250	0.25	47438.000000	Y 377.433
V (292.401 nm)	0.004786	ppm	0.000043	0.89	29.283200	Y 377.433
Zn (206.200 nm)	0.003860	ppm	0.000410	10.63	21.889100	Y 377.433
Zr (343.823 nm)	-0.003001 u	ppm	0.000048	1.59	-221.731000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.923273	16558.000100	0.006691	0.72
Y 377.433	0.923591	900724.267336	0.006251	0.68
Y_R 377.433	0.927462	66724.800000	0.004674	0.50
Y_R 488.368	0.933714	36898.600000	0.000097	0.01
Y_R2 488.368	0.947990	72208.081206	0.005032	0.53

Sample Name: CCV-5699804

Date: 5/13/2019 2:52:55 PM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.929099	ppm	0.000150	0.02	-69.857891	Y_R 488.368
Ag (328.068 nm)	0.491636	ppm	0.001083	0.22	22756.700000	Y 377.433
Al (167.019 nm)	0.483910	ppm	0.000604	0.12	291.552000	Y_R 377.433
Al H (396.152 nm)	0.425036 u	ppm	0.002720	0.64	1450.317928	Y_R 377.433
As (188.980 nm)	0.972095	ppm	0.000353	0.04	1164.350000	Y 242.219
B (249.678 nm)	0.500518	ppm	0.001011	0.20	12468.900000	Y 242.219
Ba (493.408 nm)	0.494785	ppm	0.000037	0.01	55929.900000	Y_R 488.368
Be (234.861 nm)	0.490639	ppm	0.000800	0.16	141988.000000	Y_R 488.368
Bi (223.061 nm)	-0.006711 u	ppm	0.000257	3.83	3.881510	Y 377.433
Ca (315.887 nm)	4.972262	ppm	0.007187	0.14	4097.196689	Y_R 377.433
Cd (214.439 nm)	0.497546	ppm	0.000284	0.06	30334.400000	Y 377.433
Co (228.615 nm)	0.496010	ppm	0.001017	0.21	9878.130000	Y 242.219
Cr (205.560 nm)	0.498367	ppm	0.002370	0.48	7421.670000	Y 377.433
Cu (324.754 nm)	0.488380	ppm	0.002962	0.61	32915.500000	Y 377.433
Fe (238.204 nm)	2.457050	ppm	0.004114	0.17	9045.296342	Y_R 377.433
Fe H (259.940 nm)	2.355350 u	ppm	0.002332	0.10	4770.560000	Y_R 377.433
K (766.491 nm)	48.924000	ppm	0.106173	0.22	54987.200000	Y_R2 488.368
Li (670.783 nm)	0.986438	ppm	0.001750	0.18	29261.000000	Y_R2 488.368
Mg (279.078 nm)	19.603200	ppm	0.003507	0.02	115975.000000	Y 377.433
Mn (257.610 nm)	0.498544	ppm	0.000316	0.06	126354.000000	Y 377.433
Mo (202.032 nm)	0.497234	ppm	0.001337	0.27	4334.740000	Y 377.433
Na (589.592 nm)	5.126800	ppm	0.029517	0.58	35245.400000	Y_R2 488.368
Na H (589.593 nm)	8.808599 u	ppm	0.066881	0.76	45391.445958	Y_R 488.368
Ni (231.604 nm)	0.503616	ppm	0.001377	0.27	3733.260000	Y 377.433
P (213.618 nm)	0.967275	ppm	0.007467	0.77	2227.560000	Y 242.219
Pb (220.353 nm)	0.990589	ppm	0.002870	0.29	3030.820000	Y 242.219
S (181.972 nm)	-0.003272 u	ppm	0.009020	> 100.00	22.757119	Y 377.433
Sb (206.834 nm)	1.010470	ppm	0.000731	0.07	2686.190000	Y 377.433
Se (196.026 nm)	0.961984	ppm	0.005127	0.53	906.732000	Y 242.219
Si (288.158 nm)	4.940350	ppm	0.039365	0.80	44297.600000	Y 377.433
Sn (189.925 nm)	0.991552	ppm	0.000985	0.10	2110.830000	Y 377.433
Sr (421.552 nm)	0.492337	ppm	0.000114	0.02	104145.281973	Y_R 488.368
Th (288.505 nm)	0.006573	ppm	0.003669	55.83	89.654200	Y 377.433
Ti (336.122 nm)	0.496130	ppm	0.000607	0.12	71077.700000	Y 377.433
Tl (190.794 nm)	1.003280	ppm	0.002879	0.29	2313.060000	Y 377.433
U (409.013 nm)	-0.003570 u	ppm	0.000428	12.00	-169.007000	Y 377.433
V (292.401 nm)	0.495204	ppm	0.000905	0.18	20815.800000	Y 377.433
Zn (206.200 nm)	0.496989	ppm	0.000575	0.12	2592.350000	Y 377.433
Zr (343.823 nm)	0.498176	ppm	0.000157	0.03	67742.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.922791	16549.370502	0.003275	0.35
Y 377.433	0.928760	905765.055656	0.002520	0.27
Y_R 377.433	0.921129	66269.200000	0.001171	0.13
Y_R 488.368	0.926038	36595.200000	0.003631	0.39
Y_R2 488.368	0.933990	71141.708150	0.004880	0.52

Sample Name: CCB

Date: 5/13/2019 2:56:16 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	-0.040436 Zu	ppm	0.014578	36.05	-2436.485065 Z	Y_R 488.368
Ag (328.068 nm)	0.000563	ppm	0.000248	44.10	-322.647000	Y 377.433
Al (167.019 nm)	0.012153	ppm	0.000420	3.45	7.603350	Y_R 377.433
Al H (396.152 nm)	-0.108900 Zu	ppm	0.002958	2.72	48.906031 Z	Y_R 377.433
As (188.980 nm)	-0.000944 u	ppm	0.001549	> 100.00	-1.174790	Y 242.219
B (249.678 nm)	0.007628	ppm	0.000564	7.40	256.311000	Y 242.219
Ba (493.408 nm)	0.000029 u	ppm	0.000247	> 100.00	605.182000	Y_R 488.368
Be (234.861 nm)	0.000019	ppm	0.000002	9.15	-15.482500	Y_R 488.368
Bi (223.061 nm)	-0.001903 u	ppm	0.003178	> 100.00	15.847200	Y 377.433
Ca (315.887 nm)	-0.000742 u	ppm	0.004322	> 100.00	-97.588053	Y_R 377.433
Cd (214.439 nm)	0.000084	ppm	0.000011	13.30	5.328880	Y 377.433
Co (228.615 nm)	0.000191	ppm	0.000245	> 100.00	-36.043200	Y 242.219
Cr (205.560 nm)	0.000101	ppm	0.000080	79.22	-0.504520	Y 377.433
Cu (324.754 nm)	0.000483	ppm	0.000050	10.25	629.902000	Y 377.433
Fe (238.204 nm)	0.003829	ppm	0.000315	8.23	29.921223	Y_R 377.433
Fe H (259.940 nm)	-0.190968 u	ppm	0.001623	0.85	15.670300	Y_R 377.433
K (766.491 nm)	-0.025252 u	ppm	0.025993	> 100.00	-717.493000	Y_R2 488.368
Li (670.783 nm)	0.002219	ppm	0.001166	52.55	-937.245000	Y_R2 488.368
Mg (279.078 nm)	0.001098	ppm	0.001040	94.70	29.038600	Y 377.433
Mn (257.610 nm)	0.000010 u	ppm	0.000017	> 100.00	77.342600	Y 377.433
Mo (202.032 nm)	0.000087 u	ppm	0.000176	> 100.00	-1.645680	Y 377.433
Na (589.592 nm)	0.380960 Z	ppm	0.031230	8.20	3363.870000 Z	Y_R2 488.368
Na H (589.593 nm)	2.503270 u	ppm	0.010276	0.41	20540.131041	Y_R 488.368
Ni (231.604 nm)	0.000773	ppm	0.000150	19.41	2.826320	Y 377.433
P (213.618 nm)	-0.003569 u	ppm	0.000581	16.29	8.543440	Y 242.219
Pb (220.353 nm)	-0.001042 u	ppm	0.000164	15.78	4.289220	Y 242.219
S (181.972 nm)	-0.014025 u	ppm	0.011998	85.55	17.022606	Y 377.433
Sb (206.834 nm)	0.001936	ppm	0.001335	68.95	-25.718900	Y 377.433
Se (196.026 nm)	0.000485 u	ppm	0.002958	> 100.00	11.174700	Y 242.219
Si (288.158 nm)	0.010763	ppm	0.000502	4.66	930.749000	Y 377.433
Sn (189.925 nm)	-0.000241 u	ppm	0.001193	> 100.00	7.700790	Y 377.433
Sr (421.552 nm)	-0.000091 u	ppm	0.000103	> 100.00	96.777944	Y_R 488.368
Th (288.505 nm)	-0.001967 u	ppm	0.001754	89.18	46.464100	Y 377.433
Ti (336.122 nm)	-0.000047 u	ppm	0.000008	16.25	-201.438000	Y 377.433
Tl (190.794 nm)	0.000246 u	ppm	0.002268	> 100.00	-1.651480	Y 377.433
U (409.013 nm)	-0.002675 u	ppm	0.002474	92.50	-126.209000	Y 377.433
V (292.401 nm)	-0.000029 u	ppm	0.000140	> 100.00	18.399100	Y 377.433
Zn (206.200 nm)	-0.000702 u	ppm	0.000118	16.88	-1.888860	Y 377.433
Zr (343.823 nm)	0.000155	ppm	0.000106	68.13	58.850100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.929396	16667.820174	0.002185	0.24
Y 377.433	0.936073	912897.040739	0.002887	0.31
Y_R 377.433	0.917306	65994.200000	0.007120	0.78
Y_R 488.368	0.927303	36645.200000	0.003541	0.38
Y_R2 488.368	0.933206	71081.993424	0.001346	0.14

Sample Name: CCVL-5699389

Date: 5/13/2019 2:59:39 PM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.000884 Qu	ppm	0.026008	> 100.00	-2335.622720 Q	Y_R 488.368
Ag (328.068 nm)	0.009163	ppm	0.000134	1.46	80.803000	Y 377.433
Al (167.019 nm)	0.094563	ppm	0.005065	5.36	56.960000	Y_R 377.433
Al H (396.152 nm)	-0.011941 u	ppm	0.003910	32.74	297.313504	Y_R 377.433
As (188.980 nm)	0.015920	ppm	0.004638	29.14	19.024200	Y 242.219
B (249.678 nm)	0.103202	ppm	0.000109	0.11	2621.220000	Y 242.219
Ba (493.408 nm)	0.009839	ppm	0.000095	0.96	1702.070000	Y_R 488.368
Be (234.861 nm)	0.000973	ppm	0.000021	2.14	262.819000	Y_R 488.368
Bi (223.061 nm)	0.097171	ppm	0.001652	1.70	271.203000	Y 377.433
Ca (315.887 nm)	0.203236	ppm	0.006191	3.05	74.460083	Y_R 377.433
Cd (214.439 nm)	0.005027	ppm	0.000012	0.24	306.782000	Y 377.433
Co (228.615 nm)	0.010488	ppm	0.000352	3.36	169.798000	Y 242.219
Cr (205.560 nm)	0.010045	ppm	0.000090	0.90	147.663000	Y 377.433
Cu (324.754 nm)	0.015496	ppm	0.000204	1.32	1622.590000	Y 377.433
Fe (238.204 nm)	0.101801	ppm	0.000124	0.12	389.962482	Y_R 377.433
Fe H (259.940 nm)	-0.093888 u	ppm	0.004510	4.80	196.953000	Y_R 377.433
K (766.491 nm)	2.957480	ppm	0.001805	0.06	2676.880000	Y_R2 488.368
Li (670.783 nm)	0.021167	ppm	0.000924	4.37	-355.881000	Y_R2 488.368
Mg (279.078 nm)	0.196560	ppm	0.001443	0.73	1184.020000	Y 377.433
Mn (257.610 nm)	0.010286	ppm	0.000009	0.09	2680.080000	Y 377.433
Mo (202.032 nm)	0.019101	ppm	0.000149	0.78	164.204000	Y 377.433
Na (589.592 nm)	1.283120	ppm	0.050533	3.94	9256.510000	Y_R2 488.368
Na H (589.593 nm)	2.921519 u	ppm	0.041901	1.43	22165.829954	Y_R 488.368
Ni (231.604 nm)	0.041657	ppm	0.000732	1.76	306.034000	Y 377.433
P (213.618 nm)	2.770160 o	ppm	0.010579	0.38	6348.360000	Y 242.219
Pb (220.353 nm)	0.007927	ppm	0.000289	3.65	31.686300	Y 242.219
S (181.972 nm)	0.074525	ppm	0.001401	1.88	55.751642	Y 377.433
Sb (206.834 nm)	0.019586	ppm	0.000478	2.44	21.655900	Y 377.433
Se (196.026 nm)	0.017503	ppm	0.001090	6.23	27.017300	Y 242.219
Si (288.158 nm)	0.567916	ppm	0.020411	3.59	5832.180000	Y 377.433
Sn (189.925 nm)	0.097974	ppm	0.001018	1.04	215.968000	Y 377.433
Sr (421.552 nm)	0.009908	ppm	0.000161	1.62	2209.564303	Y_R 488.368
Th (288.505 nm)	0.017060	ppm	0.003611	21.16	103.661000	Y 377.433
Ti (336.122 nm)	0.009590	ppm	0.000083	0.86	1183.250000	Y 377.433
Tl (190.794 nm)	0.013572	ppm	0.002428	17.89	29.066000	Y 377.433
U (409.013 nm)	0.058787	ppm	0.001391	2.37	162.345000	Y 377.433
V (292.401 nm)	0.009719	ppm	0.000115	1.19	425.848000	Y 377.433
Zn (206.200 nm)	0.020034	ppm	0.000740	3.69	106.198000	Y 377.433
Zr (343.823 nm)	0.010664	ppm	0.000158	1.48	1487.110000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.929930	16677.386358	0.000739	0.08
Y 377.433	0.936760	913567.350098	0.000178	0.02
Y_R 377.433	0.921050	66263.500000	0.003579	0.39
Y_R 488.368	0.926795	36625.200000	0.008111	0.88
Y_R2 488.368	0.943188	71842.292062	0.019931	2.11

Sample Name: 280-123175-K-3-B

Date: 5/13/2019 3:03:02 PM

Rack:Tube: 1:21

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	-0.005369 nu	ppm	0.001443	26.87	-2350.887679	Y_R 488.368
Ag (328.068 nm)	0.000597	ppm	0.000292	48.91	-321.049000	Y 377.433
Al (167.019 nm)	-0.001170 u	ppm	0.000526	44.92	-0.348493	Y_R 377.433
Al H (396.152 nm)	-0.120893 u	ppm	0.003126	2.59	18.394069	Y_R 377.433
As (188.980 nm)	-0.001687 u	ppm	0.000080	4.73	-2.065160	Y 242.219
B (249.678 nm)	0.006173	ppm	0.000134	2.16	220.256000	Y 242.219
Ba (493.408 nm)	0.000147	ppm	0.000009	6.11	618.438000	Y_R 488.368
Be (234.861 nm)	-0.000025 u	ppm	0.000018	71.41	-27.550800	Y_R 488.368
Bi (223.061 nm)	-0.001777 u	ppm	0.000236	13.26	16.177200	Y 377.433
Ca (315.887 nm)	0.021518	ppm	0.014811	68.83	-78.812742	Y_R 377.433
Cd (214.439 nm)	-0.000001 u	ppm	0.000050	> 100.00	0.194913	Y 377.433
Co (228.615 nm)	0.000396	ppm	0.000015	3.70	-31.959900	Y 242.219
Cr (205.560 nm)	0.000100	ppm	0.000100	99.70	-0.526441	Y 377.433
Cu (324.754 nm)	0.000470	ppm	0.000453	96.28	629.417000	Y 377.433
Fe (238.204 nm)	0.025157	ppm	0.000052	0.21	108.299271	Y_R 377.433
Fe H (259.940 nm)	-0.171012 u	ppm	0.002190	1.28	52.935200	Y_R 377.433
K (766.491 nm)	-0.000835 u	ppm	0.015103	> 100.00	-689.707000	Y_R2 488.368
Li (670.783 nm)	0.003041	ppm	0.002193	72.10	-912.035000	Y_R2 488.368
Mg (279.078 nm)	0.006298	ppm	0.000300	4.76	59.816200	Y 377.433
Mn (257.610 nm)	0.000255	ppm	0.000009	3.60	139.288000	Y 377.433
Mo (202.032 nm)	0.000030 u	ppm	0.000067	> 100.00	-2.139360	Y 377.433
Na (589.592 nm)	0.287260	ppm	0.028031	9.76	2753.620000	Y_R2 488.368
Na H (589.593 nm)	1.412839 u	ppm	0.009020	0.64	16327.040045	Y_R 488.368
Ni (231.604 nm)	0.000202 u	ppm	0.000882	> 100.00	-1.409840	Y 377.433
P (213.618 nm)	-0.001068 u	ppm	0.001344	> 100.00	14.260000	Y 242.219
Pb (220.353 nm)	-0.000129 u	ppm	0.000488	> 100.00	7.080160	Y 242.219
S (181.972 nm)	-0.001583 u	ppm	0.000014	0.87	22.461967	Y 377.433
Sb (206.834 nm)	0.002832	ppm	0.000029	1.02	-23.308700	Y 377.433
Se (196.026 nm)	-0.001609 u	ppm	0.001468	91.26	9.220490	Y 242.219
Si (288.158 nm)	0.012644	ppm	0.001615	12.77	947.296000	Y 377.433
Sn (189.925 nm)	-0.000136 u	ppm	0.000594	> 100.00	7.921900	Y 377.433
Sr (421.552 nm)	0.000095	ppm	0.000014	15.05	135.984658	Y_R 488.368
Th (288.505 nm)	0.000307 u	ppm	0.000687	> 100.00	53.079300	Y 377.433
Ti (336.122 nm)	-0.000061 u	ppm	0.000054	87.98	-203.343000	Y 377.433
Tl (190.794 nm)	-0.000447 u	ppm	0.001588	> 100.00	-3.253110	Y 377.433
U (409.013 nm)	-0.003200 u	ppm	0.000248	7.75	-128.653000	Y 377.433
V (292.401 nm)	-0.000218 u	ppm	0.000195	89.80	10.580200	Y 377.433
Zn (206.200 nm)	0.000186 u	ppm	0.000710	> 100.00	2.737120	Y 377.433
Zr (343.823 nm)	-0.000043 u	ppm	0.000024	56.27	31.938400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.934981	16767.979055	0.000898	0.10
Y 377.433	0.941109	917808.626914	0.001486	0.16
Y_R 377.433	0.923815	66462.500000	0.001115	0.12
Y_R 488.368	0.936721	37017.400000	0.009284	0.99
Y_R2 488.368	0.950562	72403.946093	0.012552	1.32

Sample Name: 280-123180-A-1-B

Date: 5/13/2019 3:06:24 PM

Rack:Tube: 1:22

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.436059 n	ppm	0.004442	1.02	-1273.363893	Y_R 488.368
Ag (328.068 nm)	0.001069	ppm	0.000347	32.42	-299.165000	Y 377.433
Al (167.019 nm)	0.137502	ppm	0.005003	3.64	82.648300	Y_R 377.433
Al H (396.152 nm)	0.124109 u	ppm	0.005582	4.50	913.778811	Y_R 377.433
As (188.980 nm)	0.001282	ppm	0.000985	76.83	1.490710	Y 242.219
B (249.678 nm)	3.655270 o	ppm	0.001122	0.03	90504.500000	Y 242.219
Ba (493.408 nm)	0.012810	ppm	0.000050	0.39	2171.260000	Y_R 488.368
Be (234.861 nm)	0.000070	ppm	0.000019	26.77	1.356180	Y_R 488.368
Bi (223.061 nm)	0.002025 u	ppm	0.003425	> 100.00	25.991300	Y 377.433
Ca (315.887 nm)	609.570092 o	ppm	7.488520	1.23	514045.671281	Y_R 377.433
Cd (214.439 nm)	0.000120	ppm	0.000042	35.34	7.653530	Y 377.433
Co (228.615 nm)	-0.000570 u	ppm	0.000198	34.71	-50.958100	Y 242.219
Cr (205.560 nm)	0.000513	ppm	0.000301	58.65	5.568980	Y 377.433
Cu (324.754 nm)	-0.000277 u	ppm	0.000413	> 100.00	142.277000	Y 377.433
Fe (238.204 nm)	0.113962	ppm	0.000133	0.12	434.653068	Y_R 377.433
Fe H (259.940 nm)	-0.091967 u	ppm	0.000992	1.08	200.541000	Y_R 377.433
K (766.491 nm)	13.575300	ppm	0.052109	0.38	14760.000000	Y_R2 488.368
Li (670.783 nm)	0.613454	ppm	0.001833	0.30	17816.900000	Y_R2 488.368
Mg (279.078 nm)	210.004000 o	ppm	0.218143	0.10	1242240.000000	Y 377.433
Mn (257.610 nm)	0.013238	ppm	0.000049	0.37	3427.750000	Y 377.433
Mo (202.032 nm)	0.022187	ppm	0.000456	2.06	191.124000	Y 377.433
Na (589.592 nm)	883.856000 o	ppm	3.020020	0.34	5754730.000000	Y_R2 488.368
Na H (589.593 nm)	963.428246	ppm	7.177959	0.75	3733151.551851	Y_R 488.368
Ni (231.604 nm)	0.005682	ppm	0.000313	5.50	39.237400	Y 377.433
P (213.618 nm)	0.023312	ppm	0.006704	28.76	69.983100	Y 242.219
Pb (220.353 nm)	-0.001192 u	ppm	0.000815	68.32	3.623840	Y 242.219
S (181.972 nm)	818.428734 bo	ppm	0.739940	0.09	357786.387880	Y 377.433
Sb (206.834 nm)	-0.003388 u	ppm	0.002627	77.53	-40.127900	Y 377.433
Se (196.026 nm)	1.795350	ppm	0.003896	0.22	1682.830000	Y 242.219
Si (288.158 nm)	12.720100 o	ppm	0.003059	0.02	112738.000000	Y 377.433
Sn (189.925 nm)	0.001179	ppm	0.000550	46.68	10.710000	Y 377.433
Sr (421.552 nm)	14.586674 bo	ppm	0.123279	0.85	3082236.283806	Y_R 488.368
Th (288.505 nm)	0.001143	ppm	0.000540	47.28	55.977600	Y 377.433
Ti (336.122 nm)	0.007315	ppm	0.001132	15.47	2793.580000	Y 377.433
Tl (190.794 nm)	0.002442	ppm	0.000053	2.18	3.327210	Y 377.433
U (409.013 nm)	-0.049145 u	ppm	0.003105	6.32	-466.126000	Y 377.433
V (292.401 nm)	0.001423	ppm	0.000097	6.81	82.474900	Y 377.433
Zn (206.200 nm)	0.006190	ppm	0.000455	7.36	34.034000	Y 377.433
Zr (343.823 nm)	0.000539	ppm	0.000039	7.15	111.279000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.823482	14768.358818	0.007567	0.92
Y 377.433	0.835700	815009.007325	0.006455	0.77
Y_R 377.433	0.862178	62028.000000	0.018591	2.16
Y_R 488.368	0.878896	34732.300000	0.009539	1.09
Y_R2 488.368	0.913429	69575.566400	0.016406	1.80

Sample Name: 280-123180-A-2-B

Date: 5/13/2019 3:09:46 PM

Rack:Tube: 1:23

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.461885 n	ppm	0.027788	6.02	-1210.323893	Y_R 488.368
Ag (328.068 nm)	0.000777	ppm	0.000042	5.34	-312.909000	Y 377.433
Al (167.019 nm)	0.136202	ppm	0.003051	2.24	81.871100	Y_R 377.433
Al H (396.152 nm)	0.115109 u	ppm	0.001073	0.93	889.514094	Y_R 377.433
As (188.980 nm)	-0.001140 u	ppm	0.001191	> 100.00	-1.410960	Y 242.219
B (249.678 nm)	3.681920 o	ppm	0.006187	0.17	91163.900000	Y 242.219
Ba (493.408 nm)	0.012732	ppm	0.000096	0.75	2161.870000	Y_R 488.368
Be (234.861 nm)	0.000035	ppm	0.000016	45.81	-8.854870	Y_R 488.368
Bi (223.061 nm)	-0.001854 u	ppm	0.001954	> 100.00	15.992500	Y 377.433
Ca (315.887 nm)	606.431344 o	ppm	13.025616	2.15	511398.290451	Y_R 377.433
Cd (214.439 nm)	0.000110	ppm	0.000074	67.44	7.049050	Y 377.433
Co (228.615 nm)	-0.000294 u	ppm	0.000176	59.87	-45.465500	Y 242.219
Cr (205.560 nm)	0.000459	ppm	0.000070	15.31	4.763160	Y 377.433
Cu (324.754 nm)	0.000069	ppm	0.000088	> 100.00	167.038000	Y 377.433
Fe (238.204 nm)	0.114460	ppm	0.001104	0.96	436.480224	Y_R 377.433
Fe H (259.940 nm)	-0.088599 u	ppm	0.001290	1.46	206.831000	Y_R 377.433
K (766.491 nm)	13.668100	ppm	0.111938	0.82	14865.700000	Y_R2 488.368
Li (670.783 nm)	0.616489	ppm	0.000027	0.00	17910.000000	Y_R2 488.368
Mg (279.078 nm)	208.380000 o	ppm	0.764685	0.37	1232640.000000	Y 377.433
Mn (257.610 nm)	0.013867	ppm	0.000040	0.29	3587.150000	Y 377.433
Mo (202.032 nm)	0.022348	ppm	0.000074	0.33	192.523000	Y 377.433
Na (589.592 nm)	884.602000 o	ppm	0.712131	0.08	5759590.000000	Y_R2 488.368
Na H (589.593 nm)	967.615055	ppm	11.211550	1.16	3749327.212664	Y_R 488.368
Ni (231.604 nm)	0.005440	ppm	0.001012	18.60	37.442500	Y 377.433
P (213.618 nm)	0.019010	ppm	0.000305	1.61	60.151000	Y 242.219
Pb (220.353 nm)	0.001064	ppm	0.001296	> 100.00	10.526300	Y 242.219
S (181.972 nm)	822.292014 bo	ppm	0.505327	0.06	359475.161041	Y 377.433
Sb (206.834 nm)	-0.000203 u	ppm	0.003246	> 100.00	-31.615100	Y 377.433
Se (196.026 nm)	1.810360	ppm	0.005709	0.32	1696.810000	Y 242.219
Si (288.158 nm)	12.722100 o	ppm	0.028159	0.22	112756.000000	Y 377.433
Sn (189.925 nm)	0.001482	ppm	0.002002	> 100.00	11.354400	Y 377.433
Sr (421.552 nm)	14.618388 bo	ppm	0.154816	1.06	3088937.364876	Y_R 488.368
Th (288.505 nm)	0.005974	ppm	0.001509	25.26	70.209400	Y 377.433
Ti (336.122 nm)	0.007042	ppm	0.000315	4.47	2744.480000	Y 377.433
Tl (190.794 nm)	0.001300	ppm	0.000624	47.99	0.689678	Y 377.433
U (409.013 nm)	-0.037292 u	ppm	0.002016	5.41	-409.722000	Y 377.433
V (292.401 nm)	0.001461	ppm	0.000268	18.37	83.885700	Y 377.433
Zn (206.200 nm)	0.006095	ppm	0.000648	10.64	33.538700	Y 377.433
Zr (343.823 nm)	0.000543	ppm	0.000079	14.61	111.882000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.861085	15442.725637	0.001693	0.20
Y 377.433	0.879582	857805.103151	0.001659	0.19
Y_R 377.433	0.876289	63043.200000	0.022027	2.51
Y_R 488.368	0.892346	35263.800000	0.028961	3.25
Y_R2 488.368	0.923373	70333.032805	0.003352	0.36

Sample Name: 280-123180-A-3-B

Date: 5/13/2019 3:13:08 PM

Rack:Tube: 1:24

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.040813 n	ppm	0.005019	12.30	-2238.156189	Y_R 488.368
Ag (328.068 nm)	0.000258	ppm	0.000002	0.79	-336.928000	Y 377.433
Al (167.019 nm)	0.001666 u	ppm	0.006183	> 100.00	1.336320	Y_R 377.433
Al H (396.152 nm)	-0.119989 u	ppm	0.002880	2.40	20.698086	Y_R 377.433
As (188.980 nm)	-0.002325 u	ppm	0.002518	> 100.00	-2.829030	Y 242.219
B (249.678 nm)	0.008955	ppm	0.000066	0.74	289.110000	Y 242.219
Ba (493.408 nm)	-0.000020 u	ppm	0.000040	> 100.00	599.755000	Y_R 488.368
Be (234.861 nm)	-0.000007 u	ppm	0.000015	> 100.00	-22.909400	Y_R 488.368
Bi (223.061 nm)	-0.000951 u	ppm	0.000178	18.77	18.302500	Y 377.433
Ca (315.887 nm)	0.031065	ppm	0.002650	8.53	-70.760754	Y_R 377.433
Cd (214.439 nm)	0.000020	ppm	0.000021	> 100.00	1.455810	Y 377.433
Co (228.615 nm)	0.000286	ppm	0.000196	68.34	-34.147800	Y 242.219
Cr (205.560 nm)	0.000223	ppm	0.000114	50.84	1.315610	Y 377.433
Cu (324.754 nm)	0.000663	ppm	0.000117	17.65	641.413000	Y 377.433
Fe (238.204 nm)	0.010178	ppm	0.000370	3.63	53.252902	Y_R 377.433
Fe H (259.940 nm)	-0.184219 u	ppm	0.001560	0.85	28.272800	Y_R 377.433
K (766.491 nm)	-0.015428 u	ppm	0.042666	> 100.00	-706.314000	Y_R2 488.368
Li (670.783 nm)	0.004194	ppm	0.000563	13.42	-876.669000	Y_R2 488.368
Mg (279.078 nm)	0.009464	ppm	0.001162	12.28	78.596100	Y 377.433
Mn (257.610 nm)	0.000134	ppm	0.000030	22.54	108.715000	Y 377.433
Mo (202.032 nm)	0.000072	ppm	0.000022	30.92	-1.779240	Y 377.433
Na (589.592 nm)	0.182263	ppm	0.024124	13.24	2068.840000	Y_R2 488.368
Na H (589.593 nm)	2.549263 u	ppm	0.036522	1.43	20717.069531	Y_R 488.368
Ni (231.604 nm)	0.000397	ppm	0.000343	86.40	0.035163	Y 377.433
P (213.618 nm)	0.000942 u	ppm	0.001568	> 100.00	18.852600	Y 242.219
Pb (220.353 nm)	-0.000034 u	ppm	0.000121	> 100.00	7.367960	Y 242.219
S (181.972 nm)	0.082561	ppm	0.006317	7.65	59.243769	Y 377.433
Sb (206.834 nm)	0.000371 u	ppm	0.001197	> 100.00	-29.891000	Y 377.433
Se (196.026 nm)	-0.000053 u	ppm	0.000285	> 100.00	10.672400	Y 242.219
Si (288.158 nm)	0.003003	ppm	0.000077	2.58	862.484000	Y 377.433
Sn (189.925 nm)	0.000202 u	ppm	0.001125	> 100.00	8.639290	Y 377.433
Sr (421.552 nm)	0.000265	ppm	0.000156	58.93	171.939955	Y_R 488.368
Th (288.505 nm)	0.000130 u	ppm	0.001251	> 100.00	52.539300	Y 377.433
Ti (336.122 nm)	0.000142	ppm	0.000014	10.03	-174.136000	Y 377.433
Tl (190.794 nm)	-0.001354 u	ppm	0.000788	58.15	-5.347770	Y 377.433
U (409.013 nm)	-0.007576 u	ppm	0.006357	83.91	-149.267000	Y 377.433
V (292.401 nm)	-0.000052 u	ppm	0.000028	52.98	17.256200	Y 377.433
Zn (206.200 nm)	0.000716	ppm	0.000559	78.03	5.503270	Y 377.433
Zr (343.823 nm)	-0.000076 u	ppm	0.000107	> 100.00	27.477700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.978304	17544.930336	0.003874	0.40
Y 377.433	0.986104	961690.077960	0.003603	0.37
Y_R 377.433	0.970891	69849.300000	0.001909	0.20
Y_R 488.368	0.981013	38767.700000	0.006168	0.63
Y_R2 488.368	1.001037	76248.616545	0.002746	0.27

Sample Name: MB 280-457047/1-A

Date: 5/13/2019 3:16:31 PM

Rack:Tube: 1:25

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.060983 n	ppm	0.000423	0.69	-2188.921694	Y_R 488.368
Ag (328.068 nm)	-0.000012 u	ppm	0.000213	> 100.00	-349.623000	Y 377.433
Al (167.019 nm)	0.002471	ppm	0.000505	20.43	1.832040	Y_R 377.433
Al H (396.152 nm)	-0.118523 u	ppm	0.001862	1.57	24.434783	Y_R 377.433
As (188.980 nm)	-0.000970 u	ppm	0.000700	72.13	-1.206580	Y 242.219
B (249.678 nm)	0.005465	ppm	0.000390	7.13	202.736000	Y 242.219
Ba (493.408 nm)	-0.000208 u	ppm	0.000285	> 100.00	578.761000	Y_R 488.368
Be (234.861 nm)	-0.000016 u	ppm	0.000019	> 100.00	-24.828500	Y_R 488.368
Bi (223.061 nm)	-0.000233 u	ppm	0.000457	> 100.00	20.156200	Y 377.433
Ca (315.887 nm)	0.014085	ppm	0.000614	4.36	-85.082656	Y_R 377.433
Cd (214.439 nm)	-0.000028 u	ppm	0.000044	> 100.00	-1.437760	Y 377.433
Co (228.615 nm)	0.000528	ppm	0.000146	27.73	-29.329500	Y 242.219
Cr (205.560 nm)	0.000291	ppm	0.000223	76.72	2.317380	Y 377.433
Cu (324.754 nm)	0.000647	ppm	0.000144	22.19	640.486000	Y 377.433
Fe (238.204 nm)	0.029039	ppm	0.000466	1.60	122.565277	Y_R 377.433
Fe H (259.940 nm)	-0.160948 u	ppm	0.001132	0.70	71.728900	Y_R 377.433
K (766.491 nm)	0.071072	ppm	0.028313	39.84	-607.876000	Y_R2 488.368
Li (670.783 nm)	0.004906	ppm	0.000274	5.58	-854.805000	Y_R2 488.368
Mg (279.078 nm)	0.004421	ppm	0.000462	10.46	48.695000	Y 377.433
Mn (257.610 nm)	0.000146	ppm	0.000032	22.19	111.599000	Y 377.433
Mo (202.032 nm)	0.000140	ppm	0.000079	56.31	-1.187200	Y 377.433
Na (589.592 nm)	0.110741	ppm	0.021317	19.25	1603.870000	Y_R2 488.368
Na H (589.593 nm)	1.262332 u	ppm	0.033312	2.64	15745.236226	Y_R 488.368
Ni (231.604 nm)	-0.000003 u	ppm	0.000174	> 100.00	-2.930210	Y 377.433
P (213.618 nm)	-0.002157 u	ppm	0.000483	22.41	11.770300	Y 242.219
Pb (220.353 nm)	-0.001340 u	ppm	0.001068	79.69	3.386690	Y 242.219
S (181.972 nm)	0.021551	ppm	0.008401	38.98	32.574445	Y 377.433
Sb (206.834 nm)	0.002632	ppm	0.002133	81.04	-23.849600	Y 377.433
Se (196.026 nm)	0.004216	ppm	0.001370	32.49	14.644500	Y 242.219
Si (288.158 nm)	-0.001490 u	ppm	0.000344	23.10	822.959000	Y 377.433
Sn (189.925 nm)	-0.000827 u	ppm	0.000203	24.62	6.457990	Y 377.433
Sr (421.552 nm)	-0.000044 u	ppm	0.000021	47.84	106.720088	Y_R 488.368
Th (288.505 nm)	-0.001205 u	ppm	0.003686	> 100.00	48.651600	Y 377.433
Ti (336.122 nm)	-0.000019 u	ppm	0.000055	> 100.00	-197.320000	Y 377.433
Tl (190.794 nm)	-0.000762 u	ppm	0.000339	44.53	-3.981220	Y 377.433
U (409.013 nm)	0.002655 u	ppm	0.008937	> 100.00	-101.080000	Y 377.433
V (292.401 nm)	-0.000219 u	ppm	0.000102	46.32	10.238800	Y 377.433
Zn (206.200 nm)	-0.000200 u	ppm	0.000056	27.86	0.725205	Y 377.433
Zr (343.823 nm)	-0.000037 u	ppm	0.000038	> 100.00	32.855100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.975329	17491.581347	0.002458	0.25
Y 377.433	0.981761	957454.229930	0.001794	0.18
Y_R 377.433	0.977021	70290.200000	0.000466	0.05
Y_R 488.368	0.991354	39176.400000	0.002892	0.29
Y_R2 488.368	1.009762	76913.244922	0.003136	0.31

Sample Name: LCS 280-457047/2-A

Date: 5/13/2019 3:19:54 PM

Rack:Tube: 1:26

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.993884 n	ppm	0.005777	0.58	88.283486	Y_R 488.368
Ag (328.068 nm)	-0.000539 u	ppm	0.000162	30.15	-480.981000	Y 377.433
Al (167.019 nm)	9.205830 o	ppm	0.012886	0.14	5513.020000	Y_R 377.433
Al H (396.152 nm)	10.148316	ppm	0.028770	0.28	26259.571573	Y_R 377.433
As (188.980 nm)	1.982700	ppm	0.000777	0.04	2374.820000	Y 242.219
B (249.678 nm)	0.990071	ppm	0.002017	0.20	24589.600000	Y 242.219
Ba (493.408 nm)	1.997700 o	ppm	0.007653	0.38	223977.000000	Y_R 488.368
Be (234.861 nm)	0.987160	ppm	0.007581	0.77	285859.000000	Y_R 488.368
Bi (223.061 nm)	1.970330	ppm	0.002318	0.12	5100.490000	Y 377.433
Ca (315.887 nm)	49.923558 o	ppm	0.122154	0.24	42011.710594	Y_R 377.433
Cd (214.439 nm)	0.978254	ppm	0.000563	0.06	59647.000000	Y 377.433
Co (228.615 nm)	0.947724	ppm	0.000042	0.00	18912.700000	Y 242.219
Cr (205.560 nm)	0.993794	ppm	0.000774	0.08	14800.100000	Y 377.433
Cu (324.754 nm)	0.965369	ppm	0.000740	0.08	64514.500000	Y 377.433
Fe (238.204 nm)	9.819844 o	ppm	0.016601	0.17	36102.923446	Y_R 377.433
Fe H (259.940 nm)	10.081700	ppm	0.015334	0.15	19198.400000	Y_R 377.433
K (766.491 nm)	49.168600	ppm	0.237015	0.48	55265.500000	Y_R2 488.368
Li (670.783 nm)	0.989498	ppm	0.004981	0.50	29354.900000	Y_R2 488.368
Mg (279.078 nm)	48.835700 o	ppm	0.062739	0.13	288825.000000	Y 377.433
Mn (257.610 nm)	0.993002	ppm	0.000422	0.04	251598.000000	Y 377.433
Mo (202.032 nm)	1.006440	ppm	0.001890	0.19	8776.300000	Y 377.433
Na (589.592 nm)	47.993200 o	ppm	0.181151	0.38	317305.000000	Y_R2 488.368
Na H (589.593 nm)	51.244965	ppm	0.163094	0.32	210839.555077	Y_R 488.368
Ni (231.604 nm)	0.957248	ppm	0.000573	0.06	7098.940000	Y 377.433
P (213.618 nm)	19.457000 o	ppm	0.027796	0.14	44488.700000	Y 242.219
Pb (220.353 nm)	0.966231	ppm	0.001561	0.16	2957.310000	Y 242.219
S (181.972 nm)	9.339481	ppm	0.015443	0.17	4107.820196	Y 377.433
Sb (206.834 nm)	0.001064	ppm	0.000008	0.79	-12.258700	Y 377.433
Se (196.026 nm)	1.931660	ppm	0.007460	0.39	1809.110000	Y 242.219
Si (288.158 nm)	2.035440	ppm	0.008067	0.40	18742.400000	Y 377.433
Sn (189.925 nm)	1.981150	ppm	0.000246	0.01	4209.310000	Y 377.433
Sr (421.552 nm)	0.978451	ppm	0.002672	0.27	206859.738637	Y_R 488.368
Th (288.505 nm)	1.006950	ppm	0.001426	0.14	3082.080000	Y 377.433
Ti (336.122 nm)	1.008480	ppm	0.000496	0.05	144806.000000	Y 377.433
Tl (190.794 nm)	1.969290	ppm	0.006622	0.34	4541.840000	Y 377.433
U (409.013 nm)	2.041500	ppm	0.003646	0.18	9456.420000	Y 377.433
V (292.401 nm)	1.001200	ppm	0.000507	0.05	42028.300000	Y 377.433
Zn (206.200 nm)	0.484922	ppm	0.002677	0.55	2529.460000	Y 377.433
Zr (343.823 nm)	0.498040	ppm	0.000766	0.15	67747.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.959324	17204.537208	0.002312	0.24
Y 377.433	0.962953	939111.584805	0.001599	0.17
Y_R 377.433	0.954872	68696.800000	0.002742	0.29
Y_R 488.368	0.971597	38395.700000	0.004798	0.49
Y_R2 488.368	0.985373	75055.532641	0.005799	0.59

Sample Name: LCSD 280-457047/3-A

Date: 5/13/2019 3:23:17 PM

Rack:Tube: 1:27

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.035307 n	ppm	0.034346	3.32	189.395800	Y_R 488.368
Ag (328.068 nm)	-0.000984 u	ppm	0.000032	3.20	-502.897000	Y 377.433
Al (167.019 nm)	9.176220 o	ppm	0.009640	0.11	5495.460000	Y_R 377.433
Al H (396.152 nm)	10.144690	ppm	0.018249	0.18	26250.839418	Y_R 377.433
As (188.980 nm)	1.987940	ppm	0.005980	0.30	2381.110000	Y 242.219
B (249.678 nm)	0.985808	ppm	0.001007	0.10	24484.000000	Y 242.219
Ba (493.408 nm)	2.006150 o	ppm	0.001508	0.08	224922.000000	Y_R 488.368
Be (234.861 nm)	0.984931	ppm	0.001221	0.12	285220.000000	Y_R 488.368
Bi (223.061 nm)	1.967800	ppm	0.003642	0.19	5094.010000	Y 377.433
Ca (315.887 nm)	49.918746 o	ppm	0.012070	0.02	42007.655643	Y_R 377.433
Cd (214.439 nm)	0.984151	ppm	0.000698	0.07	60006.700000	Y 377.433
Co (228.615 nm)	0.953227	ppm	0.000382	0.04	19022.800000	Y 242.219
Cr (205.560 nm)	0.998644	ppm	0.002893	0.29	14872.400000	Y 377.433
Cu (324.754 nm)	0.971849	ppm	0.001741	0.18	64942.400000	Y 377.433
Fe (238.204 nm)	10.025371 o	ppm	0.013534	0.13	36858.217580	Y_R 377.433
Fe H (259.940 nm)	10.296500	ppm	0.007743	0.08	19599.500000	Y_R 377.433
K (766.491 nm)	49.459700	ppm	0.151859	0.31	55596.800000	Y_R2 488.368
Li (670.783 nm)	0.999883	ppm	0.005149	0.51	29673.500000	Y_R2 488.368
Mg (279.078 nm)	48.927400 o	ppm	0.001045	0.00	289366.000000	Y 377.433
Mn (257.610 nm)	1.000020	ppm	0.000937	0.09	253377.000000	Y 377.433
Mo (202.032 nm)	1.012510	ppm	0.002224	0.22	8829.220000	Y 377.433
Na (589.592 nm)	48.128900 o	ppm	0.115138	0.24	318205.000000	Y_R2 488.368
Na H (589.593 nm)	50.931382	ppm	0.112817	0.22	209636.171604	Y_R 488.368
Ni (231.604 nm)	0.964545	ppm	0.000495	0.05	7153.070000	Y 377.433
P (213.618 nm)	19.571400 o	ppm	0.008627	0.04	44750.300000	Y 242.219
Pb (220.353 nm)	0.969317	ppm	0.000606	0.06	2966.740000	Y 242.219
S (181.972 nm)	9.401506	ppm	0.037175	0.40	4134.947592	Y 377.433
Sb (206.834 nm)	-0.000114 u	ppm	0.001867	> 100.00	-15.339800	Y 377.433
Se (196.026 nm)	1.933370	ppm	0.003328	0.17	1810.670000	Y 242.219
Si (288.158 nm)	2.042380	ppm	0.010556	0.52	18803.400000	Y 377.433
Sn (189.925 nm)	2.007630	ppm	0.008927	0.44	4265.460000	Y 377.433
Sr (421.552 nm)	0.982790	ppm	0.000402	0.04	207776.600542	Y_R 488.368
Th (288.505 nm)	1.003630	ppm	0.000620	0.06	3072.920000	Y 377.433
Ti (336.122 nm)	1.015330	ppm	0.001237	0.12	145791.000000	Y 377.433
Tl (190.794 nm)	1.981370	ppm	0.001911	0.10	4569.710000	Y 377.433
U (409.013 nm)	2.048100	ppm	0.001795	0.09	9487.690000	Y 377.433
V (292.401 nm)	1.007090	ppm	0.001876	0.19	42275.400000	Y 377.433
Zn (206.200 nm)	0.487624	ppm	0.000662	0.14	2543.540000	Y 377.433
Zr (343.823 nm)	0.498148	ppm	0.000526	0.11	67762.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.963541	17280.169652	0.000251	0.03
Y 377.433	0.965766	941854.806143	0.000026	0.00
Y_R 377.433	0.966242	69514.800000	0.001021	0.11
Y_R 488.368	0.982809	38838.700000	0.000458	0.05
Y_R2 488.368	0.988618	75302.684457	0.009225	0.93

Sample Name: 280-123270-D-1-A

Date: 5/13/2019 3:26:40 PM

Rack:Tube: 1:28

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.053864 n	ppm	0.016384	30.42	-2206.300411	Y_R 488.368
Ag (328.068 nm)	0.000226	ppm	0.000191	84.52	-339.485000	Y 377.433
Al (167.019 nm)	2.964300	ppm	0.003999	0.13	1775.410000	Y_R 377.433
Al H (396.152 nm)	3.076431	ppm	0.009350	0.30	8160.048012	Y_R 377.433
As (188.980 nm)	0.001386	ppm	0.000805	58.06	1.588880	Y 242.219
B (249.678 nm)	0.014748	ppm	0.000288	1.96	427.691000	Y 242.219
Ba (493.408 nm)	0.043724	ppm	0.000816	1.87	5494.950000	Y_R 488.368
Be (234.861 nm)	0.000191	ppm	0.000001	0.26	131.890000	Y_R 488.368
Bi (223.061 nm)	-0.004448 u	ppm	0.002229	50.11	9.832270	Y 377.433
Ca (315.887 nm)	8.238488	ppm	0.025548	0.31	6851.800233	Y_R 377.433
Cd (214.439 nm)	0.000083	ppm	0.000047	56.39	8.456350	Y 377.433
Co (228.615 nm)	0.002195	ppm	0.000152	6.92	7.879400	Y 242.219
Cr (205.560 nm)	0.006679	ppm	0.000158	2.36	96.678400	Y 377.433
Cu (324.754 nm)	0.011084	ppm	0.000027	0.24	1326.630000	Y 377.433
Fe (238.204 nm)	3.135857	ppm	0.002458	0.08	11539.854112	Y_R 377.433
Fe H (259.940 nm)	3.096440 u	ppm	0.006832	0.22	6154.430000	Y_R 377.433
K (766.491 nm)	1.856930	ppm	0.029556	1.59	1424.440000	Y_R2 488.368
Li (670.783 nm)	0.012646	ppm	0.000837	6.62	-617.330000	Y_R2 488.368
Mg (279.078 nm)	2.467460	ppm	0.000237	0.01	14612.500000	Y 377.433
Mn (257.610 nm)	0.085897	ppm	0.000137	0.16	21831.900000	Y 377.433
Mo (202.032 nm)	0.000719	ppm	0.000003	0.48	3.866670	Y 377.433
Na (589.592 nm)	22.210400 o	ppm	0.018150	0.08	145559.000000	Y_R2 488.368
Na H (589.593 nm)	23.549262	ppm	0.237513	1.01	101896.270994	Y_R 488.368
Ni (231.604 nm)	0.003598	ppm	0.000040	1.10	23.920000	Y 377.433
P (213.618 nm)	0.143981	ppm	0.002553	1.77	345.793000	Y 242.219
Pb (220.353 nm)	0.003318	ppm	0.000311	9.36	16.815600	Y 242.219
S (181.972 nm)	0.835659	ppm	0.006621	0.79	388.626069	Y 377.433
Sb (206.834 nm)	0.002850	ppm	0.001218	42.73	-24.067200	Y 377.433
Se (196.026 nm)	0.000398 u	ppm	0.001365	> 100.00	10.641200	Y 242.219
Si (288.158 nm)	6.777640	ppm	0.010137	0.15	60460.800000	Y 377.433
Sn (189.925 nm)	0.000535 u	ppm	0.001125	> 100.00	9.344330	Y 377.433
Sr (421.552 nm)	0.030329	ppm	0.000403	1.33	6524.484758	Y_R 488.368
Th (288.505 nm)	0.002832	ppm	0.002823	99.70	62.773300	Y 377.433
Ti (336.122 nm)	0.102807	ppm	0.000061	0.06	14597.100000	Y 377.433
Tl (190.794 nm)	0.001901	ppm	0.002161	> 100.00	1.615090	Y 377.433
U (409.013 nm)	-0.011129 u	ppm	0.001126	10.12	-164.772000	Y 377.433
V (292.401 nm)	0.009183	ppm	0.000117	1.27	408.185000	Y 377.433
Zn (206.200 nm)	0.107318	ppm	0.000254	0.24	561.173000	Y 377.433
Zr (343.823 nm)	0.003111	ppm	0.000082	2.62	470.184000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.987999	17718.800864	0.000220	0.02
Y 377.433	0.993314	968721.708553	0.001242	0.13
Y_R 377.433	0.974547	70112.300000	0.002041	0.21
Y_R 488.368	0.983565	38868.600000	0.012394	1.26
Y_R2 488.368	1.016643	77437.367874	0.003042	0.30

Sample Name: 280-123270-D-1-Asd@5

Date: 5/13/2019 3:30:02 PM

Rack:Tube: 1:29

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.063941 n	ppm	0.007926	12.40	-2181.702600	Y_R 488.368
Ag (328.068 nm)	0.000297	ppm	0.000086	29.07	-335.279000	Y 377.433
Al (167.019 nm)	0.841420	ppm	0.005065	0.60	504.041000	Y_R 377.433
Al H (396.152 nm)	0.780562 u	ppm	0.010287	1.32	2313.560266	Y_R 377.433
As (188.980 nm)	-0.000693 u	ppm	0.000863	> 100.00	-0.880417	Y 242.219
B (249.678 nm)	0.005803	ppm	0.000330	5.69	210.104000	Y 242.219
Ba (493.408 nm)	0.009925	ppm	0.000233	2.35	1712.550000	Y_R 488.368
Be (234.861 nm)	0.000044	ppm	0.000025	57.15	12.999600	Y_R 488.368
Bi (223.061 nm)	-0.002011 u	ppm	0.000478	23.77	15.688900	Y 377.433
Ca (315.887 nm)	1.705257	ppm	0.001666	0.10	1341.338335	Y_R 377.433
Cd (214.439 nm)	0.000038	ppm	0.000017	46.09	3.209740	Y 377.433
Co (228.615 nm)	0.000901	ppm	0.000155	17.22	-20.500000	Y 242.219
Cr (205.560 nm)	0.001418	ppm	0.000384	27.07	18.929100	Y 377.433
Cu (324.754 nm)	0.002558	ppm	0.000074	2.91	765.096000	Y 377.433
Fe (238.204 nm)	0.688623	ppm	0.005923	0.86	2546.480466	Y_R 377.433
Fe H (259.940 nm)	0.513989 u	ppm	0.003448	0.67	1332.080000	Y_R 377.433
K (766.491 nm)	0.489895	ppm	0.049451	10.09	-131.251000	Y_R2 488.368
Li (670.783 nm)	0.004650	ppm	0.000423	9.09	-862.656000	Y_R2 488.368
Mg (279.078 nm)	0.525013	ppm	0.000492	0.09	3126.810000	Y 377.433
Mn (257.610 nm)	0.018214	ppm	0.000374	2.05	4688.270000	Y 377.433
Mo (202.032 nm)	0.000096	ppm	0.000120	> 100.00	-1.570780	Y 377.433
Na (589.592 nm)	4.617150	ppm	0.023649	0.51	30961.200000	Y_R2 488.368
Na H (589.593 nm)	5.106426 u	ppm	0.113242	2.22	30607.608320	Y_R 488.368
Ni (231.604 nm)	0.001090	ppm	0.000040	3.67	5.205730	Y 377.433
P (213.618 nm)	0.027419	ppm	0.000444	1.62	79.370300	Y 242.219
Pb (220.353 nm)	0.000764	ppm	0.000206	26.92	9.573720	Y 242.219
S (181.972 nm)	0.171809	ppm	0.001341	0.78	98.294367	Y 377.433
Sb (206.834 nm)	0.000801	ppm	0.000208	26.01	-28.957800	Y 377.433
Se (196.026 nm)	-0.001128 u	ppm	0.001403	> 100.00	9.579550	Y 242.219
Si (288.158 nm)	2.054530	ppm	0.030363	1.48	18910.300000	Y 377.433
Sn (189.925 nm)	-0.001450 u	ppm	0.000272	18.77	5.136500	Y 377.433
Sr (421.552 nm)	0.006550	ppm	0.000273	4.17	1499.910121	Y_R 488.368
Th (288.505 nm)	0.001258	ppm	0.000991	78.78	56.415700	Y 377.433
Ti (336.122 nm)	0.036354	ppm	0.002210	6.08	5031.990000	Y 377.433
Tl (190.794 nm)	-0.000123 u	ppm	0.000726	> 100.00	-2.685970	Y 377.433
U (409.013 nm)	-0.004745 u	ppm	0.001264	26.63	-135.689000	Y 377.433
V (292.401 nm)	0.001738	ppm	0.000067	3.83	93.121200	Y 377.433
Zn (206.200 nm)	0.023643	ppm	0.000137	0.58	125.012000	Y 377.433
Zr (343.823 nm)	0.001114	ppm	0.000073	6.53	191.238000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.992871	17806.177277	0.005606	0.56
Y 377.433	0.998110	973398.136665	0.006737	0.68
Y_R 377.433	0.981910	70642.000000	0.001242	0.13
Y_R 488.368	0.994065	39283.500000	0.005065	0.51
Y_R2 488.368	1.014118	77245.004443	0.005250	0.52

Sample Name: 280-123270-D-1-B MS

Date: 5/13/2019 3:33:25 PM

Rack:Tube: 1:30

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.050413 n	ppm	0.011835	1.13	226.270576	Y_R 488.368
Ag (328.068 nm)	-0.000916 u	ppm	0.000181	19.78	-506.721000	Y 377.433
Al (167.019 nm)	13.689300 o	ppm	0.022271	0.16	8196.860000	Y_R 377.433
Al H (396.152 nm)	15.293934	ppm	0.032663	0.21	39360.531531	Y_R 377.433
As (188.980 nm)	2.000460	ppm	0.002114	0.11	2396.070000	Y 242.219
B (249.678 nm)	1.013060	ppm	0.000283	0.03	25153.800000	Y 242.219
Ba (493.408 nm)	2.068720 o	ppm	0.000820	0.04	231922.000000	Y_R 488.368
Be (234.861 nm)	0.995165	ppm	0.000169	0.02	288282.000000	Y_R 488.368
Bi (223.061 nm)	1.977710	ppm	0.002370	0.12	5120.110000	Y 377.433
Ca (315.887 nm)	58.112839 o	ppm	0.123866	0.21	48918.972740	Y_R 377.433
Cd (214.439 nm)	0.983406	ppm	0.001445	0.15	59964.500000	Y 377.433
Co (228.615 nm)	0.965353	ppm	0.001301	0.13	19270.400000	Y 242.219
Cr (205.560 nm)	1.015390	ppm	0.002872	0.28	15121.000000	Y 377.433
Cu (324.754 nm)	0.995625	ppm	0.001503	0.15	66513.800000	Y 377.433
Fe (238.204 nm)	13.260661 o	ppm	0.014395	0.11	48747.629212	Y_R 377.433
Fe H (259.940 nm)	13.677300	ppm	0.014438	0.11	25912.700000	Y_R 377.433
K (766.491 nm)	51.882000	ppm	0.426273	0.82	58353.400000	Y_R2 488.368
Li (670.783 nm)	1.012670	ppm	0.008801	0.87	30065.800000	Y_R2 488.368
Mg (279.078 nm)	51.573000 o	ppm	0.003920	0.01	305010.000000	Y 377.433
Mn (257.610 nm)	1.088630	ppm	0.000599	0.06	275820.000000	Y 377.433
Mo (202.032 nm)	1.012320	ppm	0.001152	0.11	8827.580000	Y 377.433
Na (589.592 nm)	68.958400 o	ppm	0.162519	0.24	453928.000000	Y_R2 488.368
Na H (589.593 nm)	73.414404	ppm	0.073402	0.10	296562.798422	Y_R 488.368
Ni (231.604 nm)	0.971879	ppm	0.000382	0.04	7207.600000	Y 377.433
P (213.618 nm)	19.560800 o	ppm	0.002881	0.01	44726.000000	Y 242.219
Pb (220.353 nm)	0.978001	ppm	0.000802	0.08	2991.750000	Y 242.219
S (181.972 nm)	10.249021	ppm	0.001551	0.02	4505.606354	Y 377.433
Sb (206.834 nm)	0.002672	ppm	0.001670	62.50	-8.406860	Y 377.433
Se (196.026 nm)	1.954940	ppm	0.003181	0.16	1830.330000	Y 242.219
Si (288.158 nm)	13.287300 o	ppm	0.049326	0.37	117728.000000	Y 377.433
Sn (189.925 nm)	1.997490	ppm	0.007542	0.38	4243.960000	Y 377.433
Sr (421.552 nm)	1.019469	ppm	0.000122	0.01	215526.638970	Y_R 488.368
Th (288.505 nm)	1.005770	ppm	0.000144	0.01	3080.820000	Y 377.433
Ti (336.122 nm)	1.159580 o	ppm	0.004948	0.43	166534.000000	Y 377.433
Tl (190.794 nm)	1.976680	ppm	0.002863	0.14	4558.170000	Y 377.433
U (409.013 nm)	2.031260	ppm	0.003982	0.20	9412.070000	Y 377.433
V (292.401 nm)	1.016910	ppm	0.001052	0.10	42691.100000	Y 377.433
Zn (206.200 nm)	0.588686	ppm	0.000621	0.11	3070.330000	Y 377.433
Zr (343.823 nm)	0.472346	ppm	0.000020	0.00	64266.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.966434	17332.062766	0.000142	0.01
Y 377.433	0.969622	945615.591471	0.001033	0.11
Y_R 377.433	0.968123	69650.100000	0.002272	0.23
Y_R 488.368	0.984546	38907.400000	0.000203	0.02
Y_R2 488.368	1.002479	76358.442960	0.005486	0.55

Sample Name: CCVH-5699817

Date: 5/13/2019 3:36:49 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.102260	ppm	0.011733	11.47	-2088.165290	Y_R 488.368
Ag (328.068 nm)	-0.000076 u	ppm	0.000217	> 100.00	-603.983000	Y 377.433
Al (167.019 nm)	43.243200 o	ppm	0.198780	0.46	25897.200000	Y_R 377.433
Al H (396.152 nm)	49.879799	ppm	0.118436	0.24	127282.472304	Y_R 377.433
As (188.980 nm)	0.001790	ppm	0.000232	12.95	1.679150	Y 242.219
B (249.678 nm)	0.004362	ppm	0.000431	9.88	101.288000	Y 242.219
Ba (493.408 nm)	0.001941	ppm	0.000013	0.67	863.740000	Y_R 488.368
Be (234.861 nm)	0.000911	ppm	0.000085	9.35	1754.280000	Y_R 488.368
Bi (223.061 nm)	0.999561	ppm	0.002823	0.28	2605.270000	Y 377.433
Ca (315.887 nm)	0.013488	ppm	0.009025	66.91	-85.584695	Y_R 377.433
Cd (214.439 nm)	0.001159	ppm	0.000088	7.58	119.760000	Y 377.433
Co (228.615 nm)	0.004624	ppm	0.000091	1.98	52.474300	Y 242.219
Cr (205.560 nm)	0.001557	ppm	0.000247	15.84	7.761180	Y 377.433
Cu (324.754 nm)	0.008751	ppm	0.000071	0.81	1564.940000	Y 377.433
Fe (238.204 nm)	48.363220 o	ppm	0.081634	0.17	177746.481789	Y_R 377.433
Fe H (259.940 nm)	50.232500	ppm	0.102386	0.20	94174.400000	Y_R 377.433
K (766.491 nm)	0.191624	ppm	0.070915	37.01	-470.687000	Y_R2 488.368
Li (670.783 nm)	0.006666	ppm	0.000633	9.49	-800.825000	Y_R2 488.368
Mg (279.078 nm)	0.032247	ppm	0.001605	4.98	-151.556000	Y 377.433
Mn (257.610 nm)	0.002846	ppm	0.000001	0.03	795.547000	Y 377.433
Mo (202.032 nm)	0.000620	ppm	0.000421	67.89	3.003980	Y 377.433
Na (589.592 nm)	232.769000 o	ppm	0.728007	0.31	1516190.000000	Y_R2 488.368
Na H (589.593 nm)	244.465611	ppm	2.189250	0.90	955378.337311	Y_R 488.368
Ni (231.604 nm)	0.004868	ppm	0.001040	21.36	35.423600	Y 377.433
P (213.618 nm)	-0.001036 u	ppm	0.001628	> 100.00	14.332800	Y 242.219
Pb (220.353 nm)	0.002348	ppm	0.001706	72.64	32.714100	Y 242.219
S (181.972 nm)	4.890236	ppm	0.000891	0.02	2160.848967	Y 377.433
Sb (206.834 nm)	-0.002586 u	ppm	0.001945	75.24	-82.607200	Y 377.433
Se (196.026 nm)	0.002617 u	ppm	0.004983	> 100.00	4.762410	Y 242.219
Si (288.158 nm)	0.040697	ppm	0.001581	3.88	1194.090000	Y 377.433
Sn (189.925 nm)	0.005189	ppm	0.001273	24.53	19.214100	Y 377.433
Sr (421.552 nm)	0.001918	ppm	0.000153	7.99	521.334526	Y_R 488.368
Th (288.505 nm)	4.993900	ppm	0.025715	0.51	14903.400000	Y 377.433
Ti (336.122 nm)	0.002492	ppm	0.000017	0.70	163.391000	Y 377.433
Tl (190.794 nm)	-0.000980 u	ppm	0.000972	99.15	-5.865480	Y 377.433
U (409.013 nm)	10.124700	ppm	0.021789	0.22	47596.200000	Y 377.433
V (292.401 nm)	0.004377	ppm	0.000049	1.11	9.362380	Y 377.433
Zn (206.200 nm)	0.003605	ppm	0.000042	1.16	20.558800	Y 377.433
Zr (343.823 nm)	-0.002667 u	ppm	0.000007	0.27	-174.977000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.957087	17164.432458	0.000097	0.01
Y 377.433	0.950998	927453.262942	0.000693	0.07
Y_R 377.433	0.952610	68534.100000	0.005584	0.59
Y_R 488.368	0.973757	38481.000000	0.012908	1.33
Y_R2 488.368	0.983780	74934.161591	0.005196	0.53

Sample Name: CCV-5699804

Date: 5/13/2019 3:40:12 PM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.016956	ppm	0.021997	2.16	144.600155	Y_R 488.368
Ag (328.068 nm)	0.491353	ppm	0.000190	0.04	22742.900000	Y 377.433
Al (167.019 nm)	0.490663	ppm	0.002728	0.56	295.600000	Y_R 377.433
Al H (396.152 nm)	0.424492 u	ppm	0.000712	0.17	1449.282785	Y_R 377.433
As (188.980 nm)	0.979385	ppm	0.003712	0.38	1173.080000	Y 242.219
B (249.678 nm)	0.492612	ppm	0.000417	0.08	12273.200000	Y 242.219
Ba (493.408 nm)	0.495270	ppm	0.001591	0.32	55984.100000	Y_R 488.368
Be (234.861 nm)	0.489255	ppm	0.004323	0.88	141588.000000	Y_R 488.368
Bi (223.061 nm)	-0.003864 u	ppm	0.001042	26.98	11.220400	Y 377.433
Ca (315.887 nm)	5.000262	ppm	0.020136	0.40	4120.814543	Y_R 377.433
Cd (214.439 nm)	0.499115	ppm	0.000969	0.19	30430.000000	Y 377.433
Co (228.615 nm)	0.496173	ppm	0.000410	0.08	9881.460000	Y 242.219
Cr (205.560 nm)	0.500641	ppm	0.003277	0.65	7455.570000	Y 377.433
Cu (324.754 nm)	0.491287	ppm	0.000210	0.04	33106.900000	Y 377.433
Fe (238.204 nm)	2.468140	ppm	0.005377	0.22	9086.052179	Y_R 377.433
Fe H (259.940 nm)	2.384550 u	ppm	0.005968	0.25	4825.090000	Y_R 377.433
K (766.491 nm)	47.960900	ppm	0.177400	0.37	53891.200000	Y_R2 488.368
Li (670.783 nm)	0.981065	ppm	0.003452	0.35	29096.100000	Y_R2 488.368
Mg (279.078 nm)	19.409100	ppm	0.005574	0.03	114827.000000	Y 377.433
Mn (257.610 nm)	0.498634	ppm	0.000041	0.01	126377.000000	Y 377.433
Mo (202.032 nm)	0.501451	ppm	0.001984	0.40	4371.520000	Y 377.433
Na (589.592 nm)	4.777580	ppm	0.021196	0.44	32973.500000	Y_R2 488.368
Na H (589.593 nm)	5.513329 u	ppm	0.006473	0.12	32660.690587	Y_R 488.368
Ni (231.604 nm)	0.506443	ppm	0.000912	0.18	3754.230000	Y 377.433
P (213.618 nm)	0.962136	ppm	0.002170	0.23	2215.820000	Y 242.219
Pb (220.353 nm)	0.989150	ppm	0.004063	0.41	3026.410000	Y 242.219
S (181.972 nm)	-0.007809 u	ppm	0.004425	56.66	20.773420	Y 377.433
Sb (206.834 nm)	1.020670	ppm	0.003426	0.34	2713.570000	Y 377.433
Se (196.026 nm)	0.970646	ppm	0.003027	0.31	914.797000	Y 242.219
Si (288.158 nm)	4.843010	ppm	0.016927	0.35	43441.300000	Y 377.433
Sn (189.925 nm)	0.997263	ppm	0.003516	0.35	2122.940000	Y 377.433
Sr (421.552 nm)	0.486644	ppm	0.001709	0.35	102942.428736	Y_R 488.368
Th (288.505 nm)	0.002018	ppm	0.001890	93.66	76.315000	Y 377.433
Ti (336.122 nm)	0.498300	ppm	0.000349	0.07	71389.400000	Y 377.433
Tl (190.794 nm)	1.011980	ppm	0.001708	0.17	2333.120000	Y 377.433
U (409.013 nm)	-0.004014 u	ppm	0.001933	48.17	-170.829000	Y 377.433
V (292.401 nm)	0.494614	ppm	0.000880	0.18	20789.700000	Y 377.433
Zn (206.200 nm)	0.496643	ppm	0.000067	0.01	2590.550000	Y 377.433
Zr (343.823 nm)	0.494586	ppm	0.000404	0.08	67255.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.976913	17519.990025	0.002466	0.25
Y 377.433	0.979479	955228.725373	0.002433	0.25
Y_R 377.433	0.969601	69756.500000	0.005204	0.54
Y_R 488.368	0.984818	38918.100000	0.007407	0.75
Y_R2 488.368	0.999166	76106.101704	0.002346	0.23

Sample Name: CCB

Date: 5/13/2019 3:43:36 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.050899 Z	ppm	0.007280	14.30	-2213.537376 Z	Y_R 488.368
Ag (328.068 nm)	0.000064 u	ppm	0.000173	> 100.00	-346.064000	Y 377.433
Al (167.019 nm)	0.009411	ppm	0.003110	33.05	5.963450	Y_R 377.433
Al H (396.152 nm)	-0.113776 Zu	ppm	0.003144	2.76	36.525035 Z	Y_R 377.433
As (188.980 nm)	-0.000912 u	ppm	0.000980	> 100.00	-1.136990	Y 242.219
B (249.678 nm)	0.002429	ppm	0.000073	3.00	127.674000	Y 242.219
Ba (493.408 nm)	-0.000006 u	ppm	0.000321	> 100.00	601.322000	Y_R 488.368
Be (234.861 nm)	-0.000006 u	ppm	0.000004	76.24	-22.641100	Y_R 488.368
Bi (223.061 nm)	-0.001732 u	ppm	0.000585	33.80	16.289400	Y 377.433
Ca (315.887 nm)	0.003142	ppm	0.003321	> 100.00	-94.312732	Y_R 377.433
Cd (214.439 nm)	0.000025 u	ppm	0.000043	> 100.00	1.757950	Y 377.433
Co (228.615 nm)	0.000378	ppm	0.000171	45.25	-32.327500	Y 242.219
Cr (205.560 nm)	-0.000027 u	ppm	0.000497	> 100.00	-2.421530	Y 377.433
Cu (324.754 nm)	0.000636	ppm	0.000477	75.03	639.482000	Y 377.433
Fe (238.204 nm)	0.003744	ppm	0.000909	24.28	29.610168	Y_R 377.433
Fe H (259.940 nm)	-0.189335 u	ppm	0.001110	0.59	18.720400	Y_R 377.433
K (766.491 nm)	-0.026433 u	ppm	0.013648	51.63	-718.837000	Y_R2 488.368
Li (670.783 nm)	0.002932	ppm	0.001363	46.48	-915.378000	Y_R2 488.368
Mg (279.078 nm)	0.002104	ppm	0.000655	31.14	34.967800	Y 377.433
Mn (257.610 nm)	-0.000021 u	ppm	0.000010	46.45	69.425700	Y 377.433
Mo (202.032 nm)	0.000269	ppm	0.000150	55.73	-0.054328	Y 377.433
Na (589.592 nm)	0.152569	ppm	0.005725	3.75	1876.450000	Y_R2 488.368
Na H (589.593 nm)	0.108854 u	ppm	0.016214	14.90	11288.839321	Y_R 488.368
Ni (231.604 nm)	0.000195 u	ppm	0.000823	> 100.00	-1.466970	Y 377.433
P (213.618 nm)	-0.001686 u	ppm	0.000392	23.25	12.847300	Y 242.219
Pb (220.353 nm)	0.000203 u	ppm	0.000747	> 100.00	8.096950	Y 242.219
S (181.972 nm)	-0.012837 u	ppm	0.001051	8.19	17.541868	Y 377.433
Sb (206.834 nm)	0.001600	ppm	0.000486	30.36	-26.619600	Y 377.433
Se (196.026 nm)	0.001061 u	ppm	0.002617	> 100.00	11.710800	Y 242.219
Si (288.158 nm)	-0.003882 u	ppm	0.000007	0.17	801.921000	Y 377.433
Sn (189.925 nm)	-0.000208 u	ppm	0.000080	38.39	7.770020	Y 377.433
Sr (421.552 nm)	-0.000015 u	ppm	0.000162	> 100.00	112.802303	Y_R 488.368
Th (288.505 nm)	0.001171	ppm	0.000781	66.67	55.658400	Y 377.433
Ti (336.122 nm)	0.000135	ppm	0.000125	92.58	-175.213000	Y 377.433
Tl (190.794 nm)	0.000438	ppm	0.000153	34.97	-1.208090	Y 377.433
U (409.013 nm)	-0.001528 u	ppm	0.000740	48.43	-120.809000	Y 377.433
V (292.401 nm)	-0.000491 u	ppm	0.000039	8.02	-1.397630	Y 377.433
Zn (206.200 nm)	-0.000233 u	ppm	0.000128	54.71	0.552802	Y 377.433
Zr (343.823 nm)	0.000144	ppm	0.000078	54.12	57.294400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.976737	17516.825581	0.004315	0.44
Y 377.433	0.978855	954620.363885	0.002852	0.29
Y_R 377.433	0.956585	68820.100000	0.000414	0.04
Y_R 488.368	0.971382	38387.200000	0.004762	0.49
Y_R2 488.368	1.000738	76225.838572	0.003783	0.38

Sample Name: CCVL-5699389

Date: 5/13/2019 3:46:58 PM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.073545 Q	ppm	0.016790	22.83	-2158.257590 Q	Y_R 488.368
Ag (328.068 nm)	0.009392	ppm	0.000062	0.67	91.783500	Y 377.433
Al (167.019 nm)	0.096951	ppm	0.002967	3.06	58.388400	Y_R 377.433
Al H (396.152 nm)	-0.018056 u	ppm	0.003918	21.70	281.743686	Y_R 377.433
As (188.980 nm)	0.012609	ppm	0.001801	14.29	15.057800	Y 242.219
B (249.678 nm)	0.097734	ppm	0.000144	0.15	2485.910000	Y 242.219
Ba (493.408 nm)	0.009696	ppm	0.000170	1.75	1686.060000	Y_R 488.368
Be (234.861 nm)	0.000957	ppm	0.000017	1.82	258.286000	Y_R 488.368
Bi (223.061 nm)	0.100438	ppm	0.000733	0.73	279.625000	Y 377.433
Ca (315.887 nm)	0.208572	ppm	0.002861	1.37	78.961134	Y_R 377.433
Cd (214.439 nm)	0.005106	ppm	0.000031	0.60	311.606000	Y 377.433
Co (228.615 nm)	0.010568	ppm	0.000141	1.34	171.398000	Y 242.219
Cr (205.560 nm)	0.009814	ppm	0.000319	3.25	144.219000	Y 377.433
Cu (324.754 nm)	0.015371	ppm	0.000085	0.56	1614.420000	Y 377.433
Fe (238.204 nm)	0.101786	ppm	0.000497	0.49	389.905455	Y_R 377.433
Fe H (259.940 nm)	-0.093604 u	ppm	0.000243	0.26	197.483000	Y_R 377.433
K (766.491 nm)	2.994990	ppm	0.001825	0.06	2719.570000	Y_R2 488.368
Li (670.783 nm)	0.024950	ppm	0.003225	12.93	-239.827000	Y_R2 488.368
Mg (279.078 nm)	0.193376	ppm	0.001431	0.74	1165.400000	Y 377.433
Mn (257.610 nm)	0.010244	ppm	0.000033	0.32	2669.400000	Y 377.433
Mo (202.032 nm)	0.019036	ppm	0.000020	0.10	163.639000	Y 377.433
Na (589.592 nm)	1.056360	ppm	0.014658	1.39	7779.860000	Y_R2 488.368
Na H (589.593 nm)	0.847376 u	ppm	0.062266	7.35	14152.000281	Y_R 488.368
Ni (231.604 nm)	0.041187	ppm	0.001132	2.75	302.548000	Y 377.433
P (213.618 nm)	2.753960 o	ppm	0.002589	0.09	6311.330000	Y 242.219
Pb (220.353 nm)	0.008814	ppm	0.001954	22.17	34.376600	Y 242.219
S (181.972 nm)	0.067862 Q	ppm	0.002592	3.82	52.838857 Q	Y 377.433
Sb (206.834 nm)	0.019937	ppm	0.001768	8.87	22.619600	Y 377.433
Se (196.026 nm)	0.016359	ppm	0.000078	0.48	25.952400	Y 242.219
Si (288.158 nm)	0.530132	ppm	0.014097	2.66	5499.780000	Y 377.433
Sn (189.925 nm)	0.099585	ppm	0.000077	0.08	219.385000	Y 377.433
Sr (421.552 nm)	0.009755	ppm	0.000037	0.38	2177.164243	Y_R 488.368
Th (288.505 nm)	0.016508	ppm	0.000434	2.63	101.854000	Y 377.433
Ti (336.122 nm)	0.009815	ppm	0.000041	0.41	1215.570000	Y 377.433
Tl (190.794 nm)	0.015053	ppm	0.001219	8.10	32.485800	Y 377.433
U (409.013 nm)	0.051192	ppm	0.003147	6.15	126.592000	Y 377.433
V (292.401 nm)	0.009528	ppm	0.000132	1.39	418.093000	Y 377.433
Zn (206.200 nm)	0.020423	ppm	0.000032	0.16	108.227000	Y 377.433
Zr (343.823 nm)	0.010722	ppm	0.000216	2.01	1495.060000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.986300	17688.327081	0.000785	0.08
Y 377.433	0.988453	963980.104141	0.000221	0.02
Y_R 377.433	0.974383	70100.500000	0.001016	0.10
Y_R 488.368	0.993016	39242.100000	0.000428	0.04
Y_R2 488.368	1.001172	76258.915847	0.008024	0.80

Sample Name: 280-123270-D-1-C MSD

Date: 5/13/2019 3:50:21 PM

Rack:Tube: 1:31

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.048948 n	ppm	0.000877	0.08	222.693763	Y_R 488.368
Ag (328.068 nm)	-0.000753 u	ppm	0.000086	11.47	-500.542000	Y 377.433
Al (167.019 nm)	13.729000 o	ppm	0.003059	0.02	8220.570000	Y_R 377.433
Al H (396.152 nm)	15.258482	ppm	0.017417	0.11	39271.303396	Y_R 377.433
As (188.980 nm)	2.003810	ppm	0.006219	0.31	2400.080000	Y 242.219
B (249.678 nm)	1.017720	ppm	0.000983	0.10	25269.600000	Y 242.219
Ba (493.408 nm)	2.075250 o	ppm	0.001296	0.06	232652.000000	Y_R 488.368
Be (234.861 nm)	1.000420	ppm	0.000382	0.04	289801.000000	Y_R 488.368
Bi (223.061 nm)	1.987490	ppm	0.004747	0.24	5145.310000	Y 377.433
Ca (315.887 nm)	58.477858 o	ppm	0.097599	0.17	49226.854234	Y_R 377.433
Cd (214.439 nm)	0.991867	ppm	0.002444	0.25	60480.300000	Y 377.433
Co (228.615 nm)	0.973285	ppm	0.001290	0.13	19428.800000	Y 242.219
Cr (205.560 nm)	1.015580	ppm	0.006883	0.68	15123.700000	Y 377.433
Cu (324.754 nm)	0.997758	ppm	0.003674	0.37	66655.300000	Y 377.433
Fe (238.204 nm)	13.223619 o	ppm	0.005146	0.04	48611.504082	Y_R 377.433
Fe H (259.940 nm)	13.665500	ppm	0.005686	0.04	25890.700000	Y_R 377.433
K (766.491 nm)	51.987200	ppm	0.084901	0.16	58473.200000	Y_R2 488.368
Li (670.783 nm)	1.016360	ppm	0.001867	0.18	30178.900000	Y_R2 488.368
Mg (279.078 nm)	51.955500 o	ppm	0.103265	0.20	307272.000000	Y 377.433
Mn (257.610 nm)	1.094120	ppm	0.003768	0.34	277211.000000	Y 377.433
Mo (202.032 nm)	1.022820	ppm	0.004040	0.39	8919.220000	Y 377.433
Na (589.592 nm)	69.072000 o	ppm	0.092770	0.13	454682.000000	Y_R2 488.368
Na H (589.593 nm)	72.925914	ppm	0.224154	0.31	294682.959481	Y_R 488.368
Ni (231.604 nm)	0.980208	ppm	0.000288	0.03	7269.390000	Y 377.433
P (213.618 nm)	19.749100 o	ppm	0.009219	0.05	45156.500000	Y 242.219
Pb (220.353 nm)	0.986861	ppm	0.000292	0.03	3018.850000	Y 242.219
S (181.972 nm)	10.312871	ppm	0.018584	0.18	4533.532396	Y 377.433
Sb (206.834 nm)	0.000289 u	ppm	0.000494	> 100.00	-14.862700	Y 377.433
Se (196.026 nm)	1.963830	ppm	0.004647	0.24	1838.620000	Y 242.219
Si (288.158 nm)	12.979000 o	ppm	0.071101	0.55	115015.000000	Y 377.433
Sn (189.925 nm)	2.024400	ppm	0.003297	0.16	4301.020000	Y 377.433
Sr (421.552 nm)	1.023565	ppm	0.001385	0.14	216392.231379	Y_R 488.368
Th (288.505 nm)	1.016410	ppm	0.000350	0.03	3112.940000	Y 377.433
Ti (336.122 nm)	1.159410 o	ppm	0.000519	0.04	166512.000000	Y 377.433
Tl (190.794 nm)	1.993930	ppm	0.009563	0.48	4598.010000	Y 377.433
U (409.013 nm)	2.054810	ppm	0.007424	0.36	9522.610000	Y 377.433
V (292.401 nm)	1.025160	ppm	0.002325	0.23	43038.600000	Y 377.433
Zn (206.200 nm)	0.588392	ppm	0.002481	0.42	3068.800000	Y 377.433
Zr (343.823 nm)	0.474781	ppm	0.000734	0.15	64597.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.963930	17287.159041	0.003018	0.31
Y 377.433	0.967783	943821.867606	0.004538	0.47
Y_R 377.433	0.966493	69532.800000	0.000310	0.03
Y_R 488.368	0.984417	38902.300000	0.001632	0.17
Y_R2 488.368	0.991607	75530.329926	0.005228	0.53

Sample Name: 280-123270-D-1-Apds

Date: 5/13/2019 3:53:43 PM

Rack:Tube: 1:32

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.162017 n	ppm	0.022562	13.93	-1942.298388	Y_R 488.368
Ag (328.068 nm)	0.050250	ppm	0.000130	0.26	2000.460000	Y 377.433
Al (167.019 nm)	4.503860 o	ppm	0.010485	0.23	2696.890000	Y_R 377.433
Al H (396.152 nm)	4.819810	ppm	0.036982	0.77	12610.115069	Y_R 377.433
As (188.980 nm)	0.194065	ppm	0.002928	1.51	232.378000	Y 242.219
B (249.678 nm)	0.111411	ppm	0.000172	0.15	2819.810000	Y 242.219
Ba (493.408 nm)	0.145177	ppm	0.002494	1.72	16842.800000	Y_R 488.368
Be (234.861 nm)	0.048586	ppm	0.000574	1.18	14163.800000	Y_R 488.368
Bi (223.061 nm)	-0.005212 u	ppm	0.001368	26.24	8.042520	Y 377.433
Ca (315.887 nm)	27.873602 o	ppm	0.084075	0.30	23413.090696	Y_R 377.433
Cd (214.439 nm)	0.049300	ppm	0.000108	0.22	3009.870000	Y 377.433
Co (228.615 nm)	0.050786	ppm	0.000167	0.33	981.209000	Y 242.219
Cr (205.560 nm)	0.056805	ppm	0.000559	0.98	843.151000	Y 377.433
Cu (324.754 nm)	0.061037	ppm	0.000028	0.05	4626.590000	Y 377.433
Fe (238.204 nm)	4.171156	ppm	0.008478	0.20	15344.487629	Y_R 377.433
Fe H (259.940 nm)	4.154490 u	ppm	0.005389	0.13	8130.200000	Y_R 377.433
K (766.491 nm)	21.438000	ppm	0.083746	0.39	23707.800000	Y_R2 488.368
Li (670.783 nm)	0.111870	ppm	0.000285	0.25	2427.110000	Y_R2 488.368
Mg (279.078 nm)	21.618200	ppm	0.018801	0.09	127879.000000	Y 377.433
Mn (257.610 nm)	0.133849	ppm	0.000152	0.11	33978.100000	Y 377.433
Mo (202.032 nm)	0.050773	ppm	0.000388	0.76	440.464000	Y 377.433
Na (589.592 nm)	40.509300 o	ppm	0.021220	0.05	264886.000000	Y_R2 488.368
Na H (589.593 nm)	41.722104	ppm	0.624035	1.50	172209.049352	Y_R 488.368
Ni (231.604 nm)	0.051487	ppm	0.001210	2.35	379.361000	Y 377.433
P (213.618 nm)	2.063350	ppm	0.005094	0.25	4732.830000	Y 242.219
Pb (220.353 nm)	0.100985	ppm	0.000978	0.97	315.786000	Y 242.219
S (181.972 nm)	0.855154	ppm	0.007652	0.89	397.247926	Y 377.433
Sb (206.834 nm)	0.095581	ppm	0.000177	0.19	223.701000	Y 377.433
Se (196.026 nm)	0.189507	ppm	0.000777	0.41	186.661000	Y 242.219
Si (288.158 nm)	13.921600 o	ppm	0.220607	1.58	123308.000000	Y 377.433
Sn (189.925 nm)	0.100683	ppm	0.000803	0.80	221.713000	Y 377.433
Sr (421.552 nm)	0.079880	ppm	0.000972	1.22	16994.410027	Y_R 488.368
Th (288.505 nm)	0.204004	ppm	0.001114	0.55	664.204000	Y 377.433
Ti (336.122 nm)	0.195902	ppm	0.000577	0.29	28030.200000	Y 377.433
Tl (190.794 nm)	0.199378	ppm	0.000087	0.04	457.260000	Y 377.433
U (409.013 nm)	0.496092	ppm	0.000954	0.19	2215.860000	Y 377.433
V (292.401 nm)	0.059604	ppm	0.000129	0.22	2515.450000	Y 377.433
Zn (206.200 nm)	0.306243	ppm	0.002326	0.76	1598.080000	Y 377.433
Zr (343.823 nm)	0.055868	ppm	0.000796	1.42	7642.580000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.973367	17456.387939	0.000804	0.08
Y 377.433	0.974608	950477.946222	0.002023	0.21
Y_R 377.433	0.978122	70369.500000	0.003101	0.32
Y_R 488.368	0.997165	39406.000000	0.014043	1.41
Y_R2 488.368	1.012789	77143.813496	0.008091	0.80

Sample Name: 280-123270-D-2-A

Date: 5/13/2019 3:57:05 PM

Rack:Tube: 1:33

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.063130 n	ppm	0.002550	4.04	-2183.681664	Y_R 488.368
Ag (328.068 nm)	-0.000227 u	ppm	0.000262	> 100.00	-359.915000	Y 377.433
Al (167.019 nm)	0.203818	ppm	0.001305	0.64	122.366000	Y_R 377.433
Al H (396.152 nm)	0.098221 u	ppm	0.006583	6.70	577.621002	Y_R 377.433
As (188.980 nm)	-0.001673 u	ppm	0.000840	50.20	-2.050160	Y 242.219
B (249.678 nm)	0.003811	ppm	0.000072	1.89	161.581000	Y 242.219
Ba (493.408 nm)	0.006060	ppm	0.000170	2.80	1280.450000	Y_R 488.368
Be (234.861 nm)	-0.000018 u	ppm	0.000001	3.58	-20.373400	Y_R 488.368
Bi (223.061 nm)	-0.003364 u	ppm	0.000142	4.23	12.116100	Y 377.433
Ca (315.887 nm)	3.449998	ppm	0.002789	0.08	2812.942581	Y_R 377.433
Cd (214.439 nm)	-0.000010 u	ppm	0.000080	> 100.00	-0.162205	Y 377.433
Co (228.615 nm)	0.000623	ppm	0.000120	19.22	-27.172200	Y 242.219
Cr (205.560 nm)	0.000533	ppm	0.000143	26.84	5.874960	Y 377.433
Cu (324.754 nm)	0.001601	ppm	0.000050	3.10	701.430000	Y 377.433
Fe (238.204 nm)	0.192726	ppm	0.000916	0.48	724.103883	Y_R 377.433
Fe H (259.940 nm)	0.001524 u	ppm	0.000299	19.65	375.121000	Y_R 377.433
K (766.491 nm)	1.390120	ppm	0.057415	4.13	893.214000	Y_R2 488.368
Li (670.783 nm)	0.004128	ppm	0.002531	61.31	-878.685000	Y_R2 488.368
Mg (279.078 nm)	0.231880	ppm	0.000942	0.41	1393.850000	Y 377.433
Mn (257.610 nm)	0.007792	ppm	0.000030	0.39	2048.360000	Y 377.433
Mo (202.032 nm)	0.000386	ppm	0.000136	35.27	0.965813	Y 377.433
Na (589.592 nm)	0.747409	ppm	0.012335	1.65	5761.760000	Y_R2 488.368
Na H (589.593 nm)	0.449945 u	ppm	0.044779	9.95	12613.104454	Y_R 488.368
Ni (231.604 nm)	0.000528	ppm	0.000287	54.36	1.009900	Y 377.433
P (213.618 nm)	0.031650	ppm	0.000147	0.46	89.041000	Y 242.219
Pb (220.353 nm)	-0.000733 u	ppm	0.000182	24.85	5.179560	Y 242.219
S (181.972 nm)	0.264977	ppm	0.001423	0.54	138.999679	Y 377.433
Sb (206.834 nm)	0.000962	ppm	0.000299	31.11	-28.374100	Y 377.433
Se (196.026 nm)	-0.002928 u	ppm	0.001813	61.90	7.970510	Y 242.219
Si (288.158 nm)	0.644373	ppm	0.003511	0.54	6504.790000	Y 377.433
Sn (189.925 nm)	-0.000867 u	ppm	0.000840	96.86	6.372530	Y 377.433
Sr (421.552 nm)	0.014559	ppm	0.000126	0.87	3192.350611	Y_R 488.368
Th (288.505 nm)	0.000521 u	ppm	0.001779	> 100.00	53.951800	Y 377.433
Ti (336.122 nm)	0.006753	ppm	0.000419	6.21	786.084000	Y 377.433
Tl (190.794 nm)	0.000081 u	ppm	0.000320	> 100.00	-2.067770	Y 377.433
U (409.013 nm)	-0.002554 u	ppm	0.002553	99.96	-126.130000	Y 377.433
V (292.401 nm)	0.001255	ppm	0.000021	1.67	72.707900	Y 377.433
Zn (206.200 nm)	0.007088	ppm	0.000246	3.47	38.717800	Y 377.433
Zr (343.823 nm)	0.000072	ppm	0.000024	32.76	48.107300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.987817	17715.539800	0.001884	0.19
Y 377.433	0.990277	965759.881775	0.003076	0.31
Y_R 377.433	0.983158	70731.800000	0.001030	0.10
Y_R 488.368	0.996316	39372.500000	0.005990	0.60
Y_R2 488.368	1.021676	77820.730668	0.003819	0.37

Sample Name: 280-123270-C-3-A

Date: 5/13/2019 4:00:27 PM

Rack:Tube: 1:34

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.055558 n	ppm	0.018083	32.55	-2202.164459	Y_R 488.368
Ag (328.068 nm)	0.000169	ppm	0.000060	35.68	-341.957000	Y 377.433
Al (167.019 nm)	1.507560	ppm	0.008352	0.55	903.027000	Y_R 377.433
Al H (396.152 nm)	1.499658	ppm	0.005541	0.37	4148.051790	Y_R 377.433
As (188.980 nm)	-0.002146 u	ppm	0.000032	1.48	-2.627780	Y 242.219
B (249.678 nm)	0.010425	ppm	0.000220	2.11	323.179000	Y 242.219
Ba (493.408 nm)	0.027690	ppm	0.000279	1.01	3701.510000	Y_R 488.368
Be (234.861 nm)	0.000095	ppm	0.000015	15.54	53.375500	Y_R 488.368
Bi (223.061 nm)	-0.005340 u	ppm	0.000140	2.62	7.250890	Y 377.433
Ca (315.887 nm)	11.182641 o	ppm	0.016948	0.15	9335.049821	Y_R 377.433
Cd (214.439 nm)	0.000107	ppm	0.000030	28.42	8.244990	Y 377.433
Co (228.615 nm)	0.000783	ppm	0.000005	0.64	-22.719000	Y 242.219
Cr (205.560 nm)	0.002669	ppm	0.000112	4.21	37.362100	Y 377.433
Cu (324.754 nm)	0.005509	ppm	0.000107	1.94	955.036000	Y 377.433
Fe (238.204 nm)	1.511666	ppm	0.000187	0.01	5571.094066	Y_R 377.433
Fe H (259.940 nm)	1.382210 u	ppm	0.013171	0.95	2953.360000	Y_R 377.433
K (766.491 nm)	5.118900	ppm	0.023656	0.46	5136.590000	Y_R2 488.368
Li (670.783 nm)	0.008996	ppm	0.002229	24.77	-729.318000	Y_R2 488.368
Mg (279.078 nm)	1.790310	ppm	0.001433	0.08	10610.000000	Y 377.433
Mn (257.610 nm)	0.071772	ppm	0.000045	0.06	18254.300000	Y 377.433
Mo (202.032 nm)	0.000501	ppm	0.000141	28.09	1.964890	Y 377.433
Na (589.592 nm)	33.404600 o	ppm	0.030045	0.09	218400.000000	Y_R2 488.368
Na H (589.593 nm)	34.471690	ppm	0.086462	0.25	144079.728139	Y_R 488.368
Ni (231.604 nm)	0.001682	ppm	0.000568	33.79	9.630270	Y 377.433
P (213.618 nm)	0.155663	ppm	0.001213	0.78	372.494000	Y 242.219
Pb (220.353 nm)	0.000864 u	ppm	0.001964	> 100.00	9.694880	Y 242.219
S (181.972 nm)	1.578141	ppm	0.006643	0.42	713.161361	Y 377.433
Sb (206.834 nm)	0.001025 u	ppm	0.003442	> 100.00	-28.548000	Y 377.433
Se (196.026 nm)	-0.000742 u	ppm	0.001394	> 100.00	9.836080	Y 242.219
Si (288.158 nm)	4.161190	ppm	0.014270	0.34	37443.100000	Y 377.433
Sn (189.925 nm)	0.000417	ppm	0.000133	31.76	9.095690	Y 377.433
Sr (421.552 nm)	0.046562	ppm	0.000281	0.60	9954.384554	Y_R 488.368
Th (288.505 nm)	-0.000240 u	ppm	0.001959	> 100.00	53.304300	Y 377.433
Ti (336.122 nm)	0.039963	ppm	0.000264	0.66	5580.380000	Y 377.433
Tl (190.794 nm)	-0.000888 u	ppm	0.000600	67.58	-4.493300	Y 377.433
U (409.013 nm)	-0.004811 u	ppm	0.001708	35.49	-137.081000	Y 377.433
V (292.401 nm)	0.006542	ppm	0.000186	2.85	296.291000	Y 377.433
Zn (206.200 nm)	0.083946	ppm	0.000073	0.09	439.345000	Y 377.433
Zr (343.823 nm)	0.001430	ppm	0.000078	5.46	236.749000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.978685	17551.764704	0.002647	0.27
Y 377.433	0.980128	955861.788800	0.002098	0.21
Y_R 377.433	0.975648	70191.500000	0.006144	0.63
Y_R 488.368	0.985768	38955.700000	0.005961	0.60
Y_R2 488.368	1.004088	76481.034180	0.004779	0.48

Sample Name: MB 280-457046/1-A

Date: 5/13/2019 4:03:50 PM

Rack:Tube: 1:35

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.045548 n	ppm	0.002387	5.24	-2226.599648	Y_R 488.368
Ag (328.068 nm)	0.000265	ppm	0.000332	> 100.00	-336.626000	Y 377.433
Al (167.019 nm)	0.006770	ppm	0.004085	60.34	4.388240	Y_R 377.433
Al H (396.152 nm)	-0.114986 u	ppm	0.003402	2.96	33.427017	Y_R 377.433
As (188.980 nm)	0.000108 u	ppm	0.003582	> 100.00	0.084429	Y 242.219
B (249.678 nm)	0.001667	ppm	0.000108	6.46	108.804000	Y 242.219
Ba (493.408 nm)	-0.000266 u	ppm	0.000415	> 100.00	572.289000	Y_R 488.368
Be (234.861 nm)	-0.000063 u	ppm	0.000010	15.68	-39.183700	Y_R 488.368
Bi (223.061 nm)	-0.001062 u	ppm	0.002070	> 100.00	18.015400	Y 377.433
Ca (315.887 nm)	0.006825	ppm	0.008778	> 100.00	-91.206048	Y_R 377.433
Cd (214.439 nm)	-0.000033 u	ppm	0.000040	> 100.00	-1.759390	Y 377.433
Co (228.615 nm)	0.000341	ppm	0.000381	> 100.00	-33.058400	Y 242.219
Cr (205.560 nm)	0.000340	ppm	0.000006	1.83	3.047530	Y 377.433
Cu (324.754 nm)	0.000460	ppm	0.000121	26.35	628.565000	Y 377.433
Fe (238.204 nm)	0.008872	ppm	0.000049	0.55	48.455396	Y_R 377.433
Fe H (259.940 nm)	-0.185936 u	ppm	0.001339	0.72	25.067700	Y_R 377.433
K (766.491 nm)	0.006420 u	ppm	0.009915	> 100.00	-681.451000	Y_R2 488.368
Li (670.783 nm)	0.003620	ppm	0.000157	4.33	-894.277000	Y_R2 488.368
Mg (279.078 nm)	0.002675	ppm	0.000400	14.97	38.394200	Y 377.433
Mn (257.610 nm)	0.000036	ppm	0.000002	4.42	83.770900	Y 377.433
Mo (202.032 nm)	0.000032	ppm	0.000002	7.68	-2.128460	Y 377.433
Na (589.592 nm)	0.055863	ppm	0.009203	16.47	1246.850000	Y_R2 488.368
Na H (589.593 nm)	-0.367000 u	ppm	0.021423	5.84	9450.318068	Y_R 488.368
Ni (231.604 nm)	-0.000291 u	ppm	0.000110	37.88	-5.071060	Y 377.433
P (213.618 nm)	-0.000499 u	ppm	0.000576	> 100.00	15.560800	Y 242.219
Pb (220.353 nm)	-0.000730 u	ppm	0.000839	> 100.00	5.245840	Y 242.219
S (181.972 nm)	-0.018963 u	ppm	0.003950	20.83	14.863833	Y 377.433
Sb (206.834 nm)	0.001513	ppm	0.000783	51.77	-26.838700	Y 377.433
Se (196.026 nm)	0.000738	ppm	0.000877	> 100.00	11.409400	Y 242.219
Si (288.158 nm)	-0.002956 u	ppm	0.000500	16.90	810.061000	Y 377.433
Sn (189.925 nm)	0.000118 u	ppm	0.001007	> 100.00	8.460790	Y 377.433
Sr (421.552 nm)	0.000049 u	ppm	0.000114	> 100.00	126.307785	Y_R 488.368
Th (288.505 nm)	0.001893	ppm	0.000398	21.03	57.733700	Y 377.433
Ti (336.122 nm)	-0.000068 u	ppm	0.000034	49.63	-204.372000	Y 377.433
Tl (190.794 nm)	-0.000516 u	ppm	0.000065	12.64	-3.410060	Y 377.433
U (409.013 nm)	-0.001906 u	ppm	0.004036	> 100.00	-122.576000	Y 377.433
V (292.401 nm)	-0.000164 u	ppm	0.000075	45.77	12.743900	Y 377.433
Zn (206.200 nm)	0.000107	ppm	0.000141	> 100.00	2.327120	Y 377.433
Zr (343.823 nm)	0.000016 u	ppm	0.000043	> 100.00	39.873900	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.979028	17557.917850	0.002425	0.25
Y 377.433	0.981356	957058.977831	0.001940	0.20
Y_R 377.433	0.971071	69862.200000	0.003121	0.32
Y_R 488.368	0.988144	39049.600000	0.005993	0.61
Y_R2 488.368	1.009026	76857.130963	0.011660	1.16

Sample Name: LCS 280-457046/2-A

Date: 5/13/2019 4:07:13 PM

Rack:Tube: 1:36

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.030229 n	ppm	0.016561	1.61	177.000396	Y_R 488.368
Ag (328.068 nm)	-0.000429 u	ppm	0.000264	61.63	-476.303000	Y 377.433
Al (167.019 nm)	9.162200 o	ppm	0.031577	0.34	5486.970000	Y_R 377.433
Al H (396.152 nm)	10.117179	ppm	0.011503	0.11	26180.829703	Y_R 377.433
As (188.980 nm)	1.975920	ppm	0.006619	0.33	2366.700000	Y 242.219
B (249.678 nm)	0.980811	ppm	0.000857	0.09	24360.500000	Y 242.219
Ba (493.408 nm)	1.997530 o	ppm	0.006863	0.34	223957.000000	Y_R 488.368
Be (234.861 nm)	0.977770	ppm	0.004078	0.42	283143.000000	Y_R 488.368
Bi (223.061 nm)	1.973080	ppm	0.000810	0.04	5107.590000	Y 377.433
Ca (315.887 nm)	49.775018 o	ppm	0.025705	0.05	41886.428884	Y_R 377.433
Cd (214.439 nm)	0.984601	ppm	0.000113	0.01	60033.900000	Y 377.433
Co (228.615 nm)	0.951405	ppm	0.001153	0.12	18986.500000	Y 242.219
Cr (205.560 nm)	0.998942	ppm	0.001738	0.17	14876.900000	Y 377.433
Cu (324.754 nm)	0.972506	ppm	0.000157	0.02	64987.300000	Y 377.433
Fe (238.204 nm)	9.867826 o	ppm	0.019796	0.20	36279.255784	Y_R 377.433
Fe H (259.940 nm)	10.098700	ppm	0.018158	0.18	19230.300000	Y_R 377.433
K (766.491 nm)	48.977400	ppm	0.109736	0.22	55047.900000	Y_R2 488.368
Li (670.783 nm)	0.991785	ppm	0.003343	0.34	29425.000000	Y_R2 488.368
Mg (279.078 nm)	48.744600 o	ppm	0.060671	0.12	288286.000000	Y 377.433
Mn (257.610 nm)	0.997788	ppm	0.001676	0.17	252810.000000	Y 377.433
Mo (202.032 nm)	1.013430	ppm	0.002213	0.22	8837.250000	Y 377.433
Na (589.592 nm)	47.718600 o	ppm	0.046282	0.10	315517.000000	Y_R2 488.368
Na H (589.593 nm)	49.155005	ppm	0.240824	0.49	202764.768187	Y_R 488.368
Ni (231.604 nm)	0.963770	ppm	0.000587	0.06	7147.320000	Y 377.433
P (213.618 nm)	19.374700 o	ppm	0.002463	0.01	44300.700000	Y 242.219
Pb (220.353 nm)	0.967646	ppm	0.000183	0.02	2961.570000	Y 242.219
S (181.972 nm)	9.310899	ppm	0.009395	0.10	4095.337425	Y 377.433
Sb (206.834 nm)	-0.000609 u	ppm	0.000088	14.43	-16.560600	Y 377.433
Se (196.026 nm)	1.934590	ppm	0.002183	0.11	1811.840000	Y 242.219
Si (288.158 nm)	2.038940	ppm	0.013792	0.68	18773.200000	Y 377.433
Sn (189.925 nm)	1.999130	ppm	0.008443	0.42	4247.450000	Y 377.433
Sr (421.552 nm)	0.976176	ppm	0.004133	0.42	206378.945212	Y_R 488.368
Th (288.505 nm)	1.002130	ppm	0.000266	0.03	3068.290000	Y 377.433
Ti (336.122 nm)	1.014660	ppm	0.000273	0.03	145693.000000	Y 377.433
Tl (190.794 nm)	1.983280	ppm	0.001793	0.09	4574.110000	Y 377.433
U (409.013 nm)	2.029200	ppm	0.001325	0.07	9398.600000	Y 377.433
V (292.401 nm)	1.005760	ppm	0.000053	0.01	42220.100000	Y 377.433
Zn (206.200 nm)	0.488154	ppm	0.000115	0.02	2546.300000	Y 377.433
Zr (343.823 nm)	0.497992	ppm	0.000679	0.14	67740.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.954729	17122.131649	0.002468	0.26
Y 377.433	0.954553	930919.622498	0.002593	0.27
Y_R 377.433	0.959336	69018.000000	0.000210	0.02
Y_R 488.368	0.978241	38658.200000	0.002604	0.27
Y_R2 488.368	0.981268	74742.820464	0.005666	0.58

Sample Name: LCSD 280-457046/3-A

Date: 5/13/2019 4:10:34 PM

Rack:Tube: 1:37

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.016907 n	ppm	0.003016	0.30	144.481911	Y_R 488.368
Ag (328.068 nm)	-0.000592 u	ppm	0.000052	8.80	-484.626000	Y 377.433
Al (167.019 nm)	9.210740 o	ppm	0.027330	0.30	5516.160000	Y_R 377.433
Al H (396.152 nm)	10.143105	ppm	0.026129	0.26	26247.275023	Y_R 377.433
As (188.980 nm)	1.991440	ppm	0.000865	0.04	2385.290000	Y 242.219
B (249.678 nm)	0.980630	ppm	0.000905	0.09	24355.900000	Y 242.219
Ba (493.408 nm)	2.005690 o	ppm	0.002942	0.15	224871.000000	Y_R 488.368
Be (234.861 nm)	0.983384	ppm	0.004935	0.50	284774.000000	Y_R 488.368
Bi (223.061 nm)	1.968420	ppm	0.000275	0.01	5095.640000	Y 377.433
Ca (315.887 nm)	49.931403 o	ppm	0.054666	0.11	42018.333912	Y_R 377.433
Cd (214.439 nm)	0.988214	ppm	0.000390	0.04	60254.400000	Y 377.433
Co (228.615 nm)	0.955264	ppm	0.000511	0.05	19063.600000	Y 242.219
Cr (205.560 nm)	1.005580	ppm	0.001928	0.19	14975.700000	Y 377.433
Cu (324.754 nm)	0.972072	ppm	0.002410	0.25	64958.800000	Y 377.433
Fe (238.204 nm)	10.095124 o	ppm	0.019814	0.20	37114.555331	Y_R 377.433
Fe H (259.940 nm)	10.356400	ppm	0.030906	0.30	19711.300000	Y_R 377.433
K (766.491 nm)	49.137600	ppm	0.009562	0.02	55230.200000	Y_R2 488.368
Li (670.783 nm)	0.995458	ppm	0.001231	0.12	29537.700000	Y_R2 488.368
Mg (279.078 nm)	48.853400 o	ppm	0.038582	0.08	288929.000000	Y 377.433
Mn (257.610 nm)	1.001830	ppm	0.000172	0.02	253835.000000	Y 377.433
Mo (202.032 nm)	1.018210	ppm	0.000014	0.00	8878.940000	Y 377.433
Na (589.592 nm)	47.802600 o	ppm	0.099145	0.21	316081.000000	Y_R2 488.368
Na H (589.593 nm)	49.357735	ppm	0.068118	0.14	203556.699688	Y_R 488.368
Ni (231.604 nm)	0.968533	ppm	0.000600	0.06	7182.670000	Y 377.433
P (213.618 nm)	19.462800 o	ppm	0.005645	0.03	44502.100000	Y 242.219
Pb (220.353 nm)	0.972947	ppm	0.000450	0.05	2977.760000	Y 242.219
S (181.972 nm)	9.334283	ppm	0.027163	0.29	4105.569434	Y 377.433
Sb (206.834 nm)	0.004556	ppm	0.002584	56.70	-2.597580	Y 377.433
Se (196.026 nm)	1.946420	ppm	0.010822	0.56	1822.820000	Y 242.219
Si (288.158 nm)	2.055680	ppm	0.010001	0.49	18920.500000	Y 377.433
Sn (189.925 nm)	2.020060	ppm	0.004226	0.21	4291.820000	Y 377.433
Sr (421.552 nm)	0.980785	ppm	0.001554	0.16	207352.807685	Y_R 488.368
Th (288.505 nm)	1.004110	ppm	0.000563	0.06	3074.160000	Y 377.433
Ti (336.122 nm)	1.017650	ppm	0.000465	0.05	146124.000000	Y 377.433
Tl (190.794 nm)	1.992870	ppm	0.002502	0.13	4596.240000	Y 377.433
U (409.013 nm)	2.030340	ppm	0.001571	0.08	9404.180000	Y 377.433
V (292.401 nm)	1.009050	ppm	0.001223	0.12	42357.000000	Y 377.433
Zn (206.200 nm)	0.488778	ppm	0.000023	0.00	2549.560000	Y 377.433
Zr (343.823 nm)	0.497616	ppm	0.000204	0.04	67690.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.957291	17168.089520	0.005203	0.54
Y 377.433	0.957925	934208.666659	0.004590	0.48
Y_R 377.433	0.958677	68970.600000	0.000521	0.05
Y_R 488.368	0.978695	38676.100000	0.000610	0.06
Y_R2 488.368	0.988259	75275.343876	0.008447	0.85

Sample Name: 280-123266-D-1-A

Date: 5/13/2019 4:13:56 PM

Rack:Tube: 1:38

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.080603 n	ppm	0.007601	9.43	-2141.028592	Y_R 488.368
Ag (328.068 nm)	0.000226	ppm	0.000232	> 100.00	-344.204000	Y 377.433
Al (167.019 nm)	30.391700 o	ppm	0.127508	0.42	18198.000000	Y_R 377.433
Al H (396.152 nm)	34.689366	ppm	0.136762	0.39	88644.370256	Y_R 377.433
As (188.980 nm)	0.008953	ppm	0.002369	26.46	10.417300	Y 242.219
B (249.678 nm)	0.040017	ppm	0.000125	0.31	1011.530000	Y 242.219
Ba (493.408 nm)	0.184353	ppm	0.000022	0.01	21252.800000	Y_R 488.368
Be (234.861 nm)	0.001848	ppm	0.000061	3.29	1454.930000	Y_R 488.368
Bi (223.061 nm)	-0.007854 u	ppm	0.000672	8.56	5.753450	Y 377.433
Ca (315.887 nm)	56.800782 o	ppm	0.044703	0.08	47811.726640	Y_R 377.433
Cd (214.439 nm)	0.000244	ppm	0.000021	8.54	45.606300	Y 377.433
Co (228.615 nm)	0.007961	ppm	0.000555	6.97	135.039000	Y 242.219
Cr (205.560 nm)	0.023616	ppm	0.000669	2.83	341.633000	Y 377.433
Cu (324.754 nm)	0.033945	ppm	0.000128	0.38	2847.250000	Y 377.433
Fe (238.204 nm)	30.206685 o	ppm	0.004876	0.02	111022.796058	Y_R 377.433
Fe H (259.940 nm)	31.607400	ppm	0.010168	0.03	59394.600000	Y_R 377.433
K (766.491 nm)	7.885520	ppm	0.051090	0.65	8285.030000	Y_R2 488.368
Li (670.783 nm)	0.036636	ppm	0.000042	0.11	118.737000	Y_R2 488.368
Mg (279.078 nm)	14.457200	ppm	0.011517	0.08	85486.100000	Y 377.433
Mn (257.610 nm)	0.498516	ppm	0.000730	0.15	126347.000000	Y 377.433
Mo (202.032 nm)	0.002370	ppm	0.000301	12.70	18.265100	Y 377.433
Na (589.592 nm)	80.882400 o	ppm	0.037580	0.05	527791.000000	Y_R2 488.368
Na H (589.593 nm)	84.751829	ppm	0.047374	0.06	338496.715232	Y_R 488.368
Ni (231.604 nm)	0.019162	ppm	0.000517	2.70	140.582000	Y 377.433
P (213.618 nm)	0.628137	ppm	0.000013	0.00	1452.410000	Y 242.219
Pb (220.353 nm)	0.019836	ppm	0.001265	6.38	58.916800	Y 242.219
S (181.972 nm)	13.797837 o	ppm	0.012369	0.09	6055.694932	Y 377.433
Sb (206.834 nm)	-0.000526 u	ppm	0.000253	48.03	-41.366900	Y 377.433
Se (196.026 nm)	0.000397 u	ppm	0.001016	> 100.00	6.385650	Y 242.219
Si (288.158 nm)	43.814000 o	ppm	0.155415	0.35	386279.000000	Y 377.433
Sn (189.925 nm)	0.003267	ppm	0.000537	16.45	15.138400	Y 377.433
Sr (421.552 nm)	0.341316	ppm	0.000144	0.04	72235.102786	Y_R 488.368
Th (288.505 nm)	0.021895	ppm	0.003561	16.26	128.480000	Y 377.433
Ti (336.122 nm)	0.412830	ppm	0.001218	0.30	59278.500000	Y 377.433
Tl (190.794 nm)	0.000931	ppm	0.000936	> 100.00	-2.814220	Y 377.433
U (409.013 nm)	-0.038408 u	ppm	0.007239	18.85	-277.371000	Y 377.433
V (292.401 nm)	0.058520	ppm	0.000187	0.32	2500.820000	Y 377.433
Zn (206.200 nm)	0.194692	ppm	0.000554	0.28	1016.610000	Y 377.433
Zr (343.823 nm)	0.019027	ppm	0.000185	0.97	2716.890000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.982838	17626.251239	0.000130	0.01
Y 377.433	0.981537	957235.361010	0.001219	0.12
Y_R 377.433	0.982003	70648.700000	0.005601	0.57
Y_R 488.368	0.999470	39497.100000	0.007358	0.74
Y_R2 488.368	1.015227	77329.513373	0.005911	0.58

Sample Name: 280-123266-D-1-Asd@5

Date: 5/13/2019 4:17:18 PM

Rack:Tube: 1:39

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.085381 n	ppm	0.006907	8.09	-2129.367174	Y_R 488.368
Ag (328.068 nm)	0.000330	ppm	0.000359	> 100.00	-334.370000	Y 377.433
Al (167.019 nm)	8.083670 o	ppm	0.073014	0.90	4839.600000	Y_R 377.433
Al H (396.152 nm)	8.660825	ppm	0.088003	1.02	22375.268701	Y_R 377.433
As (188.980 nm)	0.001622	ppm	0.000651	40.14	1.840640	Y 242.219
B (249.678 nm)	0.010025	ppm	0.000283	2.82	305.403000	Y 242.219
Ba (493.408 nm)	0.042027	ppm	0.000512	1.22	5309.230000	Y_R 488.368
Be (234.861 nm)	0.000432	ppm	0.000017	3.89	311.600000	Y_R 488.368
Bi (223.061 nm)	-0.005610 u	ppm	0.000006	0.11	7.451310	Y 377.433
Ca (315.887 nm)	11.832513 o	ppm	0.029125	0.25	9883.185446	Y_R 377.433
Cd (214.439 nm)	0.000086	ppm	0.000041	48.14	12.211700	Y 377.433
Co (228.615 nm)	0.001945	ppm	0.000032	1.64	5.059930	Y 242.219
Cr (205.560 nm)	0.005648	ppm	0.000091	1.62	80.335500	Y 377.433
Cu (324.754 nm)	0.007456	ppm	0.000216	2.89	1090.260000	Y 377.433
Fe (238.204 nm)	6.672087 o	ppm	0.004192	0.06	24535.189850	Y_R 377.433
Fe H (259.940 nm)	6.755730	ppm	0.011614	0.17	12987.700000	Y_R 377.433
K (766.491 nm)	1.846050	ppm	0.020051	1.09	1412.060000	Y_R2 488.368
Li (670.783 nm)	0.010061	ppm	0.001713	17.02	-696.634000	Y_R2 488.368
Mg (279.078 nm)	3.125680	ppm	0.000048	0.00	18499.800000	Y 377.433
Mn (257.610 nm)	0.106949	ppm	0.000096	0.09	27164.400000	Y 377.433
Mo (202.032 nm)	0.000515	ppm	0.000169	32.78	2.091400	Y 377.433
Na (589.592 nm)	17.088500 o	ppm	0.045524	0.27	112213.000000	Y_R2 488.368
Na H (589.593 nm)	17.054561	ppm	0.252536	1.48	76801.960117	Y_R 488.368
Ni (231.604 nm)	0.004462	ppm	0.000286	6.41	30.484900	Y 377.433
P (213.618 nm)	0.129797	ppm	0.002135	1.65	313.373000	Y 242.219
Pb (220.353 nm)	0.003611	ppm	0.000395	10.94	16.109200	Y 242.219
S (181.972 nm)	2.806432	ppm	0.004348	0.15	1250.162408	Y 377.433
Sb (206.834 nm)	0.000186 u	ppm	0.001342	> 100.00	-32.473000	Y 377.433
Se (196.026 nm)	-0.001411 u	ppm	0.002816	> 100.00	8.400620	Y 242.219
Si (288.158 nm)	13.296000 o	ppm	0.094505	0.71	117805.000000	Y 377.433
Sn (189.925 nm)	0.000670	ppm	0.000275	41.03	9.631850	Y 377.433
Sr (421.552 nm)	0.072020	ppm	0.000835	1.16	15333.653851	Y_R 488.368
Th (288.505 nm)	0.004177	ppm	0.000491	11.76	67.038100	Y 377.433
Ti (336.122 nm)	0.158343	ppm	0.001913	1.21	22584.800000	Y 377.433
Tl (190.794 nm)	-0.001230 u	ppm	0.000584	47.47	-5.974290	Y 377.433
U (409.013 nm)	-0.012354 u	ppm	0.000021	0.17	-168.047000	Y 377.433
V (292.401 nm)	0.013478	ppm	0.000203	1.51	592.295000	Y 377.433
Zn (206.200 nm)	0.042745	ppm	0.000080	0.19	224.582000	Y 377.433
Zr (343.823 nm)	0.006811	ppm	0.000008	0.11	983.877000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.981079	17594.705078	0.000865	0.09
Y 377.433	0.980582	956304.672057	0.000401	0.04
Y_R 377.433	0.977025	70290.600000	0.001326	0.14
Y_R 488.368	1.000080	39521.300000	0.011714	1.17
Y_R2 488.368	1.005838	76614.287802	0.011150	1.11

Sample Name: 280-123266-D-1-B MS

Date: 5/13/2019 4:20:41 PM

Rack:Tube: 1:40

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.021531 n	ppm	0.029419	2.88	155.768332	Y_R 488.368
Ag (328.068 nm)	-0.000578 u	ppm	0.000083	14.29	-498.692000	Y 377.433
Al (167.019 nm)	58.998200 o	ppm	0.303745	0.51	35317.800000	Y_R 377.433
Al H (396.152 nm)	72.211582	ppm	0.115091	0.16	184248.262593	Y_R 377.433
As (188.980 nm)	1.941660	ppm	0.008191	0.42	2325.350000	Y 242.219
B (249.678 nm)	1.025220	ppm	0.001364	0.13	25402.500000	Y 242.219
Ba (493.408 nm)	2.164260 o	ppm	0.006656	0.31	242643.000000	Y_R 488.368
Be (234.861 nm)	0.963417	ppm	0.004790	0.50	280134.000000	Y_R 488.368
Bi (223.061 nm)	1.960130	ppm	0.001753	0.09	5080.580000	Y 377.433
Ca (315.887 nm)	105.998529 o	ppm	0.309672	0.29	89308.197354	Y_R 377.433
Cd (214.439 nm)	0.950680	ppm	0.000228	0.02	58003.000000	Y 377.433
Co (228.615 nm)	0.939182	ppm	0.000578	0.06	18765.000000	Y 242.219
Cr (205.560 nm)	1.005290	ppm	0.001406	0.14	14961.600000	Y 377.433
Cu (324.754 nm)	1.009070	ppm	0.003827	0.38	67426.700000	Y 377.433
Fe (238.204 nm)	46.495694 o	ppm	0.214069	0.46	170883.489322	Y_R 377.433
Fe H (259.940 nm)	48.359600	ppm	0.233763	0.48	90677.100000	Y_R 377.433
K (766.491 nm)	58.072700	ppm	0.128152	0.22	65398.400000	Y_R2 488.368
Li (670.783 nm)	1.026570	ppm	0.001974	0.19	30492.200000	Y_R2 488.368
Mg (279.078 nm)	64.862000 o	ppm	0.053830	0.08	383560.000000	Y 377.433
Mn (257.610 nm)	1.493150 o	ppm	0.001009	0.07	378283.000000	Y 377.433
Mo (202.032 nm)	0.976572	ppm	0.002804	0.29	8515.780000	Y 377.433
Na (589.592 nm)	127.888000 o	ppm	0.222051	0.17	837746.000000	Y_R2 488.368
Na H (589.593 nm)	134.546002	ppm	0.482942	0.36	532844.698171	Y_R 488.368
Ni (231.604 nm)	0.965015	ppm	0.001420	0.15	7158.130000	Y 377.433
P (213.618 nm)	19.576200 o	ppm	0.019012	0.10	44761.400000	Y 242.219
Pb (220.353 nm)	0.958142	ppm	0.000011	0.00	2914.630000	Y 242.219
S (181.972 nm)	23.298724 o	ppm	0.044383	0.19	10210.924817	Y 377.433
Sb (206.834 nm)	-0.001892 u	ppm	0.001009	53.34	-32.597200	Y 377.433
Se (196.026 nm)	1.908350	ppm	0.014717	0.77	1781.910000	Y 242.219
Si (288.158 nm)	64.596500 o	ppm	0.415743	0.64	569108.000000	Y 377.433
Sn (189.925 nm)	1.882590	ppm	0.002913	0.15	4000.310000	Y 377.433
Sr (421.552 nm)	1.316892 o	ppm	0.000154	0.01	278371.252493	Y_R 488.368
Th (288.505 nm)	1.004730	ppm	0.004277	0.43	3086.880000	Y 377.433
Ti (336.122 nm)	1.589800 o	ppm	0.006811	0.43	228477.000000	Y 377.433
Tl (190.794 nm)	1.899150	ppm	0.002444	0.13	4376.180000	Y 377.433
U (409.013 nm)	1.964790	ppm	0.006097	0.31	9123.310000	Y 377.433
V (292.401 nm)	1.056120	ppm	0.000457	0.04	44369.300000	Y 377.433
Zn (206.200 nm)	0.682322	ppm	0.005729	0.84	3558.420000	Y 377.433
Zr (343.823 nm)	0.460897	ppm	0.000061	0.01	62813.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.954365	17115.613421	0.001925	0.20
Y 377.433	0.952600	929015.438034	0.002854	0.30
Y_R 377.433	0.964890	69417.600000	0.000479	0.05
Y_R 488.368	0.982110	38811.100000	0.001947	0.20
Y_R2 488.368	1.004438	76507.673398	0.004745	0.47

Sample Name: CCVH-5699817

Date: 5/13/2019 4:24:04 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.103872	ppm	0.004362	4.20	-2084.230633	Y_R 488.368
Ag (328.068 nm)	-0.000163 u	ppm	0.000032	19.43	-609.323000	Y 377.433
Al (167.019 nm)	43.311900 o	ppm	0.227215	0.52	25938.400000	Y_R 377.433
Al H (396.152 nm)	50.013956	ppm	0.132770	0.27	127623.964754	Y_R 377.433
As (188.980 nm)	0.001967	ppm	0.002593	> 100.00	1.889040	Y 242.219
B (249.678 nm)	0.002521	ppm	0.000040	1.58	55.300700	Y 242.219
Ba (493.408 nm)	0.002177	ppm	0.000018	0.82	890.473000	Y_R 488.368
Be (234.861 nm)	0.000843	ppm	0.000082	9.70	1743.700000	Y_R 488.368
Bi (223.061 nm)	1.005590	ppm	0.001204	0.12	2620.870000	Y 377.433
Ca (315.887 nm)	0.007278	ppm	0.006230	85.60	-90.822205	Y_R 377.433
Cd (214.439 nm)	0.001204	ppm	0.000082	6.82	122.787000	Y 377.433
Co (228.615 nm)	0.004644	ppm	0.000121	2.62	52.889300	Y 242.219
Cr (205.560 nm)	0.001447	ppm	0.000500	34.54	6.025120	Y 377.433
Cu (324.754 nm)	0.008891	ppm	0.000013	0.15	1582.160000	Y 377.433
Fe (238.204 nm)	48.657955 o	ppm	0.076410	0.16	178829.609900	Y_R 377.433
Fe H (259.940 nm)	50.589000	ppm	0.091199	0.18	94840.200000	Y_R 377.433
K (766.491 nm)	0.172299	ppm	0.021128	12.26	-492.679000	Y_R2 488.368
Li (670.783 nm)	0.007022	ppm	0.000210	2.98	-789.882000	Y_R2 488.368
Mg (279.078 nm)	0.031542	ppm	0.001745	5.53	-157.677000	Y 377.433
Mn (257.610 nm)	0.002855	ppm	0.000010	0.33	797.821000	Y 377.433
Mo (202.032 nm)	0.001017	ppm	0.000321	31.56	6.465900	Y 377.433
Na (589.592 nm)	233.755000 o	ppm	0.060819	0.03	1522610.000000	Y_R2 488.368
Na H (589.593 nm)	240.792169	ppm	0.845457	0.35	941186.040941	Y_R 488.368
Ni (231.604 nm)	0.005131	ppm	0.000050	0.98	37.390600	Y 377.433
P (213.618 nm)	-0.001564 u	ppm	0.001938	> 100.00	13.125900	Y 242.219
Pb (220.353 nm)	0.003775	ppm	0.000013	0.33	37.211700	Y 242.219
S (181.972 nm)	4.902368	ppm	0.010309	0.21	2166.152361	Y 377.433
Sb (206.834 nm)	-0.002641 u	ppm	0.001041	39.42	-82.989500	Y 377.433
Se (196.026 nm)	0.003279	ppm	0.000802	24.46	5.325590	Y 242.219
Si (288.158 nm)	0.148471	ppm	0.004519	3.04	2142.210000	Y 377.433
Sn (189.925 nm)	0.005337	ppm	0.001989	37.26	19.528800	Y 377.433
Sr (421.552 nm)	0.001934	ppm	0.000002	0.09	524.693901	Y_R 488.368
Th (288.505 nm)	5.040870	ppm	0.028257	0.56	15042.100000	Y 377.433
Ti (336.122 nm)	0.002685	ppm	0.000029	1.07	191.153000	Y 377.433
Tl (190.794 nm)	0.000315 u	ppm	0.001287	> 100.00	-2.882780	Y 377.433
U (409.013 nm)	10.168900	ppm	0.005110	0.05	47804.700000	Y 377.433
V (292.401 nm)	0.004657	ppm	0.000044	0.95	22.633400	Y 377.433
Zn (206.200 nm)	0.004199	ppm	0.000626	14.91	23.657500	Y 377.433
Zr (343.823 nm)	-0.002612 u	ppm	0.000015	0.59	-166.515000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.948949	17018.473322	0.001867	0.20
Y 377.433	0.940245	916966.263104	0.003366	0.36
Y_R 377.433	0.947095	68137.300000	0.003591	0.38
Y_R 488.368	0.973251	38461.000000	0.004013	0.41
Y_R2 488.368	0.983811	74936.508980	0.005094	0.52

Sample Name: CCV-5699804

Date: 5/13/2019 4:27:27 PM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.006980	ppm	0.021825	2.17	120.250877	Y_R 488.368
Ag (328.068 nm)	0.492367	ppm	0.000376	0.08	22791.100000	Y 377.433
Al (167.019 nm)	0.496373	ppm	0.006364	1.28	299.025000	Y_R 377.433
Al H (396.152 nm)	0.426243 u	ppm	0.002539	0.60	1454.136466	Y_R 377.433
As (188.980 nm)	0.981971	ppm	0.002029	0.21	1176.180000	Y 242.219
B (249.678 nm)	0.492122	ppm	0.000936	0.19	12261.200000	Y 242.219
Ba (493.408 nm)	0.497208	ppm	0.001187	0.24	56200.700000	Y_R 488.368
Be (234.861 nm)	0.488780	ppm	0.003031	0.62	141450.000000	Y_R 488.368
Bi (223.061 nm)	-0.004275 u	ppm	0.000104	2.42	10.165700	Y 377.433
Ca (315.887 nm)	5.021391	ppm	0.024540	0.49	4138.637773	Y_R 377.433
Cd (214.439 nm)	0.503312	ppm	0.000783	0.16	30685.900000	Y 377.433
Co (228.615 nm)	0.497119	ppm	0.003274	0.66	9900.450000	Y 242.219
Cr (205.560 nm)	0.502114	ppm	0.001602	0.32	7477.520000	Y 377.433
Cu (324.754 nm)	0.495351	ppm	0.001989	0.40	33375.700000	Y 377.433
Fe (238.204 nm)	2.482529	ppm	0.007023	0.28	9138.928276	Y_R 377.433
Fe H (259.940 nm)	2.401940 u	ppm	0.007309	0.30	4857.560000	Y_R 377.433
K (766.491 nm)	48.067300	ppm	0.240644	0.50	54012.200000	Y_R2 488.368
Li (670.783 nm)	0.987364	ppm	0.007418	0.75	29289.400000	Y_R2 488.368
Mg (279.078 nm)	19.546800	ppm	0.013466	0.07	115642.000000	Y 377.433
Mn (257.610 nm)	0.501351	ppm	0.000335	0.07	127065.000000	Y 377.433
Mo (202.032 nm)	0.506097	ppm	0.001138	0.22	4412.050000	Y 377.433
Na (589.592 nm)	4.777700	ppm	0.023378	0.49	32979.800000	Y_R2 488.368
Na H (589.593 nm)	5.016557 u	ppm	0.064158	1.28	30744.138487	Y_R 488.368
Ni (231.604 nm)	0.511715	ppm	0.002031	0.40	3793.340000	Y 377.433
P (213.618 nm)	0.962584	ppm	0.000313	0.03	2216.840000	Y 242.219
Pb (220.353 nm)	0.993945	ppm	0.000830	0.08	3041.030000	Y 242.219
S (181.972 nm)	-0.012799 u	ppm	0.008187	63.97	18.599486	Y 377.433
Sb (206.834 nm)	1.028680	ppm	0.000017	0.00	2735.080000	Y 377.433
Se (196.026 nm)	0.973905	ppm	0.004801	0.49	917.833000	Y 242.219
Si (288.158 nm)	5.021360	ppm	0.012991	0.26	45010.300000	Y 377.433
Sn (189.925 nm)	1.008980	ppm	0.002165	0.21	2147.790000	Y 377.433
Sr (421.552 nm)	0.488363	ppm	0.000234	0.05	103305.718948	Y_R 488.368
Th (288.505 nm)	0.002011	ppm	0.001724	85.71	76.493600	Y 377.433
Ti (336.122 nm)	0.500656	ppm	0.000564	0.11	71727.900000	Y 377.433
Tl (190.794 nm)	1.016760	ppm	0.000974	0.10	2344.160000	Y 377.433
U (409.013 nm)	-0.002714 u	ppm	0.002699	99.43	-165.097000	Y 377.433
V (292.401 nm)	0.496990	ppm	0.000606	0.12	20889.300000	Y 377.433
Zn (206.200 nm)	0.498944	ppm	0.001777	0.36	2602.550000	Y 377.433
Zr (343.823 nm)	0.499470	ppm	0.003093	0.62	67918.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.961382	17241.452105	0.000013	0.00
Y 377.433	0.960809	937020.899640	0.000152	0.02
Y_R 377.433	0.956360	68803.900000	0.007445	0.78
Y_R 488.368	0.973176	38458.000000	0.005252	0.54
Y_R2 488.368	0.978850	74558.679049	0.004137	0.42

Sample Name: CCB

Date: 5/13/2019 4:30:50 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.036447 Z	ppm	0.007216	19.80	-2248.814701 Z	Y_R 488.368
Ag (328.068 nm)	0.000503	ppm	0.000012	2.35	-325.527000	Y 377.433
Al (167.019 nm)	0.006901	ppm	0.001293	18.74	4.463140	Y_R 377.433
Al H (396.152 nm)	-0.113597 Zu	ppm	0.001747	1.54	36.966292 Z	Y_R 377.433
As (188.980 nm)	-0.001775 u	ppm	0.002074	> 100.00	-2.170200	Y 242.219
B (249.678 nm)	0.001528	ppm	0.000072	4.69	105.372000	Y 242.219
Ba (493.408 nm)	-0.000358 u	ppm	0.000034	9.57	561.933000	Y_R 488.368
Be (234.861 nm)	0.000021	ppm	0.000021	99.91	-15.000100	Y_R 488.368
Bi (223.061 nm)	-0.001422 u	ppm	0.000786	55.29	17.089000	Y 377.433
Ca (315.887 nm)	0.012223	ppm	0.005669	46.38	-86.652728	Y_R 377.433
Cd (214.439 nm)	-0.000019 u	ppm	0.000041	> 100.00	-0.952770	Y 377.433
Co (228.615 nm)	0.000306	ppm	0.000008	2.65	-33.746000	Y 242.219
Cr (205.560 nm)	0.000233	ppm	0.000141	60.48	1.457300	Y 377.433
Cu (324.754 nm)	0.000552	ppm	0.000051	9.15	634.532000	Y 377.433
Fe (238.204 nm)	0.004937	ppm	0.001416	28.69	33.994101	Y_R 377.433
Fe H (259.940 nm)	-0.193533 u	ppm	0.003926	2.03	10.880500	Y_R 377.433
K (766.491 nm)	-0.025065 u	ppm	0.041360	> 100.00	-717.281000	Y_R2 488.368
Li (670.783 nm)	0.001801	ppm	0.001170	64.94	-950.082000	Y_R2 488.368
Mg (279.078 nm)	0.003209	ppm	0.001598	49.78	41.462400	Y 377.433
Mn (257.610 nm)	-0.000019 u	ppm	0.000003	14.22	69.754800	Y 377.433
Mo (202.032 nm)	0.000250	ppm	0.000015	5.92	-0.221726	Y 377.433
Na (589.592 nm)	0.124879	ppm	0.007382	5.91	1694.550000	Y_R2 488.368
Na H (589.593 nm)	-0.398756 u	ppm	0.018023	4.52	9326.837451	Y_R 488.368
Ni (231.604 nm)	-0.000081 u	ppm	0.000251	> 100.00	-3.510900	Y 377.433
P (213.618 nm)	-0.000422 u	ppm	0.001817	> 100.00	15.736800	Y 242.219
Pb (220.353 nm)	-0.001055 u	ppm	0.000084	7.97	4.261420	Y 242.219
S (181.972 nm)	-0.022836 u	ppm	0.001658	7.26	13.170816	Y 377.433
Sb (206.834 nm)	0.001790	ppm	0.000334	18.67	-26.106400	Y 377.433
Se (196.026 nm)	-0.002813 u	ppm	0.000159	5.66	8.103010	Y 242.219
Si (288.158 nm)	0.031863	ppm	0.001741	5.46	1116.370000	Y 377.433
Sn (189.925 nm)	-0.000054 u	ppm	0.000575	> 100.00	8.095910	Y 377.433
Sr (421.552 nm)	0.000031 u	ppm	0.000109	> 100.00	122.497832	Y_R 488.368
Th (288.505 nm)	0.002148	ppm	0.002046	95.22	58.564300	Y 377.433
Ti (336.122 nm)	0.000220	ppm	0.000046	20.98	-163.086000	Y 377.433
Tl (190.794 nm)	0.000340	ppm	0.000325	95.63	-1.435630	Y 377.433
U (409.013 nm)	-0.001885 u	ppm	0.002508	> 100.00	-122.481000	Y 377.433
V (292.401 nm)	-0.000407 u	ppm	0.000360	88.50	2.289700	Y 377.433
Zn (206.200 nm)	-0.000431 u	ppm	0.000118	27.44	-0.477783	Y 377.433
Zr (343.823 nm)	0.000109	ppm	0.000068	62.18	52.602200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.960662	17228.540718	0.000612	0.06
Y 377.433	0.961756	937944.838201	0.000773	0.08
Y_R 377.433	0.948710	68253.500000	0.001139	0.12
Y_R 488.368	0.969553	38314.900000	0.000099	0.01
Y_R2 488.368	0.982684	74850.694196	0.005055	0.51

Sample Name: CCVL-5699389

Date: 5/13/2019 4:34:12 PM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.065659 Q	ppm	0.008308	12.65	-2177.507048 Q	Y_R 488.368
Ag (328.068 nm)	0.009185	ppm	0.000273	2.97	82.082100	Y 377.433
Al (167.019 nm)	0.096494	ppm	0.001795	1.86	58.116500	Y_R 377.433
Al H (396.152 nm)	-0.012990 u	ppm	0.001868	14.38	294.640486	Y_R 377.433
As (188.980 nm)	0.012521	ppm	0.000322	2.57	14.952700	Y 242.219
B (249.678 nm)	0.097400	ppm	0.000349	0.36	2477.660000	Y 242.219
Ba (493.408 nm)	0.009966	ppm	0.000044	0.44	1716.220000	Y_R 488.368
Be (234.861 nm)	0.000966	ppm	0.000000	0.05	260.742000	Y_R 488.368
Bi (223.061 nm)	0.101613	ppm	0.000672	0.66	282.653000	Y 377.433
Ca (315.887 nm)	0.211734	ppm	0.002711	1.28	81.628036	Y_R 377.433
Cd (214.439 nm)	0.005041	ppm	0.000056	1.11	307.671000	Y 377.433
Co (228.615 nm)	0.010526	ppm	0.000187	1.78	170.558000	Y 242.219
Cr (205.560 nm)	0.010277	ppm	0.000008	0.08	151.121000	Y 377.433
Cu (324.754 nm)	0.015699	ppm	0.000235	1.50	1636.860000	Y 377.433
Fe (238.204 nm)	0.103536	ppm	0.000637	0.62	396.337626	Y_R 377.433
Fe H (259.940 nm)	-0.093652 u	ppm	0.000507	0.54	197.395000	Y_R 377.433
K (766.491 nm)	2.928060	ppm	0.064410	2.20	2643.400000	Y_R2 488.368
Li (670.783 nm)	0.022046	ppm	0.001799	8.16	-328.908000	Y_R2 488.368
Mg (279.078 nm)	0.193027	ppm	0.000357	0.18	1163.360000	Y 377.433
Mn (257.610 nm)	0.010288	ppm	0.000064	0.62	2680.490000	Y 377.433
Mo (202.032 nm)	0.018988	ppm	0.000151	0.79	163.217000	Y 377.433
Na (589.592 nm)	1.027350	ppm	0.013552	1.32	7591.820000	Y_R2 488.368
Na H (589.593 nm)	0.384698 u	ppm	0.036201	9.41	12364.820403	Y_R 488.368
Ni (231.604 nm)	0.041864	ppm	0.000178	0.42	307.568000	Y 377.433
P (213.618 nm)	2.763900 o	ppm	0.007745	0.28	6334.040000	Y 242.219
Pb (220.353 nm)	0.008549	ppm	0.000461	5.39	33.563100	Y 242.219
S (181.972 nm)	0.065091 Q	ppm	0.001039	1.60	51.628008 Q	Y 377.433
Sb (206.834 nm)	0.022398	ppm	0.001047	4.68	29.225700	Y 377.433
Se (196.026 nm)	0.019361	ppm	0.004017	20.75	28.747600	Y 242.219
Si (288.158 nm)	0.613887	ppm	0.035680	5.81	6236.590000	Y 377.433
Sn (189.925 nm)	0.099061	ppm	0.000227	0.23	218.274000	Y 377.433
Sr (421.552 nm)	0.009770	ppm	0.000170	1.74	2180.275161	Y_R 488.368
Th (288.505 nm)	0.015084	ppm	0.001285	8.52	97.671800	Y 377.433
Ti (336.122 nm)	0.009818	ppm	0.000077	0.78	1216.030000	Y 377.433
Tl (190.794 nm)	0.015569	ppm	0.000017	0.11	33.677800	Y 377.433
U (409.013 nm)	0.051187	ppm	0.003121	6.10	126.562000	Y 377.433
V (292.401 nm)	0.009314	ppm	0.000273	2.93	409.239000	Y 377.433
Zn (206.200 nm)	0.020520	ppm	0.000660	3.22	108.732000	Y 377.433
Zr (343.823 nm)	0.010772	ppm	0.000162	1.50	1501.870000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.968646	17371.729945	0.002982	0.31
Y 377.433	0.969889	945876.077438	0.003204	0.33
Y_R 377.433	0.960733	69118.500000	0.004656	0.48
Y_R 488.368	0.976271	38580.400000	0.004700	0.48
Y_R2 488.368	0.990196	75422.902790	0.000847	0.09

Sample Name: 280-123266-D-1-C MSD

Date: 5/13/2019 4:37:36 PM

Rack:Tube: 1:41

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.065560 n	ppm	0.016284	1.53	263.244275	Y_R 488.368
Ag (328.068 nm)	-0.000975 u	ppm	0.000036	3.68	-519.560000	Y 377.433
Al (167.019 nm)	60.021000 o	ppm	0.150968	0.25	35929.900000	Y_R 377.433
Al H (396.152 nm)	74.184501	ppm	0.166449	0.22	189272.196955	Y_R 377.433
As (188.980 nm)	1.994780	ppm	0.011037	0.55	2388.970000	Y 242.219
B (249.678 nm)	1.037410	ppm	0.000444	0.04	25704.000000	Y 242.219
Ba (493.408 nm)	2.211580 o	ppm	0.003091	0.14	247935.000000	Y_R 488.368
Be (234.861 nm)	0.979501	ppm	0.001449	0.15	284804.000000	Y_R 488.368
Bi (223.061 nm)	1.992040	ppm	0.000364	0.02	5162.920000	Y 377.433
Ca (315.887 nm)	107.024716 o	ppm	0.133603	0.12	90173.749174	Y_R 377.433
Cd (214.439 nm)	0.972317	ppm	0.001644	0.17	59322.700000	Y 377.433
Co (228.615 nm)	0.961391	ppm	0.000449	0.05	19210.000000	Y 242.219
Cr (205.560 nm)	1.027400	ppm	0.001060	0.10	15290.900000	Y 377.433
Cu (324.754 nm)	1.032540	ppm	0.000769	0.07	68981.500000	Y 377.433
Fe (238.204 nm)	47.076906 o	ppm	0.049151	0.10	173019.389813	Y_R 377.433
Fe H (259.940 nm)	49.097600	ppm	0.083497	0.17	92055.000000	Y_R 377.433
K (766.491 nm)	59.217000	ppm	0.471690	0.80	66700.700000	Y_R2 488.368
Li (670.783 nm)	1.051150	ppm	0.006843	0.65	31246.400000	Y_R2 488.368
Mg (279.078 nm)	65.749800 o	ppm	0.121171	0.18	388809.000000	Y 377.433
Mn (257.610 nm)	1.521580 o	ppm	0.001506	0.10	385486.000000	Y 377.433
Mo (202.032 nm)	1.000190	ppm	0.000885	0.09	8721.780000	Y 377.433
Na (589.592 nm)	129.505000 o	ppm	0.700165	0.54	848366.000000	Y_R2 488.368
Na H (589.593 nm)	135.703438	ppm	0.279637	0.21	537363.258965	Y_R 488.368
Ni (231.604 nm)	0.985671	ppm	0.002567	0.26	7311.390000	Y 377.433
P (213.618 nm)	19.961400 o	ppm	0.006868	0.03	45641.800000	Y 242.219
Pb (220.353 nm)	0.978109	ppm	0.002530	0.26	2974.990000	Y 242.219
S (181.972 nm)	23.652399 o	ppm	0.054805	0.23	10365.584937	Y 377.433
Sb (206.834 nm)	-0.001930 u	ppm	0.003054	> 100.00	-32.569800	Y 377.433
Se (196.026 nm)	1.954590	ppm	0.000996	0.05	1824.920000	Y 242.219
Si (288.158 nm)	60.222100 o	ppm	0.238269	0.40	530626.000000	Y 377.433
Sn (189.925 nm)	1.925470	ppm	0.011727	0.61	4091.250000	Y 377.433
Sr (421.552 nm)	1.343356 o	ppm	0.005482	0.41	283962.964337	Y_R 488.368
Th (288.505 nm)	1.025700	ppm	0.000066	0.01	3150.330000	Y 377.433
Ti (336.122 nm)	1.635800 o	ppm	0.000004	0.00	235087.000000	Y 377.433
Tl (190.794 nm)	1.939450	ppm	0.001724	0.09	4469.030000	Y 377.433
U (409.013 nm)	2.004500	ppm	0.007326	0.37	9309.630000	Y 377.433
V (292.401 nm)	1.080140	ppm	0.001855	0.17	45378.700000	Y 377.433
Zn (206.200 nm)	0.691161	ppm	0.001832	0.27	3604.490000	Y 377.433
Zr (343.823 nm)	0.473462	ppm	0.000634	0.13	64522.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.956614	17155.941412	0.001110	0.12
Y 377.433	0.955651	931990.632574	0.001272	0.13
Y_R 377.433	0.972474	69963.200000	0.001730	0.18
Y_R 488.368	0.991029	39163.500000	0.002366	0.24
Y_R2 488.368	0.999555	76135.747695	0.010167	1.02

Sample Name: 280-123266-D-1-Apds

Date: 5/13/2019 4:40:59 PM

Rack:Tube: 1:42

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.173860 n	ppm	0.020280	11.66	-1913.390371	Y_R 488.368
Ag (328.068 nm)	0.049530	ppm	0.000457	0.92	1965.220000	Y 377.433
Al (167.019 nm)	32.329700 o	ppm	0.055119	0.17	19357.600000	Y_R 377.433
Al H (396.152 nm)	37.172737	ppm	0.119602	0.32	94977.237108	Y_R 377.433
As (188.980 nm)	0.202821	ppm	0.000473	0.23	242.634000	Y 242.219
B (249.678 nm)	0.138052	ppm	0.000008	0.01	3437.960000	Y 242.219
Ba (493.408 nm)	0.284317	ppm	0.000349	0.12	32433.600000	Y_R 488.368
Be (234.861 nm)	0.049458	ppm	0.000404	0.82	15250.900000	Y_R 488.368
Bi (223.061 nm)	-0.007097 u	ppm	0.002192	30.88	7.833260	Y 377.433
Ca (315.887 nm)	75.116831 o	ppm	0.305081	0.41	63260.449117	Y_R 377.433
Cd (214.439 nm)	0.047996	ppm	0.000216	0.45	2957.490000	Y 377.433
Co (228.615 nm)	0.054475	ppm	0.000229	0.42	1069.090000	Y 242.219
Cr (205.560 nm)	0.071191	ppm	0.000357	0.50	1050.190000	Y 377.433
Cu (324.754 nm)	0.082507	ppm	0.000055	0.07	6056.000000	Y 377.433
Fe (238.204 nm)	30.955348 o	ppm	0.126863	0.41	113774.065792	Y_R 377.433
Fe H (259.940 nm)	32.370100	ppm	0.113276	0.35	60818.800000	Y_R 377.433
K (766.491 nm)	27.269300	ppm	0.127452	0.47	30344.000000	Y_R2 488.368
Li (670.783 nm)	0.135491	ppm	0.001962	1.45	3151.850000	Y_R2 488.368
Mg (279.078 nm)	33.356600	ppm	0.027418	0.08	197267.000000	Y 377.433
Mn (257.610 nm)	0.538022	ppm	0.000305	0.06	136354.000000	Y 377.433
Mo (202.032 nm)	0.051361	ppm	0.000230	0.45	445.596000	Y 377.433
Na (589.592 nm)	97.295900 o	ppm	0.275934	0.28	634839.000000	Y_R2 488.368
Na H (589.593 nm)	101.719264	ppm	0.273763	0.27	404150.128091	Y_R 488.368
Ni (231.604 nm)	0.066446	ppm	0.000581	0.87	491.514000	Y 377.433
P (213.618 nm)	2.498830 o	ppm	0.005931	0.24	5728.180000	Y 242.219
Pb (220.353 nm)	0.114746	ppm	0.000901	0.79	349.129000	Y 242.219
S (181.972 nm)	13.644647 o	ppm	0.026653	0.20	5988.812269	Y 377.433
Sb (206.834 nm)	0.085413	ppm	0.003543	4.15	188.163000	Y 377.433
Se (196.026 nm)	0.189698	ppm	0.005111	2.69	182.657000	Y 242.219
Si (288.158 nm)	57.426700 o	ppm	0.361464	0.63	506033.000000	Y 377.433
Sn (189.925 nm)	0.100077	ppm	0.000260	0.26	220.427000	Y 377.433
Sr (421.552 nm)	0.384765	ppm	0.000373	0.10	81415.643873	Y_R 488.368
Th (288.505 nm)	0.218433	ppm	0.002506	1.15	715.722000	Y 377.433
Ti (336.122 nm)	0.561421	ppm	0.004680	0.83	80678.000000	Y 377.433
Tl (190.794 nm)	0.190555	ppm	0.000700	0.37	434.441000	Y 377.433
U (409.013 nm)	0.459708	ppm	0.001231	0.27	2059.460000	Y 377.433
V (292.401 nm)	0.107398	ppm	0.000035	0.03	4546.380000	Y 377.433
Zn (206.200 nm)	0.392190	ppm	0.000627	0.16	2046.090000	Y 377.433
Zr (343.823 nm)	0.082978	ppm	0.000121	0.15	11409.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.968968	17377.500271	0.000622	0.06
Y 377.433	0.967102	943158.363462	0.000072	0.01
Y_R 377.433	0.971663	69904.800000	0.004396	0.45
Y_R 488.368	0.987542	39025.800000	0.007647	0.77
Y_R2 488.368	1.006817	76688.931018	0.003012	0.30

Sample Name: 280-123266-D-2-O

Date: 5/13/2019 4:44:22 PM

Rack:Tube: 1:43

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.090183 n	ppm	0.001015	1.13	-2117.643909	Y_R 488.368
Ag (328.068 nm)	0.000324	ppm	0.000169	52.21	-334.815000	Y 377.433
Al (167.019 nm)	2.763270	ppm	0.008927	0.32	1655.610000	Y_R 377.433
Al H (396.152 nm)	2.857820	ppm	0.010159	0.36	7603.530214	Y_R 377.433
As (188.980 nm)	-0.000593 u	ppm	0.002716	> 100.00	-0.786799	Y 242.219
B (249.678 nm)	0.030886	ppm	0.000134	0.43	826.087000	Y 242.219
Ba (493.408 nm)	0.048133	ppm	0.000423	0.88	5988.330000	Y_R 488.368
Be (234.861 nm)	0.000121	ppm	0.000026	21.55	129.107000	Y_R 488.368
Bi (223.061 nm)	-0.006041 u	ppm	0.001544	25.56	5.823910	Y 377.433
Ca (315.887 nm)	7.974955	ppm	0.026128	0.33	6629.523100	Y_R 377.433
Cd (214.439 nm)	0.000076	ppm	0.000076	> 100.00	8.566140	Y 377.433
Co (228.615 nm)	0.001903	ppm	0.000196	10.28	1.382960	Y 242.219
Cr (205.560 nm)	0.008385	ppm	0.000151	1.80	121.954000	Y 377.433
Cu (324.754 nm)	0.012663	ppm	0.000022	0.17	1434.110000	Y 377.433
Fe (238.204 nm)	3.698996	ppm	0.007189	0.19	13609.338484	Y_R 377.433
Fe H (259.940 nm)	3.681300 u	ppm	0.003970	0.11	7246.590000	Y_R 377.433
K (766.491 nm)	1.942660	ppm	0.021907	1.13	1522.010000	Y_R2 488.368
Li (670.783 nm)	0.041441	ppm	0.000283	0.68	266.154000	Y_R2 488.368
Mg (279.078 nm)	4.062530	ppm	0.002786	0.07	24046.800000	Y 377.433
Mn (257.610 nm)	0.083971	ppm	0.000143	0.17	21344.100000	Y 377.433
Mo (202.032 nm)	0.000630	ppm	0.000127	20.18	3.088870	Y 377.433
Na (589.592 nm)	13.930900 o	ppm	0.042644	0.31	91669.200000	Y_R2 488.368
Na H (589.593 nm)	13.797447	ppm	0.169457	1.23	64223.689859	Y_R 488.368
Ni (231.604 nm)	0.004011	ppm	0.001078	26.88	27.006400	Y 377.433
P (213.618 nm)	0.130558	ppm	0.000621	0.48	315.113000	Y 242.219
Pb (220.353 nm)	0.001989	ppm	0.001044	52.50	12.867900	Y 242.219
S (181.972 nm)	0.933511	ppm	0.001928	0.21	431.396729	Y 377.433
Sb (206.834 nm)	0.005251	ppm	0.000244	4.65	-17.678300	Y 377.433
Se (196.026 nm)	-0.000716 u	ppm	0.003086	> 100.00	9.489410	Y 242.219
Si (288.158 nm)	6.769940	ppm	0.039097	0.58	60393.000000	Y 377.433
Sn (189.925 nm)	0.000930	ppm	0.000535	57.52	10.183900	Y 377.433
Sr (421.552 nm)	0.035466	ppm	0.000393	1.11	7609.807193	Y_R 488.368
Th (288.505 nm)	0.003974	ppm	0.000717	18.05	65.908200	Y 377.433
Ti (336.122 nm)	0.085254	ppm	0.000193	0.23	12075.200000	Y 377.433
Tl (190.794 nm)	0.000512	ppm	0.000333	65.02	-1.528150	Y 377.433
U (409.013 nm)	-0.006526 u	ppm	0.007121	> 100.00	-142.451000	Y 377.433
V (292.401 nm)	0.008821	ppm	0.000327	3.70	392.746000	Y 377.433
Zn (206.200 nm)	2.440540 o	ppm	0.005173	0.21	12723.300000	Y 377.433
Zr (343.823 nm)	0.002626	ppm	0.000023	0.89	406.013000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.972096	17433.593907	0.001528	0.16
Y 377.433	0.973983	949868.911822	0.001236	0.13
Y_R 377.433	0.972605	69972.600000	0.005322	0.55
Y_R 488.368	0.997136	39404.900000	0.002539	0.25
Y_R2 488.368	0.992312	75584.032622	0.003546	0.36

Sample Name: 280-123266-D-3-A

Date: 5/13/2019 4:47:45 PM

Rack:Tube: 1:44

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.108585 n	ppm	0.011334	10.44	-2072.725941	Y_R 488.368
Ag (328.068 nm)	0.000215	ppm	0.000095	44.19	-339.968000	Y 377.433
Al (167.019 nm)	2.689020	ppm	0.005688	0.21	1610.550000	Y_R 377.433
Al H (396.152 nm)	2.783260	ppm	0.006730	0.24	7413.579129	Y_R 377.433
As (188.980 nm)	0.000536 u	ppm	0.002011	> 100.00	0.573549	Y 242.219
B (249.678 nm)	0.028975	ppm	0.000473	1.63	780.147000	Y 242.219
Ba (493.408 nm)	0.045984	ppm	0.000342	0.74	5747.100000	Y_R 488.368
Be (234.861 nm)	0.000160	ppm	0.000006	3.70	113.199000	Y_R 488.368
Bi (223.061 nm)	-0.005424 u	ppm	0.000839	15.47	7.262540	Y 377.433
Ca (315.887 nm)	7.585934	ppm	0.019260	0.25	6301.402964	Y_R 377.433
Cd (214.439 nm)	0.000091	ppm	0.000050	54.29	8.650330	Y 377.433
Co (228.615 nm)	0.001998	ppm	0.000141	7.05	3.169320	Y 242.219
Cr (205.560 nm)	0.008440	ppm	0.000182	2.16	123.027000	Y 377.433
Cu (324.754 nm)	0.011594	ppm	0.000258	2.22	1362.110000	Y 377.433
Fe (238.204 nm)	2.824909	ppm	0.017204	0.61	10397.146276	Y_R 377.433
Fe H (259.940 nm)	2.762350 u	ppm	0.007321	0.27	5530.570000	Y_R 377.433
K (766.491 nm)	1.891540	ppm	0.045765	2.42	1463.830000	Y_R2 488.368
Li (670.783 nm)	0.037811	ppm	0.002191	5.79	154.776000	Y_R2 488.368
Mg (279.078 nm)	3.798950	ppm	0.001242	0.03	22489.100000	Y 377.433
Mn (257.610 nm)	0.076388	ppm	0.000064	0.08	19423.500000	Y 377.433
Mo (202.032 nm)	0.000932	ppm	0.000569	61.12	5.720500	Y 377.433
Na (589.592 nm)	13.307700 o	ppm	0.020254	0.15	87607.600000	Y_R2 488.368
Na H (589.593 nm)	13.015255	ppm	0.026129	0.20	61199.392172	Y_R 488.368
Ni (231.604 nm)	0.002824	ppm	0.000419	14.85	18.163200	Y 377.433
P (213.618 nm)	0.122525	ppm	0.000766	0.63	296.751000	Y 242.219
Pb (220.353 nm)	0.003302	ppm	0.001003	30.39	16.833000	Y 242.219
S (181.972 nm)	0.917010	ppm	0.009444	1.03	424.167642	Y 377.433
Sb (206.834 nm)	0.001995	ppm	0.001303	65.34	-26.202500	Y 377.433
Se (196.026 nm)	0.001699	ppm	0.000904	53.20	11.895400	Y 242.219
Si (288.158 nm)	6.543950	ppm	0.011749	0.18	58404.900000	Y 377.433
Sn (189.925 nm)	0.000627	ppm	0.000139	22.15	9.540740	Y 377.433
Sr (421.552 nm)	0.034309	ppm	0.000026	0.08	7365.291615	Y_R 488.368
Th (288.505 nm)	0.001319	ppm	0.001170	88.69	58.081300	Y 377.433
Ti (336.122 nm)	0.082680	ppm	0.000152	0.18	11704.300000	Y 377.433
Tl (190.794 nm)	0.000670	ppm	0.000533	79.48	-1.127000	Y 377.433
U (409.013 nm)	-0.009626 u	ppm	0.000654	6.79	-157.837000	Y 377.433
V (292.401 nm)	0.008371	ppm	0.000243	2.90	373.341000	Y 377.433
Zn (206.200 nm)	0.095013	ppm	0.000616	0.65	497.032000	Y 377.433
Zr (343.823 nm)	0.002520	ppm	0.000048	1.90	388.898000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.978561	17549.543842	0.003884	0.40
Y 377.433	0.979758	955500.714431	0.002858	0.29
Y_R 377.433	0.974499	70108.800000	0.002453	0.25
Y_R 488.368	0.994003	39281.100000	0.003613	0.36
Y_R2 488.368	1.001527	76285.934087	0.004512	0.45

Sample Name: 280-123268-D-1-A

Date: 5/13/2019 4:51:08 PM

Rack:Tube: 1:45

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.085518 n	ppm	0.024599	28.77	-2129.032630	Y_R 488.368
Ag (328.068 nm)	0.000216 u	ppm	0.000333	> 100.00	-339.447000	Y 377.433
Al (167.019 nm)	1.923280	ppm	0.007326	0.38	1151.910000	Y_R 377.433
Al H (396.152 nm)	1.961725	ppm	0.000047	0.00	5323.386034	Y_R 377.433
As (188.980 nm)	-0.000373 u	ppm	0.000201	53.74	-0.507796	Y 242.219
B (249.678 nm)	0.024240	ppm	0.000148	0.61	664.449000	Y 242.219
Ba (493.408 nm)	0.026810	ppm	0.000109	0.41	3603.090000	Y_R 488.368
Be (234.861 nm)	0.000095	ppm	0.000017	17.93	64.634500	Y_R 488.368
Bi (223.061 nm)	-0.006145 u	ppm	0.000406	6.61	5.239090	Y 377.433
Ca (315.887 nm)	9.473711	ppm	0.031567	0.33	7893.650826	Y_R 377.433
Cd (214.439 nm)	-0.000014 u	ppm	0.000027	> 100.00	1.267670	Y 377.433
Co (228.615 nm)	0.001004	ppm	0.000077	7.68	-18.103700	Y 242.219
Cr (205.560 nm)	0.005302	ppm	0.000169	3.18	76.503200	Y 377.433
Cu (324.754 nm)	0.007705	ppm	0.000350	4.54	1102.550000	Y 377.433
Fe (238.204 nm)	1.875156	ppm	0.002790	0.15	6906.887716	Y_R 377.433
Fe H (259.940 nm)	1.751960 u	ppm	0.010037	0.57	3643.810000	Y_R 377.433
K (766.491 nm)	1.863850	ppm	0.051719	2.77	1432.320000	Y_R2 488.368
Li (670.783 nm)	0.028691	ppm	0.000358	1.25	-125.019000	Y_R2 488.368
Mg (279.078 nm)	2.967190	ppm	0.001474	0.05	17570.900000	Y 377.433
Mn (257.610 nm)	0.044996	ppm	0.000018	0.04	11471.900000	Y 377.433
Mo (202.032 nm)	0.000560	ppm	0.000285	50.92	2.483340	Y 377.433
Na (589.592 nm)	25.105600 o	ppm	0.030149	0.12	164373.000000	Y_R2 488.368
Na H (589.593 nm)	25.076396	ppm	0.129269	0.52	107779.606377	Y_R 488.368
Ni (231.604 nm)	0.001726	ppm	0.000135	7.85	9.971350	Y 377.433
P (213.618 nm)	0.100192	ppm	0.000846	0.84	245.707000	Y 242.219
Pb (220.353 nm)	0.002599	ppm	0.000757	29.12	14.871900	Y 242.219
S (181.972 nm)	2.520548	ppm	0.013713	0.54	1125.064093	Y 377.433
Sb (206.834 nm)	0.003849	ppm	0.001138	29.56	-21.027000	Y 377.433
Se (196.026 nm)	0.000583	ppm	0.000267	45.83	10.989100	Y 242.219
Si (288.158 nm)	5.237840	ppm	0.025866	0.49	46914.700000	Y 377.433
Sn (189.925 nm)	0.000998	ppm	0.001013	> 100.00	10.326300	Y 377.433
Sr (421.552 nm)	0.048950	ppm	0.000234	0.48	10458.904488	Y_R 488.368
Th (288.505 nm)	0.002697 u	ppm	0.005162	> 100.00	61.234900	Y 377.433
Ti (336.122 nm)	0.045654	ppm	0.000147	0.32	6392.450000	Y 377.433
Tl (190.794 nm)	-0.001316 u	ppm	0.000316	24.03	-5.518180	Y 377.433
U (409.013 nm)	-0.006139 u	ppm	0.005821	94.82	-142.690000	Y 377.433
V (292.401 nm)	0.005331	ppm	0.000272	5.10	244.624000	Y 377.433
Zn (206.200 nm)	0.054974	ppm	0.000108	0.20	288.327000	Y 377.433
Zr (343.823 nm)	0.001963	ppm	0.000028	1.43	310.221000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.980697	17587.843269	0.000786	0.08
Y 377.433	0.982234	957915.651584	0.000280	0.03
Y_R 377.433	0.977097	70295.700000	0.000498	0.05
Y_R 488.368	0.996783	39390.900000	0.008956	0.90
Y_R2 488.368	1.010332	76956.649140	0.005365	0.53

Sample Name: 280-123268-D-2-A

Date: 5/13/2019 4:54:30 PM

Rack:Tube: 1:46

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.054105 n	ppm	0.031531	58.28	-2205.710001	Y_R 488.368
Ag (328.068 nm)	0.000505	ppm	0.000068	13.44	-326.172000	Y 377.433
Al (167.019 nm)	2.042610	ppm	0.008789	0.43	1223.310000	Y_R 377.433
Al H (396.152 nm)	2.106906	ppm	0.007318	0.35	5696.489315	Y_R 377.433
As (188.980 nm)	0.001735	ppm	0.000518	29.86	2.017620	Y 242.219
B (249.678 nm)	0.019209	ppm	0.000379	1.98	539.891000	Y 242.219
Ba (493.408 nm)	0.049950	ppm	0.000578	1.16	6191.930000	Y_R 488.368
Be (234.861 nm)	0.000115	ppm	0.000016	14.09	71.872500	Y_R 488.368
Bi (223.061 nm)	-0.004003 u	ppm	0.000532	13.28	10.769300	Y 377.433
Ca (315.887 nm)	17.453535 o	ppm	0.007393	0.04	14624.242797	Y_R 377.433
Cd (214.439 nm)	0.000067	ppm	0.000071	> 100.00	6.247360	Y 377.433
Co (228.615 nm)	0.001376	ppm	0.000174	12.63	-9.850280	Y 242.219
Cr (205.560 nm)	0.005131	ppm	0.000015	0.29	73.943200	Y 377.433
Cu (324.754 nm)	0.012585	ppm	0.000180	1.43	1418.990000	Y 377.433
Fe (238.204 nm)	1.923138	ppm	0.004393	0.23	7083.214449	Y_R 377.433
Fe H (259.940 nm)	1.805780 u	ppm	0.001278	0.07	3744.320000	Y_R 377.433
K (766.491 nm)	2.851450	ppm	0.004325	0.15	2556.210000	Y_R2 488.368
Li (670.783 nm)	0.018358	ppm	0.001590	8.66	-442.064000	Y_R2 488.368
Mg (279.078 nm)	3.275200	ppm	0.002899	0.09	19392.600000	Y 377.433
Mn (257.610 nm)	0.056423	ppm	0.000096	0.17	14366.300000	Y 377.433
Mo (202.032 nm)	0.001254	ppm	0.000391	31.17	8.531040	Y 377.433
Na (589.592 nm)	71.965500 o	ppm	0.186887	0.26	469473.000000	Y_R2 488.368
Na H (589.593 nm)	75.215838	ppm	0.159004	0.21	301519.681320	Y_R 488.368
Ni (231.604 nm)	0.001945	ppm	0.000302	15.55	11.599100	Y 377.433
P (213.618 nm)	0.148623	ppm	0.003718	2.50	356.403000	Y 242.219
Pb (220.353 nm)	0.001134	ppm	0.001535	> 100.00	10.362000	Y 242.219
S (181.972 nm)	2.969066	ppm	0.008412	0.28	1321.150459	Y 377.433
Sb (206.834 nm)	0.001566	ppm	0.000412	26.28	-27.190900	Y 377.433
Se (196.026 nm)	-0.001356 u	ppm	0.001296	95.58	9.190850	Y 242.219
Si (288.158 nm)	5.899650	ppm	0.000172	0.00	52736.800000	Y 377.433
Sn (189.925 nm)	0.000563 u	ppm	0.001275	> 100.00	9.405200	Y 377.433
Sr (421.552 nm)	0.088070	ppm	0.000297	0.34	18724.902751	Y_R 488.368
Th (288.505 nm)	0.001303	ppm	0.001657	> 100.00	57.584900	Y 377.433
Ti (336.122 nm)	0.067642	ppm	0.000019	0.03	9575.780000	Y 377.433
Tl (190.794 nm)	-0.000886 u	ppm	0.000693	78.22	-4.624790	Y 377.433
U (409.013 nm)	-0.008513 u	ppm	0.002566	30.15	-155.404000	Y 377.433
V (292.401 nm)	0.006287	ppm	0.000175	2.79	285.448000	Y 377.433
Zn (206.200 nm)	0.068778	ppm	0.001085	1.58	360.279000	Y 377.433
Zr (343.823 nm)	0.002043	ppm	0.000007	0.33	321.314000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.971330	17419.859034	0.000366	0.04
Y 377.433	0.973920	949807.770887	0.001189	0.12
Y_R 377.433	0.968291	69662.200000	0.004758	0.49
Y_R 488.368	0.985108	38929.600000	0.004172	0.42
Y_R2 488.368	1.008125	76788.496585	0.008332	0.83

Sample Name: 280-123268-D-3-A

Date: 5/13/2019 4:57:53 PM

Rack:Tube: 1:47

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.082001 n	ppm	0.017261	21.05	-2137.617663	Y_R 488.368
Ag (328.068 nm)	0.000243	ppm	0.000011	4.55	-338.169000	Y 377.433
Al (167.019 nm)	1.725800	ppm	0.008103	0.47	1033.600000	Y_R 377.433
Al H (396.152 nm)	1.745605	ppm	0.003136	0.18	4773.981791	Y_R 377.433
As (188.980 nm)	-0.000318 u	ppm	0.000064	19.99	-0.439195	Y 242.219
B (249.678 nm)	0.024630	ppm	0.000292	1.19	674.516000	Y 242.219
Ba (493.408 nm)	0.029020	ppm	0.000430	1.48	3850.280000	Y_R 488.368
Be (234.861 nm)	0.000094	ppm	0.000018	19.07	55.703500	Y_R 488.368
Bi (223.061 nm)	-0.004538 u	ppm	0.003633	80.04	9.331330	Y 377.433
Ca (315.887 nm)	10.985722 o	ppm	0.031564	0.29	9168.958416	Y_R 377.433
Cd (214.439 nm)	0.000030 u	ppm	0.000044	> 100.00	3.689170	Y 377.433
Co (228.615 nm)	0.001147	ppm	0.000266	23.21	-15.347600	Y 242.219
Cr (205.560 nm)	0.005280	ppm	0.000096	1.82	76.255200	Y 377.433
Cu (324.754 nm)	0.009258	ppm	0.000006	0.06	1203.700000	Y 377.433
Fe (238.204 nm)	1.592878	ppm	0.001398	0.09	5869.539952	Y_R 377.433
Fe H (259.940 nm)	1.452080 u	ppm	0.004473	0.31	3083.820000	Y_R 377.433
K (766.491 nm)	1.952680	ppm	0.063427	3.25	1533.410000	Y_R2 488.368
Li (670.783 nm)	0.030846	ppm	0.003012	9.76	-58.901200	Y_R2 488.368
Mg (279.078 nm)	2.996310	ppm	0.004642	0.15	17743.600000	Y 377.433
Mn (257.610 nm)	0.043795	ppm	0.000009	0.02	11167.800000	Y 377.433
Mo (202.032 nm)	0.000738	ppm	0.000253	34.31	4.028590	Y 377.433
Na (589.592 nm)	38.495900 o	ppm	0.021632	0.06	251548.000000	Y_R2 488.368
Na H (589.593 nm)	38.795735	ppm	0.086625	0.22	160787.951175	Y_R 488.368
Ni (231.604 nm)	0.002457	ppm	0.000037	1.52	15.384200	Y 377.433
P (213.618 nm)	0.103596	ppm	0.004248	4.10	253.487000	Y 242.219
Pb (220.353 nm)	0.001784	ppm	0.000016	0.87	12.422000	Y 242.219
S (181.972 nm)	2.781733	ppm	0.006225	0.22	1239.234428	Y 377.433
Sb (206.834 nm)	0.002539	ppm	0.001807	71.18	-24.461800	Y 377.433
Se (196.026 nm)	0.000766	ppm	0.000926	> 100.00	11.208300	Y 242.219
Si (288.158 nm)	4.798620	ppm	0.008382	0.17	43050.800000	Y 377.433
Sn (189.925 nm)	0.000622	ppm	0.000816	> 100.00	9.530210	Y 377.433
Sr (421.552 nm)	0.054191	ppm	0.000090	0.17	11566.309613	Y_R 488.368
Th (288.505 nm)	0.000717 u	ppm	0.002632	> 100.00	55.414800	Y 377.433
Ti (336.122 nm)	0.042798	ppm	0.000163	0.38	5987.030000	Y 377.433
Tl (190.794 nm)	-0.001047 u	ppm	0.000180	17.15	-4.875570	Y 377.433
U (409.013 nm)	-0.006766 u	ppm	0.002869	42.41	-146.213000	Y 377.433
V (292.401 nm)	0.005525	ppm	0.000591	10.70	252.771000	Y 377.433
Zn (206.200 nm)	0.059400	ppm	0.001108	1.87	311.393000	Y 377.433
Zr (343.823 nm)	0.001931	ppm	0.000122	6.31	305.105000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.972215	17435.733454	0.003085	0.32
Y 377.433	0.974003	949887.879067	0.004537	0.47
Y_R 377.433	0.969909	69778.600000	0.002409	0.25
Y_R 488.368	0.992467	39220.400000	0.005621	0.57
Y_R2 488.368	0.999230	76111.028031	0.003048	0.31

Sample Name: 280-123269-D-1-A

Date: 5/13/2019 5:01:14 PM

Rack:Tube: 1:48

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.082222 n	ppm	0.036839	44.80	-2137.078740	Y_R 488.368
Ag (328.068 nm)	0.000501	ppm	0.000363	72.45	-325.846000	Y 377.433
Al (167.019 nm)	0.237151	ppm	0.000655	0.28	142.358000	Y_R 377.433
Al H (396.152 nm)	0.154606 u	ppm	0.009096	5.88	740.203415	Y_R 377.433
As (188.980 nm)	0.000303 u	ppm	0.003058	> 100.00	0.316280	Y 242.219
B (249.678 nm)	0.101923	ppm	0.000469	0.46	2588.910000	Y 242.219
Ba (493.408 nm)	0.049464	ppm	0.000357	0.72	6142.500000	Y_R 488.368
Be (234.861 nm)	-0.000008 u	ppm	0.000004	53.49	-15.233300	Y_R 488.368
Bi (223.061 nm)	-0.005053 u	ppm	0.001448	28.65	7.775290	Y 377.433
Ca (315.887 nm)	46.125985 o	ppm	0.136036	0.29	38808.055332	Y_R 377.433
Cd (214.439 nm)	-0.000028 u	ppm	0.000117	> 100.00	-1.192170	Y 377.433
Co (228.615 nm)	0.000806	ppm	0.000156	19.41	-23.509500	Y 242.219
Cr (205.560 nm)	0.000345	ppm	0.000129	37.36	3.051050	Y 377.433
Cu (324.754 nm)	0.001694	ppm	0.000243	14.37	677.111000	Y 377.433
Fe (238.204 nm)	0.269834	ppm	0.001095	0.41	1007.467624	Y_R 377.433
Fe H (259.940 nm)	0.079366 u	ppm	0.000198	0.25	520.480000	Y_R 377.433
K (766.491 nm)	4.961870	ppm	0.067930	1.37	4957.890000	Y_R2 488.368
Li (670.783 nm)	0.021517	ppm	0.001518	7.06	-345.151000	Y_R2 488.368
Mg (279.078 nm)	8.836380	ppm	0.060637	0.69	52291.200000	Y 377.433
Mn (257.610 nm)	0.042017	ppm	0.000324	0.77	10717.400000	Y 377.433
Mo (202.032 nm)	0.002320	ppm	0.000437	18.83	17.831800	Y 377.433
Na (589.592 nm)	58.240000 o	ppm	0.697463	1.20	380121.000000	Y_R2 488.368
Na H (589.593 nm)	58.600603	ppm	0.777221	1.33	237325.281570	Y_R 488.368
Ni (231.604 nm)	0.002410	ppm	0.000842	34.96	14.972400	Y 377.433
P (213.618 nm)	0.543235	ppm	0.003661	0.67	1258.350000	Y 242.219
Pb (220.353 nm)	-0.000506 u	ppm	0.001456	> 100.00	5.847780	Y 242.219
S (181.972 nm)	26.402376 o	ppm	0.185046	0.70	11564.622257	Y 377.433
Sb (206.834 nm)	0.001452	ppm	0.000964	66.44	-27.101300	Y 377.433
Se (196.026 nm)	-0.002358 u	ppm	0.001092	46.31	8.514180	Y 242.219
Si (288.158 nm)	9.235800	ppm	0.182239	1.97	82085.900000	Y 377.433
Sn (189.925 nm)	-0.000185 u	ppm	0.000744	> 100.00	7.819370	Y 377.433
Sr (421.552 nm)	0.312208	ppm	0.004178	1.34	66084.513734	Y_R 488.368
Th (288.505 nm)	-0.003198 u	ppm	0.001208	37.77	43.888400	Y 377.433
Ti (336.122 nm)	0.007015	ppm	0.000136	1.93	959.492000	Y 377.433
Tl (190.794 nm)	0.000088 u	ppm	0.000397	> 100.00	-2.059120	Y 377.433
U (409.013 nm)	-0.009941 u	ppm	0.002669	26.84	-169.335000	Y 377.433
V (292.401 nm)	0.001411	ppm	0.000099	7.05	79.505000	Y 377.433
Zn (206.200 nm)	0.003448	ppm	0.000221	6.41	19.740500	Y 377.433
Zr (343.823 nm)	0.000441	ppm	0.000002	0.48	98.515400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.971135	17416.357365	0.005622	0.58
Y 377.433	0.972965	948876.111870	0.005423	0.56
Y_R 377.433	0.968425	69671.900000	0.003767	0.39
Y_R 488.368	0.992221	39210.700000	0.012212	1.23
Y_R2 488.368	0.989976	75406.096960	0.015877	1.60

Sample Name: 280-123269-D-2-O

Date: 5/13/2019 5:04:37 PM

Rack:Tube: 1:49

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.040353 n	ppm	0.001255	3.11	-2239.279520	Y_R 488.368
Ag (328.068 nm)	0.000523	ppm	0.000017	3.17	-324.829000	Y 377.433
Al (167.019 nm)	0.324896	ppm	0.002223	0.68	194.894000	Y_R 377.433
Al H (396.152 nm)	0.251021 u	ppm	0.003406	1.36	985.972640	Y_R 377.433
As (188.980 nm)	0.000966	ppm	0.001306	> 100.00	1.109760	Y 242.219
B (249.678 nm)	0.103131	ppm	0.000374	0.36	2618.660000	Y 242.219
Ba (493.408 nm)	0.051441	ppm	0.000157	0.31	6363.830000	Y_R 488.368
Be (234.861 nm)	0.000001 u	ppm	0.000019	> 100.00	-9.934170	Y_R 488.368
Bi (223.061 nm)	-0.003704 u	ppm	0.002747	74.16	11.267700	Y 377.433
Ca (315.887 nm)	46.999775 o	ppm	0.140460	0.30	39545.054410	Y_R 377.433
Cd (214.439 nm)	0.000021	ppm	0.000014	64.81	1.864980	Y 377.433
Co (228.615 nm)	0.000485	ppm	0.000091	18.81	-29.816700	Y 242.219
Cr (205.560 nm)	0.000140	ppm	0.000160	> 100.00	-0.026620	Y 377.433
Cu (324.754 nm)	0.002271	ppm	0.000342	15.06	714.382000	Y 377.433
Fe (238.204 nm)	0.353492	ppm	0.001833	0.52	1314.903273	Y_R 377.433
Fe H (259.940 nm)	0.164348 u	ppm	0.000619	0.38	679.172000	Y_R 377.433
K (766.491 nm)	4.987350	ppm	0.078835	1.58	4986.890000	Y_R2 488.368
Li (670.783 nm)	0.021347	ppm	0.000969	4.54	-350.365000	Y_R2 488.368
Mg (279.078 nm)	9.016300	ppm	0.022445	0.25	53355.300000	Y 377.433
Mn (257.610 nm)	0.046717	ppm	0.000181	0.39	11908.000000	Y 377.433
Mo (202.032 nm)	0.002099	ppm	0.000089	4.24	15.905300	Y 377.433
Na (589.592 nm)	58.500000 o	ppm	0.534823	0.91	381817.000000	Y_R2 488.368
Na H (589.593 nm)	59.983142	ppm	0.182315	0.30	242668.716179	Y_R 488.368
Ni (231.604 nm)	0.002454	ppm	0.000640	26.07	15.303000	Y 377.433
P (213.618 nm)	0.561208	ppm	0.000037	0.01	1299.430000	Y 242.219
Pb (220.353 nm)	0.000116 u	ppm	0.001126	> 100.00	7.726430	Y 242.219
S (181.972 nm)	26.620866 o	ppm	0.072220	0.27	11660.141367	Y 377.433
Sb (206.834 nm)	-0.001099 u	ppm	0.000919	83.59	-33.965000	Y 377.433
Se (196.026 nm)	-0.001198 u	ppm	0.003529	> 100.00	9.584270	Y 242.219
Si (288.158 nm)	9.401250	ppm	0.019385	0.21	83541.300000	Y 377.433
Sn (189.925 nm)	-0.000784 u	ppm	0.000090	11.48	6.548980	Y 377.433
Sr (421.552 nm)	0.321117	ppm	0.000368	0.11	67967.089566	Y_R 488.368
Th (288.505 nm)	-0.001998 u	ppm	0.000976	48.83	47.518800	Y 377.433
Ti (336.122 nm)	0.009623	ppm	0.000199	2.07	1336.810000	Y 377.433
Tl (190.794 nm)	-0.001654 u	ppm	0.001507	91.11	-6.097970	Y 377.433
U (409.013 nm)	-0.009228 u	ppm	0.005794	62.78	-166.064000	Y 377.433
V (292.401 nm)	0.001274	ppm	0.000075	5.86	73.643000	Y 377.433
Zn (206.200 nm)	0.022667	ppm	0.000053	0.23	119.924000	Y 377.433
Zr (343.823 nm)	0.000370	ppm	0.000105	28.23	89.136100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.959010	17198.916217	0.002861	0.30
Y 377.433	0.961002	937209.289195	0.003294	0.34
Y_R 377.433	0.962093	69216.300000	0.006027	0.63
Y_R 488.368	0.975129	38535.200000	0.008179	0.84
Y_R2 488.368	0.985207	75042.892098	0.007454	0.76

Sample Name: 280-123269-D-3-A

Date: 5/13/2019 5:07:59 PM

Rack:Tube: 1:50

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.074945 n	ppm	0.025866	34.51	-2154.840271	Y_R 488.368
Ag (328.068 nm)	0.000388	ppm	0.000406	> 100.00	-331.107000	Y 377.433
Al (167.019 nm)	0.157938	ppm	0.000846	0.54	94.958300	Y_R 377.433
Al H (396.152 nm)	0.070588 u	ppm	0.003698	5.24	525.144468	Y_R 377.433
As (188.980 nm)	0.002039	ppm	0.000554	27.16	2.396120	Y 242.219
B (249.678 nm)	0.094396	ppm	0.000123	0.13	2402.720000	Y 242.219
Ba (493.408 nm)	0.026769	ppm	0.000486	1.82	3604.680000	Y_R 488.368
Be (234.861 nm)	-0.000011 u	ppm	0.000027	> 100.00	-17.157300	Y_R 488.368
Bi (223.061 nm)	0.000130 u	ppm	0.001155	> 100.00	21.127000	Y 377.433
Ca (315.887 nm)	43.492732 o	ppm	0.078251	0.18	36587.034719	Y_R 377.433
Cd (214.439 nm)	-0.000014 u	ppm	0.000049	> 100.00	-0.379345	Y 377.433
Co (228.615 nm)	0.000438	ppm	0.000159	36.26	-30.977300	Y 242.219
Cr (205.560 nm)	0.000497	ppm	0.000102	20.49	5.333870	Y 377.433
Cu (324.754 nm)	0.002037	ppm	0.000117	5.74	701.730000	Y 377.433
Fe (238.204 nm)	0.233490	ppm	0.000031	0.01	873.907933	Y_R 377.433
Fe H (259.940 nm)	0.044303 u	ppm	0.002072	4.68	455.006000	Y_R 377.433
K (766.491 nm)	4.955890	ppm	0.028118	0.57	4951.090000	Y_R2 488.368
Li (670.783 nm)	0.022264	ppm	0.000654	2.94	-322.219000	Y_R2 488.368
Mg (279.078 nm)	8.267680	ppm	0.009427	0.11	48927.200000	Y 377.433
Mn (257.610 nm)	0.023291	ppm	0.000034	0.15	5974.250000	Y 377.433
Mo (202.032 nm)	0.001789	ppm	0.000003	0.14	13.203400	Y 377.433
Na (589.592 nm)	55.541100 o	ppm	0.206304	0.37	362506.000000	Y_R2 488.368
Na H (589.593 nm)	56.594744	ppm	0.482789	0.85	229553.013162	Y_R 488.368
Ni (231.604 nm)	0.001889	ppm	0.000476	25.20	11.105100	Y 377.433
P (213.618 nm)	0.461254	ppm	0.000254	0.06	1070.970000	Y 242.219
Pb (220.353 nm)	-0.000743 u	ppm	0.000103	13.86	5.158810	Y 242.219
S (181.972 nm)	24.197645 o	ppm	0.026456	0.11	10600.819911	Y 377.433
Sb (206.834 nm)	0.002228	ppm	0.001470	65.98	-25.001400	Y 377.433
Se (196.026 nm)	-0.000535 u	ppm	0.000709	> 100.00	10.203300	Y 242.219
Si (288.158 nm)	8.059500	ppm	0.027455	0.34	71737.600000	Y 377.433
Sn (189.925 nm)	-0.000702 u	ppm	0.000132	18.82	6.722850	Y 377.433
Sr (421.552 nm)	0.303527	ppm	0.001575	0.52	64250.249823	Y_R 488.368
Th (288.505 nm)	-0.000832 u	ppm	0.002064	> 100.00	50.409800	Y 377.433
Ti (336.122 nm)	0.003699	ppm	0.000011	0.28	474.862000	Y 377.433
Tl (190.794 nm)	-0.000300 u	ppm	0.000171	56.96	-2.939740	Y 377.433
U (409.013 nm)	-0.006308 u	ppm	0.002487	39.42	-151.738000	Y 377.433
V (292.401 nm)	0.001195	ppm	0.000020	1.66	70.184300	Y 377.433
Zn (206.200 nm)	0.005577	ppm	0.000044	0.79	30.842100	Y 377.433
Zr (343.823 nm)	0.000146	ppm	0.000022	15.24	58.282300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.970487	17404.743185	0.001550	0.16
Y 377.433	0.973366	949266.890760	0.001433	0.15
Y_R 377.433	0.970649	69831.800000	0.002710	0.28
Y_R 488.368	0.989346	39097.000000	0.010927	1.10
Y_R2 488.368	1.012323	77108.282925	0.005215	0.52

Sample Name: CCVH-5699817

Date: 5/13/2019 5:11:23 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.111323	ppm	0.008708	7.82	-2066.042115	Y_R 488.368
Ag (328.068 nm)	-0.000260 u	ppm	0.000042	16.15	-613.551000	Y 377.433
Al (167.019 nm)	43.006700 o	ppm	0.307593	0.72	25755.800000	Y_R 377.433
Al H (396.152 nm)	49.734292	ppm	0.005173	0.01	126912.123047	Y_R 377.433
As (188.980 nm)	0.000107 u	ppm	0.002980	> 100.00	-0.336586	Y 242.219
B (249.678 nm)	0.000734	ppm	0.000056	7.59	11.474800	Y 242.219
Ba (493.408 nm)	0.001699	ppm	0.000211	12.41	836.692000	Y_R 488.368
Be (234.861 nm)	0.000813	ppm	0.000007	0.81	1726.680000	Y_R 488.368
Bi (223.061 nm)	0.999816	ppm	0.000004	0.00	2605.930000	Y 377.433
Ca (315.887 nm)	0.010238	ppm	0.008118	79.30	-88.326040	Y_R 377.433
Cd (214.439 nm)	0.001143	ppm	0.000016	1.43	118.808000	Y 377.433
Co (228.615 nm)	0.004301	ppm	0.000127	2.94	46.041000	Y 242.219
Cr (205.560 nm)	0.001324	ppm	0.000288	21.79	4.272700	Y 377.433
Cu (324.754 nm)	0.008968	ppm	0.000238	2.65	1580.400000	Y 377.433
Fe (238.204 nm)	48.378954 o	ppm	0.064518	0.13	177804.303281	Y_R 377.433
Fe H (259.940 nm)	50.336900	ppm	0.072791	0.14	94369.300000	Y_R 377.433
K (766.491 nm)	0.094828	ppm	0.036564	38.56	-580.841000	Y_R2 488.368
Li (670.783 nm)	0.007113	ppm	0.001228	17.27	-787.096000	Y_R2 488.368
Mg (279.078 nm)	0.029936	ppm	0.002518	8.41	-166.235000	Y 377.433
Mn (257.610 nm)	0.002787	ppm	0.000027	0.98	780.658000	Y 377.433
Mo (202.032 nm)	0.000683	ppm	0.000273	40.03	3.552200	Y 377.433
Na (589.592 nm)	232.406000 o	ppm	0.141654	0.06	1513830.000000	Y_R2 488.368
Na H (589.593 nm)	240.660567	ppm	0.369270	0.15	940676.934576	Y_R 488.368
Ni (231.604 nm)	0.004825	ppm	0.001309	27.12	35.103900	Y 377.433
P (213.618 nm)	-0.001621 u	ppm	0.002121	> 100.00	12.995200	Y 242.219
Pb (220.353 nm)	0.004081	ppm	0.000311	7.62	38.170300	Y 242.219
S (181.972 nm)	4.871185	ppm	0.022473	0.46	2152.521005	Y 377.433
Sb (206.834 nm)	-0.000913 u	ppm	0.001856	> 100.00	-78.229500	Y 377.433
Se (196.026 nm)	-0.001980 u	ppm	0.000158	7.98	0.475251	Y 242.219
Si (288.158 nm)	0.058742	ppm	0.002619	4.46	1352.840000	Y 377.433
Sn (189.925 nm)	0.005379	ppm	0.000787	14.63	19.617600	Y 377.433
Sr (421.552 nm)	0.001970	ppm	0.000040	2.02	532.234209	Y_R 488.368
Th (288.505 nm)	5.004800	ppm	0.016469	0.33	14936.100000	Y 377.433
Ti (336.122 nm)	0.002395	ppm	0.000094	3.94	149.420000	Y 377.433
Tl (190.794 nm)	-0.001611 u	ppm	0.000496	30.78	-7.324040	Y 377.433
U (409.013 nm)	10.145600	ppm	0.000236	0.00	47694.900000	Y 377.433
V (292.401 nm)	0.004473	ppm	0.000098	2.20	12.792100	Y 377.433
Zn (206.200 nm)	0.003751	ppm	0.000934	24.89	21.322100	Y 377.433
Zr (343.823 nm)	-0.003016 u	ppm	0.000114	3.79	-222.329000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.972328	17437.765888	0.002634	0.27
Y 377.433	0.964892	941003.033667	0.001278	0.13
Y_R 377.433	0.969576	69754.700000	0.001146	0.12
Y_R 488.368	0.997063	39402.000000	0.001807	0.18
Y_R2 488.368	1.009911	76924.566104	0.004844	0.48

Sample Name: CCV-5699804

Date: 5/13/2019 5:14:45 PM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.039503	ppm	0.023078	2.22	199.637664	Y_R 488.368
Ag (328.068 nm)	0.491607	ppm	0.000472	0.10	22754.900000	Y 377.433
Al (167.019 nm)	0.489586	ppm	0.001129	0.23	294.958000	Y_R 377.433
Al H (396.152 nm)	0.431795 u	ppm	0.002437	0.56	1468.194412	Y_R 377.433
As (188.980 nm)	0.977300	ppm	0.000816	0.08	1170.580000	Y 242.219
B (249.678 nm)	0.488166	ppm	0.000398	0.08	12163.300000	Y 242.219
Ba (493.408 nm)	0.493012	ppm	0.001251	0.25	55731.400000	Y_R 488.368
Be (234.861 nm)	0.481593	ppm	0.000737	0.15	139370.000000	Y_R 488.368
Bi (223.061 nm)	-0.006218 u	ppm	0.000484	7.79	5.154670	Y 377.433
Ca (315.887 nm)	5.017135	ppm	0.010149	0.20	4135.046750	Y_R 377.433
Cd (214.439 nm)	0.499490	ppm	0.001943	0.39	30452.900000	Y 377.433
Co (228.615 nm)	0.495617	ppm	0.001028	0.21	9870.390000	Y 242.219
Cr (205.560 nm)	0.499275	ppm	0.000650	0.13	7435.260000	Y 377.433
Cu (324.754 nm)	0.493710	ppm	0.000916	0.19	33267.900000	Y 377.433
Fe (238.204 nm)	2.471336	ppm	0.008972	0.36	9097.796344	Y_R 377.433
Fe H (259.940 nm)	2.382100 u	ppm	0.010769	0.45	4820.500000	Y_R 377.433
K (766.491 nm)	48.063600	ppm	0.065620	0.14	54008.000000	Y_R2 488.368
Li (670.783 nm)	0.979212	ppm	0.000025	0.00	29039.200000	Y_R2 488.368
Mg (279.078 nm)	19.461700	ppm	0.022161	0.11	115138.000000	Y 377.433
Mn (257.610 nm)	0.498829	ppm	0.000636	0.13	126426.000000	Y 377.433
Mo (202.032 nm)	0.505213	ppm	0.001463	0.29	4404.330000	Y 377.433
Na (589.592 nm)	4.770910	ppm	0.016686	0.35	32926.700000	Y_R2 488.368
Na H (589.593 nm)	4.644963 u	ppm	0.063431	1.37	29304.055131	Y_R 488.368
Ni (231.604 nm)	0.508102	ppm	0.001043	0.21	3766.540000	Y 377.433
P (213.618 nm)	0.960748	ppm	0.003598	0.37	2212.650000	Y 242.219
Pb (220.353 nm)	0.987105	ppm	0.003913	0.40	3020.130000	Y 242.219
S (181.972 nm)	-0.025044 u	ppm	0.006117	24.42	13.243630	Y 377.433
Sb (206.834 nm)	1.025640	ppm	0.000767	0.07	2726.860000	Y 377.433
Se (196.026 nm)	0.967616	ppm	0.001076	0.11	911.976000	Y 242.219
Si (288.158 nm)	4.978990	ppm	0.023400	0.47	44637.600000	Y 377.433
Sn (189.925 nm)	1.000820	ppm	0.001541	0.15	2130.490000	Y 377.433
Sr (421.552 nm)	0.485925	ppm	0.001702	0.35	102790.409170	Y_R 488.368
Th (288.505 nm)	0.006292	ppm	0.000193	3.07	89.078900	Y 377.433
Ti (336.122 nm)	0.498707	ppm	0.000361	0.07	71447.900000	Y 377.433
Tl (190.794 nm)	1.012090	ppm	0.000529	0.05	2333.370000	Y 377.433
U (409.013 nm)	-0.005434 u	ppm	0.000889	16.37	-177.603000	Y 377.433
V (292.401 nm)	0.495200	ppm	0.000660	0.13	20814.800000	Y 377.433
Zn (206.200 nm)	0.498609	ppm	0.000118	0.02	2600.800000	Y 377.433
Zr (343.823 nm)	0.495503	ppm	0.000406	0.08	67379.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.979860	17572.842647	0.000155	0.02
Y 377.433	0.977274	953078.286128	0.000807	0.08
Y_R 377.433	0.981868	70639.000000	0.000630	0.06
Y_R 488.368	1.000500	39538.000000	0.001973	0.20
Y_R2 488.368	1.005492	76587.984249	0.000870	0.09

Sample Name: CCB

Date: 5/13/2019 5:18:09 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.058960 Z	ppm	0.010110	17.15	-2193.860405 Z	Y_R 488.368
Ag (328.068 nm)	0.000387	ppm	0.000109	28.21	-330.968000	Y 377.433
Al (167.019 nm)	0.005687	ppm	0.000990	17.42	3.736410	Y_R 377.433
Al H (396.152 nm)	-0.111910 Zu	ppm	0.002669	2.38	41.276328 Z	Y_R 377.433
As (188.980 nm)	-0.000404 u	ppm	0.000728	> 100.00	-0.527972	Y 242.219
B (249.678 nm)	0.000352	ppm	0.000157	44.42	76.293300	Y 242.219
Ba (493.408 nm)	-0.000396 u	ppm	0.000047	11.88	557.736000	Y_R 488.368
Be (234.861 nm)	0.000010	ppm	0.000000	2.60	-18.072800	Y_R 488.368
Bi (223.061 nm)	-0.002142 u	ppm	0.000482	22.52	15.231400	Y 377.433
Ca (315.887 nm)	0.013918	ppm	0.003615	25.98	-85.223376	Y_R 377.433
Cd (214.439 nm)	0.000042	ppm	0.000020	46.72	2.813110	Y 377.433
Co (228.615 nm)	0.000654	ppm	0.000144	21.93	-26.799200	Y 242.219
Cr (205.560 nm)	0.000017 u	ppm	0.000177	> 100.00	-1.766690	Y 377.433
Cu (324.754 nm)	0.000565	ppm	0.000195	34.58	634.911000	Y 377.433
Fe (238.204 nm)	0.003941	ppm	0.001245	31.59	30.335279	Y_R 377.433
Fe H (259.940 nm)	-0.190388 u	ppm	0.004183	2.20	16.753700	Y_R 377.433
K (766.491 nm)	0.002547 u	ppm	0.012275	> 100.00	-685.858000	Y_R2 488.368
Li (670.783 nm)	0.003871	ppm	0.000808	20.86	-886.583000	Y_R2 488.368
Mg (279.078 nm)	0.000252 u	ppm	0.000546	> 100.00	23.940500	Y 377.433
Mn (257.610 nm)	-0.000043 u	ppm	0.000035	81.45	63.792400	Y 377.433
Mo (202.032 nm)	0.000213	ppm	0.000163	76.46	-0.543068	Y 377.433
Na (589.592 nm)	0.109375	ppm	0.010683	9.77	1594.970000	Y_R2 488.368
Na H (589.593 nm)	-0.715869 u	ppm	0.044186	6.17	8102.323520	Y_R 488.368
Ni (231.604 nm)	-0.000238 u	ppm	0.000273	> 100.00	-4.671780	Y 377.433
P (213.618 nm)	-0.001918 u	ppm	0.000831	43.34	12.317100	Y 242.219
Pb (220.353 nm)	-0.001744 u	ppm	0.000105	6.04	2.158250	Y 242.219
S (181.972 nm)	-0.028369 u	ppm	0.007397	26.07	10.752041	Y 377.433
Sb (206.834 nm)	0.003202	ppm	0.000172	5.38	-22.339200	Y 377.433
Se (196.026 nm)	0.000441	ppm	0.000249	56.49	11.134000	Y 242.219
Si (288.158 nm)	0.014146	ppm	0.000923	6.53	960.516000	Y 377.433
Sn (189.925 nm)	-0.000327 u	ppm	0.000775	> 100.00	7.517220	Y 377.433
Sr (421.552 nm)	0.000077 u	ppm	0.000218	> 100.00	132.295984	Y_R 488.368
Th (288.505 nm)	0.000120	ppm	0.000057	47.36	52.648800	Y 377.433
Ti (336.122 nm)	0.000163	ppm	0.000067	41.01	-171.092000	Y 377.433
Tl (190.794 nm)	0.000376 u	ppm	0.001859	> 100.00	-1.351000	Y 377.433
U (409.013 nm)	-0.005107 u	ppm	0.003668	71.82	-137.664000	Y 377.433
V (292.401 nm)	-0.000240 u	ppm	0.000003	1.05	9.219560	Y 377.433
Zn (206.200 nm)	-0.000325 u	ppm	0.000061	18.61	0.073880	Y 377.433
Zr (343.823 nm)	0.000097	ppm	0.000019	19.59	50.966500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.984560	17657.131064	0.002046	0.21
Y 377.433	0.985276	960881.854302	0.002694	0.27
Y_R 377.433	0.978990	70431.900000	0.000588	0.06
Y_R 488.368	0.995476	39339.300000	0.001614	0.16
Y_R2 488.368	1.009232	76872.862740	0.005814	0.58

Sample Name: CCVL-5699389

Date: 5/13/2019 5:21:31 PM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.078302 Q	ppm	0.002686	3.43	-2146.647103 Q	Y_R 488.368
Ag (328.068 nm)	0.009639	ppm	0.000187	1.94	103.300000	Y 377.433
Al (167.019 nm)	0.090595	ppm	0.000882	0.97	54.588700	Y_R 377.433
Al H (396.152 nm)	-0.014146 u	ppm	0.004196	29.67	291.694290	Y_R 377.433
As (188.980 nm)	0.013342	ppm	0.003712	27.82	15.936300	Y 242.219
B (249.678 nm)	0.095864	ppm	0.000141	0.15	2439.640000	Y 242.219
Ba (493.408 nm)	0.009778	ppm	0.000339	3.47	1695.170000	Y_R 488.368
Be (234.861 nm)	0.000954	ppm	0.000028	2.94	257.338000	Y_R 488.368
Bi (223.061 nm)	0.098498	ppm	0.000992	1.01	274.625000	Y 377.433
Ca (315.887 nm)	0.207974	ppm	0.004338	2.09	78.456122	Y_R 377.433
Cd (214.439 nm)	0.005024	ppm	0.000005	0.10	306.594000	Y 377.433
Co (228.615 nm)	0.010607	ppm	0.000086	0.81	172.185000	Y 242.219
Cr (205.560 nm)	0.010333	ppm	0.000001	0.01	151.962000	Y 377.433
Cu (324.754 nm)	0.015338	ppm	0.000267	1.74	1612.780000	Y 377.433
Fe (238.204 nm)	0.103648	ppm	0.001308	1.26	396.748674	Y_R 377.433
Fe H (259.940 nm)	-0.087152 u	ppm	0.000054	0.06	209.532000	Y_R 377.433
K (766.491 nm)	2.980860	ppm	0.023139	0.78	2703.490000	Y_R2 488.368
Li (670.783 nm)	0.024396	ppm	0.000945	3.88	-256.815000	Y_R2 488.368
Mg (279.078 nm)	0.191579	ppm	0.000940	0.49	1154.730000	Y 377.433
Mn (257.610 nm)	0.010235	ppm	0.000037	0.36	2667.250000	Y 377.433
Mo (202.032 nm)	0.019003	ppm	0.000312	1.64	163.353000	Y 377.433
Na (589.592 nm)	1.015180	ppm	0.012253	1.21	7511.890000	Y_R2 488.368
Na H (589.593 nm)	0.096805 u	ppm	0.003731	3.85	11252.195442	Y_R 488.368
Ni (231.604 nm)	0.041562	ppm	0.000485	1.17	305.330000	Y 377.433
P (213.618 nm)	2.756090 o	ppm	0.006217	0.23	6316.210000	Y 242.219
Pb (220.353 nm)	0.007526	ppm	0.001504	19.99	30.446400	Y 242.219
S (181.972 nm)	0.064911 Q	ppm	0.000410	0.63	51.548964 Q	Y 377.433
Sb (206.834 nm)	0.020171	ppm	0.000184	0.91	23.255600	Y 377.433
Se (196.026 nm)	0.018417	ppm	0.000609	3.30	27.868200	Y 242.219
Si (288.158 nm)	0.616118	ppm	0.041030	6.66	6256.220000	Y 377.433
Sn (189.925 nm)	0.099790	ppm	0.000545	0.55	219.819000	Y 377.433
Sr (421.552 nm)	0.009864	ppm	0.000005	0.05	2200.325027	Y_R 488.368
Th (288.505 nm)	0.015927	ppm	0.000966	6.07	100.199000	Y 377.433
Ti (336.122 nm)	0.009792	ppm	0.000035	0.36	1212.300000	Y 377.433
Tl (190.794 nm)	0.013551	ppm	0.000216	1.59	29.018200	Y 377.433
U (409.013 nm)	0.055196	ppm	0.000713	1.29	145.441000	Y 377.433
V (292.401 nm)	0.009548	ppm	0.000110	1.15	418.966000	Y 377.433
Zn (206.200 nm)	0.019815	ppm	0.000081	0.41	105.056000	Y 377.433
Zr (343.823 nm)	0.010724	ppm	0.000215	2.00	1495.340000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.996689	17874.650152	0.001932	0.19
Y 377.433	0.997013	972328.459540	0.002784	0.28
Y_R 377.433	0.990468	71257.700000	0.000091	0.01
Y_R 488.368	1.004400	39691.900000	0.001041	0.10
Y_R2 488.368	1.026978	78224.548124	0.006446	0.63

Sample Name: MB 280-456953/1-A

Date: 5/13/2019 5:24:54 PM

Rack:Tube: 1:51

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.057354 n	ppm	0.005949	10.37	-2197.780525	Y_R 488.368
Ag (328.068 nm)	0.000005 u	ppm	0.000127	> 100.00	-348.774000	Y 377.433
Al (167.019 nm)	0.007180	ppm	0.002068	28.80	4.807880	Y_R 377.433
Al H (396.152 nm)	-0.113416 u	ppm	0.003769	3.32	37.424941	Y_R 377.433
As (188.980 nm)	0.000591	ppm	0.000716	> 100.00	0.660999	Y 242.219
B (249.678 nm)	0.000315	ppm	0.000352	> 100.00	74.981900	Y 242.219
Ba (493.408 nm)	-0.000168 u	ppm	0.000007	4.29	583.422000	Y_R 488.368
Be (234.861 nm)	-0.000017 u	ppm	0.000005	30.18	-18.346000	Y_R 488.368
Bi (223.061 nm)	-0.000633 u	ppm	0.001204	> 100.00	19.162900	Y 377.433
Ca (315.887 nm)	0.046359	ppm	0.000251	0.54	-57.861341	Y_R 377.433
Cd (214.439 nm)	-0.000043 u	ppm	0.000005	11.76	-2.167540	Y 377.433
Co (228.615 nm)	0.000434	ppm	0.000106	24.50	-31.208000	Y 242.219
Cr (205.560 nm)	0.000155	ppm	0.000194	> 100.00	0.226412	Y 377.433
Cu (324.754 nm)	0.000715	ppm	0.000001	0.13	645.075000	Y 377.433
Fe (238.204 nm)	0.243517	ppm	0.005515	2.26	910.755912	Y_R 377.433
Fe H (259.940 nm)	0.054518 u	ppm	0.003653	6.70	474.081000	Y_R 377.433
K (766.491 nm)	0.022132 u	ppm	0.102057	> 100.00	-663.570000	Y_R2 488.368
Li (670.783 nm)	0.005529	ppm	0.002370	42.86	-835.692000	Y_R2 488.368
Mg (279.078 nm)	0.003259	ppm	0.000529	16.23	41.424500	Y 377.433
Mn (257.610 nm)	0.001816	ppm	0.000020	1.12	534.768000	Y 377.433
Mo (202.032 nm)	0.000144 u	ppm	0.000221	> 100.00	-1.152900	Y 377.433
Na (589.592 nm)	0.052020	ppm	0.011449	22.01	1222.400000	Y_R2 488.368
Na H (589.593 nm)	-1.013870 u	ppm	0.003039	0.30	6951.374089	Y_R 488.368
Ni (231.604 nm)	0.000727	ppm	0.000606	83.33	2.492960	Y 377.433
P (213.618 nm)	-0.000663 u	ppm	0.001457	> 100.00	15.184200	Y 242.219
Pb (220.353 nm)	-0.001191 u	ppm	0.000923	77.49	3.855690	Y 242.219
S (181.972 nm)	-0.023117 u	ppm	0.001787	7.73	13.051878	Y 377.433
Sb (206.834 nm)	0.001973	ppm	0.002089	> 100.00	-25.666400	Y 377.433
Se (196.026 nm)	0.000086 u	ppm	0.002054	> 100.00	10.759200	Y 242.219
Si (288.158 nm)	0.014862	ppm	0.001006	6.77	966.814000	Y 377.433
Sn (189.925 nm)	-0.000552 u	ppm	0.000056	10.12	7.041070	Y 377.433
Sr (421.552 nm)	0.000051	ppm	0.000046	91.38	126.719342	Y_R 488.368
Th (288.505 nm)	-0.001007 u	ppm	0.000135	13.37	49.277200	Y 377.433
Ti (336.122 nm)	0.000090	ppm	0.000003	3.60	-181.731000	Y 377.433
Tl (190.794 nm)	-0.000711 u	ppm	0.000668	94.02	-3.868470	Y 377.433
U (409.013 nm)	-0.003356 u	ppm	0.001826	54.43	-129.192000	Y 377.433
V (292.401 nm)	-0.000400 u	ppm	0.000091	22.73	2.472830	Y 377.433
Zn (206.200 nm)	0.002260	ppm	0.000292	12.91	13.550400	Y 377.433
Zr (343.823 nm)	0.000454	ppm	0.000053	11.62	100.235000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.993089	17810.091483	0.002091	0.21
Y 377.433	0.995957	971298.811880	0.001239	0.12
Y_R 377.433	0.982514	70685.400000	0.004057	0.41
Y_R 488.368	1.007930	39831.300000	0.002602	0.26
Y_R2 488.368	1.025834	78137.430276	0.007729	0.75

Sample Name: LCS 280-456953/2-A

Date: 5/13/2019 5:28:16 PM

Rack:Tube: 1:52

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.052511 n	ppm	0.009347	0.89	231.390155	Y_R 488.368
Ag (328.068 nm)	-0.000699 u	ppm	0.000055	7.89	-491.245000	Y 377.433
Al (167.019 nm)	9.414110 o	ppm	0.017961	0.19	5638.010000	Y_R 377.433
Al H (396.152 nm)	10.374328	ppm	0.006797	0.07	26837.532706	Y_R 377.433
As (188.980 nm)	2.020520	ppm	0.005454	0.27	2420.130000	Y 242.219
B (249.678 nm)	1.002640	ppm	0.001726	0.17	24900.800000	Y 242.219
Ba (493.408 nm)	2.042310 o	ppm	0.003898	0.19	228965.000000	Y_R 488.368
Be (234.861 nm)	0.997238	ppm	0.006716	0.67	288792.000000	Y_R 488.368
Bi (223.061 nm)	2.017980	ppm	0.008544	0.42	5223.420000	Y 377.433
Ca (315.887 nm)	51.102062 o	ppm	0.042475	0.08	43005.737633	Y_R 377.433
Cd (214.439 nm)	1.004580	ppm	0.002043	0.20	61252.300000	Y 377.433
Co (228.615 nm)	0.971091	ppm	0.002863	0.29	19380.100000	Y 242.219
Cr (205.560 nm)	1.018400	ppm	0.005968	0.59	15166.700000	Y 377.433
Cu (324.754 nm)	0.991092	ppm	0.004487	0.45	66217.700000	Y 377.433
Fe (238.204 nm)	10.400695 o	ppm	0.004032	0.04	38237.502824	Y_R 377.433
Fe H (259.940 nm)	10.700100	ppm	0.004394	0.04	20353.300000	Y_R 377.433
K (766.491 nm)	50.176100	ppm	0.211237	0.42	56412.100000	Y_R2 488.368
Li (670.783 nm)	1.010890	ppm	0.002465	0.24	30011.200000	Y_R2 488.368
Mg (279.078 nm)	50.044800 o	ppm	0.103212	0.21	295974.000000	Y 377.433
Mn (257.610 nm)	1.019550	ppm	0.001162	0.11	258322.000000	Y 377.433
Mo (202.032 nm)	1.033330	ppm	0.000272	0.03	9010.860000	Y 377.433
Na (589.592 nm)	49.052900 o	ppm	0.044598	0.09	324294.000000	Y_R2 488.368
Na H (589.593 nm)	49.958541	ppm	0.015466	0.03	205914.628871	Y_R 488.368
Ni (231.604 nm)	0.985850	ppm	0.003023	0.31	7311.140000	Y 377.433
P (213.618 nm)	20.049400 o	ppm	0.041290	0.21	45843.000000	Y 242.219
Pb (220.353 nm)	0.990989	ppm	0.002064	0.21	3032.920000	Y 242.219
S (181.972 nm)	9.630760	ppm	0.041641	0.43	4235.208120	Y 377.433
Sb (206.834 nm)	0.001319 u	ppm	0.002767	> 100.00	-11.225900	Y 377.433
Se (196.026 nm)	1.987940	ppm	0.002038	0.10	1861.450000	Y 242.219
Si (288.158 nm)	2.150280	ppm	0.012796	0.60	19752.700000	Y 377.433
Sn (189.925 nm)	2.046570	ppm	0.012919	0.63	4348.040000	Y 377.433
Sr (421.552 nm)	1.000185	ppm	0.003364	0.34	211452.124486	Y_R 488.368
Th (288.505 nm)	1.029720	ppm	0.003185	0.31	3151.230000	Y 377.433
Ti (336.122 nm)	1.034390	ppm	0.002053	0.20	148531.000000	Y 377.433
Tl (190.794 nm)	2.016600	ppm	0.000602	0.03	4650.990000	Y 377.433
U (409.013 nm)	2.089450	ppm	0.002983	0.14	9681.540000	Y 377.433
V (292.401 nm)	1.025060	ppm	0.001939	0.19	43028.600000	Y 377.433
Zn (206.200 nm)	0.494682	ppm	0.001484	0.30	2580.330000	Y 377.433
Zr (343.823 nm)	0.509359	ppm	0.001181	0.23	69287.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.965736	17319.531059	0.003916	0.41
Y 377.433	0.966068	942149.419596	0.000168	0.02
Y_R 377.433	0.974003	70073.100000	0.009671	0.99
Y_R 488.368	0.992057	39204.200000	0.008684	0.88
Y_R2 488.368	1.006231	76644.262710	0.000704	0.07

Sample Name: 280-122974-A-3-A

Date: 5/13/2019 5:31:38 PM

Rack:Tube: 1:53

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.035523 n	ppm	0.013228	37.24	-2251.070043	Y_R 488.368
Ag (328.068 nm)	0.000674	ppm	0.000396	58.70	-319.143000	Y 377.433
Al (167.019 nm)	0.009972	ppm	0.002363	23.69	6.661900	Y_R 377.433
Al H (396.152 nm)	-0.099286 u	ppm	0.008680	8.74	96.347686	Y_R 377.433
As (188.980 nm)	0.002310	ppm	0.000957	41.44	2.718470	Y 242.219
B (249.678 nm)	0.014522	ppm	0.000650	4.48	426.136000	Y 242.219
Ba (493.408 nm)	0.036830	ppm	0.000274	0.74	4731.480000	Y_R 488.368
Be (234.861 nm)	-0.000015 u	ppm	0.000024	> 100.00	-10.337000	Y_R 488.368
Bi (223.061 nm)	-0.001564 u	ppm	0.000443	28.34	16.806000	Y 377.433
Ca (315.887 nm)	51.490222 o	ppm	0.034402	0.07	43332.527835	Y_R 377.433
Cd (214.439 nm)	-0.000069 u	ppm	0.000038	55.47	-3.495030	Y 377.433
Co (228.615 nm)	0.001623	ppm	0.000022	1.35	-7.450320	Y 242.219
Cr (205.560 nm)	0.009705	ppm	0.000036	0.37	142.528000	Y 377.433
Cu (324.754 nm)	0.001147	ppm	0.000078	6.81	637.487000	Y 377.433
Fe (238.204 nm)	0.491975	ppm	0.001315	0.27	1823.817257	Y_R 377.433
Fe H (259.940 nm)	0.312448 u	ppm	0.001480	0.47	955.729000	Y_R 377.433
K (766.491 nm)	5.468630	ppm	0.058741	1.07	5534.590000	Y_R2 488.368
Li (670.783 nm)	0.006316	ppm	0.001677	26.54	-811.548000	Y_R2 488.368
Mg (279.078 nm)	11.807200	ppm	0.005539	0.05	69863.500000	Y 377.433
Mn (257.610 nm)	0.007504	ppm	0.000015	0.20	1975.310000	Y 377.433
Mo (202.032 nm)	0.002111	ppm	0.000133	6.31	16.009200	Y 377.433
Na (589.592 nm)	15.673000 o	ppm	0.024856	0.16	102988.000000	Y_R2 488.368
Na H (589.593 nm)	15.367725	ppm	0.017520	0.11	70279.674707	Y_R 488.368
Ni (231.604 nm)	0.000609	ppm	0.000693	> 100.00	1.629340	Y 377.433
P (213.618 nm)	0.042732	ppm	0.000335	0.78	114.372000	Y 242.219
Pb (220.353 nm)	-0.001479 u	ppm	0.001791	> 100.00	3.008180	Y 242.219
S (181.972 nm)	19.577029 o	ppm	0.004040	0.02	8580.958084	Y 377.433
Sb (206.834 nm)	0.002124	ppm	0.000301	14.18	-25.057800	Y 377.433
Se (196.026 nm)	0.002757	ppm	0.002367	85.84	13.205100	Y 242.219
Si (288.158 nm)	14.770000 o	ppm	0.132437	0.90	130772.000000	Y 377.433
Sn (189.925 nm)	0.000473 u	ppm	0.001983	> 100.00	9.213060	Y 377.433
Sr (421.552 nm)	0.257344	ppm	0.000039	0.02	54491.901792	Y_R 488.368
Th (288.505 nm)	-0.000884 u	ppm	0.002633	> 100.00	50.315500	Y 377.433
Ti (336.122 nm)	0.000415	ppm	0.000072	17.28	28.569400	Y 377.433
Tl (190.794 nm)	0.000787	ppm	0.000917	> 100.00	-0.421147	Y 377.433
U (409.013 nm)	-0.003657 u	ppm	0.003899	> 100.00	-140.603000	Y 377.433
V (292.401 nm)	0.009432	ppm	0.000060	0.64	415.688000	Y 377.433
Zn (206.200 nm)	0.001983	ppm	0.000160	8.09	12.106800	Y 377.433
Zr (343.823 nm)	0.000413	ppm	0.000029	7.04	95.321600	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.973823	17464.577394	0.001148	0.12
Y 377.433	0.975886	951724.696269	0.000132	0.01
Y_R 377.433	0.968336	69665.400000	0.000850	0.09
Y_R 488.368	0.984367	38900.300000	0.003170	0.32
Y_R2 488.368	0.996839	75928.903306	0.002502	0.25

Sample Name: 280-122974-A-3-Osd@5

Date: 5/13/2019 5:35:00 PM

Rack:Tube: 1:54

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.072203 n	ppm	0.006282	8.70	-2161.533791	Y_R 488.368
Ag (328.068 nm)	0.000264	ppm	0.000248	93.84	-337.090000	Y 377.433
Al (167.019 nm)	0.001766	ppm	0.001772	> 100.00	1.488790	Y_R 377.433
Al H (396.152 nm)	-0.115166 u	ppm	0.003775	3.28	37.572673	Y_R 377.433
As (188.980 nm)	-0.000001 u	ppm	0.000145	> 100.00	-0.046402	Y 242.219
B (249.678 nm)	0.003187	ppm	0.000377	11.82	146.223000	Y 242.219
Ba (493.408 nm)	0.007120	ppm	0.000302	4.24	1400.440000	Y_R 488.368
Be (234.861 nm)	0.000006	ppm	0.000005	79.74	-15.128000	Y_R 488.368
Bi (223.061 nm)	-0.000781 u	ppm	0.001836	> 100.00	18.763300	Y 377.433
Ca (315.887 nm)	10.369262	ppm	0.022771	0.22	8649.004341	Y_R 377.433
Cd (214.439 nm)	-0.000088 u	ppm	0.000096	> 100.00	-5.015400	Y 377.433
Co (228.615 nm)	0.000533	ppm	0.000228	42.89	-29.230500	Y 242.219
Cr (205.560 nm)	0.002248	ppm	0.000131	5.85	31.461700	Y 377.433
Cu (324.754 nm)	0.000657	ppm	0.000030	4.51	633.033000	Y 377.433
Fe (238.204 nm)	0.134307	ppm	0.001228	0.91	509.418539	Y_R 377.433
Fe H (259.940 nm)	-0.057656 u	ppm	0.003285	5.70	264.612000	Y_R 377.433
K (766.491 nm)	1.081870	ppm	0.165909	15.34	542.418000	Y_R2 488.368
Li (670.783 nm)	0.004061	ppm	0.000954	23.49	-880.744000	Y_R2 488.368
Mg (279.078 nm)	2.377790	ppm	0.005291	0.22	14087.400000	Y 377.433
Mn (257.610 nm)	0.001732	ppm	0.000011	0.61	513.483000	Y 377.433
Mo (202.032 nm)	0.000527	ppm	0.000251	47.66	2.194890	Y 377.433
Na (589.592 nm)	3.219440	ppm	0.000726	0.02	21855.200000	Y_R2 488.368
Na H (589.593 nm)	2.291887 u	ppm	0.030526	1.33	19729.968506	Y_R 488.368
Ni (231.604 nm)	0.000119	ppm	0.000104	87.17	-2.022970	Y 377.433
P (213.618 nm)	0.006516	ppm	0.000694	10.64	31.593700	Y 242.219
Pb (220.353 nm)	-0.001588 u	ppm	0.000801	50.42	2.643820	Y 242.219
S (181.972 nm)	3.914989	ppm	0.014805	0.38	1734.532438	Y 377.433
Sb (206.834 nm)	0.001129 u	ppm	0.002482	> 100.00	-27.848400	Y 377.433
Se (196.026 nm)	-0.001935 u	ppm	0.002880	> 100.00	8.897440	Y 242.219
Si (288.158 nm)	2.957910	ppm	0.012418	0.42	26857.600000	Y 377.433
Sn (189.925 nm)	-0.000568 u	ppm	0.000773	> 100.00	7.006440	Y 377.433
Sr (421.552 nm)	0.051374	ppm	0.000353	0.69	10971.103224	Y_R 488.368
Th (288.505 nm)	-0.000321 u	ppm	0.002234	> 100.00	51.430700	Y 377.433
Ti (336.122 nm)	0.000245	ppm	0.000043	17.72	-126.660000	Y 377.433
Tl (190.794 nm)	-0.000548 u	ppm	0.001029	> 100.00	-3.490000	Y 377.433
U (409.013 nm)	-0.003819 u	ppm	0.003189	83.48	-133.497000	Y 377.433
V (292.401 nm)	0.001666	ppm	0.000025	1.52	88.952900	Y 377.433
Zn (206.200 nm)	0.002428	ppm	0.000058	2.38	14.425100	Y 377.433
Zr (343.823 nm)	-0.000026 u	ppm	0.000052	> 100.00	34.617700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.992595	17801.234962	0.002572	0.26
Y 377.433	0.994094	969482.143744	0.005168	0.52
Y_R 377.433	0.985662	70911.900000	0.000815	0.08
Y_R 488.368	1.007170	39801.300000	0.007606	0.76
Y_R2 488.368	1.015399	77342.544917	0.003912	0.39

Sample Name: 280-122974-A-3-B MS

Date: 5/13/2019 5:38:23 PM

Rack:Tube: 1:55

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.023241 n	ppm	0.005263	0.51	159.943573	Y_R 488.368
Ag (328.068 nm)	-0.000723 u	ppm	0.000032	4.47	-493.199000	Y 377.433
Al (167.019 nm)	9.160710 o	ppm	0.036535	0.40	5486.490000	Y_R 377.433
Al H (396.152 nm)	10.314639	ppm	0.010275	0.10	26707.062595	Y_R 377.433
As (188.980 nm)	2.016030	ppm	0.007517	0.37	2414.750000	Y 242.219
B (249.678 nm)	1.026950	ppm	0.000278	0.03	25501.100000	Y 242.219
Ba (493.408 nm)	2.051500 o	ppm	0.007441	0.36	230003.000000	Y_R 488.368
Be (234.861 nm)	0.995016	ppm	0.002868	0.29	288151.000000	Y_R 488.368
Bi (223.061 nm)	2.000470	ppm	0.004195	0.21	5178.290000	Y 377.433
Ca (315.887 nm)	101.011944 o	ppm	0.267095	0.26	85102.276525	Y_R 377.433
Cd (214.439 nm)	0.984733	ppm	0.000406	0.04	60042.600000	Y 377.433
Co (228.615 nm)	0.949997	ppm	0.001135	0.12	18958.800000	Y 242.219
Cr (205.560 nm)	1.016180	ppm	0.000455	0.04	15133.500000	Y 377.433
Cu (324.754 nm)	0.987307	ppm	0.003835	0.39	65929.700000	Y 377.433
Fe (238.204 nm)	10.437139 o	ppm	0.016199	0.16	38371.430917	Y_R 377.433
Fe H (259.940 nm)	10.726200	ppm	0.011385	0.11	20402.000000	Y_R 377.433
K (766.491 nm)	55.639300	ppm	0.183220	0.33	62629.300000	Y_R2 488.368
Li (670.783 nm)	1.011750	ppm	0.003110	0.31	30037.700000	Y_R2 488.368
Mg (279.078 nm)	61.127700 o	ppm	0.014119	0.02	361532.000000	Y 377.433
Mn (257.610 nm)	1.006840	ppm	0.000352	0.03	255103.000000	Y 377.433
Mo (202.032 nm)	1.024860	ppm	0.000465	0.05	8937.010000	Y 377.433
Na (589.592 nm)	63.166200 o	ppm	0.272000	0.43	416188.000000	Y_R2 488.368
Na H (589.593 nm)	66.033510	ppm	0.237089	0.36	268030.194813	Y_R 488.368
Ni (231.604 nm)	0.961473	ppm	0.002138	0.22	7130.310000	Y 377.433
P (213.618 nm)	19.841200 o	ppm	0.009578	0.05	45366.900000	Y 242.219
Pb (220.353 nm)	0.974741	ppm	0.002357	0.24	2983.280000	Y 242.219
S (181.972 nm)	29.480132 o	ppm	0.051258	0.17	12912.019955	Y 377.433
Sb (206.834 nm)	0.001036	ppm	0.000313	30.23	-11.957600	Y 377.433
Se (196.026 nm)	1.965530	ppm	0.003440	0.17	1840.560000	Y 242.219
Si (288.158 nm)	16.863800 o	ppm	0.042880	0.25	149192.000000	Y 377.433
Sn (189.925 nm)	2.039530	ppm	0.001989	0.10	4333.100000	Y 377.433
Sr (421.552 nm)	1.243809 o	ppm	0.003976	0.32	262929.093265	Y_R 488.368
Th (288.505 nm)	1.015040	ppm	0.000474	0.05	3107.470000	Y 377.433
Ti (336.122 nm)	1.026030	ppm	0.000088	0.01	147490.000000	Y 377.433
Tl (190.794 nm)	1.979360	ppm	0.003967	0.20	4564.970000	Y 377.433
U (409.013 nm)	2.067720	ppm	0.008509	0.41	9569.860000	Y 377.433
V (292.401 nm)	1.025850	ppm	0.000682	0.07	43063.400000	Y 377.433
Zn (206.200 nm)	0.486917	ppm	0.000741	0.15	2539.860000	Y 377.433
Zr (343.823 nm)	0.503353	ppm	0.000126	0.02	68471.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.957761	17176.520384	0.001397	0.15
Y 377.433	0.959529	935772.424677	0.000788	0.08
Y_R 377.433	0.963114	69289.800000	0.000442	0.05
Y_R 488.368	0.982902	38842.400000	0.001418	0.14
Y_R2 488.368	0.997755	75998.667530	0.001381	0.14

Sample Name: 280-122974-A-3-C MSD

Date: 5/13/2019 5:41:46 PM

Rack:Tube: 1:56

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.030085 n	ppm	0.006861	0.67	176.650290	Y_R 488.368
Ag (328.068 nm)	-0.000514 u	ppm	0.000086	16.79	-482.729000	Y 377.433
Al (167.019 nm)	9.236260 o	ppm	0.005978	0.06	5531.730000	Y_R 377.433
Al H (396.152 nm)	10.284597	ppm	0.040556	0.39	26630.813309	Y_R 377.433
As (188.980 nm)	2.031130	ppm	0.009070	0.45	2432.820000	Y 242.219
B (249.678 nm)	1.029610	ppm	0.001275	0.12	25567.000000	Y 242.219
Ba (493.408 nm)	2.052250 o	ppm	0.003365	0.16	230087.000000	Y_R 488.368
Be (234.861 nm)	0.991233	ppm	0.005408	0.55	287058.000000	Y_R 488.368
Bi (223.061 nm)	2.002900	ppm	0.011369	0.57	5184.560000	Y 377.433
Ca (315.887 nm)	101.747398 o	ppm	0.270313	0.27	85722.595570	Y_R 377.433
Cd (214.439 nm)	0.984840	ppm	0.002968	0.30	60049.100000	Y 377.433
Co (228.615 nm)	0.950834	ppm	0.000902	0.09	18975.500000	Y 242.219
Cr (205.560 nm)	1.016790	ppm	0.005494	0.54	15142.600000	Y 377.433
Cu (324.754 nm)	0.982207	ppm	0.002832	0.29	65592.300000	Y 377.433
Fe (238.204 nm)	10.516212 o	ppm	0.025119	0.24	38662.017834	Y_R 377.433
Fe H (259.940 nm)	10.803100	ppm	0.028147	0.26	20545.600000	Y_R 377.433
K (766.491 nm)	55.862100	ppm	0.119472	0.21	62882.700000	Y_R2 488.368
Li (670.783 nm)	1.013250	ppm	0.001196	0.12	30083.700000	Y_R2 488.368
Mg (279.078 nm)	61.396900 o	ppm	0.128391	0.21	363125.000000	Y 377.433
Mn (257.610 nm)	1.007160	ppm	0.002765	0.27	255184.000000	Y 377.433
Mo (202.032 nm)	1.023450	ppm	0.004228	0.41	8924.650000	Y 377.433
Na (589.592 nm)	63.746300 o	ppm	0.039520	0.06	419965.000000	Y_R2 488.368
Na H (589.593 nm)	66.556848	ppm	0.084400	0.13	270052.576488	Y_R 488.368
Ni (231.604 nm)	0.960800	ppm	0.003405	0.35	7125.330000	Y 377.433
P (213.618 nm)	19.823700 o	ppm	0.009617	0.05	45326.900000	Y 242.219
Pb (220.353 nm)	0.973861	ppm	0.003184	0.33	2980.580000	Y 242.219
S (181.972 nm)	29.876313 o	ppm	0.166798	0.56	13085.203780	Y 377.433
Sb (206.834 nm)	0.001983	ppm	0.000222	11.18	-9.324890	Y 377.433
Se (196.026 nm)	1.966750	ppm	0.002561	0.13	1841.680000	Y 242.219
Si (288.158 nm)	17.221200 o	ppm	0.092981	0.54	152336.000000	Y 377.433
Sn (189.925 nm)	2.039010	ppm	0.002606	0.13	4332.000000	Y 377.433
Sr (421.552 nm)	1.247450 o	ppm	0.001562	0.13	263698.508456	Y_R 488.368
Th (288.505 nm)	1.015190	ppm	0.003503	0.35	3107.670000	Y 377.433
Ti (336.122 nm)	1.025830	ppm	0.002731	0.27	147464.000000	Y 377.433
Tl (190.794 nm)	1.981370	ppm	0.007859	0.40	4569.600000	Y 377.433
U (409.013 nm)	2.053950	ppm	0.002681	0.13	9504.890000	Y 377.433
V (292.401 nm)	1.024580	ppm	0.001258	0.12	43009.500000	Y 377.433
Zn (206.200 nm)	0.487455	ppm	0.000815	0.17	2542.660000	Y 377.433
Zr (343.823 nm)	0.503950	ppm	0.001081	0.21	68552.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.953443	17099.073793	0.000800	0.08
Y 377.433	0.955530	931873.012244	0.004287	0.45
Y_R 377.433	0.964937	69420.900000	0.007749	0.80
Y_R 488.368	0.982792	38838.000000	0.008013	0.82
Y_R2 488.368	0.988904	75324.500576	0.007733	0.78

Sample Name: 280-122974-A-3-Apds

Date: 5/13/2019 5:45:09 PM

Rack:Tube: 1:57

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.142589 n	ppm	0.012239	8.58	-1989.723275	Y_R 488.368
Ag (328.068 nm)	0.051050	ppm	0.000157	0.31	2036.860000	Y 377.433
Al (167.019 nm)	0.924284	ppm	0.007765	0.84	554.192000	Y_R 377.433
Al H (396.152 nm)	0.915089	ppm	0.012549	1.37	2690.504701	Y_R 377.433
As (188.980 nm)	0.199738	ppm	0.001301	0.65	239.197000	Y 242.219
B (249.678 nm)	0.114545	ppm	0.000101	0.09	2901.390000	Y 242.219
Ba (493.408 nm)	0.134595	ppm	0.000302	0.22	15666.800000	Y_R 488.368
Be (234.861 nm)	0.048792	ppm	0.000117	0.24	14139.500000	Y_R 488.368
Bi (223.061 nm)	-0.001976 u	ppm	0.000465	23.52	15.917300	Y 377.433
Ca (315.887 nm)	70.105341 o	ppm	0.310780	0.44	59033.502081	Y_R 377.433
Cd (214.439 nm)	0.049100	ppm	0.000051	0.10	2994.980000	Y 377.433
Co (228.615 nm)	0.048761	ppm	0.000050	0.10	935.139000	Y 242.219
Cr (205.560 nm)	0.058917	ppm	0.000056	0.10	875.383000	Y 377.433
Cu (324.754 nm)	0.050210	ppm	0.000041	0.08	3877.150000	Y 377.433
Fe (238.204 nm)	1.489243	ppm	0.009171	0.62	5488.689970	Y_R 377.433
Fe H (259.940 nm)	1.347200 u	ppm	0.013693	1.02	2887.970000	Y_R 377.433
K (766.491 nm)	24.740100	ppm	0.076795	0.31	27465.600000	Y_R2 488.368
Li (670.783 nm)	0.109187	ppm	0.001448	1.33	2344.770000	Y_R2 488.368
Mg (279.078 nm)	30.584700	ppm	0.057220	0.19	180922.000000	Y 377.433
Mn (257.610 nm)	0.056943	ppm	0.000088	0.15	14498.100000	Y 377.433
Mo (202.032 nm)	0.052526	ppm	0.000644	1.23	455.754000	Y 377.433
Na (589.592 nm)	34.265700 o	ppm	0.114450	0.33	224220.000000	Y_R2 488.368
Na H (589.593 nm)	34.731421	ppm	0.035273	0.10	145189.542395	Y_R 488.368
Ni (231.604 nm)	0.047574	ppm	0.000619	1.30	350.219000	Y 377.433
P (213.618 nm)	1.986110	ppm	0.005872	0.30	4556.280000	Y 242.219
Pb (220.353 nm)	0.096981	ppm	0.000369	0.38	304.644000	Y 242.219
S (181.972 nm)	19.354260 o	ppm	0.001241	0.01	8483.680742	Y 377.433
Sb (206.834 nm)	0.101047	ppm	0.001734	1.72	239.331000	Y 377.433
Se (196.026 nm)	0.194994	ppm	0.000670	0.34	192.123000	Y 242.219
Si (288.158 nm)	19.321400 o	ppm	0.001335	0.01	170812.000000	Y 377.433
Sn (189.925 nm)	0.102270	ppm	0.001016	0.99	225.078000	Y 377.433
Sr (421.552 nm)	0.299412	ppm	0.000020	0.01	63380.787769	Y_R 488.368
Th (288.505 nm)	0.200333	ppm	0.001755	0.88	651.877000	Y 377.433
Ti (336.122 nm)	0.050540	ppm	0.000148	0.29	7286.890000	Y 377.433
Tl (190.794 nm)	0.199954	ppm	0.001061	0.53	459.328000	Y 377.433
U (409.013 nm)	0.502742	ppm	0.000939	0.19	2236.520000	Y 377.433
V (292.401 nm)	0.059377	ppm	0.000038	0.06	2500.630000	Y 377.433
Zn (206.200 nm)	0.198857	ppm	0.000346	0.17	1038.330000	Y 377.433
Zr (343.823 nm)	0.050896	ppm	0.000123	0.24	6958.650000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.957773	17176.724080	0.000041	0.00
Y 377.433	0.961406	937603.129912	0.000159	0.02
Y_R 377.433	0.962216	69225.100000	0.003930	0.41
Y_R 488.368	0.983645	38871.800000	0.000276	0.03
Y_R2 488.368	0.998512	76056.320972	0.003478	0.35

Sample Name: 280-123061-B-1-A

Date: 5/13/2019 5:48:31 PM

Rack:Tube: 1:58

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.071318 n	ppm	0.022055	30.92	-2163.693493	Y_R 488.368
Ag (328.068 nm)	0.000373	ppm	0.000032	8.50	-332.290000	Y 377.433
Al (167.019 nm)	0.033742	ppm	0.001177	3.49	20.734200	Y_R 377.433
Al H (396.152 nm)	-0.064678 u	ppm	0.000639	0.99	189.192975	Y_R 377.433
As (188.980 nm)	0.001858	ppm	0.000009	0.51	2.179110	Y 242.219
B (249.678 nm)	0.011570	ppm	0.000239	2.06	353.368000	Y 242.219
Ba (493.408 nm)	0.022930	ppm	0.000281	1.23	3179.740000	Y_R 488.368
Be (234.861 nm)	-0.000041 u	ppm	0.000044	> 100.00	-23.719100	Y_R 488.368
Bi (223.061 nm)	-0.003213 u	ppm	0.000057	1.76	12.524400	Y 377.433
Ca (315.887 nm)	62.329347 o	ppm	0.083954	0.13	52474.800988	Y_R 377.433
Cd (214.439 nm)	-0.000056 u	ppm	0.000021	37.92	-2.880430	Y 377.433
Co (228.615 nm)	0.000421	ppm	0.000382	90.79	-31.392500	Y 242.219
Cr (205.560 nm)	0.033033	ppm	0.000026	0.08	490.340000	Y 377.433
Cu (324.754 nm)	0.001381	ppm	0.000212	15.34	643.899000	Y 377.433
Fe (238.204 nm)	0.299505	ppm	0.002270	0.76	1116.505580	Y_R 377.433
Fe H (259.940 nm)	0.105921 u	ppm	0.000153	0.14	570.068000	Y_R 377.433
K (766.491 nm)	3.875930	ppm	0.042046	1.08	3722.090000	Y_R2 488.368
Li (670.783 nm)	0.008044	ppm	0.000096	1.19	-758.521000	Y_R2 488.368
Mg (279.078 nm)	9.397380	ppm	0.026375	0.28	55609.600000	Y 377.433
Mn (257.610 nm)	0.003462	ppm	0.000013	0.36	951.624000	Y 377.433
Mo (202.032 nm)	0.001590	ppm	0.000146	9.15	11.467000	Y 377.433
Na (589.592 nm)	10.816100	ppm	0.019480	0.18	71341.600000	Y_R2 488.368
Na H (589.593 nm)	10.235951	ppm	0.068288	0.67	50438.765839	Y_R 488.368
Ni (231.604 nm)	0.003555	ppm	0.000122	3.42	23.470100	Y 377.433
P (213.618 nm)	0.266791	ppm	0.002930	1.10	626.496000	Y 242.219
Pb (220.353 nm)	-0.000073 u	ppm	0.001305	> 100.00	7.252990	Y 242.219
S (181.972 nm)	13.856233 o	ppm	0.022428	0.16	6080.193756	Y 377.433
Sb (206.834 nm)	0.000559 u	ppm	0.000904	> 100.00	-28.465200	Y 377.433
Se (196.026 nm)	-0.000588 u	ppm	0.000666	> 100.00	10.123800	Y 242.219
Si (288.158 nm)	8.633110	ppm	0.022539	0.26	76783.800000	Y 377.433
Sn (189.925 nm)	-0.000036 u	ppm	0.000162	> 100.00	8.133610	Y 377.433
Sr (421.552 nm)	0.236059	ppm	0.001072	0.45	49994.608959	Y_R 488.368
Th (288.505 nm)	-0.004014 u	ppm	0.000847	21.10	40.666600	Y 377.433
Ti (336.122 nm)	0.002004	ppm	0.000030	1.49	291.234000	Y 377.433
Tl (190.794 nm)	0.000873	ppm	0.000186	21.27	-0.225156	Y 377.433
U (409.013 nm)	-0.010049 u	ppm	0.001187	11.82	-173.012000	Y 377.433
V (292.401 nm)	0.003989	ppm	0.000059	1.47	178.738000	Y 377.433
Zn (206.200 nm)	0.002545	ppm	0.000025	0.98	15.037800	Y 377.433
Zr (343.823 nm)	-0.000040 u	ppm	0.000084	> 100.00	33.162300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.970725	17409.010697	0.003190	0.33
Y 377.433	0.975492	951340.738552	0.004819	0.49
Y_R 377.433	0.972818	69987.900000	0.001787	0.18
Y_R 488.368	0.999326	39491.400000	0.004851	0.49
Y_R2 488.368	1.005600	76596.198595	0.004477	0.45

Sample Name: 280-123061-B-1-B MS

Date: 5/13/2019 5:51:53 PM

Rack:Tube: 1:59

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.025325 n	ppm	0.025353	2.47	165.030408	Y_R 488.368
Ag (328.068 nm)	-0.001112 u	ppm	0.000250	22.47	-510.545000	Y 377.433
Al (167.019 nm)	9.358370 o	ppm	0.017213	0.18	5604.730000	Y_R 377.433
Al H (396.152 nm)	10.399175	ppm	0.032301	0.31	26927.988771	Y_R 377.433
As (188.980 nm)	2.024330	ppm	0.010527	0.52	2424.690000	Y 242.219
B (249.678 nm)	1.027790	ppm	0.000447	0.04	25521.900000	Y 242.219
Ba (493.408 nm)	2.043140 o	ppm	0.001607	0.08	229072.000000	Y_R 488.368
Be (234.861 nm)	0.995892	ppm	0.001722	0.17	288405.000000	Y_R 488.368
Bi (223.061 nm)	2.010700	ppm	0.000253	0.01	5204.650000	Y 377.433
Ca (315.887 nm)	113.657526 o	ppm	0.256370	0.23	95768.208269	Y_R 377.433
Cd (214.439 nm)	0.986211	ppm	0.000045	0.00	60132.700000	Y 377.433
Co (228.615 nm)	0.948022	ppm	0.000555	0.06	18919.500000	Y 242.219
Cr (205.560 nm)	1.058630	ppm	0.002449	0.23	15766.400000	Y 377.433
Cu (324.754 nm)	0.987559	ppm	0.002530	0.26	65937.800000	Y 377.433
Fe (238.204 nm)	10.470693 o	ppm	0.020412	0.19	38494.737609	Y_R 377.433
Fe H (259.940 nm)	10.791000	ppm	0.031846	0.30	20523.000000	Y_R 377.433
K (766.491 nm)	54.251300	ppm	0.003905	0.01	61049.600000	Y_R2 488.368
Li (670.783 nm)	1.012810	ppm	0.005494	0.54	30070.000000	Y_R2 488.368
Mg (279.078 nm)	58.967300 o	ppm	0.031233	0.05	348753.000000	Y 377.433
Mn (257.610 nm)	1.004600	ppm	0.000413	0.04	254536.000000	Y 377.433
Mo (202.032 nm)	1.026870	ppm	0.001106	0.11	8954.540000	Y 377.433
Na (589.592 nm)	58.734300 o	ppm	0.001455	0.00	387317.000000	Y_R2 488.368
Na H (589.593 nm)	61.359813	ppm	0.035880	0.06	249963.001995	Y_R 488.368
Ni (231.604 nm)	0.962738	ppm	0.001418	0.15	7139.700000	Y 377.433
P (213.618 nm)	20.166500 o	ppm	0.031522	0.16	46110.600000	Y 242.219
Pb (220.353 nm)	0.974080	ppm	0.000504	0.05	2981.270000	Y 242.219
S (181.972 nm)	24.113821 o	ppm	0.051087	0.21	10566.214928	Y 377.433
Sb (206.834 nm)	0.000150 u	ppm	0.002947	> 100.00	-13.129500	Y 377.433
Se (196.026 nm)	1.964690	ppm	0.002282	0.12	1839.770000	Y 242.219
Si (288.158 nm)	11.189400 o	ppm	0.038471	0.34	99271.900000	Y 377.433
Sn (189.925 nm)	2.029950	ppm	0.006691	0.33	4312.800000	Y 377.433
Sr (421.552 nm)	1.236039 o	ppm	0.001501	0.12	261287.364288	Y_R 488.368
Th (288.505 nm)	1.019010	ppm	0.002865	0.28	3119.200000	Y 377.433
Ti (336.122 nm)	1.029760	ppm	0.000612	0.06	148066.000000	Y 377.433
Tl (190.794 nm)	1.983620	ppm	0.003048	0.15	4574.760000	Y 377.433
U (409.013 nm)	2.080640	ppm	0.001489	0.07	9627.900000	Y 377.433
V (292.401 nm)	1.022850	ppm	0.000717	0.07	42924.100000	Y 377.433
Zn (206.200 nm)	0.490281	ppm	0.000591	0.12	2557.390000	Y 377.433
Zr (343.823 nm)	0.506858	ppm	0.000705	0.14	68947.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.949804	17033.808749	0.000967	0.10
Y 377.433	0.951134	927586.008529	0.000101	0.01
Y_R 377.433	0.959672	69042.100000	0.000306	0.03
Y_R 488.368	0.977243	38618.800000	0.000233	0.02
Y_R2 488.368	0.981714	74776.810682	0.008552	0.87

Sample Name: 280-123061-B-1-C MSD

Date: 5/13/2019 5:55:16 PM

Rack:Tube: 1:60

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.989755 n	ppm	0.012201	1.23	78.204128	Y_R 488.368
Ag (328.068 nm)	-0.000581 u	ppm	0.000306	52.60	-482.486000	Y 377.433
Al (167.019 nm)	9.199020 o	ppm	0.039341	0.43	5509.270000	Y_R 377.433
Al H (396.152 nm)	10.343367	ppm	0.026243	0.25	26783.093630	Y_R 377.433
As (188.980 nm)	1.979360	ppm	0.002290	0.12	2370.820000	Y 242.219
B (249.678 nm)	1.015070	ppm	0.001018	0.10	25206.400000	Y 242.219
Ba (493.408 nm)	1.988230 o	ppm	0.004431	0.22	222932.000000	Y_R 488.368
Be (234.861 nm)	0.974065	ppm	0.005405	0.55	282084.000000	Y_R 488.368
Bi (223.061 nm)	1.977950	ppm	0.000256	0.01	5120.220000	Y 377.433
Ca (315.887 nm)	111.822776 o	ppm	0.342678	0.31	94220.671693	Y_R 377.433
Cd (214.439 nm)	0.961779	ppm	0.000594	0.06	58643.000000	Y 377.433
Co (228.615 nm)	0.926949	ppm	0.000604	0.07	18498.100000	Y 242.219
Cr (205.560 nm)	1.067280	ppm	0.000750	0.07	15895.700000	Y 377.433
Cu (324.754 nm)	0.963888	ppm	0.001629	0.17	64371.600000	Y 377.433
Fe (238.204 nm)	10.263270 o	ppm	0.005847	0.06	37732.475543	Y_R 377.433
Fe H (259.940 nm)	10.543500	ppm	0.027183	0.26	20060.700000	Y_R 377.433
K (766.491 nm)	53.514900	ppm	0.268802	0.50	60211.600000	Y_R2 488.368
Li (670.783 nm)	0.990097	ppm	0.006655	0.67	29373.200000	Y_R2 488.368
Mg (279.078 nm)	58.293700 o	ppm	0.050425	0.09	344770.000000	Y 377.433
Mn (257.610 nm)	0.980538	ppm	0.000375	0.04	248441.000000	Y 377.433
Mo (202.032 nm)	1.001670	ppm	0.001376	0.14	8734.660000	Y 377.433
Na (589.592 nm)	58.080500 o	ppm	0.787959	1.36	382952.000000	Y_R2 488.368
Na H (589.593 nm)	60.461901	ppm	0.010363	0.02	246439.704469	Y_R 488.368
Ni (231.604 nm)	0.940586	ppm	0.000959	0.10	6975.360000	Y 377.433
P (213.618 nm)	19.930100 o	ppm	0.016045	0.08	45570.300000	Y 242.219
Pb (220.353 nm)	0.951479	ppm	0.000529	0.06	2912.260000	Y 242.219
S (181.972 nm)	23.732203 o	ppm	0.053614	0.23	10399.347079	Y 377.433
Sb (206.834 nm)	-0.000785 u	ppm	0.000526	66.94	-15.079600	Y 377.433
Se (196.026 nm)	1.922430	ppm	0.004315	0.22	1800.430000	Y 242.219
Si (288.158 nm)	11.075100 o	ppm	0.015998	0.14	98266.700000	Y 377.433
Sn (189.925 nm)	1.983650	ppm	0.006149	0.31	4214.610000	Y 377.433
Sr (421.552 nm)	1.203500 o	ppm	0.003386	0.28	254411.923655	Y_R 488.368
Th (288.505 nm)	1.004840	ppm	0.002050	0.20	3076.020000	Y 377.433
Ti (336.122 nm)	1.008530	ppm	0.000303	0.03	145011.000000	Y 377.433
Tl (190.794 nm)	1.939240	ppm	0.001866	0.10	4472.380000	Y 377.433
U (409.013 nm)	2.049570	ppm	0.001708	0.08	9482.450000	Y 377.433
V (292.401 nm)	0.998107	ppm	0.000016	0.00	41876.100000	Y 377.433
Zn (206.200 nm)	0.479208	ppm	0.000695	0.15	2499.670000	Y 377.433
Zr (343.823 nm)	0.498711	ppm	0.000183	0.04	67839.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.952167	17076.185107	0.001298	0.14
Y 377.433	0.954274	930648.132680	0.001216	0.13
Y_R 377.433	0.957588	68892.200000	0.004671	0.49
Y_R 488.368	0.977368	38623.700000	0.004330	0.44
Y_R2 488.368	0.979218	74586.714281	0.000841	0.09

Sample Name: 280-123061-A-2-A

Date: 5/13/2019 5:58:39 PM

Rack:Tube: 1:61

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.056299 n	ppm	0.034188	60.73	-2200.356378	Y_R 488.368
Ag (328.068 nm)	0.000308	ppm	0.000080	26.17	-335.201000	Y 377.433
Al (167.019 nm)	0.006622	ppm	0.002273	34.33	4.310640	Y_R 377.433
Al H (396.152 nm)	-0.091666 u	ppm	0.001294	1.41	120.832884	Y_R 377.433
As (188.980 nm)	0.000733 u	ppm	0.003793	> 100.00	0.833934	Y 242.219
B (249.678 nm)	0.012074	ppm	0.000106	0.87	366.272000	Y 242.219
Ba (493.408 nm)	0.021105	ppm	0.000581	2.75	2975.660000	Y_R 488.368
Be (234.861 nm)	-0.000040 u	ppm	0.000017	41.89	-32.082900	Y_R 488.368
Bi (223.061 nm)	-0.002380 u	ppm	0.000031	1.32	14.621100	Y 377.433
Ca (315.887 nm)	62.967318 o	ppm	0.153291	0.24	53012.898434	Y_R 377.433
Cd (214.439 nm)	0.000008 u	ppm	0.000036	> 100.00	0.731391	Y 377.433
Co (228.615 nm)	0.000384	ppm	0.000344	89.77	-32.203700	Y 242.219
Cr (205.560 nm)	0.013819	ppm	0.000208	1.51	203.979000	Y 377.433
Cu (324.754 nm)	0.000349	ppm	0.000029	8.36	575.721000	Y 377.433
Fe (238.204 nm)	0.023809	ppm	0.000808	3.39	103.346458	Y_R 377.433
Fe H (259.940 nm)	-0.172675 u	ppm	0.000075	0.04	49.829100	Y_R 377.433
K (766.491 nm)	3.946010	ppm	0.061507	1.56	3801.840000	Y_R2 488.368
Li (670.783 nm)	0.008184	ppm	0.000584	7.13	-754.243000	Y_R2 488.368
Mg (279.078 nm)	9.576670	ppm	0.003454	0.04	56670.700000	Y 377.433
Mn (257.610 nm)	0.001848	ppm	0.000018	0.99	542.794000	Y 377.433
Mo (202.032 nm)	0.002144	ppm	0.000262	12.20	16.298100	Y 377.433
Na (589.592 nm)	10.718500	ppm	0.020863	0.19	70703.100000	Y_R2 488.368
Na H (589.593 nm)	10.175775	ppm	0.072583	0.71	50204.566953	Y_R 488.368
Ni (231.604 nm)	0.002266	ppm	0.000920	40.59	13.899600	Y 377.433
P (213.618 nm)	0.246368	ppm	0.000048	0.02	579.815000	Y 242.219
Pb (220.353 nm)	-0.000679 u	ppm	0.000350	51.55	5.379750	Y 242.219
S (181.972 nm)	14.113449 o	ppm	0.035731	0.25	6192.628724	Y 377.433
Sb (206.834 nm)	0.000889	ppm	0.000183	20.60	-28.104800	Y 377.433
Se (196.026 nm)	0.003772	ppm	0.000335	8.87	14.234300	Y 242.219
Si (288.158 nm)	8.623810	ppm	0.077949	0.90	76701.900000	Y 377.433
Sn (189.925 nm)	0.001294	ppm	0.000268	20.73	10.955600	Y 377.433
Sr (421.552 nm)	0.239310	ppm	0.001481	0.62	50681.379896	Y_R 488.368
Th (288.505 nm)	-0.002752 u	ppm	0.002113	76.77	44.317600	Y 377.433
Ti (336.122 nm)	0.000105	ppm	0.000065	62.02	20.648700	Y 377.433
Tl (190.794 nm)	0.000884 u	ppm	0.001703	> 100.00	-0.182959	Y 377.433
U (409.013 nm)	-0.007431 u	ppm	0.004343	58.45	-161.114000	Y 377.433
V (292.401 nm)	0.003436	ppm	0.000075	2.17	161.233000	Y 377.433
Zn (206.200 nm)	0.001407	ppm	0.000266	18.92	9.101350	Y 377.433
Zr (343.823 nm)	0.000413	ppm	0.000005	1.23	93.919700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.969771	17391.898646	0.002518	0.26
Y 377.433	0.974156	950037.075298	0.000077	0.01
Y_R 377.433	0.971974	69927.200000	0.005748	0.59
Y_R 488.368	0.991485	39181.600000	0.010933	1.10
Y_R2 488.368	0.996220	75881.693915	0.009081	0.91

Sample Name: CCVH-5699817

Date: 5/13/2019 6:02:02 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.114670	ppm	0.001992	1.74	-2057.873392	Y_R 488.368
Ag (328.068 nm)	-0.000259 u	ppm	0.000418	> 100.00	-613.444000	Y 377.433
Al (167.019 nm)	42.803500 o	ppm	0.091793	0.21	25634.200000	Y_R 377.433
Al H (396.152 nm)	49.762231	ppm	0.205615	0.41	126983.233174	Y_R 377.433
As (188.980 nm)	0.001721	ppm	0.000830	48.23	1.597480	Y 242.219
B (249.678 nm)	0.001146	ppm	0.000027	2.32	21.744600	Y 242.219
Ba (493.408 nm)	0.001843	ppm	0.000427	23.19	852.794000	Y_R 488.368
Be (234.861 nm)	0.000849	ppm	0.000007	0.88	1736.190000	Y_R 488.368
Bi (223.061 nm)	1.000430	ppm	0.000620	0.06	2607.510000	Y 377.433
Ca (315.887 nm)	0.016554	ppm	0.006794	41.04	-82.998464	Y_R 377.433
Cd (214.439 nm)	0.001202	ppm	0.000070	5.86	122.345000	Y 377.433
Co (228.615 nm)	0.004640	ppm	0.000180	3.87	52.798800	Y 242.219
Cr (205.560 nm)	0.001449	ppm	0.000303	20.94	6.151440	Y 377.433
Cu (324.754 nm)	0.008762	ppm	0.000194	2.21	1565.890000	Y 377.433
Fe (238.204 nm)	48.352757 o	ppm	0.210219	0.43	177708.031629	Y_R 377.433
Fe H (259.940 nm)	50.249900	ppm	0.261808	0.52	94206.800000	Y_R 377.433
K (766.491 nm)	0.100184	ppm	0.023566	23.52	-574.747000	Y_R2 488.368
Li (670.783 nm)	0.006761	ppm	0.001341	19.84	-797.912000	Y_R2 488.368
Mg (279.078 nm)	0.031045	ppm	0.002119	6.83	-159.546000	Y 377.433
Mn (257.610 nm)	0.002827	ppm	0.000009	0.32	790.820000	Y 377.433
Mo (202.032 nm)	0.000598	ppm	0.000269	44.99	2.814410	Y 377.433
Na (589.592 nm)	233.261000 o	ppm	0.726134	0.31	1519390.000000	Y_R2 488.368
Na H (589.593 nm)	239.659298	ppm	2.557343	1.07	936808.529506	Y_R 488.368
Ni (231.604 nm)	0.005149	ppm	0.000596	11.58	37.502900	Y 377.433
P (213.618 nm)	-0.001764 u	ppm	0.002092	> 100.00	12.668600	Y 242.219
Pb (220.353 nm)	0.004847	ppm	0.001709	35.26	40.488700	Y 242.219
S (181.972 nm)	4.903678	ppm	0.000503	0.01	2166.724972	Y 377.433
Sb (206.834 nm)	-0.001824 u	ppm	0.003126	> 100.00	-80.658900	Y 377.433
Se (196.026 nm)	-0.002301 u	ppm	0.002210	96.03	0.181095	Y 242.219
Si (288.158 nm)	0.048047	ppm	0.000448	0.93	1258.750000	Y 377.433
Sn (189.925 nm)	0.003806	ppm	0.000763	20.06	16.281200	Y 377.433
Sr (421.552 nm)	0.002015	ppm	0.000027	1.36	541.790227	Y_R 488.368
Th (288.505 nm)	4.998190	ppm	0.008262	0.17	14916.700000	Y 377.433
Ti (336.122 nm)	0.002508	ppm	0.000042	1.67	165.701000	Y 377.433
Tl (190.794 nm)	-0.001076 u	ppm	0.000215	19.94	-6.085190	Y 377.433
U (409.013 nm)	10.147900	ppm	0.011209	0.11	47705.600000	Y 377.433
V (292.401 nm)	0.004628	ppm	0.000034	0.74	19.104200	Y 377.433
Zn (206.200 nm)	0.003744	ppm	0.000634	16.94	21.283100	Y 377.433
Zr (343.823 nm)	-0.002944 u	ppm	0.000051	1.74	-212.529000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.973247	17454.240755	0.000799	0.08
Y 377.433	0.966658	942724.761475	0.000957	0.10
Y_R 377.433	0.973938	70068.500000	0.000228	0.02
Y_R 488.368	0.999544	39500.100000	0.005357	0.54
Y_R2 488.368	1.009303	76878.229188	0.000859	0.09

Sample Name: CCV-5699804

Date: 5/13/2019 6:05:24 PM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.028130	ppm	0.014610	1.42	171.875853	Y_R 488.368
Ag (328.068 nm)	0.491120	ppm	0.002000	0.41	22732.100000	Y 377.433
Al (167.019 nm)	0.490997	ppm	0.003657	0.74	295.798000	Y_R 377.433
Al H (396.152 nm)	0.424967 u	ppm	0.005137	1.21	1450.457682	Y_R 377.433
As (188.980 nm)	0.980118	ppm	0.006236	0.64	1173.960000	Y 242.219
B (249.678 nm)	0.489815	ppm	0.000791	0.16	12204.000000	Y 242.219
Ba (493.408 nm)	0.494396	ppm	0.000517	0.10	55886.300000	Y_R 488.368
Be (234.861 nm)	0.488111	ppm	0.002998	0.61	141257.000000	Y_R 488.368
Bi (223.061 nm)	-0.003654 u	ppm	0.001800	49.26	11.762200	Y 377.433
Ca (315.887 nm)	4.995338	ppm	0.002523	0.05	4116.662055	Y_R 377.433
Cd (214.439 nm)	0.500135	ppm	0.000035	0.01	30492.200000	Y 377.433
Co (228.615 nm)	0.496011	ppm	0.000687	0.14	9878.210000	Y 242.219
Cr (205.560 nm)	0.500318	ppm	0.000707	0.14	7450.770000	Y 377.433
Cu (324.754 nm)	0.491334	ppm	0.001937	0.39	33109.500000	Y 377.433
Fe (238.204 nm)	2.467436	ppm	0.007723	0.31	9083.464747	Y_R 377.433
Fe H (259.940 nm)	2.388200 u	ppm	0.005591	0.23	4831.900000	Y_R 377.433
K (766.491 nm)	47.951300	ppm	0.098372	0.21	53880.200000	Y_R2 488.368
Li (670.783 nm)	0.978187	ppm	0.004064	0.42	29007.800000	Y_R2 488.368
Mg (279.078 nm)	19.443500	ppm	0.008727	0.04	115030.000000	Y 377.433
Mn (257.610 nm)	0.498845	ppm	0.000145	0.03	126430.000000	Y 377.433
Mo (202.032 nm)	0.500923	ppm	0.000808	0.16	4366.910000	Y 377.433
Na (589.592 nm)	4.746110	ppm	0.006855	0.14	32767.500000	Y_R2 488.368
Na H (589.593 nm)	4.514242 u	ppm	0.038081	0.84	28800.124645	Y_R 488.368
Ni (231.604 nm)	0.507995	ppm	0.000092	0.02	3765.740000	Y 377.433
P (213.618 nm)	0.957393	ppm	0.002288	0.24	2204.980000	Y 242.219
Pb (220.353 nm)	0.990062	ppm	0.002289	0.23	3029.190000	Y 242.219
S (181.972 nm)	-0.021900 u	ppm	0.004222	19.28	14.615825	Y 377.433
Sb (206.834 nm)	1.019570	ppm	0.000564	0.06	2710.650000	Y 377.433
Se (196.026 nm)	0.968823	ppm	0.007471	0.77	913.100000	Y 242.219
Si (288.158 nm)	4.937920	ppm	0.058024	1.18	44276.300000	Y 377.433
Sn (189.925 nm)	1.002670	ppm	0.001402	0.14	2134.400000	Y 377.433
Sr (421.552 nm)	0.486092	ppm	0.000756	0.16	102825.681310	Y_R 488.368
Th (288.505 nm)	0.003310	ppm	0.000180	5.42	80.111200	Y 377.433
Ti (336.122 nm)	0.497849	ppm	0.000460	0.09	71324.600000	Y 377.433
Tl (190.794 nm)	1.013380	ppm	0.001789	0.18	2336.370000	Y 377.433
U (409.013 nm)	-0.003111 u	ppm	0.001840	59.15	-166.625000	Y 377.433
V (292.401 nm)	0.494456	ppm	0.000429	0.09	20782.800000	Y 377.433
Zn (206.200 nm)	0.495665	ppm	0.001226	0.25	2585.460000	Y 377.433
Zr (343.823 nm)	0.494939	ppm	0.000864	0.17	67302.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.976995	17521.456545	0.003259	0.33
Y 377.433	0.978173	953955.234462	0.002087	0.21
Y_R 377.433	0.970410	69814.600000	0.001217	0.13
Y_R 488.368	0.987095	39008.100000	0.004623	0.47
Y_R2 488.368	0.995127	75798.500922	0.003864	0.39

Sample Name: CCB

Date: 5/13/2019 6:08:46 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.046818 Z	ppm	0.016435	35.10	-2223.498983 Z	Y_R 488.368
Ag (328.068 nm)	0.000221 u	ppm	0.000469	> 100.00	-338.607000	Y 377.433
Al (167.019 nm)	0.006069	ppm	0.000591	9.74	3.964860	Y_R 377.433
Al H (396.152 nm)	-0.113937 Zu	ppm	0.000681	0.60	36.108829 Z	Y_R 377.433
As (188.980 nm)	-0.003060 u	ppm	0.000899	29.37	-3.710060	Y 242.219
B (249.678 nm)	0.000868	ppm	0.000009	1.05	89.056600	Y 242.219
Ba (493.408 nm)	-0.000379 u	ppm	0.000268	70.69	559.610000	Y_R 488.368
Be (234.861 nm)	0.000017	ppm	0.000003	15.65	-15.954800	Y_R 488.368
Bi (223.061 nm)	0.000129 u	ppm	0.001239	> 100.00	21.085700	Y 377.433
Ca (315.887 nm)	0.013347	ppm	0.005475	41.02	-85.704896	Y_R 377.433
Cd (214.439 nm)	-0.000013 u	ppm	0.000104	> 100.00	-0.579414	Y 377.433
Co (228.615 nm)	0.000434	ppm	0.000040	9.28	-31.191900	Y 242.219
Cr (205.560 nm)	0.000212	ppm	0.000296	> 100.00	1.149620	Y 377.433
Cu (324.754 nm)	0.000525	ppm	0.000103	19.64	632.616000	Y 377.433
Fe (238.204 nm)	0.004168	ppm	0.001049	25.16	31.166775	Y_R 377.433
Fe H (259.940 nm)	-0.192660 u	ppm	0.000840	0.44	12.510000	Y_R 377.433
K (766.491 nm)	0.002479 u	ppm	0.016187	> 100.00	-685.936000	Y_R2 488.368
Li (670.783 nm)	0.002697	ppm	0.000112	4.14	-922.586000	Y_R2 488.368
Mg (279.078 nm)	0.001895	ppm	0.000170	8.98	33.835200	Y 377.433
Mn (257.610 nm)	-0.000029 u	ppm	0.000002	8.24	67.351700	Y 377.433
Mo (202.032 nm)	0.000141	ppm	0.000055	39.04	-1.172320	Y 377.433
Na (589.592 nm)	0.093624	ppm	0.002430	2.60	1492.420000	Y_R2 488.368
Na H (589.593 nm)	-0.751218 u	ppm	0.020182	2.69	7965.744274	Y_R 488.368
Ni (231.604 nm)	-0.000356 u	ppm	0.000152	42.83	-5.549670	Y 377.433
P (213.618 nm)	-0.004302 u	ppm	0.000987	22.93	6.867050	Y 242.219
Pb (220.353 nm)	-0.000923 u	ppm	0.001767	> 100.00	4.644320	Y 242.219
S (181.972 nm)	-0.027819 u	ppm	0.004614	16.59	10.992435	Y 377.433
Sb (206.834 nm)	0.001195	ppm	0.000541	45.23	-27.690400	Y 377.433
Se (196.026 nm)	0.001107 u	ppm	0.003026	> 100.00	11.753600	Y 242.219
Si (288.158 nm)	0.001335	ppm	0.000484	36.26	847.815000	Y 377.433
Sn (189.925 nm)	0.000221 u	ppm	0.000316	> 100.00	8.680350	Y 377.433
Sr (421.552 nm)	0.000044 u	ppm	0.000114	> 100.00	125.228796	Y_R 488.368
Th (288.505 nm)	0.001039 u	ppm	0.004659	> 100.00	55.190800	Y 377.433
Ti (336.122 nm)	0.000228	ppm	0.000084	36.88	-161.740000	Y 377.433
Tl (190.794 nm)	-0.000958 u	ppm	0.001086	> 100.00	-4.431570	Y 377.433
U (409.013 nm)	-0.009745 u	ppm	0.000345	3.54	-159.494000	Y 377.433
V (292.401 nm)	-0.000304 u	ppm	0.000182	59.83	6.819720	Y 377.433
Zn (206.200 nm)	-0.000766 u	ppm	0.000141	18.37	-2.225260	Y 377.433
Zr (343.823 nm)	0.000139	ppm	0.000069	49.54	56.662200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.976654	17515.337438	0.002045	0.21
Y 377.433	0.978554	954326.421609	0.002954	0.30
Y_R 377.433	0.965492	69460.800000	0.004200	0.44
Y_R 488.368	0.980883	38762.600000	0.007935	0.81
Y_R2 488.368	0.989857	75397.057670	0.003554	0.36

Sample Name: CCVL-5699389

Date: 5/13/2019 6:12:09 PM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.076792 Q	ppm	0.000415	0.54	-2150.333170 Q	Y_R 488.368
Ag (328.068 nm)	0.009063	ppm	0.000228	2.52	76.185500	Y 377.433
Al (167.019 nm)	0.092666	ppm	0.005143	5.55	55.825500	Y_R 377.433
Al H (396.152 nm)	-0.017618 u	ppm	0.002980	16.91	282.880144	Y_R 377.433
As (188.980 nm)	0.012032	ppm	0.002060	17.12	14.367600	Y 242.219
B (249.678 nm)	0.096391	ppm	0.000216	0.22	2452.690000	Y 242.219
Ba (493.408 nm)	0.009503	ppm	0.000057	0.60	1664.440000	Y_R 488.368
Be (234.861 nm)	0.000927	ppm	0.000000	0.04	249.333000	Y_R 488.368
Bi (223.061 nm)	0.098376	ppm	0.000145	0.15	274.310000	Y 377.433
Ca (315.887 nm)	0.208155	ppm	0.006261	3.01	78.609212	Y_R 377.433
Cd (214.439 nm)	0.005034	ppm	0.000024	0.49	307.218000	Y 377.433
Co (228.615 nm)	0.010564	ppm	0.000139	1.32	171.325000	Y 242.219
Cr (205.560 nm)	0.010083	ppm	0.000005	0.05	148.223000	Y 377.433
Cu (324.754 nm)	0.015428	ppm	0.000241	1.56	1618.340000	Y 377.433
Fe (238.204 nm)	0.102027	ppm	0.001711	1.68	390.791291	Y_R 377.433
Fe H (259.940 nm)	-0.090275 u	ppm	0.001124	1.25	203.700000	Y_R 377.433
K (766.491 nm)	2.965830	ppm	0.020154	0.68	2686.380000	Y_R2 488.368
Li (670.783 nm)	0.024135	ppm	0.000731	3.03	-264.834000	Y_R2 488.368
Mg (279.078 nm)	0.194331	ppm	0.000362	0.19	1170.920000	Y 377.433
Mn (257.610 nm)	0.010236	ppm	0.000001	0.01	2667.450000	Y 377.433
Mo (202.032 nm)	0.019294	ppm	0.000012	0.06	165.890000	Y 377.433
Na (589.592 nm)	0.994143	ppm	0.008808	0.89	7375.160000	Y_R2 488.368
Na H (589.593 nm)	-0.039153 u	ppm	0.027123	69.28	10727.015215	Y_R 488.368
Ni (231.604 nm)	0.041960	ppm	0.000454	1.08	308.285000	Y 377.433
P (213.618 nm)	2.763440 o	ppm	0.009098	0.33	6333.000000	Y 242.219
Pb (220.353 nm)	0.008584	ppm	0.000079	0.92	33.685500	Y 242.219
S (181.972 nm)	0.061150 Q	ppm	0.001862	3.04	49.904896 Q	Y 377.433
Sb (206.834 nm)	0.020890	ppm	0.000909	4.35	25.165900	Y 377.433
Se (196.026 nm)	0.016258	ppm	0.001572	9.67	25.858100	Y 242.219
Si (288.158 nm)	0.599105	ppm	0.026651	4.45	6106.550000	Y 377.433
Sn (189.925 nm)	0.099430	ppm	0.000783	0.79	219.056000	Y 377.433
Sr (421.552 nm)	0.009810	ppm	0.000096	0.98	2188.811251	Y_R 488.368
Th (288.505 nm)	0.017554	ppm	0.001672	9.53	105.032000	Y 377.433
Ti (336.122 nm)	0.009855	ppm	0.000072	0.73	1221.340000	Y 377.433
Tl (190.794 nm)	0.015236	ppm	0.000955	6.27	32.908000	Y 377.433
U (409.013 nm)	0.055722	ppm	0.003676	6.60	147.922000	Y 377.433
V (292.401 nm)	0.009553	ppm	0.000131	1.37	418.973000	Y 377.433
Zn (206.200 nm)	0.020178	ppm	0.000350	1.73	106.946000	Y 377.433
Zr (343.823 nm)	0.010793	ppm	0.000325	3.01	1504.710000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.982926	17627.819212	0.002685	0.27
Y 377.433	0.983756	959399.535486	0.003844	0.39
Y_R 377.433	0.977406	70318.000000	0.001534	0.16
Y_R 488.368	0.999031	39479.800000	0.003610	0.36
Y_R2 488.368	1.016820	77450.816313	0.010496	1.03

Sample Name: 280-123061-A-3-A

Date: 5/13/2019 6:15:31 PM

Rack:Tube: 1:62

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.047879 n	ppm	0.013475	28.14	-2220.909255	Y_R 488.368
Ag (328.068 nm)	0.000414	ppm	0.000388	93.77	-331.690000	Y 377.433
Al (167.019 nm)	0.076251	ppm	0.000758	0.99	46.103800	Y_R 377.433
Al H (396.152 nm)	-0.028429 u	ppm	0.001792	6.30	274.480548	Y_R 377.433
As (188.980 nm)	0.003505	ppm	0.000477	13.62	4.151510	Y 242.219
B (249.678 nm)	0.012416	ppm	0.000117	0.94	374.407000	Y 242.219
Ba (493.408 nm)	0.030176	ppm	0.000062	0.21	3986.010000	Y_R 488.368
Be (234.861 nm)	-0.000021 u	ppm	0.000001	6.58	-20.427100	Y_R 488.368
Bi (223.061 nm)	-0.001974 u	ppm	0.002134	> 100.00	15.703300	Y 377.433
Ca (315.887 nm)	45.759841 o	ppm	0.088834	0.19	38499.230913	Y_R 377.433
Cd (214.439 nm)	-0.000061 u	ppm	0.000018	29.30	-3.267530	Y 377.433
Co (228.615 nm)	0.000405	ppm	0.000239	59.09	-31.702300	Y 242.219
Cr (205.560 nm)	0.028003	ppm	0.000014	0.05	415.364000	Y 377.433
Cu (324.754 nm)	0.002033	ppm	0.000017	0.85	698.957000	Y 377.433
Fe (238.204 nm)	0.229419	ppm	0.000008	0.00	858.946250	Y_R 377.433
Fe H (259.940 nm)	0.037650 u	ppm	0.002765	7.34	442.581000	Y_R 377.433
K (766.491 nm)	6.104010	ppm	0.027542	0.45	6257.650000	Y_R2 488.368
Li (670.783 nm)	0.009403	ppm	0.002530	26.91	-716.849000	Y_R2 488.368
Mg (279.078 nm)	10.916000	ppm	0.002387	0.02	64592.700000	Y 377.433
Mn (257.610 nm)	0.008031	ppm	0.000033	0.41	2108.880000	Y 377.433
Mo (202.032 nm)	0.006274	ppm	0.000228	3.63	52.316400	Y 377.433
Na (589.592 nm)	18.656800 o	ppm	0.036877	0.20	122399.000000	Y_R2 488.368
Na H (589.593 nm)	18.103881	ppm	0.013282	0.07	80844.386976	Y_R 488.368
Ni (231.604 nm)	0.009331	ppm	0.000326	3.49	66.296300	Y 377.433
P (213.618 nm)	0.054680	ppm	0.001659	3.03	141.681000	Y 242.219
Pb (220.353 nm)	-0.000746 u	ppm	0.000385	51.65	5.158500	Y 242.219
S (181.972 nm)	16.596674 o	ppm	0.002377	0.01	7278.143813	Y 377.433
Sb (206.834 nm)	0.000088 u	ppm	0.000545	> 100.00	-29.894600	Y 377.433
Se (196.026 nm)	0.000192 u	ppm	0.001253	> 100.00	10.866800	Y 242.219
Si (288.158 nm)	15.040000 o	ppm	0.115028	0.76	133147.000000	Y 377.433
Sn (189.925 nm)	0.002332	ppm	0.000171	7.34	13.156900	Y 377.433
Sr (421.552 nm)	0.238004	ppm	0.000099	0.04	50405.435287	Y_R 488.368
Th (288.505 nm)	-0.001429 u	ppm	0.002988	> 100.00	48.708700	Y 377.433
Ti (336.122 nm)	0.002425	ppm	0.000066	2.74	298.926000	Y 377.433
Tl (190.794 nm)	0.000085 u	ppm	0.000525	> 100.00	-2.056530	Y 377.433
U (409.013 nm)	-0.004724 u	ppm	0.003935	83.31	-144.717000	Y 377.433
V (292.401 nm)	0.011991	ppm	0.000079	0.66	518.274000	Y 377.433
Zn (206.200 nm)	0.004417	ppm	0.000127	2.88	24.795500	Y 377.433
Zr (343.823 nm)	-0.000057 u	ppm	0.000111	> 100.00	30.667800	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.976661	17515.463027	0.000702	0.07
Y 377.433	0.979905	955644.177140	0.000735	0.07
Y_R 377.433	0.973402	70029.900000	0.001951	0.20
Y_R 488.368	0.995100	39324.500000	0.002899	0.29
Y_R2 488.368	1.006920	76696.733640	0.010262	1.02

Sample Name: 280-123061-B-4-A

Date: 5/13/2019 6:18:54 PM

Rack:Tube: 1:63

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.035524 n	ppm	0.027014	76.04	-2251.066531	Y_R 488.368
Ag (328.068 nm)	0.000293	ppm	0.000040	13.57	-337.292000	Y 377.433
Al (167.019 nm)	0.005883	ppm	0.001238	21.05	3.868840	Y_R 377.433
Al H (396.152 nm)	-0.099248 u	ppm	0.001330	1.34	93.216137	Y_R 377.433
As (188.980 nm)	0.004823	ppm	0.002501	51.85	5.732700	Y 242.219
B (249.678 nm)	0.011410	ppm	0.000160	1.40	349.835000	Y 242.219
Ba (493.408 nm)	0.027462	ppm	0.000459	1.67	3681.970000	Y_R 488.368
Be (234.861 nm)	-0.000021 u	ppm	0.000008	39.40	-26.748300	Y_R 488.368
Bi (223.061 nm)	-0.003078 u	ppm	0.000538	17.47	12.823200	Y 377.433
Ca (315.887 nm)	43.715868 o	ppm	0.071787	0.16	36775.239073	Y_R 377.433
Cd (214.439 nm)	-0.000061 u	ppm	0.000033	54.72	-3.453230	Y 377.433
Co (228.615 nm)	0.000017 u	ppm	0.000299	> 100.00	-39.526100	Y 242.219
Cr (205.560 nm)	0.021541	ppm	0.000138	0.64	319.088000	Y 377.433
Cu (324.754 nm)	0.000400	ppm	0.000395	98.79	592.088000	Y 377.433
Fe (238.204 nm)	0.024293	ppm	0.000870	3.58	105.124114	Y_R 377.433
Fe H (259.940 nm)	-0.172474 u	ppm	0.001350	0.78	50.205300	Y_R 377.433
K (766.491 nm)	5.890670	ppm	0.053419	0.91	6014.870000	Y_R2 488.368
Li (670.783 nm)	0.006422	ppm	0.001287	20.05	-808.301000	Y_R2 488.368
Mg (279.078 nm)	10.615100	ppm	0.000750	0.01	62813.400000	Y 377.433
Mn (257.610 nm)	0.001457	ppm	0.000063	4.32	443.859000	Y 377.433
Mo (202.032 nm)	0.004950	ppm	0.000338	6.83	40.775800	Y 377.433
Na (589.592 nm)	17.684100 o	ppm	0.016356	0.09	116061.000000	Y_R2 488.368
Na H (589.593 nm)	17.287868	ppm	0.192231	1.11	77688.808852	Y_R 488.368
Ni (231.604 nm)	0.000758	ppm	0.000348	45.93	2.709610	Y 377.433
P (213.618 nm)	0.022942	ppm	0.000070	0.30	69.137500	Y 242.219
Pb (220.353 nm)	-0.000092 u	ppm	0.000461	> 100.00	7.179360	Y 242.219
S (181.972 nm)	16.067341 o	ppm	0.051268	0.32	7046.740697	Y 377.433
Sb (206.834 nm)	-0.000813 u	ppm	0.000527	64.78	-32.453600	Y 377.433
Se (196.026 nm)	0.003830	ppm	0.002750	71.79	14.287200	Y 242.219
Si (288.158 nm)	14.383000 o	ppm	0.051474	0.36	127367.000000	Y 377.433
Sn (189.925 nm)	0.000727	ppm	0.001003	> 100.00	9.752890	Y 377.433
Sr (421.552 nm)	0.230402	ppm	0.002069	0.90	48799.261033	Y_R 488.368
Th (288.505 nm)	-0.002282 u	ppm	0.001233	54.02	46.104500	Y 377.433
Ti (336.122 nm)	-0.000013 u	ppm	0.000076	> 100.00	-57.682100	Y 377.433
Tl (190.794 nm)	-0.000639 u	ppm	0.000512	80.09	-3.707160	Y 377.433
U (409.013 nm)	-0.008679 u	ppm	0.002248	25.90	-163.138000	Y 377.433
V (292.401 nm)	0.011499	ppm	0.000266	2.31	499.189000	Y 377.433
Zn (206.200 nm)	0.003063	ppm	0.000078	2.55	17.735800	Y 377.433
Zr (343.823 nm)	0.000130	ppm	0.000075	57.81	55.419300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.971207	17417.665019	0.000491	0.05
Y 377.433	0.973815	949705.416003	0.000444	0.05
Y_R 377.433	0.964202	69368.000000	0.000443	0.05
Y_R 488.368	0.982160	38813.100000	0.007462	0.76
Y_R2 488.368	1.001898	76314.247140	0.001233	0.12

Sample Name: MB 280-456949/1-A

Date: 5/13/2019 6:22:15 PM

Rack:Tube: 1:64

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.056111 n	ppm	0.007180	12.80	-2200.813849	Y_R 488.368
Ag (328.068 nm)	0.000327	ppm	0.000005	1.62	-333.851000	Y 377.433
Al (167.019 nm)	0.006678	ppm	0.001947	29.15	4.386820	Y_R 377.433
Al H (396.152 nm)	-0.113523 u	ppm	0.004075	3.59	37.170657	Y_R 377.433
As (188.980 nm)	-0.002373 u	ppm	0.001398	58.94	-2.887220	Y 242.219
B (249.678 nm)	0.000440	ppm	0.000220	50.07	78.334600	Y 242.219
Ba (493.408 nm)	-0.000072 u	ppm	0.000029	39.74	594.001000	Y_R 488.368
Be (234.861 nm)	-0.000028 u	ppm	0.000029	> 100.00	-26.683100	Y_R 488.368
Bi (223.061 nm)	-0.000429 u	ppm	0.001571	> 100.00	19.660500	Y 377.433
Ca (315.887 nm)	0.037979	ppm	0.012113	31.89	-64.929076	Y_R 377.433
Cd (214.439 nm)	-0.000002 u	ppm	0.000098	> 100.00	0.208788	Y 377.433
Co (228.615 nm)	0.000221	ppm	0.000298	> 100.00	-35.446100	Y 242.219
Cr (205.560 nm)	0.000195	ppm	0.000036	18.43	0.864196	Y 377.433
Cu (324.754 nm)	0.000666	ppm	0.000215	32.24	641.573000	Y 377.433
Fe (238.204 nm)	0.081163	ppm	0.002080	2.56	314.118557	Y_R 377.433
Fe H (259.940 nm)	-0.110711 u	ppm	0.002113	1.91	165.539000	Y_R 377.433
K (766.491 nm)	-0.032473 u	ppm	0.023598	72.67	-725.711000	Y_R2 488.368
Li (670.783 nm)	0.004240	ppm	0.001998	47.11	-875.240000	Y_R2 488.368
Mg (279.078 nm)	0.001917	ppm	0.000607	31.66	33.698700	Y 377.433
Mn (257.610 nm)	0.001491	ppm	0.000040	2.70	452.376000	Y 377.433
Mo (202.032 nm)	0.000203	ppm	0.000054	26.77	-0.636846	Y 377.433
Na (589.592 nm)	0.042113	ppm	0.003381	8.03	1157.730000	Y_R2 488.368
Na H (589.593 nm)	-1.060932 u	ppm	0.020648	1.95	6769.465148	Y_R 488.368
Ni (231.604 nm)	0.000376	ppm	0.000133	35.37	-0.116927	Y 377.433
P (213.618 nm)	-0.000430 u	ppm	0.000353	82.03	15.717700	Y 242.219
Pb (220.353 nm)	-0.002313 u	ppm	0.000328	14.19	0.423033	Y 242.219
S (181.972 nm)	-0.017405 u	ppm	0.001740	10.00	15.548133	Y 377.433
Sb (206.834 nm)	0.001370 u	ppm	0.002296	> 100.00	-27.249100	Y 377.433
Se (196.026 nm)	-0.000299 u	ppm	0.001006	> 100.00	10.430700	Y 242.219
Si (288.158 nm)	0.008395	ppm	0.000963	11.47	909.922000	Y 377.433
Sn (189.925 nm)	0.000394 u	ppm	0.000978	> 100.00	9.045720	Y 377.433
Sr (421.552 nm)	0.000061	ppm	0.000025	40.34	128.936786	Y_R 488.368
Th (288.505 nm)	0.001433	ppm	0.001403	97.90	56.485500	Y 377.433
Ti (336.122 nm)	0.000180	ppm	0.000057	31.55	-168.630000	Y 377.433
Tl (190.794 nm)	0.000306 u	ppm	0.002442	> 100.00	-1.515960	Y 377.433
U (409.013 nm)	-0.003105 u	ppm	0.003264	> 100.00	-128.139000	Y 377.433
V (292.401 nm)	-0.000171 u	ppm	0.000091	53.29	12.059000	Y 377.433
Zn (206.200 nm)	0.001573	ppm	0.000295	18.73	9.970980	Y 377.433
Zr (343.823 nm)	-0.000173 u	ppm	0.000056	32.15	14.477700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.976020	17503.972065	0.000318	0.03
Y 377.433	0.979101	954860.207784	0.000733	0.07
Y_R 377.433	0.972224	69945.200000	0.000685	0.07
Y_R 488.368	0.985048	38927.200000	0.000797	0.08
Y_R2 488.368	0.993210	75652.458745	0.003694	0.37

Sample Name: LCS 280-456949/2-A

Date: 5/13/2019 6:25:37 PM

Rack:Tube: 1:65

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.027001 n	ppm	0.037150	3.62	169.120774	Y_R 488.368
Ag (328.068 nm)	-0.000903 u	ppm	0.000190	21.04	-502.223000	Y 377.433
Al (167.019 nm)	9.411680 o	ppm	0.048540	0.52	5636.320000	Y_R 377.433
Al H (396.152 nm)	10.434185	ppm	0.042483	0.41	26990.174442	Y_R 377.433
As (188.980 nm)	2.047670	ppm	0.000773	0.04	2452.640000	Y 242.219
B (249.678 nm)	1.001210	ppm	0.000046	0.00	24865.900000	Y 242.219
Ba (493.408 nm)	2.047400 o	ppm	0.004895	0.24	229534.000000	Y_R 488.368
Be (234.861 nm)	1.013720	ppm	0.004124	0.41	293551.000000	Y_R 488.368
Bi (223.061 nm)	2.004910	ppm	0.001157	0.06	5189.660000	Y 377.433
Ca (315.887 nm)	51.240559 o	ppm	0.165105	0.32	43122.555841	Y_R 377.433
Cd (214.439 nm)	1.008250	ppm	0.001249	0.12	61475.900000	Y 377.433
Co (228.615 nm)	0.974074	ppm	0.000930	0.10	19439.700000	Y 242.219
Cr (205.560 nm)	1.025940	ppm	0.002509	0.24	15279.000000	Y 377.433
Cu (324.754 nm)	0.991498	ppm	0.004044	0.41	66241.200000	Y 377.433
Fe (238.204 nm)	10.087133 o	ppm	0.027594	0.27	37085.189806	Y_R 377.433
Fe H (259.940 nm)	10.383300	ppm	0.015714	0.15	19761.600000	Y_R 377.433
K (766.491 nm)	50.457000	ppm	0.172335	0.34	56731.700000	Y_R2 488.368
Li (670.783 nm)	1.013440	ppm	0.004150	0.41	30089.400000	Y_R2 488.368
Mg (279.078 nm)	50.306100 o	ppm	0.049674	0.10	297520.000000	Y 377.433
Mn (257.610 nm)	1.020080	ppm	0.000089	0.01	258458.000000	Y 377.433
Mo (202.032 nm)	1.036200	ppm	0.000518	0.05	9035.930000	Y 377.433
Na (589.592 nm)	49.156800 o	ppm	0.043725	0.09	324980.000000	Y_R2 488.368
Na H (589.593 nm)	50.161446	ppm	0.060427	0.12	206703.289028	Y_R 488.368
Ni (231.604 nm)	0.987638	ppm	0.000640	0.06	7324.390000	Y 377.433
P (213.618 nm)	20.225300 o	ppm	0.025852	0.13	46245.000000	Y 242.219
Pb (220.353 nm)	0.995966	ppm	0.001514	0.15	3048.070000	Y 242.219
S (181.972 nm)	9.664446	ppm	0.033061	0.34	4249.933055	Y 377.433
Sb (206.834 nm)	0.000435	ppm	0.000195	44.69	-13.319500	Y 377.433
Se (196.026 nm)	2.005470	ppm	0.013987	0.70	1877.840000	Y 242.219
Si (288.158 nm)	2.164050	ppm	0.018816	0.87	19873.800000	Y 377.433
Sn (189.925 nm)	2.040890	ppm	0.001201	0.06	4336.000000	Y 377.433
Sr (421.552 nm)	1.003600	ppm	0.002574	0.26	212173.552393	Y_R 488.368
Th (288.505 nm)	1.018530	ppm	0.000324	0.03	3118.200000	Y 377.433
Ti (336.122 nm)	1.036710	ppm	0.000231	0.02	148865.000000	Y 377.433
Tl (190.794 nm)	2.024820	ppm	0.000983	0.05	4669.970000	Y 377.433
U (409.013 nm)	2.095450	ppm	0.002520	0.12	9709.750000	Y 377.433
V (292.401 nm)	1.027860	ppm	0.000774	0.08	43143.700000	Y 377.433
Zn (206.200 nm)	0.495089	ppm	0.000197	0.04	2582.450000	Y 377.433
Zr (343.823 nm)	0.505461	ppm	0.000529	0.10	68756.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.953718	17104.007299	0.001159	0.12
Y 377.433	0.955693	932031.229479	0.000882	0.09
Y_R 377.433	0.953485	68597.000000	0.001801	0.19
Y_R 488.368	0.969707	38321.000000	0.003354	0.35
Y_R2 488.368	0.991732	75539.848202	0.001009	0.10

Sample Name: 280-123292-A-1-A

Date: 5/13/2019 6:28:59 PM

Rack:Tube: 1:66

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.093565 n	ppm	0.006069	6.49	-2109.390415	Y_R 488.368
Ag (328.068 nm)	0.000863	ppm	0.000066	7.69	-308.413000	Y 377.433
Al (167.019 nm)	0.012360	ppm	0.002177	17.62	7.754980	Y_R 377.433
Al H (396.152 nm)	-0.080258 u	ppm	0.003675	4.58	184.238209	Y_R 377.433
As (188.980 nm)	0.001052 u	ppm	0.001735	> 100.00	1.214880	Y 242.219
B (249.678 nm)	2.321320 o	ppm	0.001083	0.05	57500.600000	Y 242.219
Ba (493.408 nm)	0.017859	ppm	0.000090	0.51	2630.260000	Y_R 488.368
Be (234.861 nm)	0.000015	ppm	0.000009	58.28	-15.559000	Y_R 488.368
Bi (223.061 nm)	-0.001010 u	ppm	0.000154	15.28	18.156900	Y 377.433
Ca (315.887 nm)	140.642289 o	ppm	0.720285	0.51	118527.946525	Y_R 377.433
Cd (214.439 nm)	0.000027	ppm	0.000023	83.68	1.941440	Y 377.433
Co (228.615 nm)	-0.000398 u	ppm	0.000130	32.68	-47.788400	Y 242.219
Cr (205.560 nm)	0.000744	ppm	0.000023	3.09	9.058250	Y 377.433
Cu (324.754 nm)	0.000695	ppm	0.000163	23.50	546.057000	Y 377.433
Fe (238.204 nm)	0.041467	ppm	0.001448	3.49	168.238762	Y_R 377.433
Fe H (259.940 nm)	-0.157994 u	ppm	0.000082	0.05	77.244600	Y_R 377.433
K (766.491 nm)	11.653500	ppm	0.051305	0.44	12573.100000	Y_R2 488.368
Li (670.783 nm)	0.074081	ppm	0.001777	2.40	1267.650000	Y_R2 488.368
Mg (279.078 nm)	55.231100 o	ppm	0.009751	0.02	326727.000000	Y 377.433
Mn (257.610 nm)	0.005357	ppm	0.000038	0.71	1431.700000	Y 377.433
Mo (202.032 nm)	0.001338	ppm	0.000180	13.49	9.262180	Y 377.433
Na (589.592 nm)	296.879000 o	ppm	1.549520	0.52	1933570.000000	Y_R2 488.368
Na H (589.593 nm)	311.881472	ppm	3.888062	1.25	1215861.371064	Y_R 488.368
Ni (231.604 nm)	0.000095 u	ppm	0.000156	> 100.00	-2.198710	Y 377.433
P (213.618 nm)	0.021302	ppm	0.001862	8.74	65.389800	Y 242.219
Pb (220.353 nm)	0.000982	ppm	0.001074	> 100.00	10.438800	Y 242.219
S (181.972 nm)	254.162412 bo	ppm	0.274850	0.11	111126.252319	Y 377.433
Sb (206.834 nm)	0.000926	ppm	0.000050	5.45	-28.404300	Y 377.433
Se (196.026 nm)	0.001324 u	ppm	0.002646	> 100.00	11.953500	Y 242.219
Si (288.158 nm)	9.413760	ppm	0.016922	0.18	83651.400000	Y 377.433
Sn (189.925 nm)	0.001026	ppm	0.001122	> 100.00	10.387300	Y 377.433
Sr (421.552 nm)	8.814248 o	ppm	0.048607	0.55	1862540.128312	Y_R 488.368
Th (288.505 nm)	0.001297	ppm	0.001533	> 100.00	56.059900	Y 377.433
Ti (336.122 nm)	0.000114	ppm	0.000008	7.31	269.103000	Y 377.433
Tl (190.794 nm)	0.002742	ppm	0.000487	17.75	4.106280	Y 377.433
U (409.013 nm)	-0.029974 u	ppm	0.005911	19.72	-282.726000	Y 377.433
V (292.401 nm)	-0.000237 u	ppm	0.000061	25.72	11.615300	Y 377.433
Zn (206.200 nm)	0.001709	ppm	0.000337	19.74	10.675900	Y 377.433
Zr (343.823 nm)	0.000823	ppm	0.000141	17.15	149.698000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.925533	16598.536385	0.000515	0.06
Y 377.433	0.929878	906855.353887	0.000654	0.07
Y_R 377.433	0.955970	68775.800000	0.006241	0.65
Y_R 488.368	0.969998	38332.500000	0.009501	0.98
Y_R2 488.368	0.988722	75310.617715	0.011163	1.13

Sample Name: 280-123292-a-1-a sd@5

Date: 5/13/2019 6:32:21 PM

Rack:Tube: 1:67

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.075660 n	ppm	0.016058	21.22	-2153.094394	Y_R 488.368
Ag (328.068 nm)	0.000674	ppm	0.000137	20.33	-317.421000	Y 377.433
Al (167.019 nm)	0.005999	ppm	0.001663	27.73	3.983930	Y_R 377.433
Al H (396.152 nm)	-0.113606 u	ppm	0.011619	10.23	49.577981	Y_R 377.433
As (188.980 nm)	-0.000055 u	ppm	0.000289	> 100.00	-0.111033	Y 242.219
B (249.678 nm)	0.450447	ppm	0.000502	0.11	11212.200000	Y 242.219
Ba (493.408 nm)	0.003608	ppm	0.000051	1.42	1011.780000	Y_R 488.368
Be (234.861 nm)	0.000065	ppm	0.000028	43.40	0.346976	Y_R 488.368
Bi (223.061 nm)	-0.002398 u	ppm	0.003364	> 100.00	14.587100	Y 377.433
Ca (315.887 nm)	28.555802 o	ppm	0.083241	0.29	23988.463290	Y_R 377.433
Cd (214.439 nm)	0.000061	ppm	0.000011	17.42	4.026590	Y 377.433
Co (228.615 nm)	0.000246	ppm	0.000312	> 100.00	-34.953900	Y 242.219
Cr (205.560 nm)	0.000340	ppm	0.000093	27.47	3.032290	Y 377.433
Cu (324.754 nm)	0.000791	ppm	0.000009	1.14	630.678000	Y 377.433
Fe (238.204 nm)	0.085229	ppm	0.001839	2.16	329.059074	Y_R 377.433
Fe H (259.940 nm)	-0.107202 u	ppm	0.003542	3.30	172.092000	Y_R 377.433
K (766.491 nm)	2.216710	ppm	0.024797	1.12	1833.880000	Y_R2 488.368
Li (670.783 nm)	0.018593	ppm	0.000971	5.22	-434.869000	Y_R2 488.368
Mg (279.078 nm)	10.958700	ppm	0.003333	0.03	64845.700000	Y 377.433
Mn (257.610 nm)	0.001724	ppm	0.000002	0.12	511.309000	Y 377.433
Mo (202.032 nm)	0.000176	ppm	0.000174	98.69	-0.869292	Y 377.433
Na (589.592 nm)	59.398200 o	ppm	0.123645	0.21	387567.000000	Y_R2 488.368
Na H (589.593 nm)	61.171561	ppm	0.252013	0.41	247212.277460	Y_R 488.368
Ni (231.604 nm)	-0.000332 u	ppm	0.001051	> 100.00	-5.370830	Y 377.433
P (213.618 nm)	0.007818	ppm	0.002038	26.06	34.570400	Y 242.219
Pb (220.353 nm)	-0.001324 u	ppm	0.000992	74.97	3.444570	Y 242.219
S (181.972 nm)	50.461314 o	ppm	0.058835	0.12	22081.524098	Y 377.433
Sb (206.834 nm)	-0.001905 u	ppm	0.000275	14.42	-36.005500	Y 377.433
Se (196.026 nm)	-0.001023 u	ppm	0.000133	13.00	9.756100	Y 242.219
Si (288.158 nm)	1.834810	ppm	0.016646	0.91	16977.400000	Y 377.433
Sn (189.925 nm)	0.000771 u	ppm	0.001150	> 100.00	9.846230	Y 377.433
Sr (421.552 nm)	1.754964 o	ppm	0.005584	0.32	370934.522451	Y_R 488.368
Th (288.505 nm)	0.000605 u	ppm	0.001407	> 100.00	54.015600	Y 377.433
Ti (336.122 nm)	0.000077	ppm	0.000054	70.43	-92.922600	Y 377.433
Tl (190.794 nm)	-0.000421 u	ppm	0.001571	> 100.00	-3.194300	Y 377.433
U (409.013 nm)	-0.010521 u	ppm	0.000243	2.31	-168.731000	Y 377.433
V (292.401 nm)	-0.000437 u	ppm	0.000100	22.91	1.535490	Y 377.433
Zn (206.200 nm)	0.011799	ppm	0.000390	3.30	63.271100	Y 377.433
Zr (343.823 nm)	0.000065	ppm	0.000064	97.79	46.882900	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.972568	17442.064436	0.000327	0.03
Y 377.433	0.974304	950182.005654	0.001266	0.13
Y_R 377.433	0.973217	70016.600000	0.005242	0.54
Y_R 488.368	0.997179	39406.600000	0.005477	0.55
Y_R2 488.368	1.008510	76817.862384	0.003528	0.35

Sample Name: 280-123292-A-1-B MS

Date: 5/13/2019 6:35:43 PM

Rack:Tube: 1:68

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.099481 n	ppm	0.040022	3.64	346.043501	Y_R 488.368
Ag (328.068 nm)	-0.000412 u	ppm	0.000086	20.90	-478.866000	Y 377.433
Al (167.019 nm)	9.140710 o	ppm	0.029329	0.32	5474.210000	Y_R 377.433
Al H (396.152 nm)	10.474769	ppm	0.018522	0.18	27156.072006	Y_R 377.433
As (188.980 nm)	2.090680	ppm	0.000069	0.00	2504.170000	Y 242.219
B (249.678 nm)	3.419700 o	ppm	0.004798	0.14	84703.200000	Y 242.219
Ba (493.408 nm)	2.053320 o	ppm	0.006044	0.29	230228.000000	Y_R 488.368
Be (234.861 nm)	1.009420	ppm	0.009891	0.98	292305.000000	Y_R 488.368
Bi (223.061 nm)	2.047250	ppm	0.000115	0.01	5298.770000	Y 377.433
Ca (315.887 nm)	193.156883 o	ppm	0.005165	0.00	162822.035362	Y_R 377.433
Cd (214.439 nm)	0.981349	ppm	0.000799	0.08	59835.800000	Y 377.433
Co (228.615 nm)	0.973922	ppm	0.001056	0.11	19436.700000	Y 242.219
Cr (205.560 nm)	0.999588	ppm	0.012447	1.25	14886.200000	Y 377.433
Cu (324.754 nm)	1.016460	ppm	0.000955	0.09	67792.800000	Y 377.433
Fe (238.204 nm)	10.005240 o	ppm	0.004495	0.04	36784.237482	Y_R 377.433
Fe H (259.940 nm)	10.308600	ppm	0.005061	0.05	19622.100000	Y_R 377.433
K (766.491 nm)	64.244300	ppm	0.020325	0.03	72421.800000	Y_R2 488.368
Li (670.783 nm)	1.115020	ppm	0.001705	0.15	33206.200000	Y_R2 488.368
Mg (279.078 nm)	105.963000 o	ppm	0.028315	0.03	626742.000000	Y 377.433
Mn (257.610 nm)	1.014790	ppm	0.000943	0.09	257116.000000	Y 377.433
Mo (202.032 nm)	1.032390	ppm	0.000196	0.02	9002.680000	Y 377.433
Na (589.592 nm)	350.742000 o	ppm	1.288400	0.37	2288290.000000	Y_R2 488.368
Na H (589.593 nm)	369.483107	ppm	1.953622	0.53	1440429.875417	Y_R 488.368
Ni (231.604 nm)	0.975957	ppm	0.001970	0.20	7237.650000	Y 377.433
P (213.618 nm)	20.694500 o	ppm	0.039904	0.19	47317.400000	Y 242.219
Pb (220.353 nm)	0.970973	ppm	0.000493	0.05	2971.690000	Y 242.219
S (181.972 nm)	269.824509 bo	ppm	0.221011	0.08	117974.791416	Y 377.433
Sb (206.834 nm)	-0.001675 u	ppm	0.002042	> 100.00	-19.720700	Y 377.433
Se (196.026 nm)	2.028640	ppm	0.001693	0.08	1899.430000	Y 242.219
Si (288.158 nm)	11.809200 o	ppm	0.060516	0.51	104725.000000	Y 377.433
Sn (189.925 nm)	2.041460	ppm	0.010055	0.49	4337.200000	Y 377.433
Sr (421.552 nm)	9.994481 o	ppm	0.056165	0.56	2111919.758209	Y_R 488.368
Th (288.505 nm)	1.026840	ppm	0.006171	0.60	3142.430000	Y 377.433
Ti (336.122 nm)	1.038720	ppm	0.002188	0.21	149606.000000	Y 377.433
Tl (190.794 nm)	1.935420	ppm	0.001169	0.06	4463.540000	Y 377.433
U (409.013 nm)	2.083820	ppm	0.010682	0.51	9626.600000	Y 377.433
V (292.401 nm)	1.028200	ppm	0.001150	0.11	43167.700000	Y 377.433
Zn (206.200 nm)	0.484484	ppm	0.002509	0.52	2527.170000	Y 377.433
Zr (343.823 nm)	0.506821	ppm	0.001955	0.39	68940.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.923350	16559.379946	0.000346	0.04
Y 377.433	0.928383	905397.390822	0.001312	0.14
Y_R 377.433	0.944447	67946.800000	0.011012	1.17
Y_R 488.368	0.960774	37967.900000	0.009301	0.97
Y_R2 488.368	0.975855	74330.511327	0.003310	0.34

Sample Name: 280-123292-A-1-C MSD

Date: 5/13/2019 6:39:05 PM

Rack:Tube: 1:69

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.105544 n	ppm	0.001436	0.13	360.844954	Y_R 488.368
Ag (328.068 nm)	-0.000486 u	ppm	0.000142	29.26	-482.433000	Y 377.433
Al (167.019 nm)	9.091870 o	ppm	0.007109	0.08	5445.010000	Y_R 377.433
Al H (396.152 nm)	10.478599	ppm	0.004503	0.04	27163.130731	Y_R 377.433
As (188.980 nm)	2.081320	ppm	0.008460	0.41	2492.950000	Y 242.219
B (249.678 nm)	3.329660 o	ppm	0.000183	0.01	82475.600000	Y 242.219
Ba (493.408 nm)	2.052110 o	ppm	0.001665	0.08	230091.000000	Y_R 488.368
Be (234.861 nm)	1.002170	ppm	0.002847	0.28	290206.000000	Y_R 488.368
Bi (223.061 nm)	2.043000	ppm	0.000308	0.02	5287.830000	Y 377.433
Ca (315.887 nm)	187.701955 o	ppm	0.578042	0.31	158221.068482	Y_R 377.433
Cd (214.439 nm)	0.980474	ppm	0.000370	0.04	59782.500000	Y 377.433
Co (228.615 nm)	0.973089	ppm	0.000398	0.04	19419.900000	Y 242.219
Cr (205.560 nm)	0.999758	ppm	0.004429	0.44	14888.800000	Y 377.433
Cu (324.754 nm)	1.014990	ppm	0.001292	0.13	67699.600000	Y 377.433
Fe (238.204 nm)	10.019940 o	ppm	0.015907	0.16	36838.261385	Y_R 377.433
Fe H (259.940 nm)	10.289100	ppm	0.024295	0.24	19585.800000	Y_R 377.433
K (766.491 nm)	63.788800	ppm	0.138760	0.22	71903.500000	Y_R2 488.368
Li (670.783 nm)	1.109670	ppm	0.002140	0.19	33042.100000	Y_R2 488.368
Mg (279.078 nm)	104.036000 o	ppm	0.110173	0.11	615346.000000	Y 377.433
Mn (257.610 nm)	1.013850	ppm	0.000133	0.01	256879.000000	Y 377.433
Mo (202.032 nm)	1.028890	ppm	0.002430	0.24	8972.120000	Y 377.433
Na (589.592 nm)	339.189000 o	ppm	0.749363	0.22	2213070.000000	Y_R2 488.368
Na H (589.593 nm)	357.235777	ppm	1.774904	0.50	1393110.341344	Y_R 488.368
Ni (231.604 nm)	0.976585	ppm	0.002537	0.26	7242.310000	Y 377.433
P (213.618 nm)	20.666200 o	ppm	0.008503	0.04	47252.700000	Y 242.219
Pb (220.353 nm)	0.969619	ppm	0.004546	0.47	2967.550000	Y 242.219
S (181.972 nm)	259.990255 bo	ppm	0.179978	0.07	113675.900346	Y 377.433
Sb (206.834 nm)	0.000550 u	ppm	0.001638	> 100.00	-13.704500	Y 377.433
Se (196.026 nm)	2.026900	ppm	0.007289	0.36	1897.810000	Y 242.219
Si (288.158 nm)	11.433600 o	ppm	0.041579	0.36	101420.000000	Y 377.433
Sn (189.925 nm)	2.041290	ppm	0.002236	0.11	4336.830000	Y 377.433
Sr (421.552 nm)	9.645401 o	ppm	0.015577	0.16	2038160.137661	Y_R 488.368
Th (288.505 nm)	1.024040	ppm	0.002075	0.20	3134.160000	Y 377.433
Ti (336.122 nm)	1.035820	ppm	0.000513	0.05	149172.000000	Y 377.433
Tl (190.794 nm)	1.934610	ppm	0.001050	0.05	4461.680000	Y 377.433
U (409.013 nm)	2.075580	ppm	0.009924	0.48	9589.120000	Y 377.433
V (292.401 nm)	1.026600	ppm	0.000102	0.01	43100.500000	Y 377.433
Zn (206.200 nm)	0.481624	ppm	0.001509	0.31	2512.270000	Y 377.433
Zr (343.823 nm)	0.504114	ppm	0.002510	0.50	68573.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.927208	16628.575678	0.001388	0.15
Y 377.433	0.933549	910435.777100	0.000916	0.10
Y_R 377.433	0.955311	68728.400000	0.001483	0.16
Y_R 488.368	0.971286	38383.400000	0.001612	0.17
Y_R2 488.368	0.981887	74790.016908	0.005566	0.57

Sample Name: 280-123292-A-2-A

Date: 5/13/2019 6:42:28 PM

Rack:Tube: 1:70

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.084457 n	ppm	0.004369	5.17	-2131.622104	Y_R 488.368
Ag (328.068 nm)	0.001054	ppm	0.000106	10.01	-299.506000	Y 377.433
Al (167.019 nm)	0.015817	ppm	0.002334	14.76	10.565400	Y_R 377.433
Al H (396.152 nm)	-0.085525 u	ppm	0.000862	1.01	161.560277	Y_R 377.433
As (188.980 nm)	0.003211	ppm	0.003316	> 100.00	3.792670	Y 242.219
B (249.678 nm)	1.878700 o	ppm	0.001417	0.08	46547.900000	Y 242.219
Ba (493.408 nm)	0.016753	ppm	0.000303	1.81	2502.840000	Y_R 488.368
Be (234.861 nm)	0.000028	ppm	0.000008	29.64	19.289000	Y_R 488.368
Bi (223.061 nm)	-0.001121 u	ppm	0.001285	> 100.00	18.043400	Y 377.433
Ca (315.887 nm)	119.809404 o	ppm	0.053664	0.04	100956.424894	Y_R 377.433
Cd (214.439 nm)	0.000015 u	ppm	0.000116	> 100.00	2.189320	Y 377.433
Co (228.615 nm)	-0.000015 u	ppm	0.000591	> 100.00	-40.151900	Y 242.219
Cr (205.560 nm)	0.000089	ppm	0.000007	7.92	-0.970650	Y 377.433
Cu (324.754 nm)	0.000292	ppm	0.000155	52.94	533.599000	Y 377.433
Fe (238.204 nm)	1.041856	ppm	0.000463	0.04	3844.581184	Y_R 377.433
Fe H (259.940 nm)	0.883974 u	ppm	0.006240	0.71	2022.970000	Y_R 377.433
K (766.491 nm)	8.307310	ppm	0.097001	1.17	8765.040000	Y_R2 488.368
Li (670.783 nm)	0.057881	ppm	0.001877	3.24	770.583000	Y_R2 488.368
Mg (279.078 nm)	37.749400	ppm	0.063496	0.17	223317.000000	Y 377.433
Mn (257.610 nm)	0.026272	ppm	0.000035	0.13	6729.220000	Y 377.433
Mo (202.032 nm)	0.000884	ppm	0.000094	10.59	5.302370	Y 377.433
Na (589.592 nm)	181.892000 o	ppm	0.142919	0.08	1185020.000000	Y_R2 488.368
Na H (589.593 nm)	191.032620	ppm	0.390653	0.20	748952.781977	Y_R 488.368
Ni (231.604 nm)	-0.001482 u	ppm	0.000413	27.88	-13.847600	Y 377.433
P (213.618 nm)	0.030753	ppm	0.000559	1.82	86.992300	Y 242.219
Pb (220.353 nm)	-0.000772 u	ppm	0.000143	18.48	5.196050	Y 242.219
S (181.972 nm)	152.148305 bo	ppm	0.344650	0.23	66532.438652	Y 377.433
Sb (206.834 nm)	0.000776 u	ppm	0.001963	> 100.00	-29.070400	Y 377.433
Se (196.026 nm)	-0.000694 u	ppm	0.000006	0.93	9.902130	Y 242.219
Si (288.158 nm)	9.063830	ppm	0.040676	0.45	80572.900000	Y 377.433
Sn (189.925 nm)	0.000106 u	ppm	0.000936	> 100.00	8.436490	Y 377.433
Sr (421.552 nm)	6.581644 o	ppm	0.036810	0.56	1390797.584299	Y_R 488.368
Th (288.505 nm)	0.000140 u	ppm	0.000394	> 100.00	53.160300	Y 377.433
Ti (336.122 nm)	0.000107	ppm	0.000106	98.59	201.722000	Y 377.433
Tl (190.794 nm)	0.001914	ppm	0.001738	90.80	2.169020	Y 377.433
U (409.013 nm)	-0.023339 u	ppm	0.005273	22.59	-246.339000	Y 377.433
V (292.401 nm)	-0.000415 u	ppm	0.000055	13.21	3.202670	Y 377.433
Zn (206.200 nm)	0.007310	ppm	0.000665	9.10	39.873600	Y 377.433
Zr (343.823 nm)	0.000721	ppm	0.000050	6.91	138.875000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.939529	16849.534589	0.003287	0.35
Y 377.433	0.944406	921023.998532	0.003053	0.32
Y_R 377.433	0.954735	68686.900000	0.004567	0.48
Y_R 488.368	0.968887	38288.600000	0.003545	0.37
Y_R2 488.368	0.990919	75477.972442	0.007208	0.73

Sample Name: 280-123292-A-3-A

Date: 5/13/2019 6:45:51 PM

Rack:Tube: 1:71

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.105186 n	ppm	0.025081	23.84	-2081.023596	Y_R 488.368
Ag (328.068 nm)	0.000424	ppm	0.000265	62.41	-329.260000	Y 377.433
Al (167.019 nm)	0.004363	ppm	0.000261	5.98	3.009300	Y_R 377.433
Al H (396.152 nm)	-0.094245 u	ppm	0.003783	4.01	130.979608	Y_R 377.433
As (188.980 nm)	0.001285	ppm	0.001764	> 100.00	1.493500	Y 242.219
B (249.678 nm)	1.870780 o	ppm	0.002258	0.12	46353.400000	Y 242.219
Ba (493.408 nm)	0.014551	ppm	0.000146	1.00	2251.420000	Y_R 488.368
Be (234.861 nm)	-0.000010 u	ppm	0.000003	29.05	-21.392400	Y_R 488.368
Bi (223.061 nm)	0.000525 u	ppm	0.001764	> 100.00	22.120000	Y 377.433
Ca (315.887 nm)	100.771806 o	ppm	0.215800	0.21	84899.139794	Y_R 377.433
Cd (214.439 nm)	-0.000014 u	ppm	0.000045	> 100.00	-0.533436	Y 377.433
Co (228.615 nm)	0.000086 u	ppm	0.000207	> 100.00	-38.140400	Y 242.219
Cr (205.560 nm)	0.000275	ppm	0.000076	27.81	2.060000	Y 377.433
Cu (324.754 nm)	0.000531	ppm	0.000231	43.44	562.341000	Y 377.433
Fe (238.204 nm)	0.090678	ppm	0.001104	1.22	349.086417	Y_R 377.433
Fe H (259.940 nm)	-0.107373 u	ppm	0.003099	2.89	171.772000	Y_R 377.433
K (766.491 nm)	8.635650	ppm	0.016921	0.20	9138.690000	Y_R2 488.368
Li (670.783 nm)	0.057125	ppm	0.001791	3.14	747.392000	Y_R2 488.368
Mg (279.078 nm)	35.434600	ppm	0.035265	0.10	209626.000000	Y 377.433
Mn (257.610 nm)	0.001063	ppm	0.000012	1.17	343.940000	Y 377.433
Mo (202.032 nm)	0.001641	ppm	0.000373	22.71	11.912800	Y 377.433
Na (589.592 nm)	199.243000 o	ppm	0.036596	0.02	1297960.000000	Y_R2 488.368
Na H (589.593 nm)	206.271542	ppm	0.698865	0.34	807826.856022	Y_R 488.368
Ni (231.604 nm)	-0.000946 u	ppm	0.000338	35.72	-9.918210	Y 377.433
P (213.618 nm)	0.013162	ppm	0.001140	8.66	46.783300	Y 242.219
Pb (220.353 nm)	-0.000596 u	ppm	0.000609	> 100.00	5.638700	Y 242.219
S (181.972 nm)	142.707390 bo	ppm	0.018187	0.01	62405.439249	Y 377.433
Sb (206.834 nm)	-0.000105 u	ppm	0.001303	> 100.00	-31.202600	Y 377.433
Se (196.026 nm)	-0.004216 u	ppm	0.000379	8.99	6.781500	Y 242.219
Si (288.158 nm)	7.258650	ppm	0.013385	0.18	64692.300000	Y 377.433
Sn (189.925 nm)	0.000005 u	ppm	0.000267	> 100.00	8.221410	Y 377.433
Sr (421.552 nm)	6.019539 o	ppm	0.054040	0.90	1272026.435445	Y_R 488.368
Th (288.505 nm)	-0.000051 u	ppm	0.001801	> 100.00	52.107800	Y 377.433
Ti (336.122 nm)	-0.000126 u	ppm	0.000031	24.40	107.666000	Y 377.433
Tl (190.794 nm)	0.000783	ppm	0.000579	73.92	-0.418245	Y 377.433
U (409.013 nm)	-0.025885 u	ppm	0.003320	12.83	-255.432000	Y 377.433
V (292.401 nm)	-0.000191 u	ppm	0.000235	> 100.00	12.634500	Y 377.433
Zn (206.200 nm)	0.002509	ppm	0.000296	11.82	14.846300	Y 377.433
Zr (343.823 nm)	0.000221	ppm	0.000063	28.68	68.006100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.942547	16903.664871	0.001713	0.18
Y 377.433	0.945137	921737.118073	0.001360	0.14
Y_R 377.433	0.963998	69353.300000	0.001161	0.12
Y_R 488.368	0.986243	38974.400000	0.000392	0.04
Y_R2 488.368	0.985265	75047.263885	0.010445	1.06

Sample Name: CCVH-5699817

Date: 5/13/2019 6:49:14 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.080366	ppm	0.026392	32.84	-2141.609181	Y_R 488.368
Ag (328.068 nm)	0.000082 u	ppm	0.000249	> 100.00	-597.511000	Y 377.433
Al (167.019 nm)	42.805600 o	ppm	0.058095	0.14	25635.500000	Y_R 377.433
Al H (396.152 nm)	49.756955	ppm	0.102475	0.21	126969.791700	Y_R 377.433
As (188.980 nm)	-0.000423 u	ppm	0.003016	> 100.00	-0.970724	Y 242.219
B (249.678 nm)	0.004770	ppm	0.000308	6.45	111.419000	Y 242.219
Ba (493.408 nm)	0.001789	ppm	0.000119	6.63	846.752000	Y_R 488.368
Be (234.861 nm)	0.000851	ppm	0.000069	8.06	1736.130000	Y_R 488.368
Bi (223.061 nm)	0.996424	ppm	0.004657	0.47	2597.180000	Y 377.433
Ca (315.887 nm)	0.014009	ppm	0.007863	56.13	-85.145296	Y_R 377.433
Cd (214.439 nm)	0.001176	ppm	0.000080	6.79	120.773000	Y 377.433
Co (228.615 nm)	0.004489	ppm	0.000349	7.77	49.782400	Y 242.219
Cr (205.560 nm)	0.001192	ppm	0.000200	16.77	2.320460	Y 377.433
Cu (324.754 nm)	0.009022	ppm	0.000139	1.54	1584.590000	Y 377.433
Fe (238.204 nm)	48.334198 o	ppm	0.219801	0.45	177639.832073	Y_R 377.433
Fe H (259.940 nm)	50.233700	ppm	0.212165	0.42	94176.600000	Y_R 377.433
K (766.491 nm)	0.160297	ppm	0.045507	28.39	-506.337000	Y_R2 488.368
Li (670.783 nm)	0.006925	ppm	0.002481	35.83	-792.863000	Y_R2 488.368
Mg (279.078 nm)	0.030783	ppm	0.000021	0.07	-161.218000	Y 377.433
Mn (257.610 nm)	0.002822	ppm	0.000018	0.64	789.613000	Y 377.433
Mo (202.032 nm)	0.000460	ppm	0.000064	13.99	1.605320	Y 377.433
Na (589.592 nm)	233.073000 o	ppm	0.864713	0.37	1518170.000000	Y_R2 488.368
Na H (589.593 nm)	243.784019	ppm	0.680037	0.28	952744.845485	Y_R 488.368
Ni (231.604 nm)	0.004952	ppm	0.000055	1.11	36.039200	Y 377.433
P (213.618 nm)	-0.000263 u	ppm	0.000892	> 100.00	16.100400	Y 242.219
Pb (220.353 nm)	0.003606	ppm	0.000309	8.57	36.716200	Y 242.219
S (181.972 nm)	4.914827	ppm	0.017700	0.36	2171.598627	Y 377.433
Sb (206.834 nm)	-0.000010 u	ppm	0.001221	> 100.00	-75.809700	Y 377.433
Se (196.026 nm)	-0.000606 u	ppm	0.004315	> 100.00	1.764170	Y 242.219
Si (288.158 nm)	0.046599	ppm	0.000183	0.39	1246.010000	Y 377.433
Sn (189.925 nm)	0.005595	ppm	0.000155	2.77	20.076100	Y 377.433
Sr (421.552 nm)	0.002004	ppm	0.000065	3.22	539.348195	Y_R 488.368
Th (288.505 nm)	5.014790	ppm	0.005106	0.10	14965.500000	Y 377.433
Ti (336.122 nm)	0.002480	ppm	0.000018	0.72	161.676000	Y 377.433
Tl (190.794 nm)	-0.000860 u	ppm	0.000769	89.42	-5.584670	Y 377.433
U (409.013 nm)	10.152500	ppm	0.016786	0.17	47727.400000	Y 377.433
V (292.401 nm)	0.004417	ppm	0.000241	5.45	10.631900	Y 377.433
Zn (206.200 nm)	0.003899	ppm	0.000380	9.75	22.091900	Y 377.433
Zr (343.823 nm)	-0.003091 u	ppm	0.000131	4.25	-232.628000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.963442	17278.391996	0.001793	0.19
Y 377.433	0.957778	934065.342896	0.001531	0.16
Y_R 377.433	0.965445	69457.500000	0.003661	0.38
Y_R 488.368	0.980840	38760.900000	0.005226	0.53
Y_R2 488.368	1.007900	76771.375682	0.012486	1.24

Sample Name: CCV-5699804

Date: 5/13/2019 6:52:36 PM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.015473	ppm	0.005726	0.56	140.981730	Y_R 488.368
Ag (328.068 nm)	0.490430	ppm	0.000131	0.03	22699.600000	Y 377.433
Al (167.019 nm)	0.484886	ppm	0.003391	0.70	292.144000	Y_R 377.433
Al H (396.152 nm)	0.424249 u	ppm	0.004601	1.08	1448.614744	Y_R 377.433
As (188.980 nm)	0.975788	ppm	0.000876	0.09	1168.770000	Y 242.219
B (249.678 nm)	0.491659	ppm	0.001063	0.22	12249.700000	Y 242.219
Ba (493.408 nm)	0.493530	ppm	0.001869	0.38	55789.400000	Y_R 488.368
Be (234.861 nm)	0.484671	ppm	0.000965	0.20	140261.000000	Y_R 488.368
Bi (223.061 nm)	-0.004423 u	ppm	0.002412	54.53	9.779750	Y 377.433
Ca (315.887 nm)	5.003225	ppm	0.026146	0.52	4123.313370	Y_R 377.433
Cd (214.439 nm)	0.498514	ppm	0.001167	0.23	30393.400000	Y 377.433
Co (228.615 nm)	0.496211	ppm	0.002228	0.45	9882.190000	Y 242.219
Cr (205.560 nm)	0.500631	ppm	0.000527	0.11	7455.460000	Y 377.433
Cu (324.754 nm)	0.492508	ppm	0.000270	0.05	33187.700000	Y 377.433
Fe (238.204 nm)	2.468091	ppm	0.003897	0.16	9085.872202	Y_R 377.433
Fe H (259.940 nm)	2.386910 u	ppm	0.012457	0.52	4829.490000	Y_R 377.433
K (766.491 nm)	48.138900	ppm	0.122314	0.25	54093.700000	Y_R2 488.368
Li (670.783 nm)	0.983143	ppm	0.003921	0.40	29159.900000	Y_R2 488.368
Mg (279.078 nm)	19.441600	ppm	0.004956	0.03	115019.000000	Y 377.433
Mn (257.610 nm)	0.497552	ppm	0.000317	0.06	126103.000000	Y 377.433
Mo (202.032 nm)	0.500688	ppm	0.001442	0.29	4364.870000	Y 377.433
Na (589.592 nm)	4.786900	ppm	0.009397	0.20	33031.700000	Y_R2 488.368
Na H (589.593 nm)	5.119563 u	ppm	0.057137	1.12	31138.122709	Y_R 488.368
Ni (231.604 nm)	0.505339	ppm	0.000294	0.06	3746.040000	Y 377.433
P (213.618 nm)	0.958671	ppm	0.001014	0.11	2207.900000	Y 242.219
Pb (220.353 nm)	0.987810	ppm	0.000388	0.04	3022.320000	Y 242.219
S (181.972 nm)	-0.008345 u	ppm	0.000918	11.00	20.539688	Y 377.433
Sb (206.834 nm)	1.019880	ppm	0.001590	0.16	2711.490000	Y 377.433
Se (196.026 nm)	0.964743	ppm	0.002917	0.30	909.300000	Y 242.219
Si (288.158 nm)	4.930520	ppm	0.043768	0.89	44211.200000	Y 377.433
Sn (189.925 nm)	0.996244	ppm	0.001884	0.19	2120.780000	Y 377.433
Sr (421.552 nm)	0.486522	ppm	0.001716	0.35	102916.530717	Y_R 488.368
Th (288.505 nm)	0.005405	ppm	0.000113	2.09	86.349000	Y 377.433
Ti (336.122 nm)	0.497064	ppm	0.000399	0.08	71212.000000	Y 377.433
Tl (190.794 nm)	1.006990	ppm	0.004282	0.43	2321.620000	Y 377.433
U (409.013 nm)	-0.002454 u	ppm	0.008171	> 100.00	-163.481000	Y 377.433
V (292.401 nm)	0.493651	ppm	0.000314	0.06	20748.800000	Y 377.433
Zn (206.200 nm)	0.495551	ppm	0.000060	0.01	2584.860000	Y 377.433
Zr (343.823 nm)	0.494467	ppm	0.000401	0.08	67238.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.972573	17442.160046	0.000943	0.10
Y 377.433	0.974620	950489.770366	0.000678	0.07
Y_R 377.433	0.970781	69841.300000	0.003351	0.35
Y_R 488.368	0.987690	39031.600000	0.002645	0.27
Y_R2 488.368	1.003590	76443.081547	0.001621	0.16

Sample Name: CCB

Date: 5/13/2019 6:55:58 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.031990 Z	ppm	0.007066	22.09	-2259.693657 Z	Y_R 488.368
Ag (328.068 nm)	0.000243	ppm	0.000044	18.13	-337.678000	Y 377.433
Al (167.019 nm)	0.006169	ppm	0.001015	16.45	4.025010	Y_R 377.433
Al H (396.152 nm)	-0.115420 Zu	ppm	0.006120	5.30	32.333085 Z	Y_R 377.433
As (188.980 nm)	-0.000470 u	ppm	0.001271	> 100.00	-0.607248	Y 242.219
B (249.678 nm)	0.002261	ppm	0.000057	2.53	123.516000	Y 242.219
Ba (493.408 nm)	-0.000096 u	ppm	0.000428	> 100.00	591.272000	Y_R 488.368
Be (234.861 nm)	0.000038	ppm	0.000006	16.25	-10.010500	Y_R 488.368
Bi (223.061 nm)	0.000440	ppm	0.000349	79.25	21.887600	Y 377.433
Ca (315.887 nm)	0.003813 u	ppm	0.008551	> 100.00	-93.746277	Y_R 377.433
Cd (214.439 nm)	0.000017	ppm	0.000024	> 100.00	1.293590	Y 377.433
Co (228.615 nm)	0.000444	ppm	0.000249	56.13	-30.996500	Y 242.219
Cr (205.560 nm)	0.000102	ppm	0.000016	16.09	-0.486524	Y 377.433
Cu (324.754 nm)	0.000369	ppm	0.000101	27.23	621.943000	Y 377.433
Fe (238.204 nm)	0.004435	ppm	0.000148	3.34	32.149129	Y_R 377.433
Fe H (259.940 nm)	-0.192826 u	ppm	0.001047	0.54	12.200800	Y_R 377.433
K (766.491 nm)	-0.015877 u	ppm	0.038973	> 100.00	-706.825000	Y_R2 488.368
Li (670.783 nm)	0.004436	ppm	0.002674	60.29	-869.245000	Y_R2 488.368
Mg (279.078 nm)	0.002187	ppm	0.001457	66.63	35.469500	Y 377.433
Mn (257.610 nm)	-0.000024 u	ppm	0.000034	> 100.00	68.620500	Y 377.433
Mo (202.032 nm)	0.000186	ppm	0.000029	15.79	-0.778830	Y 377.433
Na (589.592 nm)	0.123210	ppm	0.028196	22.88	1685.800000	Y_R2 488.368
Na H (589.593 nm)	-0.360318 u	ppm	0.032879	9.12	9476.401146	Y_R 488.368
Ni (231.604 nm)	0.000441 u	ppm	0.001293	> 100.00	0.358257	Y 377.433
P (213.618 nm)	0.000047 u	ppm	0.001037	> 100.00	16.807600	Y 242.219
Pb (220.353 nm)	-0.001783 u	ppm	0.002239	> 100.00	2.032670	Y 242.219
S (181.972 nm)	-0.020917 u	ppm	0.004498	21.50	14.009636	Y 377.433
Sb (206.834 nm)	0.003565	ppm	0.001778	49.86	-21.355900	Y 377.433
Se (196.026 nm)	-0.000051 u	ppm	0.001204	> 100.00	10.675400	Y 242.219
Si (288.158 nm)	-0.000194 u	ppm	0.001480	> 100.00	834.357000	Y 377.433
Sn (189.925 nm)	-0.000069 u	ppm	0.000364	> 100.00	8.064470	Y 377.433
Sr (421.552 nm)	-0.000034 u	ppm	0.000100	> 100.00	108.711492	Y_R 488.368
Th (288.505 nm)	0.000058 u	ppm	0.000106	> 100.00	52.401900	Y 377.433
Ti (336.122 nm)	0.000042	ppm	0.000057	> 100.00	-188.502000	Y 377.433
Tl (190.794 nm)	-0.000396 u	ppm	0.001940	> 100.00	-3.134160	Y 377.433
U (409.013 nm)	-0.003728 u	ppm	0.000387	10.37	-131.175000	Y 377.433
V (292.401 nm)	-0.000133 u	ppm	0.000106	79.88	13.799400	Y 377.433
Zn (206.200 nm)	-0.000591 u	ppm	0.000004	0.73	-1.309770	Y 377.433
Zr (343.823 nm)	0.000198	ppm	0.000001	0.37	64.664100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.974976	17485.241767	0.001969	0.20
Y 377.433	0.978321	954099.614762	0.000911	0.09
Y_R 377.433	0.970806	69843.100000	0.001746	0.18
Y_R 488.368	0.987785	39035.400000	0.000695	0.07
Y_R2 488.368	0.994579	75756.713683	0.010066	1.01

Sample Name: CCVL-5699389

Date: 5/13/2019 6:59:20 PM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.074128 Q	ppm	0.006249	8.43	-2156.835862 Q	Y_R 488.368
Ag (328.068 nm)	0.009435	ppm	0.000150	1.59	93.718100	Y 377.433
Al (167.019 nm)	0.095474	ppm	0.006292	6.59	57.505800	Y_R 377.433
Al H (396.152 nm)	-0.020946 u	ppm	0.004870	23.25	274.408138	Y_R 377.433
As (188.980 nm)	0.013081	ppm	0.001024	7.83	15.623600	Y 242.219
B (249.678 nm)	0.097340	ppm	0.000428	0.44	2476.180000	Y 242.219
Ba (493.408 nm)	0.009367	ppm	0.000133	1.42	1649.290000	Y_R 488.368
Be (234.861 nm)	0.000941	ppm	0.000022	2.34	253.572000	Y_R 488.368
Bi (223.061 nm)	0.098541	ppm	0.000586	0.60	274.736000	Y 377.433
Ca (315.887 nm)	0.214346	ppm	0.006947	3.24	83.830868	Y_R 377.433
Cd (214.439 nm)	0.004995	ppm	0.000126	2.52	304.814000	Y 377.433
Co (228.615 nm)	0.010607	ppm	0.000157	1.48	172.163000	Y 242.219
Cr (205.560 nm)	0.010022	ppm	0.000105	1.05	147.316000	Y 377.433
Cu (324.754 nm)	0.015472	ppm	0.000037	0.24	1621.420000	Y 377.433
Fe (238.204 nm)	0.103102	ppm	0.000842	0.82	394.741354	Y_R 377.433
Fe H (259.940 nm)	-0.090777 u	ppm	0.000962	1.06	202.762000	Y_R 377.433
K (766.491 nm)	2.923980	ppm	0.026302	0.90	2638.760000	Y_R2 488.368
Li (670.783 nm)	0.025203	ppm	0.000332	1.32	-232.055000	Y_R2 488.368
Mg (279.078 nm)	0.192371	ppm	0.000859	0.45	1159.340000	Y 377.433
Mn (257.610 nm)	0.010180	ppm	0.000028	0.28	2653.120000	Y 377.433
Mo (202.032 nm)	0.019229	ppm	0.000354	1.84	165.321000	Y 377.433
Na (589.592 nm)	1.008070	ppm	0.004805	0.48	7464.830000	Y_R2 488.368
Na H (589.593 nm)	0.319986 u	ppm	0.019988	6.25	12114.094179	Y_R 488.368
Ni (231.604 nm)	0.041854	ppm	0.000241	0.58	307.495000	Y 377.433
P (213.618 nm)	2.745900 o	ppm	0.001737	0.06	6292.910000	Y 242.219
Pb (220.353 nm)	0.006917	ppm	0.000687	9.94	28.591200	Y 242.219
S (181.972 nm)	0.064964 Q	ppm	0.005880	9.05	51.572111 Q	Y 377.433
Sb (206.834 nm)	0.021024	ppm	0.001245	5.92	25.524100	Y 377.433
Se (196.026 nm)	0.019299	ppm	0.002849	14.76	28.689800	Y 242.219
Si (288.158 nm)	0.587315	ppm	0.027220	4.63	6002.830000	Y 377.433
Sn (189.925 nm)	0.098392	ppm	0.000013	0.01	216.855000	Y 377.433
Sr (421.552 nm)	0.009640	ppm	0.000160	1.66	2152.939351	Y_R 488.368
Th (288.505 nm)	0.016623	ppm	0.002554	15.36	102.284000	Y 377.433
Ti (336.122 nm)	0.009719	ppm	0.000105	1.08	1201.850000	Y 377.433
Tl (190.794 nm)	0.016053	ppm	0.000272	1.69	34.796200	Y 377.433
U (409.013 nm)	0.058004	ppm	0.003700	6.38	158.661000	Y 377.433
V (292.401 nm)	0.009428	ppm	0.000171	1.82	413.750000	Y 377.433
Zn (206.200 nm)	0.019400	ppm	0.001041	5.36	102.892000	Y 377.433
Zr (343.823 nm)	0.010787	ppm	0.000283	2.62	1503.920000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.989328	17742.636338	0.003402	0.34
Y 377.433	0.993471	968873.904927	0.003712	0.37
Y_R 377.433	0.981356	70602.200000	0.004482	0.46
Y_R 488.368	1.004390	39691.700000	0.001773	0.18
Y_R2 488.368	1.015638	77360.753212	0.004569	0.45

Sample Name: 280-123292-A-4-A

Date: 5/13/2019 7:02:43 PM

Rack:Tube: 1:72

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.070471 n	ppm	0.028354	40.23	-2165.762202	Y_R 488.368
Ag (328.068 nm)	0.000547	ppm	0.000353	64.55	-323.430000	Y 377.433
Al (167.019 nm)	0.007010	ppm	0.000377	5.38	4.595600	Y_R 377.433
Al H (396.152 nm)	-0.112088 u	ppm	0.001919	1.71	56.859882	Y_R 377.433
As (188.980 nm)	0.002255	ppm	0.000473	20.97	2.656350	Y 242.219
B (249.678 nm)	2.441870 o	ppm	0.000021	0.00	60483.100000	Y 242.219
Ba (493.408 nm)	0.032849	ppm	0.000175	0.53	4282.600000	Y_R 488.368
Be (234.861 nm)	0.000010	ppm	0.000001	13.86	-15.221000	Y_R 488.368
Bi (223.061 nm)	-0.002386 u	ppm	0.001346	56.41	14.620000	Y 377.433
Ca (315.887 nm)	36.061134 o	ppm	0.006889	0.02	30318.844830	Y_R 377.433
Cd (214.439 nm)	-0.000017 u	ppm	0.000030	> 100.00	-0.707303	Y 377.433
Co (228.615 nm)	0.000255	ppm	0.000005	1.93	-34.773100	Y 242.219
Cr (205.560 nm)	0.000383	ppm	0.000145	37.74	3.668190	Y 377.433
Cu (324.754 nm)	0.001825	ppm	0.000141	7.73	693.847000	Y 377.433
Fe (238.204 nm)	0.094670	ppm	0.002764	2.92	363.753760	Y_R 377.433
Fe H (259.940 nm)	-0.097649 u	ppm	0.001797	1.84	189.931000	Y_R 377.433
K (766.491 nm)	7.750000	ppm	0.008436	0.11	8130.810000	Y_R2 488.368
Li (670.783 nm)	0.043107	ppm	0.000274	0.63	317.288000	Y_R2 488.368
Mg (279.078 nm)	15.834800	ppm	0.000070	0.00	93688.800000	Y 377.433
Mn (257.610 nm)	0.001577	ppm	0.000017	1.10	474.047000	Y 377.433
Mo (202.032 nm)	0.001425	ppm	0.000648	45.47	10.021500	Y 377.433
Na (589.592 nm)	255.058000 o	ppm	1.354770	0.53	1661350.000000	Y_R2 488.368
Na H (589.593 nm)	268.253551	ppm	0.339427	0.13	1047316.850459	Y_R 488.368
Ni (231.604 nm)	-0.000607 u	ppm	0.000566	93.36	-7.404850	Y 377.433
P (213.618 nm)	0.014568	ppm	0.000706	4.84	49.997700	Y 242.219
Pb (220.353 nm)	0.000120 u	ppm	0.000986	> 100.00	7.846840	Y 242.219
S (181.972 nm)	54.221054 o	ppm	0.099034	0.18	23725.034700	Y 377.433
Sb (206.834 nm)	-0.001772 u	ppm	0.002540	> 100.00	-35.662000	Y 377.433
Se (196.026 nm)	0.000412 u	ppm	0.002270	> 100.00	11.090700	Y 242.219
Si (288.158 nm)	7.536520	ppm	0.020966	0.28	67136.800000	Y 377.433
Sn (189.925 nm)	0.000350 u	ppm	0.000823	> 100.00	8.952650	Y 377.433
Sr (421.552 nm)	2.748064 o	ppm	0.009230	0.34	580773.535251	Y_R 488.368
Th (288.505 nm)	0.001451	ppm	0.001024	70.60	56.487200	Y 377.433
Ti (336.122 nm)	0.000143	ppm	0.000006	4.06	-59.648600	Y 377.433
Tl (190.794 nm)	0.000181 u	ppm	0.000940	> 100.00	-1.808300	Y 377.433
U (409.013 nm)	-0.018165 u	ppm	0.003229	17.78	-206.192000	Y 377.433
V (292.401 nm)	-0.000230 u	ppm	0.000153	66.62	10.337700	Y 377.433
Zn (206.200 nm)	0.002291	ppm	0.000342	14.94	13.712600	Y 377.433
Zr (343.823 nm)	0.000103	ppm	0.000048	46.20	52.023700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.956511	17154.103781	0.004112	0.43
Y 377.433	0.956587	932903.408288	0.003110	0.33
Y_R 377.433	0.968816	69700.000000	0.001695	0.17
Y_R 488.368	0.978064	38651.200000	0.002924	0.30
Y_R2 488.368	1.001854	76310.897220	0.003196	0.32

Sample Name: 280-123292-A-5-A

Date: 5/13/2019 7:06:07 PM

Rack:Tube: 1:73

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.088326 n	ppm	0.006799	7.70	-2122.177558	Y_R 488.368
Ag (328.068 nm)	0.000588	ppm	0.000236	40.20	-321.579000	Y 377.433
Al (167.019 nm)	0.037778	ppm	0.001502	3.98	23.014100	Y_R 377.433
Al H (396.152 nm)	-0.061082 u	ppm	0.005560	9.10	212.219218	Y_R 377.433
As (188.980 nm)	-0.001282 u	ppm	0.002872	> 100.00	-1.580650	Y 242.219
B (249.678 nm)	1.995980 o	ppm	0.000569	0.03	49451.200000	Y 242.219
Ba (493.408 nm)	0.018377	ppm	0.000267	1.45	2677.460000	Y_R 488.368
Be (234.861 nm)	-0.000010 u	ppm	0.000002	16.89	-20.572200	Y_R 488.368
Bi (223.061 nm)	-0.001895 u	ppm	0.000799	42.15	15.889700	Y 377.433
Ca (315.887 nm)	93.086029 o	ppm	0.329107	0.35	78416.561244	Y_R 377.433
Cd (214.439 nm)	-0.000066 u	ppm	0.000012	18.65	-3.648810	Y 377.433
Co (228.615 nm)	0.000062	ppm	0.000081	> 100.00	-38.608100	Y 242.219
Cr (205.560 nm)	0.000345	ppm	0.000101	29.15	3.095130	Y 377.433
Cu (324.754 nm)	0.000901	ppm	0.000376	41.69	592.641000	Y 377.433
Fe (238.204 nm)	0.119928	ppm	0.000858	0.72	456.575707	Y_R 377.433
Fe H (259.940 nm)	-0.077726 u	ppm	0.002197	2.83	227.133000	Y_R 377.433
K (766.491 nm)	7.994970	ppm	0.005914	0.07	8409.580000	Y_R2 488.368
Li (670.783 nm)	0.058999	ppm	0.001161	1.97	804.894000	Y_R2 488.368
Mg (279.078 nm)	29.204300	ppm	0.045216	0.15	172772.000000	Y 377.433
Mn (257.610 nm)	0.003829	ppm	0.000015	0.39	1044.600000	Y 377.433
Mo (202.032 nm)	0.004626	ppm	0.000679	14.68	37.942500	Y 377.433
Na (589.592 nm)	208.749000 o	ppm	0.419446	0.20	1359860.000000	Y_R2 488.368
Na H (589.593 nm)	221.205648	ppm	0.071485	0.03	865529.614166	Y_R 488.368
Ni (231.604 nm)	0.000450 u	ppm	0.000967	> 100.00	0.434012	Y 377.433
P (213.618 nm)	0.004792	ppm	0.002553	53.29	27.652500	Y 242.219
Pb (220.353 nm)	-0.000901 u	ppm	0.000636	70.58	4.693730	Y 242.219
S (181.972 nm)	121.205501 bo	ppm	0.189294	0.16	53006.233486	Y 377.433
Sb (206.834 nm)	0.001228 u	ppm	0.002444	> 100.00	-27.655000	Y 377.433
Se (196.026 nm)	-0.001142 u	ppm	0.001678	> 100.00	9.640790	Y 242.219
Si (288.158 nm)	7.522760	ppm	0.012984	0.17	67015.700000	Y 377.433
Sn (189.925 nm)	0.001376	ppm	0.000745	54.14	11.128900	Y 377.433
Sr (421.552 nm)	4.745647 o	ppm	0.018277	0.39	1002856.837657	Y_R 488.368
Th (288.505 nm)	-0.001498 u	ppm	0.001526	> 100.00	47.936300	Y 377.433
Ti (336.122 nm)	0.000481	ppm	0.000098	20.44	170.281000	Y 377.433
Tl (190.794 nm)	-0.000206 u	ppm	0.000789	> 100.00	-2.711950	Y 377.433
U (409.013 nm)	-0.020983 u	ppm	0.000126	0.60	-230.779000	Y 377.433
V (292.401 nm)	-0.000328 u	ppm	0.000002	0.60	6.744540	Y 377.433
Zn (206.200 nm)	0.002138	ppm	0.000639	29.87	12.916100	Y 377.433
Zr (343.823 nm)	-0.000033 u	ppm	0.000116	> 100.00	33.572600	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.948983	17019.082489	0.000025	0.00
Y 377.433	0.953183	929584.245780	0.001035	0.11
Y_R 377.433	0.963431	69312.600000	0.002314	0.24
Y_R 488.368	0.971066	38374.600000	0.000800	0.08
Y_R2 488.368	0.994273	75733.444956	0.003913	0.39

Sample Name: 280-123292-A-6-A

Date: 5/13/2019 7:09:29 PM

Rack:Tube: 1:74

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.104016 n	ppm	0.007514	7.22	-2083.879130	Y_R 488.368
Ag (328.068 nm)	0.000786	ppm	0.000027	3.49	-312.219000	Y 377.433
Al (167.019 nm)	0.094573	ppm	0.000225	0.24	57.107600	Y_R 377.433
Al H (396.152 nm)	0.000711 u	ppm	0.001066	> 100.00	370.921716	Y_R 377.433
As (188.980 nm)	-0.000187 u	ppm	0.001626	> 100.00	-0.270626	Y 242.219
B (249.678 nm)	1.570750 o	ppm	0.001509	0.10	38930.000000	Y 242.219
Ba (493.408 nm)	0.015456	ppm	0.000060	0.39	2351.630000	Y_R 488.368
Be (234.861 nm)	-0.000005 u	ppm	0.000002	39.84	-14.112100	Y_R 488.368
Bi (223.061 nm)	-0.003071 u	ppm	0.001058	34.45	12.887600	Y 377.433
Ca (315.887 nm)	95.634816 o	ppm	0.499154	0.52	80566.339254	Y_R 377.433
Cd (214.439 nm)	-0.000037 u	ppm	0.000005	13.06	-1.760020	Y 377.433
Co (228.615 nm)	-0.000065 u	ppm	0.000060	92.82	-41.102600	Y 242.219
Cr (205.560 nm)	0.000226	ppm	0.000161	71.05	1.262890	Y 377.433
Cu (324.754 nm)	0.001030	ppm	0.000076	7.43	599.599000	Y 377.433
Fe (238.204 nm)	0.292011	ppm	0.000834	0.29	1088.965117	Y_R 377.433
Fe H (259.940 nm)	0.104768 u	ppm	0.002361	2.25	567.915000	Y_R 377.433
K (766.491 nm)	8.308480	ppm	0.028520	0.34	8766.370000	Y_R2 488.368
Li (670.783 nm)	0.065962	ppm	0.001076	1.63	1018.530000	Y_R2 488.368
Mg (279.078 nm)	31.933100	ppm	0.001863	0.01	188914.000000	Y 377.433
Mn (257.610 nm)	0.015392	ppm	0.000016	0.10	3973.300000	Y 377.433
Mo (202.032 nm)	0.008167	ppm	0.000189	2.32	68.831800	Y 377.433
Na (589.592 nm)	226.425000 o	ppm	0.106308	0.05	1474920.000000	Y_R2 488.368
Na H (589.593 nm)	238.710422	ppm	0.760707	0.32	933157.638652	Y_R 488.368
Ni (231.604 nm)	-0.000378 u	ppm	0.000185	48.90	-5.700520	Y 377.433
P (213.618 nm)	0.017941	ppm	0.001367	7.62	57.706700	Y 242.219
Pb (220.353 nm)	-0.001405 u	ppm	0.000476	33.86	3.122170	Y 242.219
S (181.972 nm)	141.872899 bo	ppm	0.210805	0.15	62040.684160	Y 377.433
Sb (206.834 nm)	0.000383	ppm	0.000436	> 100.00	-29.986400	Y 377.433
Se (196.026 nm)	0.000692	ppm	0.000850	> 100.00	11.327400	Y 242.219
Si (288.158 nm)	8.089070	ppm	0.022744	0.28	71997.700000	Y 377.433
Sn (189.925 nm)	0.000773	ppm	0.000871	> 100.00	9.850460	Y 377.433
Sr (421.552 nm)	4.880958 o	ppm	0.022370	0.46	1031447.742746	Y_R 488.368
Th (288.505 nm)	0.000233 u	ppm	0.002857	> 100.00	53.218900	Y 377.433
Ti (336.122 nm)	0.001522	ppm	0.000044	2.89	328.000000	Y 377.433
Tl (190.794 nm)	-0.001350 u	ppm	0.000725	53.72	-5.372180	Y 377.433
U (409.013 nm)	-0.023008 u	ppm	0.001164	5.06	-240.661000	Y 377.433
V (292.401 nm)	-0.000062 u	ppm	0.000221	> 100.00	18.020100	Y 377.433
Zn (206.200 nm)	0.003919	ppm	0.000119	3.04	22.197400	Y 377.433
Zr (343.823 nm)	0.000185	ppm	0.000062	33.81	63.743300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.937175	16807.321403	0.002391	0.26
Y 377.433	0.939668	916403.564900	0.002187	0.23
Y_R 377.433	0.960450	69098.100000	0.011431	1.19
Y_R 488.368	0.974480	38509.600000	0.007252	0.74
Y_R2 488.368	0.982249	74817.578719	0.004097	0.42

Sample Name: 280-123292-A-7-A

Date: 5/13/2019 7:12:52 PM

Rack:Tube: 1:75

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.104725 n	ppm	0.001168	1.11	-2082.148588	Y_R 488.368
Ag (328.068 nm)	0.000772	ppm	0.000018	2.34	-312.918000	Y 377.433
Al (167.019 nm)	0.233767	ppm	0.005639	2.41	140.263000	Y_R 377.433
Al H (396.152 nm)	0.156633 u	ppm	0.008440	5.39	764.466470	Y_R 377.433
As (188.980 nm)	0.001243 u	ppm	0.003324	> 100.00	1.443090	Y 242.219
B (249.678 nm)	1.673450 o	ppm	0.000170	0.01	41471.100000	Y 242.219
Ba (493.408 nm)	0.017175	ppm	0.000190	1.10	2542.130000	Y_R 488.368
Be (234.861 nm)	0.000039	ppm	0.000024	60.87	-4.848890	Y_R 488.368
Bi (223.061 nm)	-0.003777 u	ppm	0.001317	34.87	11.048600	Y 377.433
Ca (315.887 nm)	88.277709 o	ppm	0.169116	0.19	74360.978353	Y_R 377.433
Cd (214.439 nm)	0.000007 u	ppm	0.000015	> 100.00	0.846888	Y 377.433
Co (228.615 nm)	0.000194	ppm	0.000159	81.94	-35.780300	Y 242.219
Cr (205.560 nm)	0.000777	ppm	0.000217	27.98	9.505160	Y 377.433
Cu (324.754 nm)	0.001008	ppm	0.000369	36.58	603.294000	Y 377.433
Fe (238.204 nm)	0.175561	ppm	0.000039	0.02	661.024361	Y_R 377.433
Fe H (259.940 nm)	-0.016648 u	ppm	0.002980	17.90	341.188000	Y_R 377.433
K (766.491 nm)	8.490910	ppm	0.064022	0.75	8973.970000	Y_R2 488.368
Li (670.783 nm)	0.069114	ppm	0.000426	0.62	1115.250000	Y_R2 488.368
Mg (279.078 nm)	31.120000	ppm	0.055315	0.18	184104.000000	Y 377.433
Mn (257.610 nm)	0.010205	ppm	0.000005	0.05	2659.540000	Y 377.433
Mo (202.032 nm)	0.007588	ppm	0.000214	2.82	63.782700	Y 377.433
Na (589.592 nm)	248.211000 o	ppm	1.638540	0.66	1616750.000000	Y_R2 488.368
Na H (589.593 nm)	259.888551	ppm	1.474786	0.57	1014982.330672	Y_R 488.368
Ni (231.604 nm)	0.000915	ppm	0.000088	9.64	3.883520	Y 377.433
P (213.618 nm)	0.017543	ppm	0.000633	3.61	56.797200	Y 242.219
Pb (220.353 nm)	0.000555	ppm	0.000197	35.50	9.046170	Y 242.219
S (181.972 nm)	142.716196 bo	ppm	0.399619	0.28	62409.307335	Y 377.433
Sb (206.834 nm)	-0.001367 u	ppm	0.001685	> 100.00	-34.641900	Y 377.433
Se (196.026 nm)	-0.001991 u	ppm	0.001856	93.19	8.849160	Y 242.219
Si (288.158 nm)	9.662350	ppm	0.061286	0.63	85838.300000	Y 377.433
Sn (189.925 nm)	-0.000575 u	ppm	0.000232	40.45	6.992570	Y 377.433
Sr (421.552 nm)	4.482983 o	ppm	0.025167	0.56	947356.748018	Y_R 488.368
Th (288.505 nm)	0.001972	ppm	0.000710	35.98	58.215900	Y 377.433
Ti (336.122 nm)	0.005901	ppm	0.000676	11.45	933.430000	Y 377.433
Tl (190.794 nm)	-0.000555 u	ppm	0.000691	> 100.00	-3.550490	Y 377.433
U (409.013 nm)	-0.023489 u	ppm	0.006424	27.35	-241.589000	Y 377.433
V (292.401 nm)	0.000370	ppm	0.000122	32.89	36.247400	Y 377.433
Zn (206.200 nm)	0.001893	ppm	0.000257	13.56	11.636300	Y 377.433
Zr (343.823 nm)	0.000207	ppm	0.000006	2.85	66.340500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.948480	17010.065042	0.000603	0.06
Y 377.433	0.951265	927713.207458	0.000402	0.04
Y_R 377.433	0.968914	69707.000000	0.003101	0.32
Y_R 488.368	0.987798	39035.900000	0.004153	0.42
Y_R2 488.368	0.995944	75860.705627	0.013962	1.40

Sample Name: 280-123292-A-8-A

Date: 5/13/2019 7:16:15 PM

Rack:Tube: 1:76

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.083770 n	ppm	0.040986	48.93	-2133.298759	Y_R 488.368
Ag (328.068 nm)	0.000535	ppm	0.000406	75.89	-323.972000	Y 377.433
Al (167.019 nm)	0.006994	ppm	0.003310	47.33	4.784570	Y_R 377.433
Al H (396.152 nm)	-0.110914 u	ppm	0.003692	3.33	57.587045	Y_R 377.433
As (188.980 nm)	0.004036	ppm	0.001906	47.23	4.787030	Y 242.219
B (249.678 nm)	2.114550 o	ppm	0.000094	0.00	52384.300000	Y 242.219
Ba (493.408 nm)	0.061194	ppm	0.000760	1.24	7450.350000	Y_R 488.368
Be (234.861 nm)	0.000000 u	ppm	0.000011	> 100.00	-10.058200	Y_R 488.368
Bi (223.061 nm)	-0.004469 u	ppm	0.000112	2.50	9.297500	Y 377.433
Ca (315.887 nm)	30.223600 o	ppm	0.055125	0.18	25395.169854	Y_R 377.433
Cd (214.439 nm)	-0.000022 u	ppm	0.000061	> 100.00	-0.722293	Y 377.433
Co (228.615 nm)	0.000253	ppm	0.000042	16.53	-34.811700	Y 242.219
Cr (205.560 nm)	0.000377	ppm	0.000242	64.05	3.502280	Y 377.433
Cu (324.754 nm)	0.001377	ppm	0.000192	13.94	668.594000	Y 377.433
Fe (238.204 nm)	0.361916	ppm	0.002374	0.66	1345.861864	Y_R 377.433
Fe H (259.940 nm)	0.174397 u	ppm	0.004635	2.66	697.937000	Y_R 377.433
K (766.491 nm)	7.419560	ppm	0.018142	0.24	7754.770000	Y_R2 488.368
Li (670.783 nm)	0.043648	ppm	0.000650	1.49	333.871000	Y_R2 488.368
Mg (279.078 nm)	12.917000	ppm	0.009442	0.07	76428.900000	Y 377.433
Mn (257.610 nm)	0.002088	ppm	0.000028	1.35	603.448000	Y 377.433
Mo (202.032 nm)	0.005529	ppm	0.000281	5.07	45.819400	Y 377.433
Na (589.592 nm)	270.866000 o	ppm	0.146795	0.05	1764320.000000	Y_R2 488.368
Na H (589.593 nm)	284.471958	ppm	3.144045	1.11	1110005.945388	Y_R 488.368
Ni (231.604 nm)	-0.000557 u	ppm	0.000590	> 100.00	-7.022060	Y 377.433
P (213.618 nm)	0.007601	ppm	0.000390	5.13	34.074400	Y 242.219
Pb (220.353 nm)	-0.000384 u	ppm	0.000096	24.86	6.305700	Y 242.219
S (181.972 nm)	37.066542 o	ppm	0.021536	0.06	16226.211650	Y 377.433
Sb (206.834 nm)	0.000737	ppm	0.000729	98.93	-29.026600	Y 377.433
Se (196.026 nm)	-0.002183 u	ppm	0.000363	16.62	8.624250	Y 242.219
Si (288.158 nm)	7.113450	ppm	0.035132	0.49	63415.000000	Y 377.433
Sn (189.925 nm)	0.000306	ppm	0.000068	22.12	8.860610	Y 377.433
Sr (421.552 nm)	2.368281 o	ppm	0.020727	0.88	500526.573597	Y_R 488.368
Th (288.505 nm)	0.000708	ppm	0.000143	20.25	54.279800	Y 377.433
Ti (336.122 nm)	0.000035	ppm	0.000033	95.52	-93.787400	Y 377.433
Tl (190.794 nm)	-0.000015 u	ppm	0.000076	> 100.00	-2.277040	Y 377.433
U (409.013 nm)	-0.022607 u	ppm	0.004099	18.13	-225.672000	Y 377.433
V (292.401 nm)	-0.000163 u	ppm	0.000007	4.13	12.998300	Y 377.433
Zn (206.200 nm)	0.006793	ppm	0.000331	4.88	37.177600	Y 377.433
Zr (343.823 nm)	-0.000070 u	ppm	0.000055	78.47	29.314100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.945468	16956.052971	0.002518	0.27
Y 377.433	0.945866	922448.118547	0.001122	0.12
Y_R 377.433	0.965571	69466.500000	0.002598	0.27
Y_R 488.368	0.975462	38548.400000	0.004546	0.47
Y_R2 488.368	0.997439	75974.563954	0.001093	0.11

Sample Name: 280-123292-A-9-A

Date: 5/13/2019 7:19:37 PM

Rack:Tube: 1:77

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.061239 n	ppm	0.002079	3.39	-2188.296931	Y_R 488.368
Ag (328.068 nm)	0.000289	ppm	0.000127	43.87	-335.488000	Y 377.433
Al (167.019 nm)	0.004927	ppm	0.001330	26.98	3.355680	Y_R 377.433
Al H (396.152 nm)	-0.110384 u	ppm	0.000528	0.48	45.145332	Y_R 377.433
As (188.980 nm)	0.000226 u	ppm	0.000763	> 100.00	0.225156	Y 242.219
B (249.678 nm)	0.004337	ppm	0.000023	0.53	174.743000	Y 242.219
Ba (493.408 nm)	-0.000075 u	ppm	0.000284	> 100.00	593.672000	Y_R 488.368
Be (234.861 nm)	-0.000033 u	ppm	0.000002	4.68	-27.439200	Y_R 488.368
Bi (223.061 nm)	-0.001060 u	ppm	0.001796	> 100.00	18.037900	Y 377.433
Ca (315.887 nm)	0.041294	ppm	0.002761	6.69	-62.133347	Y_R 377.433
Cd (214.439 nm)	-0.000043 u	ppm	0.000094	> 100.00	-2.266420	Y 377.433
Co (228.615 nm)	0.000394	ppm	0.000078	19.92	-32.004500	Y 242.219
Cr (205.560 nm)	0.000097	ppm	0.000087	90.41	-0.601852	Y 377.433
Cu (324.754 nm)	0.001387	ppm	0.000080	5.76	688.623000	Y 377.433
Fe (238.204 nm)	0.102672	ppm	0.000114	0.11	393.161411	Y_R 377.433
Fe H (259.940 nm)	-0.089521 u	ppm	0.000294	0.33	205.108000	Y_R 377.433
K (766.491 nm)	0.020212 u	ppm	0.031284	> 100.00	-665.755000	Y_R2 488.368
Li (670.783 nm)	0.003990	ppm	0.000379	9.50	-882.909000	Y_R2 488.368
Mg (279.078 nm)	0.005030	ppm	0.000634	12.60	52.185300	Y 377.433
Mn (257.610 nm)	0.000495	ppm	0.000002	0.42	199.992000	Y 377.433
Mo (202.032 nm)	0.000000 u	ppm	0.000052	> 100.00	-2.403930	Y 377.433
Na (589.592 nm)	0.154674	ppm	0.014384	9.30	1890.370000	Y_R2 488.368
Na H (589.593 nm)	0.403285 u	ppm	0.134093	33.25	12426.501732	Y_R 488.368
Ni (231.604 nm)	0.001169	ppm	0.000067	5.70	5.759760	Y 377.433
P (213.618 nm)	0.005064	ppm	0.001541	30.42	28.275000	Y 242.219
Pb (220.353 nm)	-0.000084 u	ppm	0.000227	> 100.00	7.221770	Y 242.219
S (181.972 nm)	0.001566	ppm	0.002003	> 100.00	23.838640	Y 377.433
Sb (206.834 nm)	0.001304	ppm	0.000078	5.99	-27.420800	Y 377.433
Se (196.026 nm)	0.001729 u	ppm	0.003821	> 100.00	12.314700	Y 242.219
Si (288.158 nm)	0.009556	ppm	0.001233	12.90	920.131000	Y 377.433
Sn (189.925 nm)	-0.000332 u	ppm	0.002169	> 100.00	7.506860	Y 377.433
Sr (421.552 nm)	0.000612	ppm	0.000110	17.98	245.242420	Y_R 488.368
Th (288.505 nm)	-0.000868 u	ppm	0.000540	62.18	49.625100	Y 377.433
Ti (336.122 nm)	0.000021 u	ppm	0.000041	> 100.00	-191.461000	Y 377.433
Tl (190.794 nm)	-0.002163 u	ppm	0.001337	61.81	-7.215450	Y 377.433
U (409.013 nm)	-0.003506 u	ppm	0.002873	81.93	-130.015000	Y 377.433
V (292.401 nm)	-0.000070 u	ppm	0.000203	> 100.00	16.208600	Y 377.433
Zn (206.200 nm)	0.003007	ppm	0.000102	3.40	17.442400	Y 377.433
Zr (343.823 nm)	-0.000031 u	ppm	0.000038	> 100.00	33.787400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.980391	17582.364356	0.000294	0.03
Y 377.433	0.985798	961391.232133	0.000096	0.01
Y_R 377.433	0.976400	70245.600000	0.007539	0.77
Y_R 488.368	0.992551	39223.700000	0.015524	1.56
Y_R2 488.368	1.013761	77217.822089	0.005114	0.50

Sample Name: 280-123292-A-10-A

Date: 5/13/2019 7:23:00 PM

Rack:Tube: 1:78

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.090144 n	ppm	0.005370	5.96	-2117.740881	Y_R 488.368
Ag (328.068 nm)	0.000687	ppm	0.000010	1.39	-316.922000	Y 377.433
Al (167.019 nm)	0.008750	ppm	0.001535	17.55	5.581540	Y_R 377.433
Al H (396.152 nm)	-0.094777 u	ppm	0.004160	4.39	127.063300	Y_R 377.433
As (188.980 nm)	0.001870 u	ppm	0.003727	> 100.00	2.195270	Y 242.219
B (249.678 nm)	1.305690 o	ppm	0.001530	0.12	32372.300000	Y 242.219
Ba (493.408 nm)	0.020022	ppm	0.000270	1.35	2861.710000	Y_R 488.368
Be (234.861 nm)	0.000006	ppm	0.000005	80.45	-18.824300	Y_R 488.368
Bi (223.061 nm)	-0.003220 u	ppm	0.001959	60.84	12.456100	Y 377.433
Ca (315.887 nm)	94.717734 o	ppm	0.054871	0.06	79792.824789	Y_R 377.433
Cd (214.439 nm)	-0.000026 u	ppm	0.000144	> 100.00	-1.352790	Y 377.433
Co (228.615 nm)	0.000216	ppm	0.000111	51.44	-35.548300	Y 242.219
Cr (205.560 nm)	0.000188	ppm	0.000091	48.76	0.771524	Y 377.433
Cu (324.754 nm)	0.000396	ppm	0.000104	26.37	558.169000	Y 377.433
Fe (238.204 nm)	0.021682	ppm	0.001936	8.93	95.531885	Y_R 377.433
Fe H (259.940 nm)	-0.174774 u	ppm	0.001896	1.08	45.909400	Y_R 377.433
K (766.491 nm)	8.724550	ppm	0.003303	0.04	9239.860000	Y_R2 488.368
Li (670.783 nm)	0.056885	ppm	0.002157	3.79	740.037000	Y_R2 488.368
Mg (279.078 nm)	32.974800	ppm	0.045793	0.14	195076.000000	Y 377.433
Mn (257.610 nm)	0.021585	ppm	0.000029	0.13	5542.040000	Y 377.433
Mo (202.032 nm)	0.003256	ppm	0.000736	22.61	25.995700	Y 377.433
Na (589.592 nm)	164.995000 o	ppm	0.447115	0.27	1075020.000000	Y_R2 488.368
Na H (589.593 nm)	171.794150	ppm	0.046492	0.03	674626.390797	Y_R 488.368
Ni (231.604 nm)	-0.000470 u	ppm	0.000813	> 100.00	-6.392810	Y 377.433
P (213.618 nm)	0.005913	ppm	0.000289	4.89	30.216300	Y 242.219
Pb (220.353 nm)	-0.001067 u	ppm	0.000004	0.39	4.191890	Y 242.219
S (181.972 nm)	88.292456 o	ppm	0.064039	0.07	38618.852125	Y 377.433
Sb (206.834 nm)	-0.000532 u	ppm	0.001764	> 100.00	-32.341600	Y 377.433
Se (196.026 nm)	-0.004184 u	ppm	0.000381	9.11	6.839230	Y 242.219
Si (288.158 nm)	9.000780	ppm	0.020721	0.23	80018.300000	Y 377.433
Sn (189.925 nm)	0.000677	ppm	0.000697	> 100.00	9.645980	Y 377.433
Sr (421.552 nm)	4.942995 o	ppm	0.028232	0.57	1044556.019545	Y_R 488.368
Th (288.505 nm)	0.002524	ppm	0.000578	22.89	60.099900	Y 377.433
Ti (336.122 nm)	0.000006 u	ppm	0.000026	> 100.00	107.221000	Y 377.433
Tl (190.794 nm)	0.000557	ppm	0.000629	> 100.00	-0.940595	Y 377.433
U (409.013 nm)	-0.023049 u	ppm	0.002070	8.98	-240.921000	Y 377.433
V (292.401 nm)	-0.000415 u	ppm	0.000318	76.61	3.325470	Y 377.433
Zn (206.200 nm)	0.002017	ppm	0.000023	1.15	12.282300	Y 377.433
Zr (343.823 nm)	0.000015 u	ppm	0.000021	> 100.00	39.798400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.944272	16934.609899	0.004641	0.49
Y 377.433	0.948433	924951.677442	0.004778	0.50
Y_R 377.433	0.964700	69403.900000	0.002004	0.21
Y_R 488.368	0.986214	38973.300000	0.001944	0.20
Y_R2 488.368	1.005020	76552.049425	0.003088	0.31

Sample Name: 280-123292-A-11-A

Date: 5/13/2019 7:26:22 PM

Rack:Tube: 1:79

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.069882 n	ppm	0.033959	48.59	-2167.199581	Y_R 488.368
Ag (328.068 nm)	0.000411	ppm	0.000178	43.42	-329.786000	Y 377.433
Al (167.019 nm)	0.010887	ppm	0.001006	9.24	7.958390	Y_R 377.433
Al H (396.152 nm)	-0.100700 u	ppm	0.006005	5.96	85.169162	Y_R 377.433
As (188.980 nm)	-0.000194 u	ppm	0.000458	> 100.00	-0.289614	Y 242.219
B (249.678 nm)	2.045700 o	ppm	0.000092	0.00	50679.200000	Y 242.219
Ba (493.408 nm)	0.035804	ppm	0.000720	2.01	4613.910000	Y_R 488.368
Be (234.861 nm)	-0.000036 u	ppm	0.000049	> 100.00	15.204700	Y_R 488.368
Bi (223.061 nm)	-0.001739 u	ppm	0.000334	19.19	16.530100	Y 377.433
Ca (315.887 nm)	34.555191 o	ppm	0.042267	0.12	29048.655265	Y_R 377.433
Cd (214.439 nm)	-0.000039 u	ppm	0.000054	> 100.00	-0.615496	Y 377.433
Co (228.615 nm)	0.000541	ppm	0.000003	0.59	-29.057000	Y 242.219
Cr (205.560 nm)	0.000236	ppm	0.000297	> 100.00	1.083580	Y 377.433
Cu (324.754 nm)	0.002217	ppm	0.000069	3.13	722.262000	Y 377.433
Fe (238.204 nm)	1.501167	ppm	0.005422	0.36	5532.509517	Y_R 377.433
Fe H (259.940 nm)	1.364480 u	ppm	0.012533	0.92	2920.250000	Y_R 377.433
K (766.491 nm)	6.955660	ppm	0.030574	0.44	7226.840000	Y_R2 488.368
Li (670.783 nm)	0.037095	ppm	0.000271	0.73	132.823000	Y_R2 488.368
Mg (279.078 nm)	15.093300	ppm	0.004542	0.03	89299.900000	Y 377.433
Mn (257.610 nm)	0.036264	ppm	0.000073	0.20	9260.190000	Y 377.433
Mo (202.032 nm)	0.001344	ppm	0.000246	18.30	9.322280	Y 377.433
Na (589.592 nm)	196.199000 o	ppm	1.978600	1.01	1278200.000000	Y_R2 488.368
Na H (589.593 nm)	204.410439	ppm	1.095606	0.54	800657.553090	Y_R 488.368
Ni (231.604 nm)	-0.000223 u	ppm	0.000765	> 100.00	-4.492350	Y 377.433
P (213.618 nm)	0.091646	ppm	0.000999	1.09	226.173000	Y 242.219
Pb (220.353 nm)	-0.000822 u	ppm	0.000719	87.52	5.094450	Y 242.219
S (181.972 nm)	35.708235 o	ppm	0.074634	0.21	15632.519903	Y 377.433
Sb (206.834 nm)	-0.002260 u	ppm	0.003912	> 100.00	-37.312100	Y 377.433
Se (196.026 nm)	-0.000472 u	ppm	0.000497	> 100.00	10.029400	Y 242.219
Si (288.158 nm)	7.080610	ppm	0.001647	0.02	63126.000000	Y 377.433
Sn (189.925 nm)	0.000047 u	ppm	0.000131	> 100.00	8.311230	Y 377.433
Sr (421.552 nm)	2.690332 o	ppm	0.017873	0.66	568575.078339	Y_R 488.368
Th (288.505 nm)	0.001585	ppm	0.000061	3.87	57.587800	Y 377.433
Ti (336.122 nm)	0.000021 u	ppm	0.000047	> 100.00	-81.917000	Y 377.433
Tl (190.794 nm)	0.000134 u	ppm	0.000546	> 100.00	-1.956390	Y 377.433
U (409.013 nm)	-0.020606 u	ppm	0.002505	12.16	-215.997000	Y 377.433
V (292.401 nm)	-0.000486 u	ppm	0.000002	0.38	-0.492965	Y 377.433
Zn (206.200 nm)	0.002462	ppm	0.000746	30.30	14.604900	Y 377.433
Zr (343.823 nm)	0.000023	ppm	0.000032	> 100.00	45.455900	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.955130	17129.339089	0.000233	0.02
Y 377.433	0.958343	934616.180096	0.000256	0.03
Y_R 377.433	0.968639	69687.200000	0.006927	0.72
Y_R 488.368	0.988302	39055.800000	0.013722	1.39
Y_R2 488.368	0.993516	75675.740506	0.004879	0.49

Sample Name: 280-123292-A-12-A

Date: 5/13/2019 7:29:44 PM

Rack:Tube: 1:80

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.068606 n	ppm	0.001724	2.51	-2170.313285	Y_R 488.368
Ag (328.068 nm)	0.000373	ppm	0.000017	4.61	-331.585000	Y 377.433
Al (167.019 nm)	0.007963	ppm	0.002796	35.11	5.447330	Y_R 377.433
Al H (396.152 nm)	-0.110626 u	ppm	0.008354	7.55	57.531840	Y_R 377.433
As (188.980 nm)	0.000097 u	ppm	0.001051	> 100.00	0.067393	Y 242.219
B (249.678 nm)	2.111900 o	ppm	0.002738	0.13	52318.500000	Y 242.219
Ba (493.408 nm)	0.041730	ppm	0.000428	1.03	5274.240000	Y_R 488.368
Be (234.861 nm)	-0.000004 u	ppm	0.000005	> 100.00	-7.400410	Y_R 488.368
Bi (223.061 nm)	-0.001982 u	ppm	0.000909	45.84	15.725800	Y 377.433
Ca (315.887 nm)	29.341197 o	ppm	0.170792	0.58	24650.905440	Y_R 377.433
Cd (214.439 nm)	-0.000019 u	ppm	0.000054	> 100.00	-0.430271	Y 377.433
Co (228.615 nm)	0.000248	ppm	0.000259	> 100.00	-34.909400	Y 242.219
Cr (205.560 nm)	0.000222	ppm	0.000228	> 100.00	1.158230	Y 377.433
Cu (324.754 nm)	0.001356	ppm	0.000022	1.65	667.783000	Y 377.433
Fe (238.204 nm)	0.473824	ppm	0.009724	2.05	1757.113612	Y_R 377.433
Fe H (259.940 nm)	0.286863 u	ppm	0.011906	4.15	907.953000	Y_R 377.433
K (766.491 nm)	6.786640	ppm	0.034322	0.51	7034.500000	Y_R2 488.368
Li (670.783 nm)	0.036810	ppm	0.002214	6.02	124.068000	Y_R2 488.368
Mg (279.078 nm)	12.863800	ppm	0.003404	0.03	76114.100000	Y 377.433
Mn (257.610 nm)	0.011070	ppm	0.000018	0.16	2878.690000	Y 377.433
Mo (202.032 nm)	0.000467	ppm	0.000205	43.93	1.670100	Y 377.433
Na (589.592 nm)	225.291000 o	ppm	0.251739	0.11	1467590.000000	Y_R2 488.368
Na H (589.593 nm)	235.545638	ppm	2.056498	0.87	920956.694788	Y_R 488.368
Ni (231.604 nm)	-0.000011 u	ppm	0.000525	> 100.00	-2.970980	Y 377.433
P (213.618 nm)	0.039499	ppm	0.001901	4.81	106.981000	Y 242.219
Pb (220.353 nm)	-0.000853 u	ppm	0.000606	71.06	4.905870	Y 242.219
S (181.972 nm)	34.051078 o	ppm	0.027458	0.08	14908.067280	Y 377.433
Sb (206.834 nm)	0.001119 u	ppm	0.002378	> 100.00	-28.007600	Y 377.433
Se (196.026 nm)	0.000463 u	ppm	0.000814	> 100.00	11.073800	Y 242.219
Si (288.158 nm)	6.165550	ppm	0.003152	0.05	55076.000000	Y 377.433
Sn (189.925 nm)	0.000989	ppm	0.000531	53.68	10.307000	Y 377.433
Sr (421.552 nm)	2.329209 o	ppm	0.009816	0.42	492270.906263	Y_R 488.368
Th (288.505 nm)	0.001368 u	ppm	0.001973	> 100.00	56.412200	Y 377.433
Ti (336.122 nm)	0.000182	ppm	0.000091	49.99	-75.308000	Y 377.433
Tl (190.794 nm)	-0.000628 u	ppm	0.001440	> 100.00	-3.685830	Y 377.433
U (409.013 nm)	-0.020736 u	ppm	0.009392	45.29	-216.590000	Y 377.433
V (292.401 nm)	-0.000043 u	ppm	0.000191	> 100.00	18.256600	Y 377.433
Zn (206.200 nm)	0.004489	ppm	0.000451	10.06	25.166500	Y 377.433
Zr (343.823 nm)	-0.000049 u	ppm	0.000016	32.59	32.476900	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.945061	16948.753096	0.002090	0.22
Y 377.433	0.943831	920463.510356	0.002519	0.27
Y_R 377.433	0.968326	69664.800000	0.009662	1.00
Y_R 488.368	0.979815	38720.400000	0.011817	1.21
Y_R2 488.368	0.990046	75411.429550	0.009077	0.92

Sample Name: 280-123292-A-13-A

Date: 5/13/2019 7:33:06 PM

Rack:Tube: 1:81

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.205188 n	ppm	0.000391	0.19	-1836.918589	Y_R 488.368
Ag (328.068 nm)	0.000391	ppm	0.000088	22.47	-330.823000	Y 377.433
Al (167.019 nm)	0.023606	ppm	0.000269	1.14	14.469900	Y_R 377.433
Al H (396.152 nm)	-0.093085 u	ppm	0.004423	4.75	95.524180	Y_R 377.433
As (188.980 nm)	0.002675	ppm	0.000211	7.89	3.159440	Y 242.219
B (249.678 nm)	1.630540 o	ppm	0.001314	0.08	40409.700000	Y 242.219
Ba (493.408 nm)	0.045134	ppm	0.000047	0.11	5650.520000	Y_R 488.368
Be (234.861 nm)	-0.000001 u	ppm	0.000003	> 100.00	-21.450000	Y_R 488.368
Bi (223.061 nm)	-0.004055 u	ppm	0.000944	23.28	10.305100	Y 377.433
Ca (315.887 nm)	12.028852 o	ppm	0.042451	0.35	10048.786980	Y_R 377.433
Cd (214.439 nm)	0.000031	ppm	0.000027	87.78	2.117440	Y 377.433
Co (228.615 nm)	0.000146 u	ppm	0.000219	> 100.00	-36.930500	Y 242.219
Cr (205.560 nm)	0.000231	ppm	0.000122	53.10	1.394520	Y 377.433
Cu (324.754 nm)	0.001076	ppm	0.000128	11.87	661.345000	Y 377.433
Fe (238.204 nm)	0.027498	ppm	0.001542	5.61	116.903643	Y_R 377.433
Fe H (259.940 nm)	-0.169870 u	ppm	0.004151	2.44	55.068400	Y_R 377.433
K (766.491 nm)	26.426800	ppm	0.046010	0.17	29385.200000	Y_R2 488.368
Li (670.783 nm)	0.167406	ppm	0.000890	0.53	4131.080000	Y_R2 488.368
Mg (279.078 nm)	8.448960	ppm	0.001447	0.02	49999.900000	Y 377.433
Mn (257.610 nm)	0.000393	ppm	0.000005	1.32	174.306000	Y 377.433
Mo (202.032 nm)	0.013007	ppm	0.000076	0.58	111.051000	Y 377.433
Na (589.592 nm)	163.384000 o	ppm	0.211967	0.13	1064590.000000	Y_R2 488.368
Na H (589.593 nm)	167.738660	ppm	1.893969	1.13	658982.876499	Y_R 488.368
Ni (231.604 nm)	0.001150	ppm	0.000007	0.64	5.619830	Y 377.433
P (213.618 nm)	0.008659	ppm	0.000542	6.25	36.492800	Y 242.219
Pb (220.353 nm)	-0.000835 u	ppm	0.001743	> 100.00	4.859220	Y 242.219
S (181.972 nm)	55.915748 o	ppm	0.070022	0.13	24465.841082	Y 377.433
Sb (206.834 nm)	0.000815	ppm	0.000147	18.04	-28.793600	Y 377.433
Se (196.026 nm)	-0.000905 u	ppm	0.001436	> 100.00	9.876560	Y 242.219
Si (288.158 nm)	4.544880	ppm	0.001573	0.03	40818.500000	Y 377.433
Sn (189.925 nm)	-0.000710 u	ppm	0.000203	28.66	6.705950	Y 377.433
Sr (421.552 nm)	1.701967 o	ppm	0.019116	1.12	359736.392819	Y_R 488.368
Th (288.505 nm)	0.001462 u	ppm	0.002182	> 100.00	56.525300	Y 377.433
Ti (336.122 nm)	0.000471	ppm	0.000029	6.17	-88.900600	Y 377.433
Tl (190.794 nm)	-0.000485 u	ppm	0.000229	47.19	-3.375270	Y 377.433
U (409.013 nm)	-0.013589 u	ppm	0.003033	22.32	-179.932000	Y 377.433
V (292.401 nm)	0.000048	ppm	0.000022	45.37	21.508100	Y 377.433
Zn (206.200 nm)	0.000822	ppm	0.000061	7.46	6.051830	Y 377.433
Zr (343.823 nm)	-0.000016 u	ppm	0.000018	> 100.00	35.626500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.945894	16963.691866	0.004668	0.49
Y 377.433	0.946100	922675.839799	0.005136	0.54
Y_R 377.433	0.962186	69223.000000	0.005988	0.62
Y_R 488.368	0.985445	38942.900000	0.012339	1.25
Y_R2 488.368	0.987680	75231.219011	0.002447	0.25

Sample Name: CCVH-5699817

Date: 5/13/2019 7:36:29 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.109242	ppm	0.004513	4.13	-2071.123276	Y_R 488.368
Ag (328.068 nm)	-0.000088 u	ppm	0.000197	> 100.00	-605.087000	Y 377.433
Al (167.019 nm)	42.673900 o	ppm	0.074584	0.17	25556.500000	Y_R 377.433
Al H (396.152 nm)	49.675105	ppm	0.121266	0.24	126761.471241	Y_R 377.433
As (188.980 nm)	0.003453	ppm	0.002432	70.46	3.673200	Y 242.219
B (249.678 nm)	0.005002	ppm	0.000256	5.11	117.504000	Y 242.219
Ba (493.408 nm)	0.002021	ppm	0.000211	10.43	872.508000	Y_R 488.368
Be (234.861 nm)	0.000750	ppm	0.000069	9.15	1700.110000	Y_R 488.368
Bi (223.061 nm)	0.993691	ppm	0.004036	0.41	2590.100000	Y 377.433
Ca (315.887 nm)	0.009849	ppm	0.004287	43.53	-88.654050	Y_R 377.433
Cd (214.439 nm)	0.001147	ppm	0.000028	2.44	118.761000	Y 377.433
Co (228.615 nm)	0.004726	ppm	0.000238	5.03	54.519400	Y 242.219
Cr (205.560 nm)	0.001185	ppm	0.000358	30.19	2.278270	Y 377.433
Cu (324.754 nm)	0.009057	ppm	0.000008	0.09	1584.150000	Y 377.433
Fe (238.204 nm)	48.096153 o	ppm	0.215028	0.45	176765.036523	Y_R 377.433
Fe H (259.940 nm)	50.037900	ppm	0.288389	0.58	93811.000000	Y_R 377.433
K (766.491 nm)	0.101482	ppm	0.085849	84.60	-573.269000	Y_R2 488.368
Li (670.783 nm)	0.005842	ppm	0.000037	0.63	-826.108000	Y_R2 488.368
Mg (279.078 nm)	0.030354	ppm	0.001761	5.80	-162.849000	Y 377.433
Mn (257.610 nm)	0.002823	ppm	0.000003	0.12	789.677000	Y 377.433
Mo (202.032 nm)	0.000602	ppm	0.000429	71.30	2.846540	Y 377.433
Na (589.592 nm)	233.654000 o	ppm	0.280878	0.12	1521950.000000	Y_R2 488.368
Na H (589.593 nm)	241.971900	ppm	1.326196	0.55	945744.003365	Y_R 488.368
Ni (231.604 nm)	0.005000	ppm	0.000397	7.93	36.387400	Y 377.433
P (213.618 nm)	-0.001737 u	ppm	0.003222	> 100.00	12.729300	Y 242.219
Pb (220.353 nm)	0.003471	ppm	0.002441	70.32	36.255400	Y 242.219
S (181.972 nm)	4.858605	ppm	0.012665	0.26	2147.021797	Y 377.433
Sb (206.834 nm)	-0.003626 u	ppm	0.001722	47.49	-85.388300	Y 377.433
Se (196.026 nm)	0.001826	ppm	0.000287	15.72	4.068850	Y 242.219
Si (288.158 nm)	0.043232	ppm	0.001023	2.37	1216.390000	Y 377.433
Sn (189.925 nm)	0.004821	ppm	0.000868	18.02	18.433400	Y 377.433
Sr (421.552 nm)	0.001979	ppm	0.000250	12.65	534.119722	Y_R 488.368
Th (288.505 nm)	4.994150	ppm	0.005888	0.12	14904.600000	Y 377.433
Ti (336.122 nm)	0.002314	ppm	0.000068	2.94	137.875000	Y 377.433
Tl (190.794 nm)	-0.001333 u	ppm	0.000558	41.84	-6.673170	Y 377.433
U (409.013 nm)	10.134600	ppm	0.020072	0.20	47642.600000	Y 377.433
V (292.401 nm)	0.004627	ppm	0.000254	5.48	19.152100	Y 377.433
Zn (206.200 nm)	0.003709	ppm	0.000770	20.75	21.103700	Y 377.433
Zr (343.823 nm)	-0.003036 u	ppm	0.000037	1.21	-225.764000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.951701	17067.842717	0.000555	0.06
Y 377.433	0.945858	922440.137306	0.001127	0.12
Y_R 377.433	0.961554	69177.500000	0.002243	0.23
Y_R 488.368	0.989425	39100.200000	0.008354	0.84
Y_R2 488.368	0.988118	75264.601323	0.009487	0.96

Sample Name: CCV-5699804

Date: 5/13/2019 7:39:51 PM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.998775	ppm	0.015626	1.56	100.222626	Y_R 488.368
Ag (328.068 nm)	0.491136	ppm	0.000550	0.11	22732.700000	Y 377.433
Al (167.019 nm)	0.487635	ppm	0.004765	0.98	293.780000	Y_R 377.433
Al H (396.152 nm)	0.420216 u	ppm	0.005050	1.20	1438.264658	Y_R 377.433
As (188.980 nm)	0.973631	ppm	0.003379	0.35	1166.190000	Y 242.219
B (249.678 nm)	0.491835	ppm	0.000467	0.09	12254.100000	Y 242.219
Ba (493.408 nm)	0.492252	ppm	0.002205	0.45	55646.600000	Y_R 488.368
Be (234.861 nm)	0.487949	ppm	0.002449	0.50	141209.000000	Y_R 488.368
Bi (223.061 nm)	-0.004321 u	ppm	0.000351	8.12	10.041100	Y 377.433
Ca (315.887 nm)	4.997761	ppm	0.007161	0.14	4118.704418	Y_R 377.433
Cd (214.439 nm)	0.497791	ppm	0.001160	0.23	30349.300000	Y 377.433
Co (228.615 nm)	0.496591	ppm	0.001938	0.39	9889.710000	Y 242.219
Cr (205.560 nm)	0.497859	ppm	0.001400	0.28	7414.110000	Y 377.433
Cu (324.754 nm)	0.489773	ppm	0.001035	0.21	33007.800000	Y 377.433
Fe (238.204 nm)	2.456836	ppm	0.002702	0.11	9044.509175	Y_R 377.433
Fe H (259.940 nm)	2.369060 u	ppm	0.006101	0.26	4796.160000	Y_R 377.433
K (766.491 nm)	47.971800	ppm	0.116395	0.24	53903.500000	Y_R2 488.368
Li (670.783 nm)	0.974979	ppm	0.004203	0.43	28909.400000	Y_R2 488.368
Mg (279.078 nm)	19.408500	ppm	0.001138	0.01	114824.000000	Y 377.433
Mn (257.610 nm)	0.496109	ppm	0.000531	0.11	125737.000000	Y 377.433
Mo (202.032 nm)	0.499642	ppm	0.000576	0.12	4355.750000	Y 377.433
Na (589.592 nm)	4.815300	ppm	0.001959	0.04	33213.200000	Y_R2 488.368
Na H (589.593 nm)	5.324428 u	ppm	0.025545	0.48	31927.982435	Y_R 488.368
Ni (231.604 nm)	0.503979	ppm	0.000300	0.06	3735.950000	Y 377.433
P (213.618 nm)	0.912656	ppm	0.000350	0.04	2102.720000	Y 242.219
Pb (220.353 nm)	0.987949	ppm	0.002220	0.22	3022.730000	Y 242.219
S (181.972 nm)	-0.007912 u	ppm	0.004003	50.60	20.727627	Y 377.433
Sb (206.834 nm)	1.016910	ppm	0.002813	0.28	2703.450000	Y 377.433
Se (196.026 nm)	0.964810	ppm	0.003026	0.31	909.363000	Y 242.219
Si (288.158 nm)	4.907410	ppm	0.052327	1.07	44007.800000	Y 377.433
Sn (189.925 nm)	0.994657	ppm	0.000771	0.08	2117.420000	Y 377.433
Sr (421.552 nm)	0.486147	ppm	0.001501	0.31	102837.332117	Y_R 488.368
Th (288.505 nm)	0.001295 u	ppm	0.003687	> 100.00	74.078500	Y 377.433
Ti (336.122 nm)	0.495644	ppm	0.000127	0.03	71007.800000	Y 377.433
Tl (190.794 nm)	1.004030	ppm	0.005354	0.53	2314.800000	Y 377.433
U (409.013 nm)	-0.003277 u	ppm	0.002606	79.54	-167.255000	Y 377.433
V (292.401 nm)	0.492639	ppm	0.000468	0.10	20707.500000	Y 377.433
Zn (206.200 nm)	0.493635	ppm	0.001329	0.27	2574.870000	Y 377.433
Zr (343.823 nm)	0.492944	ppm	0.000072	0.01	67031.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.960581	17227.091453	0.001692	0.18
Y 377.433	0.963239	939390.925600	0.000637	0.07
Y_R 377.433	0.953311	68584.500000	0.002153	0.23
Y_R 488.368	0.968107	38257.700000	0.004386	0.45
Y_R2 488.368	0.984946	75022.982871	0.003410	0.35

Sample Name: CCB

Date: 5/13/2019 7:43:14 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.002970	ppm	0.003799	> 100.00	-2330.532190	Y_R 488.368
Ag (328.068 nm)	0.000364	ppm	0.000388	> 100.00	-331.961000	Y 377.433
Al (167.019 nm)	0.007247	ppm	0.000587	8.10	4.670530	Y_R 377.433
Al H (396.152 nm)	-0.113822 Zu	ppm	0.008209	7.21	36.425029 Z	Y_R 377.433
As (188.980 nm)	-0.000377 u	ppm	0.000211	55.99	-0.495760	Y 242.219
B (249.678 nm)	0.002606	ppm	0.000261	10.01	132.054000	Y 242.219
Ba (493.408 nm)	-0.000376 u	ppm	0.000191	50.76	559.909000	Y_R 488.368
Be (234.861 nm)	0.000015	ppm	0.000004	29.18	-16.702900	Y_R 488.368
Bi (223.061 nm)	-0.002187 u	ppm	0.001142	52.22	15.117000	Y 377.433
Ca (315.887 nm)	0.006476	ppm	0.001314	20.28	-91.499959	Y_R 377.433
Cd (214.439 nm)	-0.000038 u	ppm	0.000075	> 100.00	-2.081670	Y 377.433
Co (228.615 nm)	0.000352	ppm	0.000023	6.53	-32.836700	Y 242.219
Cr (205.560 nm)	0.000150	ppm	0.000138	92.30	0.218575	Y 377.433
Cu (324.754 nm)	0.000390	ppm	0.000033	8.42	623.265000	Y 377.433
Fe (238.204 nm)	0.004965	ppm	0.001402	28.23	34.098265	Y_R 377.433
Fe H (259.940 nm)	-0.193981 u	ppm	0.004650	2.40	10.044400	Y_R 377.433
K (766.491 nm)	-0.092168 u	ppm	0.040784	44.25	-793.644000	Y_R2 488.368
Li (670.783 nm)	0.003596	ppm	0.001457	40.52	-895.000000	Y_R2 488.368
Mg (279.078 nm)	0.000769	ppm	0.000529	68.74	27.075200	Y 377.433
Mn (257.610 nm)	-0.000028 u	ppm	0.000022	78.14	67.561100	Y 377.433
Mo (202.032 nm)	0.000322	ppm	0.000160	49.54	0.406348	Y 377.433
Na (589.592 nm)	0.174069	ppm	0.023880	13.72	2016.830000	Y_R2 488.368
Na H (589.593 nm)	-0.129163 u	ppm	0.006320	4.89	10369.454911	Y_R 488.368
Ni (231.604 nm)	0.000794	ppm	0.000619	77.98	2.980310	Y 377.433
P (213.618 nm)	-0.002313 u	ppm	0.002929	> 100.00	11.414500	Y 242.219
Pb (220.353 nm)	-0.001663 u	ppm	0.002325	> 100.00	2.397730	Y 242.219
S (181.972 nm)	-0.026908 u	ppm	0.005113	19.00	11.391031	Y 377.433
Sb (206.834 nm)	0.002607	ppm	0.002489	95.48	-23.916700	Y 377.433
Se (196.026 nm)	-0.000024 u	ppm	0.004686	> 100.00	10.700100	Y 242.219
Si (288.158 nm)	0.000215	ppm	0.000007	3.43	837.956000	Y 377.433
Sn (189.925 nm)	-0.000081 u	ppm	0.001054	> 100.00	8.039610	Y 377.433
Sr (421.552 nm)	-0.000095 u	ppm	0.000035	36.39	95.922243	Y_R 488.368
Th (288.505 nm)	0.002529	ppm	0.002166	85.64	59.633100	Y 377.433
Ti (336.122 nm)	0.000151	ppm	0.000092	60.69	-172.842000	Y 377.433
Tl (190.794 nm)	0.000117 u	ppm	0.000320	> 100.00	-1.949850	Y 377.433
U (409.013 nm)	-0.005098 u	ppm	0.005949	> 100.00	-137.621000	Y 377.433
V (292.401 nm)	-0.000294 u	ppm	0.000074	25.17	6.887240	Y 377.433
Zn (206.200 nm)	-0.000556 u	ppm	0.000439	79.04	-1.128130	Y 377.433
Zr (343.823 nm)	0.000171	ppm	0.000041	23.81	61.024300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.959394	17205.794176	0.001117	0.12
Y 377.433	0.962995	939152.849469	0.002930	0.30
Y_R 377.433	0.949456	68307.200000	0.002463	0.26
Y_R 488.368	0.968068	38256.200000	0.011001	1.14
Y_R2 488.368	0.978332	74519.179379	0.004404	0.45

Sample Name: CCVL-5699389

Date: 5/13/2019 7:46:38 PM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.059000 Q	ppm	0.000940	1.59	-2193.763363 Q	Y_R 488.368
Ag (328.068 nm)	0.009361	ppm	0.000190	2.03	90.255500	Y 377.433
Al (167.019 nm)	0.094949	ppm	0.000039	0.04	57.191700	Y_R 377.433
Al H (396.152 nm)	-0.019623 u	ppm	0.002643	13.47	277.747917	Y_R 377.433
As (188.980 nm)	0.010876	ppm	0.001445	13.28	12.982300	Y 242.219
B (249.678 nm)	0.098008	ppm	0.000179	0.18	2492.710000	Y 242.219
Ba (493.408 nm)	0.009761	ppm	0.000226	2.32	1693.340000	Y_R 488.368
Be (234.861 nm)	0.000940	ppm	0.000039	4.10	253.233000	Y_R 488.368
Bi (223.061 nm)	0.099388	ppm	0.000656	0.66	276.918000	Y 377.433
Ca (315.887 nm)	0.204521	ppm	0.001635	0.80	75.544476	Y_R 377.433
Cd (214.439 nm)	0.005240	ppm	0.000089	1.70	319.750000	Y 377.433
Co (228.615 nm)	0.010539	ppm	0.000005	0.05	170.830000	Y 242.219
Cr (205.560 nm)	0.010022	ppm	0.000373	3.73	147.314000	Y 377.433
Cu (324.754 nm)	0.015444	ppm	0.000013	0.08	1619.600000	Y 377.433
Fe (238.204 nm)	0.102611	ppm	0.000899	0.88	392.937127	Y_R 377.433
Fe H (259.940 nm)	-0.094050 u	ppm	0.003052	3.25	196.651000	Y_R 377.433
K (766.491 nm)	2.938080	ppm	0.092883	3.16	2654.800000	Y_R2 488.368
Li (670.783 nm)	0.023404	ppm	0.001049	4.48	-287.250000	Y_R2 488.368
Mg (279.078 nm)	0.192703	ppm	0.000355	0.18	1161.370000	Y 377.433
Mn (257.610 nm)	0.010219	ppm	0.000007	0.07	2663.100000	Y 377.433
Mo (202.032 nm)	0.018927	ppm	0.000270	1.42	162.690000	Y 377.433
Na (589.592 nm)	1.068210	ppm	0.023207	2.17	7857.060000	Y_R2 488.368
Na H (589.593 nm)	0.529065 u	ppm	0.002077	0.39	12922.238414	Y_R 488.368
Ni (231.604 nm)	0.041156	ppm	0.000263	0.64	302.318000	Y 377.433
P (213.618 nm)	2.760670 o	ppm	0.000137	0.00	6326.650000	Y 242.219
Pb (220.353 nm)	0.007898	ppm	0.000041	0.51	31.581800	Y 242.219
S (181.972 nm)	0.061977 Q	ppm	0.001297	2.09	50.266630 Q	Y 377.433
Sb (206.834 nm)	0.017804	ppm	0.002349	13.19	16.905100	Y 377.433
Se (196.026 nm)	0.019651	ppm	0.001687	8.58	29.018300	Y 242.219
Si (288.158 nm)	0.586992	ppm	0.028479	4.85	5999.990000	Y 377.433
Sn (189.925 nm)	0.099602	ppm	0.000281	0.28	219.420000	Y 377.433
Sr (421.552 nm)	0.009801	ppm	0.000112	1.14	2186.944467	Y_R 488.368
Th (288.505 nm)	0.014317	ppm	0.001658	11.58	95.485300	Y 377.433
Ti (336.122 nm)	0.009729	ppm	0.000053	0.55	1203.320000	Y 377.433
Tl (190.794 nm)	0.013665	ppm	0.000142	1.04	29.281700	Y 377.433
U (409.013 nm)	0.053724	ppm	0.002364	4.40	138.520000	Y 377.433
V (292.401 nm)	0.009619	ppm	0.000132	1.37	421.999000	Y 377.433
Zn (206.200 nm)	0.020111	ppm	0.000379	1.88	106.598000	Y 377.433
Zr (343.823 nm)	0.010634	ppm	0.000069	0.65	1483.090000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.967186	17345.546424	0.001568	0.16
Y 377.433	0.970068	946050.519510	0.002101	0.22
Y_R 377.433	0.967532	69607.600000	0.002801	0.29
Y_R 488.368	0.977765	38639.400000	0.001909	0.20
Y_R2 488.368	0.998766	76075.690710	0.004246	0.43

Sample Name: 280-123292-A-14-A

Date: 5/13/2019 7:50:01 PM

Rack:Tube: 1:82

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.163521 n	ppm	0.001901	1.16	-1938.628675	Y_R 488.368
Ag (328.068 nm)	0.000025 u	ppm	0.000194	> 100.00	-347.729000	Y 377.433
Al (167.019 nm)	0.006265	ppm	0.002414	38.54	4.106270	Y_R 377.433
Al H (396.152 nm)	-0.112901 u	ppm	0.004923	4.36	43.664974	Y_R 377.433
As (188.980 nm)	0.001058	ppm	0.000671	63.47	1.222630	Y 242.219
B (249.678 nm)	2.032070 o	ppm	0.001079	0.05	50344.100000	Y 242.219
Ba (493.408 nm)	0.040041	ppm	0.000363	0.91	5080.850000	Y_R 488.368
Be (234.861 nm)	0.000002 u	ppm	0.000020	> 100.00	-19.663200	Y_R 488.368
Bi (223.061 nm)	0.000576	ppm	0.000379	65.78	22.241500	Y 377.433
Ca (315.887 nm)	10.817974	ppm	0.041953	0.39	9027.470750	Y_R 377.433
Cd (214.439 nm)	-0.000020 u	ppm	0.000134	> 100.00	-0.935860	Y 377.433
Co (228.615 nm)	-0.000007 u	ppm	0.000140	> 100.00	-39.989800	Y 242.219
Cr (205.560 nm)	0.000148	ppm	0.000010	6.83	0.174416	Y 377.433
Cu (324.754 nm)	0.001186	ppm	0.000234	19.72	669.424000	Y 377.433
Fe (238.204 nm)	0.036623	ppm	0.000835	2.28	150.436062	Y_R 377.433
Fe H (259.940 nm)	-0.158475 u	ppm	0.001557	0.98	76.346700	Y_R 377.433
K (766.491 nm)	14.235900	ppm	0.091152	0.64	15511.800000	Y_R2 488.368
Li (670.783 nm)	0.130472	ppm	0.000978	0.75	2997.860000	Y_R2 488.368
Mg (279.078 nm)	5.707780	ppm	0.005390	0.09	33785.500000	Y 377.433
Mn (257.610 nm)	0.000562	ppm	0.000010	1.78	216.960000	Y 377.433
Mo (202.032 nm)	0.002132	ppm	0.000207	9.73	16.195800	Y 377.433
Na (589.592 nm)	294.161000 o	ppm	0.379533	0.13	1915920.000000	Y_R2 488.368
Na H (589.593 nm)	309.309035	ppm	3.175031	1.03	1205944.325010	Y_R 488.368
Ni (231.604 nm)	0.000052 u	ppm	0.000820	> 100.00	-2.520660	Y 377.433
P (213.618 nm)	0.016525	ppm	0.000039	0.24	54.470700	Y 242.219
Pb (220.353 nm)	-0.000696 u	ppm	0.000054	7.75	5.322770	Y 242.219
S (181.972 nm)	20.980252 o	ppm	0.058671	0.28	9194.340363	Y 377.433
Sb (206.834 nm)	0.001126 u	ppm	0.002080	> 100.00	-27.885800	Y 377.433
Se (196.026 nm)	-0.001469 u	ppm	0.002466	> 100.00	9.349270	Y 242.219
Si (288.158 nm)	5.694910	ppm	0.030348	0.53	50935.600000	Y 377.433
Sn (189.925 nm)	-0.000136 u	ppm	0.000105	76.85	7.922120	Y 377.433
Sr (421.552 nm)	1.116340 o	ppm	0.010724	0.96	235995.242987	Y_R 488.368
Th (288.505 nm)	0.000445 u	ppm	0.002087	> 100.00	53.358900	Y 377.433
Ti (336.122 nm)	0.000339	ppm	0.000026	7.60	-111.650000	Y 377.433
Tl (190.794 nm)	-0.000176 u	ppm	0.000750	> 100.00	-2.634650	Y 377.433
U (409.013 nm)	-0.022228 u	ppm	0.005878	26.44	-220.347000	Y 377.433
V (292.401 nm)	-0.000488 u	ppm	0.000016	3.32	-0.477878	Y 377.433
Zn (206.200 nm)	0.001280	ppm	0.000267	20.88	8.443060	Y 377.433
Zr (343.823 nm)	-0.000055 u	ppm	0.000072	> 100.00	30.366800	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.943904	16928.002359	0.003046	0.32
Y 377.433	0.942523	919188.137748	0.003757	0.40
Y_R 377.433	0.964640	69399.500000	0.000539	0.06
Y_R 488.368	0.975488	38549.400000	0.007972	0.82
Y_R2 488.368	0.991228	75501.452950	0.000397	0.04

Sample Name: 280-123292-A-15-A

Date: 5/13/2019 7:53:23 PM

Rack:Tube: 1:83

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.071197 n	ppm	0.005489	7.71	-2163.989921	Y_R 488.368
Ag (328.068 nm)	0.000518	ppm	0.000011	2.20	-324.777000	Y 377.433
Al (167.019 nm)	0.009601	ppm	0.000161	1.67	6.155990	Y_R 377.433
Al H (396.152 nm)	-0.109994 u	ppm	0.005907	5.37	54.671771	Y_R 377.433
As (188.980 nm)	0.000944 u	ppm	0.002453	> 100.00	1.085130	Y 242.219
B (249.678 nm)	2.056630 o	ppm	0.002138	0.10	50951.800000	Y 242.219
Ba (493.408 nm)	0.044312	ppm	0.000463	1.05	5560.290000	Y_R 488.368
Be (234.861 nm)	-0.000005 u	ppm	0.000013	> 100.00	-19.159300	Y_R 488.368
Bi (223.061 nm)	-0.003367 u	ppm	0.000805	23.92	12.094500	Y 377.433
Ca (315.887 nm)	19.113772 o	ppm	0.060046	0.31	16024.571606	Y_R 377.433
Cd (214.439 nm)	0.000005 u	ppm	0.000092	> 100.00	0.639231	Y 377.433
Co (228.615 nm)	0.000567	ppm	0.000160	28.27	-28.539200	Y 242.219
Cr (205.560 nm)	0.000109 u	ppm	0.000286	> 100.00	-0.415102	Y 377.433
Cu (324.754 nm)	0.001478	ppm	0.000158	10.72	683.748000	Y 377.433
Fe (238.204 nm)	0.109673	ppm	0.001576	1.44	418.891675	Y_R 377.433
Fe H (259.940 nm)	-0.086909 u	ppm	0.002233	2.57	209.986000	Y_R 377.433
K (766.491 nm)	5.945320	ppm	0.030847	0.52	6077.060000	Y_R2 488.368
Li (670.783 nm)	0.036403	ppm	0.000526	1.45	111.600000	Y_R2 488.368
Mg (279.078 nm)	8.016210	ppm	0.000143	0.00	47440.100000	Y 377.433
Mn (257.610 nm)	0.011217	ppm	0.000043	0.38	2915.950000	Y 377.433
Mo (202.032 nm)	0.001269	ppm	0.000120	9.48	8.667910	Y 377.433
Na (589.592 nm)	288.962000 o	ppm	1.225500	0.42	1882090.000000	Y_R2 488.368
Na H (589.593 nm)	303.833108	ppm	4.205828	1.38	1184792.113948	Y_R 488.368
Ni (231.604 nm)	0.000472	ppm	0.000422	89.36	0.597744	Y 377.433
P (213.618 nm)	0.014965	ppm	0.000838	5.60	50.906400	Y 242.219
Pb (220.353 nm)	-0.001281 u	ppm	0.000435	33.97	3.560490	Y 242.219
S (181.972 nm)	31.348670 o	ppm	0.014725	0.05	13726.752987	Y 377.433
Sb (206.834 nm)	0.001303	ppm	0.001002	76.93	-27.432700	Y 377.433
Se (196.026 nm)	0.000751 u	ppm	0.003080	> 100.00	11.410800	Y 242.219
Si (288.158 nm)	6.315890	ppm	0.000380	0.01	56398.600000	Y 377.433
Sn (189.925 nm)	0.000354 u	ppm	0.000792	> 100.00	8.962490	Y 377.433
Sr (421.552 nm)	1.529035 o	ppm	0.025128	1.64	323196.504312	Y_R 488.368
Th (288.505 nm)	0.005345	ppm	0.005896	> 100.00	68.080900	Y 377.433
Ti (336.122 nm)	0.000085	ppm	0.000079	93.37	-121.842000	Y 377.433
Tl (190.794 nm)	0.001262	ppm	0.001643	> 100.00	0.688121	Y 377.433
U (409.013 nm)	-0.020028 u	ppm	0.002747	13.72	-211.566000	Y 377.433
V (292.401 nm)	-0.000060 u	ppm	0.000185	> 100.00	17.828200	Y 377.433
Zn (206.200 nm)	0.001677	ppm	0.000062	3.71	10.509700	Y 377.433
Zr (343.823 nm)	-0.000132 u	ppm	0.000058	43.90	20.091600	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.946296	16970.899352	0.003900	0.41
Y 377.433	0.944521	921136.451536	0.002829	0.30
Y_R 377.433	0.957898	68914.500000	0.002306	0.24
Y_R 488.368	0.970121	38337.300000	0.016251	1.68
Y_R2 488.368	1.000870	76235.892235	0.005920	0.59

Sample Name: 280-123292-A-16-O

Date: 5/13/2019 7:56:45 PM

Rack:Tube: 1:84

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.061784 n	ppm	0.002743	4.44	-2186.965872	Y_R 488.368
Ag (328.068 nm)	0.000601	ppm	0.000426	70.77	-320.777000	Y 377.433
Al (167.019 nm)	0.003650	ppm	0.001600	43.84	3.012700	Y_R 377.433
Al H (396.152 nm)	-0.109696 u	ppm	0.000656	0.60	55.433809	Y_R 377.433
As (188.980 nm)	-0.001248 u	ppm	0.001583	> 100.00	-1.544790	Y 242.219
B (249.678 nm)	2.026330 o	ppm	0.001426	0.07	50201.100000	Y 242.219
Ba (493.408 nm)	0.044415	ppm	0.000100	0.22	5572.390000	Y_R 488.368
Be (234.861 nm)	-0.000020 u	ppm	0.000024	> 100.00	-6.133530	Y_R 488.368
Bi (223.061 nm)	-0.001545 u	ppm	0.002018	> 100.00	16.886200	Y 377.433
Ca (315.887 nm)	19.187783 o	ppm	0.037078	0.19	16086.996524	Y_R 377.433
Cd (214.439 nm)	-0.000041 u	ppm	0.000039	96.31	-1.571510	Y 377.433
Co (228.615 nm)	0.000376	ppm	0.000117	31.04	-32.362800	Y 242.219
Cr (205.560 nm)	0.000024 u	ppm	0.000242	> 100.00	-1.836290	Y 377.433
Cu (324.754 nm)	0.001273	ppm	0.000111	8.72	670.198000	Y 377.433
Fe (238.204 nm)	0.669663	ppm	0.010963	1.64	2476.805952	Y_R 377.433
Fe H (259.940 nm)	0.494641 u	ppm	0.002828	0.57	1295.950000	Y_R 377.433
K (766.491 nm)	5.778840	ppm	0.009575	0.17	5887.610000	Y_R2 488.368
Li (670.783 nm)	0.034915	ppm	0.000161	0.46	65.918000	Y_R2 488.368
Mg (279.078 nm)	7.936630	ppm	0.001486	0.02	46968.400000	Y 377.433
Mn (257.610 nm)	0.012289	ppm	0.000007	0.05	3187.360000	Y 377.433
Mo (202.032 nm)	0.001239	ppm	0.000407	32.81	8.403400	Y 377.433
Na (589.592 nm)	286.085000 o	ppm	0.356061	0.12	1863360.000000	Y_R2 488.368
Na H (589.593 nm)	299.688015	ppm	1.635700	0.55	1168777.080278	Y_R 488.368
Ni (231.604 nm)	0.000275 u	ppm	0.000578	> 100.00	-0.841988	Y 377.433
P (213.618 nm)	0.013301	ppm	0.003221	24.22	47.102500	Y 242.219
Pb (220.353 nm)	-0.002096 u	ppm	0.001382	65.93	1.124250	Y 242.219
S (181.972 nm)	31.389495 o	ppm	0.071895	0.23	13744.601023	Y 377.433
Sb (206.834 nm)	0.001399 u	ppm	0.002176	> 100.00	-27.305900	Y 377.433
Se (196.026 nm)	-0.000410 u	ppm	0.003449	> 100.00	10.225300	Y 242.219
Si (288.158 nm)	6.260740	ppm	0.045458	0.73	55913.400000	Y 377.433
Sn (189.925 nm)	-0.000061 u	ppm	0.001019	> 100.00	8.081420	Y 377.433
Sr (421.552 nm)	1.514057 o	ppm	0.007164	0.47	320031.739844	Y_R 488.368
Th (288.505 nm)	-0.000264 u	ppm	0.003423	> 100.00	51.609400	Y 377.433
Ti (336.122 nm)	0.000047	ppm	0.000007	14.06	-127.077000	Y 377.433
Tl (190.794 nm)	0.000370 u	ppm	0.000745	> 100.00	-1.386180	Y 377.433
U (409.013 nm)	-0.021413 u	ppm	0.003151	14.71	-217.559000	Y 377.433
V (292.401 nm)	-0.000022 u	ppm	0.000261	> 100.00	19.323300	Y 377.433
Zn (206.200 nm)	0.004318	ppm	0.000307	7.10	24.276100	Y 377.433
Zr (343.823 nm)	0.000003 u	ppm	0.000059	> 100.00	40.216000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.946621	16976.733735	0.002824	0.30
Y 377.433	0.944520	921135.387076	0.003194	0.34
Y_R 377.433	0.962378	69236.800000	0.004551	0.47
Y_R 488.368	0.977208	38617.400000	0.005618	0.57
Y_R2 488.368	0.989890	75399.608109	0.007067	0.71

Sample Name: 280-123292-A-17-A

Date: 5/13/2019 8:00:08 PM

Rack:Tube: 1:85

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.036495 n	ppm	0.007312	20.04	-2248.696855	Y_R 488.368
Ag (328.068 nm)	0.000639	ppm	0.000111	17.34	-319.160000	Y 377.433
Al (167.019 nm)	0.006186	ppm	0.000993	16.06	4.054910	Y_R 377.433
Al H (396.152 nm)	-0.112409 u	ppm	0.007295	6.49	60.656292	Y_R 377.433
As (188.980 nm)	0.000418	ppm	0.000190	45.58	0.455457	Y 242.219
B (249.678 nm)	2.263580 o	ppm	0.001369	0.06	56072.200000	Y 242.219
Ba (493.408 nm)	0.026156	ppm	0.000007	0.03	3536.650000	Y_R 488.368
Be (234.861 nm)	0.000003	ppm	0.000002	72.35	-19.264700	Y_R 488.368
Bi (223.061 nm)	-0.002939 u	ppm	0.003429	> 100.00	13.183200	Y 377.433
Ca (315.887 nm)	46.584399 o	ppm	0.091846	0.20	39194.705447	Y_R 377.433
Cd (214.439 nm)	-0.000027 u	ppm	0.000001	3.53	-1.384360	Y 377.433
Co (228.615 nm)	0.000414	ppm	0.000099	23.87	-31.608200	Y 242.219
Cr (205.560 nm)	0.000001 u	ppm	0.000028	> 100.00	-2.003090	Y 377.433
Cu (324.754 nm)	0.001639	ppm	0.000032	1.95	674.979000	Y 377.433
Fe (238.204 nm)	0.030943	ppm	0.000767	2.48	129.562262	Y_R 377.433
Fe H (259.940 nm)	-0.166955 u	ppm	0.002168	1.30	60.510300	Y_R 377.433
K (766.491 nm)	7.983330	ppm	0.052860	0.66	8396.340000	Y_R2 488.368
Li (670.783 nm)	0.041585	ppm	0.000782	1.88	270.583000	Y_R2 488.368
Mg (279.078 nm)	19.365800	ppm	0.002081	0.01	114576.000000	Y 377.433
Mn (257.610 nm)	0.009580	ppm	0.000016	0.16	2501.340000	Y 377.433
Mo (202.032 nm)	0.000751	ppm	0.000326	43.36	4.145830	Y 377.433
Na (589.592 nm)	250.060000 o	ppm	1.689390	0.68	1628810.000000	Y_R2 488.368
Na H (589.593 nm)	262.411571	ppm	0.389494	0.15	1024739.551120	Y_R 488.368
Ni (231.604 nm)	-0.000448 u	ppm	0.001578	> 100.00	-6.231060	Y 377.433
P (213.618 nm)	0.018216	ppm	0.000940	5.16	58.336700	Y 242.219
Pb (220.353 nm)	-0.001090 u	ppm	0.000433	39.75	4.142050	Y 242.219
S (181.972 nm)	63.208015 o	ppm	0.016578	0.03	27653.559278	Y 377.433
Sb (206.834 nm)	-0.000320 u	ppm	0.000664	> 100.00	-31.758300	Y 377.433
Se (196.026 nm)	-0.000132 u	ppm	0.002391	> 100.00	10.601700	Y 242.219
Si (288.158 nm)	5.920010	ppm	0.015024	0.25	52916.000000	Y 377.433
Sn (189.925 nm)	-0.000315 u	ppm	0.001605	> 100.00	7.543360	Y 377.433
Sr (421.552 nm)	3.435079 o	ppm	0.014475	0.42	725937.890022	Y_R 488.368
Th (288.505 nm)	0.000724 u	ppm	0.003323	> 100.00	54.553100	Y 377.433
Ti (336.122 nm)	0.000012	ppm	0.000004	30.41	-44.870100	Y 377.433
Tl (190.794 nm)	0.000170 u	ppm	0.000814	> 100.00	-1.828440	Y 377.433
U (409.013 nm)	-0.021889 u	ppm	0.004770	21.79	-225.892000	Y 377.433
V (292.401 nm)	0.000177	ppm	0.000132	74.28	28.152200	Y 377.433
Zn (206.200 nm)	0.001990	ppm	0.000124	6.23	12.143900	Y 377.433
Zr (343.823 nm)	-0.000009 u	ppm	0.000109	> 100.00	36.600700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.933686	16744.753135	0.002160	0.23
Y 377.433	0.933670	910554.366411	0.001099	0.12
Y_R 377.433	0.948009	68203.100000	0.001479	0.16
Y_R 488.368	0.961488	37996.100000	0.001686	0.18
Y_R2 488.368	0.972233	74054.616514	0.002154	0.22

Sample Name: 280-123292-A-18-O

Date: 5/13/2019 8:03:30 PM

Rack:Tube: 1:86

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.083761 n	ppm	0.015904	18.99	-2133.321699	Y_R 488.368
Ag (328.068 nm)	0.000865	ppm	0.000112	12.99	-308.546000	Y 377.433
Al (167.019 nm)	0.003817	ppm	0.004409	> 100.00	3.141620	Y_R 377.433
Al H (396.152 nm)	-0.075024 u	ppm	0.002358	3.14	243.343360	Y_R 377.433
As (188.980 nm)	0.003157	ppm	0.000720	22.82	3.730740	Y 242.219
B (249.678 nm)	0.526410	ppm	0.000005	0.00	13090.700000	Y 242.219
Ba (493.408 nm)	0.024514	ppm	0.000145	0.59	3397.950000	Y_R 488.368
Be (234.861 nm)	-0.000011 u	ppm	0.000016	> 100.00	-2.438290	Y_R 488.368
Bi (223.061 nm)	-0.004028 u	ppm	0.000931	23.13	10.493800	Y 377.433
Ca (315.887 nm)	243.359454 o	ppm	0.343306	0.14	205164.864274	Y_R 377.433
Cd (214.439 nm)	0.000039	ppm	0.000001	2.21	3.301650	Y 377.433
Co (228.615 nm)	0.000183	ppm	0.000230	> 100.00	-36.210600	Y 242.219
Cr (205.560 nm)	0.000139 u	ppm	0.000254	> 100.00	-0.150402	Y 377.433
Cu (324.754 nm)	-0.000316 u	ppm	0.000166	52.50	404.349000	Y 377.433
Fe (238.204 nm)	0.708142	ppm	0.001090	0.15	2618.212080	Y_R 377.433
Fe H (259.940 nm)	0.532707 u	ppm	0.002627	0.49	1367.030000	Y_R 377.433
K (766.491 nm)	11.554900	ppm	0.044111	0.38	12460.900000	Y_R2 488.368
Li (670.783 nm)	0.077583	ppm	0.000500	0.64	1375.100000	Y_R2 488.368
Mg (279.078 nm)	56.118700 o	ppm	0.023392	0.04	331976.000000	Y 377.433
Mn (257.610 nm)	0.029587	ppm	0.000007	0.02	7569.070000	Y 377.433
Mo (202.032 nm)	0.004646	ppm	0.000472	10.15	38.119100	Y 377.433
Na (589.592 nm)	110.981000 o	ppm	0.663253	0.60	723409.000000	Y_R2 488.368
Na H (589.593 nm)	116.149917	ppm	0.018154	0.02	459646.344463	Y_R 488.368
Ni (231.604 nm)	-0.000894 u	ppm	0.000064	7.14	-9.508730	Y 377.433
P (213.618 nm)	0.006478	ppm	0.002284	35.26	31.506800	Y 242.219
Pb (220.353 nm)	-0.000856 u	ppm	0.001083	> 100.00	4.861730	Y 242.219
S (181.972 nm)	245.003446 bo	ppm	0.323782	0.13	107122.605213	Y 377.433
Sb (206.834 nm)	-0.002928 u	ppm	0.000655	22.37	-38.922000	Y 377.433
Se (196.026 nm)	0.002443 u	ppm	0.005133	> 100.00	12.889600	Y 242.219
Si (288.158 nm)	9.008920	ppm	0.076922	0.85	80089.900000	Y 377.433
Sn (189.925 nm)	0.000983	ppm	0.000666	67.73	10.296300	Y 377.433
Sr (421.552 nm)	10.204533 o	ppm	0.030597	0.30	2156303.112484	Y_R 488.368
Th (288.505 nm)	0.000074 u	ppm	0.000253	> 100.00	53.000600	Y 377.433
Ti (336.122 nm)	-0.000576 u	ppm	0.000013	2.27	496.454000	Y 377.433
Tl (190.794 nm)	0.000062 u	ppm	0.000464	> 100.00	-2.107380	Y 377.433
U (409.013 nm)	-0.027732 u	ppm	0.001741	6.28	-291.873000	Y 377.433
V (292.401 nm)	-0.000248 u	ppm	0.000131	52.78	11.017900	Y 377.433
Zn (206.200 nm)	0.009069	ppm	0.000753	8.30	49.043300	Y 377.433
Zr (343.823 nm)	-0.000114 u	ppm	0.000076	66.67	24.420400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.925482	16597.622068	0.001275	0.14
Y 377.433	0.935283	912126.772665	0.000998	0.11
Y_R 377.433	0.954073	68639.300000	0.004218	0.44
Y_R 488.368	0.964886	38130.400000	0.006785	0.70
Y_R2 488.368	0.979687	74622.436443	0.005419	0.55

Sample Name: 280-123292-A-19-A

Date: 5/13/2019 8:06:53 PM

Rack:Tube: 1:87

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.053220 n	ppm	0.008458	15.89	-2207.872674	Y_R 488.368
Ag (328.068 nm)	0.000891	ppm	0.000021	2.36	-307.418000	Y 377.433
Al (167.019 nm)	0.017039	ppm	0.002785	16.34	10.697000	Y_R 377.433
Al H (396.152 nm)	-0.085744 u	ppm	0.003043	3.55	134.781169	Y_R 377.433
As (188.980 nm)	-0.000887 u	ppm	0.001903	> 100.00	-1.108890	Y 242.219
B (249.678 nm)	2.051540 o	ppm	0.001514	0.07	50825.500000	Y 242.219
Ba (493.408 nm)	0.040245	ppm	0.000302	0.75	5115.080000	Y_R 488.368
Be (234.861 nm)	-0.000010 u	ppm	0.000028	> 100.00	-16.784400	Y_R 488.368
Bi (223.061 nm)	-0.002883 u	ppm	0.000517	17.93	13.363300	Y 377.433
Ca (315.887 nm)	60.481307 o	ppm	0.203551	0.34	50916.069403	Y_R 377.433
Cd (214.439 nm)	0.000011 u	ppm	0.000025	> 100.00	1.125190	Y 377.433
Co (228.615 nm)	0.000022 u	ppm	0.000054	> 100.00	-39.434000	Y 242.219
Cr (205.560 nm)	0.000353	ppm	0.000021	5.91	3.181080	Y 377.433
Cu (324.754 nm)	0.002548	ppm	0.000333	13.09	724.451000	Y 377.433
Fe (238.204 nm)	0.234622	ppm	0.002303	0.98	878.066281	Y_R 377.433
Fe H (259.940 nm)	0.043600 u	ppm	0.002056	4.72	453.692000	Y_R 377.433
K (766.491 nm)	7.361350	ppm	0.118611	1.61	7688.520000	Y_R2 488.368
Li (670.783 nm)	0.040170	ppm	0.000760	1.89	227.174000	Y_R2 488.368
Mg (279.078 nm)	22.555600	ppm	0.033422	0.15	133443.000000	Y 377.433
Mn (257.610 nm)	0.023293	ppm	0.000075	0.32	5974.610000	Y 377.433
Mo (202.032 nm)	0.001951	ppm	0.000478	24.50	14.610100	Y 377.433
Na (589.592 nm)	156.977000 o	ppm	0.284941	0.18	1022870.000000	Y_R2 488.368
Na H (589.593 nm)	164.641385	ppm	0.291553	0.18	647011.561482	Y_R 488.368
Ni (231.604 nm)	-0.000904 u	ppm	0.000044	4.84	-9.599460	Y 377.433
P (213.618 nm)	0.012526	ppm	0.002168	17.30	45.331400	Y 242.219
Pb (220.353 nm)	-0.000120 u	ppm	0.001045	> 100.00	7.124000	Y 242.219
S (181.972 nm)	35.145163 o	ppm	0.023231	0.07	15386.354975	Y 377.433
Sb (206.834 nm)	0.000310 u	ppm	0.001498	> 100.00	-30.130800	Y 377.433
Se (196.026 nm)	-0.003529 u	ppm	0.000075	2.11	7.411130	Y 242.219
Si (288.158 nm)	6.595160	ppm	0.056589	0.86	58855.400000	Y 377.433
Sn (189.925 nm)	0.000178 u	ppm	0.000695	> 100.00	8.589010	Y 377.433
Sr (421.552 nm)	4.008973 o	ppm	0.012915	0.32	847199.960942	Y_R 488.368
Th (288.505 nm)	-0.001665 u	ppm	0.000944	56.68	47.947400	Y 377.433
Ti (336.122 nm)	-0.000042 u	ppm	0.000040	95.01	-8.512490	Y 377.433
Tl (190.794 nm)	-0.000065 u	ppm	0.000020	30.08	-2.381120	Y 377.433
U (409.013 nm)	-0.019497 u	ppm	0.004759	24.41	-217.183000	Y 377.433
V (292.401 nm)	-0.000460 u	ppm	0.000120	26.13	0.666094	Y 377.433
Zn (206.200 nm)	0.011172	ppm	0.000267	2.39	60.005100	Y 377.433
Zr (343.823 nm)	-0.000055 u	ppm	0.000149	> 100.00	31.001000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.946505	16974.650742	0.001999	0.21
Y 377.433	0.951486	927928.348337	0.003704	0.39
Y_R 377.433	0.958277	68941.700000	0.005817	0.61
Y_R 488.368	0.972750	38441.200000	0.006617	0.68
Y_R2 488.368	0.991251	75503.272545	0.003837	0.39

Sample Name: 280-123292-A-20-A

Date: 5/13/2019 8:10:14 PM

Rack:Tube: 1:88

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.052602 n	ppm	0.004913	9.34	-2209.379284	Y_R 488.368
Ag (328.068 nm)	0.000877	ppm	0.000197	22.41	-307.998000	Y 377.433
Al (167.019 nm)	0.013256	ppm	0.001344	10.14	8.287040	Y_R 377.433
Al H (396.152 nm)	-0.094354 u	ppm	0.000366	0.39	111.569754	Y_R 377.433
As (188.980 nm)	-0.000108 u	ppm	0.002530	> 100.00	-0.173498	Y 242.219
B (249.678 nm)	1.980230 o	ppm	0.000596	0.03	49061.600000	Y 242.219
Ba (493.408 nm)	0.057685	ppm	0.000036	0.06	7063.980000	Y_R 488.368
Be (234.861 nm)	-0.000005 u	ppm	0.000005	> 100.00	-21.410800	Y_R 488.368
Bi (223.061 nm)	-0.001489 u	ppm	0.002827	> 100.00	16.920500	Y 377.433
Ca (315.887 nm)	57.600538 o	ppm	0.030295	0.05	48486.281418	Y_R 377.433
Cd (214.439 nm)	-0.000035 u	ppm	0.000121	> 100.00	-1.847270	Y 377.433
Co (228.615 nm)	0.000032 u	ppm	0.000075	> 100.00	-39.216000	Y 242.219
Cr (205.560 nm)	0.000418	ppm	0.000010	2.28	4.209880	Y 377.433
Cu (324.754 nm)	0.000822	ppm	0.000121	14.66	612.905000	Y 377.433
Fe (238.204 nm)	0.036214	ppm	0.000678	1.87	148.936195	Y_R 377.433
Fe H (259.940 nm)	-0.162849 u	ppm	0.001645	1.01	68.177900	Y_R 377.433
K (766.491 nm)	7.179220	ppm	0.039129	0.55	7481.260000	Y_R2 488.368
Li (670.783 nm)	0.039092	ppm	0.001050	2.69	194.100000	Y_R2 488.368
Mg (279.078 nm)	21.762900	ppm	0.019439	0.09	128755.000000	Y 377.433
Mn (257.610 nm)	0.005236	ppm	0.000009	0.17	1400.930000	Y 377.433
Mo (202.032 nm)	0.001851	ppm	0.000131	7.06	13.739400	Y 377.433
Na (589.592 nm)	149.725000 o	ppm	0.745543	0.50	975698.000000	Y_R2 488.368
Na H (589.593 nm)	156.431566	ppm	1.134838	0.73	615309.843770	Y_R 488.368
Ni (231.604 nm)	-0.000591 u	ppm	0.000036	6.03	-7.292980	Y 377.433
P (213.618 nm)	0.019124	ppm	0.000744	3.89	60.411000	Y 242.219
Pb (220.353 nm)	-0.000685 u	ppm	0.001806	> 100.00	5.353340	Y 242.219
S (181.972 nm)	27.327621 o	ppm	0.009949	0.04	11969.002516	Y 377.433
Sb (206.834 nm)	0.000416 u	ppm	0.000728	> 100.00	-29.782500	Y 377.433
Se (196.026 nm)	-0.000127 u	ppm	0.004930	> 100.00	10.602800	Y 242.219
Si (288.158 nm)	6.416390	ppm	0.017116	0.27	57282.700000	Y 377.433
Sn (189.925 nm)	0.001269	ppm	0.000167	13.14	10.902800	Y 377.433
Sr (421.552 nm)	3.912958 o	ppm	0.022361	0.57	826912.296309	Y_R 488.368
Th (288.505 nm)	-0.000751 u	ppm	0.000420	55.91	50.080700	Y 377.433
Ti (336.122 nm)	0.000120	ppm	0.000132	> 100.00	5.533560	Y 377.433
Tl (190.794 nm)	0.000132 u	ppm	0.001264	> 100.00	-1.921670	Y 377.433
U (409.013 nm)	-0.021579 u	ppm	0.001993	9.24	-226.585000	Y 377.433
V (292.401 nm)	-0.000065 u	ppm	0.000164	> 100.00	17.907800	Y 377.433
Zn (206.200 nm)	0.001213	ppm	0.000479	39.48	8.094710	Y 377.433
Zr (343.823 nm)	-0.000146 u	ppm	0.000041	28.31	18.042800	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.944290	16934.919068	0.003563	0.38
Y 377.433	0.948432	924950.449946	0.003989	0.42
Y_R 377.433	0.953655	68609.200000	0.007557	0.79
Y_R 488.368	0.965860	38168.900000	0.014545	1.51
Y_R2 488.368	0.966028	73582.023612	0.001549	0.16

Sample Name: MB 280-456948/1-A

Date: 5/13/2019 8:13:37 PM

Rack:Tube: 1:89

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.032449 n	ppm	0.027493	84.73	-2258.573560	Y_R 488.368
Ag (328.068 nm)	0.000371	ppm	0.000188	50.84	-331.661000	Y 377.433
Al (167.019 nm)	0.007705	ppm	0.002654	34.44	4.954560	Y_R 377.433
Al H (396.152 nm)	-0.105613 u	ppm	0.004263	4.04	57.279136	Y_R 377.433
As (188.980 nm)	-0.001710 u	ppm	0.001718	> 100.00	-2.093320	Y 242.219
B (249.678 nm)	0.004445	ppm	0.000109	2.46	177.519000	Y 242.219
Ba (493.408 nm)	0.000119 u	ppm	0.000175	> 100.00	615.256000	Y_R 488.368
Be (234.861 nm)	-0.000017 u	ppm	0.000001	6.49	-25.353300	Y_R 488.368
Bi (223.061 nm)	-0.002608 u	ppm	0.000679	26.04	14.032700	Y 377.433
Ca (315.887 nm)	0.027259	ppm	0.000786	2.88	-73.971041	Y_R 377.433
Cd (214.439 nm)	-0.000021 u	ppm	0.000004	20.54	-1.059330	Y 377.433
Co (228.615 nm)	0.000545	ppm	0.000243	44.63	-28.968800	Y 242.219
Cr (205.560 nm)	0.000010 u	ppm	0.000279	> 100.00	-1.868350	Y 377.433
Cu (324.754 nm)	0.000664	ppm	0.000159	23.96	641.408000	Y 377.433
Fe (238.204 nm)	0.018586	ppm	0.000822	4.42	84.151415	Y_R 377.433
Fe H (259.940 nm)	-0.174602 u	ppm	0.001206	0.69	46.231000	Y_R 377.433
K (766.491 nm)	-0.063253 u	ppm	0.133544	> 100.00	-760.739000	Y_R2 488.368
Li (670.783 nm)	0.002892	ppm	0.001546	53.46	-916.624000	Y_R2 488.368
Mg (279.078 nm)	0.012599	ppm	0.000152	1.21	97.131900	Y 377.433
Mn (257.610 nm)	0.000488	ppm	0.000014	2.87	198.368000	Y 377.433
Mo (202.032 nm)	-0.000048 u	ppm	0.000015	31.61	-2.824990	Y 377.433
Na (589.592 nm)	0.178049	ppm	0.019115	10.74	2042.860000	Y_R2 488.368
Na H (589.593 nm)	0.280600 u	ppm	0.044572	15.88	11952.659609	Y_R 488.368
Ni (231.604 nm)	0.000061 u	ppm	0.000602	> 100.00	-2.456560	Y 377.433
P (213.618 nm)	-0.001087 u	ppm	0.003105	> 100.00	14.217000	Y 242.219
Pb (220.353 nm)	-0.001529 u	ppm	0.001020	66.74	2.798000	Y 242.219
S (181.972 nm)	0.002995 u	ppm	0.006575	> 100.00	24.463518	Y 377.433
Sb (206.834 nm)	-0.000482 u	ppm	0.000732	> 100.00	-32.182500	Y 377.433
Se (196.026 nm)	0.003368	ppm	0.002203	65.40	13.857400	Y 242.219
Si (288.158 nm)	0.015025	ppm	0.002915	19.40	968.248000	Y 377.433
Sn (189.925 nm)	-0.001130 u	ppm	0.000530	46.90	5.815020	Y 377.433
Sr (421.552 nm)	0.000176	ppm	0.000036	20.67	153.139898	Y_R 488.368
Th (288.505 nm)	-0.001831 u	ppm	0.004857	> 100.00	46.802000	Y 377.433
Ti (336.122 nm)	0.000368	ppm	0.000003	0.84	-141.711000	Y 377.433
Tl (190.794 nm)	0.000130 u	ppm	0.000250	> 100.00	-1.921180	Y 377.433
U (409.013 nm)	-0.011125 u	ppm	0.005889	52.94	-165.959000	Y 377.433
V (292.401 nm)	0.000011 u	ppm	0.000239	> 100.00	19.988400	Y 377.433
Zn (206.200 nm)	0.000181	ppm	0.000112	61.89	2.712720	Y 377.433
Zr (343.823 nm)	-0.000029 u	ppm	0.000005	17.86	33.900600	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.965524	17315.737714	0.000877	0.09
Y 377.433	0.969659	945651.552270	0.002008	0.21
Y_R 377.433	0.952943	68558.100000	0.002533	0.27
Y_R 488.368	0.975960	38568.100000	0.000376	0.04
Y_R2 488.368	0.979490	74607.439819	0.011249	1.15

Sample Name: LCS 280-456948/2-A

Date: 5/13/2019 8:17:00 PM

Rack:Tube: 1:90

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.002763 n	ppm	0.010725	1.07	109.955758	Y_R 488.368
Ag (328.068 nm)	0.049526	ppm	0.000096	0.19	1865.500000	Y 377.433
Al (167.019 nm)	9.138920 o	ppm	0.119912	1.31	5473.280000	Y_R 377.433
Al H (396.152 nm)	10.279348	ppm	0.029776	0.29	26595.647519	Y_R 377.433
As (188.980 nm)	2.028110	ppm	0.002293	0.11	2429.220000	Y 242.219
B (249.678 nm)	1.007400	ppm	0.000039	0.00	25019.000000	Y 242.219
Ba (493.408 nm)	2.042200 o	ppm	0.004776	0.23	228953.000000	Y_R 488.368
Be (234.861 nm)	1.007430	ppm	0.005564	0.55	291734.000000	Y_R 488.368
Bi (223.061 nm)	2.001910	ppm	0.001942	0.10	5181.950000	Y 377.433
Ca (315.887 nm)	50.433061 o	ppm	0.147164	0.29	42441.469102	Y_R 377.433
Cd (214.439 nm)	1.005810	ppm	0.000040	0.00	61327.000000	Y 377.433
Co (228.615 nm)	0.973063	ppm	0.001702	0.17	19419.400000	Y 242.219
Cr (205.560 nm)	1.022660	ppm	0.003698	0.36	15230.200000	Y 377.433
Cu (324.754 nm)	0.994166	ppm	0.001660	0.17	66422.300000	Y 377.433
Fe (238.204 nm)	10.183647 o	ppm	0.019485	0.19	37439.868923	Y_R 377.433
Fe H (259.940 nm)	10.476200	ppm	0.020544	0.20	19935.100000	Y_R 377.433
K (766.491 nm)	49.846500	ppm	0.169092	0.34	56036.900000	Y_R2 488.368
Li (670.783 nm)	1.017650	ppm	0.001326	0.13	30218.500000	Y_R2 488.368
Mg (279.078 nm)	49.459800 o	ppm	0.020925	0.04	292515.000000	Y 377.433
Mn (257.610 nm)	1.019400	ppm	0.000690	0.07	258284.000000	Y 377.433
Mo (202.032 nm)	1.035040	ppm	0.000746	0.07	9025.770000	Y 377.433
Na (589.592 nm)	48.833600 o	ppm	0.019259	0.04	322865.000000	Y_R2 488.368
Na H (589.593 nm)	50.637391	ppm	0.092405	0.18	208536.413285	Y_R 488.368
Ni (231.604 nm)	0.987836	ppm	0.000064	0.01	7325.870000	Y 377.433
P (213.618 nm)	19.894600 o	ppm	0.046921	0.24	45489.000000	Y 242.219
Pb (220.353 nm)	0.992011	ppm	0.000442	0.04	3035.980000	Y 242.219
S (181.972 nm)	9.465760	ppm	0.047482	0.50	4163.083784	Y 377.433
Sb (206.834 nm)	1.047410	ppm	0.002960	0.28	2790.690000	Y 377.433
Se (196.026 nm)	1.997440	ppm	0.002177	0.11	1870.340000	Y 242.219
Si (288.158 nm)	2.184090	ppm	0.026129	1.20	20050.100000	Y 377.433
Sn (189.925 nm)	2.030450	ppm	0.005510	0.27	4313.850000	Y 377.433
Sr (421.552 nm)	1.005590	ppm	0.003377	0.34	212594.197510	Y_R 488.368
Th (288.505 nm)	1.022740	ppm	0.004872	0.48	3130.170000	Y 377.433
Ti (336.122 nm)	1.034020	ppm	0.001267	0.12	148476.000000	Y 377.433
Tl (190.794 nm)	2.019890	ppm	0.003817	0.19	4658.610000	Y 377.433
U (409.013 nm)	2.066350	ppm	0.000817	0.04	9573.060000	Y 377.433
V (292.401 nm)	1.027180	ppm	0.000049	0.00	43118.000000	Y 377.433
Zn (206.200 nm)	0.497983	ppm	0.000924	0.19	2597.540000	Y 377.433
Zr (343.823 nm)	0.505093	ppm	0.000540	0.11	68706.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.944788	16943.859234	0.001204	0.13
Y 377.433	0.947797	924330.961484	0.000281	0.03
Y_R 377.433	0.949091	68280.900000	0.004952	0.52
Y_R 488.368	0.964161	38101.800000	0.006013	0.62
Y_R2 488.368	0.976202	74356.925943	0.004056	0.42

Sample Name: 280-123292-A-21-A

Date: 5/13/2019 8:20:23 PM

Rack:Tube: 2:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	-0.038651 nu	ppm	0.020544	53.15	-2432.128931	Y_R 488.368
Ag (328.068 nm)	0.000773	ppm	0.000301	39.01	-312.738000	Y 377.433
Al (167.019 nm)	0.409846	ppm	0.005347	1.30	245.809000	Y_R 377.433
Al H (396.152 nm)	0.402144 u	ppm	0.011664	2.90	1501.265452	Y_R 377.433
As (188.980 nm)	-0.000680 u	ppm	0.001051	> 100.00	-0.863790	Y 242.219
B (249.678 nm)	0.022648	ppm	0.000765	3.38	627.188000	Y 242.219
Ba (493.408 nm)	0.044500	ppm	0.000854	1.92	5654.330000	Y_R 488.368
Be (234.861 nm)	-0.000122 u	ppm	0.000001	1.05	-40.710100	Y_R 488.368
Bi (223.061 nm)	-0.004693 u	ppm	0.001881	40.08	8.743200	Y 377.433
Ca (315.887 nm)	342.117548 o	ppm	0.732735	0.21	288462.498204	Y_R 377.433
Cd (214.439 nm)	0.000018	ppm	0.000009	52.61	1.817790	Y 377.433
Co (228.615 nm)	0.001923	ppm	0.000018	0.95	-1.195960	Y 242.219
Cr (205.560 nm)	0.001346	ppm	0.000134	9.96	17.909100	Y 377.433
Cu (324.754 nm)	-0.001842 u	ppm	0.000039	2.13	229.464000	Y 377.433
Fe (238.204 nm)	0.505488	ppm	0.001222	0.24	1873.477322	Y_R 377.433
Fe H (259.940 nm)	0.321204 u	ppm	0.000785	0.24	972.078000	Y_R 377.433
K (766.491 nm)	0.991958	ppm	0.020927	2.11	440.100000	Y_R2 488.368
Li (670.783 nm)	0.008008	ppm	0.003066	38.28	-759.640000	Y_R2 488.368
Mg (279.078 nm)	5.600760	ppm	0.009443	0.17	33151.600000	Y 377.433
Mn (257.610 nm)	2.781770 o	ppm	0.000894	0.03	704686.000000	Y 377.433
Mo (202.032 nm)	0.000521	ppm	0.000275	52.90	2.137810	Y 377.433
Na (589.592 nm)	31.287700 o	ppm	0.004072	0.01	204655.000000	Y_R2 488.368
Na H (589.593 nm)	32.264855	ppm	0.501145	1.55	135571.170991	Y_R 488.368
Ni (231.604 nm)	0.005373	ppm	0.000968	18.01	36.963900	Y 377.433
P (213.618 nm)	0.041095	ppm	0.003699	9.00	110.629000	Y 242.219
Pb (220.353 nm)	0.001087 u	ppm	0.002321	> 100.00	10.612000	Y 242.219
S (181.972 nm)	47.556216 o	ppm	0.134629	0.28	20817.403099	Y 377.433
Sb (206.834 nm)	-0.000581 u	ppm	0.000524	90.22	-32.561400	Y 377.433
Se (196.026 nm)	-0.001106 u	ppm	0.000026	2.35	11.736600	Y 242.219
Si (288.158 nm)	6.860140	ppm	0.019420	0.28	61186.500000	Y 377.433
Sn (189.925 nm)	0.002202	ppm	0.000182	8.25	12.881000	Y 377.433
Sr (421.552 nm)	1.675098 o	ppm	0.030679	1.83	354059.130741	Y_R 488.368
Th (288.505 nm)	-0.006761 u	ppm	0.001337	19.77	96.477500	Y 377.433
Ti (336.122 nm)	0.007677	ppm	0.000001	0.01	1995.770000	Y 377.433
Tl (190.794 nm)	0.003327	ppm	0.000899	27.02	5.418960	Y 377.433
U (409.013 nm)	-0.017872 u	ppm	0.000645	3.61	-265.357000	Y 377.433
V (292.401 nm)	0.000697	ppm	0.000262	37.51	50.478500	Y 377.433
Zn (206.200 nm)	0.004100	ppm	0.000159	3.89	23.140000	Y 377.433
Zr (343.823 nm)	0.000582	ppm	0.000080	13.80	118.381000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.921628	16528.497214	0.002050	0.22
Y 377.433	0.933507	910395.330853	0.002209	0.24
Y_R 377.433	0.928138	66773.400000	0.000334	0.04
Y_R 488.368	0.943271	37276.200000	0.014604	1.55
Y_R2 488.368	0.950572	72404.742889	0.006198	0.65

Sample Name: CCVH-5699817

Date: 5/13/2019 8:23:45 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.054212	ppm	0.010662	19.67	-2205.449091	Y_R 488.368
Ag (328.068 nm)	0.000052 u	ppm	0.000093	> 100.00	-597.600000	Y 377.433
Al (167.019 nm)	42.548000 o	ppm	0.028480	0.07	25481.300000	Y_R 377.433
Al H (396.152 nm)	49.719933	ppm	0.155022	0.31	126875.592390	Y_R 377.433
As (188.980 nm)	0.001029 u	ppm	0.002051	> 100.00	0.769744	Y 242.219
B (249.678 nm)	0.002902	ppm	0.000226	7.81	65.527400	Y 242.219
Ba (493.408 nm)	0.002387	ppm	0.000391	16.39	913.380000	Y_R 488.368
Be (234.861 nm)	0.000847	ppm	0.000070	8.31	1728.280000	Y_R 488.368
Bi (223.061 nm)	0.988587	ppm	0.002958	0.30	2576.940000	Y 377.433
Ca (315.887 nm)	0.022611	ppm	0.003751	16.59	-77.890036	Y_R 377.433
Cd (214.439 nm)	0.001236	ppm	0.000107	8.67	124.208000	Y 377.433
Co (228.615 nm)	0.004236	ppm	0.000548	12.94	44.739300	Y 242.219
Cr (205.560 nm)	0.001201	ppm	0.000370	30.81	2.520060	Y 377.433
Cu (324.754 nm)	0.008915	ppm	0.000303	3.40	1582.370000	Y 377.433
Fe (238.204 nm)	48.102068 o	ppm	0.080838	0.17	176786.773964	Y_R 377.433
Fe H (259.940 nm)	49.980500	ppm	0.031390	0.06	93703.800000	Y_R 377.433
K (766.491 nm)	0.097091	ppm	0.060701	62.52	-578.266000	Y_R2 488.368
Li (670.783 nm)	0.005116	ppm	0.003011	58.86	-848.373000	Y_R2 488.368
Mg (279.078 nm)	0.031272	ppm	0.000072	0.23	-156.399000	Y 377.433
Mn (257.610 nm)	0.002840	ppm	0.000021	0.73	794.098000	Y 377.433
Mo (202.032 nm)	0.000804	ppm	0.000194	24.13	4.612420	Y 377.433
Na (589.592 nm)	234.068000 o	ppm	0.305878	0.13	1524640.000000	Y_R2 488.368
Na H (589.593 nm)	242.762166	ppm	2.391204	0.98	948797.314346	Y_R 488.368
Ni (231.604 nm)	0.004908	ppm	0.000583	11.88	35.704800	Y 377.433
P (213.618 nm)	-0.001270 u	ppm	0.000316	24.87	13.798500	Y 242.219
Pb (220.353 nm)	0.002421	ppm	0.001783	73.64	32.922600	Y 242.219
S (181.972 nm)	4.809296	ppm	0.033980	0.71	2125.467189	Y 377.433
Sb (206.834 nm)	-0.001756 u	ppm	0.000739	42.09	-80.265300	Y 377.433
Se (196.026 nm)	0.001712 u	ppm	0.004519	> 100.00	3.962880	Y 242.219
Si (288.158 nm)	0.044499	ppm	0.000357	0.80	1227.530000	Y 377.433
Sn (189.925 nm)	0.005631	ppm	0.001950	34.63	20.152500	Y 377.433
Sr (421.552 nm)	0.001898	ppm	0.000051	2.66	516.958193	Y_R 488.368
Th (288.505 nm)	5.002220	ppm	0.006981	0.14	14927.400000	Y 377.433
Ti (336.122 nm)	0.002317	ppm	0.000030	1.29	138.342000	Y 377.433
Tl (190.794 nm)	0.000151 u	ppm	0.001803	> 100.00	-3.246080	Y 377.433
U (409.013 nm)	10.099900	ppm	0.007809	0.08	47479.600000	Y 377.433
V (292.401 nm)	0.004573	ppm	0.000188	4.12	21.121000	Y 377.433
Zn (206.200 nm)	0.003680	ppm	0.000060	1.62	20.951800	Y 377.433
Zr (343.823 nm)	-0.002931 u	ppm	0.000029	0.97	-211.562000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.934780	16764.370455	0.002136	0.23
Y 377.433	0.929160	906155.554900	0.000005	0.00
Y_R 377.433	0.929182	66848.600000	0.004850	0.52
Y_R 488.368	0.951292	37593.200000	0.007881	0.83
Y_R2 488.368	0.948027	72210.915915	0.000951	0.10

Sample Name: CCV-5699804

Date: 5/13/2019 8:27:08 PM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.960731	ppm	0.007749	0.81	7.355980	Y_R 488.368
Ag (328.068 nm)	0.491113	ppm	0.001241	0.25	22731.500000	Y 377.433
Al (167.019 nm)	0.484759	ppm	0.003363	0.69	292.062000	Y_R 377.433
Al H (396.152 nm)	0.428673 u	ppm	0.002654	0.62	1459.999766	Y_R 377.433
As (188.980 nm)	0.972184	ppm	0.003071	0.32	1164.450000	Y 242.219
B (249.678 nm)	0.489955	ppm	0.000026	0.01	12207.600000	Y 242.219
Ba (493.408 nm)	0.490904	ppm	0.002064	0.42	55496.100000	Y_R 488.368
Be (234.861 nm)	0.492361	ppm	0.004504	0.91	142486.000000	Y_R 488.368
Bi (223.061 nm)	-0.003720 u	ppm	0.001734	46.61	11.590000	Y 377.433
Ca (315.887 nm)	4.991885	ppm	0.010535	0.21	4113.749539	Y_R 377.433
Cd (214.439 nm)	0.499164	ppm	0.000998	0.20	30433.000000	Y 377.433
Co (228.615 nm)	0.494216	ppm	0.000701	0.14	9842.340000	Y 242.219
Cr (205.560 nm)	0.498513	ppm	0.001686	0.34	7423.820000	Y 377.433
Cu (324.754 nm)	0.491673	ppm	0.002020	0.41	33132.700000	Y 377.433
Fe (238.204 nm)	2.459377	ppm	0.003005	0.12	9053.847082	Y_R 377.433
Fe H (259.940 nm)	2.372950 u	ppm	0.003020	0.13	4803.430000	Y_R 377.433
K (766.491 nm)	48.106400	ppm	0.155546	0.32	54056.700000	Y_R2 488.368
Li (670.783 nm)	0.979433	ppm	0.003555	0.36	29046.000000	Y_R2 488.368
Mg (279.078 nm)	19.479900	ppm	0.041859	0.21	115246.000000	Y 377.433
Mn (257.610 nm)	0.497042	ppm	0.000935	0.19	125974.000000	Y 377.433
Mo (202.032 nm)	0.502136	ppm	0.002681	0.53	4377.490000	Y 377.433
Na (589.592 nm)	4.807590	ppm	0.014834	0.31	33161.300000	Y_R2 488.368
Na H (589.593 nm)	4.937297 u	ppm	0.015135	0.31	30431.419131	Y_R 488.368
Ni (231.604 nm)	0.507818	ppm	0.001071	0.21	3764.430000	Y 377.433
P (213.618 nm)	0.957044	ppm	0.003045	0.32	2204.180000	Y 242.219
Pb (220.353 nm)	0.985137	ppm	0.003071	0.31	3014.140000	Y 242.219
S (181.972 nm)	-0.020792 u	ppm	0.002659	12.79	15.101239	Y 377.433
Sb (206.834 nm)	1.020170	ppm	0.000519	0.05	2712.260000	Y 377.433
Se (196.026 nm)	0.964333	ppm	0.001177	0.12	908.919000	Y 242.219
Si (288.158 nm)	4.924480	ppm	0.045843	0.93	44158.000000	Y 377.433
Sn (189.925 nm)	0.996898	ppm	0.002468	0.25	2122.170000	Y 377.433
Sr (421.552 nm)	0.486098	ppm	0.002546	0.52	102827.107150	Y_R 488.368
Th (288.505 nm)	0.004926	ppm	0.000658	13.37	84.722400	Y 377.433
Ti (336.122 nm)	0.495882	ppm	0.000891	0.18	71042.000000	Y 377.433
Tl (190.794 nm)	1.003490	ppm	0.001995	0.20	2313.520000	Y 377.433
U (409.013 nm)	0.000665 u	ppm	0.002047	> 100.00	-148.799000	Y 377.433
V (292.401 nm)	0.494220	ppm	0.001215	0.25	20773.100000	Y 377.433
Zn (206.200 nm)	0.498420	ppm	0.000584	0.12	2599.810000	Y 377.433
Zr (343.823 nm)	0.494123	ppm	0.001274	0.26	67192.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.962416	17260.005295	0.004208	0.44
Y 377.433	0.962267	938443.115287	0.005205	0.54
Y_R 377.433	0.944493	67950.100000	0.002697	0.29
Y_R 488.368	0.959324	37910.700000	0.004480	0.47
Y_R2 488.368	0.976318	74365.771979	0.004111	0.42

Sample Name: CCB

Date: 5/13/2019 8:30:30 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.002504 u	ppm	0.019280	> 100.00	-2331.669790	Y_R 488.368
Ag (328.068 nm)	0.000407	ppm	0.000041	10.11	-329.942000	Y 377.433
Al (167.019 nm)	0.007069	ppm	0.000825	11.68	4.562890	Y_R 377.433
Al H (396.152 nm)	-0.109800 Zu	ppm	0.003563	3.25	46.641429 Z	Y_R 377.433
As (188.980 nm)	-0.002137 u	ppm	0.001689	79.01	-2.604680	Y 242.219
B (249.678 nm)	0.001852	ppm	0.000192	10.37	113.413000	Y 242.219
Ba (493.408 nm)	-0.000050 u	ppm	0.000101	> 100.00	596.397000	Y_R 488.368
Be (234.861 nm)	0.000009	ppm	0.000008	90.12	-18.515700	Y_R 488.368
Bi (223.061 nm)	-0.003782 u	ppm	0.002564	67.79	11.005600	Y 377.433
Ca (315.887 nm)	0.006291	ppm	0.000941	14.95	-91.656041	Y_R 377.433
Cd (214.439 nm)	0.000044	ppm	0.000009	20.94	2.905910	Y 377.433
Co (228.615 nm)	0.000281	ppm	0.000203	72.33	-34.251600	Y 242.219
Cr (205.560 nm)	0.000048	ppm	0.000040	83.38	-1.305450	Y 377.433
Cu (324.754 nm)	0.000758	ppm	0.000227	29.96	647.697000	Y 377.433
Fe (238.204 nm)	0.003764	ppm	0.000005	0.12	29.682544	Y_R 377.433
Fe H (259.940 nm)	-0.190515 u	ppm	0.000847	0.44	16.516700	Y_R 377.433
K (766.491 nm)	-0.050884 u	ppm	0.081504	> 100.00	-746.663000	Y_R2 488.368
Li (670.783 nm)	0.002355	ppm	0.001434	60.90	-933.082000	Y_R2 488.368
Mg (279.078 nm)	0.001933	ppm	0.000786	40.68	34.038100	Y 377.433
Mn (257.610 nm)	-0.000021 u	ppm	0.000005	21.62	69.323500	Y 377.433
Mo (202.032 nm)	0.000207	ppm	0.000152	73.21	-0.596591	Y 377.433
Na (589.592 nm)	0.146221	ppm	0.000418	0.29	1836.050000	Y_R2 488.368
Na H (589.593 nm)	-0.354724 u	ppm	0.031878	8.99	9498.233570	Y_R 488.368
Ni (231.604 nm)	-0.000045 u	ppm	0.000414	> 100.00	-3.241040	Y 377.433
P (213.618 nm)	-0.002659 u	ppm	0.001907	71.70	10.621900	Y 242.219
Pb (220.353 nm)	-0.000122 u	ppm	0.000755	> 100.00	7.096730	Y 242.219
S (181.972 nm)	-0.023337 u	ppm	0.000074	0.32	12.951654	Y 377.433
Sb (206.834 nm)	0.001665	ppm	0.001829	> 100.00	-26.433500	Y 377.433
Se (196.026 nm)	0.000764 u	ppm	0.005321	> 100.00	11.434800	Y 242.219
Si (288.158 nm)	-0.000049 u	ppm	0.001770	> 100.00	835.635000	Y 377.433
Sn (189.925 nm)	0.000582	ppm	0.000386	66.24	9.446020	Y 377.433
Sr (421.552 nm)	0.000014 u	ppm	0.000037	> 100.00	119.042848	Y_R 488.368
Th (288.505 nm)	-0.000140 u	ppm	0.001950	> 100.00	51.771300	Y 377.433
Ti (336.122 nm)	0.000044	ppm	0.000036	81.03	-188.213000	Y 377.433
Tl (190.794 nm)	-0.000101 u	ppm	0.000831	> 100.00	-2.452870	Y 377.433
U (409.013 nm)	-0.007959 u	ppm	0.000445	5.59	-151.097000	Y 377.433
V (292.401 nm)	0.000084 u	ppm	0.000201	> 100.00	23.043900	Y 377.433
Zn (206.200 nm)	-0.000553 u	ppm	0.000001	0.23	-1.115540	Y 377.433
Zr (343.823 nm)	0.000192	ppm	0.000023	11.83	63.879000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.959831	17213.643232	0.000645	0.07
Y 377.433	0.960712	936926.385930	0.000222	0.02
Y_R 377.433	0.938939	67550.500000	0.002209	0.24
Y_R 488.368	0.958600	37882.000000	0.001654	0.17
Y_R2 488.368	0.969547	73850.019577	0.006108	0.63

Sample Name: CCVL-5699389

Date: 5/13/2019 8:33:53 PM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.038687 Q	ppm	0.044220	> 100.00	-2243.345631 Q	Y_R 488.368
Ag (328.068 nm)	0.009329	ppm	0.000176	1.89	88.803500	Y 377.433
Al (167.019 nm)	0.096396	ppm	0.000638	0.66	58.056700	Y_R 377.433
Al H (396.152 nm)	-0.015735 u	ppm	0.001151	7.31	287.624298	Y_R 377.433
As (188.980 nm)	0.012147	ppm	0.000133	1.09	14.505100	Y 242.219
B (249.678 nm)	0.096578	ppm	0.000113	0.12	2457.330000	Y 242.219
Ba (493.408 nm)	0.009889	ppm	0.000291	2.94	1707.610000	Y_R 488.368
Be (234.861 nm)	0.000969	ppm	0.000022	2.29	261.739000	Y_R 488.368
Bi (223.061 nm)	0.099014	ppm	0.000543	0.55	275.953000	Y 377.433
Ca (315.887 nm)	0.206902	ppm	0.001811	0.88	77.552710	Y_R 377.433
Cd (214.439 nm)	0.005036	ppm	0.000059	1.18	307.312000	Y 377.433
Co (228.615 nm)	0.010501	ppm	0.000056	0.53	170.064000	Y 242.219
Cr (205.560 nm)	0.009946	ppm	0.000126	1.27	146.184000	Y 377.433
Cu (324.754 nm)	0.015220	ppm	0.000009	0.06	1604.730000	Y 377.433
Fe (238.204 nm)	0.102098	ppm	0.002666	2.61	391.050956	Y_R 377.433
Fe H (259.940 nm)	-0.093122 u	ppm	0.001995	2.14	198.383000	Y_R 377.433
K (766.491 nm)	2.932360	ppm	0.095934	3.27	2648.290000	Y_R2 488.368
Li (670.783 nm)	0.025190	ppm	0.002958	11.74	-232.449000	Y_R2 488.368
Mg (279.078 nm)	0.192078	ppm	0.001065	0.55	1157.680000	Y 377.433
Mn (257.610 nm)	0.010178	ppm	0.000042	0.42	2652.600000	Y 377.433
Mo (202.032 nm)	0.018655	ppm	0.000323	1.73	160.314000	Y 377.433
Na (589.592 nm)	1.034570	ppm	0.004121	0.40	7638.360000	Y_R2 488.368
Na H (589.593 nm)	0.327431 u	ppm	0.013511	4.13	12143.359653	Y_R 488.368
Ni (231.604 nm)	0.041330	ppm	0.000016	0.04	303.611000	Y 377.433
P (213.618 nm)	2.755430 o	ppm	0.004545	0.16	6314.690000	Y 242.219
Pb (220.353 nm)	0.008337	ppm	0.001128	13.53	32.921600	Y 242.219
S (181.972 nm)	0.059991 Q	ppm	0.000369	0.61	49.398229 Q	Y 377.433
Sb (206.834 nm)	0.022264	ppm	0.001993	8.95	28.851900	Y 377.433
Se (196.026 nm)	0.018446	ppm	0.002118	11.48	27.895600	Y 242.219
Si (288.158 nm)	0.573549	ppm	0.027947	4.87	5881.730000	Y 377.433
Sn (189.925 nm)	0.097480	ppm	0.001744	1.79	214.920000	Y 377.433
Sr (421.552 nm)	0.009826	ppm	0.000005	0.05	2192.231096	Y_R 488.368
Th (288.505 nm)	0.015841	ppm	0.001424	8.99	99.935600	Y 377.433
Ti (336.122 nm)	0.009707	ppm	0.000021	0.22	1200.090000	Y 377.433
Tl (190.794 nm)	0.013694	ppm	0.001862	13.60	29.349800	Y 377.433
U (409.013 nm)	0.055812	ppm	0.000107	0.19	148.342000	Y 377.433
V (292.401 nm)	0.009306	ppm	0.000046	0.49	408.760000	Y 377.433
Zn (206.200 nm)	0.019918	ppm	0.000044	0.22	105.596000	Y 377.433
Zr (343.823 nm)	0.010614	ppm	0.000339	3.19	1480.390000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.975370	17492.307208	0.002421	0.25
Y 377.433	0.978006	953792.709264	0.002596	0.27
Y_R 377.433	0.961730	69190.200000	0.002085	0.22
Y_R 488.368	0.972066	38414.200000	0.007438	0.77
Y_R2 488.368	0.981931	74793.349859	0.008888	0.91

Sample Name: 280-123292-A-21-Asd@5

Date: 5/13/2019 8:37:15 PM

Rack:Tube: 2:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.003876 nu	ppm	0.020021	> 100.00	-2328.319263	Y_R 488.368
Ag (328.068 nm)	0.000878	ppm	0.000217	24.72	-307.878000	Y 377.433
Al (167.019 nm)	0.092708	ppm	0.001846	1.99	55.875900	Y_R 377.433
Al H (396.152 nm)	0.001443 u	ppm	0.008375	> 100.00	360.098458	Y_R 377.433
As (188.980 nm)	-0.002128 u	ppm	0.000903	42.46	-2.594110	Y 242.219
B (249.678 nm)	0.004966	ppm	0.000157	3.15	190.242000	Y 242.219
Ba (493.408 nm)	0.008613	ppm	0.000077	0.89	1580.450000	Y_R 488.368
Be (234.861 nm)	-0.000039 u	ppm	0.000015	39.22	-28.266500	Y_R 488.368
Bi (223.061 nm)	-0.006124 u	ppm	0.002117	34.57	4.991930	Y 377.433
Ca (315.887 nm)	68.517194 o	ppm	0.323839	0.47	57693.947691	Y_R 377.433
Cd (214.439 nm)	-0.000080 u	ppm	0.000064	80.26	-4.508540	Y 377.433
Co (228.615 nm)	0.000730	ppm	0.000247	33.89	-25.228000	Y 242.219
Cr (205.560 nm)	0.000414	ppm	0.000032	7.65	4.122960	Y 377.433
Cu (324.754 nm)	-0.000033 u	ppm	0.000041	> 100.00	547.229000	Y 377.433
Fe (238.204 nm)	0.135492	ppm	0.002569	1.90	513.771566	Y_R 377.433
Fe H (259.940 nm)	-0.060191 u	ppm	0.000527	0.88	259.878000	Y_R 377.433
K (766.491 nm)	0.124676	ppm	0.032276	25.89	-546.874000	Y_R2 488.368
Li (670.783 nm)	0.005452	ppm	0.000155	2.85	-838.052000	Y_R2 488.368
Mg (279.078 nm)	1.131320	ppm	0.000195	0.02	6714.350000	Y 377.433
Mn (257.610 nm)	0.566577	ppm	0.001069	0.19	143586.000000	Y 377.433
Mo (202.032 nm)	0.000101	ppm	0.000045	44.76	-1.528000	Y 377.433
Na (589.592 nm)	6.125070	ppm	0.032228	0.53	40775.700000	Y_R2 488.368
Na H (589.593 nm)	5.665216 u	ppm	0.045394	0.80	32765.572049	Y_R 488.368
Ni (231.604 nm)	0.000762	ppm	0.000462	60.56	2.747880	Y 377.433
P (213.618 nm)	0.006579	ppm	0.001132	17.21	31.738400	Y 242.219
Pb (220.353 nm)	-0.001342 u	ppm	0.002229	> 100.00	3.345890	Y 242.219
S (181.972 nm)	9.227009	ppm	0.027608	0.30	4057.776753	Y 377.433
Sb (206.834 nm)	0.000945	ppm	0.000631	66.81	-28.393400	Y 377.433
Se (196.026 nm)	0.002976	ppm	0.002013	67.65	13.905800	Y 242.219
Si (288.158 nm)	1.345700	ppm	0.001525	0.11	12674.500000	Y 377.433
Sn (189.925 nm)	-0.000243 u	ppm	0.001263	> 100.00	7.694960	Y 377.433
Sr (421.552 nm)	0.330896	ppm	0.000889	0.27	70033.391688	Y_R 488.368
Th (288.505 nm)	0.001279	ppm	0.000387	30.29	69.026300	Y 377.433
Ti (336.122 nm)	0.002193	ppm	0.000134	6.11	338.008000	Y 377.433
Tl (190.794 nm)	0.001393	ppm	0.001119	80.32	0.986185	Y 377.433
U (409.013 nm)	-0.006908 u	ppm	0.006160	89.17	-159.620000	Y 377.433
V (292.401 nm)	-0.000290 u	ppm	0.000029	9.88	7.856590	Y 377.433
Zn (206.200 nm)	0.002872	ppm	0.000446	15.52	16.742500	Y 377.433
Zr (343.823 nm)	0.000011 u	ppm	0.000070	> 100.00	39.612100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.970189	17399.396736	0.001986	0.20
Y 377.433	0.975688	951532.104890	0.002519	0.26
Y_R 377.433	0.961554	69177.500000	0.001775	0.18
Y_R 488.368	0.973694	38478.500000	0.003957	0.41
Y_R2 488.368	1.000555	76211.951514	0.002468	0.25

Sample Name: 280-123292-A-21-B MS

Date: 5/13/2019 8:40:37 PM

Rack:Tube: 2:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.909016 n	ppm	0.001833	0.20	-118.878428	Y_R 488.368
Ag (328.068 nm)	0.051535	ppm	0.000543	1.05	1958.300000	Y 377.433
Al (167.019 nm)	9.680870 o	ppm	0.024983	0.26	5797.540000	Y_R 377.433
Al H (396.152 nm)	11.366285	ppm	0.006274	0.06	29513.239010	Y_R 377.433
As (188.980 nm)	2.053820	ppm	0.004384	0.21	2460.010000	Y 242.219
B (249.678 nm)	1.053190	ppm	0.001261	0.12	26150.100000	Y 242.219
Ba (493.408 nm)	2.055800 o	ppm	0.005596	0.27	230551.000000	Y_R 488.368
Be (234.861 nm)	1.033150	ppm	0.004224	0.41	299184.000000	Y_R 488.368
Bi (223.061 nm)	2.012250	ppm	0.006509	0.32	5208.640000	Y 377.433
Ca (315.887 nm)	392.421818 o	ppm	0.126666	0.03	330892.283207	Y_R 377.433
Cd (214.439 nm)	0.975281	ppm	0.000274	0.03	59466.300000	Y 377.433
Co (228.615 nm)	0.939589	ppm	0.000580	0.06	18751.600000	Y 242.219
Cr (205.560 nm)	1.007610	ppm	0.002370	0.24	15005.500000	Y 377.433
Cu (324.754 nm)	1.001650	ppm	0.004638	0.46	66669.900000	Y 377.433
Fe (238.204 nm)	10.390404 o	ppm	0.003036	0.03	38199.684310	Y_R 377.433
Fe H (259.940 nm)	10.678600	ppm	0.015263	0.14	20313.000000	Y_R 377.433
K (766.491 nm)	52.854700	ppm	0.297026	0.56	59460.300000	Y_R2 488.368
Li (670.783 nm)	1.035910	ppm	0.006107	0.59	30778.900000	Y_R2 488.368
Mg (279.078 nm)	54.314800 o	ppm	0.046054	0.08	321232.000000	Y 377.433
Mn (257.610 nm)	3.733210 o	ppm	0.002394	0.06	945683.000000	Y 377.433
Mo (202.032 nm)	1.029410	ppm	0.000512	0.05	8976.690000	Y 377.433
Na (589.592 nm)	80.173100 o	ppm	0.268790	0.34	526914.000000	Y_R2 488.368
Na H (589.593 nm)	84.834009	ppm	0.280009	0.33	340673.471741	Y_R 488.368
Ni (231.604 nm)	0.964325	ppm	0.000988	0.10	7151.450000	Y 377.433
P (213.618 nm)	20.393600 o	ppm	0.002727	0.01	46629.700000	Y 242.219
Pb (220.353 nm)	0.975024	ppm	0.000185	0.02	2983.750000	Y 242.219
S (181.972 nm)	58.038173 o	ppm	0.043945	0.08	25401.420092	Y 377.433
Sb (206.834 nm)	1.062590	ppm	0.002231	0.21	2830.790000	Y 377.433
Se (196.026 nm)	2.006080	ppm	0.007011	0.35	1880.450000	Y 242.219
Si (288.158 nm)	9.552390	ppm	0.019812	0.21	84871.000000	Y 377.433
Sn (189.925 nm)	2.017170	ppm	0.003206	0.16	4285.700000	Y 377.433
Sr (421.552 nm)	2.662625 o	ppm	0.008269	0.31	562720.582652	Y_R 488.368
Th (288.505 nm)	1.015340	ppm	0.000801	0.08	3170.670000	Y 377.433
Ti (336.122 nm)	1.045040	ppm	0.001390	0.13	151146.000000	Y 377.433
Tl (190.794 nm)	1.957130	ppm	0.001526	0.08	4513.530000	Y 377.433
U (409.013 nm)	2.083720	ppm	0.001200	0.06	9587.530000	Y 377.433
V (292.401 nm)	1.026120	ppm	0.000636	0.06	43078.600000	Y 377.433
Zn (206.200 nm)	0.478882	ppm	0.000590	0.12	2497.970000	Y 377.433
Zr (343.823 nm)	0.498568	ppm	0.000993	0.20	67820.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.891303	15984.653311	0.007090	0.80
Y 377.433	0.898035	875801.114446	0.006801	0.76
Y_R 377.433	0.890510	64066.400000	0.003912	0.44
Y_R 488.368	0.904580	35747.200000	0.004597	0.51
Y_R2 488.368	0.914443	69652.792353	0.006992	0.76

Sample Name: 280-123292-A-21-C MSD

Date: 5/13/2019 8:43:59 PM

Rack:Tube: 2:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.893392 n	ppm	0.017897	2.00	-157.016620	Y_R 488.368
Ag (328.068 nm)	0.053539	ppm	0.000269	0.50	2051.460000	Y 377.433
Al (167.019 nm)	9.773180 o	ppm	0.029657	0.30	5852.830000	Y_R 377.433
Al H (396.152 nm)	11.447544	ppm	0.028511	0.25	29721.788776	Y_R 377.433
As (188.980 nm)	2.079360	ppm	0.001611	0.08	2490.600000	Y 242.219
B (249.678 nm)	1.067280	ppm	0.001276	0.12	26499.300000	Y 242.219
Ba (493.408 nm)	2.068070 o	ppm	0.003315	0.16	231923.000000	Y_R 488.368
Be (234.861 nm)	1.031250	ppm	0.005938	0.58	298636.000000	Y_R 488.368
Bi (223.061 nm)	2.035800	ppm	0.001402	0.07	5269.360000	Y 377.433
Ca (315.887 nm)	394.244684 o	ppm	1.160463	0.29	332429.787864	Y_R 377.433
Cd (214.439 nm)	0.985547	ppm	0.001551	0.16	60092.300000	Y 377.433
Co (228.615 nm)	0.952999	ppm	0.001684	0.18	19019.500000	Y 242.219
Cr (205.560 nm)	1.010690	ppm	0.003534	0.35	15051.300000	Y 377.433
Cu (324.754 nm)	1.004520	ppm	0.003615	0.36	66862.200000	Y 377.433
Fe (238.204 nm)	10.499352 o	ppm	0.042418	0.40	38600.056681	Y_R 377.433
Fe H (259.940 nm)	10.772900	ppm	0.034339	0.32	20489.100000	Y_R 377.433
K (766.491 nm)	53.027300	ppm	0.007040	0.01	59656.700000	Y_R2 488.368
Li (670.783 nm)	1.033360	ppm	0.002524	0.24	30700.600000	Y_R2 488.368
Mg (279.078 nm)	54.867600 o	ppm	0.073117	0.13	324502.000000	Y 377.433
Mn (257.610 nm)	3.761700 o	ppm	0.004881	0.13	952900.000000	Y 377.433
Mo (202.032 nm)	1.040770	ppm	0.000917	0.09	9075.740000	Y 377.433
Na (589.592 nm)	80.706500 o	ppm	0.011571	0.01	530412.000000	Y_R2 488.368
Na H (589.593 nm)	85.720583	ppm	0.138366	0.16	344111.028235	Y_R 488.368
Ni (231.604 nm)	0.972533	ppm	0.001734	0.18	7212.350000	Y 377.433
P (213.618 nm)	20.593400 o	ppm	0.019319	0.09	47086.200000	Y 242.219
Pb (220.353 nm)	0.984017	ppm	0.000260	0.03	3011.160000	Y 242.219
S (181.972 nm)	58.146011 o	ppm	0.134119	0.23	25448.620365	Y 377.433
Sb (206.834 nm)	1.073570	ppm	0.000130	0.01	2860.210000	Y 377.433
Se (196.026 nm)	2.026210	ppm	0.006738	0.33	1899.200000	Y 242.219
Si (288.158 nm)	9.606110	ppm	0.051445	0.54	85343.500000	Y 377.433
Sn (189.925 nm)	2.043710	ppm	0.015556	0.76	4341.960000	Y 377.433
Sr (421.552 nm)	2.654200 o	ppm	0.008856	0.33	560940.546606	Y_R 488.368
Th (288.505 nm)	1.026610	ppm	0.002932	0.29	3204.870000	Y 377.433
Ti (336.122 nm)	1.050770	ppm	0.000957	0.09	151976.000000	Y 377.433
Tl (190.794 nm)	1.978110	ppm	0.001815	0.09	4561.960000	Y 377.433
U (409.013 nm)	2.091840	ppm	0.008856	0.42	9625.270000	Y 377.433
V (292.401 nm)	1.034910	ppm	0.000687	0.07	43449.900000	Y 377.433
Zn (206.200 nm)	0.487511	ppm	0.001590	0.33	2542.950000	Y 377.433
Zr (343.823 nm)	0.502011	ppm	0.000280	0.06	68288.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.867059	15549.860374	0.001289	0.15
Y 377.433	0.873756	852123.021474	0.001921	0.22
Y_R 377.433	0.874948	62946.800000	0.000977	0.11
Y_R 488.368	0.890052	35173.100000	0.002765	0.31
Y_R2 488.368	0.854700	65102.164788	0.007884	0.92

Sample Name: 280-123292-A-22-A

Date: 5/13/2019 8:47:21 PM

Rack:Tube: 2:5

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	-0.007984 nu	ppm	0.003704	46.39	-2357.270121	Y_R 488.368
Ag (328.068 nm)	0.000689	ppm	0.000280	40.66	-316.739000	Y 377.433
Al (167.019 nm)	0.012792	ppm	0.002051	16.04	8.007830	Y_R 377.433
Al H (396.152 nm)	-0.101048 u	ppm	0.002705	2.68	91.131536	Y_R 377.433
As (188.980 nm)	0.001111	ppm	0.000343	30.87	1.285810	Y 242.219
B (249.678 nm)	1.906050 o	ppm	0.002555	0.13	47226.200000	Y 242.219
Ba (493.408 nm)	0.060732	ppm	0.000882	1.45	7402.680000	Y_R 488.368
Be (234.861 nm)	0.000016	ppm	0.000002	10.93	-15.664900	Y_R 488.368
Bi (223.061 nm)	-0.001516 u	ppm	0.000415	27.38	16.850000	Y 377.433
Ca (315.887 nm)	49.246946 o	ppm	0.181019	0.37	41440.433652	Y_R 377.433
Cd (214.439 nm)	-0.000037 u	ppm	0.000069	> 100.00	-1.979060	Y 377.433
Co (228.615 nm)	0.000167	ppm	0.000131	78.54	-36.500400	Y 242.219
Cr (205.560 nm)	0.000227	ppm	0.000171	75.04	1.357440	Y 377.433
Cu (324.754 nm)	0.000995	ppm	0.000027	2.75	630.490000	Y 377.433
Fe (238.204 nm)	0.033889	ppm	0.000363	1.07	140.389811	Y_R 377.433
Fe H (259.940 nm)	-0.163024 u	ppm	0.003984	2.44	67.852600	Y_R 377.433
K (766.491 nm)	7.615840	ppm	0.042559	0.56	7978.140000	Y_R2 488.368
Li (670.783 nm)	0.039460	ppm	0.002723	6.90	205.372000	Y_R2 488.368
Mg (279.078 nm)	19.465700	ppm	0.058851	0.30	115166.000000	Y 377.433
Mn (257.610 nm)	0.010417	ppm	0.000071	0.68	2713.180000	Y 377.433
Mo (202.032 nm)	0.005499	ppm	0.000295	5.37	45.560800	Y 377.433
Na (589.592 nm)	189.969000 o	ppm	0.754090	0.40	1237690.000000	Y_R2 488.368
Na H (589.593 nm)	197.846190	ppm	2.346929	1.19	775320.898773	Y_R 488.368
Ni (231.604 nm)	0.003240	ppm	0.000705	21.77	21.119600	Y 377.433
P (213.618 nm)	0.036113	ppm	0.004729	13.09	99.242900	Y 242.219
Pb (220.353 nm)	-0.001279 u	ppm	0.001015	79.38	3.532120	Y 242.219
S (181.972 nm)	23.774494 o	ppm	0.008071	0.03	10415.819848	Y 377.433
Sb (206.834 nm)	0.000294 u	ppm	0.000569	> 100.00	-30.130400	Y 377.433
Se (196.026 nm)	-0.000047 u	ppm	0.003538	> 100.00	10.682100	Y 242.219
Si (288.158 nm)	7.115990	ppm	0.012689	0.18	63437.300000	Y 377.433
Sn (189.925 nm)	0.000056 u	ppm	0.000693	> 100.00	8.330260	Y 377.433
Sr (421.552 nm)	3.489997 o	ppm	0.045506	1.30	737541.908097	Y_R 488.368
Th (288.505 nm)	-0.001996 u	ppm	0.002912	> 100.00	46.587300	Y 377.433
Ti (336.122 nm)	0.000623	ppm	0.000003	0.47	51.285400	Y 377.433
Tl (190.794 nm)	0.001353	ppm	0.001288	95.20	0.884857	Y 377.433
U (409.013 nm)	-0.025302 u	ppm	0.001893	7.48	-242.530000	Y 377.433
V (292.401 nm)	0.001017	ppm	0.000070	6.84	63.591800	Y 377.433
Zn (206.200 nm)	0.001436	ppm	0.000026	1.81	9.255390	Y 377.433
Zr (343.823 nm)	0.000811	ppm	0.000150	18.56	147.975000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.900886	16156.509699	0.015156	1.68
Y 377.433	0.897842	875612.498880	0.015784	1.76
Y_R 377.433	0.900567	64789.900000	0.001449	0.16
Y_R 488.368	0.914055	36121.700000	0.007323	0.80
Y_R2 488.368	0.912521	69506.433258	0.002818	0.31

Sample Name: 280-123292-A-23-A

Date: 5/13/2019 8:50:43 PM

Rack:Tube: 2:6

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.075914 n	ppm	0.012913	17.01	-2152.476215	Y_R 488.368
Ag (328.068 nm)	0.000561	ppm	0.000174	31.02	-322.728000	Y 377.433
Al (167.019 nm)	0.027090	ppm	0.000576	2.13	16.663500	Y_R 377.433
Al H (396.152 nm)	-0.084951 u	ppm	0.000873	1.03	129.472483	Y_R 377.433
As (188.980 nm)	0.000121 u	ppm	0.001220	> 100.00	0.098714	Y 242.219
B (249.678 nm)	2.006310 o	ppm	0.003504	0.17	49706.500000	Y 242.219
Ba (493.408 nm)	0.052053	ppm	0.000226	0.44	6431.390000	Y_R 488.368
Be (234.861 nm)	0.000001 u	ppm	0.000034	> 100.00	-15.378700	Y_R 488.368
Bi (223.061 nm)	-0.004688 u	ppm	0.002259	48.19	8.700760	Y 377.433
Ca (315.887 nm)	44.083719 o	ppm	0.215226	0.49	37085.503836	Y_R 377.433
Cd (214.439 nm)	0.000009 u	ppm	0.000081	> 100.00	0.971732	Y 377.433
Co (228.615 nm)	0.000205 u	ppm	0.000294	> 100.00	-35.735200	Y 242.219
Cr (205.560 nm)	0.000144 u	ppm	0.000231	> 100.00	0.082732	Y 377.433
Cu (324.754 nm)	0.001295	ppm	0.000155	11.97	653.488000	Y 377.433
Fe (238.204 nm)	0.174925	ppm	0.000855	0.49	658.685292	Y_R 377.433
Fe H (259.940 nm)	-0.019314 u	ppm	0.000785	4.07	336.210000	Y_R 377.433
K (766.491 nm)	6.797600	ppm	0.016193	0.24	7046.970000	Y_R2 488.368
Li (670.783 nm)	0.040118	ppm	0.002352	5.86	225.566000	Y_R2 488.368
Mg (279.078 nm)	17.144600	ppm	0.018081	0.11	101436.000000	Y 377.433
Mn (257.610 nm)	0.005711	ppm	0.000001	0.01	1521.380000	Y 377.433
Mo (202.032 nm)	0.001271	ppm	0.000458	36.01	8.683160	Y 377.433
Na (589.592 nm)	179.445000 o	ppm	0.184721	0.10	1169160.000000	Y_R2 488.368
Na H (589.593 nm)	186.376541	ppm	0.963572	0.52	730998.693032	Y_R 488.368
Ni (231.604 nm)	0.000121 u	ppm	0.000983	> 100.00	-2.001230	Y 377.433
P (213.618 nm)	0.039393	ppm	0.000684	1.74	106.741000	Y 242.219
Pb (220.353 nm)	0.000462	ppm	0.000315	68.09	8.885880	Y 242.219
S (181.972 nm)	24.010642 o	ppm	0.017504	0.07	10519.038174	Y 377.433
Sb (206.834 nm)	0.001486 u	ppm	0.002679	> 100.00	-26.962400	Y 377.433
Se (196.026 nm)	-0.000647 u	ppm	0.000212	32.73	10.092500	Y 242.219
Si (288.158 nm)	6.352330	ppm	0.000918	0.01	56719.200000	Y 377.433
Sn (189.925 nm)	0.000541 u	ppm	0.001534	> 100.00	9.358190	Y 377.433
Sr (421.552 nm)	3.080038 o	ppm	0.012362	0.40	650918.845680	Y_R 488.368
Th (288.505 nm)	0.000135 u	ppm	0.001032	> 100.00	52.694300	Y 377.433
Ti (336.122 nm)	0.000768	ppm	0.000013	1.65	55.650500	Y 377.433
Tl (190.794 nm)	0.000603 u	ppm	0.001248	> 100.00	-0.838238	Y 377.433
U (409.013 nm)	-0.017285 u	ppm	0.001488	8.61	-203.588000	Y 377.433
V (292.401 nm)	-0.000210 u	ppm	0.000084	39.98	11.579500	Y 377.433
Zn (206.200 nm)	0.004122	ppm	0.000809	19.63	23.253200	Y 377.433
Zr (343.823 nm)	0.000212	ppm	0.000011	5.09	67.060200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.960827	17231.499552	0.003202	0.33
Y 377.433	0.962922	939081.787432	0.004221	0.44
Y_R 377.433	0.977135	70298.500000	0.003957	0.40
Y_R 488.368	0.993040	39243.000000	0.003328	0.34
Y_R2 488.368	0.991246	75502.883590	0.003031	0.31

Sample Name: 280-123292-A-24-A

Date: 5/13/2019 8:54:05 PM

Rack:Tube: 2:7

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.038095 n	ppm	0.024495	64.30	-2244.791049	Y_R 488.368
Ag (328.068 nm)	0.000421	ppm	0.000235	55.72	-329.320000	Y 377.433
Al (167.019 nm)	0.006290	ppm	0.003317	52.73	4.105820	Y_R 377.433
Al H (396.152 nm)	-0.115068 u	ppm	0.000317	0.28	33.222647	Y_R 377.433
As (188.980 nm)	0.000332 u	ppm	0.000685	> 100.00	0.352947	Y 242.219
B (249.678 nm)	0.003416	ppm	0.000101	2.97	152.078000	Y 242.219
Ba (493.408 nm)	-0.000052 u	ppm	0.000054	> 100.00	596.154000	Y_R 488.368
Be (234.861 nm)	-0.000018 u	ppm	0.000009	46.42	-25.992700	Y_R 488.368
Bi (223.061 nm)	-0.000855 u	ppm	0.000093	10.89	18.551000	Y 377.433
Ca (315.887 nm)	0.056434	ppm	0.002068	3.66	-49.362878	Y_R 377.433
Cd (214.439 nm)	0.000001 u	ppm	0.000018	> 100.00	0.322026	Y 377.433
Co (228.615 nm)	0.000585	ppm	0.000263	44.90	-28.173800	Y 242.219
Cr (205.560 nm)	0.000145 u	ppm	0.000322	> 100.00	0.139066	Y 377.433
Cu (324.754 nm)	0.001276	ppm	0.000020	1.53	682.184000	Y 377.433
Fe (238.204 nm)	0.015098	ppm	0.000375	2.48	71.333445	Y_R 377.433
Fe H (259.940 nm)	-0.177759 u	ppm	0.001144	0.64	40.336300	Y_R 377.433
K (766.491 nm)	-0.044832 u	ppm	0.021875	48.79	-739.775000	Y_R2 488.368
Li (670.783 nm)	0.005996	ppm	0.001555	25.94	-821.374000	Y_R2 488.368
Mg (279.078 nm)	0.007461	ppm	0.000733	9.82	66.735600	Y 377.433
Mn (257.610 nm)	0.000475	ppm	0.000040	8.49	194.912000	Y 377.433
Mo (202.032 nm)	0.000067	ppm	0.000033	49.72	-1.824500	Y 377.433
Na (589.592 nm)	0.088873	ppm	0.017866	20.10	1463.180000	Y_R2 488.368
Na H (589.593 nm)	-0.344420 u	ppm	0.024188	7.02	9538.274346	Y_R 488.368
Ni (231.604 nm)	0.002089	ppm	0.000440	21.06	12.582200	Y 377.433
P (213.618 nm)	0.006062	ppm	0.000593	9.78	30.556400	Y 242.219
Pb (220.353 nm)	-0.000703 u	ppm	0.000176	25.02	5.325130	Y 242.219
S (181.972 nm)	-0.011829 u	ppm	0.005119	43.27	17.983451	Y 377.433
Sb (206.834 nm)	0.002214	ppm	0.001636	73.88	-24.965000	Y 377.433
Se (196.026 nm)	-0.000286 u	ppm	0.004380	> 100.00	10.455000	Y 242.219
Si (288.158 nm)	0.017718	ppm	0.001045	5.90	991.937000	Y 377.433
Sn (189.925 nm)	-0.000313 u	ppm	0.000569	> 100.00	7.546110	Y 377.433
Sr (421.552 nm)	0.000440	ppm	0.000004	0.96	209.042051	Y_R 488.368
Th (288.505 nm)	0.001323	ppm	0.000531	40.16	56.047900	Y 377.433
Ti (336.122 nm)	0.000148	ppm	0.000116	78.21	-173.316000	Y 377.433
Tl (190.794 nm)	-0.000228 u	ppm	0.001571	> 100.00	-2.747550	Y 377.433
U (409.013 nm)	-0.002930 u	ppm	0.001578	53.84	-127.381000	Y 377.433
V (292.401 nm)	-0.000105 u	ppm	0.000169	> 100.00	15.223400	Y 377.433
Zn (206.200 nm)	0.003426	ppm	0.000544	15.87	19.628600	Y 377.433
Zr (343.823 nm)	-0.000083 u	ppm	0.000001	1.31	26.548000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.980456	17583.531115	0.001881	0.19
Y 377.433	0.984529	960153.663479	0.002643	0.27
Y_R 377.433	0.970535	69823.700000	0.001807	0.19
Y_R 488.368	0.988935	39080.800000	0.007413	0.75
Y_R2 488.368	0.996624	75912.511129	0.005257	0.53

Sample Name: 280-123292-A-25-A

Date: 5/13/2019 8:57:26 PM

Rack:Tube: 2:8

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.076774 n	ppm	0.027648	36.01	-2150.376031	Y_R 488.368
Ag (328.068 nm)	0.000580	ppm	0.000014	2.44	-321.873000	Y 377.433
Al (167.019 nm)	0.028204	ppm	0.004429	15.70	17.437900	Y_R 377.433
Al H (396.152 nm)	-0.081318 u	ppm	0.001917	2.36	138.309126	Y_R 377.433
As (188.980 nm)	-0.000218 u	ppm	0.000893	> 100.00	-0.308891	Y 242.219
B (249.678 nm)	1.614300 o	ppm	0.001226	0.08	40007.300000	Y 242.219
Ba (493.408 nm)	0.064963	ppm	0.000973	1.50	7874.640000	Y_R 488.368
Be (234.861 nm)	-0.000006 u	ppm	0.000022	> 100.00	-12.846700	Y_R 488.368
Bi (223.061 nm)	-0.003257 u	ppm	0.000748	22.98	12.412200	Y 377.433
Ca (315.887 nm)	43.186854 o	ppm	0.071243	0.16	36329.042040	Y_R 377.433
Cd (214.439 nm)	-0.000004 u	ppm	0.000010	> 100.00	0.327437	Y 377.433
Co (228.615 nm)	0.000009 u	ppm	0.000057	> 100.00	-39.663800	Y 242.219
Cr (205.560 nm)	0.000437	ppm	0.000168	38.36	4.411740	Y 377.433
Cu (324.754 nm)	0.000965	ppm	0.000622	64.45	632.054000	Y 377.433
Fe (238.204 nm)	0.320607	ppm	0.001228	0.38	1194.055200	Y_R 377.433
Fe H (259.940 nm)	0.136827 u	ppm	0.000193	0.14	627.781000	Y_R 377.433
K (766.491 nm)	6.553990	ppm	0.021884	0.33	6769.740000	Y_R2 488.368
Li (670.783 nm)	0.036999	ppm	0.000260	0.70	129.874000	Y_R2 488.368
Mg (279.078 nm)	15.495500	ppm	0.005685	0.04	91681.200000	Y 377.433
Mn (257.610 nm)	0.002919	ppm	0.000008	0.28	813.947000	Y 377.433
Mo (202.032 nm)	0.001140	ppm	0.000114	10.00	7.538630	Y 377.433
Na (589.592 nm)	139.212000 o	ppm	0.019567	0.01	907269.000000	Y_R2 488.368
Na H (589.593 nm)	145.399306	ppm	2.158219	1.48	572693.246689	Y_R 488.368
Ni (231.604 nm)	-0.000597 u	ppm	0.000830	> 100.00	-7.325410	Y 377.433
P (213.618 nm)	0.027584	ppm	0.000326	1.18	79.747900	Y 242.219
Pb (220.353 nm)	0.000032 u	ppm	0.002028	> 100.00	7.573470	Y 242.219
S (181.972 nm)	15.453985 o	ppm	0.015328	0.10	6778.624997	Y 377.433
Sb (206.834 nm)	-0.000123 u	ppm	0.001285	> 100.00	-31.286000	Y 377.433
Se (196.026 nm)	-0.001602 u	ppm	0.001112	69.42	9.174090	Y 242.219
Si (288.158 nm)	7.152380	ppm	0.033974	0.47	63757.400000	Y 377.433
Sn (189.925 nm)	0.000403 u	ppm	0.000630	> 100.00	9.064740	Y 377.433
Sr (421.552 nm)	2.809103 o	ppm	0.024224	0.86	593671.059967	Y_R 488.368
Th (288.505 nm)	-0.000780 u	ppm	0.002927	> 100.00	49.919900	Y 377.433
Ti (336.122 nm)	0.000749	ppm	0.000030	4.02	50.003500	Y 377.433
Tl (190.794 nm)	-0.000300 u	ppm	0.000031	10.21	-2.926570	Y 377.433
U (409.013 nm)	-0.016291 u	ppm	0.000358	2.20	-198.564000	Y 377.433
V (292.401 nm)	0.000063	ppm	0.000071	> 100.00	22.806700	Y 377.433
Zn (206.200 nm)	0.006036	ppm	0.000252	4.17	33.231500	Y 377.433
Zr (343.823 nm)	-0.000037 u	ppm	0.000015	39.25	33.632500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.962758	17266.138499	0.003849	0.40
Y 377.433	0.964871	940982.188106	0.003461	0.36
Y_R 377.433	0.972517	69966.300000	0.001504	0.15
Y_R 488.368	0.980388	38743.000000	0.010636	1.08
Y_R2 488.368	0.999057	76097.783556	0.003551	0.36

Sample Name: 280-123292-A-26-A

Date: 5/13/2019 9:00:49 PM

Rack:Tube: 2:9

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.085067 n	ppm	0.003946	4.64	-2130.133194	Y_R 488.368
Ag (328.068 nm)	0.000484	ppm	0.000039	8.08	-326.242000	Y 377.433
Al (167.019 nm)	0.008384	ppm	0.000634	7.57	5.412140	Y_R 377.433
Al H (396.152 nm)	-0.104476 u	ppm	0.004332	4.15	77.696154	Y_R 377.433
As (188.980 nm)	0.002207	ppm	0.001185	53.69	2.598820	Y 242.219
B (249.678 nm)	1.930360 o	ppm	0.001290	0.07	47827.700000	Y 242.219
Ba (493.408 nm)	0.041078	ppm	0.000069	0.17	5203.180000	Y_R 488.368
Be (234.861 nm)	0.000011	ppm	0.000002	14.79	-15.338500	Y_R 488.368
Bi (223.061 nm)	-0.003338 u	ppm	0.000522	15.64	12.163600	Y 377.433
Ca (315.887 nm)	39.098331 o	ppm	0.231998	0.59	32880.572383	Y_R 377.433
Cd (214.439 nm)	0.000016	ppm	0.000015	90.19	1.297300	Y 377.433
Co (228.615 nm)	0.000458	ppm	0.000056	12.19	-30.720300	Y 242.219
Cr (205.560 nm)	0.000180	ppm	0.000114	62.95	0.645667	Y 377.433
Cu (324.754 nm)	0.000873	ppm	0.000236	27.02	629.276000	Y 377.433
Fe (238.204 nm)	0.087978	ppm	0.000702	0.80	339.163513	Y_R 377.433
Fe H (259.940 nm)	-0.105852 u	ppm	0.000728	0.69	174.612000	Y_R 377.433
K (766.491 nm)	6.589020	ppm	0.003853	0.06	6809.610000	Y_R2 488.368
Li (670.783 nm)	0.039821	ppm	0.000652	1.64	216.456000	Y_R2 488.368
Mg (279.078 nm)	15.594400	ppm	0.003209	0.02	92266.700000	Y 377.433
Mn (257.610 nm)	0.002860	ppm	0.000019	0.65	799.136000	Y 377.433
Mo (202.032 nm)	0.002933	ppm	0.000537	18.30	23.178300	Y 377.433
Na (589.592 nm)	170.042000 o	ppm	0.134103	0.08	1107920.000000	Y_R2 488.368
Na H (589.593 nm)	175.687343	ppm	1.169949	0.67	689689.345601	Y_R 488.368
Ni (231.604 nm)	0.000320	ppm	0.000028	8.73	-0.533100	Y 377.433
P (213.618 nm)	0.018798	ppm	0.000917	4.88	59.667000	Y 242.219
Pb (220.353 nm)	-0.000095 u	ppm	0.001029	> 100.00	7.161750	Y 242.219
S (181.972 nm)	28.122344 o	ppm	0.011507	0.04	12316.398197	Y 377.433
Sb (206.834 nm)	0.000493 u	ppm	0.001091	> 100.00	-29.593400	Y 377.433
Se (196.026 nm)	-0.001094 u	ppm	0.000396	36.17	9.690750	Y 242.219
Si (288.158 nm)	6.524700	ppm	0.041217	0.63	58235.600000	Y 377.433
Sn (189.925 nm)	-0.000222 u	ppm	0.000115	51.71	7.740150	Y 377.433
Sr (421.552 nm)	2.731792 o	ppm	0.017365	0.64	577335.347239	Y_R 488.368
Th (288.505 nm)	-0.000882 u	ppm	0.002899	> 100.00	49.567500	Y 377.433
Ti (336.122 nm)	0.000158	ppm	0.000001	0.41	-47.875700	Y 377.433
Tl (190.794 nm)	-0.000961 u	ppm	0.000031	3.24	-4.447920	Y 377.433
U (409.013 nm)	-0.017620 u	ppm	0.006925	39.30	-204.243000	Y 377.433
V (292.401 nm)	-0.000410 u	ppm	0.000109	26.53	3.183690	Y 377.433
Zn (206.200 nm)	0.001660	ppm	0.000117	7.04	10.423300	Y 377.433
Zr (343.823 nm)	0.000051	ppm	0.000002	4.64	44.955300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.960850	17231.906271	0.000641	0.07
Y 377.433	0.962576	938744.425221	0.000482	0.05
Y_R 377.433	0.970306	69807.100000	0.001406	0.14
Y_R 488.368	0.988949	39081.400000	0.004252	0.43
Y_R2 488.368	0.995033	75791.346433	0.002805	0.28

Sample Name: 280-123292-A-27-O

Date: 5/13/2019 9:04:12 PM

Rack:Tube: 2:10

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	-0.015714 nu	ppm	0.011536	73.41	-2376.139266	Y_R 488.368
Ag (328.068 nm)	0.000457	ppm	0.000086	18.79	-327.861000	Y 377.433
Al (167.019 nm)	0.040584	ppm	0.000839	2.07	24.953800	Y_R 377.433
Al H (396.152 nm)	-0.013418 u	ppm	0.004550	33.91	452.027232	Y_R 377.433
As (188.980 nm)	0.002839	ppm	0.002922	> 100.00	3.351570	Y 242.219
B (249.678 nm)	0.030142	ppm	0.000053	0.18	812.736000	Y 242.219
Ba (493.408 nm)	0.154934	ppm	0.000252	0.16	18004.800000	Y_R 488.368
Be (234.861 nm)	-0.000015 u	ppm	0.000000	2.83	-10.782800	Y_R 488.368
Bi (223.061 nm)	-0.003374 u	ppm	0.002302	68.22	12.137300	Y 377.433
Ca (315.887 nm)	361.504739 o	ppm	0.773746	0.21	304814.648146	Y_R 377.433
Cd (214.439 nm)	-0.000017 u	ppm	0.000017	98.70	-0.337565	Y 377.433
Co (228.615 nm)	0.003995	ppm	0.000520	13.02	39.893200	Y 242.219
Cr (205.560 nm)	0.000581	ppm	0.000280	48.24	6.511850	Y 377.433
Cu (324.754 nm)	-0.001749 u	ppm	0.000039	2.20	220.257000	Y 377.433
Fe (238.204 nm)	0.471415	ppm	0.000467	0.10	1748.258562	Y_R 377.433
Fe H (259.940 nm)	0.288967 u	ppm	0.003072	1.06	911.882000	Y_R 377.433
K (766.491 nm)	0.341636	ppm	0.089870	26.31	-299.972000	Y_R2 488.368
Li (670.783 nm)	0.016444	ppm	0.000804	4.89	-500.805000	Y_R2 488.368
Mg (279.078 nm)	6.976000	ppm	0.000348	0.00	41286.200000	Y 377.433
Mn (257.610 nm)	0.152969	ppm	0.000085	0.06	38821.000000	Y 377.433
Mo (202.032 nm)	-0.000073 u	ppm	0.000004	5.83	-3.041380	Y 377.433
Na (589.592 nm)	167.941000 o	ppm	0.680696	0.41	1094480.000000	Y_R2 488.368
Na H (589.593 nm)	176.034631	ppm	0.079810	0.05	691145.146499	Y_R 488.368
Ni (231.604 nm)	0.000127 u	ppm	0.000646	> 100.00	-1.948390	Y 377.433
P (213.618 nm)	0.026793	ppm	0.000626	2.34	77.940200	Y 242.219
Pb (220.353 nm)	0.000223 u	ppm	0.001243	> 100.00	8.159180	Y 242.219
S (181.972 nm)	35.169316 o	ppm	0.097577	0.28	15397.183953	Y 377.433
Sb (206.834 nm)	-0.000769 u	ppm	0.002102	> 100.00	-33.075300	Y 377.433
Se (196.026 nm)	-0.000211 u	ppm	0.002101	> 100.00	10.557800	Y 242.219
Si (288.158 nm)	8.281980	ppm	0.041734	0.50	73694.800000	Y 377.433
Sn (189.925 nm)	0.000832 u	ppm	0.001835	> 100.00	9.974180	Y 377.433
Sr (421.552 nm)	3.032543 o	ppm	0.010715	0.35	640883.142037	Y_R 488.368
Th (288.505 nm)	-0.001349 u	ppm	0.000659	48.81	51.880700	Y 377.433
Ti (336.122 nm)	0.000342	ppm	0.000038	11.22	1003.330000	Y 377.433
Tl (190.794 nm)	-0.001433 u	ppm	0.000290	20.26	-5.533970	Y 377.433
U (409.013 nm)	-0.021539 u	ppm	0.000808	3.75	-286.436000	Y 377.433
V (292.401 nm)	0.000655	ppm	0.000063	9.61	47.957900	Y 377.433
Zn (206.200 nm)	0.001051	ppm	0.000517	49.25	7.245450	Y 377.433
Zr (343.823 nm)	-0.000027 u	ppm	0.000077	> 100.00	35.480500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.931092	16698.228835	0.000507	0.05
Y 377.433	0.940735	917444.317147	0.000793	0.08
Y_R 377.433	0.956591	68820.500000	0.001140	0.12
Y_R 488.368	0.971339	38385.400000	0.002871	0.30
Y_R2 488.368	0.987051	75183.334342	0.004861	0.49

Sample Name: 280-123292-A-28-A

Date: 5/13/2019 9:07:33 PM

Rack:Tube: 2:11

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.065675 n	ppm	0.000919	1.40	-2177.470020	Y_R 488.368
Ag (328.068 nm)	0.000538	ppm	0.000068	12.66	-323.941000	Y 377.433
Al (167.019 nm)	0.293109	ppm	0.010777	3.68	176.157000	Y_R 377.433
Al H (396.152 nm)	0.224169 u	ppm	0.005108	2.28	916.270003	Y_R 377.433
As (188.980 nm)	0.001877	ppm	0.001061	56.51	2.197190	Y 242.219
B (249.678 nm)	1.954980 o	ppm	0.001789	0.09	48435.900000	Y 242.219
Ba (493.408 nm)	0.051668	ppm	0.000557	1.08	6388.840000	Y_R 488.368
Be (234.861 nm)	-0.000006 u	ppm	0.000002	37.14	-0.609653	Y_R 488.368
Bi (223.061 nm)	-0.002613 u	ppm	0.001042	39.88	14.143200	Y 377.433
Ca (315.887 nm)	44.171719 o	ppm	0.155317	0.35	37159.727816	Y_R 377.433
Cd (214.439 nm)	0.000044	ppm	0.000029	66.02	3.628980	Y 377.433
Co (228.615 nm)	0.000375	ppm	0.000107	28.48	-32.095000	Y 242.219
Cr (205.560 nm)	0.000728	ppm	0.000118	16.26	8.638430	Y 377.433
Cu (324.754 nm)	0.001644	ppm	0.000067	4.08	676.458000	Y 377.433
Fe (238.204 nm)	0.719247	ppm	0.004236	0.59	2659.021264	Y_R 377.433
Fe H (259.940 nm)	0.543778 u	ppm	0.003646	0.67	1387.700000	Y_R 377.433
K (766.491 nm)	6.487120	ppm	0.083874	1.29	6693.650000	Y_R2 488.368
Li (670.783 nm)	0.037131	ppm	0.000598	1.61	133.912000	Y_R2 488.368
Mg (279.078 nm)	15.532800	ppm	0.002187	0.01	91900.900000	Y 377.433
Mn (257.610 nm)	0.015312	ppm	0.000030	0.20	3953.060000	Y 377.433
Mo (202.032 nm)	0.001023	ppm	0.000498	48.69	6.516310	Y 377.433
Na (589.592 nm)	171.186000 o	ppm	0.339272	0.20	1115390.000000	Y_R2 488.368
Na H (589.593 nm)	180.074433	ppm	1.446250	0.80	706649.538827	Y_R 488.368
Ni (231.604 nm)	0.000322 u	ppm	0.000715	> 100.00	-0.487441	Y 377.433
P (213.618 nm)	0.070593	ppm	0.002384	3.38	178.052000	Y 242.219
Pb (220.353 nm)	-0.000949 u	ppm	0.000996	> 100.00	4.522010	Y 242.219
S (181.972 nm)	19.841490 o	ppm	0.013226	0.07	8696.579340	Y 377.433
Sb (206.834 nm)	-0.000927 u	ppm	0.001172	> 100.00	-33.563100	Y 377.433
Se (196.026 nm)	-0.005227 u	ppm	0.001147	21.94	5.738240	Y 242.219
Si (288.158 nm)	6.723620	ppm	0.051068	0.76	59985.500000	Y 377.433
Sn (189.925 nm)	0.001171	ppm	0.000106	9.05	10.693800	Y 377.433
Sr (421.552 nm)	2.840267 o	ppm	0.028095	0.99	600255.851965	Y_R 488.368
Th (288.505 nm)	0.001016 u	ppm	0.002252	> 100.00	55.537700	Y 377.433
Ti (336.122 nm)	0.007373	ppm	0.000094	1.27	1004.590000	Y 377.433
Tl (190.794 nm)	0.000157 u	ppm	0.001952	> 100.00	-1.912420	Y 377.433
U (409.013 nm)	-0.017742 u	ppm	0.000198	1.12	-205.220000	Y 377.433
V (292.401 nm)	0.000406	ppm	0.000148	36.44	37.276700	Y 377.433
Zn (206.200 nm)	0.001776	ppm	0.000207	11.66	11.028100	Y 377.433
Zr (343.823 nm)	0.000315	ppm	0.000007	2.37	82.813300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.965508	17315.454123	0.002496	0.26
Y 377.433	0.968641	944658.666631	0.002838	0.29
Y_R 377.433	0.979783	70489.000000	0.004047	0.41
Y_R 488.368	0.987148	39010.200000	0.011563	1.17
Y_R2 488.368	1.005211	76566.538687	0.002987	0.30

Sample Name: CCVH-5699817

Date: 5/13/2019 9:10:57 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.108937	ppm	0.032674	29.99	-2071.865620	Y_R 488.368
Ag (328.068 nm)	0.000028 u	ppm	0.000278	> 100.00	-600.619000	Y 377.433
Al (167.019 nm)	42.293400 o	ppm	0.056001	0.13	25329.000000	Y_R 377.433
Al H (396.152 nm)	49.680536	ppm	0.127118	0.26	126775.305471	Y_R 377.433
As (188.980 nm)	0.001923	ppm	0.002104	> 100.00	1.840740	Y 242.219
B (249.678 nm)	0.003711	ppm	0.000101	2.72	85.564500	Y 242.219
Ba (493.408 nm)	0.002024	ppm	0.000056	2.78	872.862000	Y_R 488.368
Be (234.861 nm)	0.000821	ppm	0.000053	6.42	1720.500000	Y_R 488.368
Bi (223.061 nm)	0.994710	ppm	0.000195	0.02	2592.720000	Y 377.433
Ca (315.887 nm)	0.019913	ppm	0.001285	6.45	-80.165164	Y_R 377.433
Cd (214.439 nm)	0.001112	ppm	0.000103	9.22	116.627000	Y 377.433
Co (228.615 nm)	0.004550	ppm	0.000489	10.75	50.990900	Y 242.219
Cr (205.560 nm)	0.001396	ppm	0.000157	11.26	5.417000	Y 377.433
Cu (324.754 nm)	0.009041	ppm	0.000123	1.36	1593.380000	Y 377.433
Fe (238.204 nm)	48.078604 o	ppm	0.166422	0.35	176700.545649	Y_R 377.433
Fe H (259.940 nm)	49.991900	ppm	0.129051	0.26	93725.100000	Y_R 377.433
K (766.491 nm)	0.114243	ppm	0.000866	0.76	-558.747000	Y_R2 488.368
Li (670.783 nm)	0.008337	ppm	0.001051	12.61	-749.549000	Y_R2 488.368
Mg (279.078 nm)	0.031708	ppm	0.000689	2.17	-155.878000	Y 377.433
Mn (257.610 nm)	0.002868	ppm	0.000007	0.23	801.023000	Y 377.433
Mo (202.032 nm)	0.000550	ppm	0.000453	82.50	2.389150	Y 377.433
Na (589.592 nm)	235.447000 o	ppm	0.310973	0.13	1533620.000000	Y_R2 488.368
Na H (589.593 nm)	245.324719	ppm	2.367721	0.97	958697.462156	Y_R 488.368
Ni (231.604 nm)	0.005408	ppm	0.000901	16.65	39.413400	Y 377.433
P (213.618 nm)	-0.002196 u	ppm	0.003395	> 100.00	11.680900	Y 242.219
Pb (220.353 nm)	0.003897	ppm	0.000338	8.67	37.675300	Y 242.219
S (181.972 nm)	4.864656	ppm	0.025414	0.52	2149.667361	Y 377.433
Sb (206.834 nm)	-0.001395 u	ppm	0.001222	87.62	-79.518000	Y 377.433
Se (196.026 nm)	-0.000380 u	ppm	0.002307	> 100.00	2.015350	Y 242.219
Si (288.158 nm)	0.045348	ppm	0.002603	5.74	1235.010000	Y 377.433
Sn (189.925 nm)	0.003473	ppm	0.000437	12.57	15.575000	Y 377.433
Sr (421.552 nm)	0.001967	ppm	0.000188	9.55	531.581081	Y_R 488.368
Th (288.505 nm)	5.043250	ppm	0.000054	0.00	15049.200000	Y 377.433
Ti (336.122 nm)	0.002410	ppm	0.000110	4.56	151.732000	Y 377.433
Tl (190.794 nm)	-0.002076 u	ppm	0.001535	73.96	-8.387240	Y 377.433
U (409.013 nm)	10.157400	ppm	0.015153	0.15	47749.800000	Y 377.433
V (292.401 nm)	0.004902	ppm	0.000131	2.67	33.748300	Y 377.433
Zn (206.200 nm)	0.003333	ppm	0.000521	15.62	19.140700	Y 377.433
Zr (343.823 nm)	-0.003025 u	ppm	0.000036	1.19	-224.389000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.966190	17327.686908	0.002326	0.24
Y 377.433	0.961552	937745.590140	0.002688	0.28
Y_R 377.433	0.972077	69934.600000	0.005511	0.57
Y_R 488.368	0.988773	39074.400000	0.009621	0.97
Y_R2 488.368	0.990396	75438.125846	0.007349	0.74

Sample Name: CCV-5699804

Date: 5/13/2019 9:14:19 PM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.003487	ppm	0.009001	0.90	111.724505	Y_R 488.368
Ag (328.068 nm)	0.493901	ppm	0.001145	0.23	22862.700000	Y 377.433
Al (167.019 nm)	0.479852	ppm	0.001188	0.25	289.133000	Y_R 377.433
Al H (396.152 nm)	0.430368 u	ppm	0.004863	1.13	1464.450639	Y_R 377.433
As (188.980 nm)	0.974248	ppm	0.001631	0.17	1166.930000	Y 242.219
B (249.678 nm)	0.492640	ppm	0.000846	0.17	12274.100000	Y 242.219
Ba (493.408 nm)	0.492872	ppm	0.001705	0.35	55716.000000	Y_R 488.368
Be (234.861 nm)	0.488385	ppm	0.002322	0.48	141335.000000	Y_R 488.368
Bi (223.061 nm)	-0.006138 u	ppm	0.000745	12.14	5.359350	Y 377.433
Ca (315.887 nm)	5.003644	ppm	0.015538	0.31	4123.667532	Y_R 377.433
Cd (214.439 nm)	0.499850	ppm	0.000281	0.06	30474.900000	Y 377.433
Co (228.615 nm)	0.495184	ppm	0.000164	0.03	9861.730000	Y 242.219
Cr (205.560 nm)	0.496336	ppm	0.001120	0.23	7391.390000	Y 377.433
Cu (324.754 nm)	0.491745	ppm	0.000139	0.03	33138.100000	Y 377.433
Fe (238.204 nm)	2.463451	ppm	0.006342	0.26	9068.819059	Y_R 377.433
Fe H (259.940 nm)	2.380450 u	ppm	0.020320	0.85	4817.430000	Y_R 377.433
K (766.491 nm)	48.344700	ppm	0.086056	0.18	54327.900000	Y_R2 488.368
Li (670.783 nm)	0.979660	ppm	0.006326	0.65	29053.000000	Y_R2 488.368
Mg (279.078 nm)	19.537100	ppm	0.005163	0.03	115584.000000	Y 377.433
Mn (257.610 nm)	0.497391	ppm	0.000438	0.09	126062.000000	Y 377.433
Mo (202.032 nm)	0.503426	ppm	0.001209	0.24	4388.750000	Y 377.433
Na (589.592 nm)	4.818740	ppm	0.021245	0.44	33238.100000	Y_R2 488.368
Na H (589.593 nm)	5.041556 u	ppm	0.069136	1.37	30836.318524	Y_R 488.368
Ni (231.604 nm)	0.507814	ppm	0.000194	0.04	3764.400000	Y 377.433
P (213.618 nm)	0.961445	ppm	0.000542	0.06	2214.240000	Y 242.219
Pb (220.353 nm)	0.988560	ppm	0.005364	0.54	3024.580000	Y 242.219
S (181.972 nm)	-0.020772 u	ppm	0.001299	6.25	15.112767	Y 377.433
Sb (206.834 nm)	1.022010	ppm	0.001506	0.15	2717.100000	Y 377.433
Se (196.026 nm)	0.967988	ppm	0.002673	0.28	912.324000	Y 242.219
Si (288.158 nm)	4.935960	ppm	0.032473	0.66	44259.000000	Y 377.433
Sn (189.925 nm)	1.001480	ppm	0.001750	0.17	2131.880000	Y 377.433
Sr (421.552 nm)	0.489066	ppm	0.001460	0.30	103454.116602	Y_R 488.368
Th (288.505 nm)	0.003936	ppm	0.003400	86.38	82.005100	Y 377.433
Ti (336.122 nm)	0.497648	ppm	0.000382	0.08	71295.700000	Y 377.433
Tl (190.794 nm)	1.001530	ppm	0.000317	0.03	2309.010000	Y 377.433
U (409.013 nm)	-0.001136 u	ppm	0.001270	> 100.00	-157.431000	Y 377.433
V (292.401 nm)	0.494817	ppm	0.000464	0.09	20799.400000	Y 377.433
Zn (206.200 nm)	0.498347	ppm	0.002797	0.56	2599.430000	Y 377.433
Zr (343.823 nm)	0.495903	ppm	0.000226	0.05	67434.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.971904	17430.152719	0.000894	0.09
Y 377.433	0.972212	948141.682111	0.000258	0.03
Y_R 377.433	0.966556	69537.400000	0.004918	0.51
Y_R 488.368	0.979797	38719.700000	0.005375	0.55
Y_R2 488.368	0.992904	75629.147511	0.002962	0.30

Sample Name: CCB

Date: 5/13/2019 9:17:40 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.035756 Z	ppm	0.008989	25.14	-2250.501005 Z	Y_R 488.368
Ag (328.068 nm)	0.000198	ppm	0.000088	44.46	-339.806000	Y 377.433
Al (167.019 nm)	0.005311	ppm	0.000067	1.26	3.511410	Y_R 377.433
Al H (396.152 nm)	-0.108397 Zu	ppm	0.000652	0.60	50.202109 Z	Y_R 377.433
As (188.980 nm)	-0.003859 u	ppm	0.000177	4.59	-4.667060	Y 242.219
B (249.678 nm)	0.001555	ppm	0.000641	41.19	106.063000	Y 242.219
Ba (493.408 nm)	-0.000264 u	ppm	0.000282	> 100.00	572.523000	Y_R 488.368
Be (234.861 nm)	0.000025	ppm	0.000004	17.20	-13.676600	Y_R 488.368
Bi (223.061 nm)	-0.002397 u	ppm	0.003533	> 100.00	14.574900	Y 377.433
Ca (315.887 nm)	0.009308	ppm	0.003260	35.02	-89.111963	Y_R 377.433
Cd (214.439 nm)	0.000087	ppm	0.000036	41.27	5.557440	Y 377.433
Co (228.615 nm)	0.000545	ppm	0.000060	11.09	-28.983200	Y 242.219
Cr (205.560 nm)	-0.000066 u	ppm	0.000051	78.18	-2.990330	Y 377.433
Cu (324.754 nm)	0.000483	ppm	0.000161	33.37	629.718000	Y 377.433
Fe (238.204 nm)	0.003399	ppm	0.000980	28.82	28.341096	Y_R 377.433
Fe H (259.940 nm)	-0.187964 u	ppm	0.002366	1.26	21.280500	Y_R 377.433
K (766.491 nm)	0.009335	ppm	0.006056	64.88	-678.134000	Y_R2 488.368
Li (670.783 nm)	0.004667	ppm	0.001136	24.35	-862.155000	Y_R2 488.368
Mg (279.078 nm)	0.001622	ppm	0.000502	30.95	32.160500	Y 377.433
Mn (257.610 nm)	-0.000009 u	ppm	0.000003	38.44	72.456600	Y 377.433
Mo (202.032 nm)	0.000108	ppm	0.000031	28.44	-1.459830	Y 377.433
Na (589.592 nm)	0.120957	ppm	0.015654	12.94	1671.370000	Y_R2 488.368
Na H (589.593 nm)	-0.462149 u	ppm	0.067434	14.59	9083.080625	Y_R 488.368
Ni (231.604 nm)	0.000199 u	ppm	0.000664	> 100.00	-1.437400	Y 377.433
P (213.618 nm)	-0.001782 u	ppm	0.001057	59.31	12.628500	Y 242.219
Pb (220.353 nm)	-0.001667 u	ppm	0.000255	15.32	2.382050	Y 242.219
S (181.972 nm)	-0.026542 u	ppm	0.002773	10.45	11.550915	Y 377.433
Sb (206.834 nm)	0.002099	ppm	0.001539	73.32	-25.282700	Y 377.433
Se (196.026 nm)	0.000617	ppm	0.000364	59.01	11.297600	Y 242.219
Si (288.158 nm)	-0.000166 u	ppm	0.000349	> 100.00	834.611000	Y 377.433
Sn (189.925 nm)	0.000669	ppm	0.000501	74.94	9.629000	Y 377.433
Sr (421.552 nm)	0.000021 u	ppm	0.000061	> 100.00	120.479699	Y_R 488.368
Th (288.505 nm)	0.002402	ppm	0.001740	72.44	59.240000	Y 377.433
Ti (336.122 nm)	0.000202	ppm	0.000117	58.13	-165.615000	Y 377.433
Tl (190.794 nm)	0.000132 u	ppm	0.001866	> 100.00	-1.913980	Y 377.433
U (409.013 nm)	-0.007781 u	ppm	0.001136	14.60	-150.241000	Y 377.433
V (292.401 nm)	-0.000205 u	ppm	0.000004	2.13	10.947600	Y 377.433
Zn (206.200 nm)	-0.000205 u	ppm	0.000055	26.83	0.699451	Y 377.433
Zr (343.823 nm)	0.000089	ppm	0.000017	19.30	49.857500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.974095	17469.449453	0.001371	0.14
Y 377.433	0.976084	951917.724748	0.001641	0.17
Y_R 377.433	0.963525	69319.300000	0.003896	0.40
Y_R 488.368	0.974355	38504.600000	0.003058	0.31
Y_R2 488.368	0.992824	75623.015144	0.008891	0.90

Sample Name: CCVL-5699389

Date: 5/13/2019 9:21:04 PM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.041703 Q	ppm	0.005482	13.15	-2235.983381 Q	Y_R 488.368
Ag (328.068 nm)	0.009333	ppm	0.000006	0.07	88.880400	Y 377.433
Al (167.019 nm)	0.093489	ppm	0.002454	2.63	56.318700	Y_R 377.433
Al H (396.152 nm)	-0.013959 u	ppm	0.000102	0.73	292.150466	Y_R 377.433
As (188.980 nm)	0.013868	ppm	0.000644	4.64	16.566300	Y 242.219
B (249.678 nm)	0.097003	ppm	0.000428	0.44	2467.820000	Y 242.219
Ba (493.408 nm)	0.009547	ppm	0.000163	1.70	1669.320000	Y_R 488.368
Be (234.861 nm)	0.000953	ppm	0.000009	0.96	256.983000	Y_R 488.368
Bi (223.061 nm)	0.097271	ppm	0.000301	0.31	271.463000	Y 377.433
Ca (315.887 nm)	0.202816	ppm	0.003316	1.64	74.105834	Y_R 377.433
Cd (214.439 nm)	0.005024	ppm	0.000110	2.19	306.589000	Y 377.433
Co (228.615 nm)	0.010407	ppm	0.000091	0.87	168.194000	Y 242.219
Cr (205.560 nm)	0.009974	ppm	0.000410	4.11	146.606000	Y 377.433
Cu (324.754 nm)	0.015482	ppm	0.000269	1.73	1622.110000	Y 377.433
Fe (238.204 nm)	0.102821	ppm	0.000014	0.01	393.709698	Y_R 377.433
Fe H (259.940 nm)	-0.089722 u	ppm	0.002549	2.84	204.732000	Y_R 377.433
K (766.491 nm)	2.918880	ppm	0.006700	0.23	2632.960000	Y_R2 488.368
Li (670.783 nm)	0.024359	ppm	0.000046	0.19	-257.938000	Y_R2 488.368
Mg (279.078 nm)	0.193009	ppm	0.001738	0.90	1163.110000	Y 377.433
Mn (257.610 nm)	0.010173	ppm	0.000002	0.02	2651.480000	Y 377.433
Mo (202.032 nm)	0.018728	ppm	0.000141	0.75	160.949000	Y 377.433
Na (589.592 nm)	1.020340	ppm	0.000925	0.09	7545.540000	Y_R2 488.368
Na H (589.593 nm)	0.285541 u	ppm	0.000712	0.25	11981.413010	Y_R 488.368
Ni (231.604 nm)	0.042078	ppm	0.000608	1.44	309.160000	Y 377.433
P (213.618 nm)	2.763200 o	ppm	0.011954	0.43	6332.440000	Y 242.219
Pb (220.353 nm)	0.008796	ppm	0.001857	21.11	34.335300	Y 242.219
S (181.972 nm)	0.061694 Q	ppm	0.003579	5.80	50.142963 Q	Y 377.433
Sb (206.834 nm)	0.020159	ppm	0.001598	7.92	23.207400	Y 377.433
Se (196.026 nm)	0.017855	ppm	0.005811	32.54	27.345000	Y 242.219
Si (288.158 nm)	0.579652	ppm	0.026698	4.61	5935.420000	Y 377.433
Sn (189.925 nm)	0.099770	ppm	0.001748	1.75	219.778000	Y 377.433
Sr (421.552 nm)	0.009876	ppm	0.000043	0.44	2202.751236	Y_R 488.368
Th (288.505 nm)	0.014823	ppm	0.002118	14.29	97.019400	Y 377.433
Ti (336.122 nm)	0.009779	ppm	0.000110	1.13	1210.410000	Y 377.433
Tl (190.794 nm)	0.014939	ppm	0.000685	4.59	32.224300	Y 377.433
U (409.013 nm)	0.057733	ppm	0.003067	5.31	157.387000	Y 377.433
V (292.401 nm)	0.009554	ppm	0.000342	3.58	419.155000	Y 377.433
Zn (206.200 nm)	0.020160	ppm	0.000152	0.76	106.852000	Y 377.433
Zr (343.823 nm)	0.010607	ppm	0.000148	1.39	1479.380000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.982374	17617.921275	0.001914	0.19
Y 377.433	0.985032	960644.330864	0.002198	0.22
Y_R 377.433	0.975337	70169.100000	0.004015	0.41
Y_R 488.368	0.985995	38964.600000	0.004259	0.43
Y_R2 488.368	1.007489	76740.042632	0.001201	0.12

Sample Name: 280-123295-C-1-A

Date: 5/13/2019 9:24:27 PM

Rack:Tube: 2:12

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.067462 n	ppm	0.007088	10.51	-2173.107187	Y_R 488.368
Ag (328.068 nm)	0.001051	ppm	0.000038	3.64	-299.780000	Y 377.433
Al (167.019 nm)	0.012337	ppm	0.003743	30.34	8.147540	Y_R 377.433
Al H (396.152 nm)	-0.070010 u	ppm	0.006957	9.94	223.189781	Y_R 377.433
As (188.980 nm)	-0.000625 u	ppm	0.001510	> 100.00	-0.798661	Y 242.219
B (249.678 nm)	2.231130 o	ppm	0.001419	0.06	55268.400000	Y 242.219
Ba (493.408 nm)	0.026243	ppm	0.000227	0.86	3574.310000	Y_R 488.368
Be (234.861 nm)	0.000001 u	ppm	0.000018	> 100.00	-2.908730	Y_R 488.368
Bi (223.061 nm)	-0.003859 u	ppm	0.000640	16.60	10.909200	Y 377.433
Ca (315.887 nm)	168.869580 o	ppm	0.167948	0.10	142336.289963	Y_R 377.433
Cd (214.439 nm)	-0.000069 u	ppm	0.000019	27.59	-3.365720	Y 377.433
Co (228.615 nm)	-0.000157 u	ppm	0.000078	49.91	-42.975400	Y 242.219
Cr (205.560 nm)	0.000377	ppm	0.000343	90.83	3.433210	Y 377.433
Cu (324.754 nm)	0.001646	ppm	0.000287	17.45	587.685000	Y 377.433
Fe (238.204 nm)	0.588382	ppm	0.001188	0.20	2178.105310	Y_R 377.433
Fe H (259.940 nm)	0.406993 u	ppm	0.004267	1.05	1132.280000	Y_R 377.433
K (766.491 nm)	10.280500	ppm	0.000215	0.00	11010.500000	Y_R2 488.368
Li (670.783 nm)	0.071581	ppm	0.000838	1.17	1190.940000	Y_R2 488.368
Mg (279.078 nm)	51.817300 o	ppm	0.006210	0.01	306532.000000	Y 377.433
Mn (257.610 nm)	0.006916	ppm	0.000020	0.29	1826.580000	Y 377.433
Mo (202.032 nm)	0.006308	ppm	0.000148	2.35	52.617400	Y 377.433
Na (589.592 nm)	227.025000 o	ppm	1.812730	0.80	1478850.000000	Y_R2 488.368
Na H (589.593 nm)	238.019351	ppm	1.574680	0.66	930498.604819	Y_R 488.368
Ni (231.604 nm)	0.000198 u	ppm	0.000923	> 100.00	-1.412940	Y 377.433
P (213.618 nm)	0.005058	ppm	0.001442	28.50	28.260900	Y 242.219
Pb (220.353 nm)	-0.001324 u	ppm	0.001180	89.15	3.424030	Y 242.219
S (181.972 nm)	224.056299 bo	ppm	0.286293	0.13	97965.843486	Y 377.433
Sb (206.834 nm)	-0.001770 u	ppm	0.002717	> 100.00	-35.784400	Y 377.433
Se (196.026 nm)	0.000368 u	ppm	0.002780	> 100.00	10.962400	Y 242.219
Si (288.158 nm)	8.001030	ppm	0.036461	0.46	71223.200000	Y 377.433
Sn (189.925 nm)	0.000252 u	ppm	0.001146	> 100.00	8.744500	Y 377.433
Sr (421.552 nm)	8.346955 o	ppm	0.092927	1.11	1763802.503041	Y_R 488.368
Th (288.505 nm)	0.000390 u	ppm	0.000639	> 100.00	53.429700	Y 377.433
Ti (336.122 nm)	0.000074	ppm	0.000086	> 100.00	352.655000	Y 377.433
Tl (190.794 nm)	0.000876	ppm	0.000812	92.70	-0.231711	Y 377.433
U (409.013 nm)	-0.030585 u	ppm	0.000973	3.18	-290.593000	Y 377.433
V (292.401 nm)	-0.000352 u	ppm	0.000201	57.30	5.953820	Y 377.433
Zn (206.200 nm)	0.012549	ppm	0.000437	3.48	67.183200	Y 377.433
Zr (343.823 nm)	0.000012 u	ppm	0.000041	> 100.00	41.181800	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.943591	16922.388394	0.001120	0.12
Y 377.433	0.948148	924673.813456	0.001311	0.14
Y_R 377.433	0.961924	69204.100000	0.007009	0.73
Y_R 488.368	0.971029	38373.200000	0.000735	0.08
Y_R2 488.368	0.983938	74946.212665	0.007672	0.78

Sample Name: 280-123295-C-2-A

Date: 5/13/2019 9:27:50 PM

Rack:Tube: 2:13

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.039025 n	ppm	0.004115	10.54	-2242.520751	Y_R 488.368
Ag (328.068 nm)	0.000864	ppm	0.000310	35.87	-308.621000	Y 377.433
Al (167.019 nm)	0.012901	ppm	0.000717	5.56	8.468980	Y_R 377.433
Al H (396.152 nm)	-0.079206 u	ppm	0.008548	10.79	172.763579	Y_R 377.433
As (188.980 nm)	0.002938 u	ppm	0.005331	> 100.00	3.470380	Y 242.219
B (249.678 nm)	2.323160 o	ppm	0.005148	0.22	57545.400000	Y 242.219
Ba (493.408 nm)	0.021979	ppm	0.000108	0.49	3084.130000	Y_R 488.368
Be (234.861 nm)	0.000002 u	ppm	0.000020	> 100.00	-2.939960	Y_R 488.368
Bi (223.061 nm)	-0.002297 u	ppm	0.000708	30.84	14.931600	Y 377.433
Ca (315.887 nm)	108.666562 o	ppm	0.293691	0.27	91557.980698	Y_R 377.433
Cd (214.439 nm)	0.000001 u	ppm	0.000009	> 100.00	0.860065	Y 377.433
Co (228.615 nm)	0.000414	ppm	0.000061	14.85	-31.584100	Y 242.219
Cr (205.560 nm)	0.000165	ppm	0.000066	39.99	0.285292	Y 377.433
Cu (324.754 nm)	0.001116	ppm	0.000273	24.42	596.969000	Y 377.433
Fe (238.204 nm)	0.565822	ppm	0.001601	0.28	2095.196356	Y_R 377.433
Fe H (259.940 nm)	0.386813 u	ppm	0.004442	1.15	1094.590000	Y_R 377.433
K (766.491 nm)	10.014200	ppm	0.059335	0.59	10707.500000	Y_R2 488.368
Li (670.783 nm)	0.061270	ppm	0.002026	3.31	874.578000	Y_R2 488.368
Mg (279.078 nm)	40.302000	ppm	0.014681	0.04	238417.000000	Y 377.433
Mn (257.610 nm)	0.005783	ppm	0.000019	0.32	1539.560000	Y 377.433
Mo (202.032 nm)	0.002089	ppm	0.000326	15.60	15.812700	Y 377.433
Na (589.592 nm)	243.225000 o	ppm	0.192788	0.08	1584300.000000	Y_R2 488.368
Na H (589.593 nm)	255.789078	ppm	0.080010	0.03	999149.478350	Y_R 488.368
Ni (231.604 nm)	0.000457	ppm	0.000099	21.69	0.506672	Y 377.433
P (213.618 nm)	0.004809	ppm	0.002445	50.86	27.691200	Y 242.219
Pb (220.353 nm)	0.000442 u	ppm	0.000965	> 100.00	8.855360	Y 242.219
S (181.972 nm)	168.947521 bo	ppm	0.206195	0.12	73875.908361	Y 377.433
Sb (206.834 nm)	-0.002285 u	ppm	0.001093	47.84	-37.158400	Y 377.433
Se (196.026 nm)	-0.001263 u	ppm	0.003551	> 100.00	9.445820	Y 242.219
Si (288.158 nm)	7.086860	ppm	0.010155	0.14	63181.000000	Y 377.433
Sn (189.925 nm)	0.000933	ppm	0.000072	7.72	10.190000	Y 377.433
Sr (421.552 nm)	6.433344 o	ppm	0.009958	0.15	1359462.298224	Y_R 488.368
Th (288.505 nm)	0.003551	ppm	0.000011	0.31	62.720900	Y 377.433
Ti (336.122 nm)	0.000305	ppm	0.000054	17.79	194.425000	Y 377.433
Tl (190.794 nm)	0.000285 u	ppm	0.001183	> 100.00	-1.582850	Y 377.433
U (409.013 nm)	-0.026610 u	ppm	0.003654	13.73	-259.923000	Y 377.433
V (292.401 nm)	-0.000268 u	ppm	0.000139	51.75	9.845940	Y 377.433
Zn (206.200 nm)	0.009115	ppm	0.000478	5.24	49.282700	Y 377.433
Zr (343.823 nm)	-0.000052 u	ppm	0.000022	42.36	32.428300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.932216	16718.385985	0.000479	0.05
Y 377.433	0.936220	913040.724825	0.001091	0.12
Y_R 377.433	0.947839	68190.800000	0.005084	0.54
Y_R 488.368	0.954884	37735.200000	0.003850	0.40
Y_R2 488.368	0.972979	74111.501032	0.003868	0.40

Sample Name: 280-123295-C-3-A

Date: 5/13/2019 9:31:12 PM

Rack:Tube: 2:14

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.062024 n	ppm	0.006929	11.17	-2186.379970	Y_R 488.368
Ag (328.068 nm)	0.001218	ppm	0.000052	4.25	-292.007000	Y 377.433
Al (167.019 nm)	0.068863	ppm	0.003532	5.13	41.602800	Y_R 377.433
Al H (396.152 nm)	-0.022588 u	ppm	0.005474	24.24	312.432298	Y_R 377.433
As (188.980 nm)	0.000587 u	ppm	0.002220	> 100.00	0.657471	Y 242.219
B (249.678 nm)	2.019020 o	ppm	0.001460	0.07	50021.300000	Y 242.219
Ba (493.408 nm)	0.025325	ppm	0.000004	0.01	3455.510000	Y_R 488.368
Be (234.861 nm)	-0.000008 u	ppm	0.000021	> 100.00	-19.782200	Y_R 488.368
Bi (223.061 nm)	-0.006438 u	ppm	0.001509	23.43	4.179740	Y 377.433
Ca (315.887 nm)	98.901008 o	ppm	0.322578	0.33	83321.212954	Y_R 377.433
Cd (214.439 nm)	-0.000003 u	ppm	0.000075	> 100.00	0.141409	Y 377.433
Co (228.615 nm)	0.000114 u	ppm	0.000208	> 100.00	-37.180500	Y 242.219
Cr (205.560 nm)	0.000689	ppm	0.000103	15.01	8.219530	Y 377.433
Cu (324.754 nm)	0.000991	ppm	0.000346	34.85	594.966000	Y 377.433
Fe (238.204 nm)	0.118005	ppm	0.000751	0.64	449.510081	Y_R 377.433
Fe H (259.940 nm)	-0.079128 u	ppm	0.003872	4.89	224.515000	Y_R 377.433
K (766.491 nm)	8.165590	ppm	0.060060	0.74	8603.760000	Y_R2 488.368
Li (670.783 nm)	0.060292	ppm	0.000635	1.05	844.556000	Y_R2 488.368
Mg (279.078 nm)	31.124500	ppm	0.011574	0.04	184131.000000	Y 377.433
Mn (257.610 nm)	0.008622	ppm	0.000012	0.14	2258.490000	Y 377.433
Mo (202.032 nm)	0.000516	ppm	0.000160	31.07	2.097630	Y 377.433
Na (589.592 nm)	219.435000 o	ppm	0.237381	0.11	1429440.000000	Y_R2 488.368
Na H (589.593 nm)	228.217418	ppm	0.121734	0.05	892627.395528	Y_R 488.368
Ni (231.604 nm)	-0.000710 u	ppm	0.000362	51.01	-8.165140	Y 377.433
P (213.618 nm)	0.062884	ppm	0.003360	5.34	160.431000	Y 242.219
Pb (220.353 nm)	-0.000984 u	ppm	0.001395	> 100.00	4.438960	Y 242.219
S (181.972 nm)	123.532108 bo	ppm	0.192148	0.16	54023.282991	Y 377.433
Sb (206.834 nm)	0.000120 u	ppm	0.000268	> 100.00	-30.592400	Y 377.433
Se (196.026 nm)	-0.000206 u	ppm	0.002025	> 100.00	10.520800	Y 242.219
Si (288.158 nm)	7.313520	ppm	0.034061	0.47	65175.100000	Y 377.433
Sn (189.925 nm)	0.000350 u	ppm	0.001287	> 100.00	8.953310	Y 377.433
Sr (421.552 nm)	5.181102 o	ppm	0.006340	0.12	1094867.226804	Y_R 488.368
Th (288.505 nm)	0.004582	ppm	0.002123	46.33	65.842500	Y 377.433
Ti (336.122 nm)	0.011206	ppm	0.000078	0.70	1729.120000	Y 377.433
Tl (190.794 nm)	0.000899	ppm	0.000694	77.12	-0.195521	Y 377.433
U (409.013 nm)	-0.021489 u	ppm	0.006630	30.85	-234.319000	Y 377.433
V (292.401 nm)	-0.000275 u	ppm	0.000092	33.28	9.652170	Y 377.433
Zn (206.200 nm)	0.001782	ppm	0.000275	15.41	11.058300	Y 377.433
Zr (343.823 nm)	-0.000082 u	ppm	0.000051	61.92	26.898300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.944014	16929.970346	0.002847	0.30
Y 377.433	0.947404	923947.908556	0.002356	0.25
Y_R 377.433	0.956596	68820.800000	0.001333	0.14
Y_R 488.368	0.971470	38390.600000	0.000587	0.06
Y_R2 488.368	0.987698	75232.620883	0.001842	0.19

Sample Name: 280-123295-C-4-A

Date: 5/13/2019 9:34:34 PM

Rack:Tube: 2:15

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.087578 n	ppm	0.019122	21.83	-2124.004787	Y_R 488.368
Ag (328.068 nm)	0.000953	ppm	0.000134	14.02	-304.483000	Y 377.433
Al (167.019 nm)	0.032958	ppm	0.004417	13.40	20.268100	Y_R 377.433
Al H (396.152 nm)	-0.039963 u	ppm	0.004395	11.00	321.889287	Y_R 377.433
As (188.980 nm)	0.003269	ppm	0.001182	36.17	3.868800	Y 242.219
B (249.678 nm)	1.161760 o	ppm	0.003454	0.30	28810.900000	Y 242.219
Ba (493.408 nm)	0.023988	ppm	0.000087	0.36	3333.290000	Y_R 488.368
Be (234.861 nm)	-0.000007 u	ppm	0.000009	> 100.00	-13.935700	Y_R 488.368
Bi (223.061 nm)	-0.002321 u	ppm	0.001653	71.23	14.823000	Y 377.433
Ca (315.887 nm)	219.377240 o	ppm	0.917902	0.42	184937.036799	Y_R 377.433
Cd (214.439 nm)	-0.000013 u	ppm	0.000159	> 100.00	-0.278679	Y 377.433
Co (228.615 nm)	-0.000150 u	ppm	0.000252	> 100.00	-42.832400	Y 242.219
Cr (205.560 nm)	-0.000019 u	ppm	0.000018	94.94	-2.392860	Y 377.433
Cu (324.754 nm)	-0.000149 u	ppm	0.000102	68.17	431.938000	Y 377.433
Fe (238.204 nm)	0.302490	ppm	0.001340	0.44	1127.474844	Y_R 377.433
Fe H (259.940 nm)	0.108237 u	ppm	0.001096	1.01	574.393000	Y_R 377.433
K (766.491 nm)	9.912840	ppm	0.082941	0.84	10592.100000	Y_R2 488.368
Li (670.783 nm)	0.085667	ppm	0.001077	1.26	1623.120000	Y_R2 488.368
Mg (279.078 nm)	52.166500 o	ppm	0.102327	0.20	308598.000000	Y 377.433
Mn (257.610 nm)	0.002786	ppm	0.000020	0.71	780.354000	Y 377.433
Mo (202.032 nm)	0.004878	ppm	0.000015	0.31	40.142900	Y 377.433
Na (589.592 nm)	206.924000 o	ppm	0.289628	0.14	1347990.000000	Y_R2 488.368
Na H (589.593 nm)	217.148266	ppm	0.959869	0.44	849859.418161	Y_R 488.368
Ni (231.604 nm)	0.000196	ppm	0.000250	> 100.00	-1.439710	Y 377.433
P (213.618 nm)	1.657240	ppm	0.000688	0.04	3804.590000	Y 242.219
Pb (220.353 nm)	0.000118 u	ppm	0.000457	> 100.00	7.798900	Y 242.219
S (181.972 nm)	232.739170 bo	ppm	0.081326	0.03	101761.414930	Y 377.433
Sb (206.834 nm)	0.000323	ppm	0.000398	> 100.00	-30.133200	Y 377.433
Se (196.026 nm)	-0.000538 u	ppm	0.002176	> 100.00	10.169800	Y 242.219
Si (288.158 nm)	10.537700	ppm	0.070230	0.67	93539.200000	Y 377.433
Sn (189.925 nm)	0.000376	ppm	0.000286	76.13	9.007940	Y 377.433
Sr (421.552 nm)	8.815253 o	ppm	0.023428	0.27	1862752.440070	Y_R 488.368
Th (288.505 nm)	-0.003449 u	ppm	0.006074	> 100.00	42.179600	Y 377.433
Ti (336.122 nm)	0.000621	ppm	0.000086	13.90	591.560000	Y 377.433
Tl (190.794 nm)	0.000649 u	ppm	0.001769	> 100.00	-0.745873	Y 377.433
U (409.013 nm)	-0.031971 u	ppm	0.001246	3.90	-307.415000	Y 377.433
V (292.401 nm)	0.000041 u	ppm	0.000161	> 100.00	22.825300	Y 377.433
Zn (206.200 nm)	0.004301	ppm	0.000031	0.73	24.186900	Y 377.433
Zr (343.823 nm)	-0.000153 u	ppm	0.000097	63.72	17.902500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.926533	16616.475380	0.002216	0.24
Y 377.433	0.933592	910478.036991	0.001915	0.21
Y_R 377.433	0.951576	68459.700000	0.006450	0.68
Y_R 488.368	0.965053	38137.000000	0.004779	0.50
Y_R2 488.368	0.990671	75459.093140	0.005700	0.58

Sample Name: 280-123295-C-5-A

Date: 5/13/2019 9:37:57 PM

Rack:Tube: 2:16

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.051736 n	ppm	0.045098	87.17	-2211.494064	Y_R 488.368
Ag (328.068 nm)	0.000840	ppm	0.000033	3.93	-309.873000	Y 377.433
Al (167.019 nm)	1.073050	ppm	0.000733	0.07	642.979000	Y_R 377.433
Al H (396.152 nm)	1.143894	ppm	0.006410	0.56	3296.320073	Y_R 377.433
As (188.980 nm)	0.003407	ppm	0.000344	10.09	4.026290	Y 242.219
B (249.678 nm)	2.463820 o	ppm	0.000031	0.00	61024.600000	Y 242.219
Ba (493.408 nm)	0.021666	ppm	0.000238	1.10	3054.940000	Y_R 488.368
Be (234.861 nm)	0.000046	ppm	0.000005	11.91	30.671900	Y_R 488.368
Bi (223.061 nm)	-0.006023 u	ppm	0.001590	26.39	5.444950	Y 377.433
Ca (315.887 nm)	132.108879 o	ppm	0.487101	0.37	111330.432216	Y_R 377.433
Cd (214.439 nm)	0.000062	ppm	0.000018	29.13	5.233370	Y 377.433
Co (228.615 nm)	0.002409	ppm	0.000008	0.35	9.560880	Y 242.219
Cr (205.560 nm)	0.002760	ppm	0.000253	9.17	38.780900	Y 377.433
Cu (324.754 nm)	0.001331	ppm	0.000362	27.16	593.612000	Y 377.433
Fe (238.204 nm)	1.242686	ppm	0.005803	0.47	4582.614698	Y_R 377.433
Fe H (259.940 nm)	1.101970 u	ppm	0.001375	0.12	2430.050000	Y_R 377.433
K (766.491 nm)	10.753500	ppm	0.136474	1.27	11548.800000	Y_R2 488.368
Li (670.783 nm)	0.063453	ppm	0.000340	0.54	941.562000	Y_R2 488.368
Mg (279.078 nm)	41.035700	ppm	0.028853	0.07	242755.000000	Y 377.433
Mn (257.610 nm)	0.029513	ppm	0.000019	0.06	7550.300000	Y 377.433
Mo (202.032 nm)	0.003050	ppm	0.000292	9.57	24.198100	Y 377.433
Na (589.592 nm)	267.874000 o	ppm	0.162990	0.06	1744770.000000	Y_R2 488.368
Na H (589.593 nm)	279.870956	ppm	3.775226	1.35	1092190.485614	Y_R 488.368
Ni (231.604 nm)	-0.000079 u	ppm	0.000578	> 100.00	-3.435110	Y 377.433
P (213.618 nm)	1.340570	ppm	0.003511	0.26	3080.780000	Y 242.219
Pb (220.353 nm)	0.000429 u	ppm	0.001097	> 100.00	8.441830	Y 242.219
S (181.972 nm)	161.509920 bo	ppm	0.171994	0.11	70624.728106	Y 377.433
Sb (206.834 nm)	-0.000323 u	ppm	0.001070	> 100.00	-32.085600	Y 377.433
Se (196.026 nm)	0.000621 u	ppm	0.001767	> 100.00	11.117800	Y 242.219
Si (288.158 nm)	11.671600 o	ppm	0.135480	1.16	103515.000000	Y 377.433
Sn (189.925 nm)	-0.000677 u	ppm	0.001355	> 100.00	6.775830	Y 377.433
Sr (421.552 nm)	6.358495 o	ppm	0.068614	1.08	1343646.757379	Y_R 488.368
Th (288.505 nm)	0.001124 u	ppm	0.001742	> 100.00	56.235300	Y 377.433
Ti (336.122 nm)	0.035890	ppm	0.000668	1.86	5379.800000	Y 377.433
Tl (190.794 nm)	0.000767 u	ppm	0.001687	> 100.00	-0.643373	Y 377.433
U (409.013 nm)	-0.027151 u	ppm	0.000833	3.07	-266.560000	Y 377.433
V (292.401 nm)	0.001903	ppm	0.000205	10.78	101.387000	Y 377.433
Zn (206.200 nm)	0.004803	ppm	0.000506	10.53	26.804100	Y 377.433
Zr (343.823 nm)	0.001355	ppm	0.000222	16.39	225.692000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.923601	16563.894945	0.000335	0.04
Y 377.433	0.926600	903658.723919	0.000957	0.10
Y_R 377.433	0.927993	66763.000000	0.001707	0.18
Y_R 488.368	0.945534	37365.700000	0.009484	1.00
Y_R2 488.368	0.948912	72278.327532	0.011230	1.18

Sample Name: 280-123295-C-6-A

Date: 5/13/2019 9:41:19 PM

Rack:Tube: 2:17

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.050167 n	ppm	0.020261	40.39	-2215.324444	Y_R 488.368
Ag (328.068 nm)	0.000990	ppm	0.000617	62.32	-302.753000	Y 377.433
Al (167.019 nm)	0.336388	ppm	0.000377	0.11	202.058000	Y_R 377.433
Al H (396.152 nm)	0.293989 u	ppm	0.006287	2.14	1139.426486	Y_R 377.433
As (188.980 nm)	0.002634	ppm	0.000218	8.28	3.104390	Y 242.219
B (249.678 nm)	1.676240 o	ppm	0.002585	0.15	41539.300000	Y 242.219
Ba (493.408 nm)	0.032152	ppm	0.000014	0.04	4229.980000	Y_R 488.368
Be (234.861 nm)	0.000006 u	ppm	0.000016	> 100.00	3.437810	Y_R 488.368
Bi (223.061 nm)	-0.003228 u	ppm	0.000739	22.88	12.561700	Y 377.433
Ca (315.887 nm)	146.167870 o	ppm	0.834485	0.57	123188.505120	Y_R 377.433
Cd (214.439 nm)	0.000013 u	ppm	0.000077	> 100.00	1.787450	Y 377.433
Co (228.615 nm)	0.000772	ppm	0.000240	31.10	-23.995800	Y 242.219
Cr (205.560 nm)	0.001043	ppm	0.000089	8.54	13.318400	Y 377.433
Cu (324.754 nm)	0.001053	ppm	0.000277	26.32	565.594000	Y 377.433
Fe (238.204 nm)	0.744851	ppm	0.003827	0.51	2753.114539	Y_R 377.433
Fe H (259.940 nm)	0.571373 u	ppm	0.004613	0.81	1439.230000	Y_R 377.433
K (766.491 nm)	8.871240	ppm	0.031292	0.35	9406.790000	Y_R2 488.368
Li (670.783 nm)	0.077584	ppm	0.001023	1.32	1375.120000	Y_R2 488.368
Mg (279.078 nm)	37.978700	ppm	0.011935	0.03	224674.000000	Y 377.433
Mn (257.610 nm)	0.013291	ppm	0.000016	0.12	3441.350000	Y 377.433
Mo (202.032 nm)	0.004159	ppm	0.000902	21.69	33.873500	Y 377.433
Na (589.592 nm)	254.853000 o	ppm	0.409465	0.16	1660020.000000	Y_R2 488.368
Na H (589.593 nm)	266.821366	ppm	1.162856	0.44	1041783.140352	Y_R 488.368
Ni (231.604 nm)	0.002206	ppm	0.000441	19.99	13.485000	Y 377.433
P (213.618 nm)	0.748136	ppm	0.000282	0.04	1726.690000	Y 242.219
Pb (220.353 nm)	-0.000970 u	ppm	0.001115	> 100.00	4.403450	Y 242.219
S (181.972 nm)	155.287100 bo	ppm	0.049842	0.03	67904.486532	Y 377.433
Sb (206.834 nm)	-0.001776 u	ppm	0.002417	> 100.00	-35.843100	Y 377.433
Se (196.026 nm)	0.002325	ppm	0.002774	> 100.00	12.768900	Y 242.219
Si (288.158 nm)	9.191140	ppm	0.083079	0.90	81693.000000	Y 377.433
Sn (189.925 nm)	0.000482	ppm	0.000670	> 100.00	9.232610	Y 377.433
Sr (421.552 nm)	5.779563 o	ppm	0.026391	0.46	1221320.301396	Y_R 488.368
Th (288.505 nm)	0.000520 u	ppm	0.003364	> 100.00	54.033800	Y 377.433
Ti (336.122 nm)	0.012562	ppm	0.000759	6.04	2074.080000	Y 377.433
Tl (190.794 nm)	0.000133 u	ppm	0.000888	> 100.00	-1.996880	Y 377.433
U (409.013 nm)	-0.023310 u	ppm	0.000317	1.36	-251.712000	Y 377.433
V (292.401 nm)	0.000745	ppm	0.000101	13.51	52.705700	Y 377.433
Zn (206.200 nm)	0.019622	ppm	0.000467	2.38	104.051000	Y 377.433
Zr (343.823 nm)	0.000398	ppm	0.000104	26.18	94.073700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.922033	16535.768899	0.001574	0.17
Y 377.433	0.926413	903476.509421	0.002275	0.25
Y_R 377.433	0.931322	67002.500000	0.001905	0.20
Y_R 488.368	0.945348	37358.300000	0.001991	0.21
Y_R2 488.368	0.928191	70699.983194	0.002477	0.27

Sample Name: 280-123295-C-7-A

Date: 5/13/2019 9:44:41 PM

Rack:Tube: 2:18

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.003148 n	ppm	0.000987	31.34	-2330.096140	Y_R 488.368
Ag (328.068 nm)	0.000461	ppm	0.000317	68.85	-327.468000	Y 377.433
Al (167.019 nm)	0.016887	ppm	0.000322	1.90	10.632300	Y_R 377.433
Al H (396.152 nm)	-0.100781 u	ppm	0.002126	2.11	69.584123	Y_R 377.433
As (188.980 nm)	-0.000453 u	ppm	0.000285	62.84	-0.589249	Y 242.219
B (249.678 nm)	0.004064	ppm	0.000256	6.29	167.707000	Y 242.219
Ba (493.408 nm)	0.000312	ppm	0.000063	20.06	637.116000	Y_R 488.368
Be (234.861 nm)	-0.000003 u	ppm	0.000023	> 100.00	-13.480100	Y_R 488.368
Bi (223.061 nm)	-0.001833 u	ppm	0.000727	39.67	16.073900	Y 377.433
Ca (315.887 nm)	0.053574	ppm	0.015565	29.05	-51.775289	Y_R 377.433
Cd (214.439 nm)	-0.000027 u	ppm	0.000002	8.21	-1.138410	Y 377.433
Co (228.615 nm)	0.000129 u	ppm	0.000236	> 100.00	-37.245800	Y 242.219
Cr (205.560 nm)	0.000008 u	ppm	0.000084	> 100.00	-1.974030	Y 377.433
Cu (324.754 nm)	0.002803	ppm	0.000052	1.87	783.910000	Y 377.433
Fe (238.204 nm)	0.270023	ppm	0.001147	0.42	1008.162043	Y_R 377.433
Fe H (259.940 nm)	0.080370 u	ppm	0.003047	3.79	522.355000	Y_R 377.433
K (766.491 nm)	0.005989 u	ppm	0.086501	> 100.00	-681.941000	Y_R2 488.368
Li (670.783 nm)	0.006115	ppm	0.000480	7.84	-817.705000	Y_R2 488.368
Mg (279.078 nm)	0.009314	ppm	0.000386	4.14	77.209500	Y 377.433
Mn (257.610 nm)	0.001168	ppm	0.000025	2.12	370.628000	Y 377.433
Mo (202.032 nm)	-0.000041 u	ppm	0.000169	> 100.00	-2.764020	Y 377.433
Na (589.592 nm)	0.130940	ppm	0.013615	10.40	1737.150000	Y_R2 488.368
Na H (589.593 nm)	0.360539 u	ppm	0.049703	13.79	12261.985418	Y_R 488.368
Ni (231.604 nm)	0.004020	ppm	0.000265	6.59	26.911400	Y 377.433
P (213.618 nm)	-0.002825 u	ppm	0.000751	26.58	10.243300	Y 242.219
Pb (220.353 nm)	-0.000434 u	ppm	0.001041	> 100.00	6.167320	Y 242.219
S (181.972 nm)	0.014823	ppm	0.006413	43.27	29.635257	Y 377.433
Sb (206.834 nm)	0.001821	ppm	0.000501	27.51	-26.077000	Y 377.433
Se (196.026 nm)	0.001353 u	ppm	0.005563	> 100.00	11.934100	Y 242.219
Si (288.158 nm)	0.066213	ppm	0.001227	1.85	1418.560000	Y 377.433
Sn (189.925 nm)	-0.000089 u	ppm	0.000569	> 100.00	8.021260	Y 377.433
Sr (421.552 nm)	0.000694	ppm	0.000099	14.24	262.596177	Y_R 488.368
Th (288.505 nm)	0.003136	ppm	0.000323	10.31	61.378300	Y 377.433
Ti (336.122 nm)	0.000866	ppm	0.000215	24.85	-70.150600	Y 377.433
Tl (190.794 nm)	0.000803	ppm	0.000110	13.74	-0.377430	Y 377.433
U (409.013 nm)	-0.007924 u	ppm	0.001716	21.66	-150.638000	Y 377.433
V (292.401 nm)	0.000020 u	ppm	0.000138	> 100.00	20.607900	Y 377.433
Zn (206.200 nm)	0.009299	ppm	0.000232	2.49	50.241600	Y 377.433
Zr (343.823 nm)	-0.000107 u	ppm	0.000052	48.49	23.960200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.941956	16893.060872	0.000732	0.08
Y 377.433	0.941976	918653.959948	0.000321	0.03
Y_R 377.433	0.937926	67477.700000	0.002520	0.27
Y_R 488.368	0.952572	37643.800000	0.000800	0.08
Y_R2 488.368	0.969941	73880.062906	0.003572	0.37

Sample Name: MB 280-457025/1-A

Date: 5/13/2019 9:48:03 PM

Rack:Tube: 2:19

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	-0.007153 nu	ppm	0.002331	32.59	-2355.241304	Y_R 488.368
Ag (328.068 nm)	0.000194	ppm	0.000274	> 100.00	-340.071000	Y 377.433
Al (167.019 nm)	0.002622 u	ppm	0.003763	> 100.00	1.906270	Y_R 377.433
Al H (396.152 nm)	-0.109930 u	ppm	0.000775	0.70	46.292979	Y_R 377.433
As (188.980 nm)	0.000066 u	ppm	0.001861	> 100.00	0.034816	Y 242.219
B (249.678 nm)	0.002892	ppm	0.000196	6.79	139.115000	Y 242.219
Ba (493.408 nm)	0.000340	ppm	0.000095	28.01	640.016000	Y_R 488.368
Be (234.861 nm)	-0.000031 u	ppm	0.000008	25.97	-29.929900	Y_R 488.368
Bi (223.061 nm)	0.001219	ppm	0.001487	> 100.00	23.894300	Y 377.433
Ca (315.887 nm)	0.021146	ppm	0.003083	14.58	-79.126822	Y_R 377.433
Cd (214.439 nm)	0.000010 u	ppm	0.000062	> 100.00	0.820750	Y 377.433
Co (228.615 nm)	0.000293	ppm	0.000326	> 100.00	-34.015200	Y 242.219
Cr (205.560 nm)	-0.000039 u	ppm	0.000066	> 100.00	-2.590320	Y 377.433
Cu (324.754 nm)	0.000714	ppm	0.000149	20.94	644.865000	Y 377.433
Fe (238.204 nm)	0.007666	ppm	0.000119	1.55	44.022233	Y_R 377.433
Fe H (259.940 nm)	-0.188122 u	ppm	0.001431	0.76	20.985300	Y_R 377.433
K (766.491 nm)	-0.061158 u	ppm	0.029609	48.41	-758.355000	Y_R2 488.368
Li (670.783 nm)	0.003038	ppm	0.000266	8.75	-912.123000	Y_R2 488.368
Mg (279.078 nm)	0.006207	ppm	0.000886	14.27	59.201300	Y 377.433
Mn (257.610 nm)	0.000113	ppm	0.000008	7.26	103.346000	Y 377.433
Mo (202.032 nm)	0.000153	ppm	0.000142	92.42	-1.068080	Y 377.433
Na (589.592 nm)	0.073146	ppm	0.013951	19.07	1360.670000	Y_R2 488.368
Na H (589.593 nm)	-0.114131 u	ppm	0.009243	8.10	10427.948814	Y_R 488.368
Ni (231.604 nm)	-0.000527 u	ppm	0.000039	7.37	-6.819220	Y 377.433
P (213.618 nm)	-0.002936 u	ppm	0.000161	5.50	9.990300	Y 242.219
Pb (220.353 nm)	-0.000949 u	ppm	0.001241	> 100.00	4.583380	Y 242.219
S (181.972 nm)	-0.008074 u	ppm	0.005706	70.67	19.624221	Y 377.433
Sb (206.834 nm)	0.001142	ppm	0.001190	> 100.00	-27.846200	Y 377.433
Se (196.026 nm)	-0.000170 u	ppm	0.002461	> 100.00	10.564300	Y 242.219
Si (288.158 nm)	0.003217	ppm	0.001648	51.23	864.370000	Y 377.433
Sn (189.925 nm)	-0.000308 u	ppm	0.000907	> 100.00	7.557290	Y 377.433
Sr (421.552 nm)	0.000044	ppm	0.000002	4.54	125.218283	Y_R 488.368
Th (288.505 nm)	-0.000735 u	ppm	0.001335	> 100.00	50.113100	Y 377.433
Ti (336.122 nm)	-0.000188 u	ppm	0.000001	0.32	-221.577000	Y 377.433
Tl (190.794 nm)	-0.000836 u	ppm	0.000838	> 100.00	-4.151920	Y 377.433
U (409.013 nm)	-0.005029 u	ppm	0.005095	> 100.00	-137.258000	Y 377.433
V (292.401 nm)	-0.000125 u	ppm	0.000125	> 100.00	14.128700	Y 377.433
Zn (206.200 nm)	-0.000299 u	ppm	0.000161	53.73	0.209573	Y 377.433
Zr (343.823 nm)	-0.000076 u	ppm	0.000006	8.47	27.464800	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.944397	16936.843323	0.000476	0.05
Y 377.433	0.946468	923035.486997	0.000397	0.04
Y_R 377.433	0.945736	68039.600000	0.002656	0.28
Y_R 488.368	0.955852	37773.400000	0.000495	0.05
Y_R2 488.368	0.967972	73730.059970	0.000150	0.02

Sample Name: LCS 280-457025/2-A

Date: 5/13/2019 9:51:25 PM

Rack:Tube: 2:20

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.957489 n	ppm	0.003104	0.32	-0.557972	Y_R 488.368
Ag (328.068 nm)	0.050363	ppm	0.000271	0.54	1906.110000	Y 377.433
Al (167.019 nm)	8.954380 o	ppm	0.003507	0.04	5362.670000	Y_R 377.433
Al H (396.152 nm)	10.178318	ppm	0.058308	0.57	26337.547680	Y_R 377.433
As (188.980 nm)	1.993640	ppm	0.007832	0.39	2387.930000	Y 242.219
B (249.678 nm)	0.982803	ppm	0.000179	0.02	24410.400000	Y 242.219
Ba (493.408 nm)	2.001800 o	ppm	0.008365	0.42	224435.000000	Y_R 488.368
Be (234.861 nm)	0.979830	ppm	0.001639	0.17	283738.000000	Y_R 488.368
Bi (223.061 nm)	1.955360	ppm	0.000248	0.01	5061.920000	Y 377.433
Ca (315.887 nm)	50.043912 o	ppm	0.113395	0.23	42113.232590	Y_R 377.433
Cd (214.439 nm)	0.991077	ppm	0.002283	0.23	60428.700000	Y 377.433
Co (228.615 nm)	0.956050	ppm	0.000090	0.01	19079.400000	Y 242.219
Cr (205.560 nm)	1.000290	ppm	0.002696	0.27	14897.000000	Y 377.433
Cu (324.754 nm)	0.975359	ppm	0.003641	0.37	65176.500000	Y 377.433
Fe (238.204 nm)	9.835612 o	ppm	0.056438	0.57	36160.871046	Y_R 377.433
Fe H (259.940 nm)	10.065200	ppm	0.023512	0.23	19167.600000	Y_R 377.433
K (766.491 nm)	49.567400	ppm	0.343718	0.69	55719.300000	Y_R2 488.368
Li (670.783 nm)	0.998753	ppm	0.003517	0.35	29638.800000	Y_R2 488.368
Mg (279.078 nm)	49.214800 o	ppm	0.081221	0.17	291066.000000	Y 377.433
Mn (257.610 nm)	1.004230	ppm	0.001397	0.14	254442.000000	Y 377.433
Mo (202.032 nm)	1.024390	ppm	0.000874	0.09	8932.890000	Y 377.433
Na (589.592 nm)	48.626100 o	ppm	0.252109	0.52	321440.000000	Y_R2 488.368
Na H (589.593 nm)	50.107563	ppm	0.262954	0.52	206452.677657	Y_R 488.368
Ni (231.604 nm)	0.974289	ppm	0.002792	0.29	7225.360000	Y 377.433
P (213.618 nm)	19.541200 o	ppm	0.015567	0.08	44681.300000	Y 242.219
Pb (220.353 nm)	0.975028	ppm	0.000283	0.03	2984.110000	Y 242.219
S (181.972 nm)	9.232834	ppm	0.019580	0.21	4061.244607	Y 377.433
Sb (206.834 nm)	1.039500	ppm	0.002916	0.28	2769.100000	Y 377.433
Se (196.026 nm)	1.943370	ppm	0.001296	0.07	1820.030000	Y 242.219
Si (288.158 nm)	2.141500	ppm	0.020571	0.96	19675.400000	Y 377.433
Sn (189.925 nm)	2.009090	ppm	0.006270	0.31	4268.570000	Y 377.433
Sr (421.552 nm)	0.989504	ppm	0.005028	0.51	209195.169098	Y_R 488.368
Th (288.505 nm)	1.010270	ppm	0.004803	0.48	3093.480000	Y 377.433
Ti (336.122 nm)	1.019210	ppm	0.001022	0.10	146348.000000	Y 377.433
Tl (190.794 nm)	1.988220	ppm	0.003653	0.18	4585.530000	Y 377.433
U (409.013 nm)	2.043900	ppm	0.009782	0.48	9467.390000	Y 377.433
V (292.401 nm)	1.015570	ppm	0.000348	0.03	42632.600000	Y 377.433
Zn (206.200 nm)	0.490435	ppm	0.001214	0.25	2558.190000	Y 377.433
Zr (343.823 nm)	0.501637	ppm	0.000331	0.07	68236.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.922691	16547.569155	0.002800	0.30
Y 377.433	0.922512	899672.586187	0.004419	0.48
Y_R 377.433	0.932536	67089.900000	0.003421	0.37
Y_R 488.368	0.947776	37454.300000	0.005588	0.59
Y_R2 488.368	0.952155	72525.277641	0.010825	1.14

Sample Name: 280-123272-C-2-D

Date: 5/13/2019 9:54:47 PM

Rack:Tube: 2:21

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.028672 n	ppm	0.000040	0.14	-2267.792583	Y_R 488.368
Ag (328.068 nm)	0.000633	ppm	0.000181	28.56	-319.336000	Y 377.433
Al (167.019 nm)	0.141542	ppm	0.000293	0.21	85.087600	Y_R 377.433
Al H (396.152 nm)	0.048878 u	ppm	0.000030	0.06	465.963584	Y_R 377.433
As (188.980 nm)	-0.000198 u	ppm	0.003619	> 100.00	-0.283213	Y 242.219
B (249.678 nm)	0.054560	ppm	0.000636	1.17	1417.240000	Y 242.219
Ba (493.408 nm)	0.001566	ppm	0.000075	4.76	784.987000	Y_R 488.368
Be (234.861 nm)	-0.000015 u	ppm	0.000008	50.80	-20.950400	Y_R 488.368
Bi (223.061 nm)	-0.001375 u	ppm	0.000914	66.46	17.233000	Y 377.433
Ca (315.887 nm)	34.824833 o	ppm	0.079991	0.23	29276.085575	Y_R 377.433
Cd (214.439 nm)	0.000088	ppm	0.000039	44.10	5.706660	Y 377.433
Co (228.615 nm)	0.000104 u	ppm	0.000187	> 100.00	-37.647100	Y 242.219
Cr (205.560 nm)	0.000391	ppm	0.000106	27.02	3.767830	Y 377.433
Cu (324.754 nm)	0.000969	ppm	0.000374	38.53	637.138000	Y 377.433
Fe (238.204 nm)	0.145039	ppm	0.000774	0.53	548.857822	Y_R 377.433
Fe H (259.940 nm)	-0.046757 u	ppm	0.003402	7.28	284.964000	Y_R 377.433
K (766.491 nm)	0.388043	ppm	0.063345	16.32	-247.160000	Y_R2 488.368
Li (670.783 nm)	0.017748	ppm	0.002885	16.25	-460.783000	Y_R2 488.368
Mg (279.078 nm)	4.350870	ppm	0.002927	0.07	25758.600000	Y 377.433
Mn (257.610 nm)	0.026034	ppm	0.000087	0.33	6668.880000	Y 377.433
Mo (202.032 nm)	0.000984	ppm	0.000096	9.79	6.181760	Y 377.433
Na (589.592 nm)	94.939700 o	ppm	0.038691	0.04	618935.000000	Y_R2 488.368
Na H (589.593 nm)	99.592517	ppm	0.018693	0.02	395652.055839	Y_R 488.368
Ni (231.604 nm)	-0.000711 u	ppm	0.000252	35.45	-8.178090	Y 377.433
P (213.618 nm)	0.004842	ppm	0.000917	18.95	27.768400	Y 242.219
Pb (220.353 nm)	-0.000907 u	ppm	0.001663	> 100.00	4.662080	Y 242.219
S (181.972 nm)	18.990733 o	ppm	0.070127	0.37	8324.706931	Y 377.433
Sb (206.834 nm)	-0.001192 u	ppm	0.002518	> 100.00	-34.143700	Y 377.433
Se (196.026 nm)	0.004130	ppm	0.001148	27.81	14.565700	Y 242.219
Si (288.158 nm)	6.954570	ppm	0.019195	0.28	62017.300000	Y 377.433
Sn (189.925 nm)	0.001461	ppm	0.000463	31.66	11.309400	Y 377.433
Sr (421.552 nm)	0.031275	ppm	0.000306	0.98	6724.318796	Y_R 488.368
Th (288.505 nm)	0.001008	ppm	0.001419	> 100.00	55.829800	Y 377.433
Ti (336.122 nm)	0.003672	ppm	0.000181	4.93	443.231000	Y 377.433
Tl (190.794 nm)	0.000501 u	ppm	0.000873	> 100.00	-1.087050	Y 377.433
U (409.013 nm)	-0.010092 u	ppm	0.000404	4.00	-167.948000	Y 377.433
V (292.401 nm)	0.000417	ppm	0.000288	69.10	37.283700	Y 377.433
Zn (206.200 nm)	0.001043	ppm	0.000060	5.77	7.205160	Y 377.433
Zr (343.823 nm)	0.000684	ppm	0.000127	18.60	131.086000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.942213	16897.672978	0.000829	0.09
Y 377.433	0.943340	919984.809795	0.000039	0.00
Y_R 377.433	0.950661	68393.900000	0.001808	0.19
Y_R 488.368	0.958214	37866.800000	0.004691	0.49
Y_R2 488.368	0.977311	74441.458694	0.000039	0.00

Sample Name: CCVH-5699817

Date: 5/13/2019 9:58:09 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.057637	ppm	0.006215	10.78	-2197.088640	Y_R 488.368
Ag (328.068 nm)	0.000146	ppm	0.000025	17.42	-596.021000	Y 377.433
Al (167.019 nm)	42.434800 o	ppm	0.075360	0.18	25413.700000	Y_R 377.433
Al H (396.152 nm)	50.040949	ppm	0.242655	0.48	127692.592118	Y_R 377.433
As (188.980 nm)	0.002321	ppm	0.001845	79.48	2.316030	Y 242.219
B (249.678 nm)	0.002292	ppm	0.000079	3.46	50.147400	Y 242.219
Ba (493.408 nm)	0.001883	ppm	0.000082	4.34	857.285000	Y_R 488.368
Be (234.861 nm)	0.000776	ppm	0.000085	10.91	1713.970000	Y_R 488.368
Bi (223.061 nm)	0.995974	ppm	0.000171	0.02	2596.020000	Y 377.433
Ca (315.887 nm)	0.011835	ppm	0.004194	35.44	-86.978544	Y_R 377.433
Cd (214.439 nm)	0.001213	ppm	0.000067	5.51	122.974000	Y 377.433
Co (228.615 nm)	0.004664	ppm	0.000051	1.08	53.270800	Y 242.219
Cr (205.560 nm)	0.001344	ppm	0.000020	1.48	4.588130	Y 377.433
Cu (324.754 nm)	0.009461	ppm	0.000071	0.75	1621.840000	Y 377.433
Fe (238.204 nm)	48.266646 o	ppm	0.067260	0.14	177391.581350	Y_R 377.433
Fe H (259.940 nm)	50.144600	ppm	0.000045	0.00	94010.200000	Y_R 377.433
K (766.491 nm)	0.121695	ppm	0.011612	9.54	-550.267000	Y_R2 488.368
Li (670.783 nm)	0.006801	ppm	0.000481	7.07	-796.659000	Y_R2 488.368
Mg (279.078 nm)	0.031724	ppm	0.002277	7.18	-157.246000	Y 377.433
Mn (257.610 nm)	0.002830	ppm	0.000001	0.05	791.419000	Y 377.433
Mo (202.032 nm)	0.000086 u	ppm	0.000148	> 100.00	-1.654740	Y 377.433
Na (589.592 nm)	235.644000 o	ppm	0.086761	0.04	1534900.000000	Y_R2 488.368
Na H (589.593 nm)	245.917456	ppm	3.580972	1.46	960987.813801	Y_R 488.368
Ni (231.604 nm)	0.005299	ppm	0.001109	20.93	38.614700	Y 377.433
P (213.618 nm)	-0.002183 u	ppm	0.000351	16.10	11.712000	Y 242.219
Pb (220.353 nm)	0.001125	ppm	0.000449	39.92	29.228100	Y 242.219
S (181.972 nm)	4.863567	ppm	0.002542	0.05	2149.191231	Y 377.433
Sb (206.834 nm)	-0.000047 u	ppm	0.003113	> 100.00	-76.086300	Y 377.433
Se (196.026 nm)	0.003807	ppm	0.003706	97.36	5.881140	Y 242.219
Si (288.158 nm)	0.044895	ppm	0.001104	2.46	1231.020000	Y 377.433
Sn (189.925 nm)	0.006252	ppm	0.002374	37.97	21.467500	Y 377.433
Sr (421.552 nm)	0.001991	ppm	0.000005	0.24	536.654823	Y_R 488.368
Th (288.505 nm)	5.057810	ppm	0.001952	0.04	15092.800000	Y 377.433
Ti (336.122 nm)	0.002213	ppm	0.000004	0.18	123.334000	Y 377.433
Tl (190.794 nm)	-0.002183 u	ppm	0.002174	99.56	-8.639460	Y 377.433
U (409.013 nm)	10.195400	ppm	0.014445	0.14	47929.000000	Y 377.433
V (292.401 nm)	0.005210	ppm	0.000058	1.11	45.517300	Y 377.433
Zn (206.200 nm)	0.003459	ppm	0.000689	19.93	19.799200	Y 377.433
Zr (343.823 nm)	-0.002805 u	ppm	0.000028	1.01	-193.756000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.942831	16908.767409	0.000195	0.02
Y 377.433	0.934384	911250.723943	0.000006	0.00
Y_R 377.433	0.943699	67893.000000	0.006544	0.69
Y_R 488.368	0.962872	38050.900000	0.006280	0.65
Y_R2 488.368	0.970264	73904.674229	0.005103	0.53

Sample Name: CCV-5699804

Date: 5/13/2019 10:01:33 PM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.961828	ppm	0.009242	0.96	10.035397	Y_R 488.368
Ag (328.068 nm)	0.495579	ppm	0.000612	0.12	22942.100000	Y 377.433
Al (167.019 nm)	0.489558	ppm	0.002383	0.49	294.942000	Y_R 377.433
Al H (396.152 nm)	0.432285 u	ppm	0.003056	0.71	1469.588988	Y_R 377.433
As (188.980 nm)	0.972879	ppm	0.002480	0.25	1165.290000	Y 242.219
B (249.678 nm)	0.492809	ppm	0.000131	0.03	12278.300000	Y 242.219
Ba (493.408 nm)	0.493381	ppm	0.001231	0.25	55772.700000	Y_R 488.368
Be (234.861 nm)	0.486214	ppm	0.002666	0.55	140707.000000	Y_R 488.368
Bi (223.061 nm)	-0.006083 u	ppm	0.000098	1.62	5.503770	Y 377.433
Ca (315.887 nm)	5.054203	ppm	0.019758	0.39	4166.312498	Y_R 377.433
Cd (214.439 nm)	0.501160	ppm	0.000469	0.09	30554.700000	Y 377.433
Co (228.615 nm)	0.495622	ppm	0.001843	0.37	9870.550000	Y 242.219
Cr (205.560 nm)	0.502294	ppm	0.000632	0.13	7480.220000	Y 377.433
Cu (324.754 nm)	0.493630	ppm	0.002055	0.42	33262.700000	Y 377.433
Fe (238.204 nm)	2.468891	ppm	0.015734	0.64	9088.809497	Y_R 377.433
Fe H (259.940 nm)	2.383820 u	ppm	0.011050	0.46	4823.730000	Y_R 377.433
K (766.491 nm)	48.535300	ppm	0.327749	0.68	54544.800000	Y_R2 488.368
Li (670.783 nm)	0.980014	ppm	0.002247	0.23	29063.900000	Y_R2 488.368
Mg (279.078 nm)	19.655700	ppm	0.007921	0.04	116286.000000	Y 377.433
Mn (257.610 nm)	0.499167	ppm	0.000289	0.06	126512.000000	Y 377.433
Mo (202.032 nm)	0.506294	ppm	0.000366	0.07	4413.770000	Y 377.433
Na (589.592 nm)	4.847740	ppm	0.007961	0.16	33428.800000	Y_R2 488.368
Na H (589.593 nm)	4.910315 u	ppm	0.044896	0.91	30330.185774	Y_R 488.368
Ni (231.604 nm)	0.509774	ppm	0.001561	0.31	3778.940000	Y 377.433
P (213.618 nm)	0.968204	ppm	0.002456	0.25	2229.690000	Y 242.219
Pb (220.353 nm)	0.994094	ppm	0.000363	0.04	3041.480000	Y 242.219
S (181.972 nm)	-0.015997 u	ppm	0.000520	3.25	17.205866	Y 377.433
Sb (206.834 nm)	1.025690	ppm	0.004983	0.49	2727.090000	Y 377.433
Se (196.026 nm)	0.969086	ppm	0.000418	0.04	913.348000	Y 242.219
Si (288.158 nm)	4.902520	ppm	0.030490	0.62	43964.800000	Y 377.433
Sn (189.925 nm)	1.005780	ppm	0.000492	0.05	2141.010000	Y 377.433
Sr (421.552 nm)	0.489718	ppm	0.000585	0.12	103591.838788	Y_R 488.368
Th (288.505 nm)	0.001472 u	ppm	0.003101	> 100.00	75.125900	Y 377.433
Ti (336.122 nm)	0.498994	ppm	0.000226	0.05	71489.200000	Y 377.433
Tl (190.794 nm)	1.006240	ppm	0.002811	0.28	2319.870000	Y 377.433
U (409.013 nm)	-0.003328 u	ppm	0.003841	> 100.00	-168.217000	Y 377.433
V (292.401 nm)	0.497445	ppm	0.000109	0.02	20908.400000	Y 377.433
Zn (206.200 nm)	0.501728	ppm	0.001913	0.38	2617.060000	Y 377.433
Zr (343.823 nm)	0.501495	ppm	0.000252	0.05	68193.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.945504	16956.688962	0.002960	0.31
Y 377.433	0.945182	921780.913232	0.002620	0.28
Y_R 377.433	0.946252	68076.600000	0.002525	0.27
Y_R 488.368	0.960374	37952.100000	0.002259	0.24
Y_R2 488.368	0.969235	73826.283801	0.004488	0.46

Sample Name: CCB

Date: 5/13/2019 10:04:55 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.006609	ppm	0.004110	62.19	-2321.648739	Y_R 488.368
Ag (328.068 nm)	0.000342	ppm	0.000251	73.17	-333.065000	Y 377.433
Al (167.019 nm)	0.009074	ppm	0.000135	1.49	5.763130	Y_R 377.433
Al H (396.152 nm)	-0.109053 Zu	ppm	0.004639	4.25	48.534567 Z	Y_R 377.433
As (188.980 nm)	-0.000339 u	ppm	0.001174	> 100.00	-0.449965	Y 242.219
B (249.678 nm)	0.001739	ppm	0.000002	0.12	110.593000	Y 242.219
Ba (493.408 nm)	-0.000445 u	ppm	0.000153	34.43	552.198000	Y_R 488.368
Be (234.861 nm)	0.000029	ppm	0.000007	25.73	-12.691100	Y_R 488.368
Bi (223.061 nm)	-0.000466 u	ppm	0.002847	> 100.00	19.552000	Y 377.433
Ca (315.887 nm)	0.008639	ppm	0.012143	> 100.00	-89.675871	Y_R 377.433
Cd (214.439 nm)	-0.000010 u	ppm	0.000045	> 100.00	-0.367788	Y 377.433
Co (228.615 nm)	0.000323	ppm	0.000072	22.22	-33.405800	Y 242.219
Cr (205.560 nm)	-0.000021 u	ppm	0.000077	> 100.00	-2.322430	Y 377.433
Cu (324.754 nm)	0.000677	ppm	0.000236	34.88	642.457000	Y 377.433
Fe (238.204 nm)	0.005499	ppm	0.001065	19.37	36.057749	Y_R 377.433
Fe H (259.940 nm)	-0.190113 u	ppm	0.000271	0.14	17.267300	Y_R 377.433
K (766.491 nm)	-0.028727 u	ppm	0.049885	> 100.00	-721.448000	Y_R2 488.368
Li (670.783 nm)	0.004510	ppm	0.001462	32.41	-866.957000	Y_R2 488.368
Mg (279.078 nm)	0.003071	ppm	0.001984	64.60	40.627200	Y 377.433
Mn (257.610 nm)	-0.000011 u	ppm	0.000004	38.51	71.968200	Y 377.433
Mo (202.032 nm)	0.000110	ppm	0.000102	92.61	-1.442170	Y 377.433
Na (589.592 nm)	0.129357	ppm	0.005097	3.94	1724.900000	Y_R2 488.368
Na H (589.593 nm)	-0.518100 u	ppm	0.020593	3.97	8866.343516	Y_R 488.368
Ni (231.604 nm)	0.000980	ppm	0.000390	39.77	4.359640	Y 377.433
P (213.618 nm)	-0.002345 u	ppm	0.001111	47.37	11.341200	Y 242.219
Pb (220.353 nm)	-0.000666 u	ppm	0.000166	24.93	5.448450	Y 242.219
S (181.972 nm)	-0.013750 u	ppm	0.007664	55.74	17.142691	Y 377.433
Sb (206.834 nm)	0.002276	ppm	0.001276	56.07	-24.813000	Y 377.433
Se (196.026 nm)	0.002190 u	ppm	0.004581	> 100.00	12.762500	Y 242.219
Si (288.158 nm)	0.001845	ppm	0.001583	85.80	852.295000	Y 377.433
Sn (189.925 nm)	0.000095 u	ppm	0.000370	> 100.00	8.412430	Y 377.433
Sr (421.552 nm)	0.000033	ppm	0.000029	88.98	122.898999	Y_R 488.368
Th (288.505 nm)	0.000084 u	ppm	0.005180	> 100.00	52.531700	Y 377.433
Ti (336.122 nm)	0.000106	ppm	0.000004	4.23	-179.322000	Y 377.433
Tl (190.794 nm)	-0.000461 u	ppm	0.001367	> 100.00	-3.285690	Y 377.433
U (409.013 nm)	-0.003460 u	ppm	0.001676	48.43	-129.908000	Y 377.433
V (292.401 nm)	-0.000208 u	ppm	0.000156	75.30	10.629700	Y 377.433
Zn (206.200 nm)	-0.000338 u	ppm	0.000004	1.12	0.010071	Y 377.433
Zr (343.823 nm)	0.000235	ppm	0.000002	1.04	69.706400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.951587	17065.789589	0.000122	0.01
Y 377.433	0.951328	927774.420388	0.000344	0.04
Y_R 377.433	0.950626	68391.400000	0.009214	0.97
Y_R 488.368	0.963325	38068.700000	0.010575	1.10
Y_R2 488.368	0.974848	74253.825808	0.004681	0.48

Sample Name: CCVL-5699389

Date: 5/13/2019 10:08:18 PM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.043386 Q	ppm	0.010973	25.29	-2231.875964 Q	Y_R 488.368
Ag (328.068 nm)	0.009545	ppm	0.000355	3.72	99.022500	Y 377.433
Al (167.019 nm)	0.094491	ppm	0.001032	1.09	56.917800	Y_R 377.433
Al H (396.152 nm)	-0.011753 u	ppm	0.001106	9.41	297.798161	Y_R 377.433
As (188.980 nm)	0.013992	ppm	0.000065	0.46	16.715100	Y 242.219
B (249.678 nm)	0.097596	ppm	0.000326	0.33	2482.510000	Y 242.219
Ba (493.408 nm)	0.009843	ppm	0.000181	1.84	1702.490000	Y_R 488.368
Be (234.861 nm)	0.000965	ppm	0.000014	1.48	260.516000	Y_R 488.368
Bi (223.061 nm)	0.097247	ppm	0.002915	3.00	271.400000	Y 377.433
Ca (315.887 nm)	0.212022	ppm	0.002475	1.17	81.870808	Y_R 377.433
Cd (214.439 nm)	0.005098	ppm	0.000052	1.02	311.122000	Y 377.433
Co (228.615 nm)	0.010330	ppm	0.000121	1.17	166.652000	Y 242.219
Cr (205.560 nm)	0.010170	ppm	0.000116	1.14	149.522000	Y 377.433
Cu (324.754 nm)	0.015561	ppm	0.000155	1.00	1628.290000	Y 377.433
Fe (238.204 nm)	0.102343	ppm	0.000124	0.12	391.952908	Y_R 377.433
Fe H (259.940 nm)	-0.091421 u	ppm	0.000700	0.77	201.561000	Y_R 377.433
K (766.491 nm)	2.906680	ppm	0.058875	2.03	2619.060000	Y_R2 488.368
Li (670.783 nm)	0.025970	ppm	0.001263	4.87	-208.524000	Y_R2 488.368
Mg (279.078 nm)	0.195888	ppm	0.000066	0.03	1180.300000	Y 377.433
Mn (257.610 nm)	0.010282	ppm	0.000008	0.08	2679.010000	Y 377.433
Mo (202.032 nm)	0.019138	ppm	0.000285	1.49	164.529000	Y 377.433
Na (589.592 nm)	1.034230	ppm	0.012284	1.19	7636.410000	Y_R2 488.368
Na H (589.593 nm)	0.248499 u	ppm	0.038852	15.63	11838.516784	Y_R 488.368
Ni (231.604 nm)	0.041870	ppm	0.000259	0.62	307.620000	Y 377.433
P (213.618 nm)	2.782660 o	ppm	0.002888	0.10	6376.920000	Y 242.219
Pb (220.353 nm)	0.007320	ppm	0.000162	2.22	29.805600	Y 242.219
S (181.972 nm)	0.063618 Q	ppm	0.009946	15.63	50.984150 Q	Y 377.433
Sb (206.834 nm)	0.019588	ppm	0.000974	4.97	21.701100	Y 377.433
Se (196.026 nm)	0.017376	ppm	0.000781	4.49	26.899500	Y 242.219
Si (288.158 nm)	0.582231	ppm	0.024804	4.26	5958.100000	Y 377.433
Sn (189.925 nm)	0.099911	ppm	0.000086	0.09	220.076000	Y 377.433
Sr (421.552 nm)	0.009842	ppm	0.000037	0.38	2195.635965	Y_R 488.368
Th (288.505 nm)	0.016219	ppm	0.001940	11.96	100.984000	Y 377.433
Ti (336.122 nm)	0.009729	ppm	0.000006	0.06	1203.320000	Y 377.433
Tl (190.794 nm)	0.015639	ppm	0.000736	4.71	33.837700	Y 377.433
U (409.013 nm)	0.051073	ppm	0.001743	3.41	126.021000	Y 377.433
V (292.401 nm)	0.009604	ppm	0.000026	0.27	421.781000	Y 377.433
Zn (206.200 nm)	0.020059	ppm	0.000335	1.67	106.325000	Y 377.433
Zr (343.823 nm)	0.010873	ppm	0.000256	2.36	1515.540000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.960124	17218.894420	0.000605	0.06
Y 377.433	0.961369	937567.554715	0.000139	0.01
Y_R 377.433	0.961588	69180.000000	0.005662	0.59
Y_R 488.368	0.977047	38611.000000	0.016210	1.66
Y_R2 488.368	0.993139	75647.031040	0.004571	0.46

Sample Name: 280-123272-C-3-B

Date: 5/13/2019 10:11:41 PM

Rack:Tube: 2:22

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.044746 n	ppm	0.004111	9.19	-2228.557486	Y_R 488.368
Ag (328.068 nm)	0.000581	ppm	0.000101	17.41	-322.074000	Y 377.433
Al (167.019 nm)	0.092980	ppm	0.001833	1.97	55.997900	Y_R 377.433
Al H (396.152 nm)	-0.005842 u	ppm	0.002058	35.23	336.682847	Y_R 377.433
As (188.980 nm)	-0.000915 u	ppm	0.000509	55.61	-1.141410	Y 242.219
B (249.678 nm)	0.027693	ppm	0.000027	0.10	752.627000	Y 242.219
Ba (493.408 nm)	0.022829	ppm	0.000046	0.20	3167.060000	Y_R 488.368
Be (234.861 nm)	-0.000020 u	ppm	0.000024	> 100.00	-24.404300	Y_R 488.368
Bi (223.061 nm)	-0.003119 u	ppm	0.002157	69.16	12.728200	Y 377.433
Ca (315.887 nm)	57.227510 o	ppm	0.118335	0.21	48171.650067	Y_R 377.433
Cd (214.439 nm)	-0.000028 u	ppm	0.000013	46.40	-1.384150	Y 377.433
Co (228.615 nm)	0.000698	ppm	0.000173	24.80	-25.875900	Y 242.219
Cr (205.560 nm)	0.000256	ppm	0.000219	85.40	1.775450	Y 377.433
Cu (324.754 nm)	0.000437	ppm	0.000109	24.91	586.513000	Y 377.433
Fe (238.204 nm)	0.080641	ppm	0.000165	0.21	312.201173	Y_R 377.433
Fe H (259.940 nm)	-0.117773 u	ppm	0.000343	0.29	152.352000	Y_R 377.433
K (766.491 nm)	1.182210	ppm	0.067969	5.75	656.614000	Y_R2 488.368
Li (670.783 nm)	0.025032	ppm	0.000781	3.12	-237.301000	Y_R2 488.368
Mg (279.078 nm)	4.722660	ppm	0.010498	0.22	27957.900000	Y 377.433
Mn (257.610 nm)	0.095633	ppm	0.000064	0.07	24298.100000	Y 377.433
Mo (202.032 nm)	0.001850	ppm	0.000084	4.55	13.735700	Y 377.433
Na (589.592 nm)	41.975600 o	ppm	0.060851	0.14	274187.000000	Y_R2 488.368
Na H (589.593 nm)	42.491775	ppm	0.030608	0.07	175061.370044	Y_R 488.368
Ni (231.604 nm)	-0.000622 u	ppm	0.000282	45.35	-7.521750	Y 377.433
P (213.618 nm)	0.020389	ppm	0.002977	14.60	63.301900	Y 242.219
Pb (220.353 nm)	-0.000906 u	ppm	0.000699	77.12	4.675660	Y 242.219
S (181.972 nm)	19.453501 o	ppm	0.024504	0.13	8527.144294	Y 377.433
Sb (206.834 nm)	0.000363 u	ppm	0.000598	> 100.00	-29.959600	Y 377.433
Se (196.026 nm)	0.001508	ppm	0.001741	> 100.00	12.188100	Y 242.219
Si (288.158 nm)	8.999960	ppm	0.050130	0.56	80011.100000	Y 377.433
Sn (189.925 nm)	0.001569	ppm	0.001208	76.98	11.538200	Y 377.433
Sr (421.552 nm)	0.112275	ppm	0.000073	0.07	23839.428619	Y_R 488.368
Th (288.505 nm)	0.000048 u	ppm	0.001237	> 100.00	54.677500	Y 377.433
Ti (336.122 nm)	0.001596	ppm	0.000081	5.07	216.239000	Y 377.433
Tl (190.794 nm)	-0.000383 u	ppm	0.001328	> 100.00	-3.117030	Y 377.433
U (409.013 nm)	-0.007496 u	ppm	0.003809	50.82	-160.184000	Y 377.433
V (292.401 nm)	0.000979	ppm	0.000107	10.92	61.330900	Y 377.433
Zn (206.200 nm)	-0.000195 u	ppm	0.000071	36.42	0.752394	Y 377.433
Zr (343.823 nm)	-0.000031 u	ppm	0.000026	82.16	33.699400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.948271	17006.329198	0.002229	0.24
Y 377.433	0.951755	928191.525438	0.002841	0.30
Y_R 377.433	0.962033	69212.000000	0.004229	0.44
Y_R 488.368	0.977403	38625.100000	0.001188	0.12
Y_R2 488.368	0.993701	75689.862463	0.003298	0.33

Sample Name: 280-123272-C-4-B

Date: 5/13/2019 10:15:03 PM

Rack:Tube: 2:23

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.017590 n	ppm	0.008249	46.89	-2294.844267	Y_R 488.368
Ag (328.068 nm)	0.000686	ppm	0.000235	34.22	-317.225000	Y 377.433
Al (167.019 nm)	0.085887	ppm	0.000219	0.26	51.779100	Y_R 377.433
Al H (396.152 nm)	-0.014515 u	ppm	0.002435	16.78	320.548282	Y_R 377.433
As (188.980 nm)	0.000197 u	ppm	0.002001	> 100.00	0.191096	Y 242.219
B (249.678 nm)	0.037208	ppm	0.000074	0.20	988.000000	Y 242.219
Ba (493.408 nm)	0.004599	ppm	0.000255	5.54	1132.170000	Y_R 488.368
Be (234.861 nm)	-0.000027 u	ppm	0.000002	6.89	-25.519400	Y_R 488.368
Bi (223.061 nm)	-0.002843 u	ppm	0.001850	65.06	13.443200	Y 377.433
Ca (315.887 nm)	70.716995 o	ppm	0.052998	0.07	59549.372864	Y_R 377.433
Cd (214.439 nm)	-0.000059 u	ppm	0.000021	36.14	-3.270500	Y 377.433
Co (228.615 nm)	0.000290	ppm	0.000043	14.88	-34.017300	Y 242.219
Cr (205.560 nm)	0.000769	ppm	0.000401	52.12	9.423100	Y 377.433
Cu (324.754 nm)	0.000705	ppm	0.000119	16.84	594.300000	Y 377.433
Fe (238.204 nm)	0.112508	ppm	0.000779	0.69	429.306529	Y_R 377.433
Fe H (259.940 nm)	-0.081521 u	ppm	0.003443	4.22	220.047000	Y_R 377.433
K (766.491 nm)	0.850376	ppm	0.078895	9.28	278.978000	Y_R2 488.368
Li (670.783 nm)	0.020965	ppm	0.001194	5.70	-362.094000	Y_R2 488.368
Mg (279.078 nm)	6.402520	ppm	0.007150	0.11	37894.500000	Y 377.433
Mn (257.610 nm)	0.003690	ppm	0.000034	0.93	1009.390000	Y 377.433
Mo (202.032 nm)	0.001376	ppm	0.000563	40.95	9.598830	Y 377.433
Na (589.592 nm)	62.836700 o	ppm	0.264982	0.42	409955.000000	Y_R2 488.368
Na H (589.593 nm)	65.087230	ppm	0.728267	1.12	262342.216375	Y_R 488.368
Ni (231.604 nm)	-0.000807 u	ppm	0.000581	72.04	-8.887310	Y 377.433
P (213.618 nm)	0.027758	ppm	0.000681	2.45	80.146200	Y 242.219
Pb (220.353 nm)	-0.000478 u	ppm	0.001877	> 100.00	5.997250	Y 242.219
S (181.972 nm)	25.319684 o	ppm	0.062726	0.25	11091.261074	Y 377.433
Sb (206.834 nm)	0.001477	ppm	0.000601	40.70	-26.970700	Y 377.433
Se (196.026 nm)	0.028270	ppm	0.001565	5.53	37.036400	Y 242.219
Si (288.158 nm)	9.636780	ppm	0.107586	1.12	85613.300000	Y 377.433
Sn (189.925 nm)	0.001053 u	ppm	0.001636	> 100.00	10.443600	Y 377.433
Sr (421.552 nm)	0.129244	ppm	0.001399	1.08	27424.846351	Y_R 488.368
Th (288.505 nm)	-0.000818 u	ppm	0.000296	36.15	50.049100	Y 377.433
Ti (336.122 nm)	0.001645	ppm	0.000100	6.07	266.264000	Y 377.433
Tl (190.794 nm)	0.001130	ppm	0.000921	81.52	0.377208	Y 377.433
U (409.013 nm)	0.000267 u	ppm	0.002078	> 100.00	-126.302000	Y 377.433
V (292.401 nm)	0.001194	ppm	0.000099	8.30	70.263100	Y 377.433
Zn (206.200 nm)	0.000086 u	ppm	0.000548	> 100.00	2.217030	Y 377.433
Zr (343.823 nm)	0.000005 u	ppm	0.000156	> 100.00	38.808800	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.940901	16874.144402	0.000545	0.06
Y 377.433	0.943676	920312.451867	0.001968	0.21
Y_R 377.433	0.952799	68547.600000	0.001204	0.13
Y_R 488.368	0.963566	38078.300000	0.010008	1.04
Y_R2 488.368	0.975799	74326.251463	0.008220	0.84

Sample Name: 280-123272-C-5-B

Date: 5/13/2019 10:18:24 PM

Rack:Tube: 2:24

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.036438 n	ppm	0.017248	47.34	-2248.836346	Y_R 488.368
Ag (328.068 nm)	0.000468	ppm	0.000091	19.46	-327.060000	Y 377.433
Al (167.019 nm)	0.060825	ppm	0.004688	7.71	36.759300	Y_R 377.433
Al H (396.152 nm)	-0.042729 u	ppm	0.002615	6.12	238.212585	Y_R 377.433
As (188.980 nm)	-0.001212 u	ppm	0.000196	16.16	-1.497070	Y 242.219
B (249.678 nm)	0.033672	ppm	0.000249	0.74	900.562000	Y 242.219
Ba (493.408 nm)	0.007303	ppm	0.000289	3.96	1428.930000	Y_R 488.368
Be (234.861 nm)	-0.000027 u	ppm	0.000001	5.21	-27.064100	Y_R 488.368
Bi (223.061 nm)	-0.002384 u	ppm	0.003013	> 100.00	14.618500	Y 377.433
Ca (315.887 nm)	46.575146 o	ppm	0.050233	0.11	39186.900894	Y_R 377.433
Cd (214.439 nm)	-0.000024 u	ppm	0.000041	> 100.00	-1.182140	Y 377.433
Co (228.615 nm)	0.000357	ppm	0.000149	41.63	-32.683700	Y 242.219
Cr (205.560 nm)	0.000405	ppm	0.000357	88.20	3.997940	Y 377.433
Cu (324.754 nm)	0.001226	ppm	0.000061	4.96	646.607000	Y 377.433
Fe (238.204 nm)	0.068439	ppm	0.003346	4.89	267.357955	Y_R 377.433
Fe H (259.940 nm)	-0.124030 u	ppm	0.002423	1.95	140.668000	Y_R 377.433
K (766.491 nm)	0.763077	ppm	0.030274	3.97	179.632000	Y_R2 488.368
Li (670.783 nm)	0.017237	ppm	0.001073	6.22	-476.474000	Y_R2 488.368
Mg (279.078 nm)	0.250284	ppm	0.001572	0.63	1502.970000	Y 377.433
Mn (257.610 nm)	0.025955	ppm	0.000001	0.00	6648.950000	Y 377.433
Mo (202.032 nm)	0.003243	ppm	0.000100	3.08	25.886100	Y 377.433
Na (589.592 nm)	311.211000 o	ppm	1.031340	0.33	2026860.000000	Y_R2 488.368
Na H (589.593 nm)	321.400719	ppm	0.134312	0.04	1252629.174066	Y_R 488.368
Ni (231.604 nm)	-0.000627 u	ppm	0.000167	26.62	-7.558930	Y 377.433
P (213.618 nm)	0.002489	ppm	0.002087	83.83	22.389500	Y 242.219
Pb (220.353 nm)	0.000005 u	ppm	0.000105	> 100.00	7.453700	Y 242.219
S (181.972 nm)	242.733899 bo	ppm	0.242704	0.10	106130.501378	Y 377.433
Sb (206.834 nm)	0.000025 u	ppm	0.002484	> 100.00	-30.854200	Y 377.433
Se (196.026 nm)	-0.000260 u	ppm	0.003635	> 100.00	10.489600	Y 242.219
Si (288.158 nm)	4.203520	ppm	0.000842	0.02	37815.500000	Y 377.433
Sn (189.925 nm)	0.000106 u	ppm	0.000514	> 100.00	8.436460	Y 377.433
Sr (421.552 nm)	0.145087	ppm	0.000369	0.25	30772.462092	Y_R 488.368
Th (288.505 nm)	0.000034 u	ppm	0.003077	> 100.00	52.868900	Y 377.433
Ti (336.122 nm)	0.001242	ppm	0.000020	1.62	131.741000	Y 377.433
Tl (190.794 nm)	0.000351	ppm	0.000376	> 100.00	-1.424550	Y 377.433
U (409.013 nm)	-0.017818 u	ppm	0.001143	6.42	-206.695000	Y 377.433
V (292.401 nm)	-0.000096 u	ppm	0.000022	22.54	16.112800	Y 377.433
Zn (206.200 nm)	0.000775	ppm	0.000048	6.20	5.810360	Y 377.433
Zr (343.823 nm)	0.000080 u	ppm	0.000155	> 100.00	48.795500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.930586	16689.157390	0.000609	0.07
Y 377.433	0.928990	905989.589645	0.000205	0.02
Y_R 377.433	0.949997	68346.000000	0.008804	0.93
Y_R 488.368	0.967369	38228.500000	0.013687	1.41
Y_R2 488.368	0.974352	74216.069956	0.003262	0.33

Sample Name: 280-123272-C-6-B

Date: 5/13/2019 10:21:46 PM

Rack:Tube: 2:25

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.047985 n	ppm	0.044744	93.25	-2220.651062	Y_R 488.368
Ag (328.068 nm)	0.000170	ppm	0.000041	24.07	-340.920000	Y 377.433
Al (167.019 nm)	0.008170	ppm	0.002513	30.75	5.226780	Y_R 377.433
Al H (396.152 nm)	-0.111135 u	ppm	0.011741	10.56	51.238040	Y_R 377.433
As (188.980 nm)	-0.000129 u	ppm	0.002422	> 100.00	-0.199609	Y 242.219
B (249.678 nm)	0.031174	ppm	0.000062	0.20	838.846000	Y 242.219
Ba (493.408 nm)	0.009286	ppm	0.000085	0.92	1644.040000	Y_R 488.368
Be (234.861 nm)	-0.000039 u	ppm	0.000013	34.04	-32.277700	Y_R 488.368
Bi (223.061 nm)	-0.001851 u	ppm	0.000552	29.83	15.982300	Y 377.433
Ca (315.887 nm)	17.669284 o	ppm	0.020731	0.12	14806.216611	Y_R 377.433
Cd (214.439 nm)	-0.000051 u	ppm	0.000018	35.11	-2.878020	Y 377.433
Co (228.615 nm)	0.000048 u	ppm	0.000249	> 100.00	-38.905800	Y 242.219
Cr (205.560 nm)	0.000238	ppm	0.000082	34.40	1.528640	Y 377.433
Cu (324.754 nm)	0.001006	ppm	0.000176	17.51	652.396000	Y 377.433
Fe (238.204 nm)	0.011114	ppm	0.000605	5.45	56.694512	Y_R 377.433
Fe H (259.940 nm)	-0.179173 u	ppm	0.003658	2.04	37.695200	Y_R 377.433
K (766.491 nm)	0.575753	ppm	0.046413	8.06	-33.544400	Y_R2 488.368
Li (670.783 nm)	0.018085	ppm	0.002552	14.11	-450.448000	Y_R2 488.368
Mg (279.078 nm)	0.118578	ppm	0.001660	1.40	724.098000	Y 377.433
Mn (257.610 nm)	0.007306	ppm	0.000034	0.47	1925.350000	Y 377.433
Mo (202.032 nm)	0.002799	ppm	0.000255	9.12	22.010300	Y 377.433
Na (589.592 nm)	202.209000 o	ppm	0.862182	0.43	1317270.000000	Y_R2 488.368
Na H (589.593 nm)	208.415268	ppm	3.455224	1.66	816104.127779	Y_R 488.368
Ni (231.604 nm)	-0.000017 u	ppm	0.000339	> 100.00	-3.036200	Y 377.433
P (213.618 nm)	0.016229	ppm	0.000313	1.93	53.794200	Y 242.219
Pb (220.353 nm)	-0.000837 u	ppm	0.002161	> 100.00	4.888070	Y 242.219
S (181.972 nm)	125.258618 bo	ppm	0.163765	0.13	54777.996679	Y 377.433
Sb (206.834 nm)	0.001052 u	ppm	0.002497	> 100.00	-28.079200	Y 377.433
Se (196.026 nm)	-0.002704 u	ppm	0.001595	58.97	8.208490	Y 242.219
Si (288.158 nm)	2.813710	ppm	0.007063	0.25	25589.000000	Y 377.433
Sn (189.925 nm)	0.000458	ppm	0.000250	54.67	9.181950	Y 377.433
Sr (421.552 nm)	0.120189	ppm	0.002105	1.75	25511.530687	Y_R 488.368
Th (288.505 nm)	0.002363	ppm	0.002853	> 100.00	59.180300	Y 377.433
Ti (336.122 nm)	-0.000056 u	ppm	0.000024	43.75	-146.676000	Y 377.433
Tl (190.794 nm)	0.000408	ppm	0.000544	> 100.00	-1.284410	Y 377.433
U (409.013 nm)	-0.012375 u	ppm	0.001362	11.00	-175.368000	Y 377.433
V (292.401 nm)	-0.000268 u	ppm	0.000039	14.56	8.635650	Y 377.433
Zn (206.200 nm)	0.000629	ppm	0.000140	22.28	5.047650	Y 377.433
Zr (343.823 nm)	-0.000003 u	ppm	0.000002	62.13	37.292000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.948817	17016.108318	0.002073	0.22
Y 377.433	0.949207	925706.533281	0.001667	0.18
Y_R 377.433	0.965386	69453.200000	0.003194	0.33
Y_R 488.368	0.980714	38755.900000	0.019637	2.00
Y_R2 488.368	0.995858	75854.169913	0.005026	0.50

Sample Name: 280-123272-C-7-B

Date: 5/13/2019 10:25:07 PM

Rack:Tube: 2:26

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.010204 n	ppm	0.003345	32.79	-2312.874402	Y_R 488.368
Ag (328.068 nm)	0.000493	ppm	0.000456	92.59	-326.130000	Y 377.433
Al (167.019 nm)	0.029105	ppm	0.000285	0.98	17.760300	Y_R 377.433
Al H (396.152 nm)	-0.075862 u	ppm	0.003497	4.61	173.234039	Y_R 377.433
As (188.980 nm)	-0.000369 u	ppm	0.001874	> 100.00	-0.487228	Y 242.219
B (249.678 nm)	0.039709	ppm	0.000108	0.27	1049.980000	Y 242.219
Ba (493.408 nm)	0.013591	ppm	0.000224	1.65	2141.550000	Y_R 488.368
Be (234.861 nm)	-0.000027 u	ppm	0.000017	62.61	-28.532900	Y_R 488.368
Bi (223.061 nm)	-0.004768 u	ppm	0.000169	3.54	8.468420	Y 377.433
Ca (315.887 nm)	89.634712 o	ppm	0.395601	0.44	75505.544375	Y_R 377.433
Cd (214.439 nm)	0.000024	ppm	0.000020	82.52	1.724930	Y 377.433
Co (228.615 nm)	0.000110	ppm	0.000046	41.58	-37.655900	Y 242.219
Cr (205.560 nm)	0.000728	ppm	0.000061	8.33	8.815050	Y 377.433
Cu (324.754 nm)	0.001366	ppm	0.000096	7.01	624.119000	Y 377.433
Fe (238.204 nm)	0.029066	ppm	0.000312	1.08	122.664540	Y_R 377.433
Fe H (259.940 nm)	-0.167176 u	ppm	0.001320	0.79	60.099000	Y_R 377.433
K (766.491 nm)	1.038420	ppm	0.020513	1.98	492.971000	Y_R2 488.368
Li (670.783 nm)	0.029644	ppm	0.000803	2.71	-95.807900	Y_R2 488.368
Mg (279.078 nm)	0.578823	ppm	0.000304	0.05	3446.290000	Y 377.433
Mn (257.610 nm)	0.002538	ppm	0.000009	0.36	717.666000	Y 377.433
Mo (202.032 nm)	0.006637	ppm	0.000428	6.45	55.489900	Y 377.433
Na (589.592 nm)	404.704000 o	ppm	1.617420	0.40	2635500.000000	Y_R2 488.368
Na H (589.593 nm)	428.845583	ppm	3.876582	0.90	1667755.763558	Y_R 488.368
Ni (231.604 nm)	0.001999	ppm	0.000474	23.71	11.917300	Y 377.433
P (213.618 nm)	0.008455	ppm	0.002829	33.47	36.024800	Y 242.219
Pb (220.353 nm)	-0.000421 u	ppm	0.000541	> 100.00	6.148140	Y 242.219
S (181.972 nm)	307.112260 bo	ppm	0.159156	0.05	134272.437267	Y 377.433
Sb (206.834 nm)	0.000304 u	ppm	0.002846	> 100.00	-30.121300	Y 377.433
Se (196.026 nm)	-0.000647 u	ppm	0.001223	> 100.00	10.118200	Y 242.219
Si (288.158 nm)	3.933070	ppm	0.028535	0.73	35436.300000	Y 377.433
Sn (189.925 nm)	0.000055 u	ppm	0.002393	> 100.00	8.326900	Y 377.433
Sr (421.552 nm)	0.293468	ppm	0.002657	0.91	62124.970663	Y_R 488.368
Th (288.505 nm)	0.001509	ppm	0.000421	27.89	56.791500	Y 377.433
Ti (336.122 nm)	0.000513	ppm	0.000162	31.56	164.008000	Y 377.433
Tl (190.794 nm)	0.000883	ppm	0.000523	59.17	-0.199825	Y 377.433
U (409.013 nm)	-0.022841 u	ppm	0.000414	1.81	-238.947000	Y 377.433
V (292.401 nm)	0.000486	ppm	0.000454	93.28	40.227900	Y 377.433
Zn (206.200 nm)	0.002889	ppm	0.000320	11.09	16.828100	Y 377.433
Zr (343.823 nm)	0.000027 u	ppm	0.000105	> 100.00	41.432500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.926267	16611.704003	0.000021	0.00
Y 377.433	0.927201	904244.624754	0.000672	0.07
Y_R 377.433	0.939758	67609.400000	0.004183	0.45
Y_R 488.368	0.943947	37303.000000	0.002235	0.24
Y_R2 488.368	0.969171	73821.395905	0.006757	0.70

Sample Name: 280-123263-R-1-D

Date: 5/13/2019 10:28:29 PM

Rack:Tube: 2:27

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	-0.004160 nu	ppm	0.007861	> 100.00	-2347.936290	Y_R 488.368
Ag (328.068 nm)	0.000973	ppm	0.000123	12.65	-303.645000	Y 377.433
Al (167.019 nm)	2.101500	ppm	0.032354	1.54	1262.350000	Y_R 377.433
Al H (396.152 nm)	2.460888	ppm	0.021031	0.85	6765.148372	Y_R 377.433
As (188.980 nm)	0.011404	ppm	0.001680	14.73	13.554700	Y 242.219
B (249.678 nm)	0.392130	ppm	0.000102	0.03	9759.440000	Y 242.219
Ba (493.408 nm)	0.043439	ppm	0.000476	1.10	5553.760000	Y_R 488.368
Be (234.861 nm)	-0.000075 u	ppm	0.000004	4.67	177.105000	Y_R 488.368
Bi (223.061 nm)	-0.004642 u	ppm	0.001776	38.26	10.013800	Y 377.433
Ca (315.887 nm)	396.037973 o	ppm	1.016170	0.26	333941.746292	Y_R 377.433
Cd (214.439 nm)	0.000004 u	ppm	0.000010	> 100.00	7.603620	Y 377.433
Co (228.615 nm)	0.019024	ppm	0.000090	0.47	342.502000	Y 242.219
Cr (205.560 nm)	0.006309	ppm	0.000016	0.26	90.065800	Y 377.433
Cu (324.754 nm)	0.002311	ppm	0.000372	16.08	475.327000	Y 377.433
Fe (238.204 nm)	7.055089 o	ppm	0.019124	0.27	25942.690167	Y_R 377.433
Fe H (259.940 nm)	7.180040	ppm	0.009801	0.14	13780.000000	Y_R 377.433
K (766.491 nm)	4.638520	ppm	0.011622	0.25	4589.920000	Y_R2 488.368
Li (670.783 nm)	0.055224	ppm	0.001397	2.53	689.052000	Y_R2 488.368
Mg (279.078 nm)	168.607000 o	ppm	0.104341	0.06	997357.000000	Y 377.433
Mn (257.610 nm)	2.557580 o	ppm	0.002302	0.09	647899.000000	Y 377.433
Mo (202.032 nm)	0.002266	ppm	0.000735	32.45	17.356800	Y 377.433
Na (589.592 nm)	48.361600 o	ppm	0.076743	0.16	315802.000000	Y_R2 488.368
Na H (589.593 nm)	51.608857	ppm	0.168063	0.33	210306.666431	Y_R 488.368
Ni (231.604 nm)	0.020284	ppm	0.000215	1.06	147.841000	Y 377.433
P (213.618 nm)	0.190977	ppm	0.001061	0.56	453.209000	Y 242.219
Pb (220.353 nm)	0.002734	ppm	0.001879	68.73	15.533300	Y 242.219
S (181.972 nm)	264.632730 bo	ppm	0.337071	0.13	115708.537111	Y 377.433
Sb (206.834 nm)	-0.001534 u	ppm	0.000962	62.73	-36.682700	Y 377.433
Se (196.026 nm)	-0.001989 u	ppm	0.001248	62.75	9.565130	Y 242.219
Si (288.158 nm)	12.653000 o	ppm	0.022435	0.18	112148.000000	Y 377.433
Sn (189.925 nm)	0.000168 u	ppm	0.000334	> 100.00	8.566120	Y 377.433
Sr (421.552 nm)	0.999861	ppm	0.004751	0.48	211383.607311	Y_R 488.368
Th (288.505 nm)	0.001396 u	ppm	0.004473	> 100.00	115.231000	Y 377.433
Ti (336.122 nm)	0.072020	ppm	0.000733	1.02	11407.300000	Y 377.433
Tl (190.794 nm)	-0.000120 u	ppm	0.001252	> 100.00	-2.946770	Y 377.433
U (409.013 nm)	-0.020111 u	ppm	0.002283	11.35	-280.173000	Y 377.433
V (292.401 nm)	0.004229	ppm	0.000162	3.83	201.532000	Y 377.433
Zn (206.200 nm)	0.030597	ppm	0.000189	0.62	161.260000	Y 377.433
Zr (343.823 nm)	0.001975	ppm	0.000147	7.43	327.928000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.905897	16246.391520	0.000417	0.05
Y 377.433	0.921839	899016.054898	0.000490	0.05
Y_R 377.433	0.944504	67950.900000	0.005122	0.54
Y_R 488.368	0.948735	37492.200000	0.007189	0.76
Y_R2 488.368	0.968669	73783.137877	0.005457	0.56

Sample Name: 280-123263-R-1-Dsd@5

Date: 5/13/2019 10:31:52 PM

Rack:Tube: 2:28

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.033736 n	ppm	0.046305	> 100.00	-2255.430865	Y_R 488.368
Ag (328.068 nm)	0.001299	ppm	0.000453	34.90	-288.282000	Y 377.433
Al (167.019 nm)	0.499703	ppm	0.012643	2.53	300.246000	Y_R 377.433
Al H (396.152 nm)	0.464502 u	ppm	0.005770	1.24	1543.914686	Y_R 377.433
As (188.980 nm)	0.001015	ppm	0.001034	> 100.00	1.158890	Y 242.219
B (249.678 nm)	0.076283	ppm	0.000012	0.02	1952.870000	Y 242.219
Ba (493.408 nm)	0.008427	ppm	0.000133	1.58	1563.450000	Y_R 488.368
Be (234.861 nm)	-0.000019 u	ppm	0.000015	78.67	18.455800	Y_R 488.368
Bi (223.061 nm)	-0.001500 u	ppm	0.000532	35.47	17.137200	Y 377.433
Ca (315.887 nm)	80.305767 o	ppm	0.302062	0.38	67637.033841	Y_R 377.433
Cd (214.439 nm)	0.000026 u	ppm	0.000066	> 100.00	3.271610	Y 377.433
Co (228.615 nm)	0.004003	ppm	0.000041	1.01	40.691300	Y 242.219
Cr (205.560 nm)	0.001407	ppm	0.000016	1.10	18.556500	Y 377.433
Cu (324.754 nm)	0.001219	ppm	0.000212	17.42	624.207000	Y 377.433
Fe (238.204 nm)	1.443995	ppm	0.002754	0.19	5322.408746	Y_R 377.433
Fe H (259.940 nm)	1.303030 u	ppm	0.007331	0.56	2805.490000	Y_R 377.433
K (766.491 nm)	0.889429	ppm	0.018037	2.03	323.421000	Y_R2 488.368
Li (670.783 nm)	0.015145	ppm	0.000468	3.09	-540.668000	Y_R2 488.368
Mg (279.078 nm)	33.473500	ppm	0.020622	0.06	198023.000000	Y 377.433
Mn (257.610 nm)	0.527156	ppm	0.000116	0.02	133601.000000	Y 377.433
Mo (202.032 nm)	0.000252	ppm	0.000009	3.62	-0.202699	Y 377.433
Na (589.592 nm)	9.385720	ppm	0.033601	0.36	62001.100000	Y_R2 488.368
Na H (589.593 nm)	9.561173	ppm	0.000502	0.01	47817.275941	Y_R 488.368
Ni (231.604 nm)	0.002913	ppm	0.000355	12.19	18.759400	Y 377.433
P (213.618 nm)	0.037716	ppm	0.003806	10.09	102.905000	Y 242.219
Pb (220.353 nm)	0.000695 u	ppm	0.001260	> 100.00	9.533240	Y 242.219
S (181.972 nm)	52.866045 o	ppm	0.022929	0.04	23133.814587	Y 377.433
Sb (206.834 nm)	0.001081	ppm	0.001350	> 100.00	-28.350700	Y 377.433
Se (196.026 nm)	-0.000498 u	ppm	0.005013	> 100.00	10.406300	Y 242.219
Si (288.158 nm)	2.644710	ppm	0.001247	0.05	24102.300000	Y 377.433
Sn (189.925 nm)	0.000089 u	ppm	0.001320	> 100.00	8.400380	Y 377.433
Sr (421.552 nm)	0.195318	ppm	0.000165	0.08	41386.037990	Y_R 488.368
Th (288.505 nm)	0.000113 u	ppm	0.000317	> 100.00	64.788000	Y 377.433
Ti (336.122 nm)	0.018124	ppm	0.001013	5.59	2663.450000	Y 377.433
Tl (190.794 nm)	-0.000097 u	ppm	0.000049	50.67	-2.551040	Y 377.433
U (409.013 nm)	-0.009430 u	ppm	0.003765	39.93	-172.566000	Y 377.433
V (292.401 nm)	0.000558	ppm	0.000452	80.97	44.358700	Y 377.433
Zn (206.200 nm)	0.008620	ppm	0.000327	3.80	46.700800	Y 377.433
Zr (343.823 nm)	0.000409	ppm	0.000010	2.46	97.810200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.946633	16976.949628	0.001431	0.15
Y 377.433	0.951727	928164.249841	0.000998	0.10
Y_R 377.433	0.947761	68185.200000	0.002590	0.27
Y_R 488.368	0.967040	38215.600000	0.001143	0.12
Y_R2 488.368	0.978937	74565.273532	0.006837	0.70

Sample Name: 280-123263-R-1-E MS

Date: 5/13/2019 10:35:15 PM

Rack:Tube: 2:29

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.963074 n	ppm	0.000341	0.04	13.074581	Y_R 488.368
Ag (328.068 nm)	0.052960	ppm	0.000655	1.24	2021.890000	Y 377.433
Al (167.019 nm)	11.432200 o	ppm	0.026524	0.23	6849.640000	Y_R 377.433
Al H (396.152 nm)	13.976301	ppm	0.052754	0.38	36175.763420	Y_R 377.433
As (188.980 nm)	2.055520	ppm	0.001561	0.08	2461.990000	Y 242.219
B (249.678 nm)	1.436990 o	ppm	0.002274	0.16	35636.000000	Y 242.219
Ba (493.408 nm)	2.050170 o	ppm	0.006325	0.31	229936.000000	Y_R 488.368
Be (234.861 nm)	0.985491	ppm	0.001256	0.13	285592.000000	Y_R 488.368
Bi (223.061 nm)	1.999990	ppm	0.005080	0.25	5178.140000	Y 377.433
Ca (315.887 nm)	439.163452 o	ppm	1.235257	0.28	370316.548685	Y_R 377.433
Cd (214.439 nm)	0.937924	ppm	0.002741	0.29	57195.300000	Y 377.433
Co (228.615 nm)	0.932140	ppm	0.004262	0.46	18603.000000	Y 242.219
Cr (205.560 nm)	0.983078	ppm	0.006302	0.64	14638.400000	Y 377.433
Cu (324.754 nm)	0.998995	ppm	0.001299	0.13	66469.100000	Y 377.433
Fe (238.204 nm)	16.728101 o	ppm	0.059503	0.36	61490.169671	Y_R 377.433
Fe H (259.940 nm)	17.411100	ppm	0.027833	0.16	32885.000000	Y_R 377.433
K (766.491 nm)	56.858100	ppm	0.173939	0.31	64016.300000	Y_R2 488.368
Li (670.783 nm)	1.077060	ppm	0.005850	0.54	32041.500000	Y_R2 488.368
Mg (279.078 nm)	214.469000 o	ppm	0.882204	0.41	1268570.000000	Y 377.433
Mn (257.610 nm)	3.447960 o	ppm	0.002208	0.06	873431.000000	Y 377.433
Mo (202.032 nm)	1.013660	ppm	0.001525	0.15	8839.300000	Y 377.433
Na (589.592 nm)	96.583900 o	ppm	0.063314	0.07	633739.000000	Y_R2 488.368
Na H (589.593 nm)	102.650593	ppm	0.371704	0.36	409505.125071	Y_R 488.368
Ni (231.604 nm)	0.944928	ppm	0.002656	0.28	7007.800000	Y 377.433
P (213.618 nm)	20.389900 o	ppm	0.042403	0.21	46621.100000	Y 242.219
Pb (220.353 nm)	0.956460	ppm	0.001221	0.13	2926.780000	Y 242.219
S (181.972 nm)	272.374558 bo	ppm	0.934366	0.34	119094.620741	Y 377.433
Sb (206.834 nm)	1.050690	ppm	0.000168	0.02	2796.690000	Y 377.433
Se (196.026 nm)	1.987800	ppm	0.011330	0.57	1862.060000	Y 242.219
Si (288.158 nm)	15.887300 o	ppm	0.011696	0.07	140601.000000	Y 377.433
Sn (189.925 nm)	1.956150	ppm	0.003901	0.20	4156.290000	Y 377.433
Sr (421.552 nm)	1.980217 o	ppm	0.006195	0.31	418529.785986	Y_R 488.368
Th (288.505 nm)	1.005620	ppm	0.007311	0.73	3136.190000	Y 377.433
Ti (336.122 nm)	1.046780	ppm	0.001723	0.16	151544.000000	Y 377.433
Tl (190.794 nm)	1.878590	ppm	0.001397	0.07	4331.990000	Y 377.433
U (409.013 nm)	2.071340	ppm	0.007378	0.36	9528.300000	Y 377.433
V (292.401 nm)	1.013410	ppm	0.001077	0.11	42548.800000	Y 377.433
Zn (206.200 nm)	0.491002	ppm	0.000404	0.08	2561.150000	Y 377.433
Zr (343.823 nm)	0.473377	ppm	0.000337	0.07	64417.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.886626	15900.782927	0.002389	0.27
Y 377.433	0.902315	879974.878823	0.002977	0.33
Y_R 377.433	0.917026	65974.000000	0.003548	0.39
Y_R 488.368	0.928515	36693.100000	0.002860	0.31
Y_R2 488.368	0.933544	71107.685537	0.006698	0.72

Sample Name: 280-123263-R-1-F MSD

Date: 5/13/2019 10:38:37 PM

Rack:Tube: 2:30

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.984111 n	ppm	0.002215	0.23	64.426380	Y_R 488.368
Ag (328.068 nm)	0.053903	ppm	0.000173	0.32	2064.300000	Y 377.433
Al (167.019 nm)	11.588100 o	ppm	0.043952	0.38	6943.090000	Y_R 377.433
Al H (396.152 nm)	14.280665	ppm	0.054056	0.38	36955.871565	Y_R 377.433
As (188.980 nm)	2.089250	ppm	0.003503	0.17	2502.390000	Y 242.219
B (249.678 nm)	1.463980 o	ppm	0.002260	0.15	36304.100000	Y 242.219
Ba (493.408 nm)	2.077380 o	ppm	0.011702	0.56	232982.000000	Y_R 488.368
Be (234.861 nm)	1.006480	ppm	0.003574	0.36	291672.000000	Y_R 488.368
Bi (223.061 nm)	2.032870	ppm	0.002592	0.13	5262.930000	Y 377.433
Ca (315.887 nm)	448.812825 o	ppm	0.854357	0.19	378455.333491	Y_R 377.433
Cd (214.439 nm)	0.952776	ppm	0.002550	0.27	58101.100000	Y 377.433
Co (228.615 nm)	0.946912	ppm	0.003471	0.37	18899.100000	Y 242.219
Cr (205.560 nm)	1.000120	ppm	0.002191	0.22	14892.200000	Y 377.433
Cu (324.754 nm)	1.014320	ppm	0.001702	0.17	67478.400000	Y 377.433
Fe (238.204 nm)	17.018909 o	ppm	0.043953	0.26	62558.863155	Y_R 377.433
Fe H (259.940 nm)	17.683200	ppm	0.015987	0.09	33393.100000	Y_R 377.433
K (766.491 nm)	57.488500	ppm	0.080306	0.14	64733.700000	Y_R2 488.368
Li (670.783 nm)	1.092410	ppm	0.005702	0.52	32512.500000	Y_R2 488.368
Mg (279.078 nm)	220.174000 o	ppm	1.257530	0.57	1302310.000000	Y 377.433
Mn (257.610 nm)	3.527390 o	ppm	0.006222	0.18	893550.000000	Y 377.433
Mo (202.032 nm)	1.028190	ppm	0.002470	0.24	8966.060000	Y 377.433
Na (589.592 nm)	97.602400 o	ppm	0.035079	0.04	640424.000000	Y_R2 488.368
Na H (589.593 nm)	104.296150	ppm	0.109798	0.11	415889.942584	Y_R 488.368
Ni (231.604 nm)	0.955525	ppm	0.002620	0.27	7086.440000	Y 377.433
P (213.618 nm)	20.759200 o	ppm	0.047071	0.23	47465.300000	Y 242.219
Pb (220.353 nm)	0.969190	ppm	0.003449	0.36	2965.630000	Y 242.219
S (181.972 nm)	278.172317 bo	ppm	1.207555	0.43	121629.188555	Y 377.433
Sb (206.834 nm)	1.068360	ppm	0.006005	0.56	2844.220000	Y 377.433
Se (196.026 nm)	2.022980	ppm	0.011549	0.57	1894.840000	Y 242.219
Si (288.158 nm)	16.452700 o	ppm	0.021908	0.13	145575.000000	Y 377.433
Sn (189.925 nm)	1.986660	ppm	0.010894	0.55	4221.000000	Y 377.433
Sr (421.552 nm)	2.016366 o	ppm	0.010760	0.53	426168.011908	Y_R 488.368
Th (288.505 nm)	1.028950	ppm	0.006790	0.66	3207.390000	Y 377.433
Ti (336.122 nm)	1.078300	ppm	0.002272	0.21	156102.000000	Y 377.433
Tl (190.794 nm)	1.913650	ppm	0.001381	0.07	4412.820000	Y 377.433
U (409.013 nm)	2.110030	ppm	0.002745	0.13	9708.090000	Y 377.433
V (292.401 nm)	1.029870	ppm	0.001351	0.13	43240.200000	Y 377.433
Zn (206.200 nm)	0.502091	ppm	0.001236	0.25	2618.950000	Y 377.433
Zr (343.823 nm)	0.482229	ppm	0.000342	0.07	65620.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.879816	15778.651274	0.000288	0.03
Y 377.433	0.894817	872662.407899	0.000748	0.08
Y_R 377.433	0.904711	65088.100000	0.001106	0.12
Y_R 488.368	0.915436	36176.300000	0.003594	0.39
Y_R2 488.368	0.934663	71192.972760	0.001400	0.15

Sample Name: 280-123277-E-1-B

Date: 5/13/2019 10:42:00 PM

Rack:Tube: 2:31

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.076626 n	ppm	0.015651	20.43	-2150.737693	Y_R 488.368
Ag (328.068 nm)	0.000693	ppm	0.000504	72.75	-319.742000	Y 377.433
Al (167.019 nm)	13.207400 o	ppm	0.004373	0.03	7914.540000	Y_R 377.433
Al H (396.152 nm)	15.033966	ppm	0.030189	0.20	38607.498648	Y_R 377.433
As (188.980 nm)	0.008578	ppm	0.000786	9.17	10.047100	Y 242.219
B (249.678 nm)	0.457985	ppm	0.000049	0.01	11366.700000	Y 242.219
Ba (493.408 nm)	0.211172	ppm	0.000885	0.42	24238.100000	Y_R 488.368
Be (234.861 nm)	0.000857	ppm	0.000033	3.83	887.186000	Y_R 488.368
Bi (223.061 nm)	-0.005488 u	ppm	0.002470	45.00	10.285000	Y 377.433
Ca (315.887 nm)	36.336005 o	ppm	0.123637	0.34	30550.685186	Y_R 377.433
Cd (214.439 nm)	0.000400	ppm	0.000132	33.03	46.022300	Y 377.433
Co (228.615 nm)	0.010110	ppm	0.000038	0.38	170.626000	Y 242.219
Cr (205.560 nm)	0.035119	ppm	0.000387	1.10	515.631000	Y 377.433
Cu (324.754 nm)	0.022790	ppm	0.000337	1.48	2107.670000	Y 377.433
Fe (238.204 nm)	21.171402 o	ppm	0.097746	0.46	77818.914324	Y_R 377.433
Fe H (259.940 nm)	21.880600	ppm	0.086485	0.40	41231.200000	Y_R 377.433
K (766.491 nm)	7.401430	ppm	0.057755	0.78	7734.130000	Y_R2 488.368
Li (670.783 nm)	0.065666	ppm	0.001633	2.49	1009.460000	Y_R2 488.368
Mg (279.078 nm)	17.295600	ppm	0.017033	0.10	102292.000000	Y 377.433
Mn (257.610 nm)	0.487369	ppm	0.000317	0.06	123523.000000	Y 377.433
Mo (202.032 nm)	0.002542	ppm	0.000077	3.05	19.768800	Y 377.433
Na (589.592 nm)	165.567000 o	ppm	0.808680	0.49	1079130.000000	Y_R2 488.368
Na H (589.593 nm)	171.058255	ppm	0.830025	0.49	671973.900205	Y_R 488.368
Ni (231.604 nm)	0.030954	ppm	0.000205	0.66	227.618000	Y 377.433
P (213.618 nm)	0.612917	ppm	0.004575	0.75	1417.620000	Y 242.219
Pb (220.353 nm)	0.037555	ppm	0.000863	2.30	118.966000	Y 242.219
S (181.972 nm)	11.441935 o	ppm	0.018832	0.16	5025.836124	Y 377.433
Sb (206.834 nm)	-0.001464 u	ppm	0.001252	85.51	-39.924700	Y 377.433
Se (196.026 nm)	-0.000403 u	ppm	0.002182	> 100.00	7.006930	Y 242.219
Si (288.158 nm)	27.868900 o	ppm	0.156773	0.56	246006.000000	Y 377.433
Sn (189.925 nm)	0.002727	ppm	0.000060	2.22	13.993100	Y 377.433
Sr (421.552 nm)	0.250889	ppm	0.001020	0.41	53128.171009	Y_R 488.368
Th (288.505 nm)	0.007016	ppm	0.001128	16.08	83.939400	Y 377.433
Ti (336.122 nm)	0.225074	ppm	0.002114	0.94	32247.000000	Y 377.433
Tl (190.794 nm)	0.001782	ppm	0.001360	76.30	0.285731	Y 377.433
U (409.013 nm)	-0.020138 u	ppm	0.000449	2.23	-195.143000	Y 377.433
V (292.401 nm)	0.026125	ppm	0.000191	0.73	1121.740000	Y 377.433
Zn (206.200 nm)	0.045566	ppm	0.000666	1.46	239.285000	Y 377.433
Zr (343.823 nm)	0.006079	ppm	0.000337	5.54	929.485000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.941801	16890.287615	0.000056	0.01
Y 377.433	0.940145	916868.748015	0.000193	0.02
Y_R 377.433	0.946334	68082.600000	0.008348	0.88
Y_R 488.368	0.960221	37946.100000	0.009718	1.01
Y_R2 488.368	0.961304	73222.194231	0.001294	0.13

Sample Name: CCVH-5699817

Date: 5/13/2019 10:45:23 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.030934	ppm	0.009001	29.10	-2262.270955	Y_R 488.368
Ag (328.068 nm)	0.000467	ppm	0.000050	10.74	-580.395000	Y 377.433
Al (167.019 nm)	42.153500 o	ppm	0.041490	0.10	25245.400000	Y_R 377.433
Al H (396.152 nm)	49.977549	ppm	0.114569	0.23	127531.249468	Y_R 377.433
As (188.980 nm)	0.003012	ppm	0.000586	19.44	3.144090	Y 242.219
B (249.678 nm)	0.001842	ppm	0.000202	10.98	39.075200	Y 242.219
Ba (493.408 nm)	0.002198	ppm	0.000099	4.52	892.413000	Y_R 488.368
Be (234.861 nm)	0.000886	ppm	0.000040	4.54	1744.520000	Y_R 488.368
Bi (223.061 nm)	0.994540	ppm	0.000680	0.07	2592.310000	Y 377.433
Ca (315.887 nm)	0.011669	ppm	0.001181	10.12	-87.118599	Y_R 377.433
Cd (214.439 nm)	0.001154	ppm	0.000039	3.40	119.374000	Y 377.433
Co (228.615 nm)	0.004182	ppm	0.000010	0.24	43.657400	Y 242.219
Cr (205.560 nm)	0.001270	ppm	0.000099	7.83	3.501590	Y 377.433
Cu (324.754 nm)	0.009580	ppm	0.000162	1.69	1631.470000	Y 377.433
Fe (238.204 nm)	48.204727 o	ppm	0.118312	0.25	177164.035914	Y_R 377.433
Fe H (259.940 nm)	50.140600	ppm	0.087013	0.17	94002.700000	Y_R 377.433
K (766.491 nm)	0.032281	ppm	0.034155	> 100.00	-652.020000	Y_R2 488.368
Li (670.783 nm)	0.005941	ppm	0.000911	15.33	-823.044000	Y_R2 488.368
Mg (279.078 nm)	0.033466	ppm	0.000692	2.07	-146.255000	Y 377.433
Mn (257.610 nm)	0.002878	ppm	0.000025	0.87	803.556000	Y 377.433
Mo (202.032 nm)	0.000405	ppm	0.000127	31.30	1.125290	Y 377.433
Na (589.592 nm)	236.579000 o	ppm	0.709878	0.30	1540990.000000	Y_R2 488.368
Na H (589.593 nm)	245.925063	ppm	0.978788	0.40	961017.144840	Y_R 488.368
Ni (231.604 nm)	0.004884	ppm	0.000382	7.82	35.537600	Y 377.433
P (213.618 nm)	-0.004149 u	ppm	0.000868	20.92	7.217520	Y 242.219
Pb (220.353 nm)	0.002992	ppm	0.001095	36.61	34.881600	Y 242.219
S (181.972 nm)	4.885163	ppm	0.005294	0.11	2158.631362	Y 377.433
Sb (206.834 nm)	-0.005281 u	ppm	0.001084	20.52	-90.030800	Y 377.433
Se (196.026 nm)	0.002963	ppm	0.000199	6.73	5.101790	Y 242.219
Si (288.158 nm)	0.056482	ppm	0.001144	2.03	1332.950000	Y 377.433
Sn (189.925 nm)	0.003743	ppm	0.000333	8.90	16.148200	Y 377.433
Sr (421.552 nm)	0.001996	ppm	0.000148	7.41	537.751033	Y_R 488.368
Th (288.505 nm)	5.057020	ppm	0.008287	0.16	15090.000000	Y 377.433
Ti (336.122 nm)	0.002271	ppm	0.000089	3.91	131.659000	Y 377.433
Tl (190.794 nm)	-0.002520 u	ppm	0.002182	86.58	-9.417190	Y 377.433
U (409.013 nm)	10.171700	ppm	0.002813	0.03	47817.300000	Y 377.433
V (292.401 nm)	0.004799	ppm	0.000028	0.58	29.645000	Y 377.433
Zn (206.200 nm)	0.003257	ppm	0.000548	16.83	18.745300	Y 377.433
Zr (343.823 nm)	-0.002818 u	ppm	0.000004	0.14	-195.664000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.934072	16751.673567	0.003354	0.36
Y 377.433	0.926871	903923.129714	0.002078	0.22
Y_R 377.433	0.924753	66530.000000	0.001544	0.17
Y_R 488.368	0.944022	37305.900000	0.005960	0.63
Y_R2 488.368	0.945466	72015.840266	0.003562	0.38

Sample Name: CCV-5699804

Date: 5/13/2019 10:48:46 PM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.938457	ppm	0.020528	2.19	-47.015294	Y_R 488.368
Ag (328.068 nm)	0.495487	ppm	0.001512	0.31	22937.900000	Y 377.433
Al (167.019 nm)	0.476958	ppm	0.006015	1.26	287.397000	Y_R 377.433
Al H (396.152 nm)	0.429528 u	ppm	0.002073	0.48	1462.381665	Y_R 377.433
As (188.980 nm)	0.972411	ppm	0.005043	0.52	1164.730000	Y 242.219
B (249.678 nm)	0.492245	ppm	0.001562	0.32	12264.400000	Y 242.219
Ba (493.408 nm)	0.492119	ppm	0.002019	0.41	55631.800000	Y_R 488.368
Be (234.861 nm)	0.488131	ppm	0.001266	0.26	141262.000000	Y_R 488.368
Bi (223.061 nm)	-0.001882 u	ppm	0.000677	35.99	16.328100	Y 377.433
Ca (315.887 nm)	5.017718	ppm	0.010924	0.22	4135.539233	Y_R 377.433
Cd (214.439 nm)	0.500990	ppm	0.001143	0.23	30544.300000	Y 377.433
Co (228.615 nm)	0.495421	ppm	0.000334	0.07	9866.520000	Y 242.219
Cr (205.560 nm)	0.499318	ppm	0.001222	0.24	7435.850000	Y 377.433
Cu (324.754 nm)	0.493015	ppm	0.000883	0.18	33221.900000	Y 377.433
Fe (238.204 nm)	2.457083	ppm	0.012409	0.51	9045.418978	Y_R 377.433
Fe H (259.940 nm)	2.385860 u	ppm	0.000858	0.04	4827.530000	Y_R 377.433
K (766.491 nm)	48.377300	ppm	0.039607	0.08	54365.000000	Y_R2 488.368
Li (670.783 nm)	0.976489	ppm	0.004522	0.46	28955.700000	Y_R2 488.368
Mg (279.078 nm)	19.611200	ppm	0.007631	0.04	116023.000000	Y 377.433
Mn (257.610 nm)	0.498253	ppm	0.000584	0.12	126280.000000	Y 377.433
Mo (202.032 nm)	0.504046	ppm	0.001463	0.29	4394.160000	Y 377.433
Na (589.592 nm)	4.828530	ppm	0.011748	0.24	33301.000000	Y_R2 488.368
Na H (589.593 nm)	4.939341 u	ppm	0.054050	1.09	30440.987286	Y_R 488.368
Ni (231.604 nm)	0.508571	ppm	0.000472	0.09	3770.020000	Y 377.433
P (213.618 nm)	0.969272	ppm	0.001153	0.12	2232.130000	Y 242.219
Pb (220.353 nm)	0.990305	ppm	0.000219	0.02	3029.910000	Y 242.219
S (181.972 nm)	0.000810 u	ppm	0.006536	> 100.00	24.551971	Y 377.433
Sb (206.834 nm)	1.021550	ppm	0.002352	0.23	2715.920000	Y 377.433
Se (196.026 nm)	0.959247	ppm	0.001240	0.13	904.187000	Y 242.219
Si (288.158 nm)	4.955770	ppm	0.024323	0.49	44433.300000	Y 377.433
Sn (189.925 nm)	0.999526	ppm	0.005267	0.53	2127.740000	Y 377.433
Sr (421.552 nm)	0.489299	ppm	0.001269	0.26	103503.482576	Y_R 488.368
Th (288.505 nm)	0.002204	ppm	0.000102	4.64	77.168600	Y 377.433
Ti (336.122 nm)	0.498608	ppm	0.000804	0.16	71433.600000	Y 377.433
Tl (190.794 nm)	1.004650	ppm	0.000427	0.04	2316.190000	Y 377.433
U (409.013 nm)	-0.003427 u	ppm	0.000616	17.99	-168.718000	Y 377.433
V (292.401 nm)	0.496634	ppm	0.000694	0.14	20875.200000	Y 377.433
Zn (206.200 nm)	0.498810	ppm	0.001906	0.38	2601.850000	Y 377.433
Zr (343.823 nm)	0.501733	ppm	0.001029	0.21	68226.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.945169	16950.698048	0.001092	0.12
Y 377.433	0.945799	922382.666376	0.000399	0.04
Y_R 377.433	0.943474	67876.800000	0.003669	0.39
Y_R 488.368	0.956015	37779.900000	0.004266	0.45
Y_R2 488.368	0.969993	73884.013685	0.002678	0.28

Sample Name: CCB

Date: 5/13/2019 10:52:08 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.010438 Z	ppm	0.014011	> 100.00	-2312.301392 Z	Y_R 488.368
Ag (328.068 nm)	0.000644	ppm	0.000010	1.60	-318.806000	Y 377.433
Al (167.019 nm)	0.007335	ppm	0.001065	14.52	4.723540	Y_R 377.433
Al H (396.152 nm)	-0.106302 Zu	ppm	0.004850	4.56	55.563318 Z	Y_R 377.433
As (188.980 nm)	-0.002588 u	ppm	0.001482	57.26	-3.144860	Y 242.219
B (249.678 nm)	0.001000	ppm	0.000366	36.64	92.306900	Y 242.219
Ba (493.408 nm)	-0.000315 u	ppm	0.000027	8.63	566.708000	Y_R 488.368
Be (234.861 nm)	0.000031	ppm	0.000008	24.56	-11.934100	Y_R 488.368
Bi (223.061 nm)	-0.001052 u	ppm	0.000104	9.88	18.041700	Y 377.433
Ca (315.887 nm)	0.011840	ppm	0.003265	27.58	-86.976385	Y_R 377.433
Cd (214.439 nm)	-0.000007 u	ppm	0.000049	> 100.00	-0.184982	Y 377.433
Co (228.615 nm)	0.000472	ppm	0.000108	22.80	-30.434600	Y 242.219
Cr (205.560 nm)	0.000147	ppm	0.000157	> 100.00	0.177202	Y 377.433
Cu (324.754 nm)	0.001013	ppm	0.000040	3.96	664.771000	Y 377.433
Fe (238.204 nm)	0.005547	ppm	0.001149	20.72	36.234295	Y_R 377.433
Fe H (259.940 nm)	-0.190028 u	ppm	0.000471	0.25	17.424900	Y_R 377.433
K (766.491 nm)	-0.060076 u	ppm	0.037383	62.23	-757.123000	Y_R2 488.368
Li (670.783 nm)	0.005190	ppm	0.001693	32.61	-846.090000	Y_R2 488.368
Mg (279.078 nm)	0.003764	ppm	0.000334	8.87	44.818900	Y 377.433
Mn (257.610 nm)	0.000023	ppm	0.000000	1.10	80.519000	Y 377.433
Mo (202.032 nm)	0.000507	ppm	0.000174	34.35	2.015650	Y 377.433
Na (589.592 nm)	0.074664	ppm	0.007866	10.53	1370.010000	Y_R2 488.368
Na H (589.593 nm)	-0.556182 u	ppm	0.033570	6.04	8719.783240	Y_R 488.368
Ni (231.604 nm)	0.000871	ppm	0.000151	17.39	3.548110	Y 377.433
P (213.618 nm)	-0.002432 u	ppm	0.000744	30.57	11.140700	Y 242.219
Pb (220.353 nm)	-0.000441 u	ppm	0.001358	> 100.00	6.124400	Y 242.219
S (181.972 nm)	-0.013590 u	ppm	0.004854	35.72	17.212752	Y 377.433
Sb (206.834 nm)	0.002390	ppm	0.000124	5.20	-24.501300	Y 377.433
Se (196.026 nm)	-0.001345 u	ppm	0.001285	95.55	9.469990	Y 242.219
Si (288.158 nm)	0.002298	ppm	0.000357	15.55	856.284000	Y 377.433
Sn (189.925 nm)	0.000145 u	ppm	0.001581	> 100.00	8.518550	Y 377.433
Sr (421.552 nm)	-0.000022 u	ppm	0.000089	> 100.00	111.247901	Y_R 488.368
Th (288.505 nm)	-0.000602 u	ppm	0.000217	36.07	50.443800	Y 377.433
Ti (336.122 nm)	0.000046	ppm	0.000015	33.63	-188.052000	Y 377.433
Tl (190.794 nm)	0.000055 u	ppm	0.000529	> 100.00	-2.094230	Y 377.433
U (409.013 nm)	-0.006784 u	ppm	0.000152	2.24	-145.546000	Y 377.433
V (292.401 nm)	-0.000273 u	ppm	0.000194	70.95	7.977920	Y 377.433
Zn (206.200 nm)	-0.000290 u	ppm	0.000188	64.71	0.256686	Y 377.433
Zr (343.823 nm)	0.000136	ppm	0.000025	18.13	56.269800	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.944304	16935.174242	0.001034	0.11
Y 377.433	0.945098	921699.133736	0.000801	0.08
Y_R 377.433	0.938439	67514.500000	0.003018	0.32
Y_R 488.368	0.947586	37446.800000	0.001584	0.17
Y_R2 488.368	0.963758	73409.110517	0.000191	0.02

Sample Name: CCVL-5699389

Date: 5/13/2019 10:55:30 PM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.023043	ppm	0.000855	3.71	-2281.532342	Y_R 488.368
Ag (328.068 nm)	0.009669	ppm	0.000155	1.60	104.564000	Y 377.433
Al (167.019 nm)	0.094625	ppm	0.002306	2.44	56.999200	Y_R 377.433
Al H (396.152 nm)	-0.014885 u	ppm	0.000010	0.07	289.832079	Y_R 377.433
As (188.980 nm)	0.013268	ppm	0.001919	14.46	15.848000	Y 242.219
B (249.678 nm)	0.097241	ppm	0.000076	0.08	2473.720000	Y 242.219
Ba (493.408 nm)	0.010050	ppm	0.000200	1.99	1725.640000	Y_R 488.368
Be (234.861 nm)	0.000969	ppm	0.000018	1.87	261.661000	Y_R 488.368
Bi (223.061 nm)	0.099316	ppm	0.001369	1.38	276.733000	Y 377.433
Ca (315.887 nm)	0.207954	ppm	0.004422	2.13	78.439209	Y_R 377.433
Cd (214.439 nm)	0.005046	ppm	0.000029	0.57	307.921000	Y 377.433
Co (228.615 nm)	0.010499	ppm	0.000246	2.34	170.017000	Y 242.219
Cr (205.560 nm)	0.010049	ppm	0.000178	1.77	147.715000	Y 377.433
Cu (324.754 nm)	0.015688	ppm	0.000096	0.61	1634.920000	Y 377.433
Fe (238.204 nm)	0.103784	ppm	0.000568	0.55	397.247741	Y_R 377.433
Fe H (259.940 nm)	-0.091888 u	ppm	0.001589	1.73	200.688000	Y_R 377.433
K (766.491 nm)	2.930410	ppm	0.009429	0.32	2646.070000	Y_R2 488.368
Li (670.783 nm)	0.024296	ppm	0.000444	1.83	-259.887000	Y_R2 488.368
Mg (279.078 nm)	0.194724	ppm	0.002040	1.05	1173.140000	Y 377.433
Mn (257.610 nm)	0.010299	ppm	0.000053	0.51	2683.330000	Y 377.433
Mo (202.032 nm)	0.019193	ppm	0.000392	2.04	165.007000	Y 377.433
Na (589.592 nm)	0.989682	ppm	0.003699	0.37	7347.090000	Y_R2 488.368
Na H (589.593 nm)	0.244264 u	ppm	0.019383	7.94	11822.495343	Y_R 488.368
Ni (231.604 nm)	0.041816	ppm	0.000226	0.54	307.216000	Y 377.433
P (213.618 nm)	2.786030 o	ppm	0.009451	0.34	6384.620000	Y 242.219
Pb (220.353 nm)	0.007915	ppm	0.000570	7.20	31.651800	Y 242.219
S (181.972 nm)	0.074660	ppm	0.003947	5.29	55.811044	Y 377.433
Sb (206.834 nm)	0.019343	ppm	0.000029	0.15	21.012100	Y 377.433
Se (196.026 nm)	0.018021	ppm	0.000228	1.27	27.499200	Y 242.219
Si (288.158 nm)	0.590336	ppm	0.024942	4.23	6029.400000	Y 377.433
Sn (189.925 nm)	0.100318	ppm	0.000974	0.97	220.939000	Y 377.433
Sr (421.552 nm)	0.009932	ppm	0.000015	0.15	2214.690321	Y_R 488.368
Th (288.505 nm)	0.015268	ppm	0.002245	14.70	98.432000	Y 377.433
Ti (336.122 nm)	0.009700	ppm	0.000082	0.84	1199.050000	Y 377.433
Tl (190.794 nm)	0.013242	ppm	0.000478	3.61	28.304300	Y 377.433
U (409.013 nm)	0.059635	ppm	0.000426	0.71	166.328000	Y 377.433
V (292.401 nm)	0.009719	ppm	0.000161	1.66	425.625000	Y 377.433
Zn (206.200 nm)	0.020183	ppm	0.000026	0.13	106.973000	Y 377.433
Zr (343.823 nm)	0.010831	ppm	0.000146	1.35	1509.810000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.949896	17035.463773	0.000534	0.06
Y 377.433	0.950054	926532.052457	0.001276	0.13
Y_R 377.433	0.943680	67891.600000	0.002924	0.31
Y_R 488.368	0.955612	37763.900000	0.000075	0.01
Y_R2 488.368	0.966311	73603.604302	0.007689	0.80

Sample Name: 280-123277-E-2-B

Date: 5/13/2019 10:58:53 PM

Rack:Tube: 2:32

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	-0.021091 nu	ppm	0.036406	> 100.00	-2389.265164	Y_R 488.368
Ag (328.068 nm)	0.001430	ppm	0.000095	6.66	-282.237000	Y 377.433
Al (167.019 nm)	0.046606	ppm	0.003761	8.07	44.982100	Y_R 377.433
Al H (396.152 nm)	0.030484 u	ppm	0.020599	67.57	625.364560	Y_R 377.433
As (188.980 nm)	0.001078	ppm	0.000337	31.27	1.051090	Y 242.219
B (249.678 nm)	1.261200 o	ppm	0.000941	0.07	31236.800000	Y 242.219
Ba (493.408 nm)	0.022127	ppm	0.000207	0.93	3208.850000	Y_R 488.368
Be (234.861 nm)	-0.000417 u	ppm	0.000002	0.46	561.339000	Y_R 488.368
Bi (223.061 nm)	-0.003396 u	ppm	0.000232	6.84	15.916200	Y 377.433
Ca (315.887 nm)	499.552592 o	ppm	0.406357	0.08	421251.277858	Y_R 377.433
Cd (214.439 nm)	-0.000050 u	ppm	0.000052	> 100.00	19.969100	Y 377.433
Co (228.615 nm)	0.000696	ppm	0.000164	23.49	-25.931000	Y 242.219
Cr (205.560 nm)	0.001310	ppm	0.000081	6.15	11.225600	Y 377.433
Cu (324.754 nm)	-0.001555 u	ppm	0.000199	12.80	164.874000	Y 377.433
Fe (238.204 nm)	22.534898 o	ppm	0.035525	0.16	82829.644038	Y_R 377.433
Fe H (259.940 nm)	23.377600	ppm	0.054648	0.23	44026.600000	Y_R 377.433
K (766.491 nm)	15.423100	ppm	0.086747	0.56	16862.900000	Y_R2 488.368
Li (670.783 nm)	0.126734	ppm	0.000878	0.69	2883.170000	Y_R2 488.368
Mg (279.078 nm)	172.689000 o	ppm	0.061168	0.04	1021480.000000	Y 377.433
Mn (257.610 nm)	3.288010 o	ppm	0.007341	0.22	832914.000000	Y 377.433
Mo (202.032 nm)	0.007180	ppm	0.000227	3.17	60.227400	Y 377.433
Na (589.592 nm)	295.635000 o	ppm	1.740270	0.59	1925480.000000	Y_R2 488.368
Na H (589.593 nm)	311.737314	ppm	1.768437	0.57	1215309.390911	Y_R 488.368
Ni (231.604 nm)	0.042544	ppm	0.001132	2.66	313.637000	Y 377.433
P (213.618 nm)	0.025782	ppm	0.003658	14.19	75.628700	Y 242.219
Pb (220.353 nm)	0.001627	ppm	0.000105	6.47	14.486100	Y 242.219
S (181.972 nm)	628.431924 bo	ppm	0.930907	0.15	274739.155999	Y 377.433
Sb (206.834 nm)	-0.002590 u	ppm	0.002001	77.27	-43.239000	Y 377.433
Se (196.026 nm)	0.001010 u	ppm	0.001730	> 100.00	9.953460	Y 242.219
Si (288.158 nm)	6.743670	ppm	0.013667	0.20	60161.900000	Y 377.433
Sn (189.925 nm)	0.001771	ppm	0.001590	89.78	11.967100	Y 377.433
Sr (421.552 nm)	1.767335 o	ppm	0.014750	0.83	373548.451893	Y_R 488.368
Th (288.505 nm)	0.009376	ppm	0.003135	33.44	154.786000	Y 377.433
Ti (336.122 nm)	-0.000120 u	ppm	0.000056	46.50	1374.730000	Y 377.433
Tl (190.794 nm)	-0.000014 u	ppm	0.001759	> 100.00	-2.920640	Y 377.433
U (409.013 nm)	-0.007889 u	ppm	0.001487	18.85	-227.701000	Y 377.433
V (292.401 nm)	0.000236	ppm	0.000151	63.80	33.235300	Y 377.433
Zn (206.200 nm)	0.023145	ppm	0.000160	0.69	122.413000	Y 377.433
Zr (343.823 nm)	0.000163	ppm	0.000207	> 100.00	129.758000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.873027	15656.897675	0.006827	0.78
Y 377.433	0.885277	863359.281589	0.007042	0.80
Y_R 377.433	0.894479	64351.900000	0.004784	0.53
Y_R 488.368	0.908062	35884.800000	0.001444	0.16
Y_R2 488.368	0.909647	69287.454600	0.001778	0.20

Sample Name: 280-123277-E-3-B

Date: 5/13/2019 11:02:15 PM

Rack:Tube: 2:33

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.032896 n	ppm	0.003664	11.14	-2257.481409	Y_R 488.368
Ag (328.068 nm)	0.001383	ppm	0.000024	1.74	-284.563000	Y 377.433
Al (167.019 nm)	1.548850	ppm	0.004955	0.32	932.643000	Y_R 377.433
Al H (396.152 nm)	1.791734	ppm	0.004257	0.24	5029.035233	Y_R 377.433
As (188.980 nm)	0.000958	ppm	0.000195	20.31	1.032370	Y 242.219
B (249.678 nm)	0.570268	ppm	0.000416	0.07	14165.200000	Y 242.219
Ba (493.408 nm)	0.124740	ppm	0.001054	0.85	14627.400000	Y_R 488.368
Be (234.861 nm)	-0.000211 u	ppm	0.000013	5.98	171.253000	Y_R 488.368
Bi (223.061 nm)	-0.004428 u	ppm	0.002223	50.21	10.751500	Y 377.433
Ca (315.887 nm)	322.031322 o	ppm	1.771027	0.55	271520.747192	Y_R 377.433
Cd (214.439 nm)	0.000346	ppm	0.000037	10.73	29.554200	Y 377.433
Co (228.615 nm)	0.018303	ppm	0.000122	0.67	327.673000	Y 242.219
Cr (205.560 nm)	0.002926	ppm	0.000220	7.50	39.340300	Y 377.433
Cu (324.754 nm)	0.005164	ppm	0.000051	0.98	723.162000	Y 377.433
Fe (238.204 nm)	8.127413 o	ppm	0.021870	0.27	29883.387191	Y_R 377.433
Fe H (259.940 nm)	8.288300	ppm	0.047400	0.57	15849.500000	Y_R 377.433
K (766.491 nm)	10.971100	ppm	0.081810	0.75	11796.500000	Y_R2 488.368
Li (670.783 nm)	0.040096	ppm	0.000396	0.99	224.886000	Y_R2 488.368
Mg (279.078 nm)	199.838000 o	ppm	1.002160	0.50	1182090.000000	Y 377.433
Mn (257.610 nm)	4.701610 o	ppm	0.002336	0.05	1190970.000000	Y 377.433
Mo (202.032 nm)	0.000230	ppm	0.000170	74.13	-0.400711	Y 377.433
Na (589.592 nm)	78.107600 o	ppm	0.154434	0.20	509608.000000	Y_R2 488.368
Na H (589.593 nm)	82.953125	ppm	0.385637	0.46	331488.071974	Y_R 488.368
Ni (231.604 nm)	0.007246	ppm	0.000273	3.77	51.203800	Y 377.433
P (213.618 nm)	0.169558	ppm	0.001658	0.98	404.253000	Y 242.219
Pb (220.353 nm)	0.003899	ppm	0.000228	5.84	19.465000	Y 242.219
S (181.972 nm)	325.756090 bo	ppm	1.027578	0.32	142432.149361	Y 377.433
Sb (206.834 nm)	-0.000067 u	ppm	0.000444	> 100.00	-33.069700	Y 377.433
Se (196.026 nm)	0.000025 u	ppm	0.005401	> 100.00	12.877900	Y 242.219
Si (288.158 nm)	11.046400 o	ppm	0.064526	0.58	98014.500000	Y 377.433
Sn (189.925 nm)	0.003300	ppm	0.000281	8.53	15.209200	Y 377.433
Sr (421.552 nm)	0.918738	ppm	0.005283	0.58	194242.586685	Y_R 488.368
Th (288.505 nm)	0.009018	ppm	0.002997	33.23	187.468000	Y 377.433
Ti (336.122 nm)	0.060688	ppm	0.000667	1.10	9544.520000	Y 377.433
Tl (190.794 nm)	-0.001950 u	ppm	0.000348	17.83	-7.151170	Y 377.433
U (409.013 nm)	-0.015906 u	ppm	0.001816	11.42	-244.606000	Y 377.433
V (292.401 nm)	0.003961	ppm	0.000072	1.82	192.165000	Y 377.433
Zn (206.200 nm)	0.009558	ppm	0.000445	4.66	51.591100	Y 377.433
Zr (343.823 nm)	0.002128	ppm	0.000168	7.88	352.127000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.906881	16264.032377	0.000665	0.07
Y 377.433	0.922024	899196.415044	0.000365	0.04
Y_R 377.433	0.953298	68583.500000	0.002561	0.27
Y_R 488.368	0.963244	38065.600000	0.005119	0.53
Y_R2 488.368	0.968489	73769.446062	0.006271	0.65

Sample Name: 280-123277-E-4-B

Date: 5/13/2019 11:05:37 PM

Rack:Tube: 2:34

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.026069 n	ppm	0.001054	4.04	-2274.146576	Y_R 488.368
Ag (328.068 nm)	0.001309	ppm	0.000174	13.29	-287.845000	Y 377.433
Al (167.019 nm)	0.714071	ppm	0.012149	1.70	429.622000	Y_R 377.433
Al H (396.152 nm)	0.810792 u	ppm	0.012825	1.58	2555.079265	Y_R 377.433
As (188.980 nm)	-0.001355 u	ppm	0.003597	> 100.00	-1.693350	Y 242.219
B (249.678 nm)	1.190000 o	ppm	0.001666	0.14	29505.400000	Y 242.219
Ba (493.408 nm)	0.025885	ppm	0.000182	0.70	3582.560000	Y_R 488.368
Be (234.861 nm)	-0.000150 u	ppm	0.000012	7.75	29.744700	Y_R 488.368
Bi (223.061 nm)	-0.001506 u	ppm	0.000183	12.17	17.395100	Y 377.433
Ca (315.887 nm)	373.397600 o	ppm	0.387519	0.10	314845.696158	Y_R 377.433
Cd (214.439 nm)	-0.000025 u	ppm	0.000028	> 100.00	1.784290	Y 377.433
Co (228.615 nm)	0.004492	ppm	0.000180	4.00	50.651700	Y 242.219
Cr (205.560 nm)	0.001407	ppm	0.000016	1.13	18.117200	Y 377.433
Cu (324.754 nm)	-0.000629 u	ppm	0.000093	14.74	294.968000	Y 377.433
Fe (238.204 nm)	3.026137	ppm	0.008094	0.27	11136.640035	Y_R 377.433
Fe H (259.940 nm)	2.963690 u	ppm	0.011165	0.38	5906.550000	Y_R 377.433
K (766.491 nm)	7.299180	ppm	0.002910	0.04	7617.780000	Y_R2 488.368
Li (670.783 nm)	0.067386	ppm	0.001607	2.38	1062.220000	Y_R2 488.368
Mg (279.078 nm)	215.073000 o	ppm	0.274300	0.13	1272220.000000	Y 377.433
Mn (257.610 nm)	3.271100 o	ppm	0.000078	0.00	828632.000000	Y 377.433
Mo (202.032 nm)	0.000473	ppm	0.000619	> 100.00	1.724670	Y 377.433
Na (589.592 nm)	91.588600 o	ppm	0.241521	0.26	597171.000000	Y_R2 488.368
Na H (589.593 nm)	96.991587	ppm	0.239515	0.25	385628.616057	Y_R 488.368
Ni (231.604 nm)	0.005609	ppm	0.000187	3.34	38.833400	Y 377.433
P (213.618 nm)	0.056932	ppm	0.000067	0.12	146.829000	Y 242.219
Pb (220.353 nm)	0.001468	ppm	0.000605	41.22	11.880900	Y 242.219
S (181.972 nm)	429.377791 bo	ppm	0.160732	0.04	187725.741860	Y 377.433
Sb (206.834 nm)	-0.004650 u	ppm	0.000644	13.85	-44.101000	Y 377.433
Se (196.026 nm)	-0.000491 u	ppm	0.000443	90.17	12.233800	Y 242.219
Si (288.158 nm)	8.179620	ppm	0.044691	0.55	72794.300000	Y 377.433
Sn (189.925 nm)	0.000996 u	ppm	0.001559	> 100.00	10.322500	Y 377.433
Sr (421.552 nm)	2.143531 o	ppm	0.007235	0.34	453037.589056	Y_R 488.368
Th (288.505 nm)	0.006957	ppm	0.000090	1.29	148.395000	Y 377.433
Ti (336.122 nm)	0.023212	ppm	0.000937	4.04	4325.240000	Y 377.433
Tl (190.794 nm)	0.000867	ppm	0.000374	43.17	-0.392479	Y 377.433
U (409.013 nm)	-0.018859 u	ppm	0.005673	30.08	-273.681000	Y 377.433
V (292.401 nm)	0.001905	ppm	0.000099	5.18	103.945000	Y 377.433
Zn (206.200 nm)	0.005050	ppm	0.000719	14.24	28.090700	Y 377.433
Zr (343.823 nm)	0.000870	ppm	0.000198	22.74	165.358000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.899296	16127.999963	0.000839	0.09
Y 377.433	0.914688	892042.166233	0.001447	0.16
Y_R 377.433	0.933758	67177.800000	0.001599	0.17
Y_R 488.368	0.949435	37519.800000	0.001886	0.20
Y_R2 488.368	0.954965	72739.354039	0.007597	0.80

Sample Name: 280-123277-E-5-B

Date: 5/13/2019 11:08:59 PM

Rack:Tube: 2:35

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.053129 n	ppm	0.017485	32.91	-2208.092725	Y_R 488.368
Ag (328.068 nm)	0.001140	ppm	0.000076	6.64	-295.727000	Y 377.433
Al (167.019 nm)	1.402480	ppm	0.009827	0.70	844.330000	Y_R 377.433
Al H (396.152 nm)	1.636463	ppm	0.014806	0.90	4660.982956	Y_R 377.433
As (188.980 nm)	0.012835	ppm	0.000791	6.16	15.268400	Y 242.219
B (249.678 nm)	0.394225	ppm	0.001079	0.27	9811.210000	Y 242.219
Ba (493.408 nm)	0.035889	ppm	0.000049	0.14	4706.820000	Y_R 488.368
Be (234.861 nm)	-0.000145 u	ppm	0.000018	12.25	157.694000	Y_R 488.368
Bi (223.061 nm)	-0.003965 u	ppm	0.001722	43.42	11.763000	Y 377.433
Ca (315.887 nm)	383.008839 o	ppm	1.426787	0.37	322952.307589	Y_R 377.433
Cd (214.439 nm)	-0.000017 u	ppm	0.000011	65.60	6.347970	Y 377.433
Co (228.615 nm)	0.018315	ppm	0.000023	0.13	327.253000	Y 242.219
Cr (205.560 nm)	0.004080	ppm	0.000094	2.30	56.832900	Y 377.433
Cu (324.754 nm)	0.000916	ppm	0.000251	27.39	393.232000	Y 377.433
Fe (238.204 nm)	7.081539 o	ppm	0.031627	0.45	26039.893574	Y_R 377.433
Fe H (259.940 nm)	7.205350	ppm	0.018306	0.25	13827.200000	Y_R 377.433
K (766.491 nm)	4.287150	ppm	0.031170	0.73	4190.050000	Y_R2 488.368
Li (670.783 nm)	0.052030	ppm	0.001263	2.43	591.064000	Y_R2 488.368
Mg (279.078 nm)	163.349000 o	ppm	0.111524	0.07	966253.000000	Y 377.433
Mn (257.610 nm)	2.456010 o	ppm	0.000991	0.04	622172.000000	Y 377.433
Mo (202.032 nm)	0.002295	ppm	0.000010	0.42	17.611600	Y 377.433
Na (589.592 nm)	45.683700 o	ppm	0.027352	0.06	298354.000000	Y_R2 488.368
Na H (589.593 nm)	47.018768	ppm	0.300556	0.64	192565.181534	Y_R 488.368
Ni (231.604 nm)	0.017942	ppm	0.001087	6.06	130.473000	Y 377.433
P (213.618 nm)	0.170901	ppm	0.000939	0.55	407.322000	Y 242.219
Pb (220.353 nm)	0.001931	ppm	0.001218	63.09	13.381600	Y 242.219
S (181.972 nm)	258.242731 bo	ppm	0.813849	0.32	112915.041089	Y 377.433
Sb (206.834 nm)	-0.001060 u	ppm	0.000258	24.36	-35.436100	Y 377.433
Se (196.026 nm)	0.000402 u	ppm	0.002998	> 100.00	11.691900	Y 242.219
Si (288.158 nm)	11.211000 o	ppm	0.095805	0.85	99462.200000	Y 377.433
Sn (189.925 nm)	0.001222	ppm	0.000358	29.28	10.803100	Y 377.433
Sr (421.552 nm)	0.962536	ppm	0.005373	0.56	203496.847296	Y_R 488.368
Th (288.505 nm)	0.003920	ppm	0.001017	25.94	120.324000	Y 377.433
Ti (336.122 nm)	0.043109	ppm	0.000958	2.22	7213.260000	Y 377.433
Tl (190.794 nm)	0.000319 u	ppm	0.002241	> 100.00	-1.807580	Y 377.433
U (409.013 nm)	-0.017300 u	ppm	0.000635	3.67	-264.276000	Y 377.433
V (292.401 nm)	0.002834	ppm	0.000192	6.76	142.426000	Y 377.433
Zn (206.200 nm)	0.026290	ppm	0.000061	0.23	138.808000	Y 377.433
Zr (343.823 nm)	0.001583	ppm	0.000001	0.04	274.843000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.929956	16677.864099	0.004789	0.51
Y 377.433	0.949402	925896.259101	0.005122	0.54
Y_R 377.433	0.966474	69531.500000	0.003495	0.36
Y_R 488.368	0.985109	38929.600000	0.005468	0.56
Y_R2 488.368	1.002316	76346.053522	0.001502	0.15

Sample Name: 280-123331-E-1-B

Date: 5/13/2019 11:12:20 PM

Rack:Tube: 2:36

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.005907 n	ppm	0.005142	87.05	-2323.363267	Y_R 488.368
Ag (328.068 nm)	0.000835	ppm	0.000006	0.71	-309.889000	Y 377.433
Al (167.019 nm)	2.228080	ppm	0.004473	0.20	1346.680000	Y_R 377.433
Al H (396.152 nm)	2.673411	ppm	0.024103	0.90	7348.580788	Y_R 377.433
As (188.980 nm)	0.013658	ppm	0.000749	5.48	16.152900	Y 242.219
B (249.678 nm)	0.634896	ppm	0.001819	0.29	15747.800000	Y 242.219
Ba (493.408 nm)	0.027240	ppm	0.000427	1.57	3775.210000	Y_R 488.368
Be (234.861 nm)	-0.000206 u	ppm	0.000028	13.78	501.082000	Y_R 488.368
Bi (223.061 nm)	-0.005050 u	ppm	0.001689	33.45	10.976600	Y 377.433
Ca (315.887 nm)	492.366303 o	ppm	2.136725	0.43	415189.993031	Y_R 377.433
Cd (214.439 nm)	-0.000059 u	ppm	0.000076	> 100.00	15.511800	Y 377.433
Co (228.615 nm)	0.013599	ppm	0.000088	0.65	234.468000	Y 242.219
Cr (205.560 nm)	0.003808	ppm	0.000073	1.91	49.557600	Y 377.433
Cu (324.754 nm)	-0.000281 u	ppm	0.000145	51.39	248.248000	Y 377.433
Fe (238.204 nm)	18.649372 o	ppm	0.086000	0.46	68550.673660	Y_R 377.433
Fe H (259.940 nm)	19.353800	ppm	0.073135	0.38	36512.800000	Y_R 377.433
K (766.491 nm)	6.299310	ppm	0.035135	0.56	6479.910000	Y_R2 488.368
Li (670.783 nm)	0.057798	ppm	0.000723	1.25	768.036000	Y_R2 488.368
Mg (279.078 nm)	203.516000 o	ppm	0.875665	0.43	1203830.000000	Y 377.433
Mn (257.610 nm)	3.223420 o	ppm	0.003867	0.12	816553.000000	Y 377.433
Mo (202.032 nm)	0.001255	ppm	0.000531	42.34	8.540940	Y 377.433
Na (589.592 nm)	51.593200 o	ppm	0.003496	0.01	336808.000000	Y_R2 488.368
Na H (589.593 nm)	53.498200	ppm	0.471042	0.88	217590.855640	Y_R 488.368
Ni (231.604 nm)	0.010161	ppm	0.000007	0.07	73.309200	Y 377.433
P (213.618 nm)	0.108916	ppm	0.000342	0.31	265.646000	Y 242.219
Pb (220.353 nm)	0.003661	ppm	0.000154	4.21	19.392600	Y 242.219
S (181.972 nm)	435.436620 bo	ppm	1.105111	0.25	190374.163447	Y 377.433
Sb (206.834 nm)	-0.000658 u	ppm	0.000290	44.11	-37.216100	Y 377.433
Se (196.026 nm)	-0.000165 u	ppm	0.000639	> 100.00	9.599030	Y 242.219
Si (288.158 nm)	13.074000 o	ppm	0.242440	1.85	115851.000000	Y 377.433
Sn (189.925 nm)	0.000536	ppm	0.000025	4.57	9.347730	Y 377.433
Sr (421.552 nm)	1.138380 o	ppm	0.010841	0.95	240652.258642	Y_R 488.368
Th (288.505 nm)	0.008714	ppm	0.005774	66.26	151.561000	Y 377.433
Ti (336.122 nm)	0.078543	ppm	0.000609	0.78	12649.800000	Y 377.433
Tl (190.794 nm)	-0.000894 u	ppm	0.000615	68.84	-5.117280	Y 377.433
U (409.013 nm)	-0.018334 u	ppm	0.004072	22.21	-279.586000	Y 377.433
V (292.401 nm)	0.004809	ppm	0.000074	1.54	227.790000	Y 377.433
Zn (206.200 nm)	0.010808	ppm	0.000069	0.64	58.108900	Y 377.433
Zr (343.823 nm)	0.003807	ppm	0.000070	1.83	612.953000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.920748	16512.729935	0.008009	0.87
Y 377.433	0.940542	917255.378120	0.011503	1.22
Y_R 377.433	0.940131	67636.300000	0.000986	0.10
Y_R 488.368	0.953571	37683.300000	0.003409	0.36
Y_R2 488.368	0.969749	73865.427553	0.010796	1.11

Sample Name: 280-123331-E-2-B

Date: 5/13/2019 11:15:42 PM

Rack:Tube: 2:37

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	-0.011773 nu	ppm	0.013323	> 100.00	-2366.518268	Y_R 488.368
Ag (328.068 nm)	0.001594	ppm	0.000079	4.95	-274.411000	Y 377.433
Al (167.019 nm)	0.120259	ppm	0.002917	2.43	79.627100	Y_R 377.433
Al H (396.152 nm)	0.080474 u	ppm	0.000353	0.44	692.121119	Y_R 377.433
As (188.980 nm)	0.020496	ppm	0.001004	4.90	24.420000	Y 242.219
B (249.678 nm)	0.364617	ppm	0.000695	0.19	9074.340000	Y 242.219
Ba (493.408 nm)	0.029637	ppm	0.000636	2.14	4006.100000	Y_R 488.368
Be (234.861 nm)	-0.000343 u	ppm	0.000007	2.16	188.743000	Y_R 488.368
Bi (223.061 nm)	-0.004298 u	ppm	0.001537	35.75	11.396400	Y 377.433
Ca (315.887 nm)	363.441499 o	ppm	1.294455	0.36	306448.210536	Y_R 377.433
Cd (214.439 nm)	-0.000006 u	ppm	0.000008	> 100.00	9.927990	Y 377.433
Co (228.615 nm)	0.019687	ppm	0.000133	0.68	353.179000	Y 242.219
Cr (205.560 nm)	0.000829	ppm	0.000284	34.24	7.587550	Y 377.433
Cu (324.754 nm)	0.005798	ppm	0.000187	3.22	735.909000	Y 377.433
Fe (238.204 nm)	9.914665 o	ppm	0.030339	0.31	36451.384884	Y_R 377.433
Fe H (259.940 nm)	10.168500	ppm	0.007727	0.08	19360.600000	Y_R 377.433
K (766.491 nm)	3.780620	ppm	0.000712	0.02	3613.620000	Y_R2 488.368
Li (670.783 nm)	0.027153	ppm	0.001034	3.81	-172.215000	Y_R2 488.368
Mg (279.078 nm)	138.441000 o	ppm	0.411151	0.30	818914.000000	Y 377.433
Mn (257.610 nm)	4.722280 o	ppm	0.000297	0.01	1196210.000000	Y 377.433
Mo (202.032 nm)	0.004210	ppm	0.000295	7.01	34.320500	Y 377.433
Na (589.592 nm)	29.672600 o	ppm	0.001773	0.01	194110.000000	Y_R2 488.368
Na H (589.593 nm)	30.647974	ppm	0.385724	1.26	129309.309294	Y_R 488.368
Ni (231.604 nm)	0.018799	ppm	0.000205	1.09	136.965000	Y 377.433
P (213.618 nm)	0.341972	ppm	0.001506	0.44	798.333000	Y 242.219
Pb (220.353 nm)	0.002608	ppm	0.001241	47.60	16.269800	Y 242.219
S (181.972 nm)	272.455903 bo	ppm	0.711710	0.26	119132.854065	Y 377.433
Sb (206.834 nm)	-0.000660 u	ppm	0.002548	> 100.00	-35.053900	Y 377.433
Se (196.026 nm)	0.001172 u	ppm	0.004551	> 100.00	13.585900	Y 242.219
Si (288.158 nm)	8.214750	ppm	0.017007	0.21	73103.400000	Y 377.433
Sn (189.925 nm)	0.000232 u	ppm	0.000540	> 100.00	8.702950	Y 377.433
Sr (421.552 nm)	0.768701	ppm	0.009580	1.25	162540.143357	Y_R 488.368
Th (288.505 nm)	0.005950	ppm	0.002989	50.23	178.677000	Y 377.433
Ti (336.122 nm)	0.004068	ppm	0.000239	5.88	1544.120000	Y 377.433
Tl (190.794 nm)	-0.000762 u	ppm	0.000093	12.26	-4.214830	Y 377.433
U (409.013 nm)	-0.008902 u	ppm	0.001807	20.30	-217.965000	Y 377.433
V (292.401 nm)	0.000435	ppm	0.000049	11.14	41.607000	Y 377.433
Zn (206.200 nm)	0.026947	ppm	0.000016	0.06	142.234000	Y 377.433
Zr (343.823 nm)	0.000520	ppm	0.000064	12.29	139.168000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.914429	16399.398503	0.004845	0.53
Y 377.433	0.931882	908809.866050	0.003131	0.34
Y_R 377.433	0.937627	67456.200000	0.001744	0.19
Y_R 488.368	0.947218	37432.200000	0.009697	1.02
Y_R2 488.368	0.952910	72582.781642	0.006575	0.69

Sample Name: 280-123331-E-3-B

Date: 5/13/2019 11:19:04 PM

Rack:Tube: 2:38

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.002087 nu	ppm	0.011322	> 100.00	-2332.687503	Y_R 488.368
Ag (328.068 nm)	0.001402	ppm	0.000239	17.05	-283.412000	Y 377.433
Al (167.019 nm)	0.860072	ppm	0.012207	1.42	517.112000	Y_R 377.433
Al H (396.152 nm)	0.965591	ppm	0.012545	1.30	2898.073583	Y_R 377.433
As (188.980 nm)	0.003819	ppm	0.000550	14.41	4.501810	Y 242.219
B (249.678 nm)	0.651366	ppm	0.000553	0.08	16178.500000	Y 242.219
Ba (493.408 nm)	0.033908	ppm	0.000263	0.77	4453.820000	Y_R 488.368
Be (234.861 nm)	-0.000200 u	ppm	0.000005	2.55	22.661300	Y_R 488.368
Bi (223.061 nm)	-0.000945 u	ppm	0.002496	> 100.00	18.882800	Y 377.433
Ca (315.887 nm)	258.111952 o	ppm	1.191823	0.46	217607.876429	Y_R 377.433
Cd (214.439 nm)	-0.000022 u	ppm	0.000040	> 100.00	2.169590	Y 377.433
Co (228.615 nm)	0.003468	ppm	0.000284	8.20	30.474100	Y 242.219
Cr (205.560 nm)	0.002768	ppm	0.000034	1.24	38.343600	Y 377.433
Cu (324.754 nm)	0.001548	ppm	0.000197	12.69	524.409000	Y 377.433
Fe (238.204 nm)	3.263512	ppm	0.010727	0.33	12008.972690	Y_R 377.433
Fe H (259.940 nm)	3.215740 u	ppm	0.021905	0.68	6377.210000	Y_R 377.433
K (766.491 nm)	4.120190	ppm	0.134195	3.26	4000.050000	Y_R2 488.368
Li (670.783 nm)	0.024777	ppm	0.000731	2.95	-245.112000	Y_R2 488.368
Mg (279.078 nm)	135.527000 o	ppm	0.014278	0.01	801690.000000	Y 377.433
Mn (257.610 nm)	4.436090 o	ppm	0.015073	0.34	1123720.000000	Y 377.433
Mo (202.032 nm)	0.000508	ppm	0.000146	28.71	2.022510	Y 377.433
Na (589.592 nm)	55.006600 o	ppm	0.041419	0.08	359041.000000	Y_R2 488.368
Na H (589.593 nm)	56.717773	ppm	0.128844	0.23	230036.127419	Y_R 488.368
Ni (231.604 nm)	0.005354	ppm	0.000567	10.59	36.950600	Y 377.433
P (213.618 nm)	0.069247	ppm	0.000860	1.24	174.975000	Y 242.219
Pb (220.353 nm)	0.002498	ppm	0.001766	70.68	15.000600	Y 242.219
S (181.972 nm)	205.605711 bo	ppm	0.043531	0.02	89909.747611	Y 377.433
Sb (206.834 nm)	-0.001365 u	ppm	0.000475	34.79	-35.317500	Y 377.433
Se (196.026 nm)	-0.002533 u	ppm	0.004582	> 100.00	11.186100	Y 242.219
Si (288.158 nm)	10.000600	ppm	0.012809	0.13	88814.100000	Y 377.433
Sn (189.925 nm)	0.001241	ppm	0.000644	51.87	10.842700	Y 377.433
Sr (421.552 nm)	1.004588	ppm	0.004939	0.49	212382.505869	Y_R 488.368
Th (288.505 nm)	0.005709	ppm	0.004931	86.37	171.680000	Y 377.433
Ti (336.122 nm)	0.030177	ppm	0.000092	0.31	4959.570000	Y 377.433
Tl (190.794 nm)	-0.000266 u	ppm	0.000469	> 100.00	-3.049740	Y 377.433
U (409.013 nm)	-0.022240 u	ppm	0.006979	31.38	-266.466000	Y 377.433
V (292.401 nm)	0.001743	ppm	0.000271	15.57	97.311300	Y 377.433
Zn (206.200 nm)	0.004927	ppm	0.000062	1.26	27.449400	Y 377.433
Zr (343.823 nm)	0.000960	ppm	0.000077	7.99	178.358000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.893910	16031.415732	0.006592	0.74
Y 377.433	0.905999	883568.115336	0.008008	0.88
Y_R 377.433	0.928865	66825.800000	0.000110	0.01
Y_R 488.368	0.940361	37161.200000	0.000823	0.09
Y_R2 488.368	0.947086	72139.215597	0.011328	1.20

Sample Name: 280-123331-E-4-B

Date: 5/13/2019 11:22:26 PM

Rack:Tube: 2:39

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.010674 nu	ppm	0.026738	> 100.00	-2311.726063	Y_R 488.368
Ag (328.068 nm)	0.001013	ppm	0.000491	48.51	-301.727000	Y 377.433
Al (167.019 nm)	0.426885	ppm	0.002901	0.68	262.528000	Y_R 377.433
Al H (396.152 nm)	0.440192 u	ppm	0.002927	0.66	1575.109753	Y_R 377.433
As (188.980 nm)	0.006169	ppm	0.002325	37.70	7.264120	Y 242.219
B (249.678 nm)	0.501822	ppm	0.001150	0.23	12469.300000	Y 242.219
Ba (493.408 nm)	0.020278	ppm	0.000329	1.62	2942.630000	Y_R 488.368
Be (234.861 nm)	-0.000143 u	ppm	0.000005	3.53	226.656000	Y_R 488.368
Bi (223.061 nm)	-0.002945 u	ppm	0.001098	37.27	14.773400	Y 377.433
Ca (315.887 nm)	289.266319 o	ppm	1.147918	0.40	243885.065121	Y_R 377.433
Cd (214.439 nm)	-0.000054 u	ppm	0.000097	> 100.00	6.327400	Y 377.433
Co (228.615 nm)	0.002720	ppm	0.000195	7.17	14.994600	Y 242.219
Cr (205.560 nm)	0.003052	ppm	0.000063	2.07	40.890500	Y 377.433
Cu (324.754 nm)	0.000706	ppm	0.000010	1.45	450.370000	Y 377.433
Fe (238.204 nm)	9.280148 o	ppm	0.009099	0.10	34119.590184	Y_R 377.433
Fe H (259.940 nm)	9.491660	ppm	0.019448	0.20	18096.600000	Y_R 377.433
K (766.491 nm)	5.467130	ppm	0.017938	0.33	5532.880000	Y_R2 488.368
Li (670.783 nm)	0.047112	ppm	0.000691	1.47	440.158000	Y_R2 488.368
Mg (279.078 nm)	132.782000 o	ppm	0.040798	0.03	785438.000000	Y 377.433
Mn (257.610 nm)	1.453330 o	ppm	0.000849	0.06	368198.000000	Y 377.433
Mo (202.032 nm)	0.006925	ppm	0.000102	1.47	57.994700	Y 377.433
Na (589.592 nm)	46.593900 o	ppm	0.163916	0.35	304247.000000	Y_R2 488.368
Na H (589.593 nm)	48.267573	ppm	0.381153	0.79	197373.961547	Y_R 488.368
Ni (231.604 nm)	0.008006	ppm	0.000646	8.07	56.889400	Y 377.433
P (213.618 nm)	0.057825	ppm	0.000480	0.83	148.869000	Y 242.219
Pb (220.353 nm)	0.001679	ppm	0.001581	94.17	13.223200	Y 242.219
S (181.972 nm)	201.390403 bo	ppm	0.456386	0.23	88060.837362	Y 377.433
Sb (206.834 nm)	-0.000357 u	ppm	0.001522	> 100.00	-34.044700	Y 377.433
Se (196.026 nm)	-0.002564 u	ppm	0.002605	> 100.00	7.719220	Y 242.219
Si (288.158 nm)	8.866220	ppm	0.053517	0.60	78834.600000	Y 377.433
Sn (189.925 nm)	0.000447	ppm	0.000347	77.64	9.158980	Y 377.433
Sr (421.552 nm)	0.839532	ppm	0.004212	0.50	177506.567853	Y_R 488.368
Th (288.505 nm)	0.007624	ppm	0.001137	14.91	107.721000	Y 377.433
Ti (336.122 nm)	0.015497	ppm	0.000687	4.44	2950.190000	Y 377.433
Tl (190.794 nm)	0.001301	ppm	0.000272	20.91	0.441846	Y 377.433
U (409.013 nm)	-0.019232 u	ppm	0.006375	33.15	-252.489000	Y 377.433
V (292.401 nm)	0.001068	ppm	0.000358	33.54	67.025800	Y 377.433
Zn (206.200 nm)	0.005711	ppm	0.000106	1.85	31.540100	Y 377.433
Zr (343.823 nm)	0.000563	ppm	0.000071	12.54	142.959000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.927313	16630.467829	0.004083	0.44
Y 377.433	0.942978	919631.177864	0.004396	0.47
Y_R 377.433	0.946595	68101.300000	0.006227	0.66
Y_R 488.368	0.953654	37686.600000	0.009413	0.99
Y_R2 488.368	0.966306	73603.166398	0.011365	1.18

Sample Name: 280-123331-E-5-B

Date: 5/13/2019 11:25:48 PM

Rack:Tube: 2:40

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.084870 n	ppm	0.016761	19.75	-2130.613064	Y_R 488.368
Ag (328.068 nm)	0.005927	ppm	0.000264	4.45	-79.330100	Y 377.433
Al (167.019 nm)	25.996800 o	ppm	0.030756	0.12	15578.800000	Y_R 377.433
Al H (396.152 nm)	31.059740	ppm	0.078684	0.25	79437.275401	Y_R 377.433
As (188.980 nm)	0.023920	ppm	0.000353	1.48	28.240200	Y 242.219
B (249.678 nm)	0.126854	ppm	0.000121	0.10	3141.860000	Y 242.219
Ba (493.408 nm)	0.247285	ppm	0.000803	0.32	28315.400000	Y_R 488.368
Be (234.861 nm)	0.001179	ppm	0.000036	3.10	1640.870000	Y_R 488.368
Bi (223.061 nm)	-0.005602 u	ppm	0.000255	4.55	13.668500	Y 377.433
Ca (315.887 nm)	127.137782 o	ppm	0.062975	0.05	107137.554902	Y_R 377.433
Cd (214.439 nm)	0.000789	ppm	0.000005	0.68	91.149600	Y 377.433
Co (228.615 nm)	0.020295	ppm	0.000488	2.41	381.528000	Y 242.219
Cr (205.560 nm)	0.064858	ppm	0.000091	0.14	953.083000	Y 377.433
Cu (324.754 nm)	0.102599	ppm	0.000443	0.43	7350.380000	Y 377.433
Fe (238.204 nm)	42.330403 o	ppm	0.113528	0.27	155576.406342	Y_R 377.433
Fe H (259.940 nm)	44.195000	ppm	0.076217	0.17	82900.300000	Y_R 377.433
K (766.491 nm)	12.589300	ppm	0.040159	0.32	13638.000000	Y_R2 488.368
Li (670.783 nm)	0.054500	ppm	0.001473	2.70	666.847000	Y_R2 488.368
Mg (279.078 nm)	67.522600 o	ppm	0.016223	0.02	399358.000000	Y 377.433
Mn (257.610 nm)	0.870321	ppm	0.000023	0.00	220524.000000	Y 377.433
Mo (202.032 nm)	0.003059	ppm	0.000048	1.56	24.281400	Y 377.433
Na (589.592 nm)	8.071960	ppm	0.009375	0.12	53927.200000	Y_R2 488.368
Na H (589.593 nm)	7.721692 u	ppm	0.069213	0.90	40948.169619	Y_R 488.368
Ni (231.604 nm)	0.066875	ppm	0.000851	1.27	494.981000	Y 377.433
P (213.618 nm)	2.468410 o	ppm	0.006275	0.25	5658.650000	Y 242.219
Pb (220.353 nm)	0.044507	ppm	0.000878	1.97	136.674000	Y 242.219
S (181.972 nm)	70.931664 o	ppm	0.200885	0.28	31031.634043	Y 377.433
Sb (206.834 nm)	-0.002838 u	ppm	0.000854	30.09	-48.898100	Y 377.433
Se (196.026 nm)	0.002296	ppm	0.001891	82.38	6.104350	Y 242.219
Si (288.158 nm)	47.614600 o	ppm	0.122735	0.26	419714.000000	Y 377.433
Sn (189.925 nm)	0.006388	ppm	0.000127	2.00	21.756300	Y 377.433
Sr (421.552 nm)	0.318299	ppm	0.000493	0.15	67371.536968	Y_R 488.368
Th (288.505 nm)	0.009789	ppm	0.001923	19.64	101.062000	Y 377.433
Ti (336.122 nm)	0.421701	ppm	0.010025	2.38	60776.100000	Y 377.433
Tl (190.794 nm)	0.000252 u	ppm	0.000890	> 100.00	-4.718380	Y 377.433
U (409.013 nm)	-0.012848 u	ppm	0.002342	18.23	-158.044000	Y 377.433
V (292.401 nm)	0.058671	ppm	0.000184	0.31	2495.920000	Y 377.433
Zn (206.200 nm)	0.246499	ppm	0.000242	0.10	1286.660000	Y 377.433
Zr (343.823 nm)	0.007305	ppm	0.000006	0.09	1161.670000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.969358	17384.495216	0.003895	0.40
Y 377.433	0.977115	952922.932224	0.002317	0.24
Y_R 377.433	0.986446	70968.300000	0.001447	0.15
Y_R 488.368	1.002310	39609.500000	0.000414	0.04
Y_R2 488.368	1.008793	76839.440350	0.001550	0.15

Sample Name: 280-123331-E-6-B

Date: 5/13/2019 11:29:10 PM

Rack:Tube: 2:41

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.077279 n	ppm	0.008299	10.74	-2149.144475	Y_R 488.368
Ag (328.068 nm)	0.001384	ppm	0.000108	7.77	-283.927000	Y 377.433
Al (167.019 nm)	0.253919	ppm	0.003815	1.50	158.515000	Y_R 377.433
Al H (396.152 nm)	0.248908 u	ppm	0.008837	3.55	1116.325570	Y_R 377.433
As (188.980 nm)	0.004991	ppm	0.000212	4.24	5.860080	Y 242.219
B (249.678 nm)	1.374790 o	ppm	0.002398	0.17	34069.100000	Y 242.219
Ba (493.408 nm)	0.014199	ppm	0.000272	1.92	2276.740000	Y_R 488.368
Be (234.861 nm)	-0.000244 u	ppm	0.000026	10.75	173.487000	Y_R 488.368
Bi (223.061 nm)	-0.002555 u	ppm	0.004473	> 100.00	15.645400	Y 377.433
Ca (315.887 nm)	353.690296 o	ppm	1.698511	0.48	298223.546988	Y_R 377.433
Cd (214.439 nm)	-0.000027 u	ppm	0.000016	59.29	7.210480	Y 377.433
Co (228.615 nm)	0.004203	ppm	0.000224	5.33	44.241600	Y 242.219
Cr (205.560 nm)	0.000991	ppm	0.000356	35.94	10.385500	Y 377.433
Cu (324.754 nm)	0.001082	ppm	0.000543	50.20	430.151000	Y 377.433
Fe (238.204 nm)	8.501654 o	ppm	0.050713	0.60	31258.691625	Y_R 377.433
Fe H (259.940 nm)	8.684100	ppm	0.065469	0.75	16588.600000	Y_R 377.433
K (766.491 nm)	10.135400	ppm	0.056333	0.56	10845.400000	Y_R2 488.368
Li (670.783 nm)	0.100628	ppm	0.000796	0.79	2082.170000	Y_R2 488.368
Mg (279.078 nm)	218.406000 o	ppm	0.001270	0.00	1291930.000000	Y 377.433
Mn (257.610 nm)	3.697230 o	ppm	0.001297	0.04	936570.000000	Y 377.433
Mo (202.032 nm)	0.001823	ppm	0.000829	45.47	13.493700	Y 377.433
Na (589.592 nm)	153.910000 o	ppm	0.097418	0.06	1002850.000000	Y_R2 488.368
Na H (589.593 nm)	161.430773	ppm	1.269388	0.79	634581.873220	Y_R 488.368
Ni (231.604 nm)	0.008288	ppm	0.000420	5.07	58.953900	Y 377.433
P (213.618 nm)	0.038651	ppm	0.001267	3.28	105.044000	Y 242.219
Pb (220.353 nm)	0.002933	ppm	0.000771	26.30	17.056500	Y 242.219
S (181.972 nm)	433.330135 bo	ppm	0.558620	0.13	189454.339041	Y 377.433
Sb (206.834 nm)	-0.001724 u	ppm	0.001639	95.04	-37.519000	Y 377.433
Se (196.026 nm)	0.001630 u	ppm	0.003550	> 100.00	13.491400	Y 242.219
Si (288.158 nm)	9.594080	ppm	0.060996	0.64	85237.700000	Y 377.433
Sn (189.925 nm)	0.001610	ppm	0.000221	13.75	11.625200	Y 377.433
Sr (421.552 nm)	1.917180 o	ppm	0.013277	0.69	405210.351587	Y_R 488.368
Th (288.505 nm)	0.004104	ppm	0.000356	8.68	149.346000	Y 377.433
Ti (336.122 nm)	0.005604	ppm	0.000057	1.02	1733.660000	Y 377.433
Tl (190.794 nm)	0.000061 u	ppm	0.001395	> 100.00	-2.337510	Y 377.433
U (409.013 nm)	-0.018290 u	ppm	0.004816	26.33	-261.635000	Y 377.433
V (292.401 nm)	0.000618	ppm	0.000446	72.12	49.909200	Y 377.433
Zn (206.200 nm)	0.002907	ppm	0.000547	18.82	16.920300	Y 377.433
Zr (343.823 nm)	0.000736	ppm	0.000074	10.10	164.068000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.913830	16388.651684	0.000743	0.08
Y 377.433	0.931116	908063.431805	0.002871	0.31
Y_R 377.433	0.934581	67237.000000	0.000819	0.09
Y_R 488.368	0.947059	37425.900000	0.011142	1.18
Y_R2 488.368	0.948882	72275.991071	0.003362	0.35

Sample Name: CCVH-5699817

Date: 5/13/2019 11:32:33 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.087870	ppm	0.022039	25.08	-2123.290970	Y_R 488.368
Ag (328.068 nm)	0.000071 u	ppm	0.000252	> 100.00	-598.268000	Y 377.433
Al (167.019 nm)	41.809300 o	ppm	0.205514	0.49	25039.400000	Y_R 377.433
Al H (396.152 nm)	49.653803	ppm	0.128086	0.26	126707.273571	Y_R 377.433
As (188.980 nm)	-0.000683 u	ppm	0.000629	92.09	-1.279710	Y 242.219
B (249.678 nm)	0.002065	ppm	0.000236	11.44	45.077800	Y 242.219
Ba (493.408 nm)	0.002149	ppm	0.000107	4.98	886.687000	Y_R 488.368
Be (234.861 nm)	0.000828	ppm	0.000016	1.96	1717.800000	Y_R 488.368
Bi (223.061 nm)	0.989338	ppm	0.006965	0.70	2578.850000	Y 377.433
Ca (315.887 nm)	0.019398	ppm	0.004715	24.31	-80.599846	Y_R 377.433
Cd (214.439 nm)	0.001243	ppm	0.000109	8.73	124.485000	Y 377.433
Co (228.615 nm)	0.004334	ppm	0.000153	3.52	46.696000	Y 242.219
Cr (205.560 nm)	0.001502	ppm	0.000067	4.45	7.045010	Y 377.433
Cu (324.754 nm)	0.009532	ppm	0.000123	1.29	1619.690000	Y 377.433
Fe (238.204 nm)	47.907637 o	ppm	0.176084	0.37	176072.255738	Y_R 377.433
Fe H (259.940 nm)	49.928600	ppm	0.185031	0.37	93606.900000	Y_R 377.433
K (766.491 nm)	0.123769	ppm	0.038927	31.45	-547.907000	Y_R2 488.368
Li (670.783 nm)	0.007842	ppm	0.000728	9.29	-764.740000	Y_R2 488.368
Mg (279.078 nm)	0.035494	ppm	0.001796	5.06	-132.869000	Y 377.433
Mn (257.610 nm)	0.002946	ppm	0.000002	0.06	820.870000	Y 377.433
Mo (202.032 nm)	0.000796	ppm	0.000220	27.71	4.534800	Y 377.433
Na (589.592 nm)	234.518000 o	ppm	0.083527	0.04	1527580.000000	Y_R2 488.368
Na H (589.593 nm)	243.922896	ppm	0.551131	0.23	953281.776927	Y_R 488.368
Ni (231.604 nm)	0.004939	ppm	0.000524	10.61	35.925800	Y 377.433
P (213.618 nm)	-0.001467 u	ppm	0.000557	37.94	13.347500	Y 242.219
Pb (220.353 nm)	0.001393	ppm	0.000473	33.97	29.985000	Y 242.219
S (181.972 nm)	4.900925	ppm	0.019091	0.39	2165.521567	Y 377.433
Sb (206.834 nm)	-0.001476 u	ppm	0.000183	12.39	-79.650500	Y 377.433
Se (196.026 nm)	0.006067	ppm	0.003573	58.89	8.047330	Y 242.219
Si (288.158 nm)	0.052356	ppm	0.002803	5.35	1296.660000	Y 377.433
Sn (189.925 nm)	0.004021	ppm	0.000523	13.01	16.737600	Y 377.433
Sr (421.552 nm)	0.001939	ppm	0.000059	3.06	525.674765	Y_R 488.368
Th (288.505 nm)	5.018500	ppm	0.005678	0.11	14976.500000	Y 377.433
Ti (336.122 nm)	0.002299	ppm	0.000066	2.85	135.661000	Y 377.433
Tl (190.794 nm)	-0.001711 u	ppm	0.001422	83.15	-7.540230	Y 377.433
U (409.013 nm)	10.143100	ppm	0.004209	0.04	47682.600000	Y 377.433
V (292.401 nm)	0.005038	ppm	0.000294	5.84	37.311100	Y 377.433
Zn (206.200 nm)	0.003958	ppm	0.000639	16.15	22.399500	Y 377.433
Zr (343.823 nm)	-0.002962 u	ppm	0.000004	0.13	-216.209000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.953552	17101.038316	0.002404	0.25
Y 377.433	0.948621	925134.687116	0.003013	0.32
Y_R 377.433	0.951424	68448.800000	0.001588	0.17
Y_R 488.368	0.971050	38374.000000	0.002296	0.24
Y_R2 488.368	0.967323	73680.656219	0.006885	0.71

Sample Name: CCV-5699804

Date: 5/13/2019 11:35:56 PM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.971559	ppm	0.014693	1.51	33.788603	Y_R 488.368
Ag (328.068 nm)	0.493297	ppm	0.000984	0.20	22833.800000	Y 377.433
Al (167.019 nm)	0.471788	ppm	0.007741	1.64	284.298000	Y_R 377.433
Al H (396.152 nm)	0.431731 u	ppm	0.006892	1.60	1467.717707	Y_R 377.433
As (188.980 nm)	0.970787	ppm	0.002901	0.30	1162.780000	Y 242.219
B (249.678 nm)	0.489243	ppm	0.000131	0.03	12190.000000	Y 242.219
Ba (493.408 nm)	0.489669	ppm	0.001357	0.28	55357.700000	Y_R 488.368
Be (234.861 nm)	0.484387	ppm	0.000395	0.08	140178.000000	Y_R 488.368
Bi (223.061 nm)	-0.005279 u	ppm	0.001644	31.15	7.572350	Y 377.433
Ca (315.887 nm)	5.005958	ppm	0.024462	0.49	4125.618041	Y_R 377.433
Cd (214.439 nm)	0.496393	ppm	0.000092	0.02	30264.100000	Y 377.433
Co (228.615 nm)	0.492926	ppm	0.001276	0.26	9816.620000	Y 242.219
Cr (205.560 nm)	0.493034	ppm	0.001015	0.21	7342.210000	Y 377.433
Cu (324.754 nm)	0.491699	ppm	0.001529	0.31	33134.300000	Y 377.433
Fe (238.204 nm)	2.447357	ppm	0.005696	0.23	9009.674757	Y_R 377.433
Fe H (259.940 nm)	2.363830 u	ppm	0.014219	0.60	4786.400000	Y_R 377.433
K (766.491 nm)	47.931800	ppm	0.139840	0.29	53858.000000	Y_R2 488.368
Li (670.783 nm)	0.965958	ppm	0.002600	0.27	28632.600000	Y_R2 488.368
Mg (279.078 nm)	19.476300	ppm	0.007349	0.04	115224.000000	Y 377.433
Mn (257.610 nm)	0.495465	ppm	0.000717	0.14	125574.000000	Y 377.433
Mo (202.032 nm)	0.500787	ppm	0.000189	0.04	4365.730000	Y 377.433
Na (589.592 nm)	4.758090	ppm	0.010400	0.22	32837.700000	Y_R2 488.368
Na H (589.593 nm)	4.509081 u	ppm	0.013091	0.29	28776.301585	Y_R 488.368
Ni (231.604 nm)	0.505199	ppm	0.000708	0.14	3745.000000	Y 377.433
P (213.618 nm)	0.960166	ppm	0.000415	0.04	2211.320000	Y 242.219
Pb (220.353 nm)	0.986984	ppm	0.002479	0.25	3019.800000	Y 242.219
S (181.972 nm)	0.030663	ppm	0.009508	31.01	37.595054	Y 377.433
Sb (206.834 nm)	1.015890	ppm	0.000034	0.00	2700.590000	Y 377.433
Se (196.026 nm)	0.956750	ppm	0.000814	0.09	901.859000	Y 242.219
Si (288.158 nm)	4.919030	ppm	0.018100	0.37	44110.100000	Y 377.433
Sn (189.925 nm)	0.990877	ppm	0.004342	0.44	2109.400000	Y 377.433
Sr (421.552 nm)	0.487389	ppm	0.001887	0.39	103099.848591	Y_R 488.368
Th (288.505 nm)	0.005582	ppm	0.000345	6.18	87.066400	Y 377.433
Ti (336.122 nm)	0.495882	ppm	0.000619	0.12	71042.100000	Y 377.433
Tl (190.794 nm)	0.996724	ppm	0.000999	0.10	2297.910000	Y 377.433
U (409.013 nm)	0.000863 u	ppm	0.001252	> 100.00	-147.871000	Y 377.433
V (292.401 nm)	0.493438	ppm	0.000617	0.13	20741.500000	Y 377.433
Zn (206.200 nm)	0.494980	ppm	0.000107	0.02	2581.880000	Y 377.433
Zr (343.823 nm)	0.493581	ppm	0.000309	0.06	67118.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.969298	17383.420886	0.002883	0.30
Y 377.433	0.971488	947435.500324	0.000623	0.06
Y_R 377.433	0.967715	69620.700000	0.000465	0.05
Y_R 488.368	0.981261	38777.500000	0.000942	0.10
Y_R2 488.368	0.988294	75277.971730	0.000130	0.01

Sample Name: CCB

Date: 5/13/2019 11:39:19 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.014670 Z	ppm	0.018213	> 100.00	-2301.972417 Z	Y_R 488.368
Ag (328.068 nm)	0.000330	ppm	0.000133	40.47	-333.569000	Y 377.433
Al (167.019 nm)	0.007853	ppm	0.001719	21.89	5.033300	Y_R 377.433
Al H (396.152 nm)	-0.116089 Zu	ppm	0.004291	3.70	30.624645 Z	Y_R 377.433
As (188.980 nm)	-0.000973 u	ppm	0.000825	84.84	-1.209860	Y 242.219
B (249.678 nm)	0.000796	ppm	0.000316	39.72	87.266100	Y 242.219
Ba (493.408 nm)	-0.000312 u	ppm	0.000164	52.62	567.049000	Y_R 488.368
Be (234.861 nm)	0.000037	ppm	0.000004	9.68	-10.301400	Y_R 488.368
Bi (223.061 nm)	-0.000522 u	ppm	0.000517	99.16	19.408400	Y 377.433
Ca (315.887 nm)	0.010511	ppm	0.004121	39.20	-88.096970	Y_R 377.433
Cd (214.439 nm)	0.000072	ppm	0.000039	54.65	4.601450	Y 377.433
Co (228.615 nm)	0.000871	ppm	0.000217	24.91	-22.485200	Y 242.219
Cr (205.560 nm)	0.000029 u	ppm	0.000237	> 100.00	-1.587180	Y 377.433
Cu (324.754 nm)	0.000842	ppm	0.000144	17.11	653.515000	Y 377.433
Fe (238.204 nm)	0.005337	ppm	0.000955	17.89	35.463239	Y_R 377.433
Fe H (259.940 nm)	-0.192389 u	ppm	0.001185	0.62	13.016700	Y_R 377.433
K (766.491 nm)	-0.031130 u	ppm	0.053924	> 100.00	-724.183000	Y_R2 488.368
Li (670.783 nm)	0.007791	ppm	0.000397	5.10	-766.289000	Y_R2 488.368
Mg (279.078 nm)	0.003215	ppm	0.001747	54.35	41.581000	Y 377.433
Mn (257.610 nm)	0.000027	ppm	0.000039	> 100.00	81.648000	Y 377.433
Mo (202.032 nm)	0.000077	ppm	0.000039	51.10	-1.732260	Y 377.433
Na (589.592 nm)	0.055468	ppm	0.004024	7.26	1244.230000	Y_R2 488.368
Na H (589.593 nm)	-0.845925 u	ppm	0.011399	1.35	7599.934753	Y_R 488.368
Ni (231.604 nm)	-0.000513 u	ppm	0.000215	41.95	-6.710610	Y 377.433
P (213.618 nm)	0.000812	ppm	0.000223	27.40	18.556800	Y 242.219
Pb (220.353 nm)	-0.001012 u	ppm	0.001274	> 100.00	4.380760	Y 242.219
S (181.972 nm)	0.023927	ppm	0.006756	28.24	33.612573	Y 377.433
Sb (206.834 nm)	0.002210	ppm	0.000142	6.45	-24.980200	Y 377.433
Se (196.026 nm)	-0.001529 u	ppm	0.000710	46.43	9.298460	Y 242.219
Si (288.158 nm)	0.001293	ppm	0.000547	42.29	847.444000	Y 377.433
Sn (189.925 nm)	0.000419 u	ppm	0.001151	> 100.00	9.099080	Y 377.433
Sr (421.552 nm)	0.000119	ppm	0.000012	10.32	141.182704	Y_R 488.368
Th (288.505 nm)	0.000323 u	ppm	0.001422	> 100.00	53.152300	Y 377.433
Ti (336.122 nm)	0.000118	ppm	0.000022	18.49	-177.580000	Y 377.433
Tl (190.794 nm)	0.001131	ppm	0.000091	8.01	0.393343	Y 377.433
U (409.013 nm)	-0.002064 u	ppm	0.000093	4.48	-123.338000	Y 377.433
V (292.401 nm)	-0.000278 u	ppm	0.000136	48.99	7.821560	Y 377.433
Zn (206.200 nm)	-0.000591 u	ppm	0.000081	13.76	-1.313620	Y 377.433
Zr (343.823 nm)	0.000204	ppm	0.000033	16.46	65.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.969844	17393.217706	0.002996	0.31
Y 377.433	0.974439	950313.497128	0.003442	0.35
Y_R 377.433	0.969781	69769.400000	0.003275	0.34
Y_R 488.368	0.968751	38283.200000	0.007422	0.77
Y_R2 488.368	0.991000	75484.098164	0.002711	0.27

Sample Name: CCVL-5699389

Date: 5/13/2019 11:42:42 PM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.043078 Q	ppm	0.018825	43.70	-2232.627978 Q	Y_R 488.368
Ag (328.068 nm)	0.009261	ppm	0.000658	7.10	85.414400	Y 377.433
Al (167.019 nm)	0.090535	ppm	0.003118	3.44	54.550700	Y_R 377.433
Al H (396.152 nm)	-0.012826 u	ppm	0.001767	13.77	295.062367	Y_R 377.433
As (188.980 nm)	0.011463	ppm	0.000176	1.53	13.685600	Y 242.219
B (249.678 nm)	0.096304	ppm	0.000148	0.15	2450.540000	Y 242.219
Ba (493.408 nm)	0.009759	ppm	0.000083	0.85	1693.090000	Y_R 488.368
Be (234.861 nm)	0.000964	ppm	0.000010	1.03	260.170000	Y_R 488.368
Bi (223.061 nm)	0.098145	ppm	0.001353	1.38	273.715000	Y 377.433
Ca (315.887 nm)	0.209473	ppm	0.000326	0.16	79.720847	Y_R 377.433
Cd (214.439 nm)	0.005012	ppm	0.000052	1.04	305.891000	Y 377.433
Co (228.615 nm)	0.010549	ppm	0.000157	1.49	171.026000	Y 242.219
Cr (205.560 nm)	0.009933	ppm	0.000256	2.58	145.992000	Y 377.433
Cu (324.754 nm)	0.015856	ppm	0.000053	0.34	1646.720000	Y 377.433
Fe (238.204 nm)	0.101479	ppm	0.002212	2.18	388.776321	Y_R 377.433
Fe H (259.940 nm)	-0.091508 u	ppm	0.003760	4.11	201.398000	Y_R 377.433
K (766.491 nm)	2.954870	ppm	0.085333	2.89	2673.910000	Y_R2 488.368
Li (670.783 nm)	0.026876 Q	ppm	0.000516	1.92	-180.730000 Q	Y_R2 488.368
Mg (279.078 nm)	0.194456	ppm	0.000491	0.25	1171.550000	Y 377.433
Mn (257.610 nm)	0.010203	ppm	0.000011	0.11	2659.100000	Y 377.433
Mo (202.032 nm)	0.019114	ppm	0.000651	3.41	164.314000	Y 377.433
Na (589.592 nm)	0.950973	ppm	0.011498	1.21	7094.260000	Y_R2 488.368
Na H (589.593 nm)	-0.001181 u	ppm	0.007995	> 100.00	10873.784516	Y_R 488.368
Ni (231.604 nm)	0.040994	ppm	0.001030	2.51	301.120000	Y 377.433
P (213.618 nm)	2.752160 o	ppm	0.007012	0.25	6307.210000	Y 242.219
Pb (220.353 nm)	0.007255	ppm	0.000848	11.69	29.638000	Y 242.219
S (181.972 nm)	0.097143	ppm	0.004589	4.72	65.639181	Y 377.433
Sb (206.834 nm)	0.020600	ppm	0.000361	1.75	24.368600	Y 377.433
Se (196.026 nm)	0.019117	ppm	0.002438	12.75	28.520500	Y 242.219
Si (288.158 nm)	0.580349	ppm	0.027624	4.76	5941.550000	Y 377.433
Sn (189.925 nm)	0.097851	ppm	0.000209	0.21	215.708000	Y 377.433
Sr (421.552 nm)	0.009917	ppm	0.000180	1.82	2211.422355	Y_R 488.368
Th (288.505 nm)	0.015283	ppm	0.002711	17.74	98.474800	Y 377.433
Ti (336.122 nm)	0.009666	ppm	0.000037	0.39	1194.140000	Y 377.433
Tl (190.794 nm)	0.014068	ppm	0.000179	1.27	30.211700	Y 377.433
U (409.013 nm)	0.060233	ppm	0.001222	2.03	169.153000	Y 377.433
V (292.401 nm)	0.009703	ppm	0.000211	2.17	425.249000	Y 377.433
Zn (206.200 nm)	0.019360	ppm	0.000108	0.56	102.686000	Y 377.433
Zr (343.823 nm)	0.010682	ppm	0.000224	2.10	1489.610000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.978429	17547.168389	0.000467	0.05
Y 377.433	0.982300	957980.264898	0.001335	0.14
Y_R 377.433	0.967533	69607.700000	0.001690	0.17
Y_R 488.368	0.977788	38640.300000	0.000420	0.04
Y_R2 488.368	0.997402	75971.734489	0.001894	0.19

Sample Name: 280-123331-E-7-B

Date: 5/13/2019 11:46:05 PM

Rack:Tube: 2:42

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	-0.037614 nu	ppm	0.022884	60.84	-2429.596889	Y_R 488.368
Ag (328.068 nm)	0.001472	ppm	0.000148	10.06	-280.324000	Y 377.433
Al (167.019 nm)	1.146280	ppm	0.005046	0.44	692.532000	Y_R 377.433
Al H (396.152 nm)	1.362827	ppm	0.008692	0.64	4008.110522	Y_R 377.433
As (188.980 nm)	0.003554	ppm	0.000573	16.11	4.134080	Y 242.219
B (249.678 nm)	0.264250	ppm	0.000915	0.35	6592.030000	Y 242.219
Ba (493.408 nm)	0.021274	ppm	0.000073	0.34	3096.930000	Y_R 488.368
Be (234.861 nm)	-0.000273 u	ppm	0.000007	2.39	180.204000	Y_R 488.368
Bi (223.061 nm)	-0.004753 u	ppm	0.001160	24.41	10.064200	Y 377.433
Ca (315.887 nm)	481.865557 o	ppm	0.721819	0.15	406333.126318	Y_R 377.433
Cd (214.439 nm)	0.000058 u	ppm	0.000099	> 100.00	12.871100	Y 377.433
Co (228.615 nm)	0.008050	ppm	0.000315	3.91	122.115000	Y 242.219
Cr (205.560 nm)	0.002226	ppm	0.000108	4.84	28.663400	Y 377.433
Cu (324.754 nm)	-0.000228 u	ppm	0.000193	84.65	252.509000	Y 377.433
Fe (238.204 nm)	8.987529 o	ppm	0.014030	0.16	33044.240168	Y_R 377.433
Fe H (259.940 nm)	9.196900	ppm	0.015521	0.17	17546.200000	Y_R 377.433
K (766.491 nm)	5.330960	ppm	0.001473	0.03	5377.920000	Y_R2 488.368
Li (670.783 nm)	0.043551	ppm	0.000128	0.29	330.912000	Y_R2 488.368
Mg (279.078 nm)	368.814000 o	ppm	0.222147	0.06	2181620.000000	Y 377.433
Mn (257.610 nm)	5.545040 o	ppm	0.012826	0.23	1404610.000000	Y 377.433
Mo (202.032 nm)	0.000341	ppm	0.000057	16.72	0.571033	Y 377.433
Na (589.592 nm)	36.287000 o	ppm	0.095989	0.26	237155.000000	Y_R2 488.368
Na H (589.593 nm)	37.911610	ppm	0.093110	0.25	157365.128665	Y_R 488.368
Ni (231.604 nm)	0.011610	ppm	0.000539	4.64	83.610400	Y 377.433
P (213.618 nm)	0.081338	ppm	0.001426	1.75	202.611000	Y 242.219
Pb (220.353 nm)	0.001062	ppm	0.001186	> 100.00	11.003100	Y 242.219
S (181.972 nm)	633.878659 bo	ppm	0.050852	0.01	277124.842295	Y 377.433
Sb (206.834 nm)	-0.002928 u	ppm	0.000529	18.08	-40.928500	Y 377.433
Se (196.026 nm)	-0.001899 u	ppm	0.000740	38.95	11.562200	Y 242.219
Si (288.158 nm)	8.353830	ppm	0.049888	0.60	74326.900000	Y 377.433
Sn (189.925 nm)	0.001907	ppm	0.000924	48.47	12.255600	Y 377.433
Sr (421.552 nm)	0.993387	ppm	0.002488	0.25	210015.715400	Y_R 488.368
Th (288.505 nm)	0.004809	ppm	0.001715	35.66	194.622000	Y 377.433
Ti (336.122 nm)	0.035493	ppm	0.001240	3.49	6433.400000	Y 377.433
Tl (190.794 nm)	-0.000921 u	ppm	0.000280	30.39	-4.731350	Y 377.433
U (409.013 nm)	0.001867 u	ppm	0.005916	> 100.00	-191.782000	Y 377.433
V (292.401 nm)	0.002909	ppm	0.000021	0.71	147.988000	Y 377.433
Zn (206.200 nm)	0.005806	ppm	0.000400	6.89	32.032400	Y 377.433
Zr (343.823 nm)	0.001406	ppm	0.000005	0.37	256.651000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.885262	15876.312658	0.001759	0.20
Y 377.433	0.904920	882515.529528	0.003097	0.34
Y_R 377.433	0.914647	65802.900000	0.007405	0.81
Y_R 488.368	0.923080	36478.300000	0.008481	0.92
Y_R2 488.368	0.937366	71398.812348	0.001764	0.19

Sample Name: 280-123331-E-8-B

Date: 5/13/2019 11:49:27 PM

Rack:Tube: 2:43

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	-0.036336 nu	ppm	0.005731	15.77	-2426.477384	Y_R 488.368
Ag (328.068 nm)	0.001197	ppm	0.000070	5.83	-293.617000	Y 377.433
Al (167.019 nm)	4.997240 o	ppm	0.012220	0.24	3033.000000	Y_R 377.433
Al H (396.152 nm)	6.078504	ppm	0.044740	0.74	16030.482464	Y_R 377.433
As (188.980 nm)	0.027875	ppm	0.001233	4.42	32.829000	Y 242.219
B (249.678 nm)	0.322574	ppm	0.000211	0.07	7957.690000	Y 242.219
Ba (493.408 nm)	0.053424	ppm	0.000336	0.63	6747.750000	Y_R 488.368
Be (234.861 nm)	-0.000742 u	ppm	0.000020	2.70	1615.220000	Y_R 488.368
Bi (223.061 nm)	-0.006328 u	ppm	0.000997	15.75	14.746900	Y 377.433
Ca (315.887 nm)	526.531427 o	ppm	1.499740	0.28	444006.608985	Y_R 377.433
Cd (214.439 nm)	-0.000112 u	ppm	0.000099	88.42	53.381600	Y 377.433
Co (228.615 nm)	0.009916	ppm	0.000023	0.23	163.287000	Y 242.219
Cr (205.560 nm)	0.008847	ppm	0.000255	2.88	113.371000	Y 377.433
Cu (324.754 nm)	0.007526	ppm	0.000167	2.22	788.343000	Y 377.433
Fe (238.204 nm)	59.282468 o	ppm	0.135163	0.23	217873.772095	Y_R 377.433
Fe H (259.940 nm)	62.141100	ppm	0.187677	0.30	116412.000000	Y_R 377.433
K (766.491 nm)	3.718250	ppm	0.107690	2.90	3542.650000	Y_R2 488.368
Li (670.783 nm)	0.031732	ppm	0.001183	3.73	-31.732200	Y_R2 488.368
Mg (279.078 nm)	214.874000 o	ppm	0.585273	0.27	1270940.000000	Y 377.433
Mn (257.610 nm)	5.813480 o	ppm	0.003413	0.06	1472610.000000	Y 377.433
Mo (202.032 nm)	0.001466	ppm	0.000174	11.84	10.383600	Y 377.433
Na (589.592 nm)	29.113200 o	ppm	0.006192	0.02	190518.000000	Y_R2 488.368
Na H (589.593 nm)	29.869824	ppm	0.136827	0.46	126327.161407	Y_R 488.368
Ni (231.604 nm)	0.012418	ppm	0.000051	0.41	91.922500	Y 377.433
P (213.618 nm)	0.195596	ppm	0.000573	0.29	463.767000	Y 242.219
Pb (220.353 nm)	0.009191	ppm	0.001176	12.80	38.975100	Y 242.219
S (181.972 nm)	433.711797 bo	ppm	0.469749	0.11	189625.617670	Y 377.433
Sb (206.834 nm)	-0.002919 u	ppm	0.000148	5.07	-53.090500	Y 377.433
Se (196.026 nm)	0.000180 u	ppm	0.005391	> 100.00	4.317540	Y 242.219
Si (288.158 nm)	20.503500 o	ppm	0.036773	0.18	181211.000000	Y 377.433
Sn (189.925 nm)	0.003147	ppm	0.000508	16.15	14.883300	Y 377.433
Sr (421.552 nm)	0.887184	ppm	0.000331	0.04	187575.295377	Y_R 488.368
Th (288.505 nm)	0.004327	ppm	0.002991	69.12	196.694000	Y 377.433
Ti (336.122 nm)	0.139361	ppm	0.000158	0.11	21493.000000	Y 377.433
Tl (190.794 nm)	-0.000792 u	ppm	0.000231	29.20	-6.338900	Y 377.433
U (409.013 nm)	-0.020654 u	ppm	0.002575	12.46	-257.187000	Y 377.433
V (292.401 nm)	0.011446	ppm	0.000018	0.16	510.191000	Y 377.433
Zn (206.200 nm)	0.028039	ppm	0.000104	0.37	147.924000	Y 377.433
Zr (343.823 nm)	0.005363	ppm	0.000288	5.38	950.416000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.899432	16130.432555	0.001971	0.22
Y 377.433	0.920781	897984.386493	0.002865	0.31
Y_R 377.433	0.940948	67695.100000	0.003715	0.39
Y_R 488.368	0.953769	37691.100000	0.002728	0.29
Y_R2 488.368	0.970900	73953.089319	0.002577	0.27

Sample Name: MB 280-457037/1-A

Date: 5/13/2019 11:52:49 PM

Rack:Tube: 2:44

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.024167 n	ppm	0.000597	2.47	-2278.789408	Y_R 488.368
Ag (328.068 nm)	0.000243	ppm	0.000202	83.26	-337.598000	Y 377.433
Al (167.019 nm)	0.002349 u	ppm	0.005606	> 100.00	1.757910	Y_R 377.433
Al H (396.152 nm)	-0.116217 u	ppm	0.006692	5.76	30.289771	Y_R 377.433
As (188.980 nm)	-0.001946 u	ppm	0.001356	69.67	-2.375580	Y 242.219
B (249.678 nm)	0.000598	ppm	0.000071	11.85	82.324000	Y 242.219
Ba (493.408 nm)	-0.000055 u	ppm	0.000074	> 100.00	595.828000	Y_R 488.368
Be (234.861 nm)	-0.000048 u	ppm	0.000023	48.15	-34.144900	Y_R 488.368
Bi (223.061 nm)	-0.000944 u	ppm	0.000793	84.02	18.323200	Y 377.433
Ca (315.887 nm)	0.019536	ppm	0.002171	11.11	-80.484740	Y_R 377.433
Cd (214.439 nm)	0.000013 u	ppm	0.000086	> 100.00	1.069510	Y 377.433
Co (228.615 nm)	0.000608	ppm	0.000119	19.52	-27.717300	Y 242.219
Cr (205.560 nm)	0.000220	ppm	0.000105	47.67	1.262390	Y 377.433
Cu (324.754 nm)	0.000825	ppm	0.000005	0.65	652.185000	Y 377.433
Fe (238.204 nm)	0.027647	ppm	0.001563	5.65	117.450567	Y_R 377.433
Fe H (259.940 nm)	-0.168219 u	ppm	0.001770	1.05	58.150900	Y_R 377.433
K (766.491 nm)	-0.074960 u	ppm	0.027548	36.75	-774.061000	Y_R2 488.368
Li (670.783 nm)	0.006744	ppm	0.000993	14.72	-798.425000	Y_R2 488.368
Mg (279.078 nm)	0.007269	ppm	0.001363	18.75	65.558800	Y 377.433
Mn (257.610 nm)	0.000321	ppm	0.000020	6.39	155.896000	Y 377.433
Mo (202.032 nm)	0.000022 u	ppm	0.000080	> 100.00	-2.210070	Y 377.433
Na (589.592 nm)	-0.019671 u	ppm	0.000554	2.81	755.585000	Y_R2 488.368
Na H (589.593 nm)	-1.088664 u	ppm	0.006511	0.60	6662.345115	Y_R 488.368
Ni (231.604 nm)	0.000503	ppm	0.000232	46.11	0.825026	Y 377.433
P (213.618 nm)	-0.002118 u	ppm	0.000152	7.17	11.860000	Y 242.219
Pb (220.353 nm)	-0.001587 u	ppm	0.000325	20.48	2.626760	Y 242.219
S (181.972 nm)	0.073474	ppm	0.008380	11.41	55.271819	Y 377.433
Sb (206.834 nm)	0.002979	ppm	0.002452	82.32	-22.913800	Y 377.433
Se (196.026 nm)	-0.002434 u	ppm	0.002300	94.47	8.451490	Y 242.219
Si (288.158 nm)	0.010951	ppm	0.000178	1.62	932.404000	Y 377.433
Sn (189.925 nm)	0.000137 u	ppm	0.002367	> 100.00	8.501160	Y 377.433
Sr (421.552 nm)	0.000025 u	ppm	0.000179	> 100.00	121.177511	Y_R 488.368
Th (288.505 nm)	0.002150	ppm	0.000924	43.00	58.470700	Y 377.433
Ti (336.122 nm)	-0.000092 u	ppm	0.000049	52.83	-207.842000	Y 377.433
Tl (190.794 nm)	0.000473 u	ppm	0.001697	> 100.00	-1.127160	Y 377.433
U (409.013 nm)	-0.004973 u	ppm	0.003049	61.31	-137.002000	Y 377.433
V (292.401 nm)	0.000025 u	ppm	0.000160	> 100.00	20.500700	Y 377.433
Zn (206.200 nm)	-0.000202 u	ppm	0.000008	3.77	0.717187	Y 377.433
Zr (343.823 nm)	0.000065	ppm	0.000038	58.98	46.609400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.958575	17191.117108	0.001911	0.20
Y 377.433	0.964650	940767.328595	0.002086	0.22
Y_R 377.433	0.953624	68607.000000	0.002393	0.25
Y_R 488.368	0.969413	38309.300000	0.001869	0.19
Y_R2 488.368	0.977754	74475.139408	0.003518	0.36

Sample Name: LCS 280-457037/2-A

Date: 5/13/2019 11:56:12 PM

Rack:Tube: 2:45

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.956857 n	ppm	0.013800	1.44	-2.100145	Y_R 488.368
Ag (328.068 nm)	-0.000616 u	ppm	0.000452	73.29	-486.336000	Y 377.433
Al (167.019 nm)	8.873320 o	ppm	0.042223	0.48	5314.130000	Y_R 377.433
Al H (396.152 nm)	10.112281	ppm	0.037121	0.37	26168.768062	Y_R 377.433
As (188.980 nm)	1.978530	ppm	0.000169	0.01	2369.830000	Y 242.219
B (249.678 nm)	0.978852	ppm	0.000211	0.02	24312.500000	Y 242.219
Ba (493.408 nm)	1.988580 o	ppm	0.004183	0.21	222957.000000	Y_R 488.368
Be (234.861 nm)	0.984669	ppm	0.003765	0.38	285136.000000	Y_R 488.368
Bi (223.061 nm)	1.948140	ppm	0.000307	0.02	5043.300000	Y 377.433
Ca (315.887 nm)	49.853946 o	ppm	0.177611	0.36	41953.000255	Y_R 377.433
Cd (214.439 nm)	0.982691	ppm	0.000261	0.03	59917.400000	Y 377.433
Co (228.615 nm)	0.948472	ppm	0.000034	0.00	18927.900000	Y 242.219
Cr (205.560 nm)	0.989303	ppm	0.006731	0.68	14733.200000	Y 377.433
Cu (324.754 nm)	0.971401	ppm	0.000543	0.06	64913.300000	Y 377.433
Fe (238.204 nm)	9.753443 o	ppm	0.049358	0.51	35858.908491	Y_R 377.433
Fe H (259.940 nm)	10.011300	ppm	0.038857	0.39	19066.900000	Y_R 377.433
K (766.491 nm)	48.948100	ppm	0.166475	0.34	55014.600000	Y_R2 488.368
Li (670.783 nm)	0.980024	ppm	0.002193	0.22	29064.200000	Y_R2 488.368
Mg (279.078 nm)	48.855000 o	ppm	0.018891	0.04	288938.000000	Y 377.433
Mn (257.610 nm)	0.996267	ppm	0.001372	0.14	252425.000000	Y 377.433
Mo (202.032 nm)	1.016540	ppm	0.002483	0.24	8864.390000	Y 377.433
Na (589.592 nm)	48.151800 o	ppm	0.108492	0.23	318326.000000	Y_R2 488.368
Na H (589.593 nm)	49.068187	ppm	0.137984	0.28	202423.973268	Y_R 488.368
Ni (231.604 nm)	0.964952	ppm	0.000740	0.08	7156.090000	Y 377.433
P (213.618 nm)	19.442800 o	ppm	0.027257	0.14	44456.500000	Y 242.219
Pb (220.353 nm)	0.970130	ppm	0.001550	0.16	2969.180000	Y 242.219
S (181.972 nm)	9.262902	ppm	0.065622	0.71	4074.371897	Y 377.433
Sb (206.834 nm)	0.001574 u	ppm	0.002868	> 100.00	-10.990100	Y 377.433
Se (196.026 nm)	1.937670	ppm	0.001512	0.08	1814.730000	Y 242.219
Si (288.158 nm)	2.130330	ppm	0.023975	1.13	19577.200000	Y 377.433
Sn (189.925 nm)	1.989270	ppm	0.004584	0.23	4226.530000	Y 377.433
Sr (421.552 nm)	0.983676	ppm	0.002562	0.26	207963.800079	Y_R 488.368
Th (288.505 nm)	1.003550	ppm	0.001137	0.11	3072.980000	Y 377.433
Ti (336.122 nm)	1.012570	ppm	0.001584	0.16	145394.000000	Y 377.433
Tl (190.794 nm)	1.974750	ppm	0.001178	0.06	4554.440000	Y 377.433
U (409.013 nm)	2.036090	ppm	0.004264	0.21	9430.860000	Y 377.433
V (292.401 nm)	1.007230	ppm	0.001086	0.11	42283.100000	Y 377.433
Zn (206.200 nm)	0.484375	ppm	0.000973	0.20	2526.610000	Y 377.433
Zr (343.823 nm)	0.497830	ppm	0.001145	0.23	67718.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.944666	16941.662271	0.001283	0.14
Y 377.433	0.946186	922760.009995	0.001981	0.21
Y_R 377.433	0.945519	68023.900000	0.002228	0.24
Y_R 488.368	0.960161	37943.700000	0.002647	0.28
Y_R2 488.368	0.971701	74014.152832	0.008831	0.91

Sample Name: 280-123273-E-12-B

Date: 5/13/2019 11:59:34 PM

Rack:Tube: 2:46

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.074529 n	ppm	0.011466	15.38	-2155.855183	Y_R 488.368
Ag (328.068 nm)	0.001084	ppm	0.000238	21.95	-297.990000	Y 377.433
Al (167.019 nm)	0.003693	ppm	0.001285	34.80	4.300080	Y_R 377.433
Al H (396.152 nm)	-0.049826 u	ppm	0.010323	20.72	380.295366	Y_R 377.433
As (188.980 nm)	0.001402	ppm	0.000405	28.87	1.614610	Y 242.219
B (249.678 nm)	0.956369	ppm	0.000478	0.05	23726.100000	Y 242.219
Ba (493.408 nm)	0.016233	ppm	0.000404	2.49	2510.810000	Y_R 488.368
Be (234.861 nm)	-0.000123 u	ppm	0.000017	13.47	16.893400	Y_R 488.368
Bi (223.061 nm)	-0.001246 u	ppm	0.001482	> 100.00	17.952200	Y 377.433
Ca (315.887 nm)	408.652142 o	ppm	0.804535	0.20	344581.182358	Y_R 377.433
Cd (214.439 nm)	0.000106	ppm	0.000010	9.72	9.064380	Y 377.433
Co (228.615 nm)	0.002746	ppm	0.000142	5.19	14.943100	Y 242.219
Cr (205.560 nm)	0.000505	ppm	0.000321	63.45	4.858190	Y 377.433
Cu (324.754 nm)	-0.001795 u	ppm	0.000001	0.06	191.482000	Y 377.433
Fe (238.204 nm)	2.362686	ppm	0.001792	0.08	8698.516877	Y_R 377.433
Fe H (259.940 nm)	2.268300 u	ppm	0.005115	0.23	4608.000000	Y_R 377.433
K (766.491 nm)	9.274680	ppm	0.009181	0.10	9865.910000	Y_R2 488.368
Li (670.783 nm)	0.102791	ppm	0.000026	0.03	2148.530000	Y_R2 488.368
Mg (279.078 nm)	252.943000 o	ppm	0.551347	0.22	1496230.000000	Y 377.433
Mn (257.610 nm)	2.324360 o	ppm	0.000721	0.03	588825.000000	Y 377.433
Mo (202.032 nm)	0.001987	ppm	0.000387	19.46	14.926700	Y 377.433
Na (589.592 nm)	57.705400 o	ppm	0.341926	0.59	376574.000000	Y_R2 488.368
Na H (589.593 nm)	60.581237	ppm	0.364878	0.60	244944.777986	Y_R 488.368
Ni (231.604 nm)	0.005393	ppm	0.000412	7.65	37.199900	Y 377.433
P (213.618 nm)	0.018668	ppm	0.001584	8.48	59.369400	Y 242.219
Pb (220.353 nm)	-0.000187 u	ppm	0.000624	> 100.00	7.058770	Y 242.219
S (181.972 nm)	402.164998 bo	ppm	0.057247	0.01	175828.113837	Y 377.433
Sb (206.834 nm)	-0.000585 u	ppm	0.001105	> 100.00	-33.022500	Y 377.433
Se (196.026 nm)	-0.001029 u	ppm	0.001607	> 100.00	11.111400	Y 242.219
Si (288.158 nm)	8.692700	ppm	0.093157	1.07	77308.000000	Y 377.433
Sn (189.925 nm)	0.001648	ppm	0.000870	52.80	11.704800	Y 377.433
Sr (421.552 nm)	2.339333 o	ppm	0.027550	1.18	494409.935540	Y_R 488.368
Th (288.505 nm)	0.002277 u	ppm	0.003562	> 100.00	112.639000	Y 377.433
Ti (336.122 nm)	-0.000882 u	ppm	0.000015	1.74	976.683000	Y 377.433
Tl (190.794 nm)	0.001032	ppm	0.000874	84.72	0.101726	Y 377.433
U (409.013 nm)	-0.019036 u	ppm	0.002863	15.04	-282.203000	Y 377.433
V (292.401 nm)	0.000484	ppm	0.000335	69.19	43.567800	Y 377.433
Zn (206.200 nm)	0.000502	ppm	0.000013	2.53	4.384570	Y 377.433
Zr (343.823 nm)	0.001485	ppm	0.000232	15.62	246.881000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.894204	16036.684744	0.002362	0.26
Y 377.433	0.912577	889983.591333	0.001810	0.20
Y_R 377.433	0.939106	67562.600000	0.008039	0.86
Y_R 488.368	0.945187	37352.000000	0.010456	1.11
Y_R2 488.368	0.961343	73225.180299	0.004123	0.43

Sample Name: 280-123273-E-13-B

Date: 5/14/2019 12:02:55 AM

Rack:Tube: 2:47

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.039483 n	ppm	0.015443	39.11	-2241.403082	Y_R 488.368
Ag (328.068 nm)	0.000711	ppm	0.000012	1.67	-315.949000	Y 377.433
Al (167.019 nm)	0.009578	ppm	0.001159	12.10	6.067840	Y_R 377.433
Al H (396.152 nm)	-0.068206 u	ppm	0.007108	10.42	258.825242	Y_R 377.433
As (188.980 nm)	0.002216	ppm	0.002071	93.47	2.610100	Y 242.219
B (249.678 nm)	0.319779	ppm	0.000301	0.09	7979.410000	Y 242.219
Ba (493.408 nm)	0.012646	ppm	0.000033	0.26	2069.680000	Y_R 488.368
Be (234.861 nm)	-0.000018 u	ppm	0.000017	95.04	-26.222700	Y_R 488.368
Bi (223.061 nm)	-0.001298 u	ppm	0.001183	91.14	17.407500	Y 377.433
Ca (315.887 nm)	239.790649 o	ppm	0.895508	0.37	202154.751436	Y_R 377.433
Cd (214.439 nm)	0.000000 u	ppm	0.000068	> 100.00	0.249820	Y 377.433
Co (228.615 nm)	0.000295	ppm	0.000146	49.63	-33.981700	Y 242.219
Cr (205.560 nm)	0.000150	ppm	0.000149	99.01	0.220589	Y 377.433
Cu (324.754 nm)	0.001255	ppm	0.000059	4.72	511.241000	Y 377.433
Fe (238.204 nm)	0.009487	ppm	0.000469	4.94	50.714042	Y_R 377.433
Fe H (259.940 nm)	-0.191828 u	ppm	0.006989	3.64	14.064000	Y_R 377.433
K (766.491 nm)	3.066720	ppm	0.095501	3.11	2801.190000	Y_R2 488.368
Li (670.783 nm)	0.029786	ppm	0.000060	0.20	-91.441200	Y_R2 488.368
Mg (279.078 nm)	199.351000 o	ppm	0.077623	0.04	1179230.000000	Y 377.433
Mn (257.610 nm)	0.054515	ppm	0.000078	0.14	13883.000000	Y 377.433
Mo (202.032 nm)	0.002531	ppm	0.000484	19.13	19.673300	Y 377.433
Na (589.592 nm)	29.160200 o	ppm	0.127493	0.44	190740.000000	Y_R2 488.368
Na H (589.593 nm)	29.750898	ppm	0.263262	0.88	125826.137341	Y_R 488.368
Ni (231.604 nm)	0.000969	ppm	0.000360	37.15	4.276700	Y 377.433
P (213.618 nm)	0.002548	ppm	0.002962	> 100.00	22.524600	Y 242.219
Pb (220.353 nm)	0.000569	ppm	0.000616	> 100.00	9.176580	Y 242.219
S (181.972 nm)	260.124101 bo	ppm	0.382780	0.15	113732.413850	Y 377.433
Sb (206.834 nm)	0.000725 u	ppm	0.001820	> 100.00	-28.973900	Y 377.433
Se (196.026 nm)	0.000308 u	ppm	0.005432	> 100.00	11.051800	Y 242.219
Si (288.158 nm)	12.461900 o	ppm	0.078460	0.63	110467.000000	Y 377.433
Sn (189.925 nm)	-0.000074 u	ppm	0.000034	46.36	8.053570	Y 377.433
Sr (421.552 nm)	0.517635	ppm	0.003356	0.65	109490.600035	Y_R 488.368
Th (288.505 nm)	0.001202	ppm	0.000411	34.22	57.132300	Y 377.433
Ti (336.122 nm)	-0.000579 u	ppm	0.000043	7.47	483.982000	Y 377.433
Tl (190.794 nm)	0.001034	ppm	0.001097	> 100.00	0.163460	Y 377.433
U (409.013 nm)	-0.011635 u	ppm	0.005975	51.36	-216.066000	Y 377.433
V (292.401 nm)	0.000490	ppm	0.000240	49.01	42.329800	Y 377.433
Zn (206.200 nm)	0.002101	ppm	0.000219	10.44	12.722000	Y 377.433
Zr (343.823 nm)	0.000385	ppm	0.000004	1.15	90.082100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.920525	16508.724887	0.001842	0.20
Y 377.433	0.936846	913651.067677	0.002005	0.21
Y_R 377.433	0.937556	67451.000000	0.000093	0.01
Y_R 488.368	0.948295	37474.800000	0.003259	0.34
Y_R2 488.368	0.962721	73330.117621	0.008938	0.93

Sample Name: 280-123273-E-14-B

Date: 5/14/2019 12:06:17 AM

Rack:Tube: 2:48

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.094015 n	ppm	0.006283	6.68	-2108.292355	Y_R 488.368
Ag (328.068 nm)	0.001218	ppm	0.000231	18.98	-291.850000	Y 377.433
Al (167.019 nm)	0.007152	ppm	0.001586	22.17	4.682030	Y_R 377.433
Al H (396.152 nm)	-0.100408 u	ppm	0.001330	1.32	114.298749	Y_R 377.433
As (188.980 nm)	0.001551	ppm	0.000567	36.55	1.812840	Y 242.219
B (249.678 nm)	2.431490 o	ppm	0.000201	0.01	60226.300000	Y 242.219
Ba (493.408 nm)	0.053959	ppm	0.000283	0.53	6656.580000	Y_R 488.368
Be (234.861 nm)	-0.000066 u	ppm	0.000019	29.00	-37.268800	Y_R 488.368
Bi (223.061 nm)	-0.001565 u	ppm	0.000667	42.63	16.736300	Y 377.433
Ca (315.887 nm)	98.344054 o	ppm	0.163358	0.17	82851.449429	Y_R 377.433
Cd (214.439 nm)	-0.000033 u	ppm	0.000039	> 100.00	-1.664220	Y 377.433
Co (228.615 nm)	0.000832	ppm	0.000091	10.98	-23.253000	Y 242.219
Cr (205.560 nm)	0.000320	ppm	0.000293	91.29	2.731190	Y 377.433
Cu (324.754 nm)	0.001174	ppm	0.000167	14.22	609.828000	Y 377.433
Fe (238.204 nm)	0.096633	ppm	0.000668	0.69	370.969153	Y_R 377.433
Fe H (259.940 nm)	-0.105349 u	ppm	0.002047	1.94	175.552000	Y_R 377.433
K (766.491 nm)	5.594720	ppm	0.010919	0.20	5678.080000	Y_R2 488.368
Li (670.783 nm)	0.066760	ppm	0.000884	1.32	1043.030000	Y_R2 488.368
Mg (279.078 nm)	89.544300 o	ppm	0.236472	0.26	529697.000000	Y 377.433
Mn (257.610 nm)	0.823013	ppm	0.001085	0.13	208541.000000	Y 377.433
Mo (202.032 nm)	0.003127	ppm	0.000132	4.24	24.867100	Y 377.433
Na (589.592 nm)	165.790000 o	ppm	0.440415	0.27	1080270.000000	Y_R2 488.368
Na H (589.593 nm)	173.744710	ppm	1.357674	0.78	682197.034387	Y_R 488.368
Ni (231.604 nm)	0.001040	ppm	0.000013	1.26	4.807760	Y 377.433
P (213.618 nm)	0.004558	ppm	0.000904	19.83	27.117700	Y 242.219
Pb (220.353 nm)	-0.000290 u	ppm	0.000371	> 100.00	6.555040	Y 242.219
S (181.972 nm)	79.571195 o	ppm	0.111539	0.14	34808.171427	Y 377.433
Sb (206.834 nm)	-0.000576 u	ppm	0.001300	> 100.00	-32.448300	Y 377.433
Se (196.026 nm)	0.000982	ppm	0.000896	91.27	12.253000	Y 242.219
Si (288.158 nm)	7.637030	ppm	0.015522	0.20	68021.000000	Y 377.433
Sn (189.925 nm)	-0.000211 u	ppm	0.000607	> 100.00	7.764100	Y 377.433
Sr (421.552 nm)	1.070436	ppm	0.004561	0.43	226295.985682	Y_R 488.368
Th (288.505 nm)	0.005559	ppm	0.000265	4.77	87.443400	Y 377.433
Ti (336.122 nm)	-0.000292 u	ppm	0.000047	16.04	75.733800	Y 377.433
Tl (190.794 nm)	0.001483	ppm	0.000580	39.09	1.195420	Y 377.433
U (409.013 nm)	-0.019478 u	ppm	0.002949	15.14	-224.756000	Y 377.433
V (292.401 nm)	-0.000470 u	ppm	0.000052	11.14	2.239100	Y 377.433
Zn (206.200 nm)	0.001251	ppm	0.000344	27.46	8.292240	Y 377.433
Zr (343.823 nm)	0.000155	ppm	0.000105	68.09	59.069000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.934964	16767.677098	0.002298	0.25
Y 377.433	0.943460	920101.676992	0.003682	0.39
Y_R 377.433	0.962343	69234.300000	0.002458	0.26
Y_R 488.368	0.970286	38343.800000	0.004939	0.51
Y_R2 488.368	0.978034	74496.524405	0.003574	0.37

Sample Name: 280-123273-E-15-B

Date: 5/14/2019 12:09:38 AM

Rack:Tube: 2:49

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.070086 n	ppm	0.009566	13.65	-2166.701004	Y_R 488.368
Ag (328.068 nm)	0.001221	ppm	0.000110	8.97	-291.820000	Y 377.433
Al (167.019 nm)	-0.003599 u	ppm	0.000262	7.29	-1.647990	Y_R 377.433
Al H (396.152 nm)	-0.053629 u	ppm	0.007392	13.78	415.574517	Y_R 377.433
As (188.980 nm)	0.000518	ppm	0.000013	2.48	0.574613	Y 242.219
B (249.678 nm)	1.582000 o	ppm	0.001263	0.08	39208.800000	Y 242.219
Ba (493.408 nm)	0.011562	ppm	0.000016	0.14	2009.470000	Y_R 488.368
Be (234.861 nm)	-0.000127 u	ppm	0.000001	1.04	-50.710300	Y_R 488.368
Bi (223.061 nm)	-0.003180 u	ppm	0.001445	45.45	12.597400	Y 377.433
Ca (315.887 nm)	510.522899 o	ppm	1.805659	0.35	430504.196043	Y_R 377.433
Cd (214.439 nm)	-0.000002 u	ppm	0.000091	> 100.00	0.319303	Y 377.433
Co (228.615 nm)	0.008242	ppm	0.000080	0.97	124.599000	Y 242.219
Cr (205.560 nm)	0.000474	ppm	0.000263	55.62	4.981470	Y 377.433
Cu (324.754 nm)	-0.002162 u	ppm	0.000356	16.46	91.006600	Y 377.433
Fe (238.204 nm)	0.230377	ppm	0.000302	0.13	862.467569	Y_R 377.433
Fe H (259.940 nm)	0.027091 u	ppm	0.000737	2.72	422.865000	Y_R 377.433
K (766.491 nm)	12.156700	ppm	0.125915	1.04	13145.700000	Y_R2 488.368
Li (670.783 nm)	0.128270	ppm	0.000836	0.65	2930.300000	Y_R2 488.368
Mg (279.078 nm)	248.038000 o	ppm	0.061578	0.02	1467220.000000	Y 377.433
Mn (257.610 nm)	3.048800 o	ppm	0.001448	0.05	772323.000000	Y 377.433
Mo (202.032 nm)	0.000638	ppm	0.000427	67.00	3.156290	Y 377.433
Na (589.592 nm)	85.497900 o	ppm	0.395688	0.46	557494.000000	Y_R2 488.368
Na H (589.593 nm)	91.806518	ppm	0.256171	0.28	365582.090310	Y_R 488.368
Ni (231.604 nm)	0.014129	ppm	0.000102	0.72	101.885000	Y 377.433
P (213.618 nm)	0.004060	ppm	0.001005	24.74	25.980200	Y 242.219
Pb (220.353 nm)	-0.000788 u	ppm	0.001137	> 100.00	5.018700	Y 242.219
S (181.972 nm)	594.929114 bo	ppm	0.116854	0.02	260093.423007	Y 377.433
Sb (206.834 nm)	-0.003991 u	ppm	0.000617	15.46	-41.623900	Y 377.433
Se (196.026 nm)	-0.003682 u	ppm	0.001500	40.75	9.598590	Y 242.219
Si (288.158 nm)	6.430240	ppm	0.016961	0.26	57404.600000	Y 377.433
Sn (189.925 nm)	0.001004	ppm	0.000907	90.34	10.340800	Y 377.433
Sr (421.552 nm)	3.813499 o	ppm	0.002500	0.07	805896.947580	Y_R 488.368
Th (288.505 nm)	0.004300	ppm	0.000872	20.27	135.468000	Y 377.433
Ti (336.122 nm)	-0.001199 u	ppm	0.000041	3.38	1254.400000	Y 377.433
Tl (190.794 nm)	-0.000206 u	ppm	0.001531	> 100.00	-2.669240	Y 377.433
U (409.013 nm)	-0.024693 u	ppm	0.008062	32.65	-331.076000	Y 377.433
V (292.401 nm)	0.000086 u	ppm	0.000196	> 100.00	27.081400	Y 377.433
Zn (206.200 nm)	0.000020 u	ppm	0.000228	> 100.00	1.874350	Y 377.433
Zr (343.823 nm)	0.000105	ppm	0.000105	99.81	52.709600	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.911520	16347.232392	0.001316	0.14
Y 377.433	0.932861	909765.142855	0.000150	0.02
Y_R 377.433	0.948351	68227.700000	0.002357	0.25
Y_R 488.368	0.951140	37587.200000	0.004000	0.42
Y_R2 488.368	0.968409	73763.389406	0.002673	0.28

Sample Name: 280-123273-E-16-B

Date: 5/14/2019 12:13:00 AM

Rack:Tube: 2:50

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.160391 n	ppm	0.020735	12.93	-1946.268389	Y_R 488.368
Ag (328.068 nm)	0.001126	ppm	0.000263	23.38	-296.352000	Y 377.433
Al (167.019 nm)	0.004296	ppm	0.002644	61.54	3.840980	Y_R 377.433
Al H (396.152 nm)	-0.057351 u	ppm	0.009766	17.03	304.531131	Y_R 377.433
As (188.980 nm)	0.000767	ppm	0.000293	38.16	0.863586	Y 242.219
B (249.678 nm)	3.594600 o	ppm	0.002645	0.07	89001.800000	Y 242.219
Ba (493.408 nm)	0.011680	ppm	0.000133	1.14	1972.010000	Y_R 488.368
Be (234.861 nm)	-0.000101 u	ppm	0.000024	23.56	-11.092600	Y_R 488.368
Bi (223.061 nm)	-0.001341 u	ppm	0.003428	> 100.00	17.516200	Y 377.433
Ca (315.887 nm)	280.978290 o	ppm	1.046990	0.37	236894.516989	Y_R 377.433
Cd (214.439 nm)	-0.000067 u	ppm	0.000014	20.50	-2.599060	Y 377.433
Co (228.615 nm)	0.001411	ppm	0.000265	18.75	-11.712800	Y 242.219
Cr (205.560 nm)	0.000228	ppm	0.000134	58.79	1.040600	Y 377.433
Cu (324.754 nm)	-0.000390 u	ppm	0.000132	33.77	375.991000	Y 377.433
Fe (238.204 nm)	1.262637	ppm	0.000668	0.05	4655.931254	Y_R 377.433
Fe H (259.940 nm)	1.114440 u	ppm	0.003172	0.28	2453.340000	Y_R 377.433
K (766.491 nm)	15.936500	ppm	0.106441	0.67	17447.100000	Y_R2 488.368
Li (670.783 nm)	0.221829	ppm	0.000563	0.25	5800.900000	Y_R2 488.368
Mg (279.078 nm)	198.650000 o	ppm	0.094218	0.05	1175080.000000	Y 377.433
Mn (257.610 nm)	1.714510 o	ppm	0.002448	0.14	434353.000000	Y 377.433
Mo (202.032 nm)	0.000420	ppm	0.000121	28.81	1.255510	Y 377.433
Na (589.592 nm)	230.107000 o	ppm	0.545507	0.24	1498880.000000	Y_R2 488.368
Na H (589.593 nm)	241.709026	ppm	1.065730	0.44	944739.902391	Y_R 488.368
Ni (231.604 nm)	0.000516	ppm	0.000411	79.61	0.979680	Y 377.433
P (213.618 nm)	0.008063	ppm	0.003380	41.92	35.130600	Y 242.219
Pb (220.353 nm)	0.000090 u	ppm	0.001020	> 100.00	7.828740	Y 242.219
S (181.972 nm)	388.606869 bo	ppm	0.053866	0.01	169900.110202	Y 377.433
Sb (206.834 nm)	-0.001133 u	ppm	0.000219	19.31	-34.233700	Y 377.433
Se (196.026 nm)	-0.002237 u	ppm	0.000015	0.66	9.723080	Y 242.219
Si (288.158 nm)	8.335360	ppm	0.097235	1.17	74164.400000	Y 377.433
Sn (189.925 nm)	0.001718	ppm	0.001867	> 100.00	11.853400	Y 377.433
Sr (421.552 nm)	4.173216 o	ppm	0.052004	1.25	881903.931276	Y_R 488.368
Th (288.505 nm)	0.005735	ppm	0.003563	62.13	108.732000	Y 377.433
Ti (336.122 nm)	-0.000663 u	ppm	0.000030	4.51	602.662000	Y 377.433
Tl (190.794 nm)	0.000351 u	ppm	0.003754	> 100.00	-1.442170	Y 377.433
U (409.013 nm)	-0.023931 u	ppm	0.002797	11.69	-280.873000	Y 377.433
V (292.401 nm)	0.000165 u	ppm	0.000396	> 100.00	29.916400	Y 377.433
Zn (206.200 nm)	0.000762	ppm	0.000386	50.64	5.740550	Y 377.433
Zr (343.823 nm)	0.000145	ppm	0.000047	32.27	61.288800	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.906486	16256.943133	0.001270	0.14
Y 377.433	0.921190	898383.203916	0.002339	0.25
Y_R 377.433	0.932385	67079.000000	0.004053	0.43
Y_R 488.368	0.947699	37451.300000	0.003695	0.39
Y_R2 488.368	0.968732	73787.972331	0.000029	0.00

Sample Name: 280-123273-E-17-B

Date: 5/14/2019 12:16:22 AM

Rack:Tube: 2:51

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.048440 n	ppm	0.015590	32.18	-2219.539034	Y_R 488.368
Ag (328.068 nm)	0.001005	ppm	0.000271	27.02	-302.027000	Y 377.433
Al (167.019 nm)	0.001999	ppm	0.000348	17.39	1.535890	Y_R 377.433
Al H (396.152 nm)	-0.055666 u	ppm	0.004221	7.58	322.391470	Y_R 377.433
As (188.980 nm)	-0.000068 u	ppm	0.003135	> 100.00	-0.126072	Y 242.219
B (249.678 nm)	1.573900 o	ppm	0.001060	0.07	39008.300000	Y 242.219
Ba (493.408 nm)	0.012650	ppm	0.000411	3.25	2086.150000	Y_R 488.368
Be (234.861 nm)	-0.000057 u	ppm	0.000006	11.17	-37.471100	Y_R 488.368
Bi (223.061 nm)	-0.001586 u	ppm	0.000983	61.97	16.667000	Y 377.433
Ca (315.887 nm)	310.978762 o	ppm	0.428741	0.14	262198.451305	Y_R 377.433
Cd (214.439 nm)	-0.000030 u	ppm	0.000040	> 100.00	-1.603250	Y 377.433
Co (228.615 nm)	0.002757	ppm	0.000039	1.41	15.163000	Y 242.219
Cr (205.560 nm)	0.000371	ppm	0.000230	62.00	3.514360	Y 377.433
Cu (324.754 nm)	-0.000510 u	ppm	0.000182	35.73	340.518000	Y 377.433
Fe (238.204 nm)	0.010500	ppm	0.001254	11.95	54.436785	Y_R 377.433
Fe H (259.940 nm)	-0.192470 u	ppm	0.004805	2.50	12.865300	Y_R 377.433
K (766.491 nm)	5.847510	ppm	0.042805	0.73	5965.760000	Y_R2 488.368
Li (670.783 nm)	0.072615	ppm	0.002998	4.13	1222.650000	Y_R2 488.368
Mg (279.078 nm)	153.976000 o	ppm	0.211706	0.14	910822.000000	Y 377.433
Mn (257.610 nm)	1.560270 o	ppm	0.001994	0.13	395284.000000	Y 377.433
Mo (202.032 nm)	0.003882	ppm	0.000120	3.08	31.452900	Y 377.433
Na (589.592 nm)	70.630300 o	ppm	0.535275	0.76	460707.000000	Y_R2 488.368
Na H (589.593 nm)	74.813341	ppm	0.418546	0.56	299927.922434	Y_R 488.368
Ni (231.604 nm)	0.002826	ppm	0.000285	10.10	18.053800	Y 377.433
P (213.618 nm)	0.005252	ppm	0.000244	4.64	28.704300	Y 242.219
Pb (220.353 nm)	-0.000634 u	ppm	0.000514	80.99	5.467830	Y 242.219
S (181.972 nm)	301.907913 bo	ppm	0.598053	0.20	132000.705262	Y 377.433
Sb (206.834 nm)	-0.001686 u	ppm	0.001300	77.11	-35.430200	Y 377.433
Se (196.026 nm)	0.002034 u	ppm	0.004304	> 100.00	13.817700	Y 242.219
Si (288.158 nm)	7.426290	ppm	0.053245	0.72	66167.000000	Y 377.433
Sn (189.925 nm)	0.000243 u	ppm	0.000475	> 100.00	8.725380	Y 377.433
Sr (421.552 nm)	1.377619 o	ppm	0.005194	0.38	291202.679552	Y_R 488.368
Th (288.505 nm)	0.003147	ppm	0.003265	> 100.00	97.615100	Y 377.433
Ti (336.122 nm)	-0.000905 u	ppm	0.000080	8.85	663.423000	Y 377.433
Tl (190.794 nm)	0.000576	ppm	0.000232	40.28	-0.889742	Y 377.433
U (409.013 nm)	-0.013889 u	ppm	0.002355	16.96	-240.816000	Y 377.433
V (292.401 nm)	0.000355	ppm	0.000152	42.69	36.052900	Y 377.433
Zn (206.200 nm)	0.001854	ppm	0.000160	8.62	11.435000	Y 377.433
Zr (343.823 nm)	0.000052	ppm	0.000038	73.59	44.823600	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.913302	16379.179980	0.002041	0.22
Y 377.433	0.929050	906048.271625	0.004202	0.45
Y_R 377.433	0.936013	67340.100000	0.000909	0.10
Y_R 488.368	0.946662	37410.300000	0.005682	0.60
Y_R2 488.368	0.958323	72995.088719	0.006112	0.64

Sample Name: CCVH-5699817

Date: 5/14/2019 12:19:46 AM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.105811	ppm	0.007034	6.65	-2079.498374	Y_R 488.368
Ag (328.068 nm)	0.000277	ppm	0.000103	37.16	-589.667000	Y 377.433
Al (167.019 nm)	41.763500 o	ppm	0.104632	0.25	25012.000000	Y_R 377.433
Al H (396.152 nm)	49.753205	ppm	0.146062	0.29	126960.239304	Y_R 377.433
As (188.980 nm)	0.001214	ppm	0.001445	> 100.00	0.991759	Y 242.219
B (249.678 nm)	0.003899	ppm	0.000143	3.66	90.308000	Y 242.219
Ba (493.408 nm)	0.001971	ppm	0.000135	6.87	866.805000	Y_R 488.368
Be (234.861 nm)	0.000756	ppm	0.000003	0.40	1700.220000	Y_R 488.368
Bi (223.061 nm)	0.989161	ppm	0.004062	0.41	2578.410000	Y 377.433
Ca (315.887 nm)	0.021260	ppm	0.007082	33.31	-79.029157	Y_R 377.433
Cd (214.439 nm)	0.001150	ppm	0.000016	1.39	118.887000	Y 377.433
Co (228.615 nm)	0.004648	ppm	0.000370	7.95	52.953700	Y 242.219
Cr (205.560 nm)	0.001017	ppm	0.000105	10.28	-0.208898	Y 377.433
Cu (324.754 nm)	0.009790	ppm	0.000417	4.26	1635.400000	Y 377.433
Fe (238.204 nm)	48.006806 o	ppm	0.065702	0.14	176436.694681	Y_R 377.433
Fe H (259.940 nm)	49.949700	ppm	0.089506	0.18	93646.400000	Y_R 377.433
K (766.491 nm)	0.127345	ppm	0.021307	16.73	-543.837000	Y_R2 488.368
Li (670.783 nm)	0.009418	ppm	0.001280	13.60	-716.374000	Y_R2 488.368
Mg (279.078 nm)	0.035062	ppm	0.003146	8.97	-136.766000	Y 377.433
Mn (257.610 nm)	0.002917	ppm	0.000028	0.96	813.459000	Y 377.433
Mo (202.032 nm)	0.000376	ppm	0.000356	94.87	0.873139	Y 377.433
Na (589.592 nm)	234.457000 o	ppm	0.843155	0.36	1527180.000000	Y_R2 488.368
Na H (589.593 nm)	244.975936	ppm	0.647573	0.26	957350.220424	Y_R 488.368
Ni (231.604 nm)	0.005257	ppm	0.001022	19.44	38.288900	Y 377.433
P (213.618 nm)	-0.000998 u	ppm	0.001551	> 100.00	14.419100	Y 242.219
Pb (220.353 nm)	0.002780	ppm	0.001019	36.64	34.328300	Y 242.219
S (181.972 nm)	4.916737	ppm	0.011720	0.24	2172.433523	Y 377.433
Sb (206.834 nm)	0.001225	ppm	0.000292	23.81	-72.581400	Y 377.433
Se (196.026 nm)	0.003129	ppm	0.002839	90.76	5.293310	Y 242.219
Si (288.158 nm)	0.045626	ppm	0.003522	7.72	1237.450000	Y 377.433
Sn (189.925 nm)	0.004035	ppm	0.002914	72.22	16.766700	Y 377.433
Sr (421.552 nm)	0.002031	ppm	0.000015	0.74	545.075611	Y_R 488.368
Th (288.505 nm)	5.017530	ppm	0.003902	0.08	14974.600000	Y 377.433
Ti (336.122 nm)	0.002264	ppm	0.000007	0.33	130.707000	Y 377.433
Tl (190.794 nm)	-0.003084 u	ppm	0.001286	41.69	-10.711900	Y 377.433
U (409.013 nm)	10.179000	ppm	0.015011	0.15	47851.600000	Y 377.433
V (292.401 nm)	0.005128	ppm	0.000194	3.79	39.279400	Y 377.433
Zn (206.200 nm)	0.003949	ppm	0.000721	18.26	22.355300	Y 377.433
Zr (343.823 nm)	-0.002964 u	ppm	0.000154	5.21	-216.217000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.957429	17170.553569	0.001272	0.13
Y 377.433	0.953538	929930.196429	0.002271	0.24
Y_R 377.433	0.964724	69405.600000	0.002607	0.27
Y_R 488.368	0.984055	38887.900000	0.002336	0.24
Y_R2 488.368	0.993098	75643.941547	0.002818	0.28

Sample Name: CCV-5699804

Date: 5/14/2019 12:23:09 AM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.967017	ppm	0.019915	2.06	22.700097	Y_R 488.368
Ag (328.068 nm)	0.494061	ppm	0.001900	0.38	22870.200000	Y 377.433
Al (167.019 nm)	0.473848	ppm	0.010363	2.19	285.534000	Y_R 377.433
Al H (396.152 nm)	0.427165 u	ppm	0.012020	2.81	1456.115156	Y_R 377.433
As (188.980 nm)	0.975293	ppm	0.001309	0.13	1168.180000	Y 242.219
B (249.678 nm)	0.492968	ppm	0.000418	0.08	12282.400000	Y 242.219
Ba (493.408 nm)	0.491059	ppm	0.000458	0.09	55513.200000	Y_R 488.368
Be (234.861 nm)	0.485919	ppm	0.001968	0.40	140622.000000	Y_R 488.368
Bi (223.061 nm)	-0.005827 u	ppm	0.001598	27.42	6.159010	Y 377.433
Ca (315.887 nm)	5.013138	ppm	0.001731	0.03	4131.671964	Y_R 377.433
Cd (214.439 nm)	0.494131	ppm	0.001047	0.21	30126.200000	Y 377.433
Co (228.615 nm)	0.496993	ppm	0.004178	0.84	9897.840000	Y 242.219
Cr (205.560 nm)	0.492873	ppm	0.001816	0.37	7339.800000	Y 377.433
Cu (324.754 nm)	0.492919	ppm	0.000191	0.04	33215.700000	Y 377.433
Fe (238.204 nm)	2.452949	ppm	0.007533	0.31	9030.225368	Y_R 377.433
Fe H (259.940 nm)	2.371920 u	ppm	0.004919	0.21	4801.510000	Y_R 377.433
K (766.491 nm)	48.110200	ppm	0.115933	0.24	54061.000000	Y_R2 488.368
Li (670.783 nm)	0.972519	ppm	0.003405	0.35	28833.900000	Y_R2 488.368
Mg (279.078 nm)	19.443700	ppm	0.024354	0.13	115032.000000	Y 377.433
Mn (257.610 nm)	0.495834	ppm	0.000685	0.14	125668.000000	Y 377.433
Mo (202.032 nm)	0.500989	ppm	0.000718	0.14	4367.490000	Y 377.433
Na (589.592 nm)	4.770930	ppm	0.014305	0.30	32924.400000	Y_R2 488.368
Na H (589.593 nm)	4.446013 u	ppm	0.040743	0.92	28534.165741	Y_R 488.368
Ni (231.604 nm)	0.505060	ppm	0.001722	0.34	3743.970000	Y 377.433
P (213.618 nm)	0.943713	ppm	0.004390	0.47	2173.710000	Y 242.219
Pb (220.353 nm)	0.985148	ppm	0.000699	0.07	3014.180000	Y 242.219
S (181.972 nm)	0.051724	ppm	0.001384	2.68	46.803172	Y 377.433
Sb (206.834 nm)	1.020180	ppm	0.001743	0.17	2712.090000	Y 377.433
Se (196.026 nm)	0.966771	ppm	0.001524	0.16	911.193000	Y 242.219
Si (288.158 nm)	4.935940	ppm	0.031672	0.64	44258.800000	Y 377.433
Sn (189.925 nm)	0.992929	ppm	0.002877	0.29	2113.750000	Y 377.433
Sr (421.552 nm)	0.488927	ppm	0.000511	0.10	103424.751160	Y_R 488.368
Th (288.505 nm)	0.006346	ppm	0.002056	32.40	89.197100	Y 377.433
Ti (336.122 nm)	0.497310	ppm	0.001404	0.28	71247.200000	Y 377.433
Tl (190.794 nm)	0.994272	ppm	0.003567	0.36	2292.260000	Y 377.433
U (409.013 nm)	-0.002431 u	ppm	0.001261	51.87	-163.576000	Y 377.433
V (292.401 nm)	0.494310	ppm	0.001042	0.21	20778.700000	Y 377.433
Zn (206.200 nm)	0.493990	ppm	0.002173	0.44	2576.720000	Y 377.433
Zr (343.823 nm)	0.495847	ppm	0.000637	0.13	67426.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.973031	17450.365038	0.000457	0.05
Y 377.433	0.977319	953122.338857	0.001565	0.16
Y_R 377.433	0.972760	69983.700000	0.001875	0.19
Y_R 488.368	0.985040	38926.900000	0.003104	0.32
Y_R2 488.368	1.008918	76848.951148	0.010855	1.08

Sample Name: CCB

Date: 5/14/2019 12:26:32 AM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.037180 Z	ppm	0.002219	5.97	-2247.023840 Z	Y_R 488.368
Ag (328.068 nm)	0.000642	ppm	0.000015	2.41	-318.873000	Y 377.433
Al (167.019 nm)	0.007690	ppm	0.001336	17.38	4.934460	Y_R 377.433
Al H (396.152 nm)	-0.108969 Zu	ppm	0.001877	1.72	48.759958 Z	Y_R 377.433
As (188.980 nm)	0.000633 u	ppm	0.001064	> 100.00	0.714235	Y 242.219
B (249.678 nm)	0.001728	ppm	0.000231	13.39	110.317000	Y 242.219
Ba (493.408 nm)	-0.000159 u	ppm	0.000328	> 100.00	584.192000	Y_R 488.368
Be (234.861 nm)	0.000030	ppm	0.000036	> 100.00	-12.197400	Y_R 488.368
Bi (223.061 nm)	-0.001345 u	ppm	0.000937	69.64	17.285100	Y 377.433
Ca (315.887 nm)	0.014002	ppm	0.001417	10.12	-85.152771	Y_R 377.433
Cd (214.439 nm)	0.000014 u	ppm	0.000082	> 100.00	1.075470	Y 377.433
Co (228.615 nm)	0.000579	ppm	0.000123	21.19	-28.298400	Y 242.219
Cr (205.560 nm)	0.000236	ppm	0.000085	35.94	1.507460	Y 377.433
Cu (324.754 nm)	0.000677	ppm	0.000378	55.82	642.548000	Y 377.433
Fe (238.204 nm)	0.004231	ppm	0.002694	63.68	31.398771	Y_R 377.433
Fe H (259.940 nm)	-0.189038 u	ppm	0.000445	0.24	19.275000	Y_R 377.433
K (766.491 nm)	0.003650 u	ppm	0.103142	> 100.00	-684.603000	Y_R2 488.368
Li (670.783 nm)	0.006948	ppm	0.002192	31.54	-792.152000	Y_R2 488.368
Mg (279.078 nm)	0.004134	ppm	0.001685	40.75	47.024100	Y 377.433
Mn (257.610 nm)	0.000055	ppm	0.000001	1.18	88.501600	Y 377.433
Mo (202.032 nm)	0.000187	ppm	0.000007	3.52	-0.775850	Y 377.433
Na (589.592 nm)	0.054929	ppm	0.008430	15.35	1241.070000	Y_R2 488.368
Na H (589.593 nm)	-0.894487 u	ppm	0.029407	3.29	7412.487482	Y_R 488.368
Ni (231.604 nm)	0.000570	ppm	0.000523	91.84	1.315260	Y 377.433
P (213.618 nm)	-0.001187 u	ppm	0.000222	18.67	13.986300	Y 242.219
Pb (220.353 nm)	-0.001478 u	ppm	0.000848	57.38	2.959630	Y 242.219
S (181.972 nm)	0.042739	ppm	0.006017	14.08	41.836068	Y 377.433
Sb (206.834 nm)	0.003402	ppm	0.000817	24.00	-21.785000	Y 377.433
Se (196.026 nm)	-0.000211 u	ppm	0.006166	> 100.00	10.526800	Y 242.219
Si (288.158 nm)	0.000836	ppm	0.000009	1.06	843.424000	Y 377.433
Sn (189.925 nm)	-0.000494 u	ppm	0.000363	73.45	7.163930	Y 377.433
Sr (421.552 nm)	0.000066	ppm	0.000020	30.82	130.000379	Y_R 488.368
Th (288.505 nm)	0.001775	ppm	0.002057	> 100.00	57.395600	Y 377.433
Ti (336.122 nm)	0.000075	ppm	0.000025	33.44	-183.740000	Y 377.433
Tl (190.794 nm)	-0.000537 u	ppm	0.001093	> 100.00	-3.461030	Y 377.433
U (409.013 nm)	-0.000585 u	ppm	0.007548	> 100.00	-116.388000	Y 377.433
V (292.401 nm)	-0.000314 u	ppm	0.000035	10.99	6.247250	Y 377.433
Zn (206.200 nm)	-0.000251 u	ppm	0.000029	11.44	0.460000	Y 377.433
Zr (343.823 nm)	0.000167	ppm	0.000169	> 100.00	60.388800	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.982398	17618.357525	0.000845	0.09
Y 377.433	0.986353	961932.854589	0.000476	0.05
Y_R 377.433	0.976968	70286.500000	0.006974	0.71
Y_R 488.368	0.991424	39179.200000	0.008648	0.87
Y_R2 488.368	1.004373	76502.731668	0.005649	0.56

Sample Name: CCVL-5699389

Date: 5/14/2019 12:29:55 AM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.067535 Q	ppm	0.005602	8.29	-2172.929103 Q	Y_R 488.368
Ag (328.068 nm)	0.009588	ppm	0.000066	0.69	100.925000	Y 377.433
Al (167.019 nm)	0.093496	ppm	0.003763	4.03	56.322300	Y_R 377.433
Al H (396.152 nm)	-0.015616 u	ppm	0.002311	14.80	287.919634	Y_R 377.433
As (188.980 nm)	0.012725	ppm	0.000652	5.12	15.196800	Y 242.219
B (249.678 nm)	0.096931	ppm	0.000026	0.03	2466.050000	Y 242.219
Ba (493.408 nm)	0.009533	ppm	0.000128	1.34	1667.810000	Y_R 488.368
Be (234.861 nm)	0.000932	ppm	0.000000	0.01	251.000000	Y_R 488.368
Bi (223.061 nm)	0.098888	ppm	0.000340	0.34	275.629000	Y 377.433
Ca (315.887 nm)	0.210051	ppm	0.005425	2.58	80.208252	Y_R 377.433
Cd (214.439 nm)	0.005040	ppm	0.000058	1.15	307.607000	Y 377.433
Co (228.615 nm)	0.010602	ppm	0.000195	1.84	172.071000	Y 242.219
Cr (205.560 nm)	0.009839	ppm	0.000144	1.47	144.594000	Y 377.433
Cu (324.754 nm)	0.015638	ppm	0.000193	1.23	1632.730000	Y 377.433
Fe (238.204 nm)	0.102115	ppm	0.000340	0.33	391.113812	Y_R 377.433
Fe H (259.940 nm)	-0.089675 u	ppm	0.001152	1.28	204.820000	Y_R 377.433
K (766.491 nm)	2.903870	ppm	0.154824	5.33	2615.870000	Y_R2 488.368
Li (670.783 nm)	0.025888	ppm	0.000616	2.38	-211.023000	Y_R2 488.368
Mg (279.078 nm)	0.194360	ppm	0.000158	0.08	1171.190000	Y 377.433
Mn (257.610 nm)	0.010197	ppm	0.000017	0.17	2657.450000	Y 377.433
Mo (202.032 nm)	0.018571	ppm	0.000566	3.05	159.585000	Y 377.433
Na (589.592 nm)	0.956601	ppm	0.004905	0.51	7130.460000	Y_R2 488.368
Na H (589.593 nm)	-0.138397 u	ppm	0.031822	22.99	10343.427027	Y_R 488.368
Ni (231.604 nm)	0.041289	ppm	0.000943	2.28	303.305000	Y 377.433
P (213.618 nm)	2.763010 o	ppm	0.009226	0.33	6332.000000	Y 242.219
Pb (220.353 nm)	0.007994	ppm	0.001437	17.98	31.875400	Y 242.219
S (181.972 nm)	0.122669	ppm	0.005720	4.66	76.797250	Y 377.433
Sb (206.834 nm)	0.020221	ppm	0.002931	14.49	23.381100	Y 377.433
Se (196.026 nm)	0.020327	ppm	0.001871	9.21	29.647800	Y 242.219
Si (288.158 nm)	0.573720	ppm	0.021102	3.68	5883.230000	Y 377.433
Sn (189.925 nm)	0.098716	ppm	0.000695	0.70	217.542000	Y 377.433
Sr (421.552 nm)	0.010041	ppm	0.000028	0.28	2237.661942	Y_R 488.368
Th (288.505 nm)	0.018430	ppm	0.002432	13.20	107.523000	Y 377.433
Ti (336.122 nm)	0.009646	ppm	0.000111	1.15	1191.290000	Y 377.433
Tl (190.794 nm)	0.014779	ppm	0.001275	8.63	31.855700	Y 377.433
U (409.013 nm)	0.054414	ppm	0.001094	2.01	141.758000	Y 377.433
V (292.401 nm)	0.009750	ppm	0.000078	0.80	427.693000	Y 377.433
Zn (206.200 nm)	0.019504	ppm	0.000437	2.24	103.433000	Y 377.433
Zr (343.823 nm)	0.010718	ppm	0.000078	0.73	1494.450000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.986314	17688.580110	0.001436	0.15
Y 377.433	0.991407	966861.324956	0.002373	0.24
Y_R 377.433	0.986010	70937.000000	0.003464	0.35
Y_R 488.368	0.997627	39424.300000	0.009400	0.94
Y_R2 488.368	1.019082	77623.087486	0.008527	0.84

Sample Name: 280-123273-E-18-B

Date: 5/14/2019 12:33:17 AM

Rack:Tube: 2:52

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.120444 n	ppm	0.004756	3.95	-2043.777466	Y_R 488.368
Ag (328.068 nm)	0.001269	ppm	0.000208	16.39	-289.460000	Y 377.433
Al (167.019 nm)	0.011943	ppm	0.000628	5.26	8.023000	Y_R 377.433
Al H (396.152 nm)	-0.058249 u	ppm	0.001181	2.03	323.497728	Y_R 377.433
As (188.980 nm)	0.000469 u	ppm	0.001294	> 100.00	0.510482	Y 242.219
B (249.678 nm)	1.632280 o	ppm	0.002728	0.17	40452.100000	Y 242.219
Ba (493.408 nm)	0.012035	ppm	0.000029	0.24	2021.810000	Y_R 488.368
Be (234.861 nm)	-0.000111 u	ppm	0.000025	22.61	-30.621400	Y_R 488.368
Bi (223.061 nm)	-0.002886 u	ppm	0.002279	78.95	13.441300	Y 377.433
Ca (315.887 nm)	327.943626 o	ppm	1.120255	0.34	276507.486611	Y_R 377.433
Cd (214.439 nm)	-0.000082 u	ppm	0.000101	> 100.00	-4.036600	Y 377.433
Co (228.615 nm)	0.012056	ppm	0.000445	3.69	200.739000	Y 242.219
Cr (205.560 nm)	0.000546	ppm	0.000160	29.29	5.904580	Y 377.433
Cu (324.754 nm)	-0.000975 u	ppm	0.000038	3.89	298.010000	Y 377.433
Fe (238.204 nm)	0.736152	ppm	0.003406	0.46	2721.146455	Y_R 377.433
Fe H (259.940 nm)	0.552225 u	ppm	0.009921	1.80	1403.480000	Y_R 377.433
K (766.491 nm)	9.538100	ppm	0.041297	0.43	10165.700000	Y_R2 488.368
Li (670.783 nm)	0.124838	ppm	0.001618	1.30	2825.000000	Y_R2 488.368
Mg (279.078 nm)	133.900000 o	ppm	0.238181	0.18	792070.000000	Y 377.433
Mn (257.610 nm)	1.905120 o	ppm	0.004380	0.23	482634.000000	Y 377.433
Mo (202.032 nm)	0.006276	ppm	0.000404	6.44	52.337100	Y 377.433
Na (589.592 nm)	151.375000 o	ppm	0.463437	0.31	986347.000000	Y_R2 488.368
Na H (589.593 nm)	157.305313	ppm	0.675897	0.43	618640.872868	Y_R 488.368
Ni (231.604 nm)	0.015586	ppm	0.000408	2.62	112.710000	Y 377.433
P (213.618 nm)	0.005632	ppm	0.001441	25.58	29.572600	Y 242.219
Pb (220.353 nm)	-0.000910 u	ppm	0.000335	36.83	4.675380	Y 242.219
S (181.972 nm)	345.550055 bo	ppm	0.451145	0.13	151078.905206	Y 377.433
Sb (206.834 nm)	-0.001587 u	ppm	0.002775	> 100.00	-35.326100	Y 377.433
Se (196.026 nm)	0.002173	ppm	0.002762	> 100.00	14.076900	Y 242.219
Si (288.158 nm)	6.729530	ppm	0.014746	0.22	60037.500000	Y 377.433
Sn (189.925 nm)	0.000491	ppm	0.000387	78.81	9.252910	Y 377.433
Sr (421.552 nm)	2.112399 o	ppm	0.007837	0.37	446459.560876	Y_R 488.368
Th (288.505 nm)	0.000553 u	ppm	0.006132	> 100.00	97.907500	Y 377.433
Ti (336.122 nm)	-0.000687 u	ppm	0.000176	25.64	748.382000	Y 377.433
Tl (190.794 nm)	0.000296 u	ppm	0.001846	> 100.00	-1.525290	Y 377.433
U (409.013 nm)	-0.023311 u	ppm	0.003000	12.87	-287.809000	Y 377.433
V (292.401 nm)	-0.000006 u	ppm	0.000179	> 100.00	20.661500	Y 377.433
Zn (206.200 nm)	0.002093	ppm	0.000123	5.85	12.680900	Y 377.433
Zr (343.823 nm)	0.000136	ppm	0.000040	29.70	58.443800	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.927576	16635.170640	0.003471	0.37
Y 377.433	0.943982	920610.931354	0.003812	0.40
Y_R 377.433	0.965444	69457.400000	0.002097	0.22
Y_R 488.368	0.979950	38725.700000	0.002517	0.26
Y_R2 488.368	0.983126	74884.384890	0.003321	0.34

Sample Name: 280-123273-E-19-B

Date: 5/14/2019 12:36:39 AM

Rack:Tube: 2:53

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.305894 n	ppm	0.017166	5.61	-1591.096892	Y_R 488.368
Ag (328.068 nm)	0.000909	ppm	0.000346	38.05	-306.391000	Y 377.433
Al (167.019 nm)	0.002431	ppm	0.000671	27.59	3.563320	Y_R 377.433
Al H (396.152 nm)	-0.074977 u	ppm	0.000264	0.35	236.470209	Y_R 377.433
As (188.980 nm)	0.003339	ppm	0.001763	52.80	3.934100	Y 242.219
B (249.678 nm)	3.425660 o	ppm	0.004567	0.13	84820.100000	Y 242.219
Ba (493.408 nm)	0.011264	ppm	0.000078	0.69	1914.780000	Y_R 488.368
Be (234.861 nm)	-0.000023 u	ppm	0.000006	25.10	46.638200	Y_R 488.368
Bi (223.061 nm)	-0.002926 u	ppm	0.001910	65.28	13.625600	Y 377.433
Ca (315.887 nm)	228.442022 o	ppm	0.353900	0.15	192582.737960	Y_R 377.433
Cd (214.439 nm)	0.000046	ppm	0.000015	32.01	5.421130	Y 377.433
Co (228.615 nm)	0.000873	ppm	0.000091	10.44	-22.438700	Y 242.219
Cr (205.560 nm)	0.000298 u	ppm	0.000423	> 100.00	1.761410	Y 377.433
Cu (324.754 nm)	-0.000462 u	ppm	0.000082	17.75	409.627000	Y 377.433
Fe (238.204 nm)	2.389416	ppm	0.004015	0.17	8796.747799	Y_R 377.433
Fe H (259.940 nm)	2.302470 u	ppm	0.000813	0.04	4671.810000	Y_R 377.433
K (766.491 nm)	15.049700	ppm	0.005191	0.03	16437.900000	Y_R2 488.368
Li (670.783 nm)	0.266355	ppm	0.000908	0.34	7167.060000	Y_R2 488.368
Mg (279.078 nm)	108.258000 o	ppm	0.318616	0.29	640387.000000	Y 377.433
Mn (257.610 nm)	0.325997	ppm	0.000306	0.09	82648.400000	Y 377.433
Mo (202.032 nm)	0.001311	ppm	0.000482	36.79	9.027960	Y 377.433
Na (589.592 nm)	413.116000 o	ppm	0.840077	0.20	2690250.000000	Y_R2 488.368
Na H (589.593 nm)	436.851356	ppm	0.754334	0.17	1698684.976061	Y_R 488.368
Ni (231.604 nm)	-0.000282 u	ppm	0.000701	> 100.00	-4.893530	Y 377.433
P (213.618 nm)	0.017802	ppm	0.001310	7.36	57.388700	Y 242.219
Pb (220.353 nm)	0.000605	ppm	0.000130	21.51	9.510200	Y 242.219
S (181.972 nm)	372.910019 bo	ppm	0.478201	0.13	163035.568144	Y 377.433
Sb (206.834 nm)	-0.001458 u	ppm	0.001161	79.58	-35.371500	Y 377.433
Se (196.026 nm)	-0.000583 u	ppm	0.003596	> 100.00	9.982730	Y 242.219
Si (288.158 nm)	7.981800	ppm	0.034570	0.43	71054.100000	Y 377.433
Sn (189.925 nm)	0.000223 u	ppm	0.001467	> 100.00	8.684300	Y 377.433
Sr (421.552 nm)	3.204788 o	ppm	0.014743	0.46	677278.016390	Y_R 488.368
Th (288.505 nm)	0.006785	ppm	0.000856	12.62	79.480100	Y 377.433
Ti (336.122 nm)	-0.000494 u	ppm	0.000045	9.03	460.053000	Y 377.433
Tl (190.794 nm)	0.000681	ppm	0.000706	> 100.00	-0.716752	Y 377.433
U (409.013 nm)	-0.025576 u	ppm	0.003903	15.26	-277.086000	Y 377.433
V (292.401 nm)	-0.000101 u	ppm	0.000248	> 100.00	18.037900	Y 377.433
Zn (206.200 nm)	-0.000740 u	ppm	0.000003	0.44	-2.086560	Y 377.433
Zr (343.823 nm)	0.000571	ppm	0.000066	11.62	122.747000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.932883	16730.360021	0.006486	0.70
Y 377.433	0.944233	920855.863850	0.007396	0.78
Y_R 377.433	0.973802	70058.700000	0.007364	0.76
Y_R 488.368	0.985960	38963.200000	0.008023	0.81
Y_R2 488.368	0.988282	75277.126218	0.002054	0.21

Sample Name: 280-123284-A-1-A

Date: 5/14/2019 12:40:01 AM

Rack:Tube: 2:54

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.046346 n	ppm	0.003072	6.63	-2224.650809	Y_R 488.368
Ag (328.068 nm)	0.000404	ppm	0.000049	12.20	-330.237000	Y 377.433
Al (167.019 nm)	-0.000707 u	ppm	0.004759	> 100.00	-0.085392	Y_R 377.433
Al H (396.152 nm)	-0.045430 u	ppm	0.002012	4.43	457.941657	Y_R 377.433
As (188.980 nm)	0.002233	ppm	0.000053	2.37	2.630490	Y 242.219
B (249.678 nm)	0.056888	ppm	0.000033	0.06	1475.070000	Y 242.219
Ba (493.408 nm)	0.021504	ppm	0.000177	0.82	3131.750000	Y_R 488.368
Be (234.861 nm)	-0.000043 u	ppm	0.000013	29.79	-33.386900	Y_R 488.368
Bi (223.061 nm)	-0.004696 u	ppm	0.003694	78.66	8.649710	Y 377.433
Ca (315.887 nm)	559.120754 o	ppm	4.431671	0.79	471494.115704	Y_R 377.433
Cd (214.439 nm)	0.000027 u	ppm	0.000072	> 100.00	1.892720	Y 377.433
Co (228.615 nm)	0.000151	ppm	0.000115	76.44	-36.870200	Y 242.219
Cr (205.560 nm)	0.000315	ppm	0.000206	65.55	2.678730	Y 377.433
Cu (324.754 nm)	-0.002436 u	ppm	0.000049	2.00	32.545000	Y 377.433
Fe (238.204 nm)	0.006182	ppm	0.000206	3.33	38.570339	Y_R 377.433
Fe H (259.940 nm)	-0.193528 u	ppm	0.001968	1.02	10.890500	Y_R 377.433
K (766.491 nm)	14.614300	ppm	0.044366	0.30	15942.500000	Y_R2 488.368
Li (670.783 nm)	0.126505	ppm	0.000239	0.19	2876.130000	Y_R2 488.368
Mg (279.078 nm)	37.548600	ppm	0.116599	0.31	222131.000000	Y 377.433
Mn (257.610 nm)	0.000835	ppm	0.000035	4.18	286.255000	Y 377.433
Mo (202.032 nm)	-0.000030 u	ppm	0.000118	> 100.00	-2.662110	Y 377.433
Na (589.592 nm)	294.100000 o	ppm	0.553391	0.19	1915490.000000	Y_R2 488.368
Na H (589.593 nm)	312.009202	ppm	0.907932	0.29	1216358.972694	Y_R 488.368
Ni (231.604 nm)	-0.000444 u	ppm	0.000164	36.97	-6.204670	Y 377.433
P (213.618 nm)	0.048092	ppm	0.004393	9.13	126.622000	Y 242.219
Pb (220.353 nm)	-0.001219 u	ppm	0.000650	53.34	3.689620	Y 242.219
S (181.972 nm)	505.108801 bo	ppm	1.956697	0.39	220823.497391	Y 377.433
Sb (206.834 nm)	-0.003000 u	ppm	0.001344	44.81	-38.919900	Y 377.433
Se (196.026 nm)	0.117381	ppm	0.003890	3.31	120.049000	Y 242.219
Si (288.158 nm)	15.138600 o	ppm	0.081729	0.54	134014.000000	Y 377.433
Sn (189.925 nm)	0.000481 u	ppm	0.000712	> 100.00	9.231900	Y 377.433
Sr (421.552 nm)	11.289910 bo	ppm	0.024953	0.22	2385639.945380	Y_R 488.368
Th (288.505 nm)	-0.002277 u	ppm	0.002253	98.96	45.548900	Y 377.433
Ti (336.122 nm)	-0.001255 u	ppm	0.000074	5.93	1401.130000	Y 377.433
Tl (190.794 nm)	0.000358 u	ppm	0.001319	> 100.00	-1.391580	Y 377.433
U (409.013 nm)	-0.037408 u	ppm	0.003870	10.35	-400.816000	Y 377.433
V (292.401 nm)	0.000229 u	ppm	0.000579	> 100.00	31.143700	Y 377.433
Zn (206.200 nm)	-0.000310 u	ppm	0.000279	89.96	0.152076	Y 377.433
Zr (343.823 nm)	-0.000170 u	ppm	0.000023	13.38	14.677700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.918327	16469.298265	0.004076	0.44
Y 377.433	0.936318	913136.464883	0.003406	0.36
Y_R 377.433	0.944380	67942.000000	0.010051	1.06
Y_R 488.368	0.954320	37712.900000	0.006558	0.69
Y_R2 488.368	0.978068	74499.126886	0.000653	0.07

Sample Name: 280-123287-A-1-A

Date: 5/14/2019 12:43:23 AM

Rack:Tube: 2:55

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.050251 n	ppm	0.007668	15.26	-2215.119970	Y_R 488.368
Ag (328.068 nm)	0.000413	ppm	0.000277	67.12	-330.764000	Y 377.433
Al (167.019 nm)	0.002159 u	ppm	0.003414	> 100.00	1.629690	Y_R 377.433
Al H (396.152 nm)	-0.057998 u	ppm	0.005545	9.56	337.716421	Y_R 377.433
As (188.980 nm)	-0.000725 u	ppm	0.000885	> 100.00	-0.913414	Y 242.219
B (249.678 nm)	0.330582	ppm	0.000833	0.25	8246.690000	Y 242.219
Ba (493.408 nm)	0.028477	ppm	0.000334	1.17	3866.510000	Y_R 488.368
Be (234.861 nm)	-0.000030 u	ppm	0.000040	> 100.00	-29.565300	Y_R 488.368
Bi (223.061 nm)	-0.003234 u	ppm	0.001765	54.58	12.417400	Y 377.433
Ca (315.887 nm)	359.689810 o	ppm	0.688021	0.19	303283.844129	Y_R 377.433
Cd (214.439 nm)	-0.000073 u	ppm	0.000086	> 100.00	-4.231840	Y 377.433
Co (228.615 nm)	-0.000351 u	ppm	0.000175	49.98	-46.878600	Y 242.219
Cr (205.560 nm)	0.000624	ppm	0.000093	14.93	7.289420	Y 377.433
Cu (324.754 nm)	-0.000874 u	ppm	0.000249	28.53	279.040000	Y 377.433
Fe (238.204 nm)	0.008276	ppm	0.000636	7.69	46.264659	Y_R 377.433
Fe H (259.940 nm)	-0.192766 u	ppm	0.002148	1.11	12.312900	Y_R 377.433
K (766.491 nm)	7.526220	ppm	0.032325	0.43	7876.150000	Y_R2 488.368
Li (670.783 nm)	0.069373	ppm	0.000607	0.88	1123.190000	Y_R2 488.368
Mg (279.078 nm)	49.363800 o	ppm	0.061640	0.12	292019.000000	Y 377.433
Mn (257.610 nm)	0.000386	ppm	0.000020	5.21	172.488000	Y 377.433
Mo (202.032 nm)	0.000081	ppm	0.000096	> 100.00	-1.699290	Y 377.433
Na (589.592 nm)	140.312000 o	ppm	0.329483	0.23	914360.000000	Y_R2 488.368
Na H (589.593 nm)	148.455177	ppm	1.229345	0.83	584463.924762	Y_R 488.368
Ni (231.604 nm)	-0.001031 u	ppm	0.001200	> 100.00	-10.555900	Y 377.433
P (213.618 nm)	0.128642	ppm	0.002133	1.66	310.732000	Y 242.219
Pb (220.353 nm)	0.000306 u	ppm	0.000799	> 100.00	8.465990	Y 242.219
S (181.972 nm)	276.560070 bo	ppm	0.721656	0.26	120917.024985	Y 377.433
Sb (206.834 nm)	-0.002186 u	ppm	0.002717	> 100.00	-36.839900	Y 377.433
Se (196.026 nm)	0.005833	ppm	0.003853	66.06	16.157100	Y 242.219
Si (288.158 nm)	12.105800 o	ppm	0.069019	0.57	107334.000000	Y 377.433
Sn (189.925 nm)	0.000599	ppm	0.000419	69.97	9.481780	Y 377.433
Sr (421.552 nm)	6.876149 o	ppm	0.029724	0.43	1453025.662361	Y_R 488.368
Th (288.505 nm)	-0.000590 u	ppm	0.001098	> 100.00	51.305100	Y 377.433
Ti (336.122 nm)	-0.000882 u	ppm	0.000037	4.16	821.447000	Y 377.433
Tl (190.794 nm)	-0.000209 u	ppm	0.001391	> 100.00	-2.701210	Y 377.433
U (409.013 nm)	0.052045	ppm	0.000136	0.26	59.901800	Y 377.433
V (292.401 nm)	0.000333	ppm	0.000060	17.98	33.264300	Y 377.433
Zn (206.200 nm)	-0.000455 u	ppm	0.000160	35.25	-0.601000	Y 377.433
Zr (343.823 nm)	-0.000115 u	ppm	0.000045	39.72	22.192100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.942613	16904.844099	0.003254	0.35
Y 377.433	0.958956	935213.792208	0.001646	0.17
Y_R 377.433	0.969103	69720.600000	0.006971	0.72
Y_R 488.368	0.979689	38715.400000	0.010500	1.07
Y_R2 488.368	0.984254	74970.271965	0.008265	0.84

Sample Name: 280-123287-A-2-O

Date: 5/14/2019 12:46:46 AM

Rack:Tube: 2:56

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.041592 n	ppm	0.006106	14.68	-2236.256447	Y_R 488.368
Ag (328.068 nm)	0.000642	ppm	0.000114	17.76	-319.942000	Y 377.433
Al (167.019 nm)	0.005633	ppm	0.004497	79.84	3.709750	Y_R 377.433
Al H (396.152 nm)	-0.072616 u	ppm	0.005384	7.41	248.935375	Y_R 377.433
As (188.980 nm)	0.000057 u	ppm	0.001296	> 100.00	0.024005	Y 242.219
B (249.678 nm)	0.212806	ppm	0.000064	0.03	5332.730000	Y 242.219
Ba (493.408 nm)	0.025867	ppm	0.000435	1.68	3548.440000	Y_R 488.368
Be (234.861 nm)	-0.000038 u	ppm	0.000005	14.22	-31.696200	Y_R 488.368
Bi (223.061 nm)	-0.002390 u	ppm	0.002248	94.07	14.593500	Y 377.433
Ca (315.887 nm)	243.108320 o	ppm	0.749975	0.31	204953.044889	Y_R 377.433
Cd (214.439 nm)	-0.000097 u	ppm	0.000031	32.36	-5.665960	Y 377.433
Co (228.615 nm)	0.000165	ppm	0.000140	85.07	-36.578200	Y 242.219
Cr (205.560 nm)	0.000414	ppm	0.000299	72.30	4.150970	Y 377.433
Cu (324.754 nm)	0.000427	ppm	0.000160	37.44	448.620000	Y 377.433
Fe (238.204 nm)	0.010772	ppm	0.001557	14.45	55.436133	Y_R 377.433
Fe H (259.940 nm)	-0.186745 u	ppm	0.000192	0.10	23.555500	Y_R 377.433
K (766.491 nm)	4.390460	ppm	0.041866	0.95	4307.630000	Y_R2 488.368
Li (670.783 nm)	0.037491	ppm	0.002185	5.83	144.958000	Y_R2 488.368
Mg (279.078 nm)	35.204400	ppm	0.055905	0.16	208263.000000	Y 377.433
Mn (257.610 nm)	0.000173	ppm	0.000028	16.27	118.540000	Y 377.433
Mo (202.032 nm)	0.000253	ppm	0.000037	14.61	-0.200340	Y 377.433
Na (589.592 nm)	159.828000 o	ppm	0.156431	0.10	1041400.000000	Y_R2 488.368
Na H (589.593 nm)	167.555824	ppm	0.117388	0.07	658258.401808	Y_R 488.368
Ni (231.604 nm)	-0.000288 u	ppm	0.000215	74.61	-5.046750	Y 377.433
P (213.618 nm)	0.012852	ppm	0.000133	1.04	46.076800	Y 242.219
Pb (220.353 nm)	-0.000303 u	ppm	0.000922	> 100.00	6.624250	Y 242.219
S (181.972 nm)	201.124628 bo	ppm	0.320937	0.16	87941.611242	Y 377.433
Sb (206.834 nm)	-0.000167 u	ppm	0.002947	> 100.00	-31.433200	Y 377.433
Se (196.026 nm)	0.005728	ppm	0.000741	12.93	16.057800	Y 242.219
Si (288.158 nm)	11.482300 o	ppm	0.093906	0.82	101849.000000	Y 377.433
Sn (189.925 nm)	0.001928	ppm	0.000578	30.00	12.299100	Y 377.433
Sr (421.552 nm)	4.203512 o	ppm	0.000690	0.02	888305.394997	Y_R 488.368
Th (288.505 nm)	-0.003009 u	ppm	0.005909	> 100.00	44.198200	Y 377.433
Ti (336.122 nm)	-0.000548 u	ppm	0.000006	1.17	499.268000	Y 377.433
Tl (190.794 nm)	0.000212	ppm	0.000092	43.43	-1.729900	Y 377.433
U (409.013 nm)	0.044451	ppm	0.003792	8.53	47.325700	Y 377.433
V (292.401 nm)	0.000238	ppm	0.000300	> 100.00	28.562400	Y 377.433
Zn (206.200 nm)	-0.000329 u	ppm	0.000193	58.63	0.052636	Y 377.433
Zr (343.823 nm)	-0.000139 u	ppm	0.000055	39.30	18.853600	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.941044	16876.705721	0.000230	0.02
Y 377.433	0.952479	928897.142552	0.000017	0.00
Y_R 377.433	0.958758	68976.300000	0.002910	0.30
Y_R 488.368	0.965552	38156.800000	0.000878	0.09
Y_R2 488.368	0.983066	74879.818367	0.002876	0.29

Sample Name: 280-123325-C-1-A

Date: 5/14/2019 12:50:09 AM

Rack:Tube: 2:57

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.075383 n	ppm	0.001478	1.96	-2153.771875	Y_R 488.368
Ag (328.068 nm)	0.000902	ppm	0.000371	41.13	-306.977000	Y 377.433
Al (167.019 nm)	0.004394	ppm	0.000578	13.16	3.374860	Y_R 377.433
Al H (396.152 nm)	-0.092805 u	ppm	0.011447	12.34	132.186894	Y_R 377.433
As (188.980 nm)	0.001857	ppm	0.001507	81.17	2.174930	Y 242.219
B (249.678 nm)	1.354250 o	ppm	0.000235	0.02	33572.900000	Y 242.219
Ba (493.408 nm)	0.009910	ppm	0.000083	0.84	1731.480000	Y_R 488.368
Be (234.861 nm)	-0.000033 u	ppm	0.000004	12.65	-14.061100	Y_R 488.368
Bi (223.061 nm)	0.000896	ppm	0.001212	> 100.00	23.157700	Y 377.433
Ca (315.887 nm)	93.762509 o	ppm	0.152440	0.16	78987.139927	Y_R 377.433
Cd (214.439 nm)	-0.000015 u	ppm	0.000005	33.61	-0.116384	Y 377.433
Co (228.615 nm)	-0.000418 u	ppm	0.000108	25.89	-48.195200	Y 242.219
Cr (205.560 nm)	0.000103	ppm	0.000130	> 100.00	-0.643474	Y 377.433
Cu (324.754 nm)	0.001204	ppm	0.000254	21.08	616.138000	Y 377.433
Fe (238.204 nm)	0.556521	ppm	0.003448	0.62	2061.017357	Y_R 377.433
Fe H (259.940 nm)	0.367317 u	ppm	0.006090	1.66	1058.190000	Y_R 377.433
K (766.491 nm)	15.782600	ppm	0.171175	1.08	17272.000000	Y_R2 488.368
Li (670.783 nm)	0.089651	ppm	0.001068	1.19	1745.370000	Y_R2 488.368
Mg (279.078 nm)	226.104000 o	ppm	0.131516	0.06	1337480.000000	Y 377.433
Mn (257.610 nm)	0.170977	ppm	0.000205	0.12	43382.400000	Y 377.433
Mo (202.032 nm)	0.010012	ppm	0.000343	3.43	84.921600	Y 377.433
Na (589.592 nm)	485.405000 o	ppm	0.309985	0.06	3160840.000000	Y_R2 488.368
Na H (589.593 nm)	513.061890	ppm	2.140930	0.42	1993127.011461	Y_R 488.368
Ni (231.604 nm)	-0.001272 u	ppm	0.000551	43.37	-12.311700	Y 377.433
P (213.618 nm)	0.057105	ppm	0.000043	0.08	147.223000	Y 242.219
Pb (220.353 nm)	-0.000968 u	ppm	0.001197	> 100.00	4.518040	Y 242.219
S (181.972 nm)	490.154174 bo	ppm	0.746612	0.15	214286.674696	Y 377.433
Sb (206.834 nm)	-0.000509 u	ppm	0.000232	45.53	-32.456600	Y 377.433
Se (196.026 nm)	0.000910 u	ppm	0.006497	> 100.00	11.598300	Y 242.219
Si (288.158 nm)	16.075300 o	ppm	0.141195	0.88	142254.000000	Y 377.433
Sn (189.925 nm)	-0.000345 u	ppm	0.001219	> 100.00	7.478850	Y 377.433
Sr (421.552 nm)	0.518355	ppm	0.002399	0.46	109642.856627	Y_R 488.368
Th (288.505 nm)	0.004101	ppm	0.000122	2.97	68.236900	Y 377.433
Ti (336.122 nm)	-0.000271 u	ppm	0.000012	4.45	64.211300	Y 377.433
Tl (190.794 nm)	0.002055	ppm	0.000105	5.10	2.484450	Y 377.433
U (409.013 nm)	-0.028017 u	ppm	0.003350	11.96	-263.589000	Y 377.433
V (292.401 nm)	0.000029 u	ppm	0.000044	> 100.00	23.135500	Y 377.433
Zn (206.200 nm)	-0.000252 u	ppm	0.000034	13.56	0.455898	Y 377.433
Zr (343.823 nm)	0.000002 u	ppm	0.000041	> 100.00	39.694400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.905529	16239.780125	0.001307	0.14
Y 377.433	0.912655	890058.999826	0.001295	0.14
Y_R 377.433	0.925327	66571.200000	0.004061	0.44
Y_R 488.368	0.940305	37159.000000	0.009663	1.03
Y_R2 488.368	0.957421	72926.396662	0.005699	0.60

Sample Name: 280-123325-C-2-A

Date: 5/14/2019 12:53:31 AM

Rack:Tube: 2:58

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.040641 n	ppm	0.012112	29.80	-2238.577522	Y_R 488.368
Ag (328.068 nm)	0.000364	ppm	0.000139	38.27	-332.043000	Y 377.433
Al (167.019 nm)	0.003886	ppm	0.004342	> 100.00	2.659230	Y_R 377.433
Al H (396.152 nm)	-0.122460 u	ppm	0.005068	4.14	14.405511	Y_R 377.433
As (188.980 nm)	-0.001498 u	ppm	0.000019	1.29	-1.838760	Y 242.219
B (249.678 nm)	0.001777	ppm	0.000166	9.32	111.549000	Y 242.219
Ba (493.408 nm)	-0.000087 u	ppm	0.000286	> 100.00	592.217000	Y_R 488.368
Be (234.861 nm)	-0.000045 u	ppm	0.000041	90.50	-34.018900	Y_R 488.368
Bi (223.061 nm)	0.000852	ppm	0.000896	> 100.00	22.949500	Y 377.433
Ca (315.887 nm)	0.031884	ppm	0.009060	28.41	-70.069724	Y_R 377.433
Cd (214.439 nm)	0.000007 u	ppm	0.000011	> 100.00	0.684265	Y 377.433
Co (228.615 nm)	0.000096 u	ppm	0.000186	> 100.00	-37.947300	Y 242.219
Cr (205.560 nm)	0.000072	ppm	0.000087	> 100.00	-0.937968	Y 377.433
Cu (324.754 nm)	0.000703	ppm	0.000346	49.22	643.746000	Y 377.433
Fe (238.204 nm)	0.003642	ppm	0.000383	10.51	29.234600	Y_R 377.433
Fe H (259.940 nm)	-0.189424 u	ppm	0.001738	0.92	18.553500	Y_R 377.433
K (766.491 nm)	0.017945 u	ppm	0.026663	> 100.00	-668.335000	Y_R2 488.368
Li (670.783 nm)	0.004267	ppm	0.002399	56.21	-874.415000	Y_R2 488.368
Mg (279.078 nm)	0.007277	ppm	0.000503	6.92	65.582900	Y 377.433
Mn (257.610 nm)	0.000101	ppm	0.000016	15.34	100.361000	Y 377.433
Mo (202.032 nm)	-0.000002 u	ppm	0.000052	> 100.00	-2.420920	Y 377.433
Na (589.592 nm)	0.140295	ppm	0.007023	5.01	1797.270000	Y_R2 488.368
Na H (589.593 nm)	-0.036995 u	ppm	0.046497	> 100.00	10725.704234	Y_R 488.368
Ni (231.604 nm)	0.000391 u	ppm	0.000754	> 100.00	-0.008614	Y 377.433
P (213.618 nm)	-0.000982 u	ppm	0.000480	48.83	14.455800	Y 242.219
Pb (220.353 nm)	-0.001363 u	ppm	0.001119	82.10	3.318810	Y 242.219
S (181.972 nm)	0.170850	ppm	0.005242	3.07	97.838001	Y 377.433
Sb (206.834 nm)	0.000523	ppm	0.000719	> 100.00	-29.497200	Y 377.433
Se (196.026 nm)	-0.000394 u	ppm	0.001626	> 100.00	10.355800	Y 242.219
Si (288.158 nm)	0.009441	ppm	0.002717	28.78	919.124000	Y 377.433
Sn (189.925 nm)	-0.001109 u	ppm	0.001054	95.03	5.858500	Y 377.433
Sr (421.552 nm)	0.000010 u	ppm	0.000136	> 100.00	118.019692	Y_R 488.368
Th (288.505 nm)	-0.000590 u	ppm	0.001522	> 100.00	50.504300	Y 377.433
Ti (336.122 nm)	-0.000094 u	ppm	0.000139	> 100.00	-208.080000	Y 377.433
Tl (190.794 nm)	-0.000731 u	ppm	0.001232	> 100.00	-3.906870	Y 377.433
U (409.013 nm)	-0.002985 u	ppm	0.002150	72.02	-127.652000	Y 377.433
V (292.401 nm)	-0.000071 u	ppm	0.000175	> 100.00	16.302800	Y 377.433
Zn (206.200 nm)	0.001002	ppm	0.000384	38.38	6.991820	Y 377.433
Zr (343.823 nm)	-0.000116 u	ppm	0.000026	22.27	22.005200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.978750	17552.924464	0.000002	0.00
Y 377.433	0.983048	958709.551027	0.001020	0.10
Y_R 377.433	0.970496	69820.900000	0.000742	0.08
Y_R 488.368	0.980322	38740.400000	0.009732	0.99
Y_R2 488.368	0.991396	75514.311434	0.001197	0.12

Sample Name: 280-123208-F-1-B

Date: 5/14/2019 12:56:52 AM

Rack:Tube: 2:59

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.040479 n	ppm	0.000750	1.85	-2238.971350	Y_R 488.368
Ag (328.068 nm)	0.000962	ppm	0.000131	13.62	-304.314000	Y 377.433
Al (167.019 nm)	0.875164	ppm	0.000582	0.07	525.575000	Y_R 377.433
Al H (396.152 nm)	0.904930	ppm	0.000562	0.06	2684.046219	Y_R 377.433
As (188.980 nm)	0.000335	ppm	0.000108	32.29	0.335310	Y 242.219
B (249.678 nm)	0.116541	ppm	0.000511	0.44	2947.150000	Y 242.219
Ba (493.408 nm)	0.089213	ppm	0.000620	0.70	10605.600000	Y_R 488.368
Be (234.861 nm)	-0.000004 u	ppm	0.000028	> 100.00	55.657700	Y_R 488.368
Bi (223.061 nm)	-0.001093 u	ppm	0.003510	> 100.00	18.371000	Y 377.433
Ca (315.887 nm)	123.066374 o	ppm	0.514753	0.42	103703.519699	Y_R 377.433
Cd (214.439 nm)	-0.000041 u	ppm	0.000023	56.27	0.250821	Y 377.433
Co (228.615 nm)	0.001278	ppm	0.000316	24.74	-13.533500	Y 242.219
Cr (205.560 nm)	0.006115	ppm	0.000593	9.69	88.443000	Y 377.433
Cu (324.754 nm)	0.008892	ppm	0.000160	1.80	1102.820000	Y 377.433
Fe (238.204 nm)	2.508085	ppm	0.011063	0.44	9232.845547	Y_R 377.433
Fe H (259.940 nm)	2.427740 u	ppm	0.010538	0.43	4905.740000	Y_R 377.433
K (766.491 nm)	6.286440	ppm	0.037261	0.59	6465.270000	Y_R2 488.368
Li (670.783 nm)	0.018830	ppm	0.002453	13.03	-427.583000	Y_R2 488.368
Mg (279.078 nm)	55.192600 o	ppm	0.038502	0.07	326494.000000	Y 377.433
Mn (257.610 nm)	0.476472	ppm	0.000095	0.02	120763.000000	Y 377.433
Mo (202.032 nm)	0.002491	ppm	0.000755	30.32	19.319400	Y 377.433
Na (589.592 nm)	10.944400	ppm	0.050206	0.46	72309.900000	Y_R2 488.368
Na H (589.593 nm)	10.959922	ppm	0.110850	1.01	53301.936356	Y_R 488.368
Ni (231.604 nm)	0.003623	ppm	0.000294	8.11	24.078100	Y 377.433
P (213.618 nm)	0.130671	ppm	0.003342	2.56	315.369000	Y 242.219
Pb (220.353 nm)	0.000861	ppm	0.000231	26.86	9.974290	Y 242.219
S (181.972 nm)	63.564962 o	ppm	0.110459	0.17	27810.571547	Y 377.433
Sb (206.834 nm)	0.001935	ppm	0.000363	18.75	-26.222900	Y 377.433
Se (196.026 nm)	-0.001594 u	ppm	0.003088	> 100.00	9.153720	Y 242.219
Si (288.158 nm)	8.026560	ppm	0.084276	1.05	71447.800000	Y 377.433
Sn (189.925 nm)	0.000423 u	ppm	0.000948	> 100.00	9.107380	Y 377.433
Sr (421.552 nm)	0.318427	ppm	0.002850	0.89	67398.699264	Y_R 488.368
Th (288.505 nm)	0.001301	ppm	0.000824	63.35	67.089000	Y 377.433
Ti (336.122 nm)	0.021891	ppm	0.000159	0.72	3340.520000	Y 377.433
Tl (190.794 nm)	0.001749	ppm	0.000781	44.67	1.646880	Y 377.433
U (409.013 nm)	-0.012785 u	ppm	0.001090	8.52	-195.840000	Y 377.433
V (292.401 nm)	0.001731	ppm	0.000393	22.69	93.035500	Y 377.433
Zn (206.200 nm)	0.006979	ppm	0.000012	0.17	38.147400	Y 377.433
Zr (343.823 nm)	0.000806	ppm	0.000067	8.36	155.017000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.940027	16858.478263	0.000121	0.01
Y 377.433	0.949740	926226.062309	0.002052	0.22
Y_R 377.433	0.955986	68777.000000	0.000724	0.08
Y_R 488.368	0.968398	38269.200000	0.010271	1.06
Y_R2 488.368	0.970745	73941.288012	0.002314	0.24

Sample Name: 280-123208-F-1-Bsd@5

Date: 5/14/2019 1:00:15 AM

Rack:Tube: 2:60

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.034493 n	ppm	0.014171	41.08	-2253.584230	Y_R 488.368
Ag (328.068 nm)	0.000557	ppm	0.000235	42.21	-322.949000	Y 377.433
Al (167.019 nm)	0.272200	ppm	0.008524	3.13	163.510000	Y_R 377.433
Al H (396.152 nm)	0.192843 u	ppm	0.010258	5.32	827.982440	Y_R 377.433
As (188.980 nm)	-0.001368 u	ppm	0.002734	> 100.00	-1.687060	Y 242.219
B (249.678 nm)	0.023480	ppm	0.000219	0.93	647.676000	Y 242.219
Ba (493.408 nm)	0.018645	ppm	0.000357	1.91	2692.520000	Y_R 488.368
Be (234.861 nm)	0.000005	ppm	0.000004	90.13	-3.235890	Y_R 488.368
Bi (223.061 nm)	-0.002824 u	ppm	0.002013	71.27	13.565000	Y 377.433
Ca (315.887 nm)	24.922490 o	ppm	0.069320	0.28	20923.942235	Y_R 377.433
Cd (214.439 nm)	-0.000054 u	ppm	0.000074	> 100.00	-2.536490	Y 377.433
Co (228.615 nm)	0.000515	ppm	0.000349	67.70	-29.202400	Y 242.219
Cr (205.560 nm)	0.001860	ppm	0.000090	4.83	25.571000	Y 377.433
Cu (324.754 nm)	0.002357	ppm	0.000062	2.62	737.042000	Y 377.433
Fe (238.204 nm)	0.528308	ppm	0.003759	0.71	1957.338657	Y_R 377.433
Fe H (259.940 nm)	0.345844 u	ppm	0.003152	0.91	1018.090000	Y_R 377.433
K (766.491 nm)	1.209190	ppm	0.076232	6.30	687.313000	Y_R2 488.368
Li (670.783 nm)	0.008477	ppm	0.000204	2.41	-745.240000	Y_R2 488.368
Mg (279.078 nm)	11.040700	ppm	0.001913	0.02	65330.000000	Y 377.433
Mn (257.610 nm)	0.097603	ppm	0.000048	0.05	24797.200000	Y 377.433
Mo (202.032 nm)	0.000667	ppm	0.000115	17.28	3.416710	Y 377.433
Na (589.592 nm)	2.203900	ppm	0.000449	0.02	15267.900000	Y_R2 488.368
Na H (589.593 nm)	1.520626 u	ppm	0.010125	0.67	16761.943868	Y_R 488.368
Ni (231.604 nm)	0.000656	ppm	0.000611	93.16	1.975000	Y 377.433
P (213.618 nm)	0.024172	ppm	0.000709	2.93	71.949100	Y 242.219
Pb (220.353 nm)	-0.000868 u	ppm	0.001036	> 100.00	4.755680	Y 242.219
S (181.972 nm)	12.630005 o	ppm	0.017488	0.14	5544.364843	Y 377.433
Sb (206.834 nm)	0.000502 u	ppm	0.000793	> 100.00	-29.643700	Y 377.433
Se (196.026 nm)	-0.000069 u	ppm	0.001517	> 100.00	10.641200	Y 242.219
Si (288.158 nm)	1.778250	ppm	0.012811	0.72	16479.800000	Y 377.433
Sn (189.925 nm)	0.000292	ppm	0.000023	8.01	8.829540	Y 377.433
Sr (421.552 nm)	0.063617	ppm	0.000004	0.01	13558.049565	Y_R 488.368
Th (288.505 nm)	0.000797 u	ppm	0.001876	> 100.00	56.753200	Y 377.433
Ti (336.122 nm)	0.010278	ppm	0.000436	4.24	1360.600000	Y 377.433
Tl (190.794 nm)	-0.001185 u	ppm	0.000163	13.75	-5.019610	Y 377.433
U (409.013 nm)	-0.008904 u	ppm	0.001050	11.79	-159.968000	Y 377.433
V (292.401 nm)	0.000091	ppm	0.000087	94.87	23.617300	Y 377.433
Zn (206.200 nm)	0.004237	ppm	0.000054	1.28	23.855700	Y 377.433
Zr (343.823 nm)	0.000252	ppm	0.000150	59.45	73.607800	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.962051	17253.452081	0.000636	0.07
Y 377.433	0.965679	941770.750311	0.001154	0.12
Y_R 377.433	0.960811	69124.100000	0.000437	0.05
Y_R 488.368	0.976579	38592.500000	0.002727	0.28
Y_R2 488.368	0.979032	74572.547217	0.002369	0.24

Sample Name: 280-123208-F-1-C MS

Date: 5/14/2019 1:03:37 AM

Rack:Tube: 2:61

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.966025 n	ppm	0.001891	0.20	20.280167	Y_R 488.368
Ag (328.068 nm)	-0.000670 u	ppm	0.000043	6.40	-498.461000	Y 377.433
Al (167.019 nm)	9.896340 o	ppm	0.064469	0.65	5927.380000	Y_R 377.433
Al H (396.152 nm)	11.566538	ppm	0.036961	0.32	29925.569307	Y_R 377.433
As (188.980 nm)	2.001000	ppm	0.000921	0.05	2396.730000	Y 242.219
B (249.678 nm)	1.131260 o	ppm	0.000113	0.01	28079.400000	Y 242.219
Ba (493.408 nm)	2.056670 o	ppm	0.003552	0.17	230599.000000	Y_R 488.368
Be (234.861 nm)	0.973142	ppm	0.002679	0.28	281862.000000	Y_R 488.368
Bi (223.061 nm)	1.963220	ppm	0.002367	0.12	5082.510000	Y 377.433
Ca (315.887 nm)	175.895254 o	ppm	0.953715	0.54	148262.676529	Y_R 377.433
Cd (214.439 nm)	0.952583	ppm	0.000279	0.03	58083.900000	Y 377.433
Co (228.615 nm)	0.924315	ppm	0.000067	0.01	18446.000000	Y 242.219
Cr (205.560 nm)	0.980215	ppm	0.014169	1.45	14597.300000	Y 377.433
Cu (324.754 nm)	0.985861	ppm	0.001151	0.12	65780.300000	Y 377.433
Fe (238.204 nm)	11.694823 o	ppm	0.036840	0.32	42993.308133	Y_R 377.433
Fe H (259.940 nm)	12.080100	ppm	0.073353	0.61	22930.100000	Y_R 377.433
K (766.491 nm)	56.561300	ppm	0.006187	0.01	63678.400000	Y_R2 488.368
Li (670.783 nm)	1.005020	ppm	0.000401	0.04	29831.300000	Y_R2 488.368
Mg (279.078 nm)	104.869000 o	ppm	0.304945	0.29	620271.000000	Y 377.433
Mn (257.610 nm)	1.460140 o	ppm	0.000419	0.03	369923.000000	Y 377.433
Mo (202.032 nm)	1.011130	ppm	0.001800	0.18	8817.220000	Y 377.433
Na (589.592 nm)	59.089000 o	ppm	0.158766	0.27	389660.000000	Y_R2 488.368
Na H (589.593 nm)	62.085361	ppm	0.033816	0.05	252783.054740	Y_R 488.368
Ni (231.604 nm)	0.939461	ppm	0.003548	0.38	6967.070000	Y 377.433
P (213.618 nm)	19.741300 o	ppm	0.006957	0.04	45138.700000	Y 242.219
Pb (220.353 nm)	0.953891	ppm	0.001135	0.12	2919.300000	Y 242.219
S (181.972 nm)	75.968717 o	ppm	0.089246	0.12	33234.737892	Y 377.433
Sb (206.834 nm)	-0.000854 u	ppm	0.001718	> 100.00	-18.181800	Y 377.433
Se (196.026 nm)	1.948330	ppm	0.000964	0.05	1824.670000	Y 242.219
Si (288.158 nm)	10.757700	ppm	0.073953	0.69	95474.500000	Y 377.433
Sn (189.925 nm)	1.962230	ppm	0.000447	0.02	4169.180000	Y 377.433
Sr (421.552 nm)	1.298060 o	ppm	0.001080	0.08	274392.248135	Y_R 488.368
Th (288.505 nm)	0.996972	ppm	0.006379	0.64	3064.740000	Y 377.433
Ti (336.122 nm)	1.020320	ppm	0.000021	0.00	146908.000000	Y 377.433
Tl (190.794 nm)	1.919540	ppm	0.002766	0.14	4426.770000	Y 377.433
U (409.013 nm)	2.050820	ppm	0.003997	0.19	9480.790000	Y 377.433
V (292.401 nm)	1.001920	ppm	0.000937	0.09	42061.000000	Y 377.433
Zn (206.200 nm)	0.473614	ppm	0.001875	0.40	2470.510000	Y 377.433
Zr (343.823 nm)	0.451723	ppm	0.000727	0.16	61459.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.921767	16530.997988	0.000676	0.07
Y 377.433	0.930821	907775.838147	0.000477	0.05
Y_R 377.433	0.939479	67589.400000	0.004744	0.50
Y_R 488.368	0.957448	37836.500000	0.003215	0.34
Y_R2 488.368	0.960471	73158.702358	0.003693	0.38

Sample Name: CCVH-5699817

Date: 5/14/2019 1:07:01 AM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.082456	ppm	0.011748	14.25	-2136.506367	Y_R 488.368
Ag (328.068 nm)	0.000217 u	ppm	0.000399	> 100.00	-591.586000	Y 377.433
Al (167.019 nm)	41.814500 o	ppm	0.144245	0.34	25042.500000	Y_R 377.433
Al H (396.152 nm)	49.717791	ppm	0.010250	0.02	126870.126193	Y_R 377.433
As (188.980 nm)	0.000063 u	ppm	0.000211	> 100.00	-0.385750	Y 242.219
B (249.678 nm)	0.002284	ppm	0.000119	5.21	50.474200	Y 242.219
Ba (493.408 nm)	0.002075	ppm	0.000031	1.52	878.367000	Y_R 488.368
Be (234.861 nm)	0.000849	ppm	0.000033	3.92	1724.400000	Y_R 488.368
Bi (223.061 nm)	0.991387	ppm	0.000902	0.09	2584.130000	Y 377.433
Ca (315.887 nm)	0.018679	ppm	0.001127	6.03	-81.206446	Y_R 377.433
Cd (214.439 nm)	0.001223	ppm	0.000007	0.53	123.237000	Y 377.433
Co (228.615 nm)	0.004209	ppm	0.000218	5.19	44.202400	Y 242.219
Cr (205.560 nm)	0.001122	ppm	0.000413	36.82	1.375320	Y 377.433
Cu (324.754 nm)	0.009305	ppm	0.000074	0.79	1601.820000	Y 377.433
Fe (238.204 nm)	47.914296 o	ppm	0.012431	0.03	176096.726863	Y_R 377.433
Fe H (259.940 nm)	49.952300	ppm	0.007757	0.02	93651.100000	Y_R 377.433
K (766.491 nm)	0.085398	ppm	0.013104	15.34	-591.573000	Y_R2 488.368
Li (670.783 nm)	0.007739	ppm	0.001467	18.96	-767.901000	Y_R2 488.368
Mg (279.078 nm)	0.034977	ppm	0.001937	5.54	-136.213000	Y 377.433
Mn (257.610 nm)	0.002924	ppm	0.000029	1.00	815.444000	Y 377.433
Mo (202.032 nm)	0.000672	ppm	0.000146	21.72	3.459250	Y 377.433
Na (589.592 nm)	232.475000 o	ppm	0.114616	0.05	1514280.000000	Y_R2 488.368
Na H (589.593 nm)	242.223621	ppm	1.076182	0.44	946716.382221	Y_R 488.368
Ni (231.604 nm)	0.004861	ppm	0.000168	3.45	35.352300	Y 377.433
P (213.618 nm)	-0.002469 u	ppm	0.001727	69.96	11.057700	Y 242.219
Pb (220.353 nm)	0.002510	ppm	0.001471	58.61	33.404300	Y 242.219
S (181.972 nm)	4.868890	ppm	0.000243	0.00	2151.518229	Y 377.433
Sb (206.834 nm)	-0.000574 u	ppm	0.002391	> 100.00	-77.285400	Y 377.433
Se (196.026 nm)	-0.000788 u	ppm	0.003458	> 100.00	1.661610	Y 242.219
Si (288.158 nm)	0.046283	ppm	0.002034	4.39	1243.230000	Y 377.433
Sn (189.925 nm)	0.004181	ppm	0.000393	9.39	17.076500	Y 377.433
Sr (421.552 nm)	0.002022	ppm	0.000017	0.86	543.333289	Y_R 488.368
Th (288.505 nm)	5.001270	ppm	0.016161	0.32	14926.300000	Y 377.433
Ti (336.122 nm)	0.002464	ppm	0.000058	2.34	159.404000	Y 377.433
Tl (190.794 nm)	-0.002329 u	ppm	0.000380	16.32	-8.969720	Y 377.433
U (409.013 nm)	10.147500	ppm	0.013087	0.13	47703.100000	Y 377.433
V (292.401 nm)	0.004967	ppm	0.000020	0.39	32.965000	Y 377.433
Zn (206.200 nm)	0.002958	ppm	0.000031	1.05	17.185900	Y 377.433
Zr (343.823 nm)	-0.002601 u	ppm	0.000172	6.63	-167.169000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.946306	16971.081974	0.004756	0.50
Y 377.433	0.940937	917640.888291	0.002771	0.29
Y_R 377.433	0.944787	67971.300000	0.003087	0.33
Y_R 488.368	0.969438	38310.300000	0.002712	0.28
Y_R2 488.368	0.970129	73894.356451	0.002790	0.29

Sample Name: CCV-5699804

Date: 5/14/2019 1:10:24 AM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.947167	ppm	0.013724	1.45	-25.753729	Y_R 488.368
Ag (328.068 nm)	0.493118	ppm	0.000311	0.06	22826.000000	Y 377.433
Al (167.019 nm)	0.474527	ppm	0.004917	1.04	285.941000	Y_R 377.433
Al H (396.152 nm)	0.430497 u	ppm	0.002381	0.55	1464.736967	Y_R 377.433
As (188.980 nm)	0.967761	ppm	0.005378	0.56	1159.160000	Y 242.219
B (249.678 nm)	0.488668	ppm	0.000258	0.05	12175.800000	Y 242.219
Ba (493.408 nm)	0.489989	ppm	0.000673	0.14	55393.600000	Y_R 488.368
Be (234.861 nm)	0.487946	ppm	0.003730	0.76	141208.000000	Y_R 488.368
Bi (223.061 nm)	-0.003656 u	ppm	0.003021	82.63	11.756600	Y 377.433
Ca (315.887 nm)	5.006363	ppm	0.019831	0.40	4125.957963	Y_R 377.433
Cd (214.439 nm)	0.495126	ppm	0.001515	0.31	30186.900000	Y 377.433
Co (228.615 nm)	0.493303	ppm	0.001134	0.23	9824.140000	Y 242.219
Cr (205.560 nm)	0.495347	ppm	0.001385	0.28	7376.650000	Y 377.433
Cu (324.754 nm)	0.491231	ppm	0.001662	0.34	33104.400000	Y 377.433
Fe (238.204 nm)	2.452751	ppm	0.000589	0.02	9029.497341	Y_R 377.433
Fe H (259.940 nm)	2.368660 u	ppm	0.012717	0.54	4795.420000	Y_R 377.433
K (766.491 nm)	47.801600	ppm	0.189890	0.40	53709.900000	Y_R2 488.368
Li (670.783 nm)	0.966739	ppm	0.002452	0.25	28656.500000	Y_R2 488.368
Mg (279.078 nm)	19.366900	ppm	0.002358	0.01	114578.000000	Y 377.433
Mn (257.610 nm)	0.494495	ppm	0.000063	0.01	125328.000000	Y 377.433
Mo (202.032 nm)	0.502748	ppm	0.001378	0.27	4382.840000	Y 377.433
Na (589.592 nm)	4.739730	ppm	0.021051	0.44	32718.500000	Y_R2 488.368
Na H (589.593 nm)	4.571072 u	ppm	0.105439	2.31	29015.953020	Y_R 488.368
Ni (231.604 nm)	0.504243	ppm	0.000407	0.08	3737.910000	Y 377.433
P (213.618 nm)	0.961000	ppm	0.001914	0.20	2213.220000	Y 242.219
Pb (220.353 nm)	0.979767	ppm	0.005815	0.59	2997.740000	Y 242.219
S (181.972 nm)	0.042749	ppm	0.004982	11.65	42.876420	Y 377.433
Sb (206.834 nm)	1.015180	ppm	0.001563	0.15	2698.760000	Y 377.433
Se (196.026 nm)	0.955831	ppm	0.001557	0.16	901.001000	Y 242.219
Si (288.158 nm)	4.898180	ppm	0.020170	0.41	43926.600000	Y 377.433
Sn (189.925 nm)	0.991493	ppm	0.006218	0.63	2110.710000	Y 377.433
Sr (421.552 nm)	0.485873	ppm	0.001598	0.33	102779.506177	Y_R 488.368
Th (288.505 nm)	0.005002	ppm	0.000583	11.66	85.121300	Y 377.433
Ti (336.122 nm)	0.495934	ppm	0.000440	0.09	71049.600000	Y 377.433
Tl (190.794 nm)	0.996946	ppm	0.003636	0.36	2298.420000	Y 377.433
U (409.013 nm)	-0.002100 u	ppm	0.001794	85.42	-161.957000	Y 377.433
V (292.401 nm)	0.493013	ppm	0.000754	0.15	20723.200000	Y 377.433
Zn (206.200 nm)	0.492242	ppm	0.001107	0.22	2567.610000	Y 377.433
Zr (343.823 nm)	0.495333	ppm	0.002101	0.42	67356.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.962813	17267.125894	0.000913	0.09
Y 377.433	0.964847	940958.694631	0.000676	0.07
Y_R 377.433	0.952020	68491.700000	0.004991	0.52
Y_R 488.368	0.966764	38204.700000	0.007308	0.76
Y_R2 488.368	0.978499	74531.936099	0.000751	0.08

Sample Name: CCB

Date: 5/14/2019 1:13:46 AM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.007669	ppm	0.010691	> 100.00	-2319.060339	Y_R 488.368
Ag (328.068 nm)	0.000597	ppm	0.000085	14.30	-320.956000	Y 377.433
Al (167.019 nm)	0.008944	ppm	0.001178	13.17	5.684360	Y_R 377.433
Al H (396.152 nm)	-0.112421 Zu	ppm	0.004115	3.66	39.991703 Z	Y_R 377.433
As (188.980 nm)	0.000764	ppm	0.000921	> 100.00	0.870756	Y 242.219
B (249.678 nm)	0.000445	ppm	0.000173	38.96	78.580900	Y 242.219
Ba (493.408 nm)	-0.000089 u	ppm	0.000159	> 100.00	592.021000	Y_R 488.368
Be (234.861 nm)	0.000024	ppm	0.000010	42.41	-13.954600	Y_R 488.368
Bi (223.061 nm)	-0.000932 u	ppm	0.000945	> 100.00	18.350500	Y 377.433
Ca (315.887 nm)	0.012204	ppm	0.005255	43.06	-86.669133	Y_R 377.433
Cd (214.439 nm)	0.000016 u	ppm	0.000044	> 100.00	1.210630	Y 377.433
Co (228.615 nm)	0.000577	ppm	0.000225	38.98	-28.337200	Y 242.219
Cr (205.560 nm)	0.000228	ppm	0.000027	11.72	1.380350	Y 377.433
Cu (324.754 nm)	0.000577	ppm	0.000190	32.90	636.208000	Y 377.433
Fe (238.204 nm)	0.003887	ppm	0.000304	7.82	30.134809	Y_R 377.433
Fe H (259.940 nm)	-0.191636 u	ppm	0.000209	0.11	14.422100	Y_R 377.433
K (766.491 nm)	-0.062278 u	ppm	0.105227	> 100.00	-759.629000	Y_R2 488.368
Li (670.783 nm)	0.004537	ppm	0.000714	15.73	-866.149000	Y_R2 488.368
Mg (279.078 nm)	0.003019	ppm	0.000700	23.18	40.482800	Y 377.433
Mn (257.610 nm)	0.000040	ppm	0.000005	11.52	84.744400	Y 377.433
Mo (202.032 nm)	0.000404	ppm	0.000007	1.70	1.122550	Y 377.433
Na (589.592 nm)	0.067804	ppm	0.003373	4.97	1324.980000	Y_R2 488.368
Na H (589.593 nm)	-0.819228 u	ppm	0.004983	0.61	7703.301265	Y_R 488.368
Ni (231.604 nm)	0.000601	ppm	0.000111	18.48	1.543140	Y 377.433
P (213.618 nm)	-0.002441 u	ppm	0.001985	81.32	11.120500	Y 242.219
Pb (220.353 nm)	-0.000120 u	ppm	0.000149	> 100.00	7.098910	Y 242.219
S (181.972 nm)	0.035394	ppm	0.004305	12.16	38.625307	Y 377.433
Sb (206.834 nm)	0.001100 u	ppm	0.001897	> 100.00	-27.941000	Y 377.433
Se (196.026 nm)	0.000914	ppm	0.000067	7.30	11.574300	Y 242.219
Si (288.158 nm)	0.000550 u	ppm	0.000867	> 100.00	840.908000	Y 377.433
Sn (189.925 nm)	-0.000325 u	ppm	0.000973	> 100.00	7.521290	Y 377.433
Sr (421.552 nm)	0.000064	ppm	0.000052	81.42	129.510508	Y_R 488.368
Th (288.505 nm)	0.003759	ppm	0.000448	11.91	63.156700	Y 377.433
Ti (336.122 nm)	0.000109	ppm	0.000026	24.25	-178.850000	Y 377.433
Tl (190.794 nm)	0.000470 u	ppm	0.000724	> 100.00	-1.135120	Y 377.433
U (409.013 nm)	-0.002214 u	ppm	0.001197	54.05	-124.046000	Y 377.433
V (292.401 nm)	-0.000217 u	ppm	0.000097	44.57	10.490500	Y 377.433
Zn (206.200 nm)	-0.000218 u	ppm	0.000372	> 100.00	0.631818	Y 377.433
Zr (343.823 nm)	0.000203	ppm	0.000100	49.20	65.364500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.967768	17355.981744	0.001687	0.17
Y 377.433	0.971840	947778.648387	0.002299	0.24
Y_R 377.433	0.957550	68889.500000	0.002698	0.28
Y_R 488.368	0.971863	38406.200000	0.006105	0.63
Y_R2 488.368	0.979563	74612.938421	0.013947	1.42

Sample Name: CCVL-5699389

Date: 5/14/2019 1:17:09 AM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.064152 Q	ppm	0.009715	15.14	-2181.186330 Q	Y_R 488.368
Ag (328.068 nm)	0.009569	ppm	0.000297	3.11	99.907900	Y 377.433
Al (167.019 nm)	0.092825	ppm	0.000860	0.93	55.921800	Y_R 377.433
Al H (396.152 nm)	-0.019995 u	ppm	0.003277	16.39	276.809098	Y_R 377.433
As (188.980 nm)	0.011329	ppm	0.000100	0.89	13.525200	Y 242.219
B (249.678 nm)	0.095946	ppm	0.000143	0.15	2441.700000	Y 242.219
Ba (493.408 nm)	0.009666	ppm	0.000410	4.25	1682.650000	Y_R 488.368
Be (234.861 nm)	0.000931	ppm	0.000019	2.06	250.556000	Y_R 488.368
Bi (223.061 nm)	0.096463	ppm	0.000921	0.96	269.381000	Y 377.433
Ca (315.887 nm)	0.206567	ppm	0.001929	0.93	77.269336	Y_R 377.433
Cd (214.439 nm)	0.005003	ppm	0.000008	0.16	305.343000	Y 377.433
Co (228.615 nm)	0.010658	ppm	0.000063	0.59	173.196000	Y 242.219
Cr (205.560 nm)	0.010027	ppm	0.000020	0.20	147.397000	Y 377.433
Cu (324.754 nm)	0.015785	ppm	0.000019	0.12	1642.230000	Y 377.433
Fe (238.204 nm)	0.102543	ppm	0.001071	1.04	392.688695	Y_R 377.433
Fe H (259.940 nm)	-0.089016 u	ppm	0.000896	1.01	206.051000	Y_R 377.433
K (766.491 nm)	2.895730	ppm	0.015013	0.52	2606.610000	Y_R2 488.368
Li (670.783 nm)	0.026607 Q	ppm	0.000179	0.67	-188.989000 Q	Y_R2 488.368
Mg (279.078 nm)	0.191496	ppm	0.000330	0.17	1154.110000	Y 377.433
Mn (257.610 nm)	0.010207	ppm	0.000046	0.45	2660.010000	Y 377.433
Mo (202.032 nm)	0.019056	ppm	0.000232	1.22	163.812000	Y 377.433
Na (589.592 nm)	0.963446	ppm	0.001848	0.19	7175.640000	Y_R2 488.368
Na H (589.593 nm)	-0.022712 u	ppm	0.037576	> 100.00	10790.690926	Y_R 488.368
Ni (231.604 nm)	0.041633	ppm	0.000477	1.15	305.854000	Y 377.433
P (213.618 nm)	2.741020 o	ppm	0.000804	0.03	6281.740000	Y 242.219
Pb (220.353 nm)	0.007562	ppm	0.000742	9.81	30.571600	Y 242.219
S (181.972 nm)	0.122073	ppm	0.004966	4.07	76.536861	Y 377.433
Sb (206.834 nm)	0.022117	ppm	0.000983	4.44	28.447400	Y 377.433
Se (196.026 nm)	0.015989	ppm	0.002139	13.38	25.607200	Y 242.219
Si (288.158 nm)	0.571143	ppm	0.021116	3.70	5860.560000	Y 377.433
Sn (189.925 nm)	0.097928	ppm	0.000415	0.42	215.870000	Y 377.433
Sr (421.552 nm)	0.009825	ppm	0.000032	0.32	2191.970919	Y_R 488.368
Th (288.505 nm)	0.014090	ppm	0.001944	13.79	94.926200	Y 377.433
Ti (336.122 nm)	0.009665	ppm	0.000042	0.43	1194.040000	Y 377.433
Tl (190.794 nm)	0.013836	ppm	0.000916	6.62	29.677800	Y 377.433
U (409.013 nm)	0.058090	ppm	0.006255	10.77	159.070000	Y 377.433
V (292.401 nm)	0.009578	ppm	0.000164	1.71	420.116000	Y 377.433
Zn (206.200 nm)	0.019757	ppm	0.000536	2.71	104.752000	Y 377.433
Zr (343.823 nm)	0.010663	ppm	0.000138	1.30	1487.060000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.979999	17575.335539	0.001998	0.20
Y 377.433	0.984963	960577.398169	0.002341	0.24
Y_R 377.433	0.973492	70036.400000	0.002027	0.21
Y_R 488.368	0.986760	38994.800000	0.000950	0.10
Y_R2 488.368	1.004205	76489.931957	0.000619	0.06

Sample Name: 280-123208-F-1-D MSD

Date: 5/14/2019 1:20:31 AM

Rack:Tube: 2:62

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.996875 n	ppm	0.027481	2.76	95.583075	Y_R 488.368
Ag (328.068 nm)	-0.000343 u	ppm	0.000092	26.74	-482.753000	Y 377.433
Al (167.019 nm)	10.017400 o	ppm	0.018493	0.18	5999.970000	Y_R 377.433
Al H (396.152 nm)	11.759908	ppm	0.021347	0.18	30419.135577	Y_R 377.433
As (188.980 nm)	1.994310	ppm	0.007870	0.39	2388.720000	Y 242.219
B (249.678 nm)	1.138560 o	ppm	0.001015	0.09	28259.500000	Y 242.219
Ba (493.408 nm)	2.075320 o	ppm	0.000646	0.03	232685.000000	Y_R 488.368
Be (234.861 nm)	0.983467	ppm	0.008401	0.85	284858.000000	Y_R 488.368
Bi (223.061 nm)	1.969860	ppm	0.001239	0.06	5099.680000	Y 377.433
Ca (315.887 nm)	177.994907 o	ppm	0.248936	0.14	150033.632354	Y_R 377.433
Cd (214.439 nm)	0.953726	ppm	0.000058	0.01	58153.900000	Y 377.433
Co (228.615 nm)	0.928785	ppm	0.003429	0.37	18535.700000	Y 242.219
Cr (205.560 nm)	0.986266	ppm	0.000508	0.05	14687.300000	Y 377.433
Cu (324.754 nm)	0.990161	ppm	0.003785	0.38	66065.400000	Y 377.433
Fe (238.204 nm)	11.974777 o	ppm	0.023111	0.19	44022.114949	Y_R 377.433
Fe H (259.940 nm)	12.374600	ppm	0.027985	0.23	23480.100000	Y_R 377.433
K (766.491 nm)	56.706600	ppm	0.302675	0.53	63843.800000	Y_R2 488.368
Li (670.783 nm)	1.011640	ppm	0.005695	0.56	30034.400000	Y_R2 488.368
Mg (279.078 nm)	105.742000 o	ppm	0.000434	0.00	625435.000000	Y 377.433
Mn (257.610 nm)	1.471870 o	ppm	0.001757	0.12	372893.000000	Y 377.433
Mo (202.032 nm)	1.016670	ppm	0.000190	0.02	8865.550000	Y 377.433
Na (589.592 nm)	59.335700 o	ppm	0.375718	0.63	391306.000000	Y_R2 488.368
Na H (589.593 nm)	62.295006	ppm	0.109936	0.18	253612.830674	Y_R 488.368
Ni (231.604 nm)	0.937201	ppm	0.000264	0.03	6950.330000	Y 377.433
P (213.618 nm)	19.780600 o	ppm	0.018450	0.09	45228.500000	Y 242.219
Pb (220.353 nm)	0.957528	ppm	0.003108	0.32	2930.360000	Y 242.219
S (181.972 nm)	76.648428 o	ppm	0.096920	0.13	33531.888843	Y 377.433
Sb (206.834 nm)	0.001946	ppm	0.000254	13.05	-10.620500	Y 377.433
Se (196.026 nm)	1.944800	ppm	0.000377	0.02	1821.350000	Y 242.219
Si (288.158 nm)	11.064700 o	ppm	0.019439	0.18	98174.800000	Y 377.433
Sn (189.925 nm)	1.977720	ppm	0.001245	0.06	4202.030000	Y 377.433
Sr (421.552 nm)	1.314071 o	ppm	0.000339	0.03	277775.288754	Y_R 488.368
Th (288.505 nm)	1.007970	ppm	0.000303	0.03	3097.250000	Y 377.433
Ti (336.122 nm)	1.031180	ppm	0.001193	0.12	148475.000000	Y 377.433
Tl (190.794 nm)	1.921490	ppm	0.003579	0.19	4431.210000	Y 377.433
U (409.013 nm)	2.059310	ppm	0.002898	0.14	9520.220000	Y 377.433
V (292.401 nm)	1.006230	ppm	0.001634	0.16	42242.200000	Y 377.433
Zn (206.200 nm)	0.476313	ppm	0.000918	0.19	2484.580000	Y 377.433
Zr (343.823 nm)	0.456918	ppm	0.000055	0.01	62165.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.928131	16645.123598	0.000419	0.05
Y 377.433	0.937812	914593.459508	0.001688	0.18
Y_R 377.433	0.945828	68046.100000	0.003306	0.35
Y_R 488.368	0.960052	37939.400000	0.006658	0.69
Y_R2 488.368	0.963205	73367.012421	0.003731	0.39

Sample Name: 280-123208-F-2-B

Date: 5/14/2019 1:23:53 AM

Rack:Tube: 2:63

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.015315 n	ppm	0.005370	35.06	-2300.397710	Y_R 488.368
Ag (328.068 nm)	0.000904	ppm	0.000038	4.16	-306.745000	Y 377.433
Al (167.019 nm)	0.745225	ppm	0.001699	0.23	452.228000	Y_R 377.433
Al H (396.152 nm)	0.840632 u	ppm	0.000711	0.08	2608.536390	Y_R 377.433
As (188.980 nm)	-0.000112 u	ppm	0.001663	> 100.00	-0.251409	Y 242.219
B (249.678 nm)	0.431654	ppm	0.000331	0.08	10734.500000	Y 242.219
Ba (493.408 nm)	0.072453	ppm	0.000010	0.01	8782.210000	Y_R 488.368
Be (234.861 nm)	-0.000131 u	ppm	0.000042	31.90	201.965000	Y_R 488.368
Bi (223.061 nm)	-0.005237 u	ppm	0.000100	1.90	8.709470	Y 377.433
Ca (315.887 nm)	322.541246 o	ppm	0.671141	0.21	271950.842607	Y_R 377.433
Cd (214.439 nm)	0.000035	ppm	0.000011	30.94	10.804000	Y 377.433
Co (228.615 nm)	0.000036 u	ppm	0.000121	> 100.00	-38.375100	Y 242.219
Cr (205.560 nm)	0.002426	ppm	0.000175	7.22	31.826400	Y 377.433
Cu (324.754 nm)	0.000023	ppm	0.000019	84.10	380.190000	Y 377.433
Fe (238.204 nm)	8.367652 o	ppm	0.008029	0.10	30766.243648	Y_R 377.433
Fe H (259.940 nm)	8.561560	ppm	0.002537	0.03	16359.800000	Y_R 377.433
K (766.491 nm)	4.888180	ppm	0.052281	1.07	4874.040000	Y_R2 488.368
Li (670.783 nm)	0.043012	ppm	0.002787	6.48	314.379000	Y_R2 488.368
Mg (279.078 nm)	197.991000 o	ppm	0.119494	0.06	1171170.000000	Y 377.433
Mn (257.610 nm)	2.381960 o	ppm	0.001068	0.04	603415.000000	Y 377.433
Mo (202.032 nm)	0.000492	ppm	0.000097	19.70	1.890120	Y 377.433
Na (589.592 nm)	64.403200 o	ppm	0.290905	0.45	420289.000000	Y_R2 488.368
Na H (589.593 nm)	68.299507	ppm	0.010115	0.01	274821.157111	Y_R 488.368
Ni (231.604 nm)	-0.000902 u	ppm	0.000232	25.74	-9.211510	Y 377.433
P (213.618 nm)	0.135480	ppm	0.001208	0.89	326.363000	Y 242.219
Pb (220.353 nm)	0.002122	ppm	0.001189	56.03	14.384000	Y 242.219
S (181.972 nm)	236.425656 bo	ppm	0.161390	0.07	103377.892460	Y 377.433
Sb (206.834 nm)	-0.002510 u	ppm	0.000240	9.58	-39.620700	Y 377.433
Se (196.026 nm)	0.001921	ppm	0.002274	> 100.00	12.788600	Y 242.219
Si (288.158 nm)	12.200700 o	ppm	0.124235	1.02	108169.000000	Y 377.433
Sn (189.925 nm)	0.002718	ppm	0.000289	10.63	13.974800	Y 377.433
Sr (421.552 nm)	1.022318	ppm	0.001603	0.16	216128.774001	Y_R 488.368
Th (288.505 nm)	0.007030	ppm	0.003190	45.38	127.652000	Y 377.433
Ti (336.122 nm)	0.020539	ppm	0.000845	4.11	3779.940000	Y 377.433
Tl (190.794 nm)	-0.000346 u	ppm	0.000017	4.84	-3.349570	Y 377.433
U (409.013 nm)	-0.013896 u	ppm	0.001413	10.17	-234.974000	Y 377.433
V (292.401 nm)	0.001636	ppm	0.000176	10.75	91.766100	Y 377.433
Zn (206.200 nm)	0.001543	ppm	0.000301	19.50	9.813210	Y 377.433
Zr (343.823 nm)	0.001632	ppm	0.000024	1.47	285.374000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.908760	16297.724247	0.003041	0.33
Y 377.433	0.924790	901893.966218	0.002048	0.22
Y_R 377.433	0.939298	67576.400000	0.004334	0.46
Y_R 488.368	0.949855	37536.400000	0.001764	0.19
Y_R2 488.368	0.957570	72937.794362	0.001652	0.17

Sample Name: 280-123208-F-3-B

Date: 5/14/2019 1:27:16 AM

Rack:Tube: 2:64

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.030287 n	ppm	0.020186	66.65	-2263.851187	Y_R 488.368
Ag (328.068 nm)	0.001098	ppm	0.000130	11.89	-297.707000	Y 377.433
Al (167.019 nm)	0.007417	ppm	0.005493	74.05	4.820560	Y_R 377.433
Al H (396.152 nm)	-0.056701 u	ppm	0.009202	16.23	305.724229	Y_R 377.433
As (188.980 nm)	-0.001552 u	ppm	0.003510	> 100.00	-1.904270	Y 242.219
B (249.678 nm)	0.173919	ppm	0.000029	0.02	4370.550000	Y 242.219
Ba (493.408 nm)	0.011623	ppm	0.000411	3.53	1964.360000	Y_R 488.368
Be (234.861 nm)	-0.000074 u	ppm	0.000011	15.23	-40.357200	Y_R 488.368
Bi (223.061 nm)	-0.001385 u	ppm	0.000564	40.71	17.194000	Y 377.433
Ca (315.887 nm)	279.879317 o	ppm	0.967990	0.35	235967.587379	Y_R 377.433
Cd (214.439 nm)	-0.000048 u	ppm	0.000042	87.52	-2.610330	Y 377.433
Co (228.615 nm)	0.001856	ppm	0.000052	2.81	-2.828970	Y 242.219
Cr (205.560 nm)	0.000777	ppm	0.000054	6.92	9.548260	Y 377.433
Cu (324.754 nm)	-0.000687 u	ppm	0.000250	36.40	352.249000	Y 377.433
Fe (238.204 nm)	0.069895	ppm	0.000818	1.17	272.710241	Y_R 377.433
Fe H (259.940 nm)	-0.132740 u	ppm	0.001373	1.03	124.403000	Y_R 377.433
K (766.491 nm)	3.597880	ppm	0.014762	0.41	3405.660000	Y_R2 488.368
Li (670.783 nm)	0.032873	ppm	0.000225	0.68	3.274130	Y_R2 488.368
Mg (279.078 nm)	191.126000 o	ppm	0.117598	0.06	1130580.000000	Y 377.433
Mn (257.610 nm)	1.522550 o	ppm	0.001137	0.07	385730.000000	Y 377.433
Mo (202.032 nm)	0.000696	ppm	0.000269	38.60	3.669310	Y 377.433
Na (589.592 nm)	35.156100 o	ppm	0.061027	0.17	229772.000000	Y_R2 488.368
Na H (589.593 nm)	36.112358	ppm	0.220139	0.61	150403.475099	Y_R 488.368
Ni (231.604 nm)	0.003132	ppm	0.000481	15.36	20.324500	Y 377.433
P (213.618 nm)	0.005111	ppm	0.001458	28.52	28.383000	Y 242.219
Pb (220.353 nm)	0.000177 u	ppm	0.002248	> 100.00	7.980720	Y 242.219
S (181.972 nm)	304.814349 bo	ppm	0.018843	0.01	133271.126717	Y 377.433
Sb (206.834 nm)	-0.000327 u	ppm	0.001066	> 100.00	-31.770000	Y 377.433
Se (196.026 nm)	0.002429	ppm	0.000454	18.68	14.144700	Y 242.219
Si (288.158 nm)	8.397190	ppm	0.036412	0.43	74708.300000	Y 377.433
Sn (189.925 nm)	-0.000229 u	ppm	0.000218	95.02	7.725350	Y 377.433
Sr (421.552 nm)	0.706050	ppm	0.005895	0.83	149302.258262	Y_R 488.368
Th (288.505 nm)	0.006825	ppm	0.000263	3.86	107.513000	Y 377.433
Ti (336.122 nm)	-0.000721 u	ppm	0.000006	0.79	590.867000	Y 377.433
Tl (190.794 nm)	0.001681	ppm	0.001038	61.74	1.663530	Y 377.433
U (409.013 nm)	-0.013988 u	ppm	0.002023	14.46	-235.026000	Y 377.433
V (292.401 nm)	0.000136	ppm	0.000068	50.10	26.980800	Y 377.433
Zn (206.200 nm)	0.000623	ppm	0.000369	59.27	5.015470	Y 377.433
Zr (343.823 nm)	0.000155	ppm	0.000061	39.13	58.984400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.917258	16450.132411	0.000759	0.08
Y 377.433	0.931519	908456.342899	0.000022	0.00
Y_R 377.433	0.947558	68170.600000	0.001839	0.19
Y_R 488.368	0.962703	38044.200000	0.005328	0.55
Y_R2 488.368	0.983440	74908.298147	0.014969	1.52

Sample Name: 280-123208-F-4-B

Date: 5/14/2019 1:30:38 AM

Rack:Tube: 2:65

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.039718 n	ppm	0.028844	72.62	-2240.829523	Y_R 488.368
Ag (328.068 nm)	0.001293	ppm	0.000256	19.77	-288.356000	Y 377.433
Al (167.019 nm)	0.419119	ppm	0.002657	0.63	256.055000	Y_R 377.433
Al H (396.152 nm)	0.412634 u	ppm	0.002240	0.54	1492.838112	Y_R 377.433
As (188.980 nm)	0.004819	ppm	0.001813	37.63	5.668430	Y 242.219
B (249.678 nm)	0.120268	ppm	0.000565	0.47	3032.750000	Y 242.219
Ba (493.408 nm)	0.049198	ppm	0.000290	0.59	6167.440000	Y_R 488.368
Be (234.861 nm)	-0.000174 u	ppm	0.000005	2.73	141.234000	Y_R 488.368
Bi (223.061 nm)	-0.001421 u	ppm	0.001083	76.17	18.273500	Y 377.433
Ca (315.887 nm)	262.417934 o	ppm	0.537168	0.20	221239.762632	Y_R 377.433
Cd (214.439 nm)	-0.000026 u	ppm	0.000009	34.63	5.554020	Y 377.433
Co (228.615 nm)	0.001422	ppm	0.000246	17.33	-11.055400	Y 242.219
Cr (205.560 nm)	0.002115	ppm	0.000083	3.94	27.606800	Y 377.433
Cu (324.754 nm)	0.000537	ppm	0.000111	20.66	456.462000	Y 377.433
Fe (238.204 nm)	6.818699 o	ppm	0.011486	0.17	25073.978060	Y_R 377.433
Fe H (259.940 nm)	6.933210	ppm	0.028699	0.41	13319.100000	Y_R 377.433
K (766.491 nm)	2.358910	ppm	0.004926	0.21	1995.710000	Y_R2 488.368
Li (670.783 nm)	0.026571	ppm	0.001960	7.38	-190.074000	Y_R2 488.368
Mg (279.078 nm)	120.869000 o	ppm	0.137597	0.11	714980.000000	Y 377.433
Mn (257.610 nm)	2.459890 o	ppm	0.002791	0.11	623154.000000	Y 377.433
Mo (202.032 nm)	0.003836	ppm	0.000271	7.06	31.058800	Y 377.433
Na (589.592 nm)	18.555000 o	ppm	0.019120	0.10	121775.000000	Y_R2 488.368
Na H (589.593 nm)	18.516179	ppm	0.059967	0.32	82456.439066	Y_R 488.368
Ni (231.604 nm)	0.003732	ppm	0.000531	14.23	25.088400	Y 377.433
P (213.618 nm)	0.093548	ppm	0.001432	1.53	230.519000	Y 242.219
Pb (220.353 nm)	-0.000289 u	ppm	0.000570	> 100.00	6.985550	Y 242.219
S (181.972 nm)	128.085985 bo	ppm	0.330774	0.26	56019.076204	Y 377.433
Sb (206.834 nm)	0.000658 u	ppm	0.000952	> 100.00	-30.736900	Y 377.433
Se (196.026 nm)	-0.002746 u	ppm	0.002621	95.44	8.784060	Y 242.219
Si (288.158 nm)	11.217600 o	ppm	0.007664	0.07	99520.400000	Y 377.433
Sn (189.925 nm)	0.000291 u	ppm	0.000598	> 100.00	8.828670	Y 377.433
Sr (421.552 nm)	0.493316	ppm	0.000793	0.16	104352.256834	Y_R 488.368
Th (288.505 nm)	0.002054 u	ppm	0.007492	> 100.00	114.721000	Y 377.433
Ti (336.122 nm)	0.011442	ppm	0.000057	0.50	2282.450000	Y 377.433
Tl (190.794 nm)	0.001187	ppm	0.000658	55.46	0.270281	Y 377.433
U (409.013 nm)	-0.015767 u	ppm	0.006249	39.63	-233.272000	Y 377.433
V (292.401 nm)	0.000448	ppm	0.000002	0.55	41.490400	Y 377.433
Zn (206.200 nm)	0.003823	ppm	0.000164	4.30	21.696500	Y 377.433
Zr (343.823 nm)	0.000476	ppm	0.000022	4.69	123.606000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.939759	16853.658775	0.000858	0.09
Y 377.433	0.956528	932846.091915	0.000513	0.05
Y_R 377.433	0.963766	69336.600000	0.004796	0.50
Y_R 488.368	0.980496	38747.300000	0.005386	0.55
Y_R2 488.368	0.999340	76119.396346	0.006332	0.63

Sample Name: 280-123208-F-5-B

Date: 5/14/2019 1:34:01 AM

Rack:Tube: 2:66

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.093721 n	ppm	0.003350	3.57	-2109.009497	Y_R 488.368
Ag (328.068 nm)	0.001341	ppm	0.000114	8.50	-286.308000	Y 377.433
Al (167.019 nm)	0.198871	ppm	0.008200	4.12	120.029000	Y_R 377.433
Al H (396.152 nm)	0.191107 u	ppm	0.011826	6.19	970.167492	Y_R 377.433
As (188.980 nm)	0.000543 u	ppm	0.002442	> 100.00	0.596531	Y 242.219
B (249.678 nm)	0.841939	ppm	0.002394	0.28	20897.000000	Y 242.219
Ba (493.408 nm)	0.011329	ppm	0.000404	3.57	1949.360000	Y_R 488.368
Be (234.861 nm)	-0.000088 u	ppm	0.000002	2.30	-14.705300	Y_R 488.368
Bi (223.061 nm)	-0.002152 u	ppm	0.001139	52.92	15.383100	Y 377.433
Ca (315.887 nm)	355.686332 o	ppm	0.583776	0.16	299907.105974	Y_R 377.433
Cd (214.439 nm)	-0.000046 u	ppm	0.000044	94.72	-1.556990	Y 377.433
Co (228.615 nm)	0.002686	ppm	0.000097	3.63	13.941300	Y 242.219
Cr (205.560 nm)	0.001093	ppm	0.000202	18.52	13.987300	Y 377.433
Cu (324.754 nm)	-0.000607 u	ppm	0.000398	65.57	303.269000	Y 377.433
Fe (238.204 nm)	1.027529	ppm	0.006271	0.61	3791.930459	Y_R 377.433
Fe H (259.940 nm)	0.863246 u	ppm	0.001629	0.19	1984.270000	Y_R 377.433
K (766.491 nm)	7.262690	ppm	0.042368	0.58	7576.250000	Y_R2 488.368
Li (670.783 nm)	0.074923	ppm	0.000243	0.32	1293.460000	Y_R2 488.368
Mg (279.078 nm)	253.977000 o	ppm	0.388716	0.15	1502350.000000	Y 377.433
Mn (257.610 nm)	1.967730 o	ppm	0.001001	0.05	498493.000000	Y 377.433
Mo (202.032 nm)	0.002987	ppm	0.000514	17.21	23.652600	Y 377.433
Na (589.592 nm)	81.371400 o	ppm	0.447644	0.55	530628.000000	Y_R2 488.368
Na H (589.593 nm)	85.667631	ppm	0.509035	0.59	341863.066728	Y_R 488.368
Ni (231.604 nm)	0.006240	ppm	0.000739	11.85	43.411200	Y 377.433
P (213.618 nm)	0.019329	ppm	0.000531	2.75	60.879100	Y 242.219
Pb (220.353 nm)	0.001206	ppm	0.000639	52.98	11.112500	Y 242.219
S (181.972 nm)	418.109254 bo	ppm	0.351042	0.08	182797.142587	Y 377.433
Sb (206.834 nm)	-0.000637 u	ppm	0.001024	> 100.00	-32.840500	Y 377.433
Se (196.026 nm)	-0.000153 u	ppm	0.003363	> 100.00	11.907100	Y 242.219
Si (288.158 nm)	9.612420	ppm	0.010398	0.11	85399.000000	Y 377.433
Sn (189.925 nm)	0.000423	ppm	0.000332	78.51	9.107580	Y 377.433
Sr (421.552 nm)	1.723726 o	ppm	0.011045	0.64	364334.079567	Y_R 488.368
Th (288.505 nm)	0.005778	ppm	0.004167	72.11	114.729000	Y 377.433
Ti (336.122 nm)	0.005368	ppm	0.000169	3.15	1706.100000	Y 377.433
Tl (190.794 nm)	0.000074 u	ppm	0.000917	> 100.00	-2.098950	Y 377.433
U (409.013 nm)	-0.015756 u	ppm	0.002728	17.32	-257.462000	Y 377.433
V (292.401 nm)	0.000885	ppm	0.000435	49.12	58.625200	Y 377.433
Zn (206.200 nm)	0.002509	ppm	0.000239	9.52	14.848600	Y 377.433
Zr (343.823 nm)	0.000256	ppm	0.000085	33.44	75.646200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.932273	16719.412864	0.010097	1.08
Y 377.433	0.952997	929402.385716	0.013368	1.40
Y_R 377.433	0.981472	70610.500000	0.002748	0.28
Y_R 488.368	1.002130	39602.100000	0.001622	0.16
Y_R2 488.368	0.999874	76160.078489	0.005732	0.57

Sample Name: 280-123208-F-6-B

Date: 5/14/2019 1:37:23 AM

Rack:Tube: 2:67

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.047383 n	ppm	0.027233	57.48	-2222.119510	Y_R 488.368
Ag (328.068 nm)	0.000796	ppm	0.000289	36.36	-311.770000	Y 377.433
Al (167.019 nm)	0.007934	ppm	0.003492	44.01	5.417870	Y_R 377.433
Al H (396.152 nm)	-0.086758 u	ppm	0.010173	11.73	159.897399	Y_R 377.433
As (188.980 nm)	-0.000484 u	ppm	0.000349	72.14	-0.627706	Y 242.219
B (249.678 nm)	0.323768	ppm	0.000025	0.01	8077.430000	Y 242.219
Ba (493.408 nm)	0.181450	ppm	0.000431	0.24	20915.700000	Y_R 488.368
Be (234.861 nm)	-0.000083 u	ppm	0.000016	19.17	-30.926300	Y_R 488.368
Bi (223.061 nm)	-0.001374 u	ppm	0.002709	> 100.00	17.291000	Y 377.433
Ca (315.887 nm)	123.381305 o	ppm	0.218754	0.18	103969.148493	Y_R 377.433
Cd (214.439 nm)	-0.000098 u	ppm	0.000020	20.09	-5.295250	Y 377.433
Co (228.615 nm)	-0.000249 u	ppm	0.000429	> 100.00	-44.819600	Y 242.219
Cr (205.560 nm)	0.000503	ppm	0.000132	26.14	5.363430	Y 377.433
Cu (324.754 nm)	0.000140	ppm	0.000052	36.94	522.541000	Y 377.433
Fe (238.204 nm)	0.457357	ppm	0.004298	0.94	1696.596732	Y_R 377.433
Fe H (259.940 nm)	0.263452 u	ppm	0.000996	0.38	864.235000	Y_R 377.433
K (766.491 nm)	2.945000	ppm	0.013040	0.44	2662.680000	Y_R2 488.368
Li (670.783 nm)	0.020308	ppm	0.001443	7.10	-382.260000	Y_R2 488.368
Mg (279.078 nm)	80.525400 o	ppm	0.033861	0.04	476347.000000	Y 377.433
Mn (257.610 nm)	1.136270 o	ppm	0.001005	0.09	287887.000000	Y 377.433
Mo (202.032 nm)	0.000205	ppm	0.000027	13.06	-0.618543	Y 377.433
Na (589.592 nm)	28.197000 o	ppm	0.097883	0.35	184807.000000	Y_R2 488.368
Na H (589.593 nm)	28.369910	ppm	0.128730	0.45	120658.308369	Y_R 488.368
Ni (231.604 nm)	-0.000590 u	ppm	0.000034	5.79	-7.260070	Y 377.433
P (213.618 nm)	0.235655	ppm	0.000992	0.42	555.328000	Y 242.219
Pb (220.353 nm)	-0.000191 u	ppm	0.002041	> 100.00	6.909540	Y 242.219
S (181.972 nm)	57.260955 o	ppm	0.124279	0.22	25056.256359	Y 377.433
Sb (206.834 nm)	-0.000982 u	ppm	0.000386	39.34	-33.618400	Y 377.433
Se (196.026 nm)	0.001280 u	ppm	0.003339	> 100.00	12.703100	Y 242.219
Si (288.158 nm)	9.206790	ppm	0.010091	0.11	81830.600000	Y 377.433
Sn (189.925 nm)	-0.000609 u	ppm	0.000449	73.81	6.919940	Y 377.433
Sr (421.552 nm)	0.514875	ppm	0.000090	0.02	108907.459829	Y_R 488.368
Th (288.505 nm)	0.004033	ppm	0.004307	> 100.00	90.304400	Y 377.433
Ti (336.122 nm)	-0.000187 u	ppm	0.000012	6.29	170.387000	Y 377.433
Tl (190.794 nm)	0.000707 u	ppm	0.001428	> 100.00	-0.598368	Y 377.433
U (409.013 nm)	-0.009647 u	ppm	0.000853	8.85	-183.115000	Y 377.433
V (292.401 nm)	-0.000207 u	ppm	0.000002	1.11	12.914800	Y 377.433
Zn (206.200 nm)	0.000435	ppm	0.000059	13.50	4.035340	Y 377.433
Zr (343.823 nm)	0.000271	ppm	0.000047	17.20	75.988500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.957524	17172.257535	0.002471	0.26
Y 377.433	0.971117	947073.638227	0.002510	0.26
Y_R 377.433	0.963405	69310.700000	0.005083	0.53
Y_R 488.368	0.980886	38762.700000	0.005122	0.52
Y_R2 488.368	0.997949	76013.436049	0.006516	0.65

Sample Name: 280-123208-F-7-B

Date: 5/14/2019 1:40:46 AM

Rack:Tube: 2:68

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.046572 n	ppm	0.008380	17.99	-2224.099694	Y_R 488.368
Ag (328.068 nm)	0.001145	ppm	0.000262	22.88	-295.463000	Y 377.433
Al (167.019 nm)	0.356172	ppm	0.000127	0.04	231.998000	Y_R 377.433
Al H (396.152 nm)	0.364916 u	ppm	0.001689	0.46	1409.541559	Y_R 377.433
As (188.980 nm)	0.002460 u	ppm	0.004916	> 100.00	2.683630	Y 242.219
B (249.678 nm)	0.146285	ppm	0.000577	0.39	3648.300000	Y 242.219
Ba (493.408 nm)	0.034280	ppm	0.000179	0.52	4536.080000	Y_R 488.368
Be (234.861 nm)	-0.000502 u	ppm	0.000019	3.79	616.119000	Y_R 488.368
Bi (223.061 nm)	-0.003955 u	ppm	0.002303	58.23	14.915000	Y 377.433
Ca (315.887 nm)	349.213342 o	ppm	1.380252	0.40	294447.454824	Y_R 377.433
Cd (214.439 nm)	-0.000091 u	ppm	0.000012	12.69	20.059300	Y 377.433
Co (228.615 nm)	-0.000192 u	ppm	0.000164	85.29	-43.302000	Y 242.219
Cr (205.560 nm)	0.002086	ppm	0.000181	8.65	22.112100	Y 377.433
Cu (324.754 nm)	-0.001194 u	ppm	0.000058	4.86	299.409000	Y 377.433
Fe (238.204 nm)	25.074643 o	ppm	0.051511	0.21	92162.984683	Y_R 377.433
Fe H (259.940 nm)	26.324500	ppm	0.039142	0.15	49529.500000	Y_R 377.433
K (766.491 nm)	2.915570	ppm	0.029230	1.00	2629.190000	Y_R2 488.368
Li (670.783 nm)	0.036041	ppm	0.000823	2.28	100.472000	Y_R2 488.368
Mg (279.078 nm)	140.567000 o	ppm	0.239014	0.17	831465.000000	Y 377.433
Mn (257.610 nm)	4.364360 o	ppm	0.004566	0.10	1105550.000000	Y 377.433
Mo (202.032 nm)	0.000916	ppm	0.000288	31.43	5.584210	Y 377.433
Na (589.592 nm)	29.363200 o	ppm	0.032921	0.11	192106.000000	Y_R2 488.368
Na H (589.593 nm)	29.760782	ppm	0.208190	0.70	125886.164248	Y_R 488.368
Ni (231.604 nm)	-0.000380 u	ppm	0.000979	> 100.00	-4.567700	Y 377.433
P (213.618 nm)	0.623444	ppm	0.000635	0.10	1441.680000	Y 242.219
Pb (220.353 nm)	0.002055	ppm	0.000173	8.40	15.929300	Y 242.219
S (181.972 nm)	180.957574 bo	ppm	0.738241	0.41	79135.048770	Y 377.433
Sb (206.834 nm)	-0.002715 u	ppm	0.001374	50.61	-44.145400	Y 377.433
Se (196.026 nm)	0.000447	ppm	0.000441	98.67	9.782780	Y 242.219
Si (288.158 nm)	14.177300 o	ppm	0.224607	1.58	125558.000000	Y 377.433
Sn (189.925 nm)	0.001630	ppm	0.000528	32.36	11.667900	Y 377.433
Sr (421.552 nm)	0.526982	ppm	0.004641	0.88	111465.698446	Y_R 488.368
Th (288.505 nm)	0.002317	ppm	0.000534	23.07	158.733000	Y 377.433
Ti (336.122 nm)	0.010545	ppm	0.000872	8.27	2429.170000	Y 377.433
Tl (190.794 nm)	-0.001304 u	ppm	0.000752	57.66	-5.999360	Y 377.433
U (409.013 nm)	-0.009947 u	ppm	0.001163	11.69	-205.032000	Y 377.433
V (292.401 nm)	0.000832	ppm	0.000087	10.41	58.001900	Y 377.433
Zn (206.200 nm)	0.001370	ppm	0.000492	35.91	8.909070	Y 377.433
Zr (343.823 nm)	0.000507	ppm	0.000084	16.66	184.317000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.935732	16781.450912	0.005085	0.54
Y 377.433	0.955442	931786.586716	0.004040	0.42
Y_R 377.433	0.971492	69892.500000	0.005102	0.53
Y_R 488.368	0.983869	38880.600000	0.009788	0.99
Y_R2 488.368	0.999003	76093.696981	0.012475	1.25

Sample Name: MB 280-457035/1-A

Date: 5/14/2019 1:44:08 AM

Rack:Tube: 2:69

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.084477 n	ppm	0.010919	12.93	-2131.574503	Y_R 488.368
Ag (328.068 nm)	0.000157	ppm	0.000185	> 100.00	-341.725000	Y 377.433
Al (167.019 nm)	0.006662	ppm	0.003715	55.76	4.356000	Y_R 377.433
Al H (396.152 nm)	-0.119253 u	ppm	0.002829	2.37	22.571801	Y_R 377.433
As (188.980 nm)	-0.001472 u	ppm	0.000956	64.99	-1.807820	Y 242.219
B (249.678 nm)	0.000045 u	ppm	0.000185	> 100.00	68.605900	Y 242.219
Ba (493.408 nm)	-0.000542 u	ppm	0.000155	28.58	541.474000	Y_R 488.368
Be (234.861 nm)	-0.000033 u	ppm	0.000014	40.64	-29.139600	Y_R 488.368
Bi (223.061 nm)	-0.002196 u	ppm	0.000526	23.97	15.101300	Y 377.433
Ca (315.887 nm)	0.039283	ppm	0.008083	20.58	-63.829097	Y_R 377.433
Cd (214.439 nm)	-0.000001 u	ppm	0.000050	> 100.00	0.226935	Y 377.433
Co (228.615 nm)	0.000451	ppm	0.000074	16.32	-30.872800	Y 242.219
Cr (205.560 nm)	0.000100	ppm	0.000007	6.96	-0.534799	Y 377.433
Cu (324.754 nm)	0.000511	ppm	0.000074	14.44	630.478000	Y 377.433
Fe (238.204 nm)	0.052757	ppm	0.000103	0.19	209.729741	Y_R 377.433
Fe H (259.940 nm)	-0.144280 u	ppm	0.000396	0.27	102.854000	Y_R 377.433
K (766.491 nm)	0.026990 u	ppm	0.047374	> 100.00	-658.042000	Y_R2 488.368
Li (670.783 nm)	0.007645	ppm	0.001293	16.92	-770.769000	Y_R2 488.368
Mg (279.078 nm)	0.006651	ppm	0.000757	11.38	61.796600	Y 377.433
Mn (257.610 nm)	0.000366	ppm	0.000016	4.33	167.407000	Y 377.433
Mo (202.032 nm)	0.000050 u	ppm	0.000081	> 100.00	-1.965210	Y 377.433
Na (589.592 nm)	-0.025585 u	ppm	0.004927	19.26	715.808000	Y_R2 488.368
Na H (589.593 nm)	-1.348746 u	ppm	0.000748	0.06	5656.870497	Y_R 488.368
Ni (231.604 nm)	0.000538	ppm	0.000015	2.73	1.076950	Y 377.433
P (213.618 nm)	-0.000730 u	ppm	0.002955	> 100.00	15.031900	Y 242.219
Pb (220.353 nm)	-0.000278 u	ppm	0.000475	> 100.00	6.633580	Y 242.219
S (181.972 nm)	0.054879	ppm	0.009869	17.98	47.143550	Y 377.433
Sb (206.834 nm)	0.001477	ppm	0.000877	59.40	-26.954100	Y 377.433
Se (196.026 nm)	-0.003429 u	ppm	0.000900	26.25	7.519970	Y 242.219
Si (288.158 nm)	0.004484	ppm	0.000671	14.96	875.516000	Y 377.433
Sn (189.925 nm)	-0.001704 u	ppm	0.000359	21.06	4.598460	Y 377.433
Sr (421.552 nm)	0.000010 u	ppm	0.000041	> 100.00	118.011877	Y_R 488.368
Th (288.505 nm)	-0.000936 u	ppm	0.001898	> 100.00	49.484800	Y 377.433
Ti (336.122 nm)	0.000014 u	ppm	0.000032	> 100.00	-192.472000	Y 377.433
Tl (190.794 nm)	-0.001767 u	ppm	0.000046	2.61	-6.300650	Y 377.433
U (409.013 nm)	-0.003589 u	ppm	0.002335	65.07	-130.453000	Y 377.433
V (292.401 nm)	-0.000357 u	ppm	0.000059	16.57	3.945200	Y 377.433
Zn (206.200 nm)	0.000053	ppm	0.000026	49.62	2.047820	Y 377.433
Zr (343.823 nm)	-0.000114 u	ppm	0.000019	16.95	22.461600	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.019942	18291.667741	0.002451	0.24
Y 377.433	1.028697	1003228.620633	0.003635	0.35
Y_R 377.433	1.013670	72926.900000	0.000047	0.00
Y_R 488.368	1.022920	40424.000000	0.001199	0.12
Y_R2 488.368	1.045733	79653.113000	0.003111	0.30

Sample Name: LCS 280-457035/2-A

Date: 5/14/2019 1:47:30 AM

Rack:Tube: 2:70

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.065052 n	ppm	0.029756	2.79	262.003156	Y_R 488.368
Ag (328.068 nm)	0.049987	ppm	0.000364	0.73	1889.460000	Y 377.433
Al (167.019 nm)	8.889460 o	ppm	0.084207	0.95	5323.820000	Y_R 377.433
Al H (396.152 nm)	10.115844	ppm	0.066124	0.65	26177.073489	Y_R 377.433
As (188.980 nm)	1.969230	ppm	0.019476	0.99	2358.690000	Y 242.219
B (249.678 nm)	0.982244	ppm	0.001297	0.13	24396.100000	Y 242.219
Ba (493.408 nm)	1.990330 o	ppm	0.004342	0.22	223153.000000	Y_R 488.368
Be (234.861 nm)	0.966186	ppm	0.005727	0.59	279790.000000	Y_R 488.368
Bi (223.061 nm)	1.950430	ppm	0.003559	0.18	5049.220000	Y 377.433
Ca (315.887 nm)	49.945904 o	ppm	0.282915	0.57	42030.552784	Y_R 377.433
Cd (214.439 nm)	0.966734	ppm	0.001485	0.15	58944.700000	Y 377.433
Co (228.615 nm)	0.943312	ppm	0.001178	0.12	18824.800000	Y 242.219
Cr (205.560 nm)	0.980988	ppm	0.001767	0.18	14609.400000	Y 377.433
Cu (324.754 nm)	0.972075	ppm	0.002713	0.28	64956.800000	Y 377.433
Fe (238.204 nm)	9.801213 o	ppm	0.063216	0.64	36034.457658	Y_R 377.433
Fe H (259.940 nm)	10.078900	ppm	0.054554	0.54	19193.100000	Y_R 377.433
K (766.491 nm)	48.848700	ppm	0.055941	0.11	54901.400000	Y_R2 488.368
Li (670.783 nm)	0.976572	ppm	0.004486	0.46	28958.200000	Y_R2 488.368
Mg (279.078 nm)	48.362400 o	ppm	0.031448	0.07	286024.000000	Y 377.433
Mn (257.610 nm)	0.986854	ppm	0.001050	0.11	250041.000000	Y 377.433
Mo (202.032 nm)	1.006990	ppm	0.001208	0.12	8781.110000	Y 377.433
Na (589.592 nm)	47.830900 o	ppm	0.017385	0.04	316240.000000	Y_R2 488.368
Na H (589.593 nm)	48.678166	ppm	0.179079	0.37	200918.472830	Y_R 488.368
Ni (231.604 nm)	0.955821	ppm	0.000533	0.06	7088.350000	Y 377.433
P (213.618 nm)	19.399700 o	ppm	0.054412	0.28	44357.900000	Y 242.219
Pb (220.353 nm)	0.960007	ppm	0.001623	0.17	2938.370000	Y 242.219
S (181.972 nm)	9.257967	ppm	0.016876	0.18	4072.195529	Y 377.433
Sb (206.834 nm)	1.029530	ppm	0.000409	0.04	2741.830000	Y 377.433
Se (196.026 nm)	1.922470	ppm	0.002230	0.12	1800.560000	Y 242.219
Si (288.158 nm)	2.133320	ppm	0.024362	1.14	19603.500000	Y 377.433
Sn (189.925 nm)	1.969720	ppm	0.001660	0.08	4185.070000	Y 377.433
Sr (421.552 nm)	0.980616	ppm	0.003166	0.32	207317.273406	Y_R 488.368
Th (288.505 nm)	1.004570	ppm	0.000959	0.10	3076.360000	Y 377.433
Ti (336.122 nm)	1.010620	ppm	0.000403	0.04	145115.000000	Y 377.433
Tl (190.794 nm)	1.949710	ppm	0.003565	0.18	4496.630000	Y 377.433
U (409.013 nm)	2.054700	ppm	0.003744	0.18	9518.770000	Y 377.433
V (292.401 nm)	0.999152	ppm	0.001415	0.14	41943.200000	Y 377.433
Zn (206.200 nm)	0.476198	ppm	0.001669	0.35	2483.980000	Y 377.433
Zr (343.823 nm)	0.494846	ppm	0.000091	0.02	67313.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.001044	17952.760338	0.000614	0.06
Y 377.433	1.007974	983018.579645	0.000556	0.06
Y_R 377.433	1.014950	73018.900000	0.006581	0.65
Y_R 488.368	1.033540	40843.500000	0.003826	0.37
Y_R2 488.368	1.043343	79471.088833	0.001532	0.15

Sample Name: LCSD 280-457035/3-A

Date: 5/14/2019 1:50:53 AM

Rack:Tube: 2:71

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.077945 n	ppm	0.009703	0.90	293.475250	Y_R 488.368
Ag (328.068 nm)	0.050736	ppm	0.000120	0.24	1922.820000	Y 377.433
Al (167.019 nm)	8.950590 o	ppm	0.006781	0.08	5360.430000	Y_R 377.433
Al H (396.152 nm)	10.218910	ppm	0.033430	0.33	26440.984270	Y_R 377.433
As (188.980 nm)	1.995620	ppm	0.010071	0.50	2390.310000	Y 242.219
B (249.678 nm)	0.995051	ppm	0.001379	0.14	24713.600000	Y 242.219
Ba (493.408 nm)	2.022710 o	ppm	0.003925	0.19	226773.000000	Y_R 488.368
Be (234.861 nm)	0.977287	ppm	0.001013	0.10	283003.000000	Y_R 488.368
Bi (223.061 nm)	1.969730	ppm	0.001414	0.07	5098.980000	Y 377.433
Ca (315.887 nm)	50.495723 o	ppm	0.241546	0.48	42494.306169	Y_R 377.433
Cd (214.439 nm)	0.979517	ppm	0.000512	0.05	59724.100000	Y 377.433
Co (228.615 nm)	0.959724	ppm	0.000350	0.04	19153.000000	Y 242.219
Cr (205.560 nm)	0.990752	ppm	0.006849	0.69	14754.800000	Y 377.433
Cu (324.754 nm)	0.985382	ppm	0.004291	0.44	65835.700000	Y 377.433
Fe (238.204 nm)	9.873069 o	ppm	0.048388	0.49	36298.522780	Y_R 377.433
Fe H (259.940 nm)	10.168600	ppm	0.034188	0.34	19360.800000	Y_R 377.433
K (766.491 nm)	49.522400	ppm	0.121880	0.25	55668.100000	Y_R2 488.368
Li (670.783 nm)	0.994174	ppm	0.001946	0.20	29498.300000	Y_R2 488.368
Mg (279.078 nm)	48.983300 o	ppm	0.030292	0.06	289696.000000	Y 377.433
Mn (257.610 nm)	1.000890	ppm	0.000923	0.09	253595.000000	Y 377.433
Mo (202.032 nm)	1.023500	ppm	0.002614	0.26	8925.160000	Y 377.433
Na (589.592 nm)	48.348800 o	ppm	0.043626	0.09	319677.000000	Y_R2 488.368
Na H (589.593 nm)	49.386704	ppm	0.182232	0.37	203688.397119	Y_R 488.368
Ni (231.604 nm)	0.969749	ppm	0.000197	0.02	7191.670000	Y 377.433
P (213.618 nm)	19.698100 o	ppm	0.014066	0.07	45039.900000	Y 242.219
Pb (220.353 nm)	0.975556	ppm	0.000746	0.08	2985.860000	Y 242.219
S (181.972 nm)	9.389525	ppm	0.020500	0.22	4129.734278	Y 377.433
Sb (206.834 nm)	1.038530	ppm	0.000039	0.00	2766.020000	Y 377.433
Se (196.026 nm)	1.955080	ppm	0.007846	0.40	1830.930000	Y 242.219
Si (288.158 nm)	2.148700	ppm	0.026964	1.25	19738.700000	Y 377.433
Sn (189.925 nm)	2.003620	ppm	0.005304	0.26	4256.970000	Y 377.433
Sr (421.552 nm)	0.996368	ppm	0.001957	0.20	210645.489914	Y_R 488.368
Th (288.505 nm)	1.017360	ppm	0.003345	0.33	3115.290000	Y 377.433
Ti (336.122 nm)	1.025810	ppm	0.001202	0.12	147297.000000	Y 377.433
Tl (190.794 nm)	1.974050	ppm	0.003524	0.18	4552.780000	Y 377.433
U (409.013 nm)	2.093650	ppm	0.008860	0.42	9701.470000	Y 377.433
V (292.401 nm)	1.013780	ppm	0.000675	0.07	42557.400000	Y 377.433
Zn (206.200 nm)	0.481764	ppm	0.001337	0.28	2512.990000	Y 377.433
Zr (343.823 nm)	0.502178	ppm	0.001089	0.22	68309.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.003286	17992.965552	0.000860	0.09
Y 377.433	1.011785	986734.626587	0.000381	0.04
Y_R 377.433	1.023910	73663.700000	0.003906	0.38
Y_R 488.368	1.040360	41113.100000	0.002768	0.27
Y_R2 488.368	1.061563	80858.890180	0.003091	0.29

Sample Name: CCVH-5699817

Date: 5/14/2019 1:54:15 AM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.145926	ppm	0.007983	5.47	-1981.576617	Y_R 488.368
Ag (328.068 nm)	0.000482	ppm	0.000149	30.96	-578.760000	Y 377.433
Al (167.019 nm)	41.208400 o	ppm	0.258388	0.63	24679.900000	Y_R 377.433
Al H (396.152 nm)	49.464198	ppm	0.132067	0.27	126224.703756	Y_R 377.433
As (188.980 nm)	0.004413	ppm	0.000340	7.71	4.826250	Y 242.219
B (249.678 nm)	0.001574	ppm	0.000127	8.07	33.060900	Y 242.219
Ba (493.408 nm)	0.001366	ppm	0.000188	13.79	799.052000	Y_R 488.368
Be (234.861 nm)	0.000844	ppm	0.000016	1.84	1719.980000	Y_R 488.368
Bi (223.061 nm)	0.989176	ppm	0.001651	0.17	2578.420000	Y 377.433
Ca (315.887 nm)	0.017576	ppm	0.002301	13.09	-82.136615	Y_R 377.433
Cd (214.439 nm)	0.001198	ppm	0.000010	0.83	121.629000	Y 377.433
Co (228.615 nm)	0.004288	ppm	0.000185	4.30	45.775300	Y 242.219
Cr (205.560 nm)	0.001648	ppm	0.000040	2.43	9.239600	Y 377.433
Cu (324.754 nm)	0.009449	ppm	0.000285	3.02	1610.120000	Y 377.433
Fe (238.204 nm)	47.807662 o	ppm	0.096559	0.20	175704.857937	Y_R 377.433
Fe H (259.940 nm)	49.817400	ppm	0.083431	0.17	93399.200000	Y_R 377.433
K (766.491 nm)	0.183048	ppm	0.060381	32.99	-480.446000	Y_R2 488.368
Li (670.783 nm)	0.008064	ppm	0.001335	16.56	-757.932000	Y_R2 488.368
Mg (279.078 nm)	0.033739	ppm	0.000777	2.30	-142.945000	Y 377.433
Mn (257.610 nm)	0.002863	ppm	0.000016	0.56	799.890000	Y 377.433
Mo (202.032 nm)	0.001097	ppm	0.000580	52.89	7.162370	Y 377.433
Na (589.592 nm)	231.851000 o	ppm	0.435606	0.19	1510220.000000	Y_R2 488.368
Na H (589.593 nm)	243.758740	ppm	0.123792	0.05	952646.885360	Y_R 488.368
Ni (231.604 nm)	0.005546	ppm	0.000620	11.18	40.427700	Y 377.433
P (213.618 nm)	-0.002474 u	ppm	0.000850	34.36	11.045500	Y 242.219
Pb (220.353 nm)	0.002407	ppm	0.001560	64.82	33.122700	Y 242.219
S (181.972 nm)	4.847690	ppm	0.009105	0.19	2142.250989	Y 377.433
Sb (206.834 nm)	0.000769	ppm	0.000527	68.58	-73.595000	Y 377.433
Se (196.026 nm)	0.001032 u	ppm	0.004775	> 100.00	3.370560	Y 242.219
Si (288.158 nm)	0.039627	ppm	0.000135	0.34	1184.670000	Y 377.433
Sn (189.925 nm)	0.005497	ppm	0.000575	10.46	19.868400	Y 377.433
Sr (421.552 nm)	0.001959	ppm	0.000022	1.14	529.825609	Y_R 488.368
Th (288.505 nm)	4.989960	ppm	0.022992	0.46	14892.800000	Y 377.433
Ti (336.122 nm)	0.002556	ppm	0.000041	1.62	172.621000	Y 377.433
Tl (190.794 nm)	0.000373 u	ppm	0.001413	> 100.00	-2.726560	Y 377.433
U (409.013 nm)	10.110600	ppm	0.012313	0.12	47529.600000	Y 377.433
V (292.401 nm)	0.005094	ppm	0.000049	0.96	38.324300	Y 377.433
Zn (206.200 nm)	0.003950	ppm	0.000305	7.72	22.360500	Y 377.433
Zr (343.823 nm)	-0.002550 u	ppm	0.000101	3.94	-160.494000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.011369	18137.924989	0.001511	0.15
Y 377.433	1.010750	985725.459650	0.001691	0.17
Y_R 377.433	1.011020	72736.600000	0.000701	0.07
Y_R 488.368	1.027210	40593.500000	0.000744	0.07
Y_R2 488.368	1.041151	79304.129794	0.007268	0.70

Sample Name: CCV-5699804

Date: 5/14/2019 1:57:39 AM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.028682	ppm	0.019168	1.86	173.223751	Y_R 488.368
Ag (328.068 nm)	0.489204	ppm	0.000902	0.18	22642.200000	Y 377.433
Al (167.019 nm)	0.483322	ppm	0.002725	0.56	291.200000	Y_R 377.433
Al H (396.152 nm)	0.426287 u	ppm	0.001672	0.39	1453.689443	Y_R 377.433
As (188.980 nm)	0.964287	ppm	0.001759	0.18	1154.990000	Y 242.219
B (249.678 nm)	0.488423	ppm	0.000422	0.09	12169.700000	Y 242.219
Ba (493.408 nm)	0.487627	ppm	0.001468	0.30	55129.300000	Y_R 488.368
Be (234.861 nm)	0.476960	ppm	0.002377	0.50	138030.000000	Y_R 488.368
Bi (223.061 nm)	-0.004934 u	ppm	0.000788	15.97	8.460940	Y 377.433
Ca (315.887 nm)	5.012034	ppm	0.005807	0.12	4130.737671	Y_R 377.433
Cd (214.439 nm)	0.488543	ppm	0.001896	0.39	29785.500000	Y 377.433
Co (228.615 nm)	0.491566	ppm	0.001395	0.28	9789.400000	Y 242.219
Cr (205.560 nm)	0.492093	ppm	0.000461	0.09	7328.250000	Y 377.433
Cu (324.754 nm)	0.492132	ppm	0.002055	0.42	33163.300000	Y 377.433
Fe (238.204 nm)	2.451230	ppm	0.006133	0.25	9023.906786	Y_R 377.433
Fe H (259.940 nm)	2.382270 u	ppm	0.001162	0.05	4820.830000	Y_R 377.433
K (766.491 nm)	47.512800	ppm	0.037041	0.08	53381.200000	Y_R2 488.368
Li (670.783 nm)	0.962765	ppm	0.001295	0.13	28534.600000	Y_R2 488.368
Mg (279.078 nm)	19.182700	ppm	0.004310	0.02	113488.000000	Y 377.433
Mn (257.610 nm)	0.490765	ppm	0.000361	0.07	124384.000000	Y 377.433
Mo (202.032 nm)	0.498451	ppm	0.000022	0.00	4345.350000	Y 377.433
Na (589.592 nm)	4.693020	ppm	0.003768	0.08	32409.700000	Y_R2 488.368
Na H (589.593 nm)	4.033105 u	ppm	0.027080	0.67	26935.127509	Y_R 488.368
Ni (231.604 nm)	0.500171	ppm	0.000431	0.09	3707.700000	Y 377.433
P (213.618 nm)	0.946642	ppm	0.002031	0.21	2180.410000	Y 242.219
Pb (220.353 nm)	0.974570	ppm	0.001715	0.18	2981.880000	Y 242.219
S (181.972 nm)	0.025949	ppm	0.000970	3.74	35.526139	Y 377.433
Sb (206.834 nm)	1.012030	ppm	0.001201	0.12	2690.280000	Y 377.433
Se (196.026 nm)	0.963873	ppm	0.001313	0.14	908.489000	Y 242.219
Si (288.158 nm)	4.865460	ppm	0.015004	0.31	43638.800000	Y 377.433
Sn (189.925 nm)	0.983189	ppm	0.002178	0.22	2093.100000	Y 377.433
Sr (421.552 nm)	0.484869	ppm	0.001589	0.33	102567.435127	Y_R 488.368
Th (288.505 nm)	0.004762	ppm	0.000433	9.10	84.561200	Y 377.433
Ti (336.122 nm)	0.494132	ppm	0.000180	0.04	70790.800000	Y 377.433
Tl (190.794 nm)	0.987511	ppm	0.001115	0.11	2276.640000	Y 377.433
U (409.013 nm)	0.004874	ppm	0.001089	22.34	-128.950000	Y 377.433
V (292.401 nm)	0.489950	ppm	0.000016	0.00	20594.200000	Y 377.433
Zn (206.200 nm)	0.484467	ppm	0.000361	0.07	2527.080000	Y 377.433
Zr (343.823 nm)	0.492849	ppm	0.000029	0.01	67019.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.024153	18367.197396	0.001968	0.19
Y 377.433	1.029451	1003963.843261	0.001265	0.12
Y_R 377.433	1.023480	73632.600000	0.005745	0.56
Y_R 488.368	1.047850	41409.000000	0.004507	0.43
Y_R2 488.368	1.065872	81187.121083	0.008447	0.79

Sample Name: CCB

Date: 5/14/2019 2:01:02 AM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.106577 Z	ppm	0.003601	3.38	-2077.627089 Z	Y_R 488.368
Ag (328.068 nm)	0.000529	ppm	0.000099	18.64	-324.214000	Y 377.433
Al (167.019 nm)	0.009204	ppm	0.001763	19.16	5.840250	Y_R 377.433
Al H (396.152 nm)	-0.111269 Zu	ppm	0.008556	7.69	42.916545 Z	Y_R 377.433
As (188.980 nm)	0.000386 u	ppm	0.001544	> 100.00	0.417951	Y 242.219
B (249.678 nm)	0.000699	ppm	0.000250	35.82	84.860100	Y 242.219
Ba (493.408 nm)	-0.000451 u	ppm	0.000085	18.93	551.549000	Y_R 488.368
Be (234.861 nm)	0.000034	ppm	0.000006	17.38	-11.125800	Y_R 488.368
Bi (223.061 nm)	-0.002305 u	ppm	0.001919	83.24	14.811700	Y 377.433
Ca (315.887 nm)	0.015742	ppm	0.006551	41.62	-83.685035	Y_R 377.433
Cd (214.439 nm)	0.000093	ppm	0.000026	27.69	5.869710	Y 377.433
Co (228.615 nm)	0.000489	ppm	0.000037	7.50	-30.106400	Y 242.219
Cr (205.560 nm)	-0.000089 u	ppm	0.000012	13.43	-3.339600	Y 377.433
Cu (324.754 nm)	0.000802	ppm	0.000117	14.57	650.227000	Y 377.433
Fe (238.204 nm)	0.003957	ppm	0.001171	29.60	30.394346	Y_R 377.433
Fe H (259.940 nm)	-0.192301 u	ppm	0.001278	0.66	13.180200	Y_R 377.433
K (766.491 nm)	0.074933	ppm	0.024114	32.18	-603.482000	Y_R2 488.368
Li (670.783 nm)	0.008359	ppm	0.001773	21.21	-748.862000	Y_R2 488.368
Mg (279.078 nm)	0.002224	ppm	0.000136	6.13	35.702900	Y 377.433
Mn (257.610 nm)	0.000054	ppm	0.000006	10.38	88.337600	Y 377.433
Mo (202.032 nm)	0.000386	ppm	0.000041	10.69	0.962157	Y 377.433
Na (589.592 nm)	0.048858	ppm	0.003700	7.57	1200.680000	Y_R2 488.368
Na H (589.593 nm)	-1.218920 u	ppm	0.012048	0.99	6158.583539	Y_R 488.368
Ni (231.604 nm)	0.000371 u	ppm	0.000532	> 100.00	-0.160162	Y 377.433
P (213.618 nm)	-0.002231 u	ppm	0.000277	12.43	11.601300	Y 242.219
Pb (220.353 nm)	-0.000546 u	ppm	0.001492	> 100.00	5.806640	Y 242.219
S (181.972 nm)	0.021093	ppm	0.002948	13.98	32.374010	Y 377.433
Sb (206.834 nm)	0.001905	ppm	0.000040	2.08	-25.803100	Y 377.433
Se (196.026 nm)	0.000594 u	ppm	0.001676	> 100.00	11.276200	Y 242.219
Si (288.158 nm)	-0.004029 u	ppm	0.001508	37.42	800.626000	Y 377.433
Sn (189.925 nm)	-0.000867 u	ppm	0.000424	48.86	6.372040	Y 377.433
Sr (421.552 nm)	-0.000059 u	ppm	0.000033	56.06	103.519217	Y_R 488.368
Th (288.505 nm)	0.003147	ppm	0.001579	50.17	61.426400	Y 377.433
Ti (336.122 nm)	0.000142	ppm	0.000131	91.95	-174.122000	Y 377.433
Tl (190.794 nm)	0.000045	ppm	0.000030	67.52	-2.115130	Y 377.433
U (409.013 nm)	0.000208	ppm	0.000192	92.20	-112.633000	Y 377.433
V (292.401 nm)	-0.000154 u	ppm	0.000111	72.25	12.799300	Y 377.433
Zn (206.200 nm)	-0.000399 u	ppm	0.000164	41.04	-0.307787	Y 377.433
Zr (343.823 nm)	0.000167	ppm	0.000150	89.58	60.477100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.025948	18399.375345	0.000355	0.03
Y 377.433	1.033798	1008202.535821	0.000919	0.09
Y_R 377.433	1.024650	73717.200000	0.006932	0.68
Y_R 488.368	1.048270	41425.700000	0.000326	0.03
Y_R2 488.368	1.064619	81091.646827	0.008831	0.83

Sample Name: CCVL-5699389

Date: 5/14/2019 2:04:25 AM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.148993 Q	ppm	0.014022	9.41	-1974.090339 Q	Y_R 488.368
Ag (328.068 nm)	0.009621	ppm	0.000102	1.06	102.498000	Y 377.433
Al (167.019 nm)	0.088897	ppm	0.001788	2.01	53.571700	Y_R 377.433
Al H (396.152 nm)	-0.010888 u	ppm	0.003996	36.70	300.001632	Y_R 377.433
As (188.980 nm)	0.010694	ppm	0.002562	23.96	12.764500	Y 242.219
B (249.678 nm)	0.095196	ppm	0.000197	0.21	2423.120000	Y 242.219
Ba (493.408 nm)	0.009114	ppm	0.000322	3.54	1620.960000	Y_R 488.368
Be (234.861 nm)	0.000946	ppm	0.000009	0.98	254.867000	Y_R 488.368
Bi (223.061 nm)	0.098072	ppm	0.001181	1.20	273.525000	Y 377.433
Ca (315.887 nm)	0.215424	ppm	0.002666	1.24	84.740239	Y_R 377.433
Cd (214.439 nm)	0.004857	ppm	0.000103	2.13	296.446000	Y 377.433
Co (228.615 nm)	0.010485	ppm	0.000072	0.69	169.737000	Y 242.219
Cr (205.560 nm)	0.009991	ppm	0.000266	2.66	146.864000	Y 377.433
Cu (324.754 nm)	0.015539	ppm	0.000026	0.17	1626.010000	Y 377.433
Fe (238.204 nm)	0.101586	ppm	0.001200	1.18	389.171710	Y_R 377.433
Fe H (259.940 nm)	-0.089625 u	ppm	0.001094	1.22	204.914000	Y_R 377.433
K (766.491 nm)	2.961270	ppm	0.068133	2.30	2681.190000	Y_R2 488.368
Li (670.783 nm)	0.029387 Q	ppm	0.001209	4.12	-103.671000 Q	Y_R2 488.368
Mg (279.078 nm)	0.190698	ppm	0.002352	1.23	1149.580000	Y 377.433
Mn (257.610 nm)	0.010059	ppm	0.000036	0.36	2622.500000	Y 377.433
Mo (202.032 nm)	0.019164	ppm	0.000111	0.58	164.754000	Y 377.433
Na (589.592 nm)	0.951634	ppm	0.000082	0.01	7096.750000	Y_R2 488.368
Na H (589.593 nm)	-0.398576 u	ppm	0.000320	0.08	9337.522422	Y_R 488.368
Ni (231.604 nm)	0.040847	ppm	0.000402	0.98	300.025000	Y 377.433
P (213.618 nm)	2.731990 o	ppm	0.008102	0.30	6261.120000	Y 242.219
Pb (220.353 nm)	0.008970	ppm	0.000752	8.38	34.847100	Y 242.219
S (181.972 nm)	0.099355	ppm	0.000513	0.52	66.605431	Y 377.433
Sb (206.834 nm)	0.020966	ppm	0.001616	7.71	25.376200	Y 377.433
Se (196.026 nm)	0.016348	ppm	0.001414	8.65	25.941700	Y 242.219
Si (288.158 nm)	0.558777	ppm	0.017471	3.13	5751.780000	Y 377.433
Sn (189.925 nm)	0.096094	ppm	0.000224	0.23	211.982000	Y 377.433
Sr (421.552 nm)	0.009766	ppm	0.000065	0.66	2179.577102	Y_R 488.368
Th (288.505 nm)	0.017330	ppm	0.003573	20.62	104.252000	Y 377.433
Ti (336.122 nm)	0.009674	ppm	0.000004	0.04	1195.280000	Y 377.433
Tl (190.794 nm)	0.014067	ppm	0.000872	6.20	30.210700	Y 377.433
U (409.013 nm)	0.053615	ppm	0.000178	0.33	138.016000	Y 377.433
V (292.401 nm)	0.009465	ppm	0.000007	0.07	415.585000	Y 377.433
Zn (206.200 nm)	0.019709	ppm	0.000013	0.06	104.506000	Y 377.433
Zr (343.823 nm)	0.010539	ppm	0.000148	1.40	1470.210000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.038088	18617.103206	0.000330	0.03
Y 377.433	1.045845	1019951.259182	0.000009	0.00
Y_R 377.433	1.038090	74684.000000	0.000073	0.01
Y_R 488.368	1.060950	41926.800000	0.003708	0.35
Y_R2 488.368	1.073350	81756.708348	0.000756	0.07

Sample Name: 280-123225-B-3-A

Date: 5/14/2019 2:07:48 AM

Rack:Tube: 2:72

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.120016 n	ppm	0.024029	20.02	-2044.823090	Y_R 488.368
Ag (328.068 nm)	0.000589	ppm	0.000398	67.67	-346.722000	Y 377.433
Al (167.019 nm)	0.005465	ppm	0.000835	15.29	3.619660	Y_R 377.433
Al H (396.152 nm)	-0.093804 u	ppm	0.003480	3.71	135.008926	Y_R 377.433
As (188.980 nm)	0.003654	ppm	0.002222	60.80	4.332600	Y 242.219
B (249.678 nm)	0.201787	ppm	0.000000	0.00	5060.060000	Y 242.219
Ba (493.408 nm)	0.126049	ppm	0.000608	0.48	14717.000000	Y_R 488.368
Be (234.861 nm)	-0.000031 u	ppm	0.000019	60.41	-31.038000	Y_R 488.368
Bi (223.061 nm)	-0.002107 u	ppm	0.001094	51.92	15.326000	Y 377.433
Ca (315.887 nm)	102.680997 o	ppm	0.026070	0.03	86509.448792	Y_R 377.433
Cd (214.439 nm)	-0.000022 u	ppm	0.000018	82.93	-1.092110	Y 377.433
Co (228.615 nm)	-0.000333 u	ppm	0.000008	2.30	-46.506000	Y 242.219
Cr (205.560 nm)	0.000404	ppm	0.000157	38.87	3.954650	Y 377.433
Cu (324.754 nm)	0.001288	ppm	0.000246	19.09	610.538000	Y 377.433
Fe (238.204 nm)	0.025341	ppm	0.001109	4.38	108.976672	Y_R 377.433
Fe H (259.940 nm)	-0.172910 u	ppm	0.000546	0.32	49.391000	Y_R 377.433
K (766.491 nm)	2.460640	ppm	0.009457	0.38	2111.480000	Y_R2 488.368
Li (670.783 nm)	0.042555	ppm	0.002679	6.30	300.346000	Y_R2 488.368
Mg (279.078 nm)	44.923900 o	ppm	0.033434	0.07	265757.000000	Y 377.433
Mn (257.610 nm)	0.000302	ppm	0.000015	4.81	151.180000	Y 377.433
Mo (202.032 nm)	0.027688	ppm	0.000300	1.08	239.106000	Y 377.433
Na (589.592 nm)	106.503000 o	ppm	0.056834	0.05	694460.000000	Y_R2 488.368
Na H (589.593 nm)	110.334102	ppm	0.318426	0.29	437277.509060	Y_R 488.368
Ni (231.604 nm)	-0.001381 u	ppm	0.000417	30.17	-13.149500	Y 377.433
P (213.618 nm)	0.011495	ppm	0.004085	35.54	42.974200	Y 242.219
Pb (220.353 nm)	-0.000848 u	ppm	0.000222	26.20	4.751500	Y 242.219
S (181.972 nm)	50.713529 o	ppm	0.012434	0.02	22191.772750	Y 377.433
Sb (206.834 nm)	-0.000138 u	ppm	0.000064	46.46	-31.432600	Y 377.433
Se (196.026 nm)	0.002260	ppm	0.000202	8.92	12.824900	Y 242.219
Si (288.158 nm)	26.584200 o	ppm	0.162963	0.61	234704.000000	Y 377.433
Sn (189.925 nm)	-0.000953 u	ppm	0.000416	43.64	6.190510	Y 377.433
Sr (421.552 nm)	1.813700 o	ppm	0.010434	0.58	383345.317807	Y_R 488.368
Th (288.505 nm)	0.002085	ppm	0.002465	> 100.00	64.828200	Y 377.433
Ti (336.122 nm)	-0.000201 u	ppm	0.000011	5.23	102.503000	Y 377.433
Tl (190.794 nm)	-0.000293 u	ppm	0.002611	> 100.00	-2.967970	Y 377.433
U (409.013 nm)	0.005701	ppm	0.004276	75.00	-107.152000	Y 377.433
V (292.401 nm)	0.147894	ppm	0.000190	0.13	6272.380000	Y 377.433
Zn (206.200 nm)	0.003009	ppm	0.000188	6.25	17.453100	Y 377.433
Zr (343.823 nm)	-0.000002 u	ppm	0.000149	> 100.00	37.535600	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.987986	17718.572067	0.003671	0.37
Y 377.433	0.998129	973416.884980	0.003201	0.32
Y_R 377.433	1.016700	73145.200000	0.001107	0.11
Y_R 488.368	1.025510	40526.100000	0.006522	0.64
Y_R2 488.368	1.035828	78898.670674	0.002871	0.28

Sample Name: 280-123225-B-3-Asd@5

Date: 5/14/2019 2:11:11 AM

Rack:Tube: 2:73

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.100876 n	ppm	0.019488	19.32	-2091.542549	Y_R 488.368
Ag (328.068 nm)	0.000622	ppm	0.000168	26.93	-324.998000	Y 377.433
Al (167.019 nm)	0.003613	ppm	0.000058	1.59	2.504200	Y_R 377.433
Al H (396.152 nm)	-0.110362 u	ppm	0.006115	5.54	54.805949	Y_R 377.433
As (188.980 nm)	-0.000505 u	ppm	0.001959	> 100.00	-0.649322	Y 242.219
B (249.678 nm)	0.039663	ppm	0.000054	0.14	1048.880000	Y 242.219
Ba (493.408 nm)	0.024437	ppm	0.000192	0.79	3338.600000	Y_R 488.368
Be (234.861 nm)	-0.000009 u	ppm	0.000020	> 100.00	-23.622200	Y_R 488.368
Bi (223.061 nm)	-0.003720 u	ppm	0.000394	10.58	11.166900	Y 377.433
Ca (315.887 nm)	20.804165 o	ppm	0.026653	0.13	17450.335615	Y_R 377.433
Cd (214.439 nm)	-0.000002 u	ppm	0.000019	> 100.00	0.123487	Y 377.433
Co (228.615 nm)	0.000426	ppm	0.000073	17.03	-31.354400	Y 242.219
Cr (205.560 nm)	0.000340	ppm	0.000311	91.40	3.041450	Y 377.433
Cu (324.754 nm)	0.001052	ppm	0.000021	2.02	652.340000	Y 377.433
Fe (238.204 nm)	0.014521	ppm	0.000444	3.05	69.213424	Y_R 377.433
Fe H (259.940 nm)	-0.183346 u	ppm	0.000298	0.16	29.904000	Y_R 377.433
K (766.491 nm)	0.454883	ppm	0.079860	17.56	-171.095000	Y_R2 488.368
Li (670.783 nm)	0.015624	ppm	0.000345	2.21	-525.949000	Y_R2 488.368
Mg (279.078 nm)	8.977230	ppm	0.007183	0.08	53124.800000	Y 377.433
Mn (257.610 nm)	0.000168	ppm	0.000000	0.20	117.132000	Y 377.433
Mo (202.032 nm)	0.005393	ppm	0.000356	6.60	44.637500	Y 377.433
Na (589.592 nm)	21.524800 o	ppm	0.009755	0.05	141058.000000	Y_R2 488.368
Na H (589.593 nm)	20.879330	ppm	0.198728	0.95	91561.858850	Y_R 488.368
Ni (231.604 nm)	-0.000305 u	ppm	0.000080	26.17	-5.169840	Y 377.433
P (213.618 nm)	0.002033	ppm	0.000934	45.95	21.346800	Y 242.219
Pb (220.353 nm)	-0.001167 u	ppm	0.000463	39.64	3.890540	Y 242.219
S (181.972 nm)	9.999783	ppm	0.009146	0.09	4394.400808	Y 377.433
Sb (206.834 nm)	0.003699	ppm	0.001895	51.22	-21.021000	Y 377.433
Se (196.026 nm)	-0.000765 u	ppm	0.001585	> 100.00	10.008700	Y 242.219
Si (288.158 nm)	5.255320	ppm	0.023002	0.44	47068.400000	Y 377.433
Sn (189.925 nm)	-0.000630 u	ppm	0.000571	90.61	6.874360	Y 377.433
Sr (421.552 nm)	0.355259	ppm	0.003255	0.92	75181.107397	Y_R 488.368
Th (288.505 nm)	0.001166 u	ppm	0.003680	> 100.00	56.952600	Y 377.433
Ti (336.122 nm)	0.000351	ppm	0.000407	> 100.00	-78.309400	Y 377.433
Tl (190.794 nm)	-0.000591 u	ppm	0.000305	51.71	-3.597190	Y 377.433
U (409.013 nm)	0.000280 u	ppm	0.001154	> 100.00	-116.390000	Y 377.433
V (292.401 nm)	0.029439	ppm	0.000000	0.00	1264.000000	Y 377.433
Zn (206.200 nm)	0.003191	ppm	0.000348	10.91	18.405200	Y 377.433
Zr (343.823 nm)	-0.000093 u	ppm	0.000128	> 100.00	25.178200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.010586	18123.888793	0.000109	0.01
Y 377.433	1.018526	993309.480534	0.000970	0.10
Y_R 377.433	1.019560	73351.000000	0.005405	0.53
Y_R 488.368	1.042010	41178.100000	0.014012	1.34
Y_R2 488.368	1.047717	79804.237066	0.006334	0.60

Sample Name: 280-123225-B-3-B MS

Date: 5/14/2019 2:14:33 AM

Rack:Tube: 2:74

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.072313 n	ppm	0.003854	0.36	279.727274	Y_R 488.368
Ag (328.068 nm)	0.051987	ppm	0.000389	0.75	1955.550000	Y 377.433
Al (167.019 nm)	8.825900 o	ppm	0.039525	0.45	5285.830000	Y_R 377.433
Al H (396.152 nm)	10.333954	ppm	0.032758	0.32	26781.235790	Y_R 377.433
As (188.980 nm)	2.034330	ppm	0.016177	0.80	2436.670000	Y 242.219
B (249.678 nm)	1.238620 o	ppm	0.000047	0.00	30739.200000	Y 242.219
Ba (493.408 nm)	2.133680 o	ppm	0.013151	0.62	239202.000000	Y_R 488.368
Be (234.861 nm)	0.982701	ppm	0.006498	0.66	284567.000000	Y_R 488.368
Bi (223.061 nm)	1.982030	ppm	0.003973	0.20	5130.650000	Y 377.433
Ca (315.887 nm)	152.904193 o	ppm	0.625148	0.41	128870.845972	Y_R 377.433
Cd (214.439 nm)	0.964776	ppm	0.001702	0.18	58825.400000	Y 377.433
Co (228.615 nm)	0.940836	ppm	0.000880	0.09	18776.100000	Y 242.219
Cr (205.560 nm)	0.994929	ppm	0.003462	0.35	14817.000000	Y 377.433
Cu (324.754 nm)	0.996030	ppm	0.000700	0.07	66465.900000	Y 377.433
Fe (238.204 nm)	9.832601 o	ppm	0.051853	0.53	36149.803954	Y_R 377.433
Fe H (259.940 nm)	10.133400	ppm	0.045002	0.44	19295.000000	Y_R 377.433
K (766.491 nm)	53.600600	ppm	0.240293	0.45	60309.200000	Y_R2 488.368
Li (670.783 nm)	1.041720	ppm	0.004494	0.43	30957.200000	Y_R2 488.368
Mg (279.078 nm)	94.213900 o	ppm	0.249428	0.26	557244.000000	Y 377.433
Mn (257.610 nm)	0.987700	ppm	0.000530	0.05	250255.000000	Y 377.433
Mo (202.032 nm)	1.049220	ppm	0.000277	0.03	9149.430000	Y 377.433
Na (589.592 nm)	155.726000 o	ppm	0.328863	0.21	1018920.000000	Y_R2 488.368
Na H (589.593 nm)	161.960440	ppm	1.250404	0.77	638736.019589	Y_R 488.368
Ni (231.604 nm)	0.948526	ppm	0.000214	0.02	7034.220000	Y 377.433
P (213.618 nm)	19.993800 o	ppm	0.001715	0.01	45715.800000	Y 242.219
Pb (220.353 nm)	0.958719	ppm	0.003567	0.37	2934.280000	Y 242.219
S (181.972 nm)	60.999778 o	ppm	0.098987	0.16	26690.318497	Y 377.433
Sb (206.834 nm)	1.054570	ppm	0.000815	0.08	2808.970000	Y 377.433
Se (196.026 nm)	1.971620	ppm	0.000037	0.00	1846.340000	Y 242.219
Si (288.158 nm)	28.750200 o	ppm	0.123736	0.43	253759.000000	Y 377.433
Sn (189.925 nm)	2.019450	ppm	0.003076	0.15	4290.530000	Y 377.433
Sr (421.552 nm)	2.786149 o	ppm	0.019564	0.70	588820.881320	Y_R 488.368
Th (288.505 nm)	1.017240	ppm	0.001614	0.16	3121.330000	Y 377.433
Ti (336.122 nm)	1.027770	ppm	0.001681	0.16	147904.000000	Y 377.433
Tl (190.794 nm)	1.922690	ppm	0.001546	0.08	4434.040000	Y 377.433
U (409.013 nm)	2.107350	ppm	0.004924	0.23	9745.560000	Y 377.433
V (292.401 nm)	1.165210 o	ppm	0.000660	0.06	48957.200000	Y 377.433
Zn (206.200 nm)	0.478478	ppm	0.000679	0.14	2495.860000	Y 377.433
Zr (343.823 nm)	0.501948	ppm	0.000415	0.08	68278.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.960966	17233.998971	0.001417	0.15
Y 377.433	0.970722	946688.326537	0.002743	0.28
Y_R 377.433	0.993617	71484.200000	0.002319	0.23
Y_R 488.368	1.010160	39919.400000	0.004366	0.43
Y_R2 488.368	1.018434	77573.774065	0.007429	0.73

Sample Name: 280-123225-B-3-C MSD

Date: 5/14/2019 2:17:56 AM

Rack:Tube: 2:75

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.073799 n	ppm	0.022642	2.11	283.355702	Y_R 488.368
Ag (328.068 nm)	0.051202	ppm	0.000192	0.38	1920.640000	Y 377.433
Al (167.019 nm)	8.662480 o	ppm	0.051569	0.60	5188.010000	Y_R 377.433
Al H (396.152 nm)	10.189914	ppm	0.029058	0.29	26412.959865	Y_R 377.433
As (188.980 nm)	2.018470	ppm	0.007044	0.35	2417.680000	Y 242.219
B (249.678 nm)	1.226440 o	ppm	0.001475	0.12	30437.600000	Y 242.219
Ba (493.408 nm)	2.109150 o	ppm	0.012773	0.61	236459.000000	Y_R 488.368
Be (234.861 nm)	0.980279	ppm	0.004161	0.42	283863.000000	Y_R 488.368
Bi (223.061 nm)	1.962600	ppm	0.002459	0.13	5080.570000	Y 377.433
Ca (315.887 nm)	150.879053 o	ppm	0.290774	0.19	127162.734135	Y_R 377.433
Cd (214.439 nm)	0.955383	ppm	0.001522	0.16	58252.600000	Y 377.433
Co (228.615 nm)	0.930309	ppm	0.000862	0.09	18565.500000	Y 242.219
Cr (205.560 nm)	0.984528	ppm	0.004371	0.44	14662.000000	Y 377.433
Cu (324.754 nm)	0.989833	ppm	0.000235	0.02	66058.200000	Y 377.433
Fe (238.204 nm)	9.707324 o	ppm	0.018293	0.19	35689.422831	Y_R 377.433
Fe H (259.940 nm)	9.976740	ppm	0.001392	0.01	19002.400000	Y_R 377.433
K (766.491 nm)	52.783600	ppm	0.074862	0.14	59379.400000	Y_R2 488.368
Li (670.783 nm)	1.032120	ppm	0.000663	0.06	30662.600000	Y_R2 488.368
Mg (279.078 nm)	92.905600 o	ppm	0.058876	0.06	549507.000000	Y 377.433
Mn (257.610 nm)	0.976157	ppm	0.000128	0.01	247331.000000	Y 377.433
Mo (202.032 nm)	1.039350	ppm	0.001277	0.12	9063.380000	Y 377.433
Na (589.592 nm)	154.287000 o	ppm	0.708306	0.46	1009500.000000	Y_R2 488.368
Na H (589.593 nm)	160.519303	ppm	1.036870	0.65	633143.918087	Y_R 488.368
Ni (231.604 nm)	0.938625	ppm	0.000765	0.08	6960.770000	Y 377.433
P (213.618 nm)	19.639500 o	ppm	0.021837	0.11	44906.000000	Y 242.219
Pb (220.353 nm)	0.951880	ppm	0.001725	0.18	2913.360000	Y 242.219
S (181.972 nm)	60.126000 o	ppm	0.129393	0.22	26308.336518	Y 377.433
Sb (206.834 nm)	1.037700	ppm	0.001221	0.12	2763.740000	Y 377.433
Se (196.026 nm)	1.955900	ppm	0.011521	0.59	1831.710000	Y 242.219
Si (288.158 nm)	28.455700 o	ppm	0.021520	0.08	251169.000000	Y 377.433
Sn (189.925 nm)	2.001400	ppm	0.005299	0.26	4252.260000	Y 377.433
Sr (421.552 nm)	2.745014 o	ppm	0.008070	0.29	580129.077739	Y_R 488.368
Th (288.505 nm)	1.004500	ppm	0.001003	0.10	3082.340000	Y 377.433
Ti (336.122 nm)	1.016610	ppm	0.000162	0.02	146295.000000	Y 377.433
Tl (190.794 nm)	1.907750	ppm	0.000367	0.02	4399.580000	Y 377.433
U (409.013 nm)	2.062970	ppm	0.002225	0.11	9537.360000	Y 377.433
V (292.401 nm)	1.151750 o	ppm	0.000855	0.07	48392.500000	Y 377.433
Zn (206.200 nm)	0.473109	ppm	0.000786	0.17	2467.880000	Y 377.433
Zr (343.823 nm)	0.496424	ppm	0.000077	0.02	67527.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.964194	17291.879493	0.000489	0.05
Y 377.433	0.974707	950575.241695	0.000336	0.03
Y_R 377.433	0.987301	71029.900000	0.000787	0.08
Y_R 488.368	1.005280	39726.600000	0.002798	0.28
Y_R2 488.368	1.019453	77651.379917	0.000674	0.07

Sample Name: 280-123225-B-4-A

Date: 5/14/2019 2:21:18 AM

Rack:Tube: 2:76

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.030209 n	ppm	0.000501	1.66	-2264.040509	Y_R 488.368
Ag (328.068 nm)	0.000951	ppm	0.000486	51.15	-304.769000	Y 377.433
Al (167.019 nm)	0.006874	ppm	0.000641	9.33	4.456500	Y_R 377.433
Al H (396.152 nm)	-0.068684 u	ppm	0.000435	0.63	277.489032	Y_R 377.433
As (188.980 nm)	0.001031	ppm	0.000348	33.71	1.190560	Y 242.219
B (249.678 nm)	0.067643	ppm	0.000069	0.10	1741.150000	Y 242.219
Ba (493.408 nm)	0.024420	ppm	0.000349	1.43	3384.220000	Y_R 488.368
Be (234.861 nm)	-0.000035 u	ppm	0.000000	0.47	-49.387400	Y_R 488.368
Bi (223.061 nm)	-0.001101 u	ppm	0.001716	> 100.00	17.916800	Y 377.433
Ca (315.887 nm)	232.216233 o	ppm	0.973566	0.42	195766.100701	Y_R 377.433
Cd (214.439 nm)	0.000031 u	ppm	0.000046	> 100.00	2.161430	Y 377.433
Co (228.615 nm)	-0.000325 u	ppm	0.000121	37.14	-46.345700	Y 242.219
Cr (205.560 nm)	0.000558	ppm	0.000288	51.71	5.763120	Y 377.433
Cu (324.754 nm)	0.000008 u	ppm	0.000088	> 100.00	441.596000	Y 377.433
Fe (238.204 nm)	0.017547	ppm	0.002168	12.35	80.336182	Y_R 377.433
Fe H (259.940 nm)	-0.183723 u	ppm	0.001070	0.58	29.199700	Y_R 377.433
K (766.491 nm)	4.740130	ppm	0.017359	0.37	4705.550000	Y_R2 488.368
Li (670.783 nm)	0.035994	ppm	0.001039	2.89	99.030200	Y_R2 488.368
Mg (279.078 nm)	67.740900 o	ppm	0.082001	0.12	400725.000000	Y 377.433
Mn (257.610 nm)	0.000314	ppm	0.000004	1.12	154.348000	Y 377.433
Mo (202.032 nm)	0.289083	ppm	0.000804	0.28	2519.130000	Y 377.433
Na (589.592 nm)	55.261400 o	ppm	0.072178	0.13	360680.000000	Y_R2 488.368
Na H (589.593 nm)	57.234382	ppm	0.284419	0.50	232022.035615	Y_R 488.368
Ni (231.604 nm)	-0.000163 u	ppm	0.000043	26.66	-4.113310	Y 377.433
P (213.618 nm)	0.005596	ppm	0.002839	50.74	29.490900	Y 242.219
Pb (220.353 nm)	-0.001004 u	ppm	0.000276	27.45	3.018420	Y 242.219
S (181.972 nm)	185.236378 bo	ppm	0.179245	0.10	80996.313717	Y 377.433
Sb (206.834 nm)	0.000067 u	ppm	0.002087	> 100.00	-32.355200	Y 377.433
Se (196.026 nm)	0.019391	ppm	0.001114	5.75	28.781600	Y 242.219
Si (288.158 nm)	21.162200 o	ppm	0.080461	0.38	187006.000000	Y 377.433
Sn (189.925 nm)	0.002102	ppm	0.001102	52.39	12.669100	Y 377.433
Sr (421.552 nm)	1.258096 o	ppm	0.004281	0.34	265947.853167	Y_R 488.368
Th (288.505 nm)	0.000341 u	ppm	0.004493	> 100.00	53.544700	Y 377.433
Ti (336.122 nm)	-0.000531 u	ppm	0.000021	3.90	466.698000	Y 377.433
Tl (190.794 nm)	0.002099	ppm	0.002853	> 100.00	1.876840	Y 377.433
U (409.013 nm)	0.017746	ppm	0.006465	36.43	-76.280400	Y 377.433
V (292.401 nm)	0.001565	ppm	0.000034	2.17	79.385100	Y 377.433
Zn (206.200 nm)	0.003381	ppm	0.000249	7.36	19.392900	Y 377.433
Zr (343.823 nm)	0.000953	ppm	0.000122	12.76	167.299000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.943528	16921.265470	0.009563	1.01
Y 377.433	0.955189	931539.726903	0.009683	1.01
Y_R 377.433	0.963887	69345.300000	0.007026	0.73
Y_R 488.368	0.972253	38421.600000	0.008487	0.87
Y_R2 488.368	0.972308	74060.367234	0.005433	0.56

Sample Name: 280-123225-B-5-A

Date: 5/14/2019 2:24:40 AM

Rack:Tube: 2:77

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.019473 n	ppm	0.020226	> 100.00	-2290.246776	Y_R 488.368
Ag (328.068 nm)	0.000965	ppm	0.000265	27.46	-304.152000	Y 377.433
Al (167.019 nm)	0.004797	ppm	0.000028	0.58	3.224600	Y_R 377.433
Al H (396.152 nm)	-0.037645 u	ppm	0.004430	11.77	517.022374	Y_R 377.433
As (188.980 nm)	-0.000206 u	ppm	0.000260	> 100.00	-0.291887	Y 242.219
B (249.678 nm)	0.095724	ppm	0.000656	0.69	2435.890000	Y 242.219
Ba (493.408 nm)	0.007466	ppm	0.000317	4.25	1579.560000	Y_R 488.368
Be (234.861 nm)	-0.000009 u	ppm	0.000002	23.28	-27.069800	Y_R 488.368
Bi (223.061 nm)	-0.002906 u	ppm	0.001313	45.20	13.268500	Y 377.433
Ca (315.887 nm)	636.041811 o	ppm	0.789918	0.12	536373.275904	Y_R 377.433
Cd (214.439 nm)	0.001440	ppm	0.000068	4.75	88.025300	Y 377.433
Co (228.615 nm)	-0.000357 u	ppm	0.000056	15.66	-46.988900	Y 242.219
Cr (205.560 nm)	0.000280 u	ppm	0.000410	> 100.00	2.039770	Y 377.433
Cu (324.754 nm)	-0.001346 u	ppm	0.000387	28.79	51.743600	Y 377.433
Fe (238.204 nm)	0.030945	ppm	0.001453	4.70	129.572351	Y_R 377.433
Fe H (259.940 nm)	-0.172839 u	ppm	0.001346	0.78	49.522800	Y_R 377.433
K (766.491 nm)	13.436300	ppm	0.118772	0.88	14601.900000	Y_R2 488.368
Li (670.783 nm)	0.114778	ppm	0.000011	0.01	2516.310000	Y_R2 488.368
Mg (279.078 nm)	147.619000 o	ppm	1.454070	0.99	873219.000000	Y 377.433
Mn (257.610 nm)	0.088149	ppm	0.000379	0.43	22402.600000	Y 377.433
Mo (202.032 nm)	0.064449	ppm	0.000625	0.97	559.750000	Y 377.433
Na (589.592 nm)	70.753800 o	ppm	0.009694	0.01	461502.000000	Y_R2 488.368
Na H (589.593 nm)	75.366389	ppm	0.340319	0.45	302060.050579	Y_R 488.368
Ni (231.604 nm)	0.000113 u	ppm	0.000261	> 100.00	-2.069550	Y 377.433
P (213.618 nm)	0.049895	ppm	0.000419	0.84	130.743000	Y 242.219
Pb (220.353 nm)	0.002709	ppm	0.001586	58.54	15.402800	Y 242.219
S (181.972 nm)	546.012297 bo	ppm	2.256492	0.41	238703.998482	Y 377.433
Sb (206.834 nm)	-0.002521 u	ppm	0.001323	52.47	-38.048800	Y 377.433
Se (196.026 nm)	0.181446	ppm	0.001241	0.68	179.780000	Y 242.219
Si (288.158 nm)	19.404900 o	ppm	0.028211	0.15	171546.000000	Y 377.433
Sn (189.925 nm)	-0.000459 u	ppm	0.001713	> 100.00	7.238300	Y 377.433
Sr (421.552 nm)	1.834703 o	ppm	0.012516	0.68	387783.263286	Y_R 488.368
Th (288.505 nm)	0.001885	ppm	0.000360	19.10	60.020400	Y 377.433
Ti (336.122 nm)	-0.001160 u	ppm	0.000082	7.09	1658.960000	Y 377.433
Tl (190.794 nm)	0.000105	ppm	0.000034	32.50	-2.143610	Y 377.433
U (409.013 nm)	0.006101	ppm	0.003423	56.11	-211.285000	Y 377.433
V (292.401 nm)	0.000900	ppm	0.000371	41.22	58.169000	Y 377.433
Zn (206.200 nm)	0.004269	ppm	0.000604	14.16	24.023500	Y 377.433
Zr (343.823 nm)	0.000219	ppm	0.000004	1.70	67.640200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.910609	16330.889654	0.013417	1.47
Y 377.433	0.932423	909337.597533	0.017892	1.92
Y_R 377.433	0.950708	68397.200000	0.019338	2.03
Y_R 488.368	0.962054	38018.500000	0.016909	1.76
Y_R2 488.368	0.967403	73686.749828	0.003081	0.32

Sample Name: 280-123272-D-2-A

Date: 5/14/2019 2:28:02 AM

Rack:Tube: 2:78

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.107279 n	ppm	0.035841	33.41	-2075.912936	Y_R 488.368
Ag (328.068 nm)	0.000483	ppm	0.000319	65.91	-326.370000	Y 377.433
Al (167.019 nm)	0.002006	ppm	0.000802	39.99	1.588360	Y_R 377.433
Al H (396.152 nm)	-0.108458 u	ppm	0.002981	2.75	65.101095	Y_R 377.433
As (188.980 nm)	-0.000183 u	ppm	0.002131	> 100.00	-0.263906	Y 242.219
B (249.678 nm)	0.051087	ppm	0.000023	0.04	1331.420000	Y 242.219
Ba (493.408 nm)	-0.000262 u	ppm	0.000284	> 100.00	580.369000	Y_R 488.368
Be (234.861 nm)	-0.000021 u	ppm	0.000006	28.60	-24.959100	Y_R 488.368
Bi (223.061 nm)	-0.001847 u	ppm	0.001822	98.68	16.005400	Y 377.433
Ca (315.887 nm)	34.014822 o	ppm	0.116248	0.34	28592.880796	Y_R 377.433
Cd (214.439 nm)	-0.000006 u	ppm	0.000044	> 100.00	-0.096314	Y 377.433
Co (228.615 nm)	0.000139 u	ppm	0.000267	> 100.00	-37.094000	Y 242.219
Cr (205.560 nm)	0.000656	ppm	0.000080	12.23	7.739420	Y 377.433
Cu (324.754 nm)	0.001148	ppm	0.000043	3.71	649.640000	Y 377.433
Fe (238.204 nm)	0.075453	ppm	0.002244	2.97	293.134289	Y_R 377.433
Fe H (259.940 nm)	-0.121767 u	ppm	0.003607	2.96	144.894000	Y_R 377.433
K (766.491 nm)	0.346219	ppm	0.075494	21.81	-294.757000	Y_R2 488.368
Li (670.783 nm)	0.022064	ppm	0.000488	2.21	-328.353000	Y_R2 488.368
Mg (279.078 nm)	4.172760	ppm	0.005186	0.12	24705.300000	Y 377.433
Mn (257.610 nm)	0.000297	ppm	0.000019	6.37	149.967000	Y 377.433
Mo (202.032 nm)	0.000349	ppm	0.000156	44.61	0.637105	Y 377.433
Na (589.592 nm)	93.773900 o	ppm	0.347060	0.37	611343.000000	Y_R2 488.368
Na H (589.593 nm)	95.871434	ppm	0.315264	0.33	381274.195944	Y_R 488.368
Ni (231.604 nm)	-0.000006 u	ppm	0.000649	> 100.00	-2.948590	Y 377.433
P (213.618 nm)	0.002073	ppm	0.001135	54.77	21.437700	Y 242.219
Pb (220.353 nm)	-0.000907 u	ppm	0.000577	63.61	4.697360	Y 242.219
S (181.972 nm)	18.849944 o	ppm	0.043417	0.23	8263.109249	Y 377.433
Sb (206.834 nm)	-0.000522 u	ppm	0.001710	> 100.00	-32.286100	Y 377.433
Se (196.026 nm)	0.002403	ppm	0.000444	18.49	12.947700	Y 242.219
Si (288.158 nm)	6.493350	ppm	0.017655	0.27	57959.700000	Y 377.433
Sn (189.925 nm)	-0.000369 u	ppm	0.000643	> 100.00	7.427880	Y 377.433
Sr (421.552 nm)	0.028387	ppm	0.000120	0.42	6114.148373	Y_R 488.368
Th (288.505 nm)	0.003137	ppm	0.002082	66.36	61.334900	Y 377.433
Ti (336.122 nm)	-0.000053 u	ppm	0.000060	> 100.00	-94.284700	Y 377.433
Tl (190.794 nm)	0.000048 u	ppm	0.000273	> 100.00	-2.111260	Y 377.433
U (409.013 nm)	-0.002982 u	ppm	0.002730	91.53	-134.326000	Y 377.433
V (292.401 nm)	-0.000008 u	ppm	0.000054	> 100.00	19.362100	Y 377.433
Zn (206.200 nm)	0.000487	ppm	0.000246	50.47	4.309050	Y 377.433
Zr (343.823 nm)	-0.000035 u	ppm	0.000146	> 100.00	33.163000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.996114	17864.343890	0.000679	0.07
Y 377.433	1.003498	978652.959901	0.000023	0.00
Y_R 377.433	1.007510	72483.800000	0.002999	0.30
Y_R 488.368	1.033090	40825.700000	0.006628	0.64
Y_R2 488.368	1.023215	77937.897031	0.010469	1.02

Sample Name: 280-123272-D-3-A

Date: 5/14/2019 2:31:23 AM

Rack:Tube: 2:79

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.096118 n	ppm	0.004785	4.98	-2103.157169	Y_R 488.368
Ag (328.068 nm)	0.000563	ppm	0.000122	21.73	-322.794000	Y 377.433
Al (167.019 nm)	0.002261	ppm	0.000465	20.57	1.743100	Y_R 377.433
Al H (396.152 nm)	-0.103661 u	ppm	0.003679	3.55	87.854964	Y_R 377.433
As (188.980 nm)	0.000712 u	ppm	0.001157	> 100.00	0.807371	Y 242.219
B (249.678 nm)	0.026979	ppm	0.000020	0.07	734.957000	Y 242.219
Ba (493.408 nm)	0.023054	ppm	0.000044	0.19	3192.300000	Y_R 488.368
Be (234.861 nm)	-0.000031 u	ppm	0.000000	1.25	-27.832000	Y_R 488.368
Bi (223.061 nm)	-0.002681 u	ppm	0.000673	25.12	13.856900	Y 377.433
Ca (315.887 nm)	57.686451 o	ppm	0.552135	0.96	48558.744529	Y_R 377.433
Cd (214.439 nm)	-0.000032 u	ppm	0.000022	68.52	-1.627830	Y 377.433
Co (228.615 nm)	0.000347	ppm	0.000123	35.53	-32.937700	Y 242.219
Cr (205.560 nm)	0.000443	ppm	0.000289	65.23	4.572310	Y 377.433
Cu (324.754 nm)	0.000858	ppm	0.000103	12.01	613.352000	Y 377.433
Fe (238.204 nm)	0.078126	ppm	0.001805	2.31	302.958607	Y_R 377.433
Fe H (259.940 nm)	-0.119054 u	ppm	0.001353	1.14	149.959000	Y_R 377.433
K (766.491 nm)	1.186480	ppm	0.033134	2.79	661.465000	Y_R2 488.368
Li (670.783 nm)	0.027009	ppm	0.000935	3.46	-176.654000	Y_R2 488.368
Mg (279.078 nm)	4.668610	ppm	0.000451	0.01	27638.300000	Y 377.433
Mn (257.610 nm)	0.073266	ppm	0.000025	0.03	18632.600000	Y 377.433
Mo (202.032 nm)	0.001414	ppm	0.000197	13.91	9.928330	Y 377.433
Na (589.592 nm)	41.889200 o	ppm	0.154540	0.37	273625.000000	Y_R2 488.368
Na H (589.593 nm)	42.703626	ppm	0.336086	0.79	175879.829677	Y_R 488.368
Ni (231.604 nm)	-0.000612 u	ppm	0.000153	25.05	-7.442470	Y 377.433
P (213.618 nm)	0.018152	ppm	0.000920	5.07	58.190300	Y 242.219
Pb (220.353 nm)	0.000040 u	ppm	0.000187	> 100.00	7.595470	Y 242.219
S (181.972 nm)	19.371854 o	ppm	0.022361	0.12	8491.407107	Y 377.433
Sb (206.834 nm)	0.000396 u	ppm	0.001019	> 100.00	-29.847700	Y 377.433
Se (196.026 nm)	0.000683	ppm	0.000570	83.34	11.401800	Y 242.219
Si (288.158 nm)	8.659430	ppm	0.036477	0.42	77015.300000	Y 377.433
Sn (189.925 nm)	0.000336	ppm	0.000149	44.23	8.923270	Y 377.433
Sr (421.552 nm)	0.113542	ppm	0.000941	0.83	24107.157374	Y_R 488.368
Th (288.505 nm)	0.000139 u	ppm	0.000893	> 100.00	54.335400	Y 377.433
Ti (336.122 nm)	-0.000152 u	ppm	0.000048	31.36	-33.297200	Y 377.433
Tl (190.794 nm)	0.000640	ppm	0.000686	> 100.00	-0.746012	Y 377.433
U (409.013 nm)	-0.001958 u	ppm	0.003634	> 100.00	-134.214000	Y 377.433
V (292.401 nm)	0.000600	ppm	0.000115	19.10	45.145000	Y 377.433
Zn (206.200 nm)	0.001512	ppm	0.000213	14.10	9.652410	Y 377.433
Zr (343.823 nm)	0.000053	ppm	0.000018	33.31	45.235100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.005418	18031.202202	0.001417	0.14
Y 377.433	1.016927	991749.505611	0.000632	0.06
Y_R 377.433	1.013150	72889.300000	0.005815	0.57
Y_R 488.368	1.022390	40403.000000	0.003944	0.39
Y_R2 488.368	1.050903	80046.941378	0.002560	0.24

Sample Name: 280-123272-D-4-A

Date: 5/14/2019 2:34:44 AM

Rack:Tube: 2:80

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.080529 n	ppm	0.003876	4.81	-2141.210602	Y_R 488.368
Ag (328.068 nm)	0.000587	ppm	0.000276	47.02	-321.902000	Y 377.433
Al (167.019 nm)	0.005534	ppm	0.001059	19.14	3.671970	Y_R 377.433
Al H (396.152 nm)	-0.096756 u	ppm	0.007720	7.98	111.502344	Y_R 377.433
As (188.980 nm)	-0.001583 u	ppm	0.003835	> 100.00	-1.940330	Y 242.219
B (249.678 nm)	0.035787	ppm	0.000112	0.31	952.943000	Y 242.219
Ba (493.408 nm)	0.003736	ppm	0.000129	3.45	1035.730000	Y_R 488.368
Be (234.861 nm)	-0.000035 u	ppm	0.000008	21.65	-30.115300	Y_R 488.368
Bi (223.061 nm)	-0.001974 u	ppm	0.000021	1.04	15.670300	Y 377.433
Ca (315.887 nm)	71.301300 o	ppm	0.281192	0.39	60042.205481	Y_R 377.433
Cd (214.439 nm)	-0.000037 u	ppm	0.000024	64.43	-2.000350	Y 377.433
Co (228.615 nm)	0.000151	ppm	0.000093	61.67	-36.861900	Y 242.219
Cr (205.560 nm)	0.000378	ppm	0.000149	39.39	3.613740	Y 377.433
Cu (324.754 nm)	0.000372	ppm	0.000021	5.56	570.363000	Y 377.433
Fe (238.204 nm)	0.039646	ppm	0.000656	1.66	161.547532	Y_R 377.433
Fe H (259.940 nm)	-0.155537 u	ppm	0.001253	0.81	81.831700	Y_R 377.433
K (766.491 nm)	0.982137	ppm	0.001735	0.18	428.923000	Y_R2 488.368
Li (670.783 nm)	0.024047	ppm	0.000791	3.29	-267.537000	Y_R2 488.368
Mg (279.078 nm)	6.369060	ppm	0.003615	0.06	37696.800000	Y 377.433
Mn (257.610 nm)	0.000341	ppm	0.000010	2.95	161.147000	Y 377.433
Mo (202.032 nm)	0.001703	ppm	0.000155	9.08	12.450400	Y 377.433
Na (589.592 nm)	62.922900 o	ppm	0.108513	0.17	410513.000000	Y_R2 488.368
Na H (589.593 nm)	65.087438	ppm	0.004200	0.01	262341.664555	Y_R 488.368
Ni (231.604 nm)	-0.001157 u	ppm	0.000814	70.35	-11.491600	Y 377.433
P (213.618 nm)	0.027588	ppm	0.001303	4.72	79.756700	Y 242.219
Pb (220.353 nm)	0.000876	ppm	0.000613	70.06	10.154500	Y 242.219
S (181.972 nm)	25.512716 o	ppm	0.046485	0.18	11175.635131	Y 377.433
Sb (206.834 nm)	0.001267 u	ppm	0.003423	> 100.00	-27.526500	Y 377.433
Se (196.026 nm)	0.027441	ppm	0.005266	19.19	36.274100	Y 242.219
Si (288.158 nm)	9.563590	ppm	0.000647	0.01	84969.500000	Y 377.433
Sn (189.925 nm)	-0.000165 u	ppm	0.000913	> 100.00	7.860100	Y 377.433
Sr (421.552 nm)	0.129423	ppm	0.000215	0.17	27462.631518	Y_R 488.368
Th (288.505 nm)	-0.002355 u	ppm	0.001423	60.41	45.499400	Y 377.433
Ti (336.122 nm)	-0.000120 u	ppm	0.000107	89.27	14.490700	Y 377.433
Tl (190.794 nm)	-0.000084 u	ppm	0.001960	> 100.00	-2.417530	Y 377.433
U (409.013 nm)	-0.000517 u	ppm	0.001488	> 100.00	-130.158000	Y 377.433
V (292.401 nm)	0.000822	ppm	0.000191	23.19	53.963800	Y 377.433
Zn (206.200 nm)	0.000557	ppm	0.000132	23.71	4.671400	Y 377.433
Zr (343.823 nm)	-0.000045 u	ppm	0.000050	> 100.00	31.715100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.995263	17849.078436	0.001326	0.13
Y 377.433	1.005224	980336.344981	0.000292	0.03
Y_R 377.433	1.003280	72179.500000	0.003882	0.39
Y_R 488.368	1.017510	40209.900000	0.001628	0.16
Y_R2 488.368	1.036391	78941.547228	0.006555	0.63

Sample Name: 280-123272-D-5-A

Date: 5/14/2019 2:38:06 AM

Rack:Tube: 2:81

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.077033 n	ppm	0.015750	20.45	-2149.745142	Y_R 488.368
Ag (328.068 nm)	0.000586	ppm	0.000130	22.14	-321.674000	Y 377.433
Al (167.019 nm)	0.011170	ppm	0.000998	8.93	7.023000	Y_R 377.433
Al H (396.152 nm)	-0.096808 u	ppm	0.001917	1.98	100.259322	Y_R 377.433
As (188.980 nm)	-0.001528 u	ppm	0.002934	> 100.00	-1.875260	Y 242.219
B (249.678 nm)	0.032372	ppm	0.000010	0.03	868.477000	Y 242.219
Ba (493.408 nm)	0.005605	ppm	0.000209	3.72	1238.920000	Y_R 488.368
Be (234.861 nm)	-0.000043 u	ppm	0.000030	68.98	-33.281000	Y_R 488.368
Bi (223.061 nm)	-0.001725 u	ppm	0.000539	31.27	16.308100	Y 377.433
Ca (315.887 nm)	45.963195 o	ppm	0.087028	0.19	38670.750090	Y_R 377.433
Cd (214.439 nm)	-0.000063 u	ppm	0.000023	35.78	-3.620400	Y 377.433
Co (228.615 nm)	0.000249	ppm	0.000258	> 100.00	-34.909800	Y 242.219
Cr (205.560 nm)	0.000623	ppm	0.000226	36.30	7.272310	Y 377.433
Cu (324.754 nm)	0.000948	ppm	0.000193	20.33	627.666000	Y 377.433
Fe (238.204 nm)	0.014183	ppm	0.000689	4.86	67.973702	Y_R 377.433
Fe H (259.940 nm)	-0.181641 u	ppm	0.000659	0.36	33.086600	Y_R 377.433
K (766.491 nm)	0.852551	ppm	0.047934	5.62	281.454000	Y_R2 488.368
Li (670.783 nm)	0.019224	ppm	0.000189	0.98	-415.505000	Y_R2 488.368
Mg (279.078 nm)	0.229506	ppm	0.001411	0.61	1380.020000	Y 377.433
Mn (257.610 nm)	0.023246	ppm	0.000024	0.10	5962.730000	Y 377.433
Mo (202.032 nm)	0.003102	ppm	0.000635	20.48	24.656600	Y 377.433
Na (589.592 nm)	306.364000 o	ppm	0.462257	0.15	1995300.000000	Y_R2 488.368
Na H (589.593 nm)	318.323593	ppm	1.547953	0.49	1240738.620213	Y_R 488.368
Ni (231.604 nm)	-0.000230 u	ppm	0.000737	> 100.00	-4.613730	Y 377.433
P (213.618 nm)	0.001434 u	ppm	0.003125	> 100.00	19.978600	Y 242.219
Pb (220.353 nm)	-0.001366 u	ppm	0.002350	> 100.00	3.298150	Y 242.219
S (181.972 nm)	238.711502 bo	ppm	0.280771	0.12	104372.168296	Y 377.433
Sb (206.834 nm)	-0.000486 u	ppm	0.001357	> 100.00	-32.215300	Y 377.433
Se (196.026 nm)	-0.003097 u	ppm	0.001501	48.49	7.854780	Y 242.219
Si (288.158 nm)	4.013430	ppm	0.026445	0.66	36143.300000	Y 377.433
Sn (189.925 nm)	-0.000251 u	ppm	0.000377	> 100.00	7.679580	Y 377.433
Sr (421.552 nm)	0.142995	ppm	0.000090	0.06	30330.301509	Y_R 488.368
Th (288.505 nm)	0.002148	ppm	0.002470	> 100.00	59.120200	Y 377.433
Ti (336.122 nm)	-0.000147 u	ppm	0.000015	10.26	-69.853300	Y 377.433
Tl (190.794 nm)	-0.001247 u	ppm	0.000106	8.47	-5.106540	Y 377.433
U (409.013 nm)	-0.018337 u	ppm	0.005897	32.16	-209.043000	Y 377.433
V (292.401 nm)	-0.000223 u	ppm	0.000059	26.46	10.032700	Y 377.433
Zn (206.200 nm)	0.000193 u	ppm	0.000603	> 100.00	2.775910	Y 377.433
Zr (343.823 nm)	-0.000020 u	ppm	0.000043	> 100.00	35.107300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.975224	17489.699751	0.005005	0.51
Y 377.433	0.978617	954387.768679	0.005679	0.58
Y_R 377.433	1.000830	72003.300000	0.003750	0.37
Y_R 488.368	1.013570	40054.300000	0.002188	0.22
Y_R2 488.368	1.024858	78063.071397	0.003021	0.29

Sample Name: CCVH-5699817

Date: 5/14/2019 2:41:29 AM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.103249	ppm	0.013741	13.31	-2085.751703	Y_R 488.368
Ag (328.068 nm)	0.000665	ppm	0.000105	15.77	-571.338000	Y 377.433
Al (167.019 nm)	41.343800 o	ppm	0.077911	0.19	24760.800000	Y_R 377.433
Al H (396.152 nm)	49.520694	ppm	0.126829	0.26	126368.446343	Y_R 377.433
As (188.980 nm)	0.001725	ppm	0.000378	21.92	1.606710	Y 242.219
B (249.678 nm)	0.000352	ppm	0.000060	17.03	3.008500	Y 242.219
Ba (493.408 nm)	0.001532	ppm	0.000177	11.57	817.475000	Y_R 488.368
Be (234.861 nm)	0.000806	ppm	0.000142	17.62	1705.100000	Y_R 488.368
Bi (223.061 nm)	0.987066	ppm	0.002029	0.21	2572.960000	Y 377.433
Ca (315.887 nm)	0.022190	ppm	0.005357	24.14	-78.245098	Y_R 377.433
Cd (214.439 nm)	0.001219	ppm	0.000019	1.53	122.791000	Y 377.433
Co (228.615 nm)	0.004749	ppm	0.000040	0.83	54.975100	Y 242.219
Cr (205.560 nm)	0.001287	ppm	0.000207	16.08	3.893730	Y 377.433
Cu (324.754 nm)	0.009687	ppm	0.000083	0.85	1623.840000	Y 377.433
Fe (238.204 nm)	47.663701 o	ppm	0.056633	0.12	175175.810258	Y_R 377.433
Fe H (259.940 nm)	49.690100	ppm	0.150593	0.30	93161.400000	Y_R 377.433
K (766.491 nm)	0.096777	ppm	0.026058	26.93	-578.624000	Y_R2 488.368
Li (670.783 nm)	0.011206	ppm	0.001122	10.01	-661.508000	Y_R2 488.368
Mg (279.078 nm)	0.031557	ppm	0.000182	0.58	-156.853000	Y 377.433
Mn (257.610 nm)	0.002795	ppm	0.000018	0.63	782.550000	Y 377.433
Mo (202.032 nm)	0.000448	ppm	0.000142	31.63	1.502290	Y 377.433
Na (589.592 nm)	232.909000 o	ppm	0.425524	0.18	1517100.000000	Y_R2 488.368
Na H (589.593 nm)	242.960551	ppm	0.737056	0.30	949563.283367	Y_R 488.368
Ni (231.604 nm)	0.005252	ppm	0.000024	0.45	38.241400	Y 377.433
P (213.618 nm)	-0.001244 u	ppm	0.000429	34.47	13.857100	Y 242.219
Pb (220.353 nm)	0.002831	ppm	0.000562	19.87	34.529300	Y 242.219
S (181.972 nm)	4.880597	ppm	0.010283	0.21	2156.635610	Y 377.433
Sb (206.834 nm)	-0.001438 u	ppm	0.000270	18.76	-79.607300	Y 377.433
Se (196.026 nm)	0.002583	ppm	0.000341	13.19	4.839070	Y 242.219
Si (288.158 nm)	0.043347	ppm	0.001362	3.14	1217.400000	Y 377.433
Sn (189.925 nm)	0.005521	ppm	0.000572	10.35	19.918100	Y 377.433
Sr (421.552 nm)	0.001911	ppm	0.000094	4.90	519.760246	Y_R 488.368
Th (288.505 nm)	4.996880	ppm	0.002487	0.05	14914.100000	Y 377.433
Ti (336.122 nm)	0.002398	ppm	0.000124	5.18	149.905000	Y 377.433
Tl (190.794 nm)	-0.001698 u	ppm	0.000190	11.20	-7.502280	Y 377.433
U (409.013 nm)	10.157200	ppm	0.032655	0.32	47748.500000	Y 377.433
V (292.401 nm)	0.005185	ppm	0.000001	0.03	40.006600	Y 377.433
Zn (206.200 nm)	0.003667	ppm	0.000611	16.66	20.882200	Y 377.433
Zr (343.823 nm)	-0.002908 u	ppm	0.000115	3.96	-209.585000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.994391	17833.435862	0.001259	0.13
Y 377.433	0.991343	966799.081834	0.000636	0.06
Y_R 377.433	0.997265	71746.700000	0.005801	0.58
Y_R 488.368	1.018240	40238.900000	0.014725	1.45
Y_R2 488.368	1.023919	77991.555139	0.004145	0.40

Sample Name: CCV-5699804

Date: 5/14/2019 2:44:52 AM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.023803	ppm	0.027153	2.65	161.315535	Y_R 488.368
Ag (328.068 nm)	0.490958	ppm	0.002080	0.42	22724.600000	Y 377.433
Al (167.019 nm)	0.477162	ppm	0.001385	0.29	287.507000	Y_R 377.433
Al H (396.152 nm)	0.422055 u	ppm	0.003711	0.88	1442.935337	Y_R 377.433
As (188.980 nm)	0.963619	ppm	0.000070	0.01	1154.200000	Y 242.219
B (249.678 nm)	0.489318	ppm	0.000748	0.15	12191.800000	Y 242.219
Ba (493.408 nm)	0.488126	ppm	0.001608	0.33	55185.100000	Y_R 488.368
Be (234.861 nm)	0.480651	ppm	0.000451	0.09	139097.000000	Y_R 488.368
Bi (223.061 nm)	-0.004615 u	ppm	0.001915	41.49	9.282850	Y 377.433
Ca (315.887 nm)	4.985912	ppm	0.000033	0.00	4108.707039	Y_R 377.433
Cd (214.439 nm)	0.490939	ppm	0.001088	0.22	29931.600000	Y 377.433
Co (228.615 nm)	0.490187	ppm	0.000615	0.13	9761.930000	Y 242.219
Cr (205.560 nm)	0.492046	ppm	0.001140	0.23	7327.520000	Y 377.433
Cu (324.754 nm)	0.491200	ppm	0.000085	0.02	33102.100000	Y 377.433
Fe (238.204 nm)	2.438036	ppm	0.001371	0.06	8975.422756	Y_R 377.433
Fe H (259.940 nm)	2.365090 u	ppm	0.000999	0.04	4788.750000	Y_R 377.433
K (766.491 nm)	47.814200	ppm	0.027264	0.06	53724.200000	Y_R2 488.368
Li (670.783 nm)	0.962116	ppm	0.000279	0.03	28514.700000	Y_R2 488.368
Mg (279.078 nm)	19.264500	ppm	0.033958	0.18	113972.000000	Y 377.433
Mn (257.610 nm)	0.491500	ppm	0.000010	0.00	124570.000000	Y 377.433
Mo (202.032 nm)	0.498840	ppm	0.000338	0.07	4348.750000	Y 377.433
Na (589.592 nm)	4.737440	ppm	0.000497	0.01	32699.800000	Y_R2 488.368
Na H (589.593 nm)	4.323220 u	ppm	0.029046	0.67	28056.509876	Y_R 488.368
Ni (231.604 nm)	0.502562	ppm	0.000569	0.11	3725.440000	Y 377.433
P (213.618 nm)	0.957414	ppm	0.002318	0.24	2205.030000	Y 242.219
Pb (220.353 nm)	0.979117	ppm	0.000973	0.10	2995.760000	Y 242.219
S (181.972 nm)	0.024382	ppm	0.000156	0.64	34.843730	Y 377.433
Sb (206.834 nm)	1.012920	ppm	0.003488	0.34	2692.640000	Y 377.433
Se (196.026 nm)	0.958501	ppm	0.006578	0.69	903.489000	Y 242.219
Si (288.158 nm)	4.915470	ppm	0.017323	0.35	44078.700000	Y 377.433
Sn (189.925 nm)	0.983952	ppm	0.002976	0.30	2094.720000	Y 377.433
Sr (421.552 nm)	0.486148	ppm	0.001321	0.27	102837.622025	Y_R 488.368
Th (288.505 nm)	0.004067	ppm	0.003227	79.35	82.453600	Y 377.433
Ti (336.122 nm)	0.495205	ppm	0.000275	0.06	70944.700000	Y 377.433
Tl (190.794 nm)	0.991811	ppm	0.001378	0.14	2286.570000	Y 377.433
U (409.013 nm)	0.001047 u	ppm	0.002916	> 100.00	-147.084000	Y 377.433
V (292.401 nm)	0.491116	ppm	0.000120	0.02	20644.000000	Y 377.433
Zn (206.200 nm)	0.489604	ppm	0.000401	0.08	2553.860000	Y 377.433
Zr (343.823 nm)	0.494230	ppm	0.000602	0.12	67206.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.009147	18098.065693	0.002395	0.24
Y 377.433	1.014117	989009.208606	0.001013	0.10
Y_R 377.433	1.010220	72679.100000	0.003592	0.36
Y_R 488.368	1.026100	40549.500000	0.002459	0.24
Y_R2 488.368	1.043039	79447.873733	0.002179	0.21

Sample Name: CCB

Date: 5/14/2019 2:48:15 AM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.075155 Z	ppm	0.008677	11.55	-2154.328402 Z	Y_R 488.368
Ag (328.068 nm)	0.000608	ppm	0.000191	31.33	-320.538000	Y 377.433
Al (167.019 nm)	0.005230	ppm	0.000659	12.60	3.463840	Y_R 377.433
Al H (396.152 nm)	-0.114493 Zu	ppm	0.003384	2.96	34.675682 Z	Y_R 377.433
As (188.980 nm)	0.000818 u	ppm	0.001242	> 100.00	0.934915	Y 242.219
B (249.678 nm)	0.000114 u	ppm	0.000319	> 100.00	70.389600	Y 242.219
Ba (493.408 nm)	-0.000697 u	ppm	0.000113	16.18	524.072000	Y_R 488.368
Be (234.861 nm)	0.000034	ppm	0.000005	15.56	-11.037600	Y_R 488.368
Bi (223.061 nm)	-0.000720 u	ppm	0.001649	> 100.00	18.897600	Y 377.433
Ca (315.887 nm)	0.022370	ppm	0.006581	29.42	-78.094407	Y_R 377.433
Cd (214.439 nm)	0.000091	ppm	0.000024	26.53	5.795660	Y 377.433
Co (228.615 nm)	0.000585	ppm	0.000155	26.42	-28.178900	Y 242.219
Cr (205.560 nm)	0.000150	ppm	0.000088	58.81	0.219539	Y 377.433
Cu (324.754 nm)	0.000609	ppm	0.000097	15.95	636.934000	Y 377.433
Fe (238.204 nm)	0.004596	ppm	0.000238	5.18	32.742213	Y_R 377.433
Fe H (259.940 nm)	-0.190630 u	ppm	0.000740	0.39	16.301400	Y_R 377.433
K (766.491 nm)	0.016246 u	ppm	0.028840	> 100.00	-670.268000	Y_R2 488.368
Li (670.783 nm)	0.008423	ppm	0.000568	6.74	-746.893000	Y_R2 488.368
Mg (279.078 nm)	0.002384	ppm	0.002063	86.54	36.659100	Y 377.433
Mn (257.610 nm)	0.000022	ppm	0.000003	15.51	80.353400	Y 377.433
Mo (202.032 nm)	0.000099	ppm	0.000014	13.96	-1.542330	Y 377.433
Na (589.592 nm)	0.068068	ppm	0.018691	27.46	1325.110000	Y_R2 488.368
Na H (589.593 nm)	-1.013555 u	ppm	0.008380	0.83	6951.715399	Y_R 488.368
Ni (231.604 nm)	0.000402	ppm	0.000116	28.95	0.068333	Y 377.433
P (213.618 nm)	-0.000445 u	ppm	0.000884	> 100.00	15.683600	Y 242.219
Pb (220.353 nm)	-0.000431 u	ppm	0.000283	65.73	6.158710	Y 242.219
S (181.972 nm)	0.016083	ppm	0.003275	20.36	30.183621	Y 377.433
Sb (206.834 nm)	0.002925	ppm	0.000418	14.31	-23.060800	Y 377.433
Se (196.026 nm)	0.000583 u	ppm	0.002583	> 100.00	11.265500	Y 242.219
Si (288.158 nm)	-0.003472 u	ppm	0.000349	10.04	805.520000	Y 377.433
Sn (189.925 nm)	-0.000140 u	ppm	0.001208	> 100.00	7.915020	Y 377.433
Sr (421.552 nm)	-0.000044 u	ppm	0.000011	24.21	106.730350	Y_R 488.368
Th (288.505 nm)	-0.000426 u	ppm	0.001891	> 100.00	50.967100	Y 377.433
Ti (336.122 nm)	0.000228	ppm	0.000052	22.65	-161.917000	Y 377.433
Tl (190.794 nm)	-0.000505 u	ppm	0.000053	10.46	-3.385380	Y 377.433
U (409.013 nm)	-0.002633 u	ppm	0.000536	20.35	-126.003000	Y 377.433
V (292.401 nm)	-0.000030 u	ppm	0.000025	83.32	17.758300	Y 377.433
Zn (206.200 nm)	-0.000472 u	ppm	0.000496	> 100.00	-0.693020	Y 377.433
Zr (343.823 nm)	0.000099	ppm	0.000110	> 100.00	51.195000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.011080	18132.744475	0.002231	0.22
Y 377.433	1.018583	993364.601870	0.003289	0.32
Y_R 377.433	1.011010	72735.900000	0.001533	0.15
Y_R 488.368	1.032000	40782.600000	0.003164	0.31
Y_R2 488.368	1.040931	79287.322091	0.000544	0.05

Sample Name: CCVL-5699389

Date: 5/14/2019 2:51:38 AM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.106369 Q	ppm	0.004850	4.56	-2078.134675 Q	Y_R 488.368
Ag (328.068 nm)	0.009387	ppm	0.000103	1.09	91.465300	Y 377.433
Al (167.019 nm)	0.093552	ppm	0.000038	0.04	56.356600	Y_R 377.433
Al H (396.152 nm)	-0.014155 u	ppm	0.010041	70.94	291.679633	Y_R 377.433
As (188.980 nm)	0.012639	ppm	0.000057	0.45	15.094200	Y 242.219
B (249.678 nm)	0.095314	ppm	0.000295	0.31	2426.020000	Y 242.219
Ba (493.408 nm)	0.009293	ppm	0.000047	0.51	1641.050000	Y_R 488.368
Be (234.861 nm)	0.000948	ppm	0.000003	0.34	255.551000	Y_R 488.368
Bi (223.061 nm)	0.096660	ppm	0.000605	0.63	269.888000	Y 377.433
Ca (315.887 nm)	0.214874	ppm	0.009103	4.24	84.276037	Y_R 377.433
Cd (214.439 nm)	0.004940	ppm	0.000117	2.36	301.497000	Y 377.433
Co (228.615 nm)	0.010393	ppm	0.000062	0.59	167.890000	Y 242.219
Cr (205.560 nm)	0.009767	ppm	0.000386	3.95	143.524000	Y 377.433
Cu (324.754 nm)	0.015846	ppm	0.000017	0.11	1645.680000	Y 377.433
Fe (238.204 nm)	0.103005	ppm	0.000907	0.88	394.385878	Y_R 377.433
Fe H (259.940 nm)	-0.092588 u	ppm	0.001525	1.65	199.382000	Y_R 377.433
K (766.491 nm)	2.966000	ppm	0.026249	0.88	2686.580000	Y_R2 488.368
Li (670.783 nm)	0.028210 Q	ppm	0.001062	3.76	-139.786000 Q	Y_R2 488.368
Mg (279.078 nm)	0.191130	ppm	0.000496	0.26	1152.000000	Y 377.433
Mn (257.610 nm)	0.010095	ppm	0.000002	0.02	2631.640000	Y 377.433
Mo (202.032 nm)	0.019088	ppm	0.000151	0.79	164.092000	Y 377.433
Na (589.592 nm)	0.972617	ppm	0.003335	0.34	7233.600000	Y_R2 488.368
Na H (589.593 nm)	-0.238983 u	ppm	0.009730	4.07	9954.247472	Y_R 488.368
Ni (231.604 nm)	0.041005	ppm	0.000019	0.05	301.197000	Y 377.433
P (213.618 nm)	2.751720 o	ppm	0.003529	0.13	6306.220000	Y 242.219
Pb (220.353 nm)	0.007374	ppm	0.000823	11.16	29.990200	Y 242.219
S (181.972 nm)	0.097724	ppm	0.000448	0.46	65.892779	Y 377.433
Sb (206.834 nm)	0.021925	ppm	0.001631	7.44	27.927200	Y 377.433
Se (196.026 nm)	0.017091	ppm	0.002747	16.07	26.633800	Y 242.219
Si (288.158 nm)	0.579178	ppm	0.027269	4.71	5931.250000	Y 377.433
Sn (189.925 nm)	0.096939	ppm	0.000824	0.85	213.774000	Y 377.433
Sr (421.552 nm)	0.009810	ppm	0.000003	0.03	2188.858078	Y_R 488.368
Th (288.505 nm)	0.013900	ppm	0.001069	7.69	94.311300	Y 377.433
Ti (336.122 nm)	0.009605	ppm	0.000020	0.21	1185.390000	Y 377.433
Tl (190.794 nm)	0.014425	ppm	0.000012	0.08	31.036700	Y 377.433
U (409.013 nm)	0.057236	ppm	0.004053	7.08	155.048000	Y 377.433
V (292.401 nm)	0.009544	ppm	0.000156	1.63	418.588000	Y 377.433
Zn (206.200 nm)	0.019971	ppm	0.000701	3.51	105.867000	Y 377.433
Zr (343.823 nm)	0.010636	ppm	0.000287	2.70	1483.310000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.021945	18327.598932	0.000594	0.06
Y 377.433	1.030676	1005158.095088	0.000180	0.02
Y_R 377.433	1.019920	73376.500000	0.001085	0.11
Y_R 488.368	1.041580	41161.300000	0.013544	1.30
Y_R2 488.368	1.053693	80259.412470	0.000835	0.08

Sample Name: 280-123272-D-6-A

Date: 5/14/2019 2:55:00 AM

Rack:Tube: 2:82

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.089417 n	ppm	0.018642	20.85	-2119.514257	Y_R 488.368
Ag (328.068 nm)	0.000669	ppm	0.000257	38.46	-317.659000	Y 377.433
Al (167.019 nm)	0.022086	ppm	0.000794	3.59	13.581200	Y_R 377.433
Al H (396.152 nm)	-0.092800 u	ppm	0.002550	2.75	98.233006	Y_R 377.433
As (188.980 nm)	0.001524	ppm	0.001381	90.58	1.780680	Y 242.219
B (249.678 nm)	0.032354	ppm	0.000119	0.37	867.980000	Y 242.219
Ba (493.408 nm)	0.010012	ppm	0.000333	3.33	1725.450000	Y_R 488.368
Be (234.861 nm)	0.000016	ppm	0.000002	11.29	-15.017700	Y_R 488.368
Bi (223.061 nm)	-0.004007 u	ppm	0.001435	35.82	10.434400	Y 377.433
Ca (315.887 nm)	18.373259 o	ppm	0.042577	0.23	15399.984960	Y_R 377.433
Cd (214.439 nm)	-0.000043 u	ppm	0.000071	> 100.00	-2.371110	Y 377.433
Co (228.615 nm)	0.000550	ppm	0.000174	31.69	-28.865100	Y 242.219
Cr (205.560 nm)	0.000594	ppm	0.000331	55.69	6.815410	Y 377.433
Cu (324.754 nm)	0.001236	ppm	0.000188	15.18	666.747000	Y 377.433
Fe (238.204 nm)	0.054322	ppm	0.000073	0.13	215.481321	Y_R 377.433
Fe H (259.940 nm)	-0.139325 u	ppm	0.003241	2.33	112.106000	Y_R 377.433
K (766.491 nm)	0.656919	ppm	0.030343	4.62	58.822800	Y_R2 488.368
Li (670.783 nm)	0.019617	ppm	0.001397	7.12	-403.460000	Y_R2 488.368
Mg (279.078 nm)	0.141327	ppm	0.000866	0.61	858.440000	Y 377.433
Mn (257.610 nm)	0.007732	ppm	0.000040	0.52	2033.250000	Y 377.433
Mo (202.032 nm)	0.002989	ppm	0.000080	2.67	23.669200	Y 377.433
Na (589.592 nm)	208.966000 o	ppm	0.925930	0.44	1361250.000000	Y_R2 488.368
Na H (589.593 nm)	215.800872	ppm	0.608614	0.28	844639.579863	Y_R 488.368
Ni (231.604 nm)	0.000202 u	ppm	0.001233	> 100.00	-1.408880	Y 377.433
P (213.618 nm)	0.017777	ppm	0.000192	1.08	57.331800	Y 242.219
Pb (220.353 nm)	-0.002549 u	ppm	0.000143	5.61	-0.322169	Y 242.219
S (181.972 nm)	130.326482 bo	ppm	0.238581	0.18	56993.334316	Y 377.433
Sb (206.834 nm)	0.001460	ppm	0.001495	> 100.00	-26.996700	Y 377.433
Se (196.026 nm)	-0.002785 u	ppm	0.001395	50.10	8.125760	Y 242.219
Si (288.158 nm)	2.925500	ppm	0.016408	0.56	26572.500000	Y 377.433
Sn (189.925 nm)	0.000560	ppm	0.000737	> 100.00	9.399170	Y 377.433
Sr (421.552 nm)	0.126423	ppm	0.000101	0.08	26828.868671	Y_R 488.368
Th (288.505 nm)	0.002277	ppm	0.002709	> 100.00	59.050100	Y 377.433
Ti (336.122 nm)	0.000445	ppm	0.000077	17.30	-72.566700	Y 377.433
Tl (190.794 nm)	-0.000579 u	ppm	0.001902	> 100.00	-3.568020	Y 377.433
U (409.013 nm)	-0.011236 u	ppm	0.005163	45.95	-170.084000	Y 377.433
V (292.401 nm)	-0.000203 u	ppm	0.000019	9.45	10.877900	Y 377.433
Zn (206.200 nm)	0.001094	ppm	0.000472	43.15	7.470470	Y 377.433
Zr (343.823 nm)	-0.000018 u	ppm	0.000090	> 100.00	35.480900	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.991755	17786.165586	0.001697	0.17
Y 377.433	0.995306	970664.236596	0.002264	0.23
Y_R 377.433	1.015590	73064.900000	0.010828	1.07
Y_R 488.368	1.033510	40842.300000	0.009263	0.90
Y_R2 488.368	1.035752	78892.844492	0.006387	0.62

Sample Name: 280-123272-D-7-A

Date: 5/14/2019 2:58:23 AM

Rack:Tube: 2:83

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.080333 n	ppm	0.004390	5.47	-2141.688736	Y_R 488.368
Ag (328.068 nm)	0.000469	ppm	0.000057	12.26	-327.204000	Y 377.433
Al (167.019 nm)	0.003261	ppm	0.000861	26.41	2.291030	Y_R 377.433
Al H (396.152 nm)	-0.093016 u	ppm	0.001977	2.13	131.233335	Y_R 377.433
As (188.980 nm)	0.000574 u	ppm	0.003046	> 100.00	0.643371	Y 242.219
B (249.678 nm)	0.040555	ppm	0.000153	0.38	1070.950000	Y 242.219
Ba (493.408 nm)	0.012786	ppm	0.000196	1.53	2052.380000	Y_R 488.368
Be (234.861 nm)	-0.000027 u	ppm	0.000011	41.11	-29.179400	Y_R 488.368
Bi (223.061 nm)	-0.002475 u	ppm	0.001060	42.82	14.375500	Y 377.433
Ca (315.887 nm)	93.414062 o	ppm	0.335010	0.36	78693.241144	Y_R 377.433
Cd (214.439 nm)	-0.000002 u	ppm	0.000020	> 100.00	0.126585	Y 377.433
Co (228.615 nm)	0.000391	ppm	0.000073	18.77	-32.062400	Y 242.219
Cr (205.560 nm)	0.000700	ppm	0.000048	6.83	8.410250	Y 377.433
Cu (324.754 nm)	0.001798	ppm	0.000111	6.19	649.824000	Y 377.433
Fe (238.204 nm)	0.010826	ppm	0.000659	6.09	55.635932	Y_R 377.433
Fe H (259.940 nm)	-0.184819 u	ppm	0.001419	0.77	27.153400	Y_R 377.433
K (766.491 nm)	1.093130	ppm	0.080254	7.34	555.236000	Y_R2 488.368
Li (670.783 nm)	0.033124	ppm	0.000636	1.92	10.986700	Y_R2 488.368
Mg (279.078 nm)	0.589293	ppm	0.000547	0.09	3508.330000	Y 377.433
Mn (257.610 nm)	0.000462	ppm	0.000009	1.96	191.637000	Y 377.433
Mo (202.032 nm)	0.006779	ppm	0.000037	0.54	56.722600	Y 377.433
Na (589.592 nm)	422.377000 o	ppm	1.597720	0.38	2750550.000000	Y_R2 488.368
Na H (589.593 nm)	439.401857	ppm	1.181216	0.27	1708539.750955	Y_R 488.368
Ni (231.604 nm)	0.001212	ppm	0.000427	35.28	6.074170	Y 377.433
P (213.618 nm)	0.009238	ppm	0.002536	27.45	37.815400	Y 242.219
Pb (220.353 nm)	-0.001945 u	ppm	0.002203	> 100.00	1.491370	Y 242.219
S (181.972 nm)	318.608526 bo	ppm	0.422449	0.13	139297.843997	Y 377.433
Sb (206.834 nm)	-0.000503 u	ppm	0.001176	> 100.00	-32.265900	Y 377.433
Se (196.026 nm)	0.000831	ppm	0.000349	42.05	11.496200	Y 242.219
Si (288.158 nm)	4.030520	ppm	0.039878	0.99	36293.600000	Y 377.433
Sn (189.925 nm)	0.000665	ppm	0.000725	> 100.00	9.621930	Y 377.433
Sr (421.552 nm)	0.302205	ppm	0.000364	0.12	63971.064504	Y_R 488.368
Th (288.505 nm)	0.002312	ppm	0.001272	55.00	59.034800	Y 377.433
Ti (336.122 nm)	-0.000270 u	ppm	0.000138	50.99	63.251100	Y 377.433
Tl (190.794 nm)	0.000097 u	ppm	0.001674	> 100.00	-2.012950	Y 377.433
U (409.013 nm)	-0.020659 u	ppm	0.001757	8.50	-229.426000	Y 377.433
V (292.401 nm)	0.000228	ppm	0.000043	18.72	29.263700	Y 377.433
Zn (206.200 nm)	0.000937	ppm	0.000445	47.47	6.653960	Y 377.433
Zr (343.823 nm)	0.000002 u	ppm	0.000027	> 100.00	38.017400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.961717	17247.454125	0.003639	0.38
Y 377.433	0.967084	943140.992546	0.003823	0.40
Y_R 377.433	0.993425	71470.500000	0.003372	0.34
Y_R 488.368	1.011230	39961.800000	0.006119	0.61
Y_R2 488.368	1.003014	76399.205962	0.003818	0.38

Sample Name: 280-123273-E-1-B

Date: 5/14/2019 3:01:45 AM

Rack:Tube: 2:84

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.078498 n	ppm	0.019424	24.74	-2146.167496	Y_R 488.368
Ag (328.068 nm)	0.000793	ppm	0.000143	18.10	-311.972000	Y 377.433
Al (167.019 nm)	0.003268	ppm	0.002136	65.38	2.294630	Y_R 377.433
Al H (396.152 nm)	-0.077831 u	ppm	0.001675	2.15	194.488750	Y_R 377.433
As (188.980 nm)	0.001522	ppm	0.000251	16.46	1.778380	Y 242.219
B (249.678 nm)	0.302610	ppm	0.000558	0.18	7554.600000	Y 242.219
Ba (493.408 nm)	0.018592	ppm	0.000254	1.37	2714.220000	Y_R 488.368
Be (234.861 nm)	-0.000040 u	ppm	0.000033	81.72	-32.504800	Y_R 488.368
Bi (223.061 nm)	-0.001536 u	ppm	0.002711	> 100.00	16.796100	Y 377.433
Ca (315.887 nm)	149.852374 o	ppm	0.331127	0.22	126296.204310	Y_R 377.433
Cd (214.439 nm)	-0.000070 u	ppm	0.000028	40.00	-4.056610	Y 377.433
Co (228.615 nm)	-0.000131 u	ppm	0.000438	> 100.00	-42.490300	Y 242.219
Cr (205.560 nm)	0.000290	ppm	0.000158	54.54	2.308800	Y 377.433
Cu (324.754 nm)	0.000824	ppm	0.000145	17.61	548.075000	Y 377.433
Fe (238.204 nm)	0.010465	ppm	0.000276	2.64	54.308643	Y_R 377.433
Fe H (259.940 nm)	-0.189537 u	ppm	0.002768	1.46	18.342700	Y_R 377.433
K (766.491 nm)	3.319420	ppm	0.005841	0.18	3088.770000	Y_R2 488.368
Li (670.783 nm)	0.026632	ppm	0.001486	5.58	-188.211000	Y_R2 488.368
Mg (279.078 nm)	65.924600 o	ppm	0.022762	0.03	389981.000000	Y 377.433
Mn (257.610 nm)	0.015221	ppm	0.000056	0.36	3930.060000	Y 377.433
Mo (202.032 nm)	0.002013	ppm	0.000091	4.52	15.153800	Y 377.433
Na (589.592 nm)	35.087100 o	ppm	0.035054	0.10	229335.000000	Y_R2 488.368
Na H (589.593 nm)	36.174920	ppm	0.162133	0.45	150651.339999	Y_R 488.368
Ni (231.604 nm)	-0.001063 u	ppm	0.000271	25.45	-10.792800	Y 377.433
P (213.618 nm)	0.007201	ppm	0.001529	21.23	33.160300	Y 242.219
Pb (220.353 nm)	-0.000475 u	ppm	0.001990	> 100.00	5.993390	Y 242.219
S (181.972 nm)	108.067469 o	ppm	0.337391	0.31	47263.174287	Y 377.433
Sb (206.834 nm)	-0.001599 u	ppm	0.001012	63.27	-35.181600	Y 377.433
Se (196.026 nm)	0.001789 u	ppm	0.003386	> 100.00	12.400500	Y 242.219
Si (288.158 nm)	5.007390	ppm	0.000750	0.01	44887.400000	Y 377.433
Sn (189.925 nm)	0.000021 u	ppm	0.000138	> 100.00	8.255390	Y 377.433
Sr (421.552 nm)	0.424797	ppm	0.001027	0.24	89874.238897	Y_R 488.368
Th (288.505 nm)	0.005309	ppm	0.002683	50.53	68.098400	Y 377.433
Ti (336.122 nm)	-0.000349 u	ppm	0.000045	12.80	231.379000	Y 377.433
Tl (190.794 nm)	0.001602	ppm	0.000734	45.78	1.475880	Y 377.433
U (409.013 nm)	-0.007616 u	ppm	0.000081	1.06	-179.226000	Y 377.433
V (292.401 nm)	-0.000085 u	ppm	0.000134	> 100.00	18.050800	Y 377.433
Zn (206.200 nm)	0.000521	ppm	0.000259	49.77	4.484440	Y 377.433
Zr (343.823 nm)	-0.000107 u	ppm	0.000134	> 100.00	23.196600	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.973756	17463.377875	0.002739	0.28
Y 377.433	0.988204	963737.743682	0.003188	0.32
Y_R 377.433	0.980098	70511.700000	0.001153	0.12
Y_R 488.368	0.993028	39242.500000	0.000203	0.02
Y_R2 488.368	1.005139	76561.079398	0.007557	0.75

Sample Name: 280-123273-E-2-B

Date: 5/14/2019 3:05:07 AM

Rack:Tube: 2:85

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.095301 n	ppm	0.021900	22.98	-2105.153088	Y_R 488.368
Ag (328.068 nm)	0.000841	ppm	0.000152	18.02	-309.712000	Y 377.433
Al (167.019 nm)	0.008055	ppm	0.000737	9.15	5.178980	Y_R 377.433
Al H (396.152 nm)	-0.078834 u	ppm	0.003969	5.03	211.201521	Y_R 377.433
As (188.980 nm)	0.002583 u	ppm	0.003764	> 100.00	3.049560	Y 242.219
B (249.678 nm)	1.167040 o	ppm	0.000422	0.04	28942.000000	Y 242.219
Ba (493.408 nm)	0.018473	ppm	0.000033	0.18	2710.470000	Y_R 488.368
Be (234.861 nm)	-0.000012 u	ppm	0.000018	> 100.00	-23.769800	Y_R 488.368
Bi (223.061 nm)	-0.002087 u	ppm	0.002240	> 100.00	15.378900	Y 377.433
Ca (315.887 nm)	192.633903 o	ppm	0.496427	0.26	162380.336670	Y_R 377.433
Cd (214.439 nm)	0.000025	ppm	0.000015	60.00	1.806280	Y 377.433
Co (228.615 nm)	0.000609	ppm	0.000245	40.32	-27.715000	Y 242.219
Cr (205.560 nm)	0.000410	ppm	0.000242	58.95	4.082450	Y 377.433
Cu (324.754 nm)	0.000838	ppm	0.000298	35.55	519.965000	Y 377.433
Fe (238.204 nm)	0.038863	ppm	0.002585	6.65	158.669645	Y_R 377.433
Fe H (259.940 nm)	-0.167356 u	ppm	0.000811	0.48	59.762400	Y_R 377.433
K (766.491 nm)	6.053750	ppm	0.062099	1.03	6200.470000	Y_R2 488.368
Li (670.783 nm)	0.071913	ppm	0.001772	2.46	1201.110000	Y_R2 488.368
Mg (279.078 nm)	143.652000 o	ppm	0.142934	0.10	849753.000000	Y 377.433
Mn (257.610 nm)	1.076750	ppm	0.000446	0.04	272812.000000	Y 377.433
Mo (202.032 nm)	0.006390	ppm	0.000167	2.62	53.333100	Y 377.433
Na (589.592 nm)	57.386000 o	ppm	0.230938	0.40	374500.000000	Y_R2 488.368
Na H (589.593 nm)	60.964456	ppm	0.130509	0.21	246427.591049	Y_R 488.368
Ni (231.604 nm)	0.003240	ppm	0.000755	23.32	21.121700	Y 377.433
P (213.618 nm)	0.003483	ppm	0.001158	33.26	24.661900	Y 242.219
Pb (220.353 nm)	-0.000910 u	ppm	0.000224	24.67	4.636430	Y 242.219
S (181.972 nm)	176.312822 bo	ppm	0.139080	0.08	77097.784714	Y 377.433
Sb (206.834 nm)	-0.001487 u	ppm	0.001813	> 100.00	-34.901000	Y 377.433
Se (196.026 nm)	0.002538	ppm	0.002717	> 100.00	13.911200	Y 242.219
Si (288.158 nm)	6.507620	ppm	0.077108	1.18	58085.300000	Y 377.433
Sn (189.925 nm)	0.002186	ppm	0.002343	> 100.00	12.846300	Y 377.433
Sr (421.552 nm)	1.317342 o	ppm	0.000468	0.04	278466.454256	Y_R 488.368
Th (288.505 nm)	0.004488	ppm	0.001088	24.24	90.343200	Y 377.433
Ti (336.122 nm)	-0.000483 u	ppm	0.000068	14.02	347.838000	Y 377.433
Tl (190.794 nm)	0.002035	ppm	0.002172	> 100.00	2.463510	Y 377.433
U (409.013 nm)	-0.009839 u	ppm	0.005956	60.54	-198.159000	Y 377.433
V (292.401 nm)	0.000136	ppm	0.000050	36.79	28.211600	Y 377.433
Zn (206.200 nm)	0.007398	ppm	0.000262	3.54	40.330900	Y 377.433
Zr (343.823 nm)	-0.000016 u	ppm	0.000094	> 100.00	35.640100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.950767	17051.086734	0.000780	0.08
Y 377.433	0.968161	944190.707416	0.000031	0.00
Y_R 377.433	0.983811	70778.800000	0.008642	0.88
Y_R 488.368	0.990067	39125.500000	0.005157	0.52
Y_R2 488.368	0.995285	75810.506914	0.000439	0.04

Sample Name: 280-123273-E-3-B

Date: 5/14/2019 3:08:30 AM

Rack:Tube: 2:86

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.054363 n	ppm	0.027802	51.14	-2205.082351	Y_R 488.368
Ag (328.068 nm)	0.000928	ppm	0.000268	28.86	-305.736000	Y 377.433
Al (167.019 nm)	0.014794	ppm	0.001920	12.98	9.281670	Y_R 377.433
Al H (396.152 nm)	-0.050467 u	ppm	0.008228	16.30	324.261684	Y_R 377.433
As (188.980 nm)	-0.000701 u	ppm	0.001034	> 100.00	-0.884787	Y 242.219
B (249.678 nm)	0.181474	ppm	0.000501	0.28	4557.350000	Y 242.219
Ba (493.408 nm)	0.014976	ppm	0.000155	1.03	2340.640000	Y_R 488.368
Be (234.861 nm)	-0.000032 u	ppm	0.000002	5.66	-26.165400	Y_R 488.368
Bi (223.061 nm)	-0.003101 u	ppm	0.000880	28.38	12.783300	Y 377.433
Ca (315.887 nm)	285.847496 o	ppm	0.810722	0.28	241001.455149	Y_R 377.433
Cd (214.439 nm)	-0.000067 u	ppm	0.000181	> 100.00	-3.739830	Y 377.433
Co (228.615 nm)	0.001325	ppm	0.000254	19.20	-13.415100	Y 242.219
Cr (205.560 nm)	0.000155	ppm	0.000126	81.25	0.255981	Y 377.433
Cu (324.754 nm)	-0.000430 u	ppm	0.000119	27.80	366.357000	Y 377.433
Fe (238.204 nm)	0.136770	ppm	0.000383	0.28	518.470347	Y_R 377.433
Fe H (259.940 nm)	-0.063773 u	ppm	0.000959	1.50	253.189000	Y_R 377.433
K (766.491 nm)	5.350410	ppm	0.028160	0.53	5400.060000	Y_R2 488.368
Li (670.783 nm)	0.035756	ppm	0.001522	4.26	91.745200	Y_R2 488.368
Mg (279.078 nm)	90.834000 o	ppm	0.063772	0.07	537325.000000	Y 377.433
Mn (257.610 nm)	0.510066	ppm	0.000380	0.07	129272.000000	Y 377.433
Mo (202.032 nm)	0.000840	ppm	0.000411	49.00	4.918360	Y 377.433
Na (589.592 nm)	17.624200 o	ppm	0.001767	0.01	115646.000000	Y_R2 488.368
Na H (589.593 nm)	17.730277	ppm	0.006054	0.03	79385.850072	Y_R 488.368
Ni (231.604 nm)	0.007311	ppm	0.000860	11.76	51.314200	Y 377.433
P (213.618 nm)	0.011326	ppm	0.000146	1.29	42.588100	Y 242.219
Pb (220.353 nm)	0.000189	ppm	0.000011	5.74	8.025470	Y 242.219
S (181.972 nm)	194.954080 bo	ppm	0.120655	0.06	85245.325256	Y 377.433
Sb (206.834 nm)	-0.000087 u	ppm	0.000436	> 100.00	-31.171400	Y 377.433
Se (196.026 nm)	0.001610	ppm	0.000172	10.66	12.591700	Y 242.219
Si (288.158 nm)	5.216100	ppm	0.001649	0.03	46723.500000	Y 377.433
Sn (189.925 nm)	0.001167 u	ppm	0.001660	> 100.00	10.686300	Y 377.433
Sr (421.552 nm)	1.075372	ppm	0.001275	0.12	227338.882419	Y_R 488.368
Th (288.505 nm)	0.002944	ppm	0.001402	47.62	72.747300	Y 377.433
Ti (336.122 nm)	-0.000260 u	ppm	0.000018	6.78	676.059000	Y 377.433
Tl (190.794 nm)	-0.000027 u	ppm	0.000148	> 100.00	-2.284420	Y 377.433
U (409.013 nm)	-0.004756 u	ppm	0.003582	75.32	-192.666000	Y 377.433
V (292.401 nm)	0.000081	ppm	0.000107	> 100.00	25.299200	Y 377.433
Zn (206.200 nm)	0.004307	ppm	0.000149	3.45	24.218200	Y 377.433
Zr (343.823 nm)	-0.000137 u	ppm	0.000055	39.99	19.539400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.953620	17102.249686	0.001041	0.11
Y 377.433	0.970969	946929.208112	0.000888	0.09
Y_R 377.433	0.977806	70346.700000	0.004147	0.42
Y_R 488.368	0.985874	38959.900000	0.008598	0.87
Y_R2 488.368	0.990264	75428.064474	0.001617	0.16

Sample Name: 280-123273-E-4-B

Date: 5/14/2019 3:11:52 AM

Rack:Tube: 2:87

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.100889 n	ppm	0.008138	8.07	-2091.512919	Y_R 488.368
Ag (328.068 nm)	0.000838	ppm	0.000288	34.33	-309.865000	Y 377.433
Al (167.019 nm)	0.005946	ppm	0.000937	15.75	4.219500	Y_R 377.433
Al H (396.152 nm)	-0.093420 u	ppm	0.006018	6.44	136.839913	Y_R 377.433
As (188.980 nm)	0.001541	ppm	0.000024	1.56	1.797990	Y 242.219
B (249.678 nm)	1.103270 o	ppm	0.000400	0.04	27363.600000	Y 242.219
Ba (493.408 nm)	0.025610	ppm	0.000434	1.70	3489.870000	Y_R 488.368
Be (234.861 nm)	-0.000036 u	ppm	0.000030	84.78	-17.941400	Y_R 488.368
Bi (223.061 nm)	-0.003709 u	ppm	0.000096	2.60	11.270500	Y 377.433
Ca (315.887 nm)	108.715438 o	ppm	0.132667	0.12	91599.205934	Y_R 377.433
Cd (214.439 nm)	0.000006 u	ppm	0.000021	> 100.00	1.021250	Y 377.433
Co (228.615 nm)	0.000007 u	ppm	0.000502	> 100.00	-39.724400	Y 242.219
Cr (205.560 nm)	0.000788	ppm	0.000191	24.29	9.599050	Y 377.433
Cu (324.754 nm)	0.000289 u	ppm	0.000425	> 100.00	541.543000	Y 377.433
Fe (238.204 nm)	0.444060	ppm	0.000192	0.04	1647.734499	Y_R 377.433
Fe H (259.940 nm)	0.258225 u	ppm	0.001624	0.63	854.475000	Y_R 377.433
K (766.491 nm)	11.398100	ppm	0.014022	0.12	12282.400000	Y_R2 488.368
Li (670.783 nm)	0.102561	ppm	0.002078	2.03	2141.460000	Y_R2 488.368
Mg (279.078 nm)	47.212500 o	ppm	0.014193	0.03	279294.000000	Y 377.433
Mn (257.610 nm)	0.190130	ppm	0.000160	0.08	48233.900000	Y 377.433
Mo (202.032 nm)	0.005134	ppm	0.000466	9.08	42.377100	Y 377.433
Na (589.592 nm)	87.935300 o	ppm	0.041673	0.05	573386.000000	Y_R2 488.368
Na H (589.593 nm)	92.891019	ppm	0.320434	0.34	369784.872129	Y_R 488.368
Ni (231.604 nm)	-0.001631 u	ppm	0.000730	44.78	-14.985400	Y 377.433
P (213.618 nm)	0.009669	ppm	0.000381	3.94	38.799700	Y 242.219
Pb (220.353 nm)	-0.000204 u	ppm	0.000324	> 100.00	6.858760	Y 242.219
S (181.972 nm)	79.551081 o	ppm	0.193685	0.24	34798.052648	Y 377.433
Sb (206.834 nm)	0.000510 u	ppm	0.001304	> 100.00	-29.636000	Y 377.433
Se (196.026 nm)	0.000521 u	ppm	0.000876	> 100.00	11.271800	Y 242.219
Si (288.158 nm)	4.590860	ppm	0.026507	0.58	41223.100000	Y 377.433
Sn (189.925 nm)	0.001197	ppm	0.001127	94.12	10.750100	Y 377.433
Sr (421.552 nm)	1.218950 o	ppm	0.002398	0.20	257676.510884	Y_R 488.368
Th (288.505 nm)	0.003272	ppm	0.000075	2.28	66.212300	Y 377.433
Ti (336.122 nm)	-0.000272 u	ppm	0.000103	37.75	111.551000	Y 377.433
Tl (190.794 nm)	-0.000532 u	ppm	0.000902	> 100.00	-3.472760	Y 377.433
U (409.013 nm)	-0.008231 u	ppm	0.000818	9.94	-173.513000	Y 377.433
V (292.401 nm)	-0.000232 u	ppm	0.000046	19.67	10.779600	Y 377.433
Zn (206.200 nm)	0.000853	ppm	0.000308	36.09	6.217350	Y 377.433
Zr (343.823 nm)	-0.000045 u	ppm	0.000003	5.89	32.929500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.962914	17268.926966	0.001337	0.14
Y 377.433	0.973470	949368.461728	0.001135	0.12
Y_R 377.433	0.955213	68721.300000	0.000982	0.10
Y_R 488.368	0.964733	38124.400000	0.000795	0.08
Y_R2 488.368	0.975596	74310.828225	0.002169	0.22

Sample Name: 280-123273-E-5-B

Date: 5/14/2019 3:15:14 AM

Rack:Tube: 2:88

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.116334 n	ppm	0.001351	1.16	-2053.810675	Y_R 488.368
Ag (328.068 nm)	0.000949	ppm	0.000377	39.78	-304.558000	Y 377.433
Al (167.019 nm)	0.016539	ppm	0.001508	9.12	14.132800	Y_R 377.433
Al H (396.152 nm)	-0.027312 u	ppm	0.013317	48.76	470.261567	Y_R 377.433
As (188.980 nm)	0.005850	ppm	0.002533	43.31	6.917350	Y 242.219
B (249.678 nm)	1.118490 o	ppm	0.000256	0.02	27732.900000	Y 242.219
Ba (493.408 nm)	0.014279	ppm	0.000270	1.89	2311.550000	Y_R 488.368
Be (234.861 nm)	-0.000156 u	ppm	0.000035	22.27	97.631300	Y_R 488.368
Bi (223.061 nm)	-0.002798 u	ppm	0.002839	> 100.00	14.454100	Y 377.433
Ca (315.887 nm)	482.667099 o	ppm	0.726972	0.15	407009.188067	Y_R 377.433
Cd (214.439 nm)	-0.000063 u	ppm	0.000006	9.39	1.697720	Y 377.433
Co (228.615 nm)	0.002623	ppm	0.000369	14.05	12.499000	Y 242.219
Cr (205.560 nm)	0.000981	ppm	0.000238	24.32	11.141300	Y 377.433
Cu (324.754 nm)	-0.001255 u	ppm	0.000331	26.40	176.238000	Y 377.433
Fe (238.204 nm)	5.252528	ppm	0.006068	0.12	19318.435964	Y_R 377.433
Fe H (259.940 nm)	5.296870	ppm	0.004105	0.08	10263.400000	Y_R 377.433
K (766.491 nm)	10.961400	ppm	0.071347	0.65	11785.400000	Y_R2 488.368
Li (670.783 nm)	0.123720	ppm	0.000002	0.00	2790.670000	Y_R2 488.368
Mg (279.078 nm)	261.915000 o	ppm	0.157904	0.06	1549300.000000	Y 377.433
Mn (257.610 nm)	2.582580 o	ppm	0.001446	0.06	654232.000000	Y 377.433
Mo (202.032 nm)	0.001291	ppm	0.000499	38.68	8.860230	Y 377.433
Na (589.592 nm)	87.519900 o	ppm	0.594144	0.68	570660.000000	Y_R2 488.368
Na H (589.593 nm)	92.554898	ppm	1.122781	1.21	368475.335513	Y_R 488.368
Ni (231.604 nm)	0.031250	ppm	0.000230	0.74	229.085000	Y 377.433
P (213.618 nm)	0.016830	ppm	0.000842	5.00	55.168200	Y 242.219
Pb (220.353 nm)	0.001536	ppm	0.000176	11.47	12.590400	Y 242.219
S (181.972 nm)	506.270323 bo	ppm	1.060605	0.21	221336.668213	Y 377.433
Sb (206.834 nm)	-0.002663 u	ppm	0.000978	36.73	-39.253300	Y 377.433
Se (196.026 nm)	-0.005539 u	ppm	0.005181	93.54	6.570260	Y 242.219
Si (288.158 nm)	8.788870	ppm	0.048878	0.56	78154.100000	Y 377.433
Sn (189.925 nm)	0.001624	ppm	0.000292	18.00	11.654300	Y 377.433
Sr (421.552 nm)	2.619836 o	ppm	0.025904	0.99	553679.387373	Y_R 488.368
Th (288.505 nm)	0.003978	ppm	0.001032	25.93	123.584000	Y 377.433
Ti (336.122 nm)	-0.000767 u	ppm	0.000011	1.49	1227.870000	Y 377.433
Tl (190.794 nm)	0.000535 u	ppm	0.001222	> 100.00	-1.130140	Y 377.433
U (409.013 nm)	-0.020215 u	ppm	0.000882	4.36	-299.491000	Y 377.433
V (292.401 nm)	0.000482	ppm	0.000252	52.22	43.287900	Y 377.433
Zn (206.200 nm)	0.003066	ppm	0.000840	27.39	17.752400	Y 377.433
Zr (343.823 nm)	0.000259	ppm	0.000002	0.92	89.185700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.921642	16528.755450	0.001013	0.11
Y 377.433	0.945822	922404.939829	0.001944	0.21
Y_R 377.433	0.970361	69811.100000	0.004523	0.47
Y_R 488.368	0.988330	39056.900000	0.011740	1.19
Y_R2 488.368	0.976430	74374.319273	0.001087	0.11

Sample Name: 280-123273-E-6-B

Date: 5/14/2019 3:18:36 AM

Rack:Tube: 2:89

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.091786 n	ppm	0.023588	25.70	-2113.732220	Y_R 488.368
Ag (328.068 nm)	0.001105	ppm	0.000077	6.98	-297.362000	Y 377.433
Al (167.019 nm)	-0.000607 u	ppm	0.000657	> 100.00	4.130610	Y_R 377.433
Al H (396.152 nm)	-0.050012 u	ppm	0.003088	6.17	411.801905	Y_R 377.433
As (188.980 nm)	0.001661	ppm	0.000271	16.30	1.897040	Y 242.219
B (249.678 nm)	1.523250 o	ppm	0.000877	0.06	37746.700000	Y 242.219
Ba (493.408 nm)	0.011708	ppm	0.000259	2.22	2024.110000	Y_R 488.368
Be (234.861 nm)	-0.000207 u	ppm	0.000003	1.67	93.187000	Y_R 488.368
Bi (223.061 nm)	-0.002466 u	ppm	0.001126	45.64	15.368000	Y 377.433
Ca (315.887 nm)	480.914426 o	ppm	0.628222	0.13	405530.893854	Y_R 377.433
Cd (214.439 nm)	0.000009	ppm	0.000000	3.24	6.436450	Y 377.433
Co (228.615 nm)	-0.000001 u	ppm	0.000250	> 100.00	-39.879500	Y 242.219
Cr (205.560 nm)	0.000391	ppm	0.000128	32.66	2.255300	Y 377.433
Cu (324.754 nm)	-0.002201 u	ppm	0.000227	10.30	116.252000	Y 377.433
Fe (238.204 nm)	5.590643 o	ppm	0.002561	0.05	20560.980308	Y_R 377.433
Fe H (259.940 nm)	5.643610	ppm	0.008340	0.15	10910.900000	Y_R 377.433
K (766.491 nm)	11.088000	ppm	0.067581	0.61	11929.400000	Y_R2 488.368
Li (670.783 nm)	0.119738	ppm	0.000779	0.65	2668.520000	Y_R2 488.368
Mg (279.078 nm)	236.834000 o	ppm	0.323804	0.14	1400940.000000	Y 377.433
Mn (257.610 nm)	2.785760 o	ppm	0.004215	0.15	705696.000000	Y 377.433
Mo (202.032 nm)	0.002392	ppm	0.000249	10.42	18.458300	Y 377.433
Na (589.592 nm)	133.885000 o	ppm	0.646190	0.48	872486.000000	Y_R2 488.368
Na H (589.593 nm)	141.350891	ppm	2.778027	1.97	556999.900502	Y_R 488.368
Ni (231.604 nm)	0.001778	ppm	0.000098	5.51	10.537600	Y 377.433
P (213.618 nm)	0.011580	ppm	0.001447	12.50	43.168100	Y 242.219
Pb (220.353 nm)	0.000452	ppm	0.000093	20.49	9.315260	Y 242.219
S (181.972 nm)	535.313096 bo	ppm	0.512984	0.10	234032.686286	Y 377.433
Sb (206.834 nm)	-0.001567 u	ppm	0.000545	34.78	-36.430400	Y 377.433
Se (196.026 nm)	-0.002328 u	ppm	0.002892	> 100.00	9.653340	Y 242.219
Si (288.158 nm)	8.661290	ppm	0.060542	0.70	77031.700000	Y 377.433
Sn (189.925 nm)	0.001198	ppm	0.000142	11.83	10.751700	Y 377.433
Sr (421.552 nm)	3.118730 o	ppm	0.040223	1.29	659094.225536	Y_R 488.368
Th (288.505 nm)	0.010042	ppm	0.000512	5.10	146.112000	Y 377.433
Ti (336.122 nm)	-0.001070 u	ppm	0.000000	0.04	1178.880000	Y 377.433
Tl (190.794 nm)	0.000606	ppm	0.000135	22.35	-0.985935	Y 377.433
U (409.013 nm)	-0.019175 u	ppm	0.003516	18.33	-293.907000	Y 377.433
V (292.401 nm)	0.000528	ppm	0.000074	13.96	45.717900	Y 377.433
Zn (206.200 nm)	0.001554	ppm	0.000086	5.56	9.868170	Y 377.433
Zr (343.823 nm)	0.000215	ppm	0.000045	21.10	84.236000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.924216	16574.917721	0.004449	0.48
Y 377.433	0.947500	924041.148367	0.004890	0.52
Y_R 377.433	0.979101	70439.900000	0.008064	0.82
Y_R 488.368	0.985571	38947.900000	0.024645	2.50
Y_R2 488.368	1.007117	76711.721165	0.006169	0.61

Sample Name: 280-123273-E-7-B

Date: 5/14/2019 3:21:59 AM

Rack:Tube: 2:90

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.219089 n	ppm	0.004234	1.93	-1802.986199	Y_R 488.368
Ag (328.068 nm)	0.001225	ppm	0.000272	22.23	-291.664000	Y 377.433
Al (167.019 nm)	0.003258	ppm	0.000344	10.55	3.206810	Y_R 377.433
Al H (396.152 nm)	-0.063919 u	ppm	0.000771	1.21	290.157681	Y_R 377.433
As (188.980 nm)	0.003226	ppm	0.000952	29.50	3.808520	Y 242.219
B (249.678 nm)	2.000320 o	ppm	0.000101	0.01	49556.900000	Y 242.219
Ba (493.408 nm)	0.013686	ppm	0.000236	1.72	2197.210000	Y_R 488.368
Be (234.861 nm)	-0.000055 u	ppm	0.000017	30.61	1.232330	Y_R 488.368
Bi (223.061 nm)	-0.005144 u	ppm	0.000400	7.78	7.709700	Y 377.433
Ca (315.887 nm)	284.963423 o	ppm	0.393212	0.14	240255.782602	Y_R 377.433
Cd (214.439 nm)	0.000050	ppm	0.000069	> 100.00	4.559370	Y 377.433
Co (228.615 nm)	0.004819	ppm	0.000171	3.55	56.307700	Y 242.219
Cr (205.560 nm)	-0.000103 u	ppm	0.000109	> 100.00	-3.904990	Y 377.433
Cu (324.754 nm)	-0.000335 u	ppm	0.000186	55.67	376.294000	Y 377.433
Fe (238.204 nm)	1.243252	ppm	0.001558	0.13	4584.694283	Y_R 377.433
Fe H (259.940 nm)	1.088270 u	ppm	0.000282	0.03	2404.470000	Y_R 377.433
K (766.491 nm)	13.683000	ppm	0.073943	0.54	14882.600000	Y_R2 488.368
Li (670.783 nm)	0.225566	ppm	0.000495	0.22	5915.570000	Y_R2 488.368
Mg (279.078 nm)	189.448000 o	ppm	0.194963	0.10	1120650.000000	Y 377.433
Mn (257.610 nm)	0.805602	ppm	0.000574	0.07	204131.000000	Y 377.433
Mo (202.032 nm)	0.008005	ppm	0.000143	1.79	67.417100	Y 377.433
Na (589.592 nm)	174.084000 o	ppm	0.478255	0.27	1134180.000000	Y_R2 488.368
Na H (589.593 nm)	182.346829	ppm	0.361187	0.20	715391.931348	Y_R 488.368
Ni (231.604 nm)	0.003837	ppm	0.000141	3.67	25.600800	Y 377.433
P (213.618 nm)	0.007621	ppm	0.000076	1.00	34.118800	Y 242.219
Pb (220.353 nm)	0.000248 u	ppm	0.001594	> 100.00	8.276210	Y 242.219
S (181.972 nm)	349.574913 bo	ppm	0.522224	0.15	152836.004092	Y 377.433
Sb (206.834 nm)	-0.002100 u	ppm	0.000631	30.05	-36.861900	Y 377.433
Se (196.026 nm)	-0.002837 u	ppm	0.002176	76.71	8.469900	Y 242.219
Si (288.158 nm)	8.112490	ppm	0.050677	0.62	72203.700000	Y 377.433
Sn (189.925 nm)	0.002772	ppm	0.000427	15.42	14.088200	Y 377.433
Sr (421.552 nm)	2.897664 o	ppm	0.018981	0.66	612383.580635	Y_R 488.368
Th (288.505 nm)	0.005459	ppm	0.000152	2.78	86.850800	Y 377.433
Ti (336.122 nm)	-0.000778 u	ppm	0.000005	0.63	598.637000	Y 377.433
Tl (190.794 nm)	-0.001796 u	ppm	0.000065	3.61	-6.404410	Y 377.433
U (409.013 nm)	-0.021021 u	ppm	0.005812	27.65	-267.968000	Y 377.433
V (292.401 nm)	0.000192	ppm	0.000102	52.76	30.619200	Y 377.433
Zn (206.200 nm)	0.001419	ppm	0.000086	6.03	9.167860	Y 377.433
Zr (343.823 nm)	0.000167	ppm	0.000038	22.74	64.275500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.921815	16531.861298	0.000454	0.05
Y 377.433	0.938688	915448.096930	0.001370	0.15
Y_R 377.433	0.944954	67983.300000	0.002152	0.23
Y_R 488.368	0.962329	38029.400000	0.000171	0.02
Y_R2 488.368	0.973271	74133.710531	0.006222	0.64

Sample Name: 280-123273-E-8-B

Date: 5/14/2019 3:25:24 AM

Rack:Tube: 4:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.199474 n	ppm	0.011289	5.66	-1850.867214	Y_R 488.368
Ag (328.068 nm)	0.001058	ppm	0.000149	14.07	-299.643000	Y 377.433
Al (167.019 nm)	0.012894	ppm	0.000092	0.71	8.868310	Y_R 377.433
Al H (396.152 nm)	-0.029709 u	ppm	0.002708	9.11	495.132863	Y_R 377.433
As (188.980 nm)	0.000073 u	ppm	0.000290	> 100.00	0.033236	Y 242.219
B (249.678 nm)	1.086180	ppm	0.002101	0.19	26939.900000	Y 242.219
Ba (493.408 nm)	0.010556	ppm	0.000045	0.42	1907.320000	Y_R 488.368
Be (234.861 nm)	-0.000078 u	ppm	0.000019	24.62	-9.086770	Y_R 488.368
Bi (223.061 nm)	-0.002914 u	ppm	0.000939	32.23	13.433500	Y 377.433
Ca (315.887 nm)	552.738744 o	ppm	6.219347	1.13	466111.201771	Y_R 377.433
Cd (214.439 nm)	0.000032	ppm	0.000022	67.56	3.303450	Y 377.433
Co (228.615 nm)	0.008445	ppm	0.000287	3.40	128.673000	Y 242.219
Cr (205.560 nm)	0.000222	ppm	0.000290	> 100.00	0.991126	Y 377.433
Cu (324.754 nm)	-0.001393 u	ppm	0.000054	3.87	107.331000	Y 377.433
Fe (238.204 nm)	1.107043	ppm	0.006214	0.56	4084.137018	Y_R 377.433
Fe H (259.940 nm)	0.950766 u	ppm	0.011453	1.20	2147.700000	Y_R 377.433
K (766.491 nm)	17.408300	ppm	0.061353	0.35	19122.100000	Y_R2 488.368
Li (670.783 nm)	0.273878	ppm	0.002500	0.91	7397.880000	Y_R2 488.368
Mg (279.078 nm)	244.407000 o	ppm	0.387321	0.16	1445740.000000	Y 377.433
Mn (257.610 nm)	1.504160 o	ppm	0.001885	0.13	381073.000000	Y 377.433
Mo (202.032 nm)	0.001220	ppm	0.000455	37.32	8.235480	Y 377.433
Na (589.592 nm)	90.224200 o	ppm	0.211834	0.23	588258.000000	Y_R2 488.368
Na H (589.593 nm)	96.615616	ppm	0.862168	0.89	384161.019548	Y_R 488.368
Ni (231.604 nm)	0.012438	ppm	0.000101	0.82	89.381600	Y 377.433
P (213.618 nm)	0.008787	ppm	0.001731	19.70	36.784100	Y 242.219
Pb (220.353 nm)	-0.000223 u	ppm	0.001821	> 100.00	6.822550	Y 242.219
S (181.972 nm)	592.472937 bo	ppm	1.254129	0.21	259016.513001	Y 377.433
Sb (206.834 nm)	-0.000608 u	ppm	0.001379	> 100.00	-32.787800	Y 377.433
Se (196.026 nm)	0.003693	ppm	0.000910	24.65	15.117000	Y 242.219
Si (288.158 nm)	9.046000	ppm	0.014812	0.16	80416.100000	Y 377.433
Sn (189.925 nm)	0.001613	ppm	0.000168	10.41	11.631900	Y 377.433
Sr (421.552 nm)	2.477141 o	ppm	0.020700	0.84	523528.517560	Y_R 488.368
Th (288.505 nm)	0.002554	ppm	0.000066	2.59	94.625000	Y 377.433
Ti (336.122 nm)	-0.000819 u	ppm	0.000045	5.51	1442.680000	Y 377.433
Tl (190.794 nm)	-0.000008 u	ppm	0.000054	> 100.00	-2.239780	Y 377.433
U (409.013 nm)	-0.020054 u	ppm	0.003411	17.01	-316.728000	Y 377.433
V (292.401 nm)	0.000973	ppm	0.000158	16.29	62.556500	Y 377.433
Zn (206.200 nm)	0.012425	ppm	0.000165	1.33	66.533200	Y 377.433
Zr (343.823 nm)	0.000072 u	ppm	0.000122	> 100.00	50.964700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.911848	16353.111030	0.010309	1.13
Y 377.433	0.936298	913116.423356	0.010594	1.13
Y_R 377.433	0.958325	68945.200000	0.014565	1.52
Y_R 488.368	0.966162	38180.900000	0.001791	0.19
Y_R2 488.368	0.979810	74631.816620	0.000970	0.10

Sample Name: CCVH-5699817

Date: 5/14/2019 3:28:47 AM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.176048	ppm	0.005235	2.97	-1908.048921	Y_R 488.368
Ag (328.068 nm)	0.000337	ppm	0.000222	65.71	-585.958000	Y 377.433
Al (167.019 nm)	40.845100 o	ppm	0.305568	0.75	24462.700000	Y_R 377.433
Al H (396.152 nm)	49.578830	ppm	0.112613	0.23	126516.435835	Y_R 377.433
As (188.980 nm)	-0.000897 u	ppm	0.000391	43.63	-1.535120	Y 242.219
B (249.678 nm)	0.002191	ppm	0.000114	5.21	48.188300	Y 242.219
Ba (493.408 nm)	0.001562	ppm	0.000088	5.65	821.070000	Y_R 488.368
Be (234.861 nm)	0.000670	ppm	0.000039	5.79	1672.320000	Y_R 488.368
Bi (223.061 nm)	0.981521	ppm	0.002536	0.26	2558.710000	Y 377.433
Ca (315.887 nm)	0.033334	ppm	0.004069	12.21	-68.845366	Y_R 377.433
Cd (214.439 nm)	0.001140	ppm	0.000056	4.87	118.213000	Y 377.433
Co (228.615 nm)	0.004550	ppm	0.000039	0.86	50.986700	Y 242.219
Cr (205.560 nm)	0.001414	ppm	0.000149	10.51	5.730670	Y 377.433
Cu (324.754 nm)	0.009726	ppm	0.000134	1.38	1623.710000	Y 377.433
Fe (238.204 nm)	47.876995 o	ppm	0.118639	0.25	175959.649844	Y_R 377.433
Fe H (259.940 nm)	49.890600	ppm	0.138721	0.28	93536.000000	Y_R 377.433
K (766.491 nm)	0.171207	ppm	0.051093	29.84	-493.922000	Y_R2 488.368
Li (670.783 nm)	0.011713	ppm	0.002198	18.77	-645.964000	Y_R2 488.368
Mg (279.078 nm)	0.035569	ppm	0.000763	2.15	-132.668000	Y 377.433
Mn (257.610 nm)	0.002888	ppm	0.000004	0.14	806.310000	Y 377.433
Mo (202.032 nm)	0.000636	ppm	0.000440	69.21	3.143850	Y 377.433
Na (589.592 nm)	233.969000 o	ppm	0.175658	0.08	1524000.000000	Y_R2 488.368
Na H (589.593 nm)	243.801828	ppm	0.207264	0.09	952813.415449	Y_R 488.368
Ni (231.604 nm)	0.005030	ppm	0.000644	12.80	36.601000	Y 377.433
P (213.618 nm)	-0.003004 u	ppm	0.000659	21.95	9.835260	Y 242.219
Pb (220.353 nm)	0.002044	ppm	0.002742	> 100.00	32.035300	Y 242.219
S (181.972 nm)	4.933113	ppm	0.008380	0.17	2179.592145	Y 377.433
Sb (206.834 nm)	-0.000666 u	ppm	0.000638	95.83	-77.506400	Y 377.433
Se (196.026 nm)	-0.001309 u	ppm	0.000199	15.18	1.174730	Y 242.219
Si (288.158 nm)	0.039671	ppm	0.000195	0.49	1185.060000	Y 377.433
Sn (189.925 nm)	0.005485	ppm	0.001594	29.06	19.841000	Y 377.433
Sr (421.552 nm)	0.001890	ppm	0.000056	2.98	515.301011	Y_R 488.368
Th (288.505 nm)	4.977290	ppm	0.004580	0.09	14856.000000	Y 377.433
Ti (336.122 nm)	0.002393	ppm	0.000089	3.71	149.243000	Y 377.433
Tl (190.794 nm)	-0.002240 u	ppm	0.001223	54.61	-8.761370	Y 377.433
U (409.013 nm)	10.120600	ppm	0.061037	0.60	47576.500000	Y 377.433
V (292.401 nm)	0.005016	ppm	0.000155	3.08	32.616900	Y 377.433
Zn (206.200 nm)	0.003861	ppm	0.000040	1.03	21.894300	Y 377.433
Zr (343.823 nm)	-0.003075 u	ppm	0.000007	0.23	-231.539000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.018017	18257.156895	0.002473	0.24
Y 377.433	1.021347	996059.738746	0.000058	0.01
Y_R 377.433	1.031740	74227.100000	0.004902	0.48
Y_R 488.368	1.054630	41677.000000	0.000350	0.03
Y_R2 488.368	1.070384	81530.798321	0.002759	0.26

Sample Name: CCV-5699804

Date: 5/14/2019 3:32:11 AM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.032124	ppm	0.006062	0.59	181.625305	Y_R 488.368
Ag (328.068 nm)	0.488750	ppm	0.000679	0.14	22621.200000	Y 377.433
Al (167.019 nm)	0.473614	ppm	0.003469	0.73	285.390000	Y_R 377.433
Al H (396.152 nm)	0.427357 u	ppm	0.003597	0.84	1456.201126	Y_R 377.433
As (188.980 nm)	0.960391	ppm	0.000959	0.10	1150.330000	Y 242.219
B (249.678 nm)	0.490159	ppm	0.000553	0.11	12212.700000	Y 242.219
Ba (493.408 nm)	0.487876	ppm	0.000584	0.12	55157.100000	Y_R 488.368
Be (234.861 nm)	0.477414	ppm	0.000360	0.08	138161.000000	Y_R 488.368
Bi (223.061 nm)	-0.003212 u	ppm	0.002584	80.46	12.899700	Y 377.433
Ca (315.887 nm)	5.017410	ppm	0.023569	0.47	4135.269862	Y_R 377.433
Cd (214.439 nm)	0.484942	ppm	0.000749	0.15	29566.000000	Y 377.433
Co (228.615 nm)	0.492423	ppm	0.001227	0.25	9806.470000	Y 242.219
Cr (205.560 nm)	0.489460	ppm	0.002021	0.41	7288.990000	Y 377.433
Cu (324.754 nm)	0.489878	ppm	0.000153	0.03	33014.500000	Y 377.433
Fe (238.204 nm)	2.444135	ppm	0.003238	0.13	8997.834478	Y_R 377.433
Fe H (259.940 nm)	2.371840 u	ppm	0.016369	0.69	4801.350000	Y_R 377.433
K (766.491 nm)	47.762000	ppm	0.106015	0.22	53664.800000	Y_R2 488.368
Li (670.783 nm)	0.966121	ppm	0.004489	0.46	28637.600000	Y_R2 488.368
Mg (279.078 nm)	19.145200	ppm	0.023636	0.12	113266.000000	Y 377.433
Mn (257.610 nm)	0.488614	ppm	0.000055	0.01	123839.000000	Y 377.433
Mo (202.032 nm)	0.495681	ppm	0.000237	0.05	4321.190000	Y 377.433
Na (589.592 nm)	4.739650	ppm	0.007082	0.15	32714.500000	Y_R2 488.368
Na H (589.593 nm)	4.163333 u	ppm	0.026604	0.64	27438.922698	Y_R 488.368
Ni (231.604 nm)	0.498479	ppm	0.000482	0.10	3695.150000	Y 377.433
P (213.618 nm)	0.950648	ppm	0.000551	0.06	2189.560000	Y 242.219
Pb (220.353 nm)	0.972109	ppm	0.002096	0.22	2974.360000	Y 242.219
S (181.972 nm)	0.060326	ppm	0.006994	11.59	50.550539	Y 377.433
Sb (206.834 nm)	1.007110	ppm	0.000109	0.01	2677.030000	Y 377.433
Se (196.026 nm)	0.958505	ppm	0.000693	0.07	903.489000	Y 242.219
Si (288.158 nm)	4.878160	ppm	0.009957	0.20	43750.500000	Y 377.433
Sn (189.925 nm)	0.977972	ppm	0.000672	0.07	2082.040000	Y 377.433
Sr (421.552 nm)	0.486262	ppm	0.000634	0.13	102861.615014	Y_R 488.368
Th (288.505 nm)	0.003521	ppm	0.000241	6.86	80.697400	Y 377.433
Ti (336.122 nm)	0.493137	ppm	0.000163	0.03	70647.900000	Y 377.433
Tl (190.794 nm)	0.983394	ppm	0.002768	0.28	2267.150000	Y 377.433
U (409.013 nm)	-0.000666 u	ppm	0.001392	> 100.00	-154.994000	Y 377.433
V (292.401 nm)	0.488243	ppm	0.000284	0.06	20523.200000	Y 377.433
Zn (206.200 nm)	0.483461	ppm	0.000943	0.20	2521.840000	Y 377.433
Zr (343.823 nm)	0.492354	ppm	0.000317	0.06	66951.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.033490	18534.638654	0.003544	0.34
Y 377.433	1.043348	1017516.596803	0.002806	0.27
Y_R 377.433	1.034280	74409.800000	0.001874	0.18
Y_R 488.368	1.056380	41746.100000	0.003939	0.37
Y_R2 488.368	1.083062	82496.480035	0.014962	1.38

Sample Name: CCB

Date: 5/14/2019 3:35:34 AM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.103745 Z	ppm	0.004304	4.15	-2084.539660 Z	Y_R 488.368
Ag (328.068 nm)	0.000344	ppm	0.000231	67.05	-332.851000	Y 377.433
Al (167.019 nm)	0.005620	ppm	0.004446	79.10	3.696000	Y_R 377.433
Al H (396.152 nm)	-0.113358 Zu	ppm	0.003441	3.04	37.574472 Z	Y_R 377.433
As (188.980 nm)	-0.001754 u	ppm	0.002777	> 100.00	-2.145180	Y 242.219
B (249.678 nm)	0.000512	ppm	0.000326	63.81	80.233400	Y 242.219
Ba (493.408 nm)	-0.000749 u	ppm	0.000228	30.47	518.280000	Y_R 488.368
Be (234.861 nm)	0.000018	ppm	0.000015	83.82	-15.779400	Y_R 488.368
Bi (223.061 nm)	-0.001144 u	ppm	0.001451	> 100.00	17.804900	Y 377.433
Ca (315.887 nm)	0.015359	ppm	0.000253	1.65	-84.007703	Y_R 377.433
Cd (214.439 nm)	0.000017	ppm	0.000009	52.02	1.255490	Y 377.433
Co (228.615 nm)	0.000785	ppm	0.000112	14.28	-24.207000	Y 242.219
Cr (205.560 nm)	0.000035 u	ppm	0.000177	> 100.00	-1.487960	Y 377.433
Cu (324.754 nm)	0.000660	ppm	0.000113	17.13	640.230000	Y 377.433
Fe (238.204 nm)	0.002935	ppm	0.002132	72.64	26.636757	Y_R 377.433
Fe H (259.940 nm)	-0.188908 u	ppm	0.001076	0.57	19.517900	Y_R 377.433
K (766.491 nm)	0.015860 u	ppm	0.034760	> 100.00	-670.708000	Y_R2 488.368
Li (670.783 nm)	0.008657	ppm	0.001227	14.18	-739.726000	Y_R2 488.368
Mg (279.078 nm)	0.003053	ppm	0.000828	27.11	40.679900	Y 377.433
Mn (257.610 nm)	0.000038	ppm	0.000002	6.48	84.305400	Y 377.433
Mo (202.032 nm)	0.000210	ppm	0.000176	83.95	-0.574049	Y 377.433
Na (589.592 nm)	0.041241	ppm	0.001045	2.53	1150.530000	Y_R2 488.368
Na H (589.593 nm)	-1.120579 u	ppm	0.005166	0.46	6538.256441	Y_R 488.368
Ni (231.604 nm)	0.000482	ppm	0.000057	11.83	0.664906	Y 377.433
P (213.618 nm)	-0.002197 u	ppm	0.000954	43.40	11.678400	Y 242.219
Pb (220.353 nm)	-0.001391 u	ppm	0.000148	10.66	3.219370	Y 242.219
S (181.972 nm)	0.044463	ppm	0.000422	0.95	42.589533	Y 377.433
Sb (206.834 nm)	0.003951	ppm	0.000604	15.30	-20.315900	Y 377.433
Se (196.026 nm)	-0.000050 u	ppm	0.000222	> 100.00	10.676800	Y 242.219
Si (288.158 nm)	-0.004631 u	ppm	0.000200	4.31	795.323000	Y 377.433
Sn (189.925 nm)	-0.000560 u	ppm	0.001524	> 100.00	7.022460	Y 377.433
Sr (421.552 nm)	-0.000049 u	ppm	0.000107	> 100.00	105.580350	Y_R 488.368
Th (288.505 nm)	0.003189	ppm	0.001622	50.88	61.494700	Y 377.433
Ti (336.122 nm)	0.000162	ppm	0.000021	13.05	-171.385000	Y 377.433
Tl (190.794 nm)	0.000885	ppm	0.000925	> 100.00	-0.175081	Y 377.433
U (409.013 nm)	0.000546 u	ppm	0.003526	> 100.00	-111.044000	Y 377.433
V (292.401 nm)	-0.000182 u	ppm	0.000008	4.26	11.443000	Y 377.433
Zn (206.200 nm)	-0.000363 u	ppm	0.000014	3.88	-0.120429	Y 377.433
Zr (343.823 nm)	0.000038	ppm	0.000018	47.70	42.937700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.043311	18710.767940	0.001442	0.14
Y 377.433	1.055797	1029656.996240	0.000919	0.09
Y_R 377.433	1.033580	74359.000000	0.000056	0.01
Y_R 488.368	1.050870	41528.400000	0.006159	0.59
Y_R2 488.368	1.079746	82243.904855	0.000192	0.02

Sample Name: CCVL-5699389

Date: 5/14/2019 3:38:57 AM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.168461 Q	ppm	0.005709	3.39	-1926.569223 Q	Y_R 488.368
Ag (328.068 nm)	0.009534	ppm	0.000107	1.12	98.174100	Y 377.433
Al (167.019 nm)	0.088733	ppm	0.000358	0.40	53.474000	Y_R 377.433
Al H (396.152 nm)	-0.014628 u	ppm	0.001824	12.47	290.462316	Y_R 377.433
As (188.980 nm)	0.013460	ppm	0.000208	1.54	16.077400	Y 242.219
B (249.678 nm)	0.095616	ppm	0.000363	0.38	2433.510000	Y 242.219
Ba (493.408 nm)	0.009048	ppm	0.000109	1.20	1613.590000	Y_R 488.368
Be (234.861 nm)	0.000941	ppm	0.000005	0.54	253.621000	Y_R 488.368
Bi (223.061 nm)	0.097514	ppm	0.001775	1.82	272.089000	Y 377.433
Ca (315.887 nm)	0.225454	ppm	0.002280	1.01	93.199565	Y_R 377.433
Cd (214.439 nm)	0.004903	ppm	0.000057	1.15	299.220000	Y 377.433
Co (228.615 nm)	0.010415	ppm	0.000144	1.38	168.320000	Y 242.219
Cr (205.560 nm)	0.009913	ppm	0.000130	1.31	145.694000	Y 377.433
Cu (324.754 nm)	0.015424	ppm	0.000447	2.90	1617.750000	Y 377.433
Fe (238.204 nm)	0.102474	ppm	0.001154	1.13	392.432497	Y_R 377.433
Fe H (259.940 nm)	-0.092478 u	ppm	0.000389	0.42	199.587000	Y_R 377.433
K (766.491 nm)	2.976850	ppm	0.016581	0.56	2698.930000	Y_R2 488.368
Li (670.783 nm)	0.028950 Q	ppm	0.000931	3.22	-117.090000 Q	Y_R2 488.368
Mg (279.078 nm)	0.190415	ppm	0.002608	1.37	1147.640000	Y 377.433
Mn (257.610 nm)	0.010049	ppm	0.000014	0.14	2620.040000	Y 377.433
Mo (202.032 nm)	0.018861	ppm	0.000335	1.78	162.110000	Y 377.433
Na (589.592 nm)	0.941394	ppm	0.008928	0.95	7029.880000	Y_R2 488.368
Na H (589.593 nm)	-0.375049 u	ppm	0.033914	9.04	9428.314311	Y_R 488.368
Ni (231.604 nm)	0.041063	ppm	0.000190	0.46	301.629000	Y 377.433
P (213.618 nm)	2.726550 o	ppm	0.011775	0.43	6248.680000	Y 242.219
Pb (220.353 nm)	0.007480	ppm	0.001899	25.39	30.326200	Y 242.219
S (181.972 nm)	0.118486	ppm	0.003407	2.88	74.968614	Y 377.433
Sb (206.834 nm)	0.019553	ppm	0.000218	1.12	21.562500	Y 377.433
Se (196.026 nm)	0.015029	ppm	0.001378	9.17	24.713300	Y 242.219
Si (288.158 nm)	0.554187	ppm	0.020927	3.78	5711.400000	Y 377.433
Sn (189.925 nm)	0.097132	ppm	0.000433	0.45	214.182000	Y 377.433
Sr (421.552 nm)	0.009725	ppm	0.000038	0.39	2170.879544	Y_R 488.368
Th (288.505 nm)	0.015365	ppm	0.000843	5.49	98.712000	Y 377.433
Ti (336.122 nm)	0.009697	ppm	0.000093	0.96	1198.630000	Y 377.433
Tl (190.794 nm)	0.014803	ppm	0.000311	2.10	31.912600	Y 377.433
U (409.013 nm)	0.062321	ppm	0.001776	2.85	178.998000	Y 377.433
V (292.401 nm)	0.009445	ppm	0.000005	0.05	414.229000	Y 377.433
Zn (206.200 nm)	0.019596	ppm	0.000050	0.26	103.914000	Y 377.433
Zr (343.823 nm)	0.010515	ppm	0.000197	1.87	1466.990000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.051415	18856.106134	0.005317	0.51
Y 377.433	1.062385	1036082.528200	0.004436	0.42
Y_R 377.433	1.055730	75952.800000	0.002824	0.27
Y_R 488.368	1.084570	42860.100000	0.000386	0.04
Y_R2 488.368	1.096505	83520.421326	0.000583	0.05

Sample Name: 280-123273-E-9-B

Date: 5/14/2019 3:42:20 AM

Rack:Tube: 4:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.136526 n	ppm	0.029802	21.83	-2004.520938	Y_R 488.368
Ag (328.068 nm)	0.001104	ppm	0.000170	15.37	-297.353000	Y 377.433
Al (167.019 nm)	0.005775	ppm	0.001138	19.70	3.861110	Y_R 377.433
Al H (396.152 nm)	-0.055504 u	ppm	0.003456	6.23	333.637434	Y_R 377.433
As (188.980 nm)	0.000060 u	ppm	0.000166	> 100.00	0.026288	Y 242.219
B (249.678 nm)	1.276520 o	ppm	0.000380	0.03	31650.600000	Y 242.219
Ba (493.408 nm)	0.017955	ppm	0.000240	1.34	2684.780000	Y_R 488.368
Be (234.861 nm)	-0.000083 u	ppm	0.000011	13.79	-42.232300	Y_R 488.368
Bi (223.061 nm)	-0.005945 u	ppm	0.000039	0.66	5.447190	Y 377.433
Ca (315.887 nm)	335.797310 o	ppm	1.452480	0.43	283131.686365	Y_R 377.433
Cd (214.439 nm)	-0.000029 u	ppm	0.000027	94.73	-1.428200	Y 377.433
Co (228.615 nm)	0.000077 u	ppm	0.000260	> 100.00	-38.331300	Y 242.219
Cr (205.560 nm)	0.000189	ppm	0.000166	87.94	0.766922	Y 377.433
Cu (324.754 nm)	-0.000722 u	ppm	0.000133	18.37	308.079000	Y 377.433
Fe (238.204 nm)	0.100013	ppm	0.000575	0.57	383.388394	Y_R 377.433
Fe H (259.940 nm)	-0.105171 u	ppm	0.000629	0.60	175.884000	Y_R 377.433
K (766.491 nm)	10.429900	ppm	0.027296	0.26	11180.500000	Y_R2 488.368
Li (670.783 nm)	0.109455	ppm	0.001618	1.48	2353.010000	Y_R2 488.368
Mg (279.078 nm)	184.627000 o	ppm	0.114663	0.06	1092130.000000	Y 377.433
Mn (257.610 nm)	1.718610 o	ppm	0.000857	0.05	435393.000000	Y 377.433
Mo (202.032 nm)	0.003036	ppm	0.000266	8.76	24.073400	Y 377.433
Na (589.592 nm)	111.872000 o	ppm	0.087241	0.08	729195.000000	Y_R2 488.368
Na H (589.593 nm)	116.426790	ppm	0.272171	0.23	460709.259290	Y_R 488.368
Ni (231.604 nm)	0.004262	ppm	0.000189	4.45	28.701400	Y 377.433
P (213.618 nm)	0.007389	ppm	0.000730	9.88	33.590300	Y 242.219
Pb (220.353 nm)	0.000769	ppm	0.000391	50.86	9.764240	Y 242.219
S (181.972 nm)	349.987526 bo	ppm	0.187975	0.05	153018.295240	Y 377.433
Sb (206.834 nm)	0.002668	ppm	0.003081	> 100.00	-23.777000	Y 377.433
Se (196.026 nm)	-0.000684 u	ppm	0.000041	6.04	11.396200	Y 242.219
Si (288.158 nm)	7.864520	ppm	0.009197	0.12	70022.300000	Y 377.433
Sn (189.925 nm)	0.000732	ppm	0.000506	69.20	9.762890	Y 377.433
Sr (421.552 nm)	2.274574 o	ppm	0.000628	0.03	480726.573461	Y_R 488.368
Th (288.505 nm)	0.003787	ppm	0.003359	88.71	103.261000	Y 377.433
Ti (336.122 nm)	-0.000675 u	ppm	0.000044	6.48	774.597000	Y 377.433
Tl (190.794 nm)	0.001198	ppm	0.000521	43.53	0.536429	Y 377.433
U (409.013 nm)	-0.017225 u	ppm	0.001411	8.19	-261.305000	Y 377.433
V (292.401 nm)	0.000299	ppm	0.000119	39.77	33.575200	Y 377.433
Zn (206.200 nm)	0.001159	ppm	0.000312	26.90	7.810470	Y 377.433
Zr (343.823 nm)	-0.000017 u	ppm	0.000052	> 100.00	35.789400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.950912	17053.688207	0.004945	0.52
Y 377.433	0.973052	948960.420866	0.005462	0.56
Y_R 377.433	1.008320	72541.800000	0.001900	0.19
Y_R 488.368	1.028300	40636.300000	0.001025	0.10
Y_R2 488.368	1.026688	78202.485591	0.017896	1.74

Sample Name: 280-123273-E-10-B

Date: 5/14/2019 3:45:43 AM

Rack:Tube: 4:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.146684 n	ppm	0.005729	3.91	-1979.727521	Y_R 488.368
Ag (328.068 nm)	0.001112	ppm	0.000108	9.70	-296.918000	Y 377.433
Al (167.019 nm)	0.018342	ppm	0.001786	9.74	12.543000	Y_R 377.433
Al H (396.152 nm)	-0.043207 u	ppm	0.007892	18.27	316.823359	Y_R 377.433
As (188.980 nm)	-0.000771 u	ppm	0.000078	10.10	-0.983023	Y 242.219
B (249.678 nm)	1.131420 o	ppm	0.000712	0.06	28058.300000	Y 242.219
Ba (493.408 nm)	0.025420	ppm	0.000208	0.82	3496.440000	Y_R 488.368
Be (234.861 nm)	-0.000151 u	ppm	0.000001	0.88	-12.885200	Y_R 488.368
Bi (223.061 nm)	-0.002715 u	ppm	0.002587	95.30	14.045400	Y 377.433
Ca (315.887 nm)	227.253970 o	ppm	0.574383	0.25	191580.674021	Y_R 377.433
Cd (214.439 nm)	0.000067	ppm	0.000010	15.20	6.001950	Y 377.433
Co (228.615 nm)	0.002248	ppm	0.000064	2.83	5.007550	Y 242.219
Cr (205.560 nm)	0.000063 u	ppm	0.000227	> 100.00	-1.541800	Y 377.433
Cu (324.754 nm)	0.000084	ppm	0.000089	> 100.00	445.301000	Y 377.433
Fe (238.204 nm)	1.667078	ppm	0.000218	0.01	6142.218046	Y_R 377.433
Fe H (259.940 nm)	1.524610 u	ppm	0.010754	0.71	3219.270000	Y_R 377.433
K (766.491 nm)	8.649450	ppm	0.098397	1.14	9154.390000	Y_R2 488.368
Li (670.783 nm)	0.099812	ppm	0.000311	0.31	2057.140000	Y_R2 488.368
Mg (279.078 nm)	134.095000 o	ppm	0.345099	0.26	793223.000000	Y 377.433
Mn (257.610 nm)	1.929400 o	ppm	0.004058	0.21	488784.000000	Y 377.433
Mo (202.032 nm)	0.001745	ppm	0.000294	16.87	12.814800	Y 377.433
Na (589.592 nm)	77.551900 o	ppm	0.268037	0.35	505791.000000	Y_R2 488.368
Na H (589.593 nm)	81.492893	ppm	0.471272	0.58	325747.354866	Y_R 488.368
Ni (231.604 nm)	0.001269	ppm	0.000945	74.42	6.582570	Y 377.433
P (213.618 nm)	0.016712	ppm	0.002198	13.15	54.898500	Y 242.219
Pb (220.353 nm)	-0.000086 u	ppm	0.001471	> 100.00	7.310270	Y 242.219
S (181.972 nm)	171.274625 bo	ppm	0.005693	0.00	74897.213477	Y 377.433
Sb (206.834 nm)	-0.001411 u	ppm	0.002165	> 100.00	-35.076300	Y 377.433
Se (196.026 nm)	0.001905 u	ppm	0.002914	> 100.00	13.674800	Y 242.219
Si (288.158 nm)	8.438670	ppm	0.004002	0.05	75073.300000	Y 377.433
Sn (189.925 nm)	0.001512	ppm	0.000118	7.78	11.417800	Y 377.433
Sr (421.552 nm)	1.541466 o	ppm	0.008272	0.54	325823.053468	Y_R 488.368
Th (288.505 nm)	0.002288	ppm	0.001605	70.14	103.690000	Y 377.433
Ti (336.122 nm)	-0.000263 u	ppm	0.000018	6.71	489.217000	Y 377.433
Tl (190.794 nm)	-0.000440 u	ppm	0.000243	55.35	-3.281210	Y 377.433
U (409.013 nm)	-0.013936 u	ppm	0.002247	16.13	-222.719000	Y 377.433
V (292.401 nm)	0.000154 u	ppm	0.000395	> 100.00	28.688100	Y 377.433
Zn (206.200 nm)	0.004001	ppm	0.000117	2.92	22.623200	Y 377.433
Zr (343.823 nm)	0.000033 u	ppm	0.000116	> 100.00	47.448200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.963675	17282.584940	0.000676	0.07
Y 377.433	0.984771	960389.271874	0.001258	0.13
Y_R 377.433	0.997251	71745.700000	0.003801	0.38
Y_R 488.368	1.013840	40065.200000	0.003800	0.37
Y_R2 488.368	0.999378	76122.292354	0.013519	1.35

Sample Name: 280-123273-E-11-B

Date: 5/14/2019 3:49:07 AM

Rack:Tube: 4:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.102992 n	ppm	0.014563	14.14	-2086.379131	Y_R 488.368
Ag (328.068 nm)	0.001322	ppm	0.000033	2.53	-287.126000	Y 377.433
Al (167.019 nm)	0.005533	ppm	0.003614	65.32	6.649060	Y_R 377.433
Al H (396.152 nm)	-0.060635 u	ppm	0.002936	4.84	314.329474	Y_R 377.433
As (188.980 nm)	0.002827	ppm	0.001402	49.59	3.307090	Y 242.219
B (249.678 nm)	0.920928	ppm	0.002157	0.23	22846.700000	Y 242.219
Ba (493.408 nm)	0.013285	ppm	0.000113	0.85	2163.300000	Y_R 488.368
Be (234.861 nm)	-0.000161 u	ppm	0.000001	0.39	58.225400	Y_R 488.368
Bi (223.061 nm)	-0.002970 u	ppm	0.003392	> 100.00	13.800500	Y 377.433
Ca (315.887 nm)	322.125583 o	ppm	0.190634	0.06	271600.251199	Y_R 377.433
Cd (214.439 nm)	-0.000026 u	ppm	0.000018	71.10	2.745720	Y 377.433
Co (228.615 nm)	0.002601	ppm	0.000006	0.24	12.041100	Y 242.219
Cr (205.560 nm)	0.000235 u	ppm	0.000413	> 100.00	0.363532	Y 377.433
Cu (324.754 nm)	-0.000978 u	ppm	0.000253	25.84	308.768000	Y 377.433
Fe (238.204 nm)	4.036672	ppm	0.011790	0.29	14850.270824	Y_R 377.433
Fe H (259.940 nm)	4.007800 u	ppm	0.002661	0.07	7856.280000	Y_R 377.433
K (766.491 nm)	11.390700	ppm	0.021735	0.19	12274.000000	Y_R2 488.368
Li (670.783 nm)	0.101272	ppm	0.001100	1.09	2101.920000	Y_R2 488.368
Mg (279.078 nm)	278.718000 o	ppm	0.425228	0.15	1648700.000000	Y 377.433
Mn (257.610 nm)	2.307280 o	ppm	0.004435	0.19	584501.000000	Y 377.433
Mo (202.032 nm)	0.000734	ppm	0.000393	53.57	3.998650	Y 377.433
Na (589.592 nm)	47.014500 o	ppm	0.131718	0.28	306973.000000	Y_R2 488.368
Na H (589.593 nm)	48.995664	ppm	0.163098	0.33	200181.031842	Y_R 488.368
Ni (231.604 nm)	0.003281	ppm	0.000053	1.61	21.609900	Y 377.433
P (213.618 nm)	0.007629	ppm	0.000672	8.81	34.138300	Y 242.219
Pb (220.353 nm)	0.000693	ppm	0.000920	> 100.00	9.923860	Y 242.219
S (181.972 nm)	346.138687 bo	ppm	0.821556	0.24	151337.076545	Y 377.433
Sb (206.834 nm)	-0.000269 u	ppm	0.000686	> 100.00	-32.575200	Y 377.433
Se (196.026 nm)	-0.001599 u	ppm	0.001113	69.59	10.256900	Y 242.219
Si (288.158 nm)	8.469430	ppm	0.049488	0.58	75343.800000	Y 377.433
Sn (189.925 nm)	0.001141	ppm	0.000694	60.82	10.631000	Y 377.433
Sr (421.552 nm)	2.260364 o	ppm	0.003801	0.17	477724.181426	Y_R 488.368
Th (288.505 nm)	0.000918 u	ppm	0.002566	> 100.00	108.386000	Y 377.433
Ti (336.122 nm)	-0.000639 u	ppm	0.000037	5.76	736.337000	Y 377.433
Tl (190.794 nm)	0.000932	ppm	0.000245	26.35	-0.177316	Y 377.433
U (409.013 nm)	-0.014788 u	ppm	0.003171	21.44	-243.229000	Y 377.433
V (292.401 nm)	0.000318	ppm	0.000061	19.21	35.790500	Y 377.433
Zn (206.200 nm)	-0.000125 u	ppm	0.000231	> 100.00	1.117830	Y 377.433
Zr (343.823 nm)	0.000185	ppm	0.000084	45.23	75.362300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.932934	16731.275337	0.003447	0.37
Y 377.433	0.955850	932185.042428	0.004000	0.42
Y_R 377.433	0.972542	69968.100000	0.005191	0.53
Y_R 488.368	0.979933	38725.100000	0.000320	0.03
Y_R2 488.368	1.003461	76433.259500	0.000735	0.07

Sample Name: MB 280-457757/1-A

Date: 5/14/2019 3:52:32 AM

Rack:Tube: 4:5

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.093031 n	ppm	0.007943	8.54	-2110.692050	Y_R 488.368
Ag (328.068 nm)	0.000732	ppm	0.000217	29.63	-314.634000	Y 377.433
Al (167.019 nm)	0.003110	ppm	0.000500	16.07	2.200440	Y_R 377.433
Al H (396.152 nm)	-0.114483 u	ppm	0.003682	3.22	34.712082	Y_R 377.433
As (188.980 nm)	-0.000943 u	ppm	0.000133	14.07	-1.173890	Y 242.219
B (249.678 nm)	0.001334	ppm	0.000088	6.61	100.559000	Y 242.219
Ba (493.408 nm)	-0.000576 u	ppm	0.000024	4.24	537.602000	Y_R 488.368
Be (234.861 nm)	-0.000021 u	ppm	0.000001	2.98	-26.944800	Y_R 488.368
Bi (223.061 nm)	-0.003822 u	ppm	0.000781	20.42	10.904100	Y 377.433
Ca (315.887 nm)	0.029818	ppm	0.005575	18.70	-71.812323	Y_R 377.433
Cd (214.439 nm)	-0.000012 u	ppm	0.000066	> 100.00	-0.486181	Y 377.433
Co (228.615 nm)	0.000385	ppm	0.000101	26.13	-32.178800	Y 242.219
Cr (205.560 nm)	0.000025 u	ppm	0.000365	> 100.00	-1.649010	Y 377.433
Cu (324.754 nm)	0.000659	ppm	0.000088	13.38	641.117000	Y 377.433
Fe (238.204 nm)	0.010451	ppm	0.000284	2.72	54.258451	Y_R 377.433
Fe H (259.940 nm)	-0.185326 u	ppm	0.000049	0.03	26.205300	Y_R 377.433
K (766.491 nm)	-0.028521 u	ppm	0.011145	39.08	-721.214000	Y_R2 488.368
Li (670.783 nm)	0.009906	ppm	0.001617	16.32	-701.416000	Y_R2 488.368
Mg (279.078 nm)	0.007626	ppm	0.000612	8.02	67.742600	Y 377.433
Mn (257.610 nm)	0.000262	ppm	0.000033	12.76	141.017000	Y 377.433
Mo (202.032 nm)	0.000093 u	ppm	0.000184	> 100.00	-1.591560	Y 377.433
Na (589.592 nm)	-0.029807 u	ppm	0.006299	21.13	688.233000	Y_R2 488.368
Na H (589.593 nm)	-1.312621 u	ppm	0.016858	1.28	5796.395032	Y_R 488.368
Ni (231.604 nm)	0.000387	ppm	0.000284	73.38	-0.045263	Y 377.433
P (213.618 nm)	-0.003343 u	ppm	0.001249	37.36	9.060250	Y 242.219
Pb (220.353 nm)	-0.001463 u	ppm	0.001143	78.12	3.000120	Y 242.219
S (181.972 nm)	0.069235	ppm	0.001243	1.80	53.418801	Y 377.433
Sb (206.834 nm)	0.002426	ppm	0.000439	18.10	-24.392200	Y 377.433
Se (196.026 nm)	-0.001104 u	ppm	0.002205	> 100.00	9.693800	Y 242.219
Si (288.158 nm)	-0.001177 u	ppm	0.001123	95.37	825.711000	Y 377.433
Sn (189.925 nm)	-0.000735 u	ppm	0.000055	7.44	6.652180	Y 377.433
Sr (421.552 nm)	0.000001	ppm	0.000000	32.03	116.287479	Y_R 488.368
Th (288.505 nm)	0.001568 u	ppm	0.002371	> 100.00	56.722000	Y 377.433
Ti (336.122 nm)	-0.000002 u	ppm	0.000132	> 100.00	-194.823000	Y 377.433
Tl (190.794 nm)	-0.000898 u	ppm	0.000861	95.87	-4.292820	Y 377.433
U (409.013 nm)	-0.005502 u	ppm	0.001188	21.59	-139.490000	Y 377.433
V (292.401 nm)	-0.000354 u	ppm	0.000078	21.92	4.578770	Y 377.433
Zn (206.200 nm)	-0.000074 u	ppm	0.000268	> 100.00	1.384250	Y 377.433
Zr (343.823 nm)	-0.000151 u	ppm	0.000106	70.22	17.194300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.018361	18263.309790	0.005632	0.55
Y 377.433	1.029281	1003798.045817	0.005559	0.54
Y_R 377.433	1.022100	73533.500000	0.001756	0.17
Y_R 488.368	1.030400	40719.300000	0.000493	0.05
Y_R2 488.368	1.062043	80895.439719	0.003068	0.29

Sample Name: LCS 280-457757/2-A

Date: 5/14/2019 3:55:56 AM

Rack:Tube: 4:6

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.062437 n	ppm	0.005271	0.50	255.621031	Y_R 488.368
Ag (328.068 nm)	-0.000381 u	ppm	0.000003	0.80	-480.861000	Y 377.433
Al (167.019 nm)	9.147450 o	ppm	0.015649	0.17	5478.370000	Y_R 377.433
Al H (396.152 nm)	10.540436	ppm	0.035786	0.34	27261.954386	Y_R 377.433
As (188.980 nm)	2.044140	ppm	0.003713	0.18	2448.420000	Y 242.219
B (249.678 nm)	1.022420	ppm	0.001384	0.14	25391.400000	Y 242.219
Ba (493.408 nm)	2.062380 o	ppm	0.003955	0.19	231209.000000	Y_R 488.368
Be (234.861 nm)	1.008400	ppm	0.005089	0.50	292014.000000	Y_R 488.368
Bi (223.061 nm)	2.007120	ppm	0.002852	0.14	5195.370000	Y 377.433
Ca (315.887 nm)	51.878779 o	ppm	0.245312	0.47	43660.862150	Y_R 377.433
Cd (214.439 nm)	1.004440	ppm	0.000675	0.07	61243.600000	Y 377.433
Co (228.615 nm)	0.980583	ppm	0.000518	0.05	19570.300000	Y 242.219
Cr (205.560 nm)	1.019690	ppm	0.000382	0.04	15185.800000	Y 377.433
Cu (324.754 nm)	1.012120	ppm	0.003442	0.34	67606.000000	Y 377.433
Fe (238.204 nm)	10.137435 o	ppm	0.053926	0.53	37270.045835	Y_R 377.433
Fe H (259.940 nm)	10.444900	ppm	0.057689	0.55	19876.700000	Y_R 377.433
K (766.491 nm)	51.052700	ppm	0.277442	0.54	57409.700000	Y_R2 488.368
Li (670.783 nm)	1.014920	ppm	0.005183	0.51	30134.900000	Y_R2 488.368
Mg (279.078 nm)	50.358300 o	ppm	0.039051	0.08	297827.000000	Y 377.433
Mn (257.610 nm)	1.024920	ppm	0.000659	0.06	259684.000000	Y 377.433
Mo (202.032 nm)	1.047360	ppm	0.000800	0.08	9133.230000	Y 377.433
Na (589.592 nm)	50.104100 o	ppm	0.091948	0.18	331186.000000	Y_R2 488.368
Na H (589.593 nm)	51.015555	ppm	0.032041	0.06	210022.466281	Y_R 488.368
Ni (231.604 nm)	0.993471	ppm	0.001170	0.12	7367.670000	Y 377.433
P (213.618 nm)	20.351600 o	ppm	0.004880	0.02	46533.600000	Y 242.219
Pb (220.353 nm)	0.998851	ppm	0.003561	0.36	3056.980000	Y 242.219
S (181.972 nm)	9.667658	ppm	0.022774	0.24	4251.374737	Y 377.433
Sb (206.834 nm)	0.003121	ppm	0.000055	1.77	-6.493650	Y 377.433
Se (196.026 nm)	2.014780	ppm	0.005064	0.25	1886.510000	Y 242.219
Si (288.158 nm)	2.187500	ppm	0.021756	0.99	20080.000000	Y 377.433
Sn (189.925 nm)	2.044800	ppm	0.012863	0.63	4344.270000	Y 377.433
Sr (421.552 nm)	1.024677	ppm	0.002020	0.20	216627.069767	Y_R 488.368
Th (288.505 nm)	1.039890	ppm	0.002062	0.20	3183.480000	Y 377.433
Ti (336.122 nm)	1.051490	ppm	0.000646	0.06	150990.000000	Y 377.433
Tl (190.794 nm)	2.014870	ppm	0.004058	0.20	4646.970000	Y 377.433
U (409.013 nm)	2.144210	ppm	0.001179	0.05	9938.730000	Y 377.433
V (292.401 nm)	1.040450	ppm	0.000225	0.02	43674.900000	Y 377.433
Zn (206.200 nm)	0.490787	ppm	0.001688	0.34	2560.030000	Y 377.433
Zr (343.823 nm)	0.511286	ppm	0.000565	0.11	69548.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.993549	17818.340085	0.000361	0.04
Y 377.433	1.001904	977098.218717	0.000456	0.05
Y_R 377.433	1.007670	72495.000000	0.001722	0.17
Y_R 488.368	1.026940	40582.800000	0.003649	0.36
Y_R2 488.368	1.029613	78425.248935	0.006049	0.59

Sample Name: 280-123364-Q-1-A

Date: 5/14/2019 3:59:20 AM

Rack:Tube: 4:7

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.085035 n	ppm	0.021096	24.81	-2130.211570	Y_R 488.368
Ag (328.068 nm)	0.000668	ppm	0.000204	30.48	-317.762000	Y 377.433
Al (167.019 nm)	0.003124	ppm	0.004367	> 100.00	2.242890	Y_R 377.433
Al H (396.152 nm)	-0.110938 u	ppm	0.000943	0.85	56.817150	Y_R 377.433
As (188.980 nm)	-0.001113 u	ppm	0.001445	> 100.00	-1.378070	Y 242.219
B (249.678 nm)	0.024860	ppm	0.000629	2.53	682.581000	Y 242.219
Ba (493.408 nm)	0.084992	ppm	0.000028	0.03	10110.500000	Y_R 488.368
Be (234.861 nm)	0.000022	ppm	0.000017	79.60	-13.129700	Y_R 488.368
Bi (223.061 nm)	-0.001218 u	ppm	0.000440	36.15	17.621600	Y 377.433
Ca (315.887 nm)	29.580181 o	ppm	0.033256	0.11	24852.476694	Y_R 377.433
Cd (214.439 nm)	-0.000004 u	ppm	0.000003	70.24	0.040378	Y 377.433
Co (228.615 nm)	0.000294	ppm	0.000244	82.97	-34.000900	Y 242.219
Cr (205.560 nm)	0.000842	ppm	0.000358	42.59	10.519500	Y 377.433
Cu (324.754 nm)	0.001287	ppm	0.000211	16.37	661.768000	Y 377.433
Fe (238.204 nm)	0.055995	ppm	0.001360	2.43	221.629630	Y_R 377.433
Fe H (259.940 nm)	-0.139435 u	ppm	0.001350	0.97	111.902000	Y_R 377.433
K (766.491 nm)	3.019040	ppm	0.039712	1.32	2746.940000	Y_R2 488.368
Li (670.783 nm)	0.012403	ppm	0.000390	3.14	-624.799000	Y_R2 488.368
Mg (279.078 nm)	10.696800	ppm	0.001604	0.01	63296.500000	Y 377.433
Mn (257.610 nm)	0.000641	ppm	0.000004	0.60	236.947000	Y 377.433
Mo (202.032 nm)	0.000368	ppm	0.000050	13.46	0.809192	Y 377.433
Na (589.592 nm)	27.122400 o	ppm	0.007700	0.03	177618.000000	Y_R2 488.368
Na H (589.593 nm)	26.996253	ppm	0.058065	0.22	115255.086018	Y_R 488.368
Ni (231.604 nm)	0.000136	ppm	0.000033	23.86	-1.895280	Y 377.433
P (213.618 nm)	0.080907	ppm	0.002323	2.87	201.627000	Y 242.219
Pb (220.353 nm)	-0.000323 u	ppm	0.000409	> 100.00	6.501270	Y 242.219
S (181.972 nm)	9.112144	ppm	0.000867	0.01	4006.384349	Y 377.433
Sb (206.834 nm)	0.000819 u	ppm	0.001579	> 100.00	-28.702600	Y 377.433
Se (196.026 nm)	0.002241	ppm	0.001485	66.29	12.800400	Y 242.219
Si (288.158 nm)	5.414330	ppm	0.003864	0.07	48467.400000	Y 377.433
Sn (189.925 nm)	-0.000038 u	ppm	0.000820	> 100.00	8.131020	Y 377.433
Sr (421.552 nm)	0.105228	ppm	0.000004	0.00	22350.249233	Y_R 488.368
Th (288.505 nm)	-0.000660 u	ppm	0.000774	> 100.00	50.365500	Y 377.433
Ti (336.122 nm)	0.000102	ppm	0.000038	37.49	-86.155300	Y 377.433
Tl (190.794 nm)	0.001718	ppm	0.000569	33.12	1.747790	Y 377.433
U (409.013 nm)	-0.001403 u	ppm	0.000649	46.25	-126.036000	Y 377.433
V (292.401 nm)	-0.000092 u	ppm	0.000061	65.85	15.398700	Y 377.433
Zn (206.200 nm)	0.000262	ppm	0.000362	> 100.00	3.137340	Y 377.433
Zr (343.823 nm)	0.000126	ppm	0.000082	65.07	55.035700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.008381	18084.341982	0.000937	0.09
Y 377.433	1.021746	996449.660632	0.000599	0.06
Y_R 377.433	1.017650	73213.400000	0.000546	0.05
Y_R 488.368	1.034380	40876.600000	0.000406	0.04
Y_R2 488.368	1.043064	79449.811988	0.004267	0.41

Sample Name: 280-123364-Q-1-Asd@5

Date: 5/14/2019 4:02:45 AM

Rack:Tube: 4:8

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.095312 n	ppm	0.010054	10.55	-2105.124418	Y_R 488.368
Ag (328.068 nm)	0.000565	ppm	0.000236	41.81	-322.643000	Y 377.433
Al (167.019 nm)	0.005782	ppm	0.001241	21.47	3.807750	Y_R 377.433
Al H (396.152 nm)	-0.116278 u	ppm	0.001323	1.14	32.756499	Y_R 377.433
As (188.980 nm)	-0.002458 u	ppm	0.000390	15.88	-2.989040	Y 242.219
B (249.678 nm)	0.005093	ppm	0.000101	1.99	193.562000	Y 242.219
Ba (493.408 nm)	0.016309	ppm	0.000060	0.37	2426.630000	Y_R 488.368
Be (234.861 nm)	0.000002 u	ppm	0.000012	> 100.00	-19.916500	Y_R 488.368
Bi (223.061 nm)	-0.002620 u	ppm	0.001168	44.57	14.004700	Y 377.433
Ca (315.887 nm)	6.004101	ppm	0.012059	0.20	4967.204049	Y_R 377.433
Cd (214.439 nm)	-0.000049 u	ppm	0.000097	> 100.00	-2.756740	Y 377.433
Co (228.615 nm)	0.000619	ppm	0.000005	0.85	-27.514300	Y 242.219
Cr (205.560 nm)	0.000193	ppm	0.000209	> 100.00	0.863137	Y 377.433
Cu (324.754 nm)	0.000856	ppm	0.000015	1.75	649.968000	Y 377.433
Fe (238.204 nm)	0.022919	ppm	0.001848	8.06	100.076071	Y_R 377.433
Fe H (259.940 nm)	-0.174070 u	ppm	0.001530	0.88	47.225600	Y_R 377.433
K (766.491 nm)	0.660407	ppm	0.052600	7.96	62.792700	Y_R2 488.368
Li (670.783 nm)	0.010267	ppm	0.000250	2.44	-690.328000	Y_R2 488.368
Mg (279.078 nm)	2.161030	ppm	0.005418	0.25	12805.400000	Y 377.433
Mn (257.610 nm)	0.000250	ppm	0.000011	4.35	138.031000	Y 377.433
Mo (202.032 nm)	-0.000032 u	ppm	0.000059	> 100.00	-2.687220	Y 377.433
Na (589.592 nm)	5.478710	ppm	0.012163	0.22	36582.700000	Y_R2 488.368
Na H (589.593 nm)	4.357397 u	ppm	0.025102	0.58	27720.058072	Y_R 488.368
Ni (231.604 nm)	-0.000012 u	ppm	0.000334	> 100.00	-3.000650	Y 377.433
P (213.618 nm)	0.015183	ppm	0.001062	6.99	51.404700	Y 242.219
Pb (220.353 nm)	-0.000213 u	ppm	0.000884	> 100.00	6.834780	Y 242.219
S (181.972 nm)	1.830702	ppm	0.005426	0.30	823.416044	Y 377.433
Sb (206.834 nm)	0.002130	ppm	0.002502	> 100.00	-25.200700	Y 377.433
Se (196.026 nm)	0.000606	ppm	0.000198	32.68	11.283300	Y 242.219
Si (288.158 nm)	1.073530	ppm	0.001263	0.12	10280.200000	Y 377.433
Sn (189.925 nm)	-0.000572 u	ppm	0.000635	> 100.00	6.998260	Y 377.433
Sr (421.552 nm)	0.020997	ppm	0.000100	0.47	4552.626215	Y_R 488.368
Th (288.505 nm)	-0.000167 u	ppm	0.002109	> 100.00	51.771200	Y 377.433
Ti (336.122 nm)	-0.000041 u	ppm	0.000077	> 100.00	-181.622000	Y 377.433
Tl (190.794 nm)	0.000475 u	ppm	0.001010	> 100.00	-1.121690	Y 377.433
U (409.013 nm)	0.002070	ppm	0.002831	> 100.00	-105.024000	Y 377.433
V (292.401 nm)	-0.000271 u	ppm	0.000291	> 100.00	7.976920	Y 377.433
Zn (206.200 nm)	0.002634	ppm	0.000173	6.59	15.501300	Y 377.433
Zr (343.823 nm)	-0.000108 u	ppm	0.000013	12.45	23.181000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.014652	18196.807420	0.000024	0.00
Y 377.433	1.025720	1000325.030439	0.001686	0.16
Y_R 377.433	1.022670	73574.700000	0.003987	0.39
Y_R 488.368	1.044780	41287.800000	0.008254	0.79
Y_R2 488.368	1.051370	80082.470936	0.000092	0.01

Sample Name: 280-123364-Q-1-B MS

Date: 5/14/2019 4:06:09 AM

Rack:Tube: 4:9

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.064879 n	ppm	0.002746	0.26	261.580238	Y_R 488.368
Ag (328.068 nm)	-0.000763 u	ppm	0.000062	8.15	-497.478000	Y 377.433
Al (167.019 nm)	8.926070 o	ppm	0.003746	0.04	5345.880000	Y_R 377.433
Al H (396.152 nm)	10.390886	ppm	0.041650	0.40	26892.716890	Y_R 377.433
As (188.980 nm)	2.051160	ppm	0.001799	0.09	2456.820000	Y 242.219
B (249.678 nm)	1.053180	ppm	0.000440	0.04	26152.000000	Y 242.219
Ba (493.408 nm)	2.126180 o	ppm	0.001585	0.07	238347.000000	Y_R 488.368
Be (234.861 nm)	1.004550	ppm	0.000836	0.08	290895.000000	Y_R 488.368
Bi (223.061 nm)	1.991050	ppm	0.001793	0.09	5153.930000	Y 377.433
Ca (315.887 nm)	79.463305 o	ppm	0.218713	0.28	66927.054270	Y_R 377.433
Cd (214.439 nm)	0.988762	ppm	0.000268	0.03	60287.800000	Y 377.433
Co (228.615 nm)	0.967533	ppm	0.000960	0.10	19309.500000	Y 242.219
Cr (205.560 nm)	1.007330	ppm	0.000585	0.06	15001.600000	Y 377.433
Cu (324.754 nm)	1.006220	ppm	0.002782	0.28	67193.000000	Y 377.433
Fe (238.204 nm)	10.017549 o	ppm	0.027589	0.28	36829.473741	Y_R 377.433
Fe H (259.940 nm)	10.307000	ppm	0.035093	0.34	19619.100000	Y_R 377.433
K (766.491 nm)	53.818700	ppm	0.062164	0.12	60557.400000	Y_R2 488.368
Li (670.783 nm)	1.012810	ppm	0.002141	0.21	30070.000000	Y_R2 488.368
Mg (279.078 nm)	60.304000 o	ppm	0.030687	0.05	356659.000000	Y 377.433
Mn (257.610 nm)	1.010250	ppm	0.000162	0.02	255968.000000	Y 377.433
Mo (202.032 nm)	1.037690	ppm	0.000388	0.04	9048.870000	Y 377.433
Na (589.592 nm)	74.984400 o	ppm	0.228752	0.31	493282.000000	Y_R2 488.368
Na H (589.593 nm)	78.427437	ppm	0.017658	0.02	315993.456765	Y_R 488.368
Ni (231.604 nm)	0.977071	ppm	0.000595	0.06	7246.000000	Y 377.433
P (213.618 nm)	20.322400 o	ppm	0.022832	0.11	46466.900000	Y 242.219
Pb (220.353 nm)	0.986480	ppm	0.004445	0.45	3019.240000	Y 242.219
S (181.972 nm)	18.546376 o	ppm	0.043008	0.23	8132.534053	Y 377.433
Sb (206.834 nm)	0.003388	ppm	0.003145	92.83	-6.066850	Y 377.433
Se (196.026 nm)	2.012010	ppm	0.006016	0.30	1883.940000	Y 242.219
Si (288.158 nm)	7.494140	ppm	0.015671	0.21	66764.000000	Y 377.433
Sn (189.925 nm)	2.025210	ppm	0.007199	0.36	4302.740000	Y 377.433
Sr (421.552 nm)	1.117116 o	ppm	0.000773	0.07	236159.233244	Y_R 488.368
Th (288.505 nm)	1.027610	ppm	0.000973	0.09	3146.540000	Y 377.433
Ti (336.122 nm)	1.042480	ppm	0.000596	0.06	149783.000000	Y 377.433
Tl (190.794 nm)	1.986100	ppm	0.003778	0.19	4580.540000	Y 377.433
U (409.013 nm)	2.132590	ppm	0.001030	0.05	9878.700000	Y 377.433
V (292.401 nm)	1.030760	ppm	0.000012	0.00	43268.900000	Y 377.433
Zn (206.200 nm)	0.485308	ppm	0.000123	0.03	2531.470000	Y 377.433
Zr (343.823 nm)	0.508313	ppm	0.000300	0.06	69143.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.981574	17603.579051	0.001819	0.19
Y 377.433	0.993014	968428.234269	0.000715	0.07
Y_R 377.433	1.005360	72328.900000	0.001575	0.16
Y_R 488.368	1.018130	40234.600000	0.001512	0.15
Y_R2 488.368	1.031998	78606.899081	0.000810	0.08

Sample Name: 280-123364-Q-1-C MSD

Date: 5/14/2019 4:09:33 AM

Rack:Tube: 4:10

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.047307 n	ppm	0.017563	1.68	218.688631	Y_R 488.368
Ag (328.068 nm)	-0.000573 u	ppm	0.000003	0.53	-489.481000	Y 377.433
Al (167.019 nm)	9.021160 o	ppm	0.040598	0.45	5402.750000	Y_R 377.433
Al H (396.152 nm)	10.488286	ppm	0.003485	0.03	27141.355645	Y_R 377.433
As (188.980 nm)	2.055190	ppm	0.004872	0.24	2461.660000	Y 242.219
B (249.678 nm)	1.057940	ppm	0.001118	0.11	26270.000000	Y 242.219
Ba (493.408 nm)	2.138170 o	ppm	0.001910	0.09	239689.000000	Y_R 488.368
Be (234.861 nm)	1.007610	ppm	0.009065	0.90	291780.000000	Y_R 488.368
Bi (223.061 nm)	2.008570	ppm	0.001956	0.10	5199.100000	Y 377.433
Ca (315.887 nm)	80.050656 o	ppm	0.126908	0.16	67422.460281	Y_R 377.433
Cd (214.439 nm)	0.995125	ppm	0.001432	0.14	60675.700000	Y 377.433
Co (228.615 nm)	0.971520	ppm	0.000715	0.07	19389.400000	Y 242.219
Cr (205.560 nm)	1.015220	ppm	0.000797	0.08	15119.200000	Y 377.433
Cu (324.754 nm)	1.012550	ppm	0.000839	0.08	67613.300000	Y 377.433
Fe (238.204 nm)	10.022034 o	ppm	0.000513	0.01	36845.953921	Y_R 377.433
Fe H (259.940 nm)	10.313900	ppm	0.002355	0.02	19632.000000	Y_R 377.433
K (766.491 nm)	54.140300	ppm	0.030728	0.06	60923.300000	Y_R2 488.368
Li (670.783 nm)	1.017020	ppm	0.002988	0.29	30199.300000	Y_R2 488.368
Mg (279.078 nm)	60.829400 o	ppm	0.050834	0.08	359766.000000	Y 377.433
Mn (257.610 nm)	1.016390	ppm	0.001788	0.18	257522.000000	Y 377.433
Mo (202.032 nm)	1.043590	ppm	0.003091	0.30	9100.350000	Y 377.433
Na (589.592 nm)	74.893900 o	ppm	0.364609	0.49	492717.000000	Y_R2 488.368
Na H (589.593 nm)	79.110144	ppm	0.283443	0.36	318642.967501	Y_R 488.368
Ni (231.604 nm)	0.981907	ppm	0.000033	0.00	7281.880000	Y 377.433
P (213.618 nm)	20.464500 o	ppm	0.009523	0.05	46791.600000	Y 242.219
Pb (220.353 nm)	0.991303	ppm	0.000780	0.08	3033.940000	Y 242.219
S (181.972 nm)	18.641330 o	ppm	0.023063	0.12	8174.054147	Y 377.433
Sb (206.834 nm)	0.001806	ppm	0.000055	3.04	-10.083000	Y 377.433
Se (196.026 nm)	2.014100	ppm	0.007771	0.39	1885.900000	Y 242.219
Si (288.158 nm)	7.537660	ppm	0.009545	0.13	67146.900000	Y 377.433
Sn (189.925 nm)	2.042470	ppm	0.001394	0.07	4339.330000	Y 377.433
Sr (421.552 nm)	1.123026 o	ppm	0.003108	0.28	237407.912011	Y_R 488.368
Th (288.505 nm)	1.036500	ppm	0.000477	0.05	3173.230000	Y 377.433
Ti (336.122 nm)	1.049800	ppm	0.000006	0.00	150837.000000	Y 377.433
Tl (190.794 nm)	1.995890	ppm	0.000493	0.02	4603.120000	Y 377.433
U (409.013 nm)	2.147200	ppm	0.002657	0.12	9947.120000	Y 377.433
V (292.401 nm)	1.037480	ppm	0.001114	0.11	43550.400000	Y 377.433
Zn (206.200 nm)	0.487365	ppm	0.001532	0.31	2542.190000	Y 377.433
Zr (343.823 nm)	0.510931	ppm	0.000196	0.04	69499.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.983491	17637.951811	0.001885	0.19
Y 377.433	0.993331	968737.336503	0.002896	0.29
Y_R 377.433	1.007430	72477.800000	0.005811	0.58
Y_R 488.368	1.022330	40400.400000	0.007596	0.74
Y_R2 488.368	1.032789	78667.190915	0.001580	0.15

Sample Name: 280-123364-Q-1-Apds

Date: 5/14/2019 4:12:56 AM

Rack:Tube: 4:11

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.160991 n	ppm	0.018131	11.26	-1944.803221	Y_R 488.368
Ag (328.068 nm)	0.051634	ppm	0.000068	0.13	2065.250000	Y 377.433
Al (167.019 nm)	0.886976	ppm	0.008003	0.90	531.514000	Y_R 377.433
Al H (396.152 nm)	0.904682 u	ppm	0.013624	1.51	2654.378204	Y_R 377.433
As (188.980 nm)	0.196963	ppm	0.000014	0.01	235.876000	Y 242.219
B (249.678 nm)	0.124712	ppm	0.000154	0.12	3153.670000	Y 242.219
Ba (493.408 nm)	0.181012	ppm	0.001162	0.64	20850.700000	Y_R 488.368
Be (234.861 nm)	0.048735	ppm	0.000374	0.77	14107.900000	Y_R 488.368
Bi (223.061 nm)	-0.004365 u	ppm	0.001735	39.74	9.675370	Y 377.433
Ca (315.887 nm)	48.614693 o	ppm	0.504237	1.04	40907.188460	Y_R 377.433
Cd (214.439 nm)	0.048500	ppm	0.000006	0.01	2957.890000	Y 377.433
Co (228.615 nm)	0.047721	ppm	0.000205	0.43	914.363000	Y 242.219
Cr (205.560 nm)	0.049831	ppm	0.000087	0.18	740.059000	Y 377.433
Cu (324.754 nm)	0.050690	ppm	0.000148	0.29	3923.420000	Y 377.433
Fe (238.204 nm)	0.992809	ppm	0.010101	1.02	3664.337774	Y_R 377.433
Fe H (259.940 nm)	0.833716 u	ppm	0.014284	1.71	1929.120000	Y_R 377.433
K (766.491 nm)	22.552900	ppm	0.140866	0.62	24976.600000	Y_R2 488.368
Li (670.783 nm)	0.109312	ppm	0.000280	0.26	2348.610000	Y_R2 488.368
Mg (279.078 nm)	29.557800	ppm	0.003316	0.01	174848.000000	Y 377.433
Mn (257.610 nm)	0.049537	ppm	0.000102	0.21	12622.300000	Y 377.433
Mo (202.032 nm)	0.051324	ppm	0.000033	0.06	445.274000	Y 377.433
Na (589.592 nm)	45.990200 o	ppm	0.073025	0.16	300638.000000	Y_R2 488.368
Na H (589.593 nm)	46.673947	ppm	0.250481	0.54	191376.623517	Y_R 488.368
Ni (231.604 nm)	0.047424	ppm	0.000325	0.69	349.086000	Y 377.433
P (213.618 nm)	2.041360	ppm	0.003320	0.16	4682.570000	Y 242.219
Pb (220.353 nm)	0.096354	ppm	0.004067	4.22	302.756000	Y 242.219
S (181.972 nm)	9.033810	ppm	0.010144	0.11	3972.244655	Y 377.433
Sb (206.834 nm)	0.104769	ppm	0.000571	0.55	249.093000	Y 377.433
Se (196.026 nm)	0.194113	ppm	0.004104	2.11	191.391000	Y 242.219
Si (288.158 nm)	10.314100	ppm	0.067345	0.65	91572.200000	Y 377.433
Sn (189.925 nm)	0.100385	ppm	0.002115	2.11	221.080000	Y 377.433
Sr (421.552 nm)	0.152371	ppm	0.001012	0.66	32311.503780	Y_R 488.368
Th (288.505 nm)	0.203430	ppm	0.001007	0.49	660.910000	Y 377.433
Ti (336.122 nm)	0.050372	ppm	0.000057	0.11	7194.230000	Y 377.433
Tl (190.794 nm)	0.195731	ppm	0.000509	0.26	449.591000	Y 377.433
U (409.013 nm)	0.519548	ppm	0.000150	0.03	2319.430000	Y 377.433
V (292.401 nm)	0.050176	ppm	0.000293	0.58	2113.210000	Y 377.433
Zn (206.200 nm)	0.195381	ppm	0.000180	0.09	1020.210000	Y 377.433
Zr (343.823 nm)	0.050864	ppm	0.000184	0.36	6952.690000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.997409	17887.569664	0.000134	0.01
Y 377.433	1.007770	982819.496643	0.000296	0.03
Y_R 377.433	1.013500	72914.600000	0.002906	0.29
Y_R 488.368	1.030440	40720.900000	0.007650	0.74
Y_R2 488.368	1.029589	78423.441689	0.001745	0.17

Sample Name: CCVH-5699817

Date: 5/14/2019 4:16:20 AM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.111421	ppm	0.002377	2.13	-2065.803747	Y_R 488.368
Ag (328.068 nm)	0.000566	ppm	0.000416	73.50	-575.862000	Y 377.433
Al (167.019 nm)	40.775800 o	ppm	0.119919	0.29	24421.000000	Y_R 377.433
Al H (396.152 nm)	49.480289	ppm	0.170881	0.35	126265.619200	Y_R 377.433
As (188.980 nm)	-0.000928 u	ppm	0.000990	> 100.00	-1.569290	Y 242.219
B (249.678 nm)	0.001196	ppm	0.000460	38.51	24.067100	Y 242.219
Ba (493.408 nm)	0.001726	ppm	0.000489	28.36	838.998000	Y_R 488.368
Be (234.861 nm)	0.000777	ppm	0.000089	11.41	1692.700000	Y_R 488.368
Bi (223.061 nm)	0.980617	ppm	0.001313	0.13	2556.320000	Y 377.433
Ca (315.887 nm)	0.019271	ppm	0.007603	39.45	-80.706698	Y_R 377.433
Cd (214.439 nm)	0.001168	ppm	0.000040	3.46	119.524000	Y 377.433
Co (228.615 nm)	0.004255	ppm	0.000080	1.88	45.101800	Y 242.219
Cr (205.560 nm)	0.001281	ppm	0.000303	23.63	3.850890	Y 377.433
Cu (324.754 nm)	0.009699	ppm	0.000098	1.01	1622.030000	Y 377.433
Fe (238.204 nm)	47.536544 o	ppm	0.189452	0.40	174708.522163	Y_R 377.433
Fe H (259.940 nm)	49.495500	ppm	0.177502	0.36	92798.200000	Y_R 377.433
K (766.491 nm)	0.166384	ppm	0.026706	16.05	-499.410000	Y_R2 488.368
Li (670.783 nm)	0.012175	ppm	0.001967	16.16	-631.795000	Y_R2 488.368
Mg (279.078 nm)	0.032862	ppm	0.000967	2.94	-148.821000	Y 377.433
Mn (257.610 nm)	0.002869	ppm	0.000008	0.29	801.399000	Y 377.433
Mo (202.032 nm)	0.000642	ppm	0.000370	57.60	3.199490	Y 377.433
Na (589.592 nm)	234.048000 o	ppm	0.654939	0.28	1524520.000000	Y_R2 488.368
Na H (589.593 nm)	244.532987	ppm	2.533564	1.04	955638.543023	Y_R 488.368
Ni (231.604 nm)	0.004302	ppm	0.000411	9.55	31.193100	Y 377.433
P (213.618 nm)	-0.001629 u	ppm	0.000679	41.70	12.977700	Y 242.219
Pb (220.353 nm)	0.002273	ppm	0.001447	63.68	32.818200	Y 242.219
S (181.972 nm)	4.828210	ppm	0.010745	0.22	2133.735646	Y 377.433
Sb (206.834 nm)	0.000023 u	ppm	0.001390	> 100.00	-75.647200	Y 377.433
Se (196.026 nm)	-0.000875 u	ppm	0.000456	52.10	1.642480	Y 242.219
Si (288.158 nm)	0.043427	ppm	0.001723	3.97	1218.100000	Y 377.433
Sn (189.925 nm)	0.005508	ppm	0.001325	24.06	19.890400	Y 377.433
Sr (421.552 nm)	0.001929	ppm	0.000061	3.18	523.679178	Y_R 488.368
Th (288.505 nm)	4.990650	ppm	0.049340	0.99	14895.800000	Y 377.433
Ti (336.122 nm)	0.002321	ppm	0.000095	4.10	138.838000	Y 377.433
Tl (190.794 nm)	-0.001025 u	ppm	0.001367	> 100.00	-5.948260	Y 377.433
U (409.013 nm)	10.156000	ppm	0.019393	0.19	47743.000000	Y 377.433
V (292.401 nm)	0.005031	ppm	0.000073	1.45	32.539300	Y 377.433
Zn (206.200 nm)	0.003474	ppm	0.000259	7.45	19.879600	Y 377.433
Zr (343.823 nm)	-0.002804 u	ppm	0.000034	1.22	-195.788000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.992540	17800.250567	0.002691	0.27
Y 377.433	0.992140	967576.331168	0.002401	0.24
Y_R 377.433	1.002690	72136.900000	0.005879	0.59
Y_R 488.368	1.021660	40374.200000	0.012426	1.22
Y_R2 488.368	1.018802	77601.765571	0.009001	0.88

Sample Name: CCV-5699804

Date: 5/14/2019 4:19:43 AM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.022243	ppm	0.030781	3.01	157.507305	Y_R 488.368
Ag (328.068 nm)	0.491659	ppm	0.001536	0.31	22757.500000	Y 377.433
Al (167.019 nm)	0.466184	ppm	0.002825	0.61	280.935000	Y_R 377.433
Al H (396.152 nm)	0.425948 u	ppm	0.000812	0.19	1452.593664	Y_R 377.433
As (188.980 nm)	0.959634	ppm	0.010566	1.10	1149.420000	Y 242.219
B (249.678 nm)	0.489361	ppm	0.000605	0.12	12192.800000	Y 242.219
Ba (493.408 nm)	0.486867	ppm	0.001126	0.23	55044.400000	Y_R 488.368
Be (234.861 nm)	0.478413	ppm	0.000968	0.20	138450.000000	Y_R 488.368
Bi (223.061 nm)	-0.004756 u	ppm	0.001645	34.58	8.916940	Y 377.433
Ca (315.887 nm)	4.975628	ppm	0.012547	0.25	4100.029968	Y_R 377.433
Cd (214.439 nm)	0.486184	ppm	0.002817	0.58	29641.700000	Y 377.433
Co (228.615 nm)	0.488681	ppm	0.001468	0.30	9731.790000	Y 242.219
Cr (205.560 nm)	0.489996	ppm	0.002712	0.55	7296.980000	Y 377.433
Cu (324.754 nm)	0.489705	ppm	0.001785	0.36	33002.600000	Y 377.433
Fe (238.204 nm)	2.427024	ppm	0.004709	0.19	8934.952641	Y_R 377.433
Fe H (259.940 nm)	2.354270 u	ppm	0.002659	0.11	4768.540000	Y_R 377.433
K (766.491 nm)	47.673000	ppm	0.083005	0.17	53563.500000	Y_R2 488.368
Li (670.783 nm)	0.959425	ppm	0.001641	0.17	28432.100000	Y_R2 488.368
Mg (279.078 nm)	19.191000	ppm	0.007888	0.04	113538.000000	Y 377.433
Mn (257.610 nm)	0.489017	ppm	0.000008	0.00	123941.000000	Y 377.433
Mo (202.032 nm)	0.495599	ppm	0.000533	0.11	4320.480000	Y 377.433
Na (589.592 nm)	4.732580	ppm	0.000255	0.01	32666.200000	Y_R2 488.368
Na H (589.593 nm)	4.173351 u	ppm	0.002082	0.05	27476.464389	Y_R 488.368
Ni (231.604 nm)	0.498840	ppm	0.000070	0.01	3697.830000	Y 377.433
P (213.618 nm)	0.957887	ppm	0.006705	0.70	2206.110000	Y 242.219
Pb (220.353 nm)	0.975758	ppm	0.000205	0.02	2985.510000	Y 242.219
S (181.972 nm)	0.021352	ppm	0.003998	18.73	33.515848	Y 377.433
Sb (206.834 nm)	1.006780	ppm	0.000651	0.06	2676.190000	Y 377.433
Se (196.026 nm)	0.958495	ppm	0.000176	0.02	903.484000	Y 242.219
Si (288.158 nm)	4.858050	ppm	0.010335	0.21	43573.600000	Y 377.433
Sn (189.925 nm)	0.979874	ppm	0.001414	0.14	2086.070000	Y 377.433
Sr (421.552 nm)	0.485963	ppm	0.001369	0.28	102798.485213	Y_R 488.368
Th (288.505 nm)	0.005485	ppm	0.002152	39.24	86.482700	Y 377.433
Ti (336.122 nm)	0.493181	ppm	0.000387	0.08	70654.100000	Y 377.433
Tl (190.794 nm)	0.984606	ppm	0.001949	0.20	2269.940000	Y 377.433
U (409.013 nm)	-0.001923 u	ppm	0.003741	> 100.00	-160.919000	Y 377.433
V (292.401 nm)	0.489132	ppm	0.000845	0.17	20560.500000	Y 377.433
Zn (206.200 nm)	0.484676	ppm	0.000245	0.05	2528.170000	Y 377.433
Zr (343.823 nm)	0.492178	ppm	0.000342	0.07	66927.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.004367	18012.345909	0.000153	0.02
Y 377.433	1.013709	988610.822410	0.000144	0.01
Y_R 377.433	1.011030	72736.900000	0.001059	0.10
Y_R 488.368	1.025210	40514.500000	0.001347	0.13
Y_R2 488.368	1.031710	78584.976730	0.000243	0.02

Sample Name: CCB

Date: 5/14/2019 4:23:05 AM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.082931 Z	ppm	0.008550	10.31	-2135.347197 Z	Y_R 488.368
Ag (328.068 nm)	0.000401	ppm	0.000098	24.50	-330.262000	Y 377.433
Al (167.019 nm)	0.007024	ppm	0.003457	49.22	4.536890	Y_R 377.433
Al H (396.152 nm)	-0.113640 Zu	ppm	0.001745	1.54	36.864436 Z	Y_R 377.433
As (188.980 nm)	-0.003029 u	ppm	0.000331	10.94	-3.672430	Y 242.219
B (249.678 nm)	0.000436	ppm	0.000065	15.01	78.356300	Y 242.219
Ba (493.408 nm)	-0.000387 u	ppm	0.000150	38.90	558.764000	Y_R 488.368
Be (234.861 nm)	0.000040	ppm	0.000015	37.14	-9.503410	Y_R 488.368
Bi (223.061 nm)	-0.000260 u	ppm	0.001394	> 100.00	20.083500	Y 377.433
Ca (315.887 nm)	0.014617	ppm	0.011984	81.99	-84.634098	Y_R 377.433
Cd (214.439 nm)	0.000027 u	ppm	0.000050	> 100.00	1.868780	Y 377.433
Co (228.615 nm)	0.000574	ppm	0.000036	6.27	-28.412900	Y 242.219
Cr (205.560 nm)	0.000027	ppm	0.000023	85.83	-1.617870	Y 377.433
Cu (324.754 nm)	0.000632	ppm	0.000061	9.60	638.761000	Y 377.433
Fe (238.204 nm)	0.004996	ppm	0.000781	15.64	34.210189	Y_R 377.433
Fe H (259.940 nm)	-0.188877 u	ppm	0.000008	0.00	19.575500	Y_R 377.433
K (766.491 nm)	0.048868	ppm	0.037450	76.64	-633.144000	Y_R2 488.368
Li (670.783 nm)	0.005799	ppm	0.000999	17.22	-827.418000	Y_R2 488.368
Mg (279.078 nm)	0.003598	ppm	0.001015	28.20	43.821700	Y 377.433
Mn (257.610 nm)	0.000024	ppm	0.000017	70.96	80.727400	Y 377.433
Mo (202.032 nm)	0.000175	ppm	0.000243	> 100.00	-0.874327	Y 377.433
Na (589.592 nm)	0.046482	ppm	0.003050	6.56	1185.120000	Y_R2 488.368
Na H (589.593 nm)	-1.133681 u	ppm	0.022559	1.99	6487.866375	Y_R 488.368
Ni (231.604 nm)	-0.000059 u	ppm	0.000354	> 100.00	-3.344710	Y 377.433
P (213.618 nm)	0.000060 u	ppm	0.000829	> 100.00	16.838000	Y 242.219
Pb (220.353 nm)	-0.000555 u	ppm	0.000294	52.97	5.780550	Y 242.219
S (181.972 nm)	0.013231	ppm	0.000862	6.52	28.936849	Y 377.433
Sb (206.834 nm)	0.003081	ppm	0.001121	36.40	-22.648200	Y 377.433
Se (196.026 nm)	-0.000805 u	ppm	0.003588	> 100.00	9.972680	Y 242.219
Si (288.158 nm)	-0.002952 u	ppm	0.001461	49.48	810.100000	Y 377.433
Sn (189.925 nm)	0.000671	ppm	0.000013	1.87	9.632990	Y 377.433
Sr (421.552 nm)	-0.000069 u	ppm	0.000041	59.52	101.359753	Y_R 488.368
Th (288.505 nm)	-0.000517 u	ppm	0.000095	18.41	50.718500	Y 377.433
Ti (336.122 nm)	0.000116	ppm	0.000054	46.71	-177.888000	Y 377.433
Tl (190.794 nm)	0.000359	ppm	0.000234	65.31	-1.390980	Y 377.433
U (409.013 nm)	-0.004190 u	ppm	0.003493	83.36	-133.348000	Y 377.433
V (292.401 nm)	-0.000064 u	ppm	0.000097	> 100.00	16.461800	Y 377.433
Zn (206.200 nm)	-0.000326 u	ppm	0.000288	88.33	0.067664	Y 377.433
Zr (343.823 nm)	0.000133	ppm	0.000042	31.92	55.783100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.008773	18091.366045	0.002870	0.28
Y 377.433	1.018462	993246.764049	0.003163	0.31
Y_R 377.433	1.008700	72569.500000	0.004663	0.46
Y_R 488.368	1.017990	40229.000000	0.003414	0.34
Y_R2 488.368	1.033831	78746.561047	0.008127	0.79

Sample Name: CCVL-5699389

Date: 5/14/2019 4:26:28 AM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.080653 Q	ppm	0.014059	17.43	-2140.907274 Q	Y_R 488.368
Ag (328.068 nm)	0.009571	ppm	0.000095	0.99	100.062000	Y 377.433
Al (167.019 nm)	0.091899	ppm	0.002163	2.35	55.367100	Y_R 377.433
Al H (396.152 nm)	-0.013393 u	ppm	0.003479	25.98	293.599991	Y_R 377.433
As (188.980 nm)	0.011748	ppm	0.000576	4.91	14.026700	Y 242.219
B (249.678 nm)	0.095213	ppm	0.000422	0.44	2423.570000	Y 242.219
Ba (493.408 nm)	0.009259	ppm	0.000402	4.34	1637.170000	Y_R 488.368
Be (234.861 nm)	0.000949	ppm	0.000002	0.26	255.789000	Y_R 488.368
Bi (223.061 nm)	0.099503	ppm	0.000944	0.95	277.213000	Y 377.433
Ca (315.887 nm)	0.217341	ppm	0.007809	3.59	86.356715	Y_R 377.433
Cd (214.439 nm)	0.004902	ppm	0.000037	0.76	299.181000	Y 377.433
Co (228.615 nm)	0.010530	ppm	0.000135	1.29	170.629000	Y 242.219
Cr (205.560 nm)	0.009821	ppm	0.000194	1.97	144.318000	Y 377.433
Cu (324.754 nm)	0.015387	ppm	0.000368	2.39	1615.260000	Y 377.433
Fe (238.204 nm)	0.101518	ppm	0.000251	0.25	388.922330	Y_R 377.433
Fe H (259.940 nm)	-0.093372 u	ppm	0.002485	2.66	197.917000	Y_R 377.433
K (766.491 nm)	2.850810	ppm	0.063725	2.24	2555.490000	Y_R2 488.368
Li (670.783 nm)	0.027682 Q	ppm	0.001847	6.67	-156.007000 Q	Y_R2 488.368
Mg (279.078 nm)	0.190171	ppm	0.001371	0.72	1146.320000	Y 377.433
Mn (257.610 nm)	0.010070	ppm	0.000014	0.14	2625.460000	Y 377.433
Mo (202.032 nm)	0.018840	ppm	0.000272	1.44	161.931000	Y 377.433
Na (589.592 nm)	0.963476	ppm	0.002062	0.21	7174.340000	Y_R2 488.368
Na H (589.593 nm)	-0.282001 u	ppm	0.006004	2.13	9788.168753	Y_R 488.368
Ni (231.604 nm)	0.040985	ppm	0.000571	1.39	301.053000	Y 377.433
P (213.618 nm)	2.739050 o	ppm	0.006427	0.23	6277.240000	Y 242.219
Pb (220.353 nm)	0.008267	ppm	0.000685	8.28	32.719500	Y 242.219
S (181.972 nm)	0.096078	ppm	0.001708	1.78	65.173073	Y 377.433
Sb (206.834 nm)	0.022647	ppm	0.000051	0.23	29.863600	Y 377.433
Se (196.026 nm)	0.018879	ppm	0.000879	4.66	28.299300	Y 242.219
Si (288.158 nm)	0.560222	ppm	0.024290	4.34	5764.480000	Y 377.433
Sn (189.925 nm)	0.097114	ppm	0.000043	0.04	214.146000	Y 377.433
Sr (421.552 nm)	0.009897	ppm	0.000017	0.18	2207.109016	Y_R 488.368
Th (288.505 nm)	0.016784	ppm	0.002444	14.56	102.758000	Y 377.433
Ti (336.122 nm)	0.009696	ppm	0.000038	0.40	1198.520000	Y 377.433
Tl (190.794 nm)	0.014424	ppm	0.000523	3.63	31.038700	Y 377.433
U (409.013 nm)	0.058331	ppm	0.001603	2.75	160.205000	Y 377.433
V (292.401 nm)	0.009472	ppm	0.000070	0.74	415.496000	Y 377.433
Zn (206.200 nm)	0.019867	ppm	0.000135	0.68	105.326000	Y 377.433
Zr (343.823 nm)	0.010573	ppm	0.000234	2.22	1474.760000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.014208	18188.844983	0.003773	0.37
Y 377.433	1.022187	996879.195242	0.005004	0.49
Y_R 377.433	1.007360	72473.200000	0.003041	0.30
Y_R 488.368	1.019980	40307.500000	0.005832	0.57
Y_R2 488.368	1.037269	79008.407419	0.009228	0.89

Sample Name: 280-123364-Q-2-A

Date: 5/14/2019 4:29:51 AM

Rack:Tube: 4:12

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.056941 n	ppm	0.001676	2.94	-2198.789124	Y_R 488.368
Ag (328.068 nm)	0.000734	ppm	0.000328	44.66	-314.819000	Y 377.433
Al (167.019 nm)	0.006566	ppm	0.000254	3.87	4.315380	Y_R 377.433
Al H (396.152 nm)	-0.111090 u	ppm	0.001497	1.35	55.925053	Y_R 377.433
As (188.980 nm)	0.000926	ppm	0.000631	68.07	1.064600	Y 242.219
B (249.678 nm)	0.023089	ppm	0.000428	1.85	638.713000	Y 242.219
Ba (493.408 nm)	0.081901	ppm	0.000201	0.25	9764.680000	Y_R 488.368
Be (234.861 nm)	0.000002	ppm	0.000000	4.28	-18.139500	Y_R 488.368
Bi (223.061 nm)	-0.001853 u	ppm	0.001432	77.26	15.989200	Y 377.433
Ca (315.887 nm)	28.422094 o	ppm	0.050903	0.18	23875.687090	Y_R 377.433
Cd (214.439 nm)	-0.000070 u	ppm	0.000046	65.86	-3.957510	Y 377.433
Co (228.615 nm)	0.000007 u	ppm	0.000105	> 100.00	-39.724000	Y 242.219
Cr (205.560 nm)	0.000772	ppm	0.000094	12.21	9.475210	Y 377.433
Cu (324.754 nm)	0.001467	ppm	0.000145	9.88	674.457000	Y 377.433
Fe (238.204 nm)	0.074828	ppm	0.000969	1.30	290.835988	Y_R 377.433
Fe H (259.940 nm)	-0.126554 u	ppm	0.000720	0.57	135.954000	Y_R 377.433
K (766.491 nm)	3.028130	ppm	0.026123	0.86	2757.280000	Y_R2 488.368
Li (670.783 nm)	0.009297	ppm	0.000195	2.10	-720.081000	Y_R2 488.368
Mg (279.078 nm)	10.413800	ppm	0.001210	0.01	61622.400000	Y 377.433
Mn (257.610 nm)	0.000949	ppm	0.000023	2.40	314.974000	Y 377.433
Mo (202.032 nm)	0.000352	ppm	0.000076	21.71	0.668994	Y 377.433
Na (589.592 nm)	26.289100 o	ppm	0.037476	0.14	172187.000000	Y_R2 488.368
Na H (589.593 nm)	25.773069	ppm	0.057540	0.22	110526.024354	Y_R 488.368
Ni (231.604 nm)	0.000311	ppm	0.000152	48.78	-0.599440	Y 377.433
P (213.618 nm)	0.076617	ppm	0.003060	3.99	191.822000	Y 242.219
Pb (220.353 nm)	0.001011	ppm	0.000968	95.73	10.578800	Y 242.219
S (181.972 nm)	8.759385	ppm	0.002069	0.02	3852.182237	Y 377.433
Sb (206.834 nm)	0.002474	ppm	0.000236	9.52	-24.281900	Y 377.433
Se (196.026 nm)	-0.001301 u	ppm	0.001524	> 100.00	9.498800	Y 242.219
Si (288.158 nm)	5.219460	ppm	0.003107	0.06	46753.000000	Y 377.433
Sn (189.925 nm)	-0.000963 u	ppm	0.000396	41.17	6.169580	Y 377.433
Sr (421.552 nm)	0.101292	ppm	0.000428	0.42	21518.671454	Y_R 488.368
Th (288.505 nm)	-0.001477 u	ppm	0.002776	> 100.00	48.008500	Y 377.433
Ti (336.122 nm)	-0.000063 u	ppm	0.000027	42.77	-113.456000	Y 377.433
Tl (190.794 nm)	-0.000589 u	ppm	0.000054	9.09	-3.581030	Y 377.433
U (409.013 nm)	-0.003204 u	ppm	0.004791	> 100.00	-134.249000	Y 377.433
V (292.401 nm)	0.000022 u	ppm	0.000037	> 100.00	20.257300	Y 377.433
Zn (206.200 nm)	0.000086	ppm	0.000091	> 100.00	2.216920	Y 377.433
Zr (343.823 nm)	-0.000167 u	ppm	0.000123	73.68	15.255000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.994069	17827.666203	0.001491	0.15
Y 377.433	1.002012	977203.673539	0.001666	0.17
Y_R 377.433	0.996018	71657.000000	0.000366	0.04
Y_R 488.368	1.012600	40016.200000	0.002209	0.22
Y_R2 488.368	1.022842	77909.528085	0.001706	0.17

Sample Name: 280-123364-Q-3-A

Date: 5/14/2019 4:33:15 AM

Rack:Tube: 4:13

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.065121 n	ppm	0.013833	21.24	-2178.820263	Y_R 488.368
Ag (328.068 nm)	0.000745	ppm	0.000096	12.94	-314.233000	Y 377.433
Al (167.019 nm)	0.004699	ppm	0.001224	26.06	3.154970	Y_R 377.433
Al H (396.152 nm)	-0.108007 u	ppm	0.002358	2.18	63.804660	Y_R 377.433
As (188.980 nm)	-0.000906 u	ppm	0.000045	5.02	-1.129950	Y 242.219
B (249.678 nm)	0.022878	ppm	0.000280	1.22	633.595000	Y 242.219
Ba (493.408 nm)	0.082251	ppm	0.000168	0.20	9803.840000	Y_R 488.368
Be (234.861 nm)	-0.000022 u	ppm	0.000004	17.15	-26.901600	Y_R 488.368
Bi (223.061 nm)	-0.001034 u	ppm	0.001812	> 100.00	18.089700	Y 377.433
Ca (315.887 nm)	28.535572 o	ppm	0.101130	0.35	23971.400569	Y_R 377.433
Cd (214.439 nm)	-0.000044 u	ppm	0.000051	> 100.00	-2.420790	Y 377.433
Co (228.615 nm)	0.000028 u	ppm	0.000040	> 100.00	-39.314200	Y 242.219
Cr (205.560 nm)	0.000941	ppm	0.000211	22.44	12.004600	Y 377.433
Cu (324.754 nm)	0.001057	ppm	0.000208	19.66	647.026000	Y 377.433
Fe (238.204 nm)	0.016523	ppm	0.000650	3.94	76.571165	Y_R 377.433
Fe H (259.940 nm)	-0.178655 u	ppm	0.000537	0.30	38.662900	Y_R 377.433
K (766.491 nm)	2.995530	ppm	0.017985	0.60	2720.180000	Y_R2 488.368
Li (670.783 nm)	0.010077	ppm	0.002097	20.81	-696.159000	Y_R2 488.368
Mg (279.078 nm)	10.394600	ppm	0.023659	0.23	61508.800000	Y 377.433
Mn (257.610 nm)	0.000341	ppm	0.000002	0.52	161.094000	Y 377.433
Mo (202.032 nm)	0.000217	ppm	0.000110	50.87	-0.512564	Y 377.433
Na (589.592 nm)	26.215700 o	ppm	0.040011	0.15	171710.000000	Y_R2 488.368
Na H (589.593 nm)	25.955652	ppm	0.001745	0.01	111231.786514	Y_R 488.368
Ni (231.604 nm)	-0.000825 u	ppm	0.000086	10.49	-9.026890	Y 377.433
P (213.618 nm)	0.077328	ppm	0.000052	0.07	193.446000	Y 242.219
Pb (220.353 nm)	0.000231	ppm	0.000146	63.39	8.184050	Y 242.219
S (181.972 nm)	8.799940	ppm	0.000144	0.00	3869.909081	Y 377.433
Sb (206.834 nm)	0.001676	ppm	0.000721	43.03	-26.390700	Y 377.433
Se (196.026 nm)	-0.000233 u	ppm	0.000798	> 100.00	10.503400	Y 242.219
Si (288.158 nm)	5.268470	ppm	0.007308	0.14	47184.100000	Y 377.433
Sn (189.925 nm)	-0.000632 u	ppm	0.000714	> 100.00	6.869840	Y 377.433
Sr (421.552 nm)	0.101109	ppm	0.000150	0.15	21480.068531	Y_R 488.368
Th (288.505 nm)	-0.001886 u	ppm	0.001558	82.58	46.730800	Y 377.433
Ti (336.122 nm)	0.000015 u	ppm	0.000038	> 100.00	-101.998000	Y 377.433
Tl (190.794 nm)	0.000931	ppm	0.000546	58.68	-0.070068	Y 377.433
U (409.013 nm)	0.000561 u	ppm	0.002441	> 100.00	-116.591000	Y 377.433
V (292.401 nm)	0.000133	ppm	0.000151	> 100.00	24.947800	Y 377.433
Zn (206.200 nm)	0.000118 u	ppm	0.000299	> 100.00	2.383740	Y 377.433
Zr (343.823 nm)	-0.000172 u	ppm	0.000051	29.52	14.364600	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.996197	17865.823019	0.003945	0.40
Y 377.433	1.005631	980733.149241	0.002914	0.29
Y_R 377.433	0.997843	71788.300000	0.003075	0.31
Y_R 488.368	1.010050	39915.100000	0.002606	0.26
Y_R2 488.368	1.017343	77490.634434	0.004655	0.46

Sample Name: CCVH-5699817

Date: 5/14/2019 4:36:39 AM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.107520	ppm	0.000560	0.52	-2075.325079	Y_R 488.368
Ag (328.068 nm)	0.000315	ppm	0.000237	75.35	-586.812000	Y 377.433
Al (167.019 nm)	41.215400 o	ppm	0.086583	0.21	24684.000000	Y_R 377.433
Al H (396.152 nm)	49.510808	ppm	0.189514	0.38	126343.301372	Y_R 377.433
As (188.980 nm)	0.000589	ppm	0.000610	> 100.00	0.246894	Y 242.219
B (249.678 nm)	0.000536	ppm	0.000135	25.23	7.575110	Y 242.219
Ba (493.408 nm)	0.001852	ppm	0.000081	4.37	853.210000	Y_R 488.368
Be (234.861 nm)	0.000772	ppm	0.000017	2.23	1694.990000	Y_R 488.368
Bi (223.061 nm)	0.982727	ppm	0.001033	0.11	2561.780000	Y 377.433
Ca (315.887 nm)	0.013593	ppm	0.003906	28.73	-85.495556	Y_R 377.433
Cd (214.439 nm)	0.001167	ppm	0.000019	1.59	119.623000	Y 377.433
Co (228.615 nm)	0.004159	ppm	0.000378	9.08	43.189700	Y 242.219
Cr (205.560 nm)	0.001345	ppm	0.000134	9.94	4.770220	Y 377.433
Cu (324.754 nm)	0.009811	ppm	0.000143	1.45	1633.870000	Y 377.433
Fe (238.204 nm)	47.672695 o	ppm	0.045433	0.10	175208.863750	Y_R 377.433
Fe H (259.940 nm)	49.676900	ppm	0.039472	0.08	93136.900000	Y_R 377.433
K (766.491 nm)	0.111328	ppm	0.058546	52.59	-562.064000	Y_R2 488.368
Li (670.783 nm)	0.009674	ppm	0.001144	11.83	-708.510000	Y_R2 488.368
Mg (279.078 nm)	0.032153	ppm	0.000909	2.83	-152.260000	Y 377.433
Mn (257.610 nm)	0.002869	ppm	0.000050	1.76	801.424000	Y 377.433
Mo (202.032 nm)	0.000696	ppm	0.000538	77.20	3.669630	Y 377.433
Na (589.592 nm)	233.525000 o	ppm	0.179853	0.08	1521110.000000	Y_R2 488.368
Na H (589.593 nm)	242.915001	ppm	1.252904	0.52	949387.402068	Y_R 488.368
Ni (231.604 nm)	0.005036	ppm	0.000154	3.06	36.636700	Y 377.433
P (213.618 nm)	-0.003006 u	ppm	0.000886	29.47	9.828920	Y 242.219
Pb (220.353 nm)	0.003829	ppm	0.000304	7.94	37.460400	Y 242.219
S (181.972 nm)	4.800894	ppm	0.015034	0.31	2121.794712	Y 377.433
Sb (206.834 nm)	-0.002395 u	ppm	0.001645	68.68	-82.061000	Y 377.433
Se (196.026 nm)	0.001534	ppm	0.000641	41.77	3.863940	Y 242.219
Si (288.158 nm)	0.040429	ppm	0.003172	7.85	1191.730000	Y 377.433
Sn (189.925 nm)	0.004140	ppm	0.000559	13.50	16.989900	Y 377.433
Sr (421.552 nm)	0.001945	ppm	0.000048	2.48	527.052290	Y_R 488.368
Th (288.505 nm)	4.992330	ppm	0.010242	0.21	14899.900000	Y 377.433
Ti (336.122 nm)	0.002356	ppm	0.000148	6.27	143.883000	Y 377.433
Tl (190.794 nm)	-0.003103 u	ppm	0.001118	36.02	-10.749100	Y 377.433
U (409.013 nm)	10.130900	ppm	0.009194	0.09	47624.700000	Y 377.433
V (292.401 nm)	0.005466	ppm	0.000174	3.19	53.842000	Y 377.433
Zn (206.200 nm)	0.003816	ppm	0.000379	9.94	21.659500	Y 377.433
Zr (343.823 nm)	-0.002938 u	ppm	0.000091	3.11	-213.711000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.972869	17447.469218	0.003002	0.31
Y 377.433	0.970363	946338.928187	0.003441	0.35
Y_R 377.433	0.981131	70586.000000	0.002386	0.24
Y_R 488.368	1.001840	39590.700000	0.001183	0.12
Y_R2 488.368	0.997986	76016.249410	0.006299	0.63

Sample Name: CCV-5699804

Date: 5/14/2019 4:40:02 AM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.994519	ppm	0.001641	0.17	89.832524	Y_R 488.368
Ag (328.068 nm)	0.491406	ppm	0.000481	0.10	22745.300000	Y 377.433
Al (167.019 nm)	0.472780	ppm	0.011459	2.42	284.886000	Y_R 377.433
Al H (396.152 nm)	0.420548 u	ppm	0.003790	0.90	1439.082137	Y_R 377.433
As (188.980 nm)	0.964004	ppm	0.000833	0.09	1154.660000	Y 242.219
B (249.678 nm)	0.486663	ppm	0.000913	0.19	12126.200000	Y 242.219
Ba (493.408 nm)	0.486739	ppm	0.001427	0.29	55030.000000	Y_R 488.368
Be (234.861 nm)	0.478192	ppm	0.000431	0.09	138386.000000	Y_R 488.368
Bi (223.061 nm)	-0.004341 u	ppm	0.002784	64.13	9.987610	Y 377.433
Ca (315.887 nm)	4.976052	ppm	0.004312	0.09	4100.390110	Y_R 377.433
Cd (214.439 nm)	0.490553	ppm	0.000970	0.20	29908.100000	Y 377.433
Co (228.615 nm)	0.491739	ppm	0.000343	0.07	9792.860000	Y 242.219
Cr (205.560 nm)	0.492018	ppm	0.003289	0.67	7327.120000	Y 377.433
Cu (324.754 nm)	0.489460	ppm	0.000517	0.11	32987.700000	Y 377.433
Fe (238.204 nm)	2.438590	ppm	0.006924	0.28	8977.457631	Y_R 377.433
Fe H (259.940 nm)	2.357220 u	ppm	0.000337	0.01	4774.050000	Y_R 377.433
K (766.491 nm)	47.702100	ppm	0.301340	0.63	53596.700000	Y_R2 488.368
Li (670.783 nm)	0.960267	ppm	0.002392	0.25	28458.000000	Y_R2 488.368
Mg (279.078 nm)	19.248300	ppm	0.020091	0.10	113876.000000	Y 377.433
Mn (257.610 nm)	0.491134	ppm	0.000037	0.01	124477.000000	Y 377.433
Mo (202.032 nm)	0.498530	ppm	0.001996	0.40	4346.040000	Y 377.433
Na (589.592 nm)	4.733810	ppm	0.006934	0.15	32674.000000	Y_R2 488.368
Na H (589.593 nm)	4.014302 u	ppm	0.001350	0.03	26861.898282	Y_R 488.368
Ni (231.604 nm)	0.501079	ppm	0.001071	0.21	3714.430000	Y 377.433
P (213.618 nm)	0.956151	ppm	0.003758	0.39	2202.140000	Y 242.219
Pb (220.353 nm)	0.976189	ppm	0.001897	0.19	2986.820000	Y 242.219
S (181.972 nm)	0.013460	ppm	0.006378	47.38	30.068262	Y 377.433
Sb (206.834 nm)	1.011860	ppm	0.000362	0.04	2689.800000	Y 377.433
Se (196.026 nm)	0.950812	ppm	0.001071	0.11	896.328000	Y 242.219
Si (288.158 nm)	4.888870	ppm	0.002217	0.05	43844.700000	Y 377.433
Sn (189.925 nm)	0.985286	ppm	0.000908	0.09	2097.550000	Y 377.433
Sr (421.552 nm)	0.484646	ppm	0.000805	0.17	102520.308056	Y_R 488.368
Th (288.505 nm)	0.007013	ppm	0.001570	22.38	91.126900	Y 377.433
Ti (336.122 nm)	0.493967	ppm	0.000315	0.06	70767.000000	Y 377.433
Tl (190.794 nm)	0.986549	ppm	0.002412	0.24	2274.420000	Y 377.433
U (409.013 nm)	-0.000434 u	ppm	0.001737	> 100.00	-153.907000	Y 377.433
V (292.401 nm)	0.491129	ppm	0.000685	0.14	20644.900000	Y 377.433
Zn (206.200 nm)	0.488809	ppm	0.000923	0.19	2549.720000	Y 377.433
Zr (343.823 nm)	0.492509	ppm	0.000559	0.11	66972.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.989596	17747.441451	0.002403	0.24
Y 377.433	0.993641	969040.229903	0.002749	0.28
Y_R 377.433	0.994627	71557.000000	0.002222	0.22
Y_R 488.368	1.009470	39892.200000	0.001525	0.15
Y_R2 488.368	1.017307	77487.876968	0.002970	0.29

Sample Name: CCB

Date: 5/14/2019 4:43:24 AM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.067332 Z	ppm	0.020262	30.09	-2173.424034 Z	Y_R 488.368
Ag (328.068 nm)	0.000499	ppm	0.000045	8.92	-325.613000	Y 377.433
Al (167.019 nm)	0.003409	ppm	0.002392	70.15	2.374770	Y_R 377.433
Al H (396.152 nm)	-0.115792 Zu	ppm	0.000565	0.49	31.411237 Z	Y_R 377.433
As (188.980 nm)	-0.000525 u	ppm	0.002799	> 100.00	-0.673568	Y 242.219
B (249.678 nm)	0.000254 u	ppm	0.000424	> 100.00	73.867300	Y 242.219
Ba (493.408 nm)	-0.000427 u	ppm	0.000220	51.42	554.188000	Y_R 488.368
Be (234.861 nm)	0.000055	ppm	0.000009	15.89	-5.061890	Y_R 488.368
Bi (223.061 nm)	-0.000593 u	ppm	0.002829	> 100.00	19.225100	Y 377.433
Ca (315.887 nm)	0.002670	ppm	0.001282	48.03	-94.710371	Y_R 377.433
Cd (214.439 nm)	0.000061	ppm	0.000033	53.65	3.955410	Y 377.433
Co (228.615 nm)	0.000549	ppm	0.000203	36.92	-28.912600	Y 242.219
Cr (205.560 nm)	-0.000067 u	ppm	0.000168	> 100.00	-3.010160	Y 377.433
Cu (324.754 nm)	0.000743	ppm	0.000131	17.68	646.733000	Y 377.433
Fe (238.204 nm)	0.004342	ppm	0.000937	21.58	31.806960	Y_R 377.433
Fe H (259.940 nm)	-0.189828 u	ppm	0.000944	0.50	17.798800	Y_R 377.433
K (766.491 nm)	-0.052816 u	ppm	0.055068	> 100.00	-748.862000	Y_R2 488.368
Li (670.783 nm)	0.007445	ppm	0.001986	26.67	-776.920000	Y_R2 488.368
Mg (279.078 nm)	0.001843	ppm	0.001970	> 100.00	33.519800	Y 377.433
Mn (257.610 nm)	0.000034	ppm	0.000006	16.41	83.311600	Y 377.433
Mo (202.032 nm)	0.000492	ppm	0.000198	40.33	1.883720	Y 377.433
Na (589.592 nm)	0.065507	ppm	0.006850	10.46	1308.950000	Y_R2 488.368
Na H (589.593 nm)	-1.193051 u	ppm	0.037130	3.11	6258.477073	Y_R 488.368
Ni (231.604 nm)	0.000079 u	ppm	0.000128	> 100.00	-2.327320	Y 377.433
P (213.618 nm)	-0.001482 u	ppm	0.003193	> 100.00	13.312500	Y 242.219
Pb (220.353 nm)	-0.001000 u	ppm	0.001644	> 100.00	4.412280	Y 242.219
S (181.972 nm)	0.009909	ppm	0.000283	2.85	27.484880	Y 377.433
Sb (206.834 nm)	0.002082	ppm	0.001286	61.77	-25.323600	Y 377.433
Se (196.026 nm)	0.000732 u	ppm	0.001919	> 100.00	11.404800	Y 242.219
Si (288.158 nm)	-0.003937 u	ppm	0.001418	36.01	801.433000	Y 377.433
Sn (189.925 nm)	-0.000130 u	ppm	0.001658	> 100.00	7.935200	Y 377.433
Sr (421.552 nm)	0.000048 u	ppm	0.000143	> 100.00	126.230965	Y_R 488.368
Th (288.505 nm)	0.003382	ppm	0.001373	40.59	62.061700	Y 377.433
Ti (336.122 nm)	0.000157	ppm	0.000054	34.05	-171.973000	Y 377.433
Tl (190.794 nm)	-0.000024 u	ppm	0.000453	> 100.00	-2.274540	Y 377.433
U (409.013 nm)	-0.008291 u	ppm	0.005369	64.76	-152.640000	Y 377.433
V (292.401 nm)	-0.000154 u	ppm	0.000166	> 100.00	13.057300	Y 377.433
Zn (206.200 nm)	-0.000324 u	ppm	0.000114	35.14	0.081244	Y 377.433
Zr (343.823 nm)	0.000107	ppm	0.000094	88.14	52.243300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.997118	17882.339049	0.001012	0.10
Y 377.433	1.003629	978780.690618	0.001964	0.20
Y_R 377.433	0.997474	71761.700000	0.003431	0.34
Y_R 488.368	1.014700	40098.800000	0.016181	1.59
Y_R2 488.368	1.025490	78111.217561	0.002797	0.27

Sample Name: CCVL-5699389

Date: 5/14/2019 4:46:48 AM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.089538 Q	ppm	0.007018	7.84	-2119.219865 Q	Y_R 488.368
Ag (328.068 nm)	0.009507	ppm	0.000092	0.97	97.030300	Y 377.433
Al (167.019 nm)	0.092291	ppm	0.007058	7.65	55.601100	Y_R 377.433
Al H (396.152 nm)	-0.019170 u	ppm	0.006463	33.71	278.893277	Y_R 377.433
As (188.980 nm)	0.011949	ppm	0.000196	1.64	14.267500	Y 242.219
B (249.678 nm)	0.095280	ppm	0.000121	0.13	2425.210000	Y 242.219
Ba (493.408 nm)	0.009252	ppm	0.000170	1.83	1636.440000	Y_R 488.368
Be (234.861 nm)	0.000923	ppm	0.000003	0.29	248.459000	Y_R 488.368
Bi (223.061 nm)	0.099192	ppm	0.002522	2.54	276.414000	Y 377.433
Ca (315.887 nm)	0.202414	ppm	0.008959	4.43	73.767009	Y_R 377.433
Cd (214.439 nm)	0.004979	ppm	0.000006	0.12	303.880000	Y 377.433
Co (228.615 nm)	0.010536	ppm	0.000298	2.83	170.747000	Y 242.219
Cr (205.560 nm)	0.009831	ppm	0.000090	0.92	144.470000	Y 377.433
Cu (324.754 nm)	0.015472	ppm	0.000110	0.71	1621.160000	Y 377.433
Fe (238.204 nm)	0.100932	ppm	0.001884	1.87	386.768381	Y_R 377.433
Fe H (259.940 nm)	-0.089157 u	ppm	0.000972	1.09	205.787000	Y_R 377.433
K (766.491 nm)	2.971780	ppm	0.000233	0.01	2693.160000	Y_R2 488.368
Li (670.783 nm)	0.028786 Q	ppm	0.001686	5.86	-122.127000 Q	Y_R2 488.368
Mg (279.078 nm)	0.190160	ppm	0.000890	0.47	1146.260000	Y 377.433
Mn (257.610 nm)	0.010043	ppm	0.000003	0.03	2618.650000	Y 377.433
Mo (202.032 nm)	0.018838	ppm	0.000458	2.43	161.912000	Y 377.433
Na (589.592 nm)	0.965784	ppm	0.005664	0.59	7189.490000	Y_R2 488.368
Na H (589.593 nm)	-0.353654 u	ppm	0.020467	5.79	9511.391093	Y_R 488.368
Ni (231.604 nm)	0.041132	ppm	0.000441	1.07	302.141000	Y 377.433
P (213.618 nm)	2.737430 o	ppm	0.001192	0.04	6273.540000	Y 242.219
Pb (220.353 nm)	0.008528	ppm	0.000267	3.13	33.516400	Y 242.219
S (181.972 nm)	0.095540	ppm	0.013963	14.61	64.937665	Y 377.433
Sb (206.834 nm)	0.020681	ppm	0.003549	17.16	24.604200	Y 377.433
Se (196.026 nm)	0.016711	ppm	0.002045	12.24	26.279800	Y 242.219
Si (288.158 nm)	0.552071	ppm	0.026523	4.80	5692.780000	Y 377.433
Sn (189.925 nm)	0.097731	ppm	0.000013	0.01	215.452000	Y 377.433
Sr (421.552 nm)	0.009660	ppm	0.000018	0.18	2157.012470	Y_R 488.368
Th (288.505 nm)	0.015977	ppm	0.001670	10.45	100.390000	Y 377.433
Ti (336.122 nm)	0.009539	ppm	0.000102	1.07	1175.900000	Y 377.433
Tl (190.794 nm)	0.014442	ppm	0.000172	1.19	31.078600	Y 377.433
U (409.013 nm)	0.057612	ppm	0.001667	2.89	156.838000	Y 377.433
V (292.401 nm)	0.009300	ppm	0.000118	1.27	408.303000	Y 377.433
Zn (206.200 nm)	0.020055	ppm	0.000005	0.02	106.308000	Y 377.433
Zr (343.823 nm)	0.010391	ppm	0.000116	1.11	1450.120000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.001433	17959.732688	0.002394	0.24
Y 377.433	1.008672	983698.988692	0.005204	0.52
Y_R 377.433	0.997828	71787.200000	0.000188	0.02
Y_R 488.368	1.021670	40374.400000	0.001885	0.18
Y_R2 488.368	1.027324	78250.887197	0.002713	0.26

Sample Name: MB 280-457243/1-A

Date: 5/14/2019 4:50:11 AM

Rack:Tube: 4:14

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.077694 n	ppm	0.010658	13.72	-2148.130574	Y_R 488.368
Ag (328.068 nm)	0.000437	ppm	0.000007	1.54	-328.580000	Y 377.433
Al (167.019 nm)	0.003320	ppm	0.002254	67.90	2.392130	Y_R 377.433
Al H (396.152 nm)	-0.123057 u	ppm	0.002835	2.30	12.894370	Y_R 377.433
As (188.980 nm)	-0.001078 u	ppm	0.000972	90.13	-1.336570	Y 242.219
B (249.678 nm)	0.000079	ppm	0.000073	91.82	69.389100	Y 242.219
Ba (493.408 nm)	-0.000315 u	ppm	0.000023	7.20	566.802000	Y_R 488.368
Be (234.861 nm)	-0.000016 u	ppm	0.000005	31.42	-22.663800	Y_R 488.368
Bi (223.061 nm)	-0.000687 u	ppm	0.000757	> 100.00	18.998200	Y 377.433
Ca (315.887 nm)	0.019549	ppm	0.002399	12.27	-80.474012	Y_R 377.433
Cd (214.439 nm)	0.000016	ppm	0.000006	39.20	1.316870	Y 377.433
Co (228.615 nm)	0.000342	ppm	0.000151	44.30	-33.051000	Y 242.219
Cr (205.560 nm)	0.000063 u	ppm	0.000192	> 100.00	-1.108780	Y 377.433
Cu (324.754 nm)	0.000568	ppm	0.000068	12.03	634.959000	Y 377.433
Fe (238.204 nm)	0.099302	ppm	0.000609	0.61	380.777062	Y_R 377.433
Fe H (259.940 nm)	-0.096094 u	ppm	0.001122	1.17	192.833000	Y_R 377.433
K (766.491 nm)	0.006669 u	ppm	0.081186	> 100.00	-681.167000	Y_R2 488.368
Li (670.783 nm)	0.005817	ppm	0.001070	18.40	-826.853000	Y_R2 488.368
Mg (279.078 nm)	0.000448 u	ppm	0.000647	> 100.00	25.044700	Y 377.433
Mn (257.610 nm)	0.000691	ppm	0.000013	1.93	249.679000	Y 377.433
Mo (202.032 nm)	0.000171	ppm	0.000125	72.96	-0.911882	Y 377.433
Na (589.592 nm)	-0.005487 u	ppm	0.007325	> 100.00	847.960000	Y_R2 488.368
Na H (589.593 nm)	-1.436914 u	ppm	0.017941	1.25	5316.880750	Y_R 488.368
Ni (231.604 nm)	0.000231 u	ppm	0.000445	> 100.00	-1.190560	Y 377.433
P (213.618 nm)	-0.002518 u	ppm	0.000554	21.98	10.945600	Y 242.219
Pb (220.353 nm)	-0.000488 u	ppm	0.001141	> 100.00	5.997620	Y 242.219
S (181.972 nm)	0.001889 u	ppm	0.002700	> 100.00	23.980614	Y 377.433
Sb (206.834 nm)	0.002790	ppm	0.000434	15.54	-23.440500	Y 377.433
Se (196.026 nm)	-0.000993 u	ppm	0.000011	1.10	9.780780	Y 242.219
Si (288.158 nm)	-0.002584 u	ppm	0.000537	20.79	813.337000	Y 377.433
Sn (189.925 nm)	0.000389	ppm	0.000144	37.00	9.034810	Y 377.433
Sr (421.552 nm)	-0.000033 u	ppm	0.000136	> 100.00	108.948969	Y_R 488.368
Th (288.505 nm)	0.000518 u	ppm	0.005072	> 100.00	53.727800	Y 377.433
Ti (336.122 nm)	0.000023 u	ppm	0.000038	> 100.00	-191.260000	Y 377.433
Tl (190.794 nm)	-0.000606 u	ppm	0.000356	58.79	-3.620150	Y 377.433
U (409.013 nm)	-0.007071 u	ppm	0.002109	29.83	-146.794000	Y 377.433
V (292.401 nm)	-0.000097 u	ppm	0.000216	> 100.00	15.198700	Y 377.433
Zn (206.200 nm)	-0.000089 u	ppm	0.000789	> 100.00	1.304920	Y 377.433
Zr (343.823 nm)	-0.000092 u	ppm	0.000057	62.06	25.472700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.002089	17971.488097	0.000832	0.08
Y 377.433	1.009902	984898.131119	0.000445	0.04
Y_R 377.433	1.002710	72138.200000	0.001015	0.10
Y_R 488.368	1.018890	40264.700000	0.006804	0.67
Y_R2 488.368	1.023346	77947.906341	0.003359	0.33

Sample Name: LCS 280-457243/2-A

Date: 5/14/2019 4:53:36 AM

Rack:Tube: 4:15

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.999828 n	ppm	0.023028	2.30	102.791184	Y_R 488.368
Ag (328.068 nm)	0.051807	ppm	0.000215	0.42	1979.200000	Y 377.433
Al (167.019 nm)	9.004440 o	ppm	0.032953	0.37	5392.710000	Y_R 377.433
Al H (396.152 nm)	10.347080	ppm	0.039638	0.38	26765.380151	Y_R 377.433
As (188.980 nm)	1.943870	ppm	0.001825	0.09	2328.310000	Y 242.219
B (249.678 nm)	1.004690	ppm	0.000775	0.08	24950.800000	Y 242.219
Ba (493.408 nm)	1.954250 o	ppm	0.005406	0.28	219119.000000	Y_R 488.368
Be (234.861 nm)	0.954507	ppm	0.005950	0.62	276417.000000	Y_R 488.368
Bi (223.061 nm)	2.000320	ppm	0.005066	0.25	5177.830000	Y 377.433
Ca (315.887 nm)	50.855765 o	ppm	0.163659	0.32	42797.973083	Y_R 377.433
Cd (214.439 nm)	0.959970	ppm	0.000099	0.01	58532.500000	Y 377.433
Co (228.615 nm)	0.931574	ppm	0.001294	0.14	18590.100000	Y 242.219
Cr (205.560 nm)	0.974098	ppm	0.003969	0.41	14506.700000	Y 377.433
Cu (324.754 nm)	0.960318	ppm	0.000280	0.03	64181.700000	Y 377.433
Fe (238.204 nm)	9.971516 o	ppm	0.050373	0.51	36660.306659	Y_R 377.433
Fe H (259.940 nm)	10.250800	ppm	0.041864	0.41	19514.200000	Y_R 377.433
K (766.491 nm)	50.014200	ppm	0.099818	0.20	56227.800000	Y_R2 488.368
Li (670.783 nm)	0.963273	ppm	0.001826	0.19	28550.200000	Y_R2 488.368
Mg (279.078 nm)	49.692300 o	ppm	0.059732	0.12	293889.000000	Y 377.433
Mn (257.610 nm)	0.975054	ppm	0.000085	0.01	247052.000000	Y 377.433
Mo (202.032 nm)	0.998617	ppm	0.000653	0.07	8708.070000	Y 377.433
Na (589.592 nm)	49.042500 o	ppm	0.120771	0.25	324057.000000	Y_R2 488.368
Na H (589.593 nm)	49.844066	ppm	0.208902	0.42	205388.039587	Y_R 488.368
Ni (231.604 nm)	0.947443	ppm	0.001924	0.20	7026.200000	Y 377.433
P (213.618 nm)	19.914800 o	ppm	0.005304	0.03	45535.200000	Y 242.219
Pb (220.353 nm)	0.951954	ppm	0.000357	0.04	2913.870000	Y 242.219
S (181.972 nm)	9.416821	ppm	0.017277	0.18	4141.614751	Y 377.433
Sb (206.834 nm)	1.053280	ppm	0.005647	0.54	2805.110000	Y 377.433
Se (196.026 nm)	1.906700	ppm	0.002030	0.11	1785.830000	Y 242.219
Si (288.158 nm)	2.028470	ppm	0.014199	0.70	18681.100000	Y 377.433
Sn (189.925 nm)	1.961990	ppm	0.007123	0.36	4168.680000	Y 377.433
Sr (421.552 nm)	0.966551	ppm	0.003149	0.33	204345.210011	Y_R 488.368
Th (288.505 nm)	1.035150	ppm	0.004503	0.43	3166.550000	Y 377.433
Ti (336.122 nm)	0.997319	ppm	0.000584	0.06	143207.000000	Y 377.433
Tl (190.794 nm)	1.928010	ppm	0.000678	0.04	4446.550000	Y 377.433
U (409.013 nm)	2.096130	ppm	0.001585	0.08	9712.400000	Y 377.433
V (292.401 nm)	0.988801	ppm	0.000496	0.05	41506.700000	Y 377.433
Zn (206.200 nm)	0.491795	ppm	0.000770	0.16	2565.280000	Y 377.433
Zr (343.823 nm)	0.511563	ppm	0.000257	0.05	69585.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.966434	17332.051034	0.005021	0.52
Y 377.433	0.970832	946796.340768	0.003911	0.40
Y_R 377.433	0.981738	70629.700000	0.002719	0.28
Y_R 488.368	0.998812	39471.100000	0.002732	0.27
Y_R2 488.368	1.005016	76551.684648	0.008919	0.89

Sample Name: LCSD 280-457243/3-A

Date: 5/14/2019 4:57:00 AM

Rack:Tube: 4:16

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.999340 n	ppm	0.039994	4.00	101.601411	Y_R 488.368
Ag (328.068 nm)	0.051601	ppm	0.000380	0.74	1964.450000	Y 377.433
Al (167.019 nm)	8.989280 o	ppm	0.068051	0.76	5383.660000	Y_R 377.433
Al H (396.152 nm)	10.348702	ppm	0.037860	0.37	26771.710403	Y_R 377.433
As (188.980 nm)	1.997730	ppm	0.000580	0.03	2392.830000	Y 242.219
B (249.678 nm)	0.998891	ppm	0.001058	0.11	24808.400000	Y 242.219
Ba (493.408 nm)	2.009440 o	ppm	0.005248	0.26	225290.000000	Y_R 488.368
Be (234.861 nm)	0.990601	ppm	0.005658	0.57	286860.000000	Y_R 488.368
Bi (223.061 nm)	1.982980	ppm	0.007229	0.36	5133.130000	Y 377.433
Ca (315.887 nm)	50.884435 o	ppm	0.185882	0.37	42822.169465	Y_R 377.433
Cd (214.439 nm)	0.984585	ppm	0.000995	0.10	60033.100000	Y 377.433
Co (228.615 nm)	0.957783	ppm	0.001847	0.19	19114.200000	Y 242.219
Cr (205.560 nm)	1.004810	ppm	0.003037	0.30	14964.200000	Y 377.433
Cu (324.754 nm)	0.982487	ppm	0.001114	0.11	65646.700000	Y 377.433
Fe (238.204 nm)	9.991368 o	ppm	0.038997	0.39	36733.259779	Y_R 377.433
Fe H (259.940 nm)	10.272200	ppm	0.031545	0.31	19554.200000	Y_R 377.433
K (766.491 nm)	50.106800	ppm	0.132801	0.27	56333.300000	Y_R2 488.368
Li (670.783 nm)	0.991551	ppm	0.007814	0.79	29417.800000	Y_R2 488.368
Mg (279.078 nm)	49.652700 o	ppm	0.067944	0.14	293655.000000	Y 377.433
Mn (257.610 nm)	1.001860	ppm	0.000668	0.07	253841.000000	Y 377.433
Mo (202.032 nm)	1.025650	ppm	0.001448	0.14	8943.840000	Y 377.433
Na (589.592 nm)	49.107700 o	ppm	0.173129	0.35	324592.000000	Y_R2 488.368
Na H (589.593 nm)	50.131041	ppm	0.070428	0.14	206551.872002	Y_R 488.368
Ni (231.604 nm)	0.972633	ppm	0.001117	0.11	7213.080000	Y 377.433
P (213.618 nm)	19.792700 o	ppm	0.024636	0.12	45256.200000	Y 242.219
Pb (220.353 nm)	0.975279	ppm	0.000891	0.09	2984.950000	Y 242.219
S (181.972 nm)	9.331898	ppm	0.013367	0.14	4104.548609	Y 377.433
Sb (206.834 nm)	1.052550	ppm	0.002532	0.24	2803.970000	Y 377.433
Se (196.026 nm)	1.946970	ppm	0.004581	0.24	1823.360000	Y 242.219
Si (288.158 nm)	2.114430	ppm	0.018123	0.86	19437.300000	Y 377.433
Sn (189.925 nm)	2.005850	ppm	0.000563	0.03	4261.690000	Y 377.433
Sr (421.552 nm)	0.995170	ppm	0.003104	0.31	210392.445861	Y_R 488.368
Th (288.505 nm)	1.024230	ppm	0.003830	0.37	3135.060000	Y 377.433
Ti (336.122 nm)	1.025070	ppm	0.001530	0.15	147192.000000	Y 377.433
Tl (190.794 nm)	1.977530	ppm	0.004942	0.25	4560.810000	Y 377.433
U (409.013 nm)	2.083250	ppm	0.007023	0.34	9652.060000	Y 377.433
V (292.401 nm)	1.015640	ppm	0.000981	0.10	42632.800000	Y 377.433
Zn (206.200 nm)	0.488965	ppm	0.000511	0.10	2550.530000	Y 377.433
Zr (343.823 nm)	0.507985	ppm	0.000964	0.19	69099.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.961396	17241.703179	0.001537	0.16
Y 377.433	0.966905	942966.003074	0.001062	0.11
Y_R 377.433	0.967636	69615.100000	0.003495	0.36
Y_R 488.368	0.983104	38850.400000	0.003745	0.38
Y_R2 488.368	0.985089	75033.881198	0.007150	0.73

Sample Name: 280-123390-A-1-A

Date: 5/14/2019 5:00:25 AM

Rack:Tube: 4:17

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.003999 nu	ppm	0.020008	> 100.00	-2328.018591	Y_R 488.368
Ag (328.068 nm)	0.000757	ppm	0.000032	4.21	-314.424000	Y 377.433
Al (167.019 nm)	2.331470	ppm	0.016265	0.70	1396.520000	Y_R 377.433
Al H (396.152 nm)	2.674575	ppm	0.013011	0.49	7270.391810	Y_R 377.433
As (188.980 nm)	0.001562 u	ppm	0.002421	> 100.00	1.804820	Y 242.219
B (249.678 nm)	0.195372	ppm	0.000016	0.01	4897.490000	Y 242.219
Ba (493.408 nm)	0.195868	ppm	0.001075	0.55	22571.200000	Y_R 488.368
Be (234.861 nm)	0.000155	ppm	0.000043	27.52	103.165000	Y_R 488.368
Bi (223.061 nm)	-0.003734 u	ppm	0.003347	89.63	11.569900	Y 377.433
Ca (315.887 nm)	309.034285 o	ppm	0.518508	0.17	260558.379907	Y_R 377.433
Cd (214.439 nm)	0.000034 u	ppm	0.000086	> 100.00	4.874550	Y 377.433
Co (228.615 nm)	0.001088	ppm	0.000268	24.65	-15.213800	Y 242.219
Cr (205.560 nm)	0.014262	ppm	0.000097	0.68	209.886000	Y 377.433
Cu (324.754 nm)	0.002406	ppm	0.000389	16.18	538.239000	Y 377.433
Fe (238.204 nm)	2.539851	ppm	0.009706	0.38	9349.582700	Y_R 377.433
Fe H (259.940 nm)	2.477020 u	ppm	0.007191	0.29	4997.750000	Y_R 377.433
K (766.491 nm)	7.350970	ppm	0.042474	0.58	7676.710000	Y_R2 488.368
Li (670.783 nm)	0.045421	ppm	0.001016	2.24	388.284000	Y_R2 488.368
Mg (279.078 nm)	59.736600 o	ppm	0.061575	0.10	353373.000000	Y 377.433
Mn (257.610 nm)	0.318338	ppm	0.000239	0.08	80708.400000	Y 377.433
Mo (202.032 nm)	0.000659	ppm	0.000071	10.78	3.340800	Y 377.433
Na (589.592 nm)	104.549000 o	ppm	0.276479	0.26	681880.000000	Y_R2 488.368
Na H (589.593 nm)	108.957932	ppm	0.559102	0.51	432030.438679	Y_R 488.368
Ni (231.604 nm)	0.022582	ppm	0.000267	1.18	164.674000	Y 377.433
P (213.618 nm)	0.054901	ppm	0.000056	0.10	142.187000	Y 242.219
Pb (220.353 nm)	0.001054	ppm	0.000567	53.82	9.925220	Y 242.219
S (181.972 nm)	88.666951 o	ppm	0.165738	0.19	38783.180516	Y 377.433
Sb (206.834 nm)	-0.002585 u	ppm	0.001647	63.72	-38.187600	Y 377.433
Se (196.026 nm)	0.003950	ppm	0.002016	51.04	14.229700	Y 242.219
Si (288.158 nm)	21.298600 o	ppm	0.102584	0.48	188206.000000	Y 377.433
Sn (189.925 nm)	0.002073	ppm	0.000380	18.31	12.606000	Y 377.433
Sr (421.552 nm)	2.037514 o	ppm	0.013210	0.65	430636.567541	Y_R 488.368
Th (288.505 nm)	0.003222	ppm	0.000149	4.63	69.136000	Y 377.433
Ti (336.122 nm)	0.078086	ppm	0.000221	0.28	12002.200000	Y 377.433
Tl (190.794 nm)	0.002028	ppm	0.000322	15.86	2.044370	Y 377.433
U (409.013 nm)	-0.021259 u	ppm	0.003379	15.89	-272.746000	Y 377.433
V (292.401 nm)	0.007518	ppm	0.000360	4.78	337.553000	Y 377.433
Zn (206.200 nm)	0.029912	ppm	0.000568	1.90	157.689000	Y 377.433
Zr (343.823 nm)	0.001940	ppm	0.000028	1.47	309.217000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.926860	16622.337326	0.000800	0.09
Y 377.433	0.940775	917482.972672	0.001156	0.12
Y_R 377.433	0.950088	68352.600000	0.004734	0.50
Y_R 488.368	0.959468	37916.300000	0.002354	0.25
Y_R2 488.368	0.969781	73867.897366	0.001678	0.17

Sample Name: 280-123390-A-1-Asd@5

Date: 5/14/2019 5:03:49 AM

Rack:Tube: 4:18

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.055415 n	ppm	0.011391	20.56	-2202.513370	Y_R 488.368
Ag (328.068 nm)	0.000999	ppm	0.000019	1.88	-302.331000	Y 377.433
Al (167.019 nm)	0.539219	ppm	0.001887	0.35	323.331000	Y_R 377.433
Al H (396.152 nm)	0.502526 u	ppm	0.006903	1.37	1633.267978	Y_R 377.433
As (188.980 nm)	-0.000108 u	ppm	0.004159	> 100.00	-0.179516	Y 242.219
B (249.678 nm)	0.038900	ppm	0.000035	0.09	1028.940000	Y 242.219
Ba (493.408 nm)	0.039206	ppm	0.000009	0.02	5000.000000	Y_R 488.368
Be (234.861 nm)	0.000018	ppm	0.000002	9.42	6.130050	Y_R 488.368
Bi (223.061 nm)	-0.003077 u	ppm	0.001458	47.39	12.945400	Y 377.433
Ca (315.887 nm)	63.535691 o	ppm	0.011155	0.02	53492.292833	Y_R 377.433
Cd (214.439 nm)	0.000046	ppm	0.000028	61.95	3.718330	Y 377.433
Co (228.615 nm)	0.000468	ppm	0.000138	29.57	-29.876100	Y 242.219
Cr (205.560 nm)	0.003172	ppm	0.000144	4.55	45.073600	Y 377.433
Cu (324.754 nm)	0.001727	ppm	0.000151	8.73	667.222000	Y 377.433
Fe (238.204 nm)	0.708085	ppm	0.003120	0.44	2618.002342	Y_R 377.433
Fe H (259.940 nm)	0.539840 u	ppm	0.000044	0.01	1380.350000	Y_R 377.433
K (766.491 nm)	1.449250	ppm	0.053224	3.67	960.507000	Y_R2 488.368
Li (670.783 nm)	0.014783	ppm	0.000724	4.89	-551.754000	Y_R2 488.368
Mg (279.078 nm)	12.164600	ppm	0.009390	0.08	71977.700000	Y 377.433
Mn (257.610 nm)	0.067185	ppm	0.000065	0.10	17092.500000	Y 377.433
Mo (202.032 nm)	0.000157	ppm	0.000176	> 100.00	-1.031220	Y 377.433
Na (589.592 nm)	21.230700 o	ppm	0.017161	0.08	139172.000000	Y_R2 488.368
Na H (589.593 nm)	20.866703	ppm	0.103126	0.49	91527.536798	Y_R 488.368
Ni (231.604 nm)	0.003858	ppm	0.000165	4.28	25.737300	Y 377.433
P (213.618 nm)	0.009822	ppm	0.001151	11.72	39.151100	Y 242.219
Pb (220.353 nm)	-0.000526 u	ppm	0.000647	> 100.00	5.715240	Y 242.219
S (181.972 nm)	17.609584 o	ppm	0.062573	0.36	7721.046026	Y 377.433
Sb (206.834 nm)	-0.000032 u	ppm	0.000404	> 100.00	-31.096800	Y 377.433
Se (196.026 nm)	-0.000281 u	ppm	0.005104	> 100.00	10.392900	Y 242.219
Si (288.158 nm)	4.564210	ppm	0.014426	0.32	40988.600000	Y 377.433
Sn (189.925 nm)	0.000606	ppm	0.000210	34.67	9.495020	Y 377.433
Sr (421.552 nm)	0.406886	ppm	0.001895	0.47	86089.844268	Y_R 488.368
Th (288.505 nm)	-0.001873 u	ppm	0.001491	79.62	48.303100	Y 377.433
Ti (336.122 nm)	0.017336	ppm	0.000114	0.66	2497.020000	Y 377.433
Tl (190.794 nm)	0.000613	ppm	0.000207	33.86	-0.901441	Y 377.433
U (409.013 nm)	-0.010490 u	ppm	0.006244	59.52	-174.951000	Y 377.433
V (292.401 nm)	0.000762	ppm	0.000122	15.96	51.683000	Y 377.433
Zn (206.200 nm)	0.008729	ppm	0.000462	5.29	47.268800	Y 377.433
Zr (343.823 nm)	0.000423	ppm	0.000055	13.11	97.380300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.972779	17445.840869	0.000674	0.07
Y 377.433	0.980292	956021.832306	0.000722	0.07
Y_R 377.433	0.977253	70307.000000	0.001898	0.19
Y_R 488.368	0.993881	39276.300000	0.002599	0.26
Y_R2 488.368	1.004829	76537.441317	0.004099	0.41

Sample Name: 280-123390-A-1-B MS

Date: 5/14/2019 5:07:14 AM

Rack:Tube: 4:19

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.023622 n	ppm	0.012651	1.24	160.872275	Y_R 488.368
Ag (328.068 nm)	0.053645	ppm	0.000289	0.54	2059.360000	Y 377.433
Al (167.019 nm)	12.982000 o	ppm	0.079837	0.61	7773.580000	Y_R 377.433
Al H (396.152 nm)	15.777541	ppm	0.063857	0.40	40722.325574	Y_R 377.433
As (188.980 nm)	2.037770	ppm	0.000677	0.03	2440.760000	Y 242.219
B (249.678 nm)	1.243640 o	ppm	0.000381	0.03	30858.000000	Y 242.219
Ba (493.408 nm)	2.208280 o	ppm	0.011422	0.52	247590.000000	Y_R 488.368
Be (234.861 nm)	0.992015	ppm	0.007637	0.77	287359.000000	Y_R 488.368
Bi (223.061 nm)	2.006000	ppm	0.000915	0.05	5192.950000	Y 377.433
Ca (315.887 nm)	353.173713 o	ppm	0.621066	0.18	297788.404848	Y_R 377.433
Cd (214.439 nm)	0.946401	ppm	0.000164	0.02	57708.200000	Y 377.433
Co (228.615 nm)	0.925686	ppm	0.000317	0.03	18477.000000	Y 242.219
Cr (205.560 nm)	0.993536	ppm	0.004283	0.43	14795.400000	Y 377.433
Cu (324.754 nm)	1.001380	ppm	0.001893	0.19	66682.600000	Y 377.433
Fe (238.204 nm)	12.838612 o	ppm	0.018329	0.14	47196.636462	Y_R 377.433
Fe H (259.940 nm)	13.325800	ppm	0.025803	0.19	25256.400000	Y_R 377.433
K (766.491 nm)	58.981600	ppm	0.230180	0.39	66432.800000	Y_R2 488.368
Li (670.783 nm)	1.052560	ppm	0.004183	0.40	31289.600000	Y_R2 488.368
Mg (279.078 nm)	107.275000 o	ppm	0.068804	0.06	634497.000000	Y 377.433
Mn (257.610 nm)	1.288240 o	ppm	0.000423	0.03	326381.000000	Y 377.433
Mo (202.032 nm)	1.014130	ppm	0.000367	0.04	8843.370000	Y 377.433
Na (589.592 nm)	151.319000 o	ppm	0.283174	0.19	990377.000000	Y_R2 488.368
Na H (589.593 nm)	159.568522	ppm	1.198049	0.75	629568.820568	Y_R 488.368
Ni (231.604 nm)	0.951953	ppm	0.000548	0.06	7059.730000	Y 377.433
P (213.618 nm)	20.156900 o	ppm	0.008342	0.04	46088.500000	Y 242.219
Pb (220.353 nm)	0.955234	ppm	0.000507	0.05	2922.110000	Y 242.219
S (181.972 nm)	98.107492 o	ppm	0.094171	0.10	42912.001387	Y 377.433
Sb (206.834 nm)	1.053150	ppm	0.003678	0.35	2804.250000	Y 377.433
Se (196.026 nm)	1.987840	ppm	0.004014	0.20	1861.200000	Y 242.219
Si (288.158 nm)	30.004100 o	ppm	0.243216	0.81	264790.000000	Y 377.433
Sn (189.925 nm)	1.970630	ppm	0.000754	0.04	4187.010000	Y 377.433
Sr (421.552 nm)	2.959738 o	ppm	0.009360	0.32	625499.730808	Y_R 488.368
Th (288.505 nm)	1.020630	ppm	0.008611	0.84	3130.720000	Y 377.433
Ti (336.122 nm)	1.115170 o	ppm	0.001418	0.13	161093.000000	Y 377.433
Tl (190.794 nm)	1.894340	ppm	0.005963	0.31	4368.120000	Y 377.433
U (409.013 nm)	2.083470	ppm	0.007774	0.37	9596.350000	Y 377.433
V (292.401 nm)	1.016030	ppm	0.001203	0.12	42657.100000	Y 377.433
Zn (206.200 nm)	0.495176	ppm	0.001391	0.28	2582.910000	Y 377.433
Zr (343.823 nm)	0.501948	ppm	0.002433	0.48	68287.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.925495	16597.853223	0.002161	0.23
Y 377.433	0.940078	916803.318263	0.001619	0.17
Y_R 377.433	0.957765	68904.900000	0.001279	0.13
Y_R 488.368	0.973480	38470.100000	0.005659	0.58
Y_R2 488.368	0.982834	74862.098301	0.001164	0.12

Sample Name: 280-123390-A-1-C MSD

Date: 5/14/2019 5:10:39 AM

Rack:Tube: 4:20

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.046165 n	ppm	0.010512	1.00	215.899862	Y_R 488.368
Ag (328.068 nm)	0.054286	ppm	0.000394	0.73	2087.890000	Y 377.433
Al (167.019 nm)	13.318200 o	ppm	0.035324	0.27	7974.880000	Y_R 377.433
Al H (396.152 nm)	16.232936	ppm	0.021803	0.13	41883.862743	Y_R 377.433
As (188.980 nm)	2.059370	ppm	0.001872	0.09	2466.630000	Y 242.219
B (249.678 nm)	1.261640 o	ppm	0.000295	0.02	31303.400000	Y 242.219
Ba (493.408 nm)	2.240510 o	ppm	0.003040	0.14	251195.000000	Y_R 488.368
Be (234.861 nm)	1.007040	ppm	0.005871	0.58	291716.000000	Y_R 488.368
Bi (223.061 nm)	2.039620	ppm	0.004351	0.21	5279.670000	Y 377.433
Ca (315.887 nm)	355.628180 o	ppm	0.301752	0.08	299858.635888	Y_R 377.433
Cd (214.439 nm)	0.960206	ppm	0.000575	0.06	58550.200000	Y 377.433
Co (228.615 nm)	0.939109	ppm	0.000353	0.04	18745.800000	Y 242.219
Cr (205.560 nm)	1.011320	ppm	0.002933	0.29	15060.200000	Y 377.433
Cu (324.754 nm)	1.018880	ppm	0.000501	0.05	67841.100000	Y 377.433
Fe (238.204 nm)	13.207892 o	ppm	0.008633	0.07	48553.708262	Y_R 377.433
Fe H (259.940 nm)	13.719600	ppm	0.003278	0.02	25991.600000	Y_R 377.433
K (766.491 nm)	59.881200	ppm	0.042564	0.07	67456.500000	Y_R2 488.368
Li (670.783 nm)	1.070450	ppm	0.001907	0.18	31838.600000	Y_R2 488.368
Mg (279.078 nm)	108.088000 o	ppm	0.160733	0.15	639306.000000	Y 377.433
Mn (257.610 nm)	1.306920 o	ppm	0.000355	0.03	331112.000000	Y 377.433
Mo (202.032 nm)	1.030700	ppm	0.000413	0.04	8987.920000	Y 377.433
Na (589.592 nm)	152.872000 o	ppm	0.605026	0.40	1000550.000000	Y_R2 488.368
Na H (589.593 nm)	160.389362	ppm	0.074400	0.05	632772.876525	Y_R 488.368
Ni (231.604 nm)	0.966264	ppm	0.001903	0.20	7165.920000	Y 377.433
P (213.618 nm)	20.363900 o	ppm	0.021373	0.10	46561.800000	Y 242.219
Pb (220.353 nm)	0.970977	ppm	0.001823	0.19	2970.070000	Y 242.219
S (181.972 nm)	98.338444 o	ppm	0.341357	0.35	43012.997850	Y 377.433
Sb (206.834 nm)	1.062000	ppm	0.001961	0.18	2828.260000	Y 377.433
Se (196.026 nm)	2.016110	ppm	0.002800	0.14	1887.490000	Y 242.219
Si (288.158 nm)	31.134400 o	ppm	0.105542	0.34	274734.000000	Y 377.433
Sn (189.925 nm)	2.012650	ppm	0.008531	0.42	4276.110000	Y 377.433
Sr (421.552 nm)	2.994359 o	ppm	0.002331	0.08	632815.056620	Y_R 488.368
Th (288.505 nm)	1.033750	ppm	0.001138	0.11	3170.360000	Y 377.433
Ti (336.122 nm)	1.139410 o	ppm	0.003710	0.33	164582.000000	Y 377.433
Tl (190.794 nm)	1.920390	ppm	0.002921	0.15	4428.170000	Y 377.433
U (409.013 nm)	2.104850	ppm	0.004125	0.20	9696.260000	Y 377.433
V (292.401 nm)	1.030740	ppm	0.000043	0.00	43273.600000	Y 377.433
Zn (206.200 nm)	0.500938	ppm	0.000044	0.01	2612.940000	Y 377.433
Zr (343.823 nm)	0.509469	ppm	0.001041	0.20	69310.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.931129	16698.887570	0.004654	0.50
Y 377.433	0.945873	922454.685592	0.004050	0.43
Y_R 377.433	0.962865	69271.900000	0.010610	1.10
Y_R 488.368	0.979660	38714.300000	0.010018	1.02
Y_R2 488.368	0.972691	74089.537343	0.014435	1.48

Sample Name: 280-123390-A-1-Apds

Date: 5/14/2019 5:14:04 AM

Rack:Tube: 4:21

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.122805 n	ppm	0.002547	2.07	-2038.015466	Y_R 488.368
Ag (328.068 nm)	0.051613	ppm	0.000567	1.10	2064.780000	Y 377.433
Al (167.019 nm)	3.281980 o	ppm	0.017600	0.54	1965.670000	Y_R 377.433
Al H (396.152 nm)	3.819702	ppm	0.023457	0.61	10194.919662	Y_R 377.433
As (188.980 nm)	0.195639	ppm	0.002369	1.21	234.270000	Y 242.219
B (249.678 nm)	0.295629	ppm	0.000617	0.21	7378.500000	Y 242.219
Ba (493.408 nm)	0.288426	ppm	0.001328	0.46	32923.100000	Y_R 488.368
Be (234.861 nm)	0.047936	ppm	0.000211	0.44	13955.100000	Y_R 488.368
Bi (223.061 nm)	-0.002829 u	ppm	0.000812	28.72	14.069800	Y 377.433
Ca (315.887 nm)	322.272934 o	ppm	1.354630	0.42	271724.562452	Y_R 377.433
Cd (214.439 nm)	0.046091	ppm	0.000137	0.30	2813.570000	Y 377.433
Co (228.615 nm)	0.045967	ppm	0.000130	0.28	882.468000	Y 242.219
Cr (205.560 nm)	0.061815	ppm	0.000391	0.63	918.038000	Y 377.433
Cu (324.754 nm)	0.051214	ppm	0.000064	0.13	3766.560000	Y 377.433
Fe (238.204 nm)	3.503089	ppm	0.013279	0.38	12889.397932	Y_R 377.433
Fe H (259.940 nm)	3.496780 u	ppm	0.012764	0.37	6902.020000	Y_R 377.433
K (766.491 nm)	26.796100	ppm	0.108212	0.40	29805.500000	Y_R2 488.368
Li (670.783 nm)	0.143699	ppm	0.000645	0.45	3403.700000	Y_R2 488.368
Mg (279.078 nm)	77.713800 o	ppm	0.029274	0.04	459698.000000	Y 377.433
Mn (257.610 nm)	0.359575	ppm	0.000255	0.07	91153.600000	Y 377.433
Mo (202.032 nm)	0.050721	ppm	0.000521	1.03	440.010000	Y 377.433
Na (589.592 nm)	121.421000 o	ppm	0.638793	0.53	791901.000000	Y_R2 488.368
Na H (589.593 nm)	127.192830	ppm	0.581713	0.46	502573.727396	Y_R 488.368
Ni (231.604 nm)	0.067440	ppm	0.000621	0.92	497.622000	Y 377.433
P (213.618 nm)	1.998850	ppm	0.005790	0.29	4585.400000	Y 242.219
Pb (220.353 nm)	0.095582	ppm	0.001546	1.62	299.496000	Y 242.219
S (181.972 nm)	87.785032 o	ppm	0.081584	0.09	38397.750295	Y 377.433
Sb (206.834 nm)	0.100425	ppm	0.000870	0.87	237.114000	Y 377.433
Se (196.026 nm)	0.189277	ppm	0.002353	1.24	186.715000	Y 242.219
Si (288.158 nm)	27.761900 o	ppm	0.041671	0.15	245065.000000	Y 377.433
Sn (189.925 nm)	0.100402	ppm	0.001765	1.76	221.116000	Y 377.433
Sr (421.552 nm)	2.040586 o	ppm	0.010070	0.49	431285.703782	Y_R 488.368
Th (288.505 nm)	0.206005	ppm	0.002519	1.22	674.993000	Y 377.433
Ti (336.122 nm)	0.131993	ppm	0.000906	0.69	19786.400000	Y 377.433
Tl (190.794 nm)	0.185548	ppm	0.000595	0.32	425.630000	Y 377.433
U (409.013 nm)	0.488378	ppm	0.000293	0.06	2120.540000	Y 377.433
V (292.401 nm)	0.056396	ppm	0.000026	0.05	2378.820000	Y 377.433
Zn (206.200 nm)	0.214863	ppm	0.000545	0.25	1121.750000	Y 377.433
Zr (343.823 nm)	0.053962	ppm	0.000039	0.07	7381.550000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.933854	16747.757712	0.000760	0.08
Y 377.433	0.946775	923334.842440	0.000731	0.08
Y_R 377.433	0.963457	69314.400000	0.001630	0.17
Y_R 488.368	0.978444	38666.200000	0.004087	0.42
Y_R2 488.368	0.980828	74709.318563	0.017080	1.74

Sample Name: CCVH-5699817

Date: 5/14/2019 5:17:27 AM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.125520	ppm	0.000449	0.36	-2031.387215	Y_R 488.368
Ag (328.068 nm)	0.000849	ppm	0.000203	23.89	-563.419000	Y 377.433
Al (167.019 nm)	41.088000 o	ppm	0.127102	0.31	24608.000000	Y_R 377.433
Al H (396.152 nm)	49.642050	ppm	0.076715	0.15	126677.342728	Y_R 377.433
As (188.980 nm)	-0.000047 u	ppm	0.003492	> 100.00	-0.516689	Y 242.219
B (249.678 nm)	0.001706	ppm	0.000055	3.22	36.282500	Y 242.219
Ba (493.408 nm)	0.001708	ppm	0.000029	1.69	837.274000	Y_R 488.368
Be (234.861 nm)	0.000802	ppm	0.000012	1.46	1708.650000	Y_R 488.368
Bi (223.061 nm)	0.984024	ppm	0.006280	0.64	2565.150000	Y 377.433
Ca (315.887 nm)	0.027633	ppm	0.007764	28.10	-73.653793	Y_R 377.433
Cd (214.439 nm)	0.001223	ppm	0.000013	1.06	123.191000	Y 377.433
Co (228.615 nm)	0.004338	ppm	0.000081	1.86	46.767400	Y 242.219
Cr (205.560 nm)	0.001341	ppm	0.000183	13.63	4.659140	Y 377.433
Cu (324.754 nm)	0.009722	ppm	0.000117	1.21	1621.240000	Y 377.433
Fe (238.204 nm)	47.830506 o	ppm	0.101268	0.21	175788.804659	Y_R 377.433
Fe H (259.940 nm)	49.836300	ppm	0.127301	0.26	93434.600000	Y_R 377.433
K (766.491 nm)	0.120445	ppm	0.039136	32.49	-551.689000	Y_R2 488.368
Li (670.783 nm)	0.010433	ppm	0.002464	23.61	-685.244000	Y_R2 488.368
Mg (279.078 nm)	0.032443	ppm	0.000287	0.88	-152.727000	Y 377.433
Mn (257.610 nm)	0.002855	ppm	0.000043	1.50	797.815000	Y 377.433
Mo (202.032 nm)	0.000575	ppm	0.000011	1.93	2.614560	Y 377.433
Na (589.592 nm)	232.011000 o	ppm	0.058032	0.03	1511260.000000	Y_R2 488.368
Na H (589.593 nm)	242.989332	ppm	0.485820	0.20	949674.955739	Y_R 488.368
Ni (231.604 nm)	0.004479	ppm	0.000522	11.66	32.515600	Y 377.433
P (213.618 nm)	-0.002806 u	ppm	0.001377	49.08	10.286700	Y 242.219
Pb (220.353 nm)	0.002290	ppm	0.001602	69.95	32.941300	Y 242.219
S (181.972 nm)	4.822148	ppm	0.021441	0.44	2131.085315	Y 377.433
Sb (206.834 nm)	0.000335	ppm	0.000378	> 100.00	-74.998700	Y 377.433
Se (196.026 nm)	-0.002054 u	ppm	0.000728	35.45	0.493032	Y 242.219
Si (288.158 nm)	0.075533	ppm	0.003248	4.30	1500.550000	Y 377.433
Sn (189.925 nm)	0.003344	ppm	0.000167	5.00	15.302100	Y 377.433
Sr (421.552 nm)	0.001987	ppm	0.000150	7.57	535.816082	Y_R 488.368
Th (288.505 nm)	4.985460	ppm	0.035067	0.70	14881.300000	Y 377.433
Ti (336.122 nm)	0.002460	ppm	0.000205	8.33	158.926000	Y 377.433
Tl (190.794 nm)	-0.001539 u	ppm	0.000574	37.28	-7.141040	Y 377.433
U (409.013 nm)	10.193800	ppm	0.027204	0.27	47921.000000	Y 377.433
V (292.401 nm)	0.005339	ppm	0.000048	0.90	43.428600	Y 377.433
Zn (206.200 nm)	0.003161	ppm	0.000475	15.01	18.246600	Y 377.433
Zr (343.823 nm)	-0.002890 u	ppm	0.000029	1.02	-206.639000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.983132	17631.524790	0.003932	0.40
Y 377.433	0.981022	956733.106863	0.004005	0.41
Y_R 377.433	0.992709	71418.900000	0.000881	0.09
Y_R 488.368	1.010570	39935.600000	0.004808	0.48
Y_R2 488.368	1.027432	78259.126131	0.002613	0.25

Sample Name: CCV-5699804

Date: 5/14/2019 5:20:50 AM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.018525	ppm	0.014504	1.42	148.432329	Y_R 488.368
Ag (328.068 nm)	0.492003	ppm	0.001115	0.23	22773.500000	Y 377.433
Al (167.019 nm)	0.472525	ppm	0.000543	0.12	284.739000	Y_R 377.433
Al H (396.152 nm)	0.424557 u	ppm	0.002410	0.57	1449.289557	Y_R 377.433
As (188.980 nm)	0.961247	ppm	0.000425	0.04	1151.350000	Y 242.219
B (249.678 nm)	0.488368	ppm	0.000572	0.12	12168.400000	Y 242.219
Ba (493.408 nm)	0.488293	ppm	0.000182	0.04	55203.700000	Y_R 488.368
Be (234.861 nm)	0.477626	ppm	0.001968	0.41	138222.000000	Y_R 488.368
Bi (223.061 nm)	-0.005603 u	ppm	0.000596	10.64	6.737230	Y 377.433
Ca (315.887 nm)	4.982050	ppm	0.010285	0.21	4105.446926	Y_R 377.433
Cd (214.439 nm)	0.487302	ppm	0.000348	0.07	29709.900000	Y 377.433
Co (228.615 nm)	0.493331	ppm	0.003349	0.68	9824.670000	Y 242.219
Cr (205.560 nm)	0.489888	ppm	0.003271	0.67	7295.360000	Y 377.433
Cu (324.754 nm)	0.489858	ppm	0.000484	0.10	33013.100000	Y 377.433
Fe (238.204 nm)	2.445652	ppm	0.009622	0.39	9003.409452	Y_R 377.433
Fe H (259.940 nm)	2.364750 u	ppm	0.014185	0.60	4788.110000	Y_R 377.433
K (766.491 nm)	47.706500	ppm	0.099269	0.21	53601.600000	Y_R2 488.368
Li (670.783 nm)	0.966063	ppm	0.000015	0.00	28635.800000	Y_R2 488.368
Mg (279.078 nm)	19.206500	ppm	0.000736	0.00	113629.000000	Y 377.433
Mn (257.610 nm)	0.490917	ppm	0.000237	0.05	124422.000000	Y 377.433
Mo (202.032 nm)	0.498660	ppm	0.000670	0.13	4347.180000	Y 377.433
Na (589.592 nm)	4.726290	ppm	0.007531	0.16	32628.000000	Y_R2 488.368
Na H (589.593 nm)	4.186460 u	ppm	0.012254	0.29	27528.492722	Y_R 488.368
Ni (231.604 nm)	0.500878	ppm	0.001825	0.36	3712.950000	Y 377.433
P (213.618 nm)	0.953469	ppm	0.000340	0.04	2196.010000	Y 242.219
Pb (220.353 nm)	0.974515	ppm	0.002509	0.26	2981.710000	Y 242.219
S (181.972 nm)	0.011278	ppm	0.008094	71.76	29.114728	Y 377.433
Sb (206.834 nm)	1.012680	ppm	0.002472	0.24	2691.940000	Y 377.433
Se (196.026 nm)	0.959935	ppm	0.002217	0.23	904.823000	Y 242.219
Si (288.158 nm)	4.955430	ppm	0.001613	0.03	44430.200000	Y 377.433
Sn (189.925 nm)	0.985419	ppm	0.000021	0.00	2097.830000	Y 377.433
Sr (421.552 nm)	0.485751	ppm	0.000165	0.03	102753.707687	Y_R 488.368
Th (288.505 nm)	0.007720	ppm	0.000272	3.52	93.247400	Y 377.433
Ti (336.122 nm)	0.494774	ppm	0.000105	0.02	70882.800000	Y 377.433
Tl (190.794 nm)	0.989304	ppm	0.000339	0.03	2280.790000	Y 377.433
U (409.013 nm)	0.002512	ppm	0.003062	> 100.00	-140.094000	Y 377.433
V (292.401 nm)	0.491025	ppm	0.000500	0.10	20640.600000	Y 377.433
Zn (206.200 nm)	0.485761	ppm	0.002202	0.45	2533.830000	Y 377.433
Zr (343.823 nm)	0.493181	ppm	0.000125	0.03	67064.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.998897	17914.253203	0.000050	0.01
Y 377.433	1.005432	980539.077747	0.001112	0.11
Y_R 377.433	1.007000	72446.900000	0.007662	0.76
Y_R 488.368	1.023490	40446.300000	0.004624	0.45
Y_R2 488.368	1.041029	79294.822679	0.003826	0.37

Sample Name: CCB

Date: 5/14/2019 5:24:13 AM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.087595 Z	ppm	0.003467	3.96	-2123.961325 Z	Y_R 488.368
Ag (328.068 nm)	0.000642	ppm	0.000104	16.17	-318.935000	Y 377.433
Al (167.019 nm)	0.008480	ppm	0.003057	36.06	5.407670	Y_R 377.433
Al H (396.152 nm)	-0.106788 Zu	ppm	0.004218	3.95	54.309448 Z	Y_R 377.433
As (188.980 nm)	-0.002856 u	ppm	0.002653	92.91	-3.465420	Y 242.219
B (249.678 nm)	0.000675	ppm	0.000276	40.96	84.264400	Y 242.219
Ba (493.408 nm)	-0.000375 u	ppm	0.000086	22.87	560.108000	Y_R 488.368
Be (234.861 nm)	0.000056	ppm	0.000017	29.89	-4.695170	Y_R 488.368
Bi (223.061 nm)	-0.002037 u	ppm	0.001625	79.74	15.502100	Y 377.433
Ca (315.887 nm)	0.012180	ppm	0.002815	23.11	-86.689111	Y_R 377.433
Cd (214.439 nm)	0.000008 u	ppm	0.000047	> 100.00	0.689754	Y 377.433
Co (228.615 nm)	0.000454	ppm	0.000403	88.66	-30.797200	Y 242.219
Cr (205.560 nm)	0.000231	ppm	0.000086	37.09	1.424400	Y 377.433
Cu (324.754 nm)	0.000631	ppm	0.000034	5.37	638.683000	Y 377.433
Fe (238.204 nm)	0.005272	ppm	0.001157	21.94	35.224636	Y_R 377.433
Fe H (259.940 nm)	-0.188961 u	ppm	0.000816	0.43	19.418600	Y_R 377.433
K (766.491 nm)	0.032862 u	ppm	0.059330	> 100.00	-651.359000	Y_R2 488.368
Li (670.783 nm)	0.009749	ppm	0.001467	15.05	-706.232000	Y_R2 488.368
Mg (279.078 nm)	0.002910	ppm	0.000986	33.88	39.743700	Y 377.433
Mn (257.610 nm)	0.000018	ppm	0.000008	44.09	79.289500	Y 377.433
Mo (202.032 nm)	0.000198	ppm	0.000070	35.35	-0.680191	Y 377.433
Na (589.592 nm)	0.052942	ppm	0.001911	3.61	1227.130000	Y_R2 488.368
Na H (589.593 nm)	-1.071535 u	ppm	0.037847	3.53	6727.948803	Y_R 488.368
Ni (231.604 nm)	0.000109 u	ppm	0.000754	> 100.00	-2.104020	Y 377.433
P (213.618 nm)	-0.003791 u	ppm	0.001719	45.35	8.036030	Y 242.219
Pb (220.353 nm)	-0.000424 u	ppm	0.000969	> 100.00	6.180140	Y 242.219
S (181.972 nm)	-0.001958 u	ppm	0.006373	> 100.00	22.297212	Y 377.433
Sb (206.834 nm)	0.003242	ppm	0.000033	1.01	-22.215300	Y 377.433
Se (196.026 nm)	-0.002805 u	ppm	0.000091	3.25	8.110170	Y 242.219
Si (288.158 nm)	0.005743	ppm	0.000034	0.59	886.593000	Y 377.433
Sn (189.925 nm)	0.000331 u	ppm	0.000552	> 100.00	8.912410	Y 377.433
Sr (421.552 nm)	0.000051 u	ppm	0.000194	> 100.00	126.724093	Y_R 488.368
Th (288.505 nm)	0.001362	ppm	0.001116	81.94	56.222100	Y 377.433
Ti (336.122 nm)	0.000193	ppm	0.000216	> 100.00	-166.791000	Y 377.433
Tl (190.794 nm)	0.001179	ppm	0.000671	56.89	0.503078	Y 377.433
U (409.013 nm)	0.002442 u	ppm	0.005277	> 100.00	-102.131000	Y 377.433
V (292.401 nm)	-0.000084 u	ppm	0.000180	> 100.00	15.583600	Y 377.433
Zn (206.200 nm)	-0.000245 u	ppm	0.000074	30.09	0.493455	Y 377.433
Zr (343.823 nm)	0.000179	ppm	0.000071	39.90	62.047200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.007187	18062.928466	0.000417	0.04
Y 377.433	1.014243	989132.156414	0.002128	0.21
Y_R 377.433	1.006030	72377.500000	0.002576	0.26
Y_R 488.368	1.023840	40460.100000	0.000342	0.03
Y_R2 488.368	1.052512	80169.497950	0.017637	1.68

Sample Name: CCVL-5699389

Date: 5/14/2019 5:27:37 AM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.106567 Q	ppm	0.018133	17.02	-2077.652527 Q	Y_R 488.368
Ag (328.068 nm)	0.009679	ppm	0.000091	0.94	105.028000	Y 377.433
Al (167.019 nm)	0.090050	ppm	0.001606	1.78	54.262800	Y_R 377.433
Al H (396.152 nm)	-0.016497 u	ppm	0.002323	14.08	285.724414	Y_R 377.433
As (188.980 nm)	0.013361	ppm	0.000841	6.29	15.958600	Y 242.219
B (249.678 nm)	0.095223	ppm	0.000603	0.63	2423.790000	Y 242.219
Ba (493.408 nm)	0.008800	ppm	0.000090	1.02	1585.840000	Y_R 488.368
Be (234.861 nm)	0.000930	ppm	0.000005	0.53	250.472000	Y_R 488.368
Bi (223.061 nm)	0.098579	ppm	0.001767	1.79	274.832000	Y 377.433
Ca (315.887 nm)	0.223488	ppm	0.008704	3.89	91.541744	Y_R 377.433
Cd (214.439 nm)	0.004903	ppm	0.000012	0.25	299.219000	Y 377.433
Co (228.615 nm)	0.010802	ppm	0.000369	3.42	176.054000	Y 242.219
Cr (205.560 nm)	0.010009	ppm	0.000073	0.73	147.126000	Y 377.433
Cu (324.754 nm)	0.015657	ppm	0.000243	1.55	1633.290000	Y 377.433
Fe (238.204 nm)	0.103366	ppm	0.000288	0.28	395.713182	Y_R 377.433
Fe H (259.940 nm)	-0.094015 u	ppm	0.003679	3.91	196.716000	Y_R 377.433
K (766.491 nm)	2.878120	ppm	0.058720	2.04	2586.570000	Y_R2 488.368
Li (670.783 nm)	0.027706 Q	ppm	0.004022	14.52	-155.256000 Q	Y_R2 488.368
Mg (279.078 nm)	0.189310	ppm	0.000440	0.23	1141.170000	Y 377.433
Mn (257.610 nm)	0.010088	ppm	0.000018	0.18	2629.980000	Y 377.433
Mo (202.032 nm)	0.019106	ppm	0.000033	0.17	164.244000	Y 377.433
Na (589.592 nm)	0.958577	ppm	0.004378	0.46	7141.980000	Y_R2 488.368
Na H (589.593 nm)	-0.358136 u	ppm	0.018794	5.25	9493.785061	Y_R 488.368
Ni (231.604 nm)	0.041336	ppm	0.000043	0.10	303.652000	Y 377.433
P (213.618 nm)	2.732710 o	ppm	0.004684	0.17	6262.740000	Y 242.219
Pb (220.353 nm)	0.007655	ppm	0.000715	9.34	30.852100	Y 242.219
S (181.972 nm)	0.086819	ppm	0.001795	2.07	61.125690	Y 377.433
Sb (206.834 nm)	0.020889	ppm	0.001787	8.56	25.160300	Y 377.433
Se (196.026 nm)	0.019974	ppm	0.000509	2.55	29.318000	Y 242.219
Si (288.158 nm)	0.589886	ppm	0.027007	4.58	6025.450000	Y 377.433
Sn (189.925 nm)	0.099236	ppm	0.000292	0.29	218.644000	Y 377.433
Sr (421.552 nm)	0.009702	ppm	0.000203	2.09	2165.984518	Y_R 488.368
Th (288.505 nm)	0.015263	ppm	0.001364	8.94	98.368500	Y 377.433
Ti (336.122 nm)	0.009747	ppm	0.000013	0.14	1205.840000	Y 377.433
Tl (190.794 nm)	0.015532	ppm	0.000882	5.68	33.594800	Y 377.433
U (409.013 nm)	0.059932	ppm	0.005702	9.51	167.737000	Y 377.433
V (292.401 nm)	0.009530	ppm	0.000049	0.52	417.815000	Y 377.433
Zn (206.200 nm)	0.019596	ppm	0.000264	1.35	103.914000	Y 377.433
Zr (343.823 nm)	0.010635	ppm	0.000100	0.94	1483.280000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.016108	18222.916798	0.000182	0.02
Y 377.433	1.024595	999227.754481	0.000387	0.04
Y_R 377.433	1.019430	73341.200000	0.001284	0.13
Y_R 488.368	1.047400	41391.300000	0.011994	1.15
Y_R2 488.368	1.053066	80211.676863	0.008421	0.80

Sample Name: MB 280-457068/1-A

Date: 5/14/2019 5:31:01 AM

Rack:Tube: 4:22

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.101631 n	ppm	0.009503	9.35	-2089.700402	Y_R 488.368
Ag (328.068 nm)	0.000496	ppm	0.000059	11.88	-325.860000	Y 377.433
Al (167.019 nm)	0.003297	ppm	0.000263	7.98	2.352700	Y_R 377.433
Al H (396.152 nm)	-0.117664 u	ppm	0.001472	1.25	26.618119	Y_R 377.433
As (188.980 nm)	0.001293 u	ppm	0.002832	> 100.00	1.504190	Y 242.219
B (249.678 nm)	0.000384	ppm	0.000166	43.20	76.990000	Y 242.219
Ba (493.408 nm)	-0.000251 u	ppm	0.000488	> 100.00	574.020000	Y_R 488.368
Be (234.861 nm)	-0.000046 u	ppm	0.000007	16.04	-32.462200	Y_R 488.368
Bi (223.061 nm)	-0.003012 u	ppm	0.000298	9.88	12.999500	Y 377.433
Ca (315.887 nm)	0.023241	ppm	0.001409	6.06	-77.359566	Y_R 377.433
Cd (214.439 nm)	-0.000031 u	ppm	0.000016	51.06	-1.573300	Y 377.433
Co (228.615 nm)	0.000454	ppm	0.000082	18.01	-30.800600	Y 242.219
Cr (205.560 nm)	0.000182	ppm	0.000178	97.43	0.686093	Y 377.433
Cu (324.754 nm)	0.000665	ppm	0.000031	4.68	641.275000	Y 377.433
Fe (238.204 nm)	0.065016	ppm	0.000856	1.32	254.780674	Y_R 377.433
Fe H (259.940 nm)	-0.129890 u	ppm	0.001812	1.39	129.724000	Y_R 377.433
K (766.491 nm)	-0.009678 u	ppm	0.003838	39.66	-699.770000	Y_R2 488.368
Li (670.783 nm)	0.008096	ppm	0.000331	4.09	-756.939000	Y_R2 488.368
Mg (279.078 nm)	0.002634	ppm	0.000074	2.81	38.046900	Y 377.433
Mn (257.610 nm)	0.000632	ppm	0.000021	3.25	234.653000	Y 377.433
Mo (202.032 nm)	0.000097	ppm	0.000039	40.59	-1.557270	Y 377.433
Na (589.592 nm)	-0.011777 u	ppm	0.019942	> 100.00	806.594000	Y_R2 488.368
Na H (589.593 nm)	-1.401479 u	ppm	0.016227	1.16	5453.575989	Y_R 488.368
Ni (231.604 nm)	0.000551	ppm	0.000025	4.59	1.180520	Y 377.433
P (213.618 nm)	-0.002235 u	ppm	0.000618	27.65	11.591200	Y 242.219
Pb (220.353 nm)	-0.000078 u	ppm	0.000407	> 100.00	7.241680	Y 242.219
S (181.972 nm)	-0.001009 u	ppm	0.000310	30.71	22.713730	Y 377.433
Sb (206.834 nm)	0.004137	ppm	0.001252	30.27	-19.828800	Y 377.433
Se (196.026 nm)	-0.001165 u	ppm	0.001785	> 100.00	9.627280	Y 242.219
Si (288.158 nm)	0.004935	ppm	0.000485	9.82	879.484000	Y 377.433
Sn (189.925 nm)	-0.000877 u	ppm	0.001494	> 100.00	6.350210	Y 377.433
Sr (421.552 nm)	0.000018 u	ppm	0.000057	> 100.00	119.842421	Y_R 488.368
Th (288.505 nm)	0.001093 u	ppm	0.001741	> 100.00	55.407700	Y 377.433
Ti (336.122 nm)	0.000003 u	ppm	0.000008	> 100.00	-194.046000	Y 377.433
Tl (190.794 nm)	0.000113 u	ppm	0.001216	> 100.00	-1.959650	Y 377.433
U (409.013 nm)	-0.004375 u	ppm	0.001977	45.18	-134.126000	Y 377.433
V (292.401 nm)	-0.000136 u	ppm	0.000077	56.53	13.603700	Y 377.433
Zn (206.200 nm)	0.000527	ppm	0.000231	43.86	4.519020	Y 377.433
Zr (343.823 nm)	-0.000108 u	ppm	0.000041	37.83	23.295400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.012764	18162.943479	0.000320	0.03
Y 377.433	1.021783	996484.948823	0.001548	0.15
Y_R 377.433	1.016230	73111.300000	0.004784	0.47
Y_R 488.368	1.034840	40895.000000	0.015280	1.48
Y_R2 488.368	1.045526	79637.339228	0.004704	0.45

Sample Name: LCS 280-457068/2-A

Date: 5/14/2019 5:34:24 AM

Rack:Tube: 4:23

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.057421 n	ppm	0.046885	4.43	243.375845	Y_R 488.368
Ag (328.068 nm)	-0.000733 u	ppm	0.000317	43.17	-491.890000	Y 377.433
Al (167.019 nm)	9.171380 o	ppm	0.065467	0.71	5492.910000	Y_R 377.433
Al H (396.152 nm)	10.536744	ppm	0.023916	0.23	27251.035779	Y_R 377.433
As (188.980 nm)	2.001300	ppm	0.006391	0.32	2397.100000	Y 242.219
B (249.678 nm)	1.015100	ppm	0.001947	0.19	25208.800000	Y 242.219
Ba (493.408 nm)	2.024460 o	ppm	0.003431	0.17	226969.000000	Y_R 488.368
Be (234.861 nm)	0.987951	ppm	0.002685	0.27	286107.000000	Y_R 488.368
Bi (223.061 nm)	2.025960	ppm	0.000218	0.01	5243.980000	Y 377.433
Ca (315.887 nm)	51.844899 o	ppm	0.080620	0.16	43632.274247	Y_R 377.433
Cd (214.439 nm)	0.985090	ppm	0.002058	0.21	60064.400000	Y 377.433
Co (228.615 nm)	0.960841	ppm	0.001852	0.19	19175.400000	Y 242.219
Cr (205.560 nm)	1.004970	ppm	0.000419	0.04	14966.500000	Y 377.433
Cu (324.754 nm)	0.991390	ppm	0.002643	0.27	66236.700000	Y 377.433
Fe (238.204 nm)	10.452281 o	ppm	0.014840	0.14	38427.075904	Y_R 377.433
Fe H (259.940 nm)	10.786700	ppm	0.015857	0.15	20515.000000	Y_R 377.433
K (766.491 nm)	50.885000	ppm	0.021424	0.04	57218.700000	Y_R2 488.368
Li (670.783 nm)	0.991935	ppm	0.000322	0.03	29429.600000	Y_R2 488.368
Mg (279.078 nm)	50.340600 o	ppm	0.084949	0.17	297722.000000	Y 377.433
Mn (257.610 nm)	1.004100	ppm	0.000787	0.08	254409.000000	Y 377.433
Mo (202.032 nm)	1.029240	ppm	0.002240	0.22	8975.180000	Y 377.433
Na (589.592 nm)	49.745500 o	ppm	0.154297	0.31	328774.000000	Y_R2 488.368
Na H (589.593 nm)	50.792332	ppm	0.125702	0.25	209121.539432	Y_R 488.368
Ni (231.604 nm)	0.974708	ppm	0.002357	0.24	7228.480000	Y 377.433
P (213.618 nm)	20.146000 o	ppm	0.050122	0.25	46063.600000	Y 242.219
Pb (220.353 nm)	0.975234	ppm	0.001302	0.13	2984.930000	Y 242.219
S (181.972 nm)	9.530925	ppm	0.028857	0.30	4191.555285	Y 377.433
Sb (206.834 nm)	0.001325	ppm	0.000258	19.44	-11.727900	Y 377.433
Se (196.026 nm)	1.961040	ppm	0.007055	0.36	1836.380000	Y 242.219
Si (288.158 nm)	2.101230	ppm	0.015564	0.74	19321.100000	Y 377.433
Sn (189.925 nm)	2.023900	ppm	0.006877	0.34	4299.960000	Y 377.433
Sr (421.552 nm)	0.999370	ppm	0.003797	0.38	211279.885278	Y_R 488.368
Th (288.505 nm)	1.045280	ppm	0.004758	0.46	3198.080000	Y 377.433
Ti (336.122 nm)	1.029840	ppm	0.001191	0.12	147880.000000	Y 377.433
Tl (190.794 nm)	1.979280	ppm	0.004024	0.20	4564.820000	Y 377.433
U (409.013 nm)	2.136010	ppm	0.002316	0.11	9899.890000	Y 377.433
V (292.401 nm)	1.019410	ppm	0.000207	0.02	42790.500000	Y 377.433
Zn (206.200 nm)	0.494456	ppm	0.001445	0.29	2579.160000	Y 377.433
Zr (343.823 nm)	0.517798	ppm	0.000458	0.09	70434.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.986888	17698.878860	0.001578	0.16
Y 377.433	0.993411	968815.876252	0.001389	0.14
Y_R 377.433	0.998508	71836.100000	0.003104	0.31
Y_R 488.368	1.015730	40139.800000	0.002834	0.28
Y_R2 488.368	1.031975	78605.152999	0.002883	0.28

Sample Name: LCSD 280-457068/3-A

Date: 5/14/2019 5:37:48 AM

Rack:Tube: 4:24

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.025648 n	ppm	0.014576	1.42	165.818512	Y_R 488.368
Ag (328.068 nm)	-0.000660 u	ppm	0.000111	16.85	-488.272000	Y 377.433
Al (167.019 nm)	9.136960 o	ppm	0.051524	0.56	5472.080000	Y_R 377.433
Al H (396.152 nm)	10.492943	ppm	0.018161	0.17	27139.100249	Y_R 377.433
As (188.980 nm)	1.984360	ppm	0.006072	0.31	2376.810000	Y 242.219
B (249.678 nm)	1.006460	ppm	0.000133	0.01	24995.400000	Y 242.219
Ba (493.408 nm)	2.013270 o	ppm	0.006603	0.33	225719.000000	Y_R 488.368
Be (234.861 nm)	0.982176	ppm	0.012476	1.27	284426.000000	Y_R 488.368
Bi (223.061 nm)	2.003540	ppm	0.001464	0.07	5186.150000	Y 377.433
Ca (315.887 nm)	51.653770 o	ppm	0.111729	0.22	43471.063780	Y_R 377.433
Cd (214.439 nm)	0.981639	ppm	0.000432	0.04	59853.700000	Y 377.433
Co (228.615 nm)	0.956925	ppm	0.000432	0.05	19097.100000	Y 242.219
Cr (205.560 nm)	0.995391	ppm	0.003160	0.32	14823.800000	Y 377.433
Cu (324.754 nm)	0.981544	ppm	0.000550	0.06	65585.500000	Y 377.433
Fe (238.204 nm)	10.128469 o	ppm	0.009018	0.09	37237.095667	Y_R 377.433
Fe H (259.940 nm)	10.441700	ppm	0.040187	0.38	19870.600000	Y_R 377.433
K (766.491 nm)	50.748100	ppm	0.038253	0.08	57063.000000	Y_R2 488.368
Li (670.783 nm)	0.990228	ppm	0.005489	0.55	29377.200000	Y_R2 488.368
Mg (279.078 nm)	50.112500 o	ppm	0.022342	0.04	296374.000000	Y 377.433
Mn (257.610 nm)	1.000070	ppm	0.000087	0.01	253388.000000	Y 377.433
Mo (202.032 nm)	1.024510	ppm	0.000244	0.02	8933.910000	Y 377.433
Na (589.592 nm)	49.588900 o	ppm	0.025976	0.05	327733.000000	Y_R2 488.368
Na H (589.593 nm)	50.465403	ppm	0.355592	0.70	207847.523826	Y_R 488.368
Ni (231.604 nm)	0.971619	ppm	0.000065	0.01	7205.560000	Y 377.433
P (213.618 nm)	19.926700 o	ppm	0.002787	0.01	45562.400000	Y 242.219
Pb (220.353 nm)	0.976356	ppm	0.000023	0.00	2988.260000	Y 242.219
S (181.972 nm)	9.418406	ppm	0.018167	0.19	4142.360729	Y 377.433
Sb (206.834 nm)	0.003898	ppm	0.000614	15.76	-4.908000	Y 377.433
Se (196.026 nm)	1.947710	ppm	0.002043	0.10	1824.020000	Y 242.219
Si (288.158 nm)	2.084080	ppm	0.014939	0.72	19170.300000	Y 377.433
Sn (189.925 nm)	2.014150	ppm	0.002257	0.11	4279.300000	Y 377.433
Sr (421.552 nm)	0.993448	ppm	0.004085	0.41	210028.457603	Y_R 488.368
Th (288.505 nm)	1.035010	ppm	0.001848	0.18	3167.170000	Y 377.433
Ti (336.122 nm)	1.025940	ppm	0.001130	0.11	147320.000000	Y 377.433
Tl (190.794 nm)	1.972430	ppm	0.002270	0.12	4549.030000	Y 377.433
U (409.013 nm)	2.103320	ppm	0.003549	0.17	9746.190000	Y 377.433
V (292.401 nm)	1.015550	ppm	0.001067	0.11	42631.200000	Y 377.433
Zn (206.200 nm)	0.489613	ppm	0.001385	0.28	2553.910000	Y 377.433
Zr (343.823 nm)	0.512351	ppm	0.000048	0.01	69692.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.980685	17587.633024	0.001980	0.20
Y 377.433	0.987671	963217.836793	0.001844	0.19
Y_R 377.433	0.993935	71507.100000	0.012214	1.23
Y_R 488.368	1.012850	40026.000000	0.014784	1.46
Y_R2 488.368	1.038989	79139.398699	0.003631	0.35

Sample Name: 280-123183-A-1-A

Date: 5/14/2019 5:41:11 AM

Rack:Tube: 4:25

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.076311 n	ppm	0.005221	6.84	-2151.505468	Y_R 488.368
Ag (328.068 nm)	0.000601	ppm	0.000250	41.54	-320.835000	Y 377.433
Al (167.019 nm)	0.005090	ppm	0.001876	36.85	4.018580	Y_R 377.433
Al H (396.152 nm)	-0.084723 u	ppm	0.004136	4.88	157.235970	Y_R 377.433
As (188.980 nm)	0.003634	ppm	0.000959	26.39	4.301510	Y 242.219
B (249.678 nm)	0.089885	ppm	0.000203	0.23	2290.150000	Y 242.219
Ba (493.408 nm)	0.020604	ppm	0.000341	1.66	2929.900000	Y_R 488.368
Be (234.861 nm)	-0.000020 u	ppm	0.000008	40.05	-0.165118	Y_R 488.368
Bi (223.061 nm)	-0.003170 u	ppm	0.000595	18.78	12.732500	Y 377.433
Ca (315.887 nm)	105.397936 o	ppm	0.328419	0.31	88801.054291	Y_R 377.433
Cd (214.439 nm)	0.000026	ppm	0.000005	20.00	2.694510	Y 377.433
Co (228.615 nm)	-0.000006 u	ppm	0.000033	> 100.00	-39.995100	Y 242.219
Cr (205.560 nm)	0.000316	ppm	0.000238	75.29	2.448280	Y 377.433
Cu (324.754 nm)	0.000384	ppm	0.000247	64.41	549.703000	Y 377.433
Fe (238.204 nm)	0.860283	ppm	0.004840	0.56	3177.315079	Y_R 377.433
Fe H (259.940 nm)	0.704146 u	ppm	0.005967	0.85	1687.170000	Y_R 377.433
K (766.491 nm)	3.570770	ppm	0.056063	1.57	3374.810000	Y_R2 488.368
Li (670.783 nm)	0.040109	ppm	0.000305	0.76	225.290000	Y_R2 488.368
Mg (279.078 nm)	28.372300	ppm	0.010084	0.04	167849.000000	Y 377.433
Mn (257.610 nm)	0.099198	ppm	0.000053	0.05	25201.200000	Y 377.433
Mo (202.032 nm)	0.001886	ppm	0.000454	24.06	14.050100	Y 377.433
Na (589.592 nm)	11.971800 o	ppm	0.005327	0.04	78860.700000	Y_R2 488.368
Na H (589.593 nm)	11.115948	ppm	0.053699	0.48	53836.455778	Y_R 488.368
Ni (231.604 nm)	-0.001387 u	ppm	0.000201	14.49	-13.153900	Y 377.433
P (213.618 nm)	0.022938	ppm	0.000402	1.75	69.129000	Y 242.219
Pb (220.353 nm)	-0.000615 u	ppm	0.000505	82.13	5.659710	Y 242.219
S (181.972 nm)	42.273016 o	ppm	0.084229	0.20	18502.343371	Y 377.433
Sb (206.834 nm)	-0.000154 u	ppm	0.001261	> 100.00	-31.511900	Y 377.433
Se (196.026 nm)	0.000202 u	ppm	0.002554	> 100.00	10.825700	Y 242.219
Si (288.158 nm)	7.304390	ppm	0.019740	0.27	65094.700000	Y 377.433
Sn (189.925 nm)	0.000021 u	ppm	0.000031	> 100.00	8.254540	Y 377.433
Sr (421.552 nm)	0.350636	ppm	0.000398	0.11	74204.296851	Y_R 488.368
Th (288.505 nm)	0.001007	ppm	0.001277	> 100.00	57.399600	Y 377.433
Ti (336.122 nm)	-0.000102 u	ppm	0.000119	> 100.00	125.464000	Y 377.433
Tl (190.794 nm)	0.001959	ppm	0.000428	21.86	2.275730	Y 377.433
U (409.013 nm)	-0.013494 u	ppm	0.002792	20.69	-197.240000	Y 377.433
V (292.401 nm)	-0.000469 u	ppm	0.000273	58.25	0.640789	Y 377.433
Zn (206.200 nm)	-0.000146 u	ppm	0.000096	65.65	1.006500	Y 377.433
Zr (343.823 nm)	0.000287	ppm	0.000075	26.05	79.418700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.984327	17652.951321	0.005140	0.52
Y 377.433	0.995772	971118.786679	0.006082	0.61
Y_R 377.433	0.990043	71227.100000	0.003792	0.38
Y_R 488.368	1.011170	39959.500000	0.001791	0.18
Y_R2 488.368	1.015991	77387.693568	0.000891	0.09

Sample Name: 280-123183-A-1-B MS

Date: 5/14/2019 5:44:35 AM

Rack:Tube: 4:26

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.080004 n	ppm	0.014272	1.32	298.500155	Y_R 488.368
Ag (328.068 nm)	-0.000164 u	ppm	0.000116	70.69	-467.052000	Y 377.433
Al (167.019 nm)	9.057860 o	ppm	0.008831	0.10	5425.420000	Y_R 377.433
Al H (396.152 nm)	10.571501	ppm	0.046405	0.44	27387.284794	Y_R 377.433
As (188.980 nm)	2.041030	ppm	0.008275	0.41	2444.680000	Y 242.219
B (249.678 nm)	1.136890 o	ppm	0.001391	0.12	28220.800000	Y 242.219
Ba (493.408 nm)	2.052360 o	ppm	0.011147	0.54	230113.000000	Y_R 488.368
Be (234.861 nm)	0.994962	ppm	0.005515	0.55	288153.000000	Y_R 488.368
Bi (223.061 nm)	2.046560	ppm	0.008595	0.42	5297.180000	Y 377.433
Ca (315.887 nm)	157.838874 o	ppm	0.220771	0.14	133033.016747	Y_R 377.433
Cd (214.439 nm)	0.977402	ppm	0.002701	0.28	59596.200000	Y 377.433
Co (228.615 nm)	0.949900	ppm	0.002474	0.26	18957.500000	Y 242.219
Cr (205.560 nm)	1.014020	ppm	0.003509	0.35	15101.100000	Y 377.433
Cu (324.754 nm)	1.005970	ppm	0.004504	0.45	67126.500000	Y 377.433
Fe (238.204 nm)	10.998320 o	ppm	0.007639	0.07	40433.720540	Y_R 377.433
Fe H (259.940 nm)	11.391000	ppm	0.007215	0.06	21643.300000	Y_R 377.433
K (766.491 nm)	54.993400	ppm	0.084006	0.15	61894.200000	Y_R2 488.368
Li (670.783 nm)	1.042980	ppm	0.000533	0.05	30995.700000	Y_R2 488.368
Mg (279.078 nm)	79.251500 o	ppm	0.097328	0.12	468735.000000	Y 377.433
Mn (257.610 nm)	1.099050 o	ppm	0.001776	0.16	278459.000000	Y 377.433
Mo (202.032 nm)	1.039540	ppm	0.000955	0.09	9064.990000	Y 377.433
Na (589.592 nm)	61.152300 o	ppm	0.424414	0.69	403088.000000	Y_R2 488.368
Na H (589.593 nm)	63.893142	ppm	0.333933	0.52	259765.909035	Y_R 488.368
Ni (231.604 nm)	0.962324	ppm	0.003594	0.37	7136.650000	Y 377.433
P (213.618 nm)	20.442200 o	ppm	0.039803	0.19	46740.700000	Y 242.219
Pb (220.353 nm)	0.978813	ppm	0.003548	0.36	2995.870000	Y 242.219
S (181.972 nm)	53.548245 o	ppm	0.100228	0.19	23433.233454	Y 377.433
Sb (206.834 nm)	0.003660	ppm	0.003091	84.45	-5.434810	Y 377.433
Se (196.026 nm)	1.994050	ppm	0.010924	0.55	1867.090000	Y 242.219
Si (288.158 nm)	9.349320	ppm	0.034414	0.37	83084.400000	Y 377.433
Sn (189.925 nm)	2.037730	ppm	0.009610	0.47	4329.280000	Y 377.433
Sr (421.552 nm)	1.368286 o	ppm	0.006620	0.48	289230.665961	Y_R 488.368
Th (288.505 nm)	1.047760	ppm	0.003765	0.36	3208.150000	Y 377.433
Ti (336.122 nm)	1.042150	ppm	0.001730	0.17	149986.000000	Y 377.433
Tl (190.794 nm)	1.965530	ppm	0.004115	0.21	4532.930000	Y 377.433
U (409.013 nm)	2.151800	ppm	0.000455	0.02	9953.540000	Y 377.433
V (292.401 nm)	1.031290	ppm	0.002633	0.26	43290.700000	Y 377.433
Zn (206.200 nm)	0.484465	ppm	0.000261	0.05	2527.070000	Y 377.433
Zr (343.823 nm)	0.519926	ppm	0.001161	0.22	70725.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.970997	17413.881168	0.002627	0.27
Y 377.433	0.981657	957352.818053	0.003172	0.32
Y_R 377.433	0.996568	71696.600000	0.007386	0.74
Y_R 488.368	1.016220	40159.000000	0.004732	0.47
Y_R2 488.368	1.013671	77210.947674	0.000658	0.06

Sample Name: 280-123183-a-1-c msd

Date: 5/14/2019 5:47:59 AM

Rack:Tube: 4:27

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.118355 n	ppm	0.011461	1.02	392.114551	Y_R 488.368
Ag (328.068 nm)	-0.000768 u	ppm	0.000002	0.27	-497.596000	Y 377.433
Al (167.019 nm)	9.098200 o	ppm	0.031476	0.35	5449.570000	Y_R 377.433
Al H (396.152 nm)	10.706894	ppm	0.042655	0.40	27733.916375	Y_R 377.433
As (188.980 nm)	2.088280	ppm	0.019017	0.91	2501.280000	Y 242.219
B (249.678 nm)	1.155120 o	ppm	0.001301	0.11	28672.800000	Y 242.219
Ba (493.408 nm)	2.097550 o	ppm	0.007746	0.37	235166.000000	Y_R 488.368
Be (234.861 nm)	1.016580	ppm	0.008271	0.81	294407.000000	Y_R 488.368
Bi (223.061 nm)	2.069510	ppm	0.004541	0.22	5356.320000	Y 377.433
Ca (315.887 nm)	159.063025 o	ppm	0.178395	0.11	134065.537857	Y_R 377.433
Cd (214.439 nm)	0.994049	ppm	0.000732	0.07	60611.200000	Y 377.433
Co (228.615 nm)	0.968914	ppm	0.000087	0.01	19337.800000	Y 242.219
Cr (205.560 nm)	1.029110	ppm	0.000454	0.04	15325.900000	Y 377.433
Cu (324.754 nm)	1.025480	ppm	0.001783	0.17	68415.400000	Y 377.433
Fe (238.204 nm)	11.029575 o	ppm	0.031169	0.28	40548.579491	Y_R 377.433
Fe H (259.940 nm)	11.410600	ppm	0.021280	0.19	21680.000000	Y_R 377.433
K (766.491 nm)	55.968300	ppm	0.008007	0.01	63003.600000	Y_R2 488.368
Li (670.783 nm)	1.068230	ppm	0.002080	0.19	31770.500000	Y_R2 488.368
Mg (279.078 nm)	80.092600 o	ppm	0.111501	0.14	473710.000000	Y 377.433
Mn (257.610 nm)	1.117760 o	ppm	0.001176	0.11	283199.000000	Y 377.433
Mo (202.032 nm)	1.057960	ppm	0.001115	0.11	9225.670000	Y 377.433
Na (589.592 nm)	61.927600 o	ppm	0.292522	0.47	408227.000000	Y_R2 488.368
Na H (589.593 nm)	65.024560	ppm	0.159562	0.25	264182.347666	Y_R 488.368
Ni (231.604 nm)	0.978869	ppm	0.000904	0.09	7259.410000	Y 377.433
P (213.618 nm)	20.700700 o	ppm	0.056754	0.27	47331.500000	Y 242.219
Pb (220.353 nm)	0.998893	ppm	0.002280	0.23	3057.150000	Y 242.219
S (181.972 nm)	53.695493 o	ppm	0.043399	0.08	23497.640572	Y 377.433
Sb (206.834 nm)	0.001587	ppm	0.001413	89.01	-10.654400	Y 377.433
Se (196.026 nm)	2.038850	ppm	0.001007	0.05	1908.840000	Y 242.219
Si (288.158 nm)	9.418790	ppm	0.007307	0.08	83695.600000	Y 377.433
Sn (189.925 nm)	2.075080	ppm	0.001973	0.10	4408.500000	Y 377.433
Sr (421.552 nm)	1.392466 o	ppm	0.005676	0.41	294339.783466	Y_R 488.368
Th (288.505 nm)	1.059320	ppm	0.001618	0.15	3243.200000	Y 377.433
Ti (336.122 nm)	1.062050	ppm	0.000559	0.05	152847.000000	Y 377.433
Tl (190.794 nm)	1.999860	ppm	0.000433	0.02	4612.140000	Y 377.433
U (409.013 nm)	2.177110	ppm	0.007270	0.33	10071.900000	Y 377.433
V (292.401 nm)	1.050290	ppm	0.001688	0.16	44087.800000	Y 377.433
Zn (206.200 nm)	0.491409	ppm	0.000313	0.06	2563.270000	Y 377.433
Zr (343.823 nm)	0.527537	ppm	0.000787	0.15	71759.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.973562	17459.899272	0.003995	0.41
Y 377.433	0.985826	961418.718714	0.005905	0.60
Y_R 377.433	1.002690	72137.000000	0.003621	0.36
Y_R 488.368	1.018320	40242.200000	0.004054	0.40
Y_R2 488.368	1.032716	78661.582458	0.011505	1.11

Sample Name: MB 280-456840/1-B

Date: 5/14/2019 5:51:23 AM

Rack:Tube: 4:28

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.089733 n	ppm	0.012107	13.49	-2118.743633	Y_R 488.368
Ag (328.068 nm)	0.000350	ppm	0.000237	67.81	-332.681000	Y 377.433
Al (167.019 nm)	0.001452	ppm	0.000184	12.66	1.257720	Y_R 377.433
Al H (396.152 nm)	-0.118258 u	ppm	0.005716	4.83	25.128910	Y_R 377.433
As (188.980 nm)	-0.000967 u	ppm	0.000761	78.67	-1.203560	Y 242.219
B (249.678 nm)	0.001236	ppm	0.000104	8.42	98.025000	Y 242.219
Ba (493.408 nm)	-0.000456 u	ppm	0.000009	1.89	551.054000	Y_R 488.368
Be (234.861 nm)	-0.000015 u	ppm	0.000052	> 100.00	-23.037500	Y_R 488.368
Bi (223.061 nm)	-0.004124 u	ppm	0.000605	14.68	10.136600	Y 377.433
Ca (315.887 nm)	0.039890	ppm	0.005175	12.97	-63.317583	Y_R 377.433
Cd (214.439 nm)	0.000029	ppm	0.000025	86.63	2.053210	Y 377.433
Co (228.615 nm)	0.000371	ppm	0.000060	16.29	-32.462400	Y 242.219
Cr (205.560 nm)	0.000305	ppm	0.000035	11.56	2.512780	Y 377.433
Cu (324.754 nm)	0.000940	ppm	0.000118	12.54	659.443000	Y 377.433
Fe (238.204 nm)	0.076419	ppm	0.001748	2.29	296.683032	Y_R 377.433
Fe H (259.940 nm)	-0.115324 u	ppm	0.000556	0.48	156.925000	Y_R 377.433
K (766.491 nm)	0.004451 u	ppm	0.010506	> 100.00	-683.691000	Y_R2 488.368
Li (670.783 nm)	0.007810	ppm	0.002540	32.52	-765.712000	Y_R2 488.368
Mg (279.078 nm)	0.005174	ppm	0.001201	23.22	53.020800	Y 377.433
Mn (257.610 nm)	0.000599	ppm	0.000027	4.46	226.290000	Y 377.433
Mo (202.032 nm)	0.000326	ppm	0.000095	29.25	0.442140	Y 377.433
Na (589.592 nm)	-0.009848 u	ppm	0.004614	46.85	818.238000	Y_R2 488.368
Na H (589.593 nm)	-1.299059 u	ppm	0.001507	0.12	5848.830155	Y_R 488.368
Ni (231.604 nm)	0.000300	ppm	0.000319	> 100.00	-0.682404	Y 377.433
P (213.618 nm)	-0.002126 u	ppm	0.000246	11.55	11.841500	Y 242.219
Pb (220.353 nm)	-0.001372 u	ppm	0.000726	52.88	3.291600	Y 242.219
S (181.972 nm)	0.010772	ppm	0.004619	42.88	27.863501	Y 377.433
Sb (206.834 nm)	0.002209	ppm	0.001032	46.72	-24.994500	Y 377.433
Se (196.026 nm)	0.001170 u	ppm	0.003287	> 100.00	11.799700	Y 242.219
Si (288.158 nm)	0.006523	ppm	0.000280	4.29	893.455000	Y 377.433
Sn (189.925 nm)	0.000642	ppm	0.000162	25.26	9.571910	Y 377.433
Sr (421.552 nm)	-0.000068 u	ppm	0.000184	> 100.00	101.698936	Y_R 488.368
Th (288.505 nm)	0.002526	ppm	0.000072	2.84	59.628800	Y 377.433
Ti (336.122 nm)	0.000289	ppm	0.000015	5.10	-153.016000	Y 377.433
Tl (190.794 nm)	0.001180	ppm	0.000134	11.32	0.502170	Y 377.433
U (409.013 nm)	-0.003156 u	ppm	0.004575	> 100.00	-128.404000	Y 377.433
V (292.401 nm)	-0.000122 u	ppm	0.000034	27.57	14.085600	Y 377.433
Zn (206.200 nm)	0.001004	ppm	0.000094	9.33	7.003980	Y 377.433
Zr (343.823 nm)	0.000134	ppm	0.000114	84.65	56.239200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.008821	18092.226483	0.000129	0.01
Y 377.433	1.016307	991145.408449	0.000886	0.09
Y_R 377.433	1.002000	72087.300000	0.005441	0.54
Y_R 488.368	1.021080	40351.200000	0.006700	0.66
Y_R2 488.368	1.045253	79616.531701	0.002741	0.26

Sample Name: LCS 280-456840/2-B

Date: 5/14/2019 5:54:46 AM

Rack:Tube: 4:29

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.027494 n	ppm	0.010106	0.98	170.325138	Y_R 488.368
Ag (328.068 nm)	0.052362	ppm	0.000163	0.31	1997.130000	Y 377.433
Al (167.019 nm)	8.751780 o	ppm	0.032269	0.37	5241.440000	Y_R 377.433
Al H (396.152 nm)	10.122983	ppm	0.025745	0.25	26198.038424	Y_R 377.433
As (188.980 nm)	2.018060	ppm	0.007500	0.37	2417.180000	Y 242.219
B (249.678 nm)	1.002430	ppm	0.000541	0.05	24897.000000	Y 242.219
Ba (493.408 nm)	2.033310 o	ppm	0.007692	0.38	227958.000000	Y_R 488.368
Be (234.861 nm)	0.999974	ppm	0.002185	0.22	289563.000000	Y_R 488.368
Bi (223.061 nm)	1.984280	ppm	0.003437	0.17	5136.440000	Y 377.433
Ca (315.887 nm)	49.828490 o	ppm	0.162496	0.33	41931.538661	Y_R 377.433
Cd (214.439 nm)	0.996773	ppm	0.000843	0.08	60775.900000	Y 377.433
Co (228.615 nm)	0.971426	ppm	0.002189	0.23	19387.000000	Y 242.219
Cr (205.560 nm)	1.014810	ppm	0.006680	0.66	15113.300000	Y 377.433
Cu (324.754 nm)	0.998677	ppm	0.003895	0.39	66716.200000	Y 377.433
Fe (238.204 nm)	9.739839 o	ppm	0.027357	0.28	35808.914688	Y_R 377.433
Fe H (259.940 nm)	10.038900	ppm	0.029549	0.29	19118.500000	Y_R 377.433
K (766.491 nm)	48.893800	ppm	0.104330	0.21	54952.800000	Y_R2 488.368
Li (670.783 nm)	0.998010	ppm	0.004282	0.43	29616.000000	Y_R2 488.368
Mg (279.078 nm)	48.576600 o	ppm	0.077660	0.16	287289.000000	Y 377.433
Mn (257.610 nm)	1.015120	ppm	0.000117	0.01	257201.000000	Y 377.433
Mo (202.032 nm)	1.041600	ppm	0.002873	0.28	9083.030000	Y 377.433
Na (589.592 nm)	47.871000 o	ppm	0.100511	0.21	316591.000000	Y_R2 488.368
Na H (589.593 nm)	48.749229	ppm	0.175774	0.36	201237.506728	Y_R 488.368
Ni (231.604 nm)	0.987666	ppm	0.001970	0.20	7324.590000	Y 377.433
P (213.618 nm)	20.142500 o	ppm	0.046344	0.23	46055.600000	Y 242.219
Pb (220.353 nm)	0.988229	ppm	0.001763	0.18	3024.610000	Y 242.219
S (181.972 nm)	9.530202	ppm	0.009933	0.10	4191.265286	Y 377.433
Sb (206.834 nm)	1.057560	ppm	0.001419	0.13	2817.620000	Y 377.433
Se (196.026 nm)	1.984210	ppm	0.000843	0.04	1858.100000	Y 242.219
Si (288.158 nm)	2.188040	ppm	0.022570	1.03	20084.800000	Y 377.433
Sn (189.925 nm)	2.028350	ppm	0.001280	0.06	4309.410000	Y 377.433
Sr (421.552 nm)	1.005623	ppm	0.003722	0.37	212601.045188	Y_R 488.368
Th (288.505 nm)	1.025740	ppm	0.002184	0.21	3141.050000	Y 377.433
Ti (336.122 nm)	1.038250	ppm	0.001505	0.14	149081.000000	Y 377.433
Tl (190.794 nm)	2.006890	ppm	0.003725	0.19	4628.570000	Y 377.433
U (409.013 nm)	2.123890	ppm	0.008680	0.41	9843.240000	Y 377.433
V (292.401 nm)	1.029110	ppm	0.000873	0.08	43196.700000	Y 377.433
Zn (206.200 nm)	0.487745	ppm	0.000203	0.04	2544.170000	Y 377.433
Zr (343.823 nm)	0.508818	ppm	0.000952	0.19	69211.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.974034	17468.350356	0.000024	0.00
Y 377.433	0.978937	954700.600168	0.000355	0.04
Y_R 377.433	0.983627	70765.600000	0.000315	0.03
Y_R 488.368	1.001240	39567.000000	0.001625	0.16
Y_R2 488.368	1.013547	77201.521807	0.002769	0.27

Sample Name: 280-123143-D-1-B

Date: 5/14/2019 5:58:09 AM

Rack:Tube: 4:30

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.054400 n	ppm	0.000231	0.42	-2204.991736	Y_R 488.368
Ag (328.068 nm)	0.000836	ppm	0.000141	16.88	-309.890000	Y 377.433
Al (167.019 nm)	0.005157	ppm	0.003239	62.79	3.431740	Y_R 377.433
Al H (396.152 nm)	-0.107140 u	ppm	0.002566	2.39	66.513958	Y_R 377.433
As (188.980 nm)	-0.000118 u	ppm	0.001309	> 100.00	-0.185902	Y 242.219
B (249.678 nm)	0.010489	ppm	0.000175	1.67	327.059000	Y 242.219
Ba (493.408 nm)	0.032518	ppm	0.000365	1.12	4244.000000	Y_R 488.368
Be (234.861 nm)	0.000037	ppm	0.000023	61.84	-9.723020	Y_R 488.368
Bi (223.061 nm)	0.000501 u	ppm	0.001755	> 100.00	22.046100	Y 377.433
Ca (315.887 nm)	29.609697 o	ppm	0.019995	0.07	24877.372590	Y_R 377.433
Cd (214.439 nm)	0.000031	ppm	0.000015	48.90	2.134080	Y 377.433
Co (228.615 nm)	0.000228	ppm	0.000180	78.61	-35.300900	Y 242.219
Cr (205.560 nm)	0.001689	ppm	0.000226	13.36	23.160700	Y 377.433
Cu (324.754 nm)	0.001714	ppm	0.000011	0.65	690.994000	Y 377.433
Fe (238.204 nm)	0.019879	ppm	0.000825	4.15	88.905133	Y_R 377.433
Fe H (259.940 nm)	-0.174848 u	ppm	0.000123	0.07	45.771300	Y_R 377.433
K (766.491 nm)	0.218002	ppm	0.003976	1.82	-440.668000	Y_R2 488.368
Li (670.783 nm)	0.011172	ppm	0.000325	2.91	-662.570000	Y_R2 488.368
Mg (279.078 nm)	11.884000	ppm	0.006185	0.05	70318.900000	Y 377.433
Mn (257.610 nm)	0.000726	ppm	0.000017	2.32	258.532000	Y 377.433
Mo (202.032 nm)	0.000459	ppm	0.000118	25.66	1.600660	Y 377.433
Na (589.592 nm)	10.637800	ppm	0.019407	0.18	70200.400000	Y_R2 488.368
Na H (589.593 nm)	9.741564	ppm	0.047058	0.48	48538.320551	Y_R 488.368
Ni (231.604 nm)	0.000065 u	ppm	0.000177	> 100.00	-2.422070	Y 377.433
P (213.618 nm)	0.015246	ppm	0.000505	3.31	51.546700	Y 242.219
Pb (220.353 nm)	-0.002185 u	ppm	0.001791	81.98	0.808079	Y 242.219
S (181.972 nm)	3.537576	ppm	0.005798	0.16	1569.550353	Y 377.433
Sb (206.834 nm)	0.001609	ppm	0.001069	66.44	-26.546700	Y 377.433
Se (196.026 nm)	0.000136 u	ppm	0.003306	> 100.00	10.846900	Y 242.219
Si (288.158 nm)	14.317800 o	ppm	0.085650	0.60	126793.000000	Y 377.433
Sn (189.925 nm)	0.001375	ppm	0.000934	67.94	11.126700	Y 377.433
Sr (421.552 nm)	0.129361	ppm	0.000353	0.27	27449.542777	Y_R 488.368
Th (288.505 nm)	0.002495	ppm	0.003158	> 100.00	59.575200	Y 377.433
Ti (336.122 nm)	0.000179	ppm	0.000024	13.39	-74.934000	Y 377.433
Tl (190.794 nm)	0.001273	ppm	0.000786	61.72	0.718933	Y 377.433
U (409.013 nm)	-0.004997 u	ppm	0.003866	77.35	-143.016000	Y 377.433
V (292.401 nm)	-0.000078 u	ppm	0.000054	69.59	16.311200	Y 377.433
Zn (206.200 nm)	0.006976	ppm	0.000182	2.60	38.132700	Y 377.433
Zr (343.823 nm)	0.000253	ppm	0.000104	41.19	72.113400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.988566	17728.965920	0.002131	0.22
Y 377.433	0.996434	971763.542963	0.001756	0.18
Y_R 377.433	0.998447	71831.800000	0.000994	0.10
Y_R 488.368	1.013170	40038.300000	0.000587	0.06
Y_R2 488.368	1.029961	78451.796699	0.002208	0.21

Sample Name: CCVH-5699817

Date: 5/14/2019 6:01:33 AM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.099554	ppm	0.003994	4.01	-2094.771588	Y_R 488.368
Ag (328.068 nm)	0.000609	ppm	0.000151	24.81	-574.452000	Y 377.433
Al (167.019 nm)	41.123100 o	ppm	0.130247	0.32	24628.900000	Y_R 377.433
Al H (396.152 nm)	49.564960	ppm	0.159698	0.32	126481.134052	Y_R 377.433
As (188.980 nm)	0.001814	ppm	0.001849	> 100.00	1.712740	Y 242.219
B (249.678 nm)	0.000945	ppm	0.000116	12.32	17.551900	Y 242.219
Ba (493.408 nm)	0.001935	ppm	0.000150	7.73	862.553000	Y_R 488.368
Be (234.861 nm)	0.000737	ppm	0.000021	2.86	1687.180000	Y_R 488.368
Bi (223.061 nm)	0.984382	ppm	0.001284	0.13	2566.060000	Y 377.433
Ca (315.887 nm)	0.019586	ppm	0.012395	63.28	-80.440797	Y_R 377.433
Cd (214.439 nm)	0.001336	ppm	0.000008	0.61	130.002000	Y 377.433
Co (228.615 nm)	0.004190	ppm	0.000038	0.92	43.807100	Y 242.219
Cr (205.560 nm)	0.001369	ppm	0.000097	7.11	5.099400	Y 377.433
Cu (324.754 nm)	0.010073	ppm	0.000005	0.05	1649.980000	Y 377.433
Fe (238.204 nm)	47.726763 o	ppm	0.132385	0.28	175407.558051	Y_R 377.433
Fe H (259.940 nm)	49.770800	ppm	0.103906	0.21	93312.200000	Y_R 377.433
K (766.491 nm)	0.141454	ppm	0.063240	44.71	-527.781000	Y_R2 488.368
Li (670.783 nm)	0.010826	ppm	0.001168	10.79	-673.170000	Y_R2 488.368
Mg (279.078 nm)	0.035464	ppm	0.001162	3.28	-134.421000	Y 377.433
Mn (257.610 nm)	0.002842	ppm	0.000006	0.21	794.543000	Y 377.433
Mo (202.032 nm)	0.000683	ppm	0.000005	0.74	3.552710	Y 377.433
Na (589.592 nm)	232.205000 o	ppm	1.680470	0.72	1512520.000000	Y_R2 488.368
Na H (589.593 nm)	241.592732	ppm	2.498668	1.03	944279.056213	Y_R 488.368
Ni (231.604 nm)	0.004898	ppm	0.000329	6.71	35.616700	Y 377.433
P (213.618 nm)	-0.004248 u	ppm	0.000453	10.67	6.991610	Y 242.219
Pb (220.353 nm)	0.003918	ppm	0.001421	36.26	37.903900	Y 242.219
S (181.972 nm)	4.791936	ppm	0.027613	0.58	2117.878680	Y 377.433
Sb (206.834 nm)	-0.000268 u	ppm	0.001845	> 100.00	-76.548400	Y 377.433
Se (196.026 nm)	-0.001940 u	ppm	0.002843	> 100.00	0.614061	Y 242.219
Si (288.158 nm)	0.044165	ppm	0.001568	3.55	1224.600000	Y 377.433
Sn (189.925 nm)	0.005285	ppm	0.000787	14.90	19.417500	Y 377.433
Sr (421.552 nm)	0.001928	ppm	0.000030	1.53	523.346494	Y_R 488.368
Th (288.505 nm)	5.018500	ppm	0.014473	0.29	14977.800000	Y 377.433
Ti (336.122 nm)	0.002350	ppm	0.000068	2.88	143.105000	Y 377.433
Tl (190.794 nm)	-0.001165 u	ppm	0.003193	> 100.00	-6.276850	Y 377.433
U (409.013 nm)	10.178800	ppm	0.012456	0.12	47850.500000	Y 377.433
V (292.401 nm)	0.005404	ppm	0.000372	6.88	48.722000	Y 377.433
Zn (206.200 nm)	0.003884	ppm	0.000642	16.53	22.016100	Y 377.433
Zr (343.823 nm)	-0.002791 u	ppm	0.000073	2.62	-193.461000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.966224	17328.292972	0.000065	0.01
Y 377.433	0.963477	939623.216901	0.001267	0.13
Y_R 377.433	0.977312	70311.200000	0.005482	0.56
Y_R 488.368	1.001440	39575.100000	0.009806	0.98
Y_R2 488.368	1.014732	77291.799963	0.000504	0.05

Sample Name: CCV-5699804

Date: 5/14/2019 6:04:56 AM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.984930	ppm	0.013942	1.42	66.425194	Y_R 488.368
Ag (328.068 nm)	0.493272	ppm	0.000638	0.13	22833.300000	Y 377.433
Al (167.019 nm)	0.468132	ppm	0.007364	1.57	282.108000	Y_R 377.433
Al H (396.152 nm)	0.426261 u	ppm	0.011886	2.79	1453.806466	Y_R 377.433
As (188.980 nm)	0.965376	ppm	0.000413	0.04	1156.300000	Y 242.219
B (249.678 nm)	0.488653	ppm	0.000812	0.17	12175.400000	Y 242.219
Ba (493.408 nm)	0.487725	ppm	0.000532	0.11	55140.200000	Y_R 488.368
Be (234.861 nm)	0.476371	ppm	0.003744	0.79	137859.000000	Y_R 488.368
Bi (223.061 nm)	-0.004223 u	ppm	0.002278	53.95	10.292400	Y 377.433
Ca (315.887 nm)	4.988601	ppm	0.024983	0.50	4110.974975	Y_R 377.433
Cd (214.439 nm)	0.490866	ppm	0.001100	0.22	29927.200000	Y 377.433
Co (228.615 nm)	0.491139	ppm	0.003859	0.79	9780.950000	Y 242.219
Cr (205.560 nm)	0.494408	ppm	0.003337	0.68	7362.760000	Y 377.433
Cu (324.754 nm)	0.492195	ppm	0.000750	0.15	33168.100000	Y 377.433
Fe (238.204 nm)	2.439780	ppm	0.009264	0.38	8981.832476	Y_R 377.433
Fe H (259.940 nm)	2.367190 u	ppm	0.010263	0.43	4792.680000	Y_R 377.433
K (766.491 nm)	47.697400	ppm	0.100958	0.21	53591.300000	Y_R2 488.368
Li (670.783 nm)	0.961133	ppm	0.001411	0.15	28484.600000	Y_R2 488.368
Mg (279.078 nm)	19.254400	ppm	0.014998	0.08	113913.000000	Y 377.433
Mn (257.610 nm)	0.491972	ppm	0.000171	0.03	124689.000000	Y 377.433
Mo (202.032 nm)	0.500642	ppm	0.000332	0.07	4364.470000	Y 377.433
Na (589.592 nm)	4.728870	ppm	0.018375	0.39	32644.000000	Y_R2 488.368
Na H (589.593 nm)	4.008965 u	ppm	0.046348	1.16	26842.361460	Y_R 488.368
Ni (231.604 nm)	0.503341	ppm	0.000257	0.05	3731.220000	Y 377.433
P (213.618 nm)	0.954739	ppm	0.000724	0.08	2198.910000	Y 242.219
Pb (220.353 nm)	0.980061	ppm	0.000319	0.03	2998.620000	Y 242.219
S (181.972 nm)	0.003508	ppm	0.000244	6.95	25.722497	Y 377.433
Sb (206.834 nm)	1.012710	ppm	0.000502	0.05	2692.160000	Y 377.433
Se (196.026 nm)	0.953743	ppm	0.002080	0.22	899.059000	Y 242.219
Si (288.158 nm)	4.879800	ppm	0.026990	0.55	43764.900000	Y 377.433
Sn (189.925 nm)	0.988121	ppm	0.001552	0.16	2103.560000	Y 377.433
Sr (421.552 nm)	0.485605	ppm	0.000804	0.17	102722.842424	Y_R 488.368
Th (288.505 nm)	0.004329	ppm	0.004544	> 100.00	83.323500	Y 377.433
Ti (336.122 nm)	0.495787	ppm	0.000362	0.07	71028.400000	Y 377.433
Tl (190.794 nm)	0.989038	ppm	0.000677	0.07	2280.160000	Y 377.433
U (409.013 nm)	0.000056 u	ppm	0.004485	> 100.00	-151.796000	Y 377.433
V (292.401 nm)	0.492279	ppm	0.000342	0.07	20692.600000	Y 377.433
Zn (206.200 nm)	0.489002	ppm	0.001212	0.25	2550.720000	Y 377.433
Zr (343.823 nm)	0.494767	ppm	0.000008	0.00	67279.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.982301	17616.613706	0.001614	0.16
Y 377.433	0.986793	962361.982754	0.002614	0.26
Y_R 377.433	0.994861	71573.800000	0.004295	0.43
Y_R 488.368	1.009450	39891.500000	0.004864	0.48
Y_R2 488.368	1.013756	77217.427850	0.005703	0.56

Sample Name: CCB

Date: 5/14/2019 6:08:19 AM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.073770 Z	ppm	0.027040	36.65	-2157.708210 Z	Y_R 488.368
Ag (328.068 nm)	0.000293	ppm	0.000076	25.90	-335.272000	Y 377.433
Al (167.019 nm)	0.008453	ppm	0.000254	3.01	5.390720	Y_R 377.433
Al H (396.152 nm)	-0.111939 Zu	ppm	0.001768	1.58	41.223865 Z	Y_R 377.433
As (188.980 nm)	0.000386	ppm	0.000087	22.48	0.418374	Y 242.219
B (249.678 nm)	0.000331 u	ppm	0.000517	> 100.00	75.749200	Y 242.219
Ba (493.408 nm)	-0.000309 u	ppm	0.000023	7.34	567.398000	Y_R 488.368
Be (234.861 nm)	0.000048	ppm	0.000001	1.41	-7.174850	Y_R 488.368
Bi (223.061 nm)	0.000569 u	ppm	0.003430	> 100.00	22.218100	Y 377.433
Ca (315.887 nm)	0.018627	ppm	0.006054	32.50	-81.251163	Y_R 377.433
Cd (214.439 nm)	0.000040	ppm	0.000012	30.16	2.665770	Y 377.433
Co (228.615 nm)	0.000587	ppm	0.000111	18.97	-28.142400	Y 242.219
Cr (205.560 nm)	0.000032	ppm	0.000033	> 100.00	-1.543810	Y 377.433
Cu (324.754 nm)	0.000807	ppm	0.000150	18.63	650.879000	Y 377.433
Fe (238.204 nm)	0.003957	ppm	0.000878	22.19	30.392678	Y_R 377.433
Fe H (259.940 nm)	-0.191451 u	ppm	0.000993	0.52	14.769100	Y_R 377.433
K (766.491 nm)	0.015489 u	ppm	0.029372	> 100.00	-671.130000	Y_R2 488.368
Li (670.783 nm)	0.005810	ppm	0.000055	0.95	-827.085000	Y_R2 488.368
Mg (279.078 nm)	0.003093	ppm	0.000232	7.50	40.854200	Y 377.433
Mn (257.610 nm)	0.000039	ppm	0.000003	8.58	84.534000	Y 377.433
Mo (202.032 nm)	0.000541	ppm	0.000300	55.50	2.312040	Y 377.433
Na (589.592 nm)	0.050241	ppm	0.003708	7.38	1210.110000	Y_R2 488.368
Na H (589.593 nm)	-1.304376 u	ppm	0.030933	2.37	5828.632790	Y_R 488.368
Ni (231.604 nm)	0.000611	ppm	0.000560	91.77	1.621780	Y 377.433
P (213.618 nm)	-0.002238 u	ppm	0.001668	74.53	11.585500	Y 242.219
Pb (220.353 nm)	-0.001030 u	ppm	0.000932	90.48	4.325650	Y 242.219
S (181.972 nm)	-0.000150 u	ppm	0.000173	> 100.00	23.087594	Y 377.433
Sb (206.834 nm)	0.002360	ppm	0.000702	29.76	-24.581100	Y 377.433
Se (196.026 nm)	0.001625	ppm	0.000633	38.96	12.236400	Y 242.219
Si (288.158 nm)	-0.000096 u	ppm	0.000558	> 100.00	835.227000	Y 377.433
Sn (189.925 nm)	-0.000505 u	ppm	0.001102	> 100.00	7.139340	Y 377.433
Sr (421.552 nm)	0.000087 u	ppm	0.000132	> 100.00	134.423954	Y_R 488.368
Th (288.505 nm)	0.003292	ppm	0.002151	65.36	61.845700	Y 377.433
Ti (336.122 nm)	0.000175	ppm	0.000074	42.06	-169.450000	Y 377.433
Tl (190.794 nm)	0.002659	ppm	0.000162	6.10	3.919680	Y 377.433
U (409.013 nm)	-0.001596 u	ppm	0.000854	53.52	-121.132000	Y 377.433
V (292.401 nm)	-0.000379 u	ppm	0.000094	24.79	3.371330	Y 377.433
Zn (206.200 nm)	-0.000344 u	ppm	0.000035	10.19	-0.024931	Y 377.433
Zr (343.823 nm)	0.000147	ppm	0.000038	25.72	57.672400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.989192	17740.202133	0.000084	0.01
Y 377.433	0.994980	970345.581048	0.000662	0.07
Y_R 377.433	0.995621	71628.400000	0.004979	0.50
Y_R 488.368	1.015370	40125.500000	0.014698	1.45
Y_R2 488.368	1.016459	77423.306100	0.008221	0.81

Sample Name: CCVL-5699389

Date: 5/14/2019 6:11:41 AM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.085494 Q	ppm	0.007432	8.69	-2129.091719 Q	Y_R 488.368
Ag (328.068 nm)	0.009902	ppm	0.000068	0.69	115.655000	Y 377.433
Al (167.019 nm)	0.091703	ppm	0.001535	1.67	55.250600	Y_R 377.433
Al H (396.152 nm)	-0.017034 u	ppm	0.000713	4.19	284.356363	Y_R 377.433
As (188.980 nm)	0.011977	ppm	0.002253	18.81	14.301400	Y 242.219
B (249.678 nm)	0.095632	ppm	0.000407	0.43	2433.910000	Y 242.219
Ba (493.408 nm)	0.009526	ppm	0.000443	4.65	1667.060000	Y_R 488.368
Be (234.861 nm)	0.000924	ppm	0.000017	1.86	248.670000	Y_R 488.368
Bi (223.061 nm)	0.095644	ppm	0.000028	0.03	267.268000	Y 377.433
Ca (315.887 nm)	0.218733	ppm	0.000341	0.16	87.531161	Y_R 377.433
Cd (214.439 nm)	0.004944	ppm	0.000076	1.53	301.730000	Y 377.433
Co (228.615 nm)	0.010727	ppm	0.000206	1.92	174.556000	Y 242.219
Cr (205.560 nm)	0.010181	ppm	0.000097	0.95	149.696000	Y 377.433
Cu (324.754 nm)	0.015532	ppm	0.000158	1.02	1624.930000	Y 377.433
Fe (238.204 nm)	0.102888	ppm	0.000826	0.80	393.955944	Y_R 377.433
Fe H (259.940 nm)	-0.093575 u	ppm	0.004344	4.64	197.539000	Y_R 377.433
K (766.491 nm)	2.955720	ppm	0.083901	2.84	2674.880000	Y_R2 488.368
Li (670.783 nm)	0.028726 Q	ppm	0.002553	8.89	-123.954000 Q	Y_R2 488.368
Mg (279.078 nm)	0.192517	ppm	0.002170	1.13	1160.220000	Y 377.433
Mn (257.610 nm)	0.010107	ppm	0.000004	0.04	2634.750000	Y 377.433
Mo (202.032 nm)	0.019080	ppm	0.000501	2.63	164.021000	Y 377.433
Na (589.592 nm)	0.954396	ppm	0.000964	0.10	7115.790000	Y_R2 488.368
Na H (589.593 nm)	-0.457728 u	ppm	0.013678	2.99	9109.512150	Y_R 488.368
Ni (231.604 nm)	0.041324	ppm	0.000040	0.10	303.566000	Y 377.433
P (213.618 nm)	2.735640 o	ppm	0.001710	0.06	6269.440000	Y 242.219
Pb (220.353 nm)	0.009619	ppm	0.000307	3.20	36.846300	Y 242.219
S (181.972 nm)	0.086882	ppm	0.002595	2.99	61.153504	Y 377.433
Sb (206.834 nm)	0.020239	ppm	0.000667	3.30	23.427200	Y 377.433
Se (196.026 nm)	0.013638 Q	ppm	0.003981	29.19	23.417800 Q	Y 242.219
Si (288.158 nm)	0.561603	ppm	0.020125	3.58	5776.640000	Y 377.433
Sn (189.925 nm)	0.097935	ppm	0.000335	0.34	215.886000	Y 377.433
Sr (421.552 nm)	0.009749	ppm	0.000213	2.18	2175.868440	Y_R 488.368
Th (288.505 nm)	0.015831	ppm	0.002526	15.95	99.966100	Y 377.433
Ti (336.122 nm)	0.009731	ppm	0.000013	0.13	1203.580000	Y 377.433
Tl (190.794 nm)	0.015454	ppm	0.000192	1.24	33.412800	Y 377.433
U (409.013 nm)	0.056322	ppm	0.003793	6.73	150.726000	Y 377.433
V (292.401 nm)	0.009513	ppm	0.000215	2.26	417.154000	Y 377.433
Zn (206.200 nm)	0.019393	ppm	0.000120	0.62	102.854000	Y 377.433
Zr (343.823 nm)	0.010673	ppm	0.000166	1.56	1488.460000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.996129	17864.613288	0.000379	0.04
Y 377.433	1.002264	977449.920983	0.001529	0.15
Y_R 377.433	1.002500	72123.700000	0.001327	0.13
Y_R 488.368	1.013800	40063.400000	0.013724	1.35
Y_R2 488.368	1.047065	79754.563795	0.003372	0.32

Sample Name: 280-123143-D-3-B

Date: 5/14/2019 6:15:05 AM

Rack:Tube: 4:31

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.090714 n	ppm	0.011414	12.58	-2116.349418	Y_R 488.368
Ag (328.068 nm)	0.000708	ppm	0.000006	0.83	-315.928000	Y 377.433
Al (167.019 nm)	0.003885	ppm	0.002311	59.49	2.671650	Y_R 377.433
Al H (396.152 nm)	-0.107461 u	ppm	0.003147	2.93	65.850771	Y_R 377.433
As (188.980 nm)	-0.000199 u	ppm	0.000927	> 100.00	-0.283458	Y 242.219
B (249.678 nm)	0.009614	ppm	0.000002	0.02	305.410000	Y 242.219
Ba (493.408 nm)	0.032766	ppm	0.000175	0.53	4271.800000	Y_R 488.368
Be (234.861 nm)	0.000015 u	ppm	0.000022	> 100.00	-16.052300	Y_R 488.368
Bi (223.061 nm)	-0.001619 u	ppm	0.000253	15.65	16.582900	Y 377.433
Ca (315.887 nm)	30.082206 o	ppm	0.022786	0.08	25275.911012	Y_R 377.433
Cd (214.439 nm)	0.000003	ppm	0.000001	34.58	0.418733	Y 377.433
Co (228.615 nm)	0.000134 u	ppm	0.000221	> 100.00	-37.193100	Y 242.219
Cr (205.560 nm)	0.001997	ppm	0.000163	8.14	27.750000	Y 377.433
Cu (324.754 nm)	0.001566	ppm	0.000041	2.65	680.395000	Y 377.433
Fe (238.204 nm)	0.020838	ppm	0.001843	8.84	92.427711	Y_R 377.433
Fe H (259.940 nm)	-0.175531 u	ppm	0.000871	0.50	44.497200	Y_R 377.433
K (766.491 nm)	0.162595	ppm	0.020676	12.72	-503.721000	Y_R2 488.368
Li (670.783 nm)	0.010456	ppm	0.000915	8.75	-684.523000	Y_R2 488.368
Mg (279.078 nm)	12.071000	ppm	0.013691	0.11	71425.000000	Y 377.433
Mn (257.610 nm)	0.000566	ppm	0.000032	5.64	218.148000	Y 377.433
Mo (202.032 nm)	0.000010 u	ppm	0.000028	> 100.00	-2.321180	Y 377.433
Na (589.592 nm)	10.852700	ppm	0.003528	0.03	71599.800000	Y_R2 488.368
Na H (589.593 nm)	9.630967	ppm	0.038046	0.40	48111.091858	Y_R 488.368
Ni (231.604 nm)	0.001072	ppm	0.000253	23.60	5.036160	Y 377.433
P (213.618 nm)	0.016130	ppm	0.003938	24.41	53.568400	Y 242.219
Pb (220.353 nm)	-0.000163 u	ppm	0.001447	> 100.00	6.979290	Y 242.219
S (181.972 nm)	3.589909	ppm	0.001395	0.04	1592.426429	Y 377.433
Sb (206.834 nm)	-0.000550 u	ppm	0.000788	> 100.00	-32.314800	Y 377.433
Se (196.026 nm)	-0.001341 u	ppm	0.000001	0.10	9.470940	Y 242.219
Si (288.158 nm)	14.568300 o	ppm	0.065076	0.45	128997.000000	Y 377.433
Sn (189.925 nm)	0.000316	ppm	0.000403	> 100.00	8.881630	Y 377.433
Sr (421.552 nm)	0.130538	ppm	0.000578	0.44	27698.338571	Y_R 488.368
Th (288.505 nm)	0.000400 u	ppm	0.000730	> 100.00	53.409200	Y 377.433
Ti (336.122 nm)	0.000027 u	ppm	0.000057	> 100.00	-95.375300	Y 377.433
Tl (190.794 nm)	-0.001783 u	ppm	0.001054	59.14	-6.335650	Y 377.433
U (409.013 nm)	-0.007471 u	ppm	0.000350	4.68	-154.713000	Y 377.433
V (292.401 nm)	-0.000083 u	ppm	0.000223	> 100.00	15.894400	Y 377.433
Zn (206.200 nm)	0.006612	ppm	0.000263	3.97	36.233000	Y 377.433
Zr (343.823 nm)	-0.000074 u	ppm	0.000026	34.48	27.720800	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.988758	17732.424776	0.000018	0.00
Y 377.433	0.995652	971001.220263	0.001170	0.12
Y_R 377.433	1.002110	72095.600000	0.001772	0.18
Y_R 488.368	1.027020	40586.000000	0.001460	0.14
Y_R2 488.368	1.023300	77944.435394	0.000740	0.07

Sample Name: 280-123143-D-3-Bsd@5

Date: 5/14/2019 6:18:30 AM

Rack:Tube: 4:32

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.066941 n	ppm	0.020266	30.27	-2174.378303	Y_R 488.368
Ag (328.068 nm)	0.000476	ppm	0.000013	2.78	-326.699000	Y 377.433
Al (167.019 nm)	0.005817	ppm	0.002552	43.87	3.827430	Y_R 377.433
Al H (396.152 nm)	-0.113896 u	ppm	0.004664	4.10	38.841159	Y_R 377.433
As (188.980 nm)	-0.002461 u	ppm	0.002335	94.88	-2.992050	Y 242.219
B (249.678 nm)	0.001949	ppm	0.000510	26.15	115.771000	Y 242.219
Ba (493.408 nm)	0.006117	ppm	0.000116	1.89	1287.160000	Y_R 488.368
Be (234.861 nm)	-0.000018 u	ppm	0.000007	37.37	-25.658400	Y_R 488.368
Bi (223.061 nm)	0.000168 u	ppm	0.002232	> 100.00	21.189800	Y 377.433
Ca (315.887 nm)	5.991774	ppm	0.024247	0.40	4956.806323	Y_R 377.433
Cd (214.439 nm)	0.000043	ppm	0.000039	91.14	2.875740	Y 377.433
Co (228.615 nm)	0.000447	ppm	0.000018	4.09	-30.941600	Y 242.219
Cr (205.560 nm)	0.000245	ppm	0.000014	5.90	1.634890	Y 377.433
Cu (324.754 nm)	0.000999	ppm	0.000006	0.57	659.746000	Y 377.433
Fe (238.204 nm)	0.021157	ppm	0.001468	6.94	93.602607	Y_R 377.433
Fe H (259.940 nm)	-0.174790 u	ppm	0.001649	0.94	45.880400	Y_R 377.433
K (766.491 nm)	0.012957 u	ppm	0.048195	> 100.00	-674.012000	Y_R2 488.368
Li (670.783 nm)	0.009856	ppm	0.000008	0.08	-702.932000	Y_R2 488.368
Mg (279.078 nm)	2.378420	ppm	0.004923	0.21	14091.400000	Y 377.433
Mn (257.610 nm)	0.000267	ppm	0.000028	10.65	142.337000	Y 377.433
Mo (202.032 nm)	0.000262	ppm	0.000209	80.05	-0.123577	Y 377.433
Na (589.592 nm)	2.158340	ppm	0.004034	0.19	14946.500000	Y_R2 488.368
Na H (589.593 nm)	0.671172 u	ppm	0.018784	2.80	13467.702113	Y_R 488.368
Ni (231.604 nm)	0.000706	ppm	0.000313	44.41	2.322160	Y 377.433
P (213.618 nm)	-0.001941 u	ppm	0.000596	30.69	12.263100	Y 242.219
Pb (220.353 nm)	-0.001767 u	ppm	0.000047	2.67	2.076710	Y 242.219
S (181.972 nm)	0.699664	ppm	0.001799	0.26	329.000940	Y 377.433
Sb (206.834 nm)	0.001377 u	ppm	0.002967	> 100.00	-27.203500	Y 377.433
Se (196.026 nm)	-0.001048 u	ppm	0.002432	> 100.00	9.744130	Y 242.219
Si (288.158 nm)	2.859880	ppm	0.009728	0.34	25995.100000	Y 377.433
Sn (189.925 nm)	-0.000593 u	ppm	0.000547	92.25	6.953410	Y 377.433
Sr (421.552 nm)	0.025904	ppm	0.000073	0.28	5589.518927	Y_R 488.368
Th (288.505 nm)	0.000791	ppm	0.000632	79.88	54.498000	Y 377.433
Ti (336.122 nm)	0.000077	ppm	0.000045	58.40	-164.703000	Y 377.433
Tl (190.794 nm)	0.000443	ppm	0.000563	> 100.00	-1.194950	Y 377.433
U (409.013 nm)	-0.003369 u	ppm	0.002290	67.98	-130.622000	Y 377.433
V (292.401 nm)	-0.000178 u	ppm	0.000065	36.40	12.072200	Y 377.433
Zn (206.200 nm)	0.003890	ppm	0.000380	9.78	22.044200	Y 377.433
Zr (343.823 nm)	-0.000115 u	ppm	0.000043	36.99	22.114400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.995993	17862.164451	0.001517	0.15
Y 377.433	1.001975	977167.598598	0.001699	0.17
Y_R 377.433	1.007890	72511.200000	0.007804	0.77
Y_R 488.368	1.025730	40534.700000	0.008573	0.84
Y_R2 488.368	1.031496	78568.658304	0.001093	0.11

Sample Name: 280-123143-D-3-C MS

Date: 5/14/2019 6:21:54 AM

Rack:Tube: 4:33

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.035020 n	ppm	0.002295	0.22	188.694501	Y_R 488.368
Ag (328.068 nm)	0.053297	ppm	0.000395	0.74	2034.700000	Y 377.433
Al (167.019 nm)	9.110560 o	ppm	0.020049	0.22	5456.270000	Y_R 377.433
Al H (396.152 nm)	10.567637	ppm	0.033350	0.32	27344.726053	Y_R 377.433
As (188.980 nm)	2.046910	ppm	0.001625	0.08	2451.740000	Y 242.219
B (249.678 nm)	1.006610	ppm	0.000365	0.04	25000.000000	Y 242.219
Ba (493.408 nm)	2.093400 o	ppm	0.006196	0.30	234684.000000	Y_R 488.368
Be (234.861 nm)	1.009800	ppm	0.005958	0.59	292415.000000	Y_R 488.368
Bi (223.061 nm)	1.930750	ppm	0.005409	0.28	4998.550000	Y 377.433
Ca (315.887 nm)	81.412522 o	ppm	0.332776	0.41	68571.133495	Y_R 377.433
Cd (214.439 nm)	1.004510	ppm	0.000733	0.07	61247.900000	Y 377.433
Co (228.615 nm)	0.975984	ppm	0.000251	0.03	19478.700000	Y 242.219
Cr (205.560 nm)	1.022900	ppm	0.002577	0.25	15233.700000	Y 377.433
Cu (324.754 nm)	1.016800	ppm	0.002924	0.29	67885.100000	Y 377.433
Fe (238.204 nm)	10.095560 o	ppm	0.032987	0.33	37116.157488	Y_R 377.433
Fe H (259.940 nm)	10.410100	ppm	0.041204	0.40	19811.600000	Y_R 377.433
K (766.491 nm)	51.561300	ppm	0.178572	0.35	57988.400000	Y_R2 488.368
Li (670.783 nm)	1.023550	ppm	0.000863	0.08	30399.700000	Y_R2 488.368
Mg (279.078 nm)	62.802200 o	ppm	0.070022	0.11	371436.000000	Y 377.433
Mn (257.610 nm)	1.021950	ppm	0.000312	0.03	258931.000000	Y 377.433
Mo (202.032 nm)	1.053130	ppm	0.002046	0.19	9183.540000	Y 377.433
Na (589.592 nm)	60.025900 o	ppm	0.110739	0.18	395840.000000	Y_R2 488.368
Na H (589.593 nm)	61.985644	ppm	0.291702	0.47	252437.798174	Y_R 488.368
Ni (231.604 nm)	0.990999	ppm	0.000327	0.03	7349.340000	Y 377.433
P (213.618 nm)	20.335200 o	ppm	0.019128	0.09	46496.200000	Y 242.219
Pb (220.353 nm)	0.998767	ppm	0.002651	0.27	3056.670000	Y 242.219
S (181.972 nm)	13.290952 o	ppm	0.000480	0.00	5835.235812	Y 377.433
Sb (206.834 nm)	1.078590	ppm	0.002485	0.23	2874.090000	Y 377.433
Se (196.026 nm)	2.019370	ppm	0.003376	0.17	1890.800000	Y 242.219
Si (288.158 nm)	16.682400 o	ppm	0.007604	0.05	147596.000000	Y 377.433
Sn (189.925 nm)	2.073610	ppm	0.003604	0.17	4405.370000	Y 377.433
Sr (421.552 nm)	1.152717 o	ppm	0.003847	0.33	243681.592899	Y_R 488.368
Th (288.505 nm)	0.996942	ppm	0.000049	0.00	3057.700000	Y 377.433
Ti (336.122 nm)	1.055550	ppm	0.000034	0.00	151667.000000	Y 377.433
Tl (190.794 nm)	2.016670	ppm	0.001245	0.06	4651.070000	Y 377.433
U (409.013 nm)	2.140700	ppm	0.003356	0.16	9917.580000	Y 377.433
V (292.401 nm)	1.045030	ppm	0.000354	0.03	43863.700000	Y 377.433
Zn (206.200 nm)	0.475769	ppm	0.000156	0.03	2481.750000	Y 377.433
Zr (343.823 nm)	0.494978	ppm	0.000140	0.03	67332.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.962074	17253.862407	0.001844	0.19
Y 377.433	0.968233	944260.879127	0.001496	0.15
Y_R 377.433	0.982729	70700.900000	0.002671	0.27
Y_R 488.368	1.000820	39550.300000	0.004212	0.42
Y_R2 488.368	1.012388	77113.238922	0.009735	0.96

Sample Name: 280-123143-D-3-D MSD

Date: 5/14/2019 6:25:19 AM

Rack:Tube: 4:34

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	1.022615 n	ppm	0.009176	0.90	158.414817	Y_R 488.368
Ag (328.068 nm)	0.052813	ppm	0.000272	0.52	2019.610000	Y 377.433
Al (167.019 nm)	9.104770 o	ppm	0.001264	0.01	5452.930000	Y_R 377.433
Al H (396.152 nm)	10.600012	ppm	0.024133	0.23	27426.831754	Y_R 377.433
As (188.980 nm)	2.055560	ppm	0.004272	0.21	2462.090000	Y 242.219
B (249.678 nm)	1.063470	ppm	0.000668	0.06	26406.500000	Y 242.219
Ba (493.408 nm)	2.090790 o	ppm	0.006737	0.32	234392.000000	Y_R 488.368
Be (234.861 nm)	1.010700	ppm	0.005585	0.55	292681.000000	Y_R 488.368
Bi (223.061 nm)	2.046110	ppm	0.003598	0.18	5295.880000	Y 377.433
Ca (315.887 nm)	81.496215 o	ppm	0.265381	0.33	68641.723210	Y_R 377.433
Cd (214.439 nm)	1.001200	ppm	0.000310	0.03	61046.300000	Y 377.433
Co (228.615 nm)	0.973380	ppm	0.001033	0.11	19426.600000	Y 242.219
Cr (205.560 nm)	1.021610	ppm	0.006795	0.67	15214.400000	Y 377.433
Cu (324.754 nm)	1.015990	ppm	0.000448	0.04	67847.800000	Y 377.433
Fe (238.204 nm)	10.251794 o	ppm	0.035704	0.35	37690.304852	Y_R 377.433
Fe H (259.940 nm)	10.551800	ppm	0.008824	0.08	20076.300000	Y_R 377.433
K (766.491 nm)	51.525200	ppm	0.167546	0.33	57947.400000	Y_R2 488.368
Li (670.783 nm)	1.016870	ppm	0.002989	0.29	30194.600000	Y_R2 488.368
Mg (279.078 nm)	62.874500 o	ppm	0.041072	0.07	371864.000000	Y 377.433
Mn (257.610 nm)	1.020110	ppm	0.000894	0.09	258465.000000	Y 377.433
Mo (202.032 nm)	1.048880	ppm	0.000826	0.08	9146.460000	Y 377.433
Na (589.592 nm)	60.037500 o	ppm	0.128428	0.21	395910.000000	Y_R2 488.368
Na H (589.593 nm)	62.451865	ppm	0.258261	0.41	254236.585992	Y_R 488.368
Ni (231.604 nm)	0.986524	ppm	0.002079	0.21	7316.150000	Y 377.433
P (213.618 nm)	20.041800 o	ppm	0.021513	0.11	45825.500000	Y 242.219
Pb (220.353 nm)	0.995946	ppm	0.003066	0.31	3047.970000	Y 242.219
S (181.972 nm)	13.162974 o	ppm	0.000363	0.00	5779.288819	Y 377.433
Sb (206.834 nm)	1.046890	ppm	0.001320	0.13	2789.110000	Y 377.433
Se (196.026 nm)	2.007180	ppm	0.007199	0.36	1879.410000	Y 242.219
Si (288.158 nm)	16.743800 o	ppm	0.013955	0.08	148136.000000	Y 377.433
Sn (189.925 nm)	2.056130	ppm	0.003835	0.19	4368.320000	Y 377.433
Sr (421.552 nm)	1.151949 o	ppm	0.005427	0.47	243519.238960	Y_R 488.368
Th (288.505 nm)	1.054160	ppm	0.000319	0.03	3224.320000	Y 377.433
Ti (336.122 nm)	1.052760	ppm	0.000299	0.03	151267.000000	Y 377.433
Tl (190.794 nm)	2.010550	ppm	0.001475	0.07	4636.950000	Y 377.433
U (409.013 nm)	2.107510	ppm	0.005201	0.25	9759.150000	Y 377.433
V (292.401 nm)	1.042530	ppm	0.000045	0.00	43766.100000	Y 377.433
Zn (206.200 nm)	0.503952	ppm	0.001580	0.31	2628.650000	Y 377.433
Zr (343.823 nm)	0.523839	ppm	0.000000	0.00	71254.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.959891	17214.713694	0.001149	0.12
Y 377.433	0.966441	942513.934225	0.000101	0.01
Y_R 377.433	0.981489	70611.700000	0.003574	0.36
Y_R 488.368	0.996359	39374.200000	0.005576	0.56
Y_R2 488.368	1.001789	76305.923642	0.004472	0.45

Sample Name: 280-123135-D-1-D

Date: 5/14/2019 6:28:44 AM

Rack:Tube: 4:35

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.082432 n	ppm	0.013128	15.93	-2136.565470	Y_R 488.368
Ag (328.068 nm)	0.001334	ppm	0.000355	26.65	-277.163000	Y 377.433
Al (167.019 nm)	0.053858	ppm	0.000461	0.86	35.671800	Y_R 377.433
Al H (396.152 nm)	-0.030345 u	ppm	0.002211	7.29	294.145486	Y_R 377.433
As (188.980 nm)	0.090398	ppm	0.001284	1.42	108.201000	Y 242.219
B (249.678 nm)	8.734620 o	ppm	0.020070	0.23	216170.000000	Y 242.219
Ba (493.408 nm)	0.544387	ppm	0.000646	0.12	61488.900000	Y_R 488.368
Be (234.861 nm)	-0.000071 u	ppm	0.000007	10.61	89.390100	Y_R 488.368
Bi (223.061 nm)	-0.004904 u	ppm	0.000286	5.82	8.843890	Y 377.433
Ca (315.887 nm)	101.548774 o	ppm	0.118576	0.12	85554.474106	Y_R 377.433
Cd (214.439 nm)	0.000035	ppm	0.000015	42.50	6.609730	Y 377.433
Co (228.615 nm)	0.027123	ppm	0.000276	1.02	515.310000	Y 242.219
Cr (205.560 nm)	0.101198	ppm	0.000472	0.47	1505.430000	Y 377.433
Cu (324.754 nm)	0.003809	ppm	0.000223	5.87	780.950000	Y 377.433
Fe (238.204 nm)	4.203433	ppm	0.009356	0.22	15463.101875	Y_R 377.433
Fe H (259.940 nm)	4.197740 u	ppm	0.009950	0.24	8210.970000	Y_R 377.433
K (766.491 nm)	370.878000 o	ppm	0.591346	0.16	421373.000000	Y_R2 488.368
Li (670.783 nm)	0.025779	ppm	0.000662	2.57	-214.370000	Y_R2 488.368
Mg (279.078 nm)	117.082000 o	ppm	0.275221	0.24	692578.000000	Y 377.433
Mn (257.610 nm)	1.611790 o	ppm	0.000424	0.03	408335.000000	Y 377.433
Mo (202.032 nm)	0.004770	ppm	0.000321	6.74	39.202300	Y 377.433
Na (589.592 nm)	1144.900000 o	ppm	0.319283	0.03	7455190.000000	Y_R2 488.368
Na H (589.593 nm)	1251.374044	ppm	3.772034	0.30	4846176.920279	Y_R 488.368
Ni (231.604 nm)	0.092978	ppm	0.000428	0.46	686.798000	Y 377.433
P (213.618 nm)	5.378290 o	ppm	0.001590	0.03	12309.700000	Y 242.219
Pb (220.353 nm)	-0.000708 u	ppm	0.000515	72.72	5.657690	Y 242.219
S (181.972 nm)	17.081959 o	ppm	0.032259	0.19	7493.662614	Y 377.433
Sb (206.834 nm)	0.000940	ppm	0.001180	> 100.00	-26.799500	Y 377.433
Se (196.026 nm)	0.001439 u	ppm	0.002656	> 100.00	12.615200	Y 242.219
Si (288.158 nm)	27.522100 o	ppm	0.254581	0.93	242955.000000	Y 377.433
Sn (189.925 nm)	0.011136	ppm	0.000843	7.57	31.825200	Y 377.433
Sr (421.552 nm)	1.484219 o	ppm	0.004000	0.27	313726.963069	Y_R 488.368
Th (288.505 nm)	0.011279	ppm	0.002586	22.93	127.674000	Y 377.433
Ti (336.122 nm)	0.358054	ppm	0.000032	0.01	51553.100000	Y 377.433
Tl (190.794 nm)	0.001743	ppm	0.000615	35.30	0.133757	Y 377.433
U (409.013 nm)	-0.041721 u	ppm	0.001488	3.57	-336.683000	Y 377.433
V (292.401 nm)	0.116915	ppm	0.000040	0.03	4947.100000	Y 377.433
Zn (206.200 nm)	0.010964	ppm	0.000952	8.68	58.920600	Y 377.433
Zr (343.823 nm)	0.132703	ppm	0.000097	0.07	18083.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.884116	15855.756285	0.002140	0.24
Y 377.433	0.889115	867101.958847	0.003887	0.44
Y_R 377.433	0.960596	69108.600000	0.000909	0.09
Y_R 488.368	0.975414	38546.500000	0.001689	0.17
Y_R2 488.368	0.977486	74454.731085	0.001853	0.19

Sample Name: 280-123135-D-2-B

Date: 5/14/2019 6:32:09 AM

Rack:Tube: 4:36

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.059041 n	ppm	0.016580	28.08	-2193.663661	Y_R 488.368
Ag (328.068 nm)	0.001899	ppm	0.000009	0.50	-259.964000	Y 377.433
Al (167.019 nm)	0.003853	ppm	0.004735	> 100.00	9.291920	Y_R 377.433
Al H (396.152 nm)	-0.083555 u	ppm	0.000159	0.19	183.078254	Y_R 377.433
As (188.980 nm)	0.016027	ppm	0.005221	32.58	19.075000	Y 242.219
B (249.678 nm)	0.205175	ppm	0.000098	0.05	5130.190000	Y 242.219
Ba (493.408 nm)	0.190927	ppm	0.000410	0.21	21990.600000	Y_R 488.368
Be (234.861 nm)	-0.000564 u	ppm	0.000012	2.05	94.595100	Y_R 488.368
Bi (223.061 nm)	-0.001431 u	ppm	0.000654	45.73	18.617700	Y 377.433
Ca (315.887 nm)	157.293627 o	ppm	0.394253	0.25	132572.538515	Y_R 377.433
Cd (214.439 nm)	-0.000023 u	ppm	0.000072	> 100.00	7.847530	Y 377.433
Co (228.615 nm)	0.000924	ppm	0.000096	10.35	-21.414400	Y 242.219
Cr (205.560 nm)	0.001123	ppm	0.000049	4.36	12.233200	Y 377.433
Cu (324.754 nm)	0.000650	ppm	0.000074	11.38	550.910000	Y 377.433
Fe (238.204 nm)	8.933616 o	ppm	0.025725	0.29	32846.114888	Y_R 377.433
Fe H (259.940 nm)	9.148960	ppm	0.028892	0.32	17456.700000	Y_R 377.433
K (766.491 nm)	2.961040	ppm	0.004333	0.15	2680.930000	Y_R2 488.368
Li (670.783 nm)	0.012575	ppm	0.001350	10.73	-619.501000	Y_R2 488.368
Mg (279.078 nm)	66.385700 o	ppm	0.160877	0.24	392693.000000	Y 377.433
Mn (257.610 nm)	9.028470 o	ppm	0.009968	0.11	2286950.000000	Y 377.433
Mo (202.032 nm)	0.000773	ppm	0.000144	18.67	4.340900	Y 377.433
Na (589.592 nm)	96.545000 o	ppm	0.237104	0.25	629766.000000	Y_R2 488.368
Na H (589.593 nm)	101.054941	ppm	0.614619	0.61	401491.539880	Y_R 488.368
Ni (231.604 nm)	0.005745	ppm	0.000006	0.10	40.124500	Y 377.433
P (213.618 nm)	0.493487	ppm	0.001041	0.21	1144.640000	Y 242.219
Pb (220.353 nm)	0.000727	ppm	0.000276	37.97	10.496700	Y 242.219
S (181.972 nm)	1.078207	ppm	0.001607	0.15	513.506255	Y 377.433
Sb (206.834 nm)	-0.000339 u	ppm	0.001568	> 100.00	-33.891800	Y 377.433
Se (196.026 nm)	-0.001004 u	ppm	0.004949	> 100.00	15.085400	Y 242.219
Si (288.158 nm)	31.907100 o	ppm	0.299935	0.94	281531.000000	Y 377.433
Sn (189.925 nm)	0.001296	ppm	0.000125	9.61	10.959000	Y 377.433
Sr (421.552 nm)	0.890153	ppm	0.001500	0.17	188202.585022	Y_R 488.368
Th (288.505 nm)	0.016780	ppm	0.000065	0.39	311.278000	Y 377.433
Ti (336.122 nm)	-0.000055 u	ppm	0.000023	40.98	296.906000	Y 377.433
Tl (190.794 nm)	0.000745	ppm	0.000086	11.57	-0.756555	Y 377.433
U (409.013 nm)	-0.016527 u	ppm	0.001250	7.56	-213.808000	Y 377.433
V (292.401 nm)	0.000071 u	ppm	0.000224	> 100.00	28.753900	Y 377.433
Zn (206.200 nm)	0.002143	ppm	0.000096	4.46	12.940600	Y 377.433
Zr (343.823 nm)	0.000124	ppm	0.000139	> 100.00	82.322700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.957222	17166.853693	0.002030	0.21
Y 377.433	0.969092	945098.886726	0.004353	0.45
Y_R 377.433	0.997066	71732.400000	0.000363	0.04
Y_R 488.368	1.016440	40167.700000	0.001111	0.11
Y_R2 488.368	1.023025	77923.423016	0.009386	0.92

Sample Name: 280-123135-D-3-B

Date: 5/14/2019 6:35:33 AM

Rack:Tube: 4:37

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.023171 n	ppm	0.008597	37.10	-2281.220849	Y_R 488.368
Ag (328.068 nm)	0.001689	ppm	0.000174	10.31	-269.699000	Y 377.433
Al (167.019 nm)	0.007253	ppm	0.000620	8.55	5.958610	Y_R 377.433
Al H (396.152 nm)	-0.070771 u	ppm	0.001558	2.20	232.150223	Y_R 377.433
As (188.980 nm)	0.079907	ppm	0.000830	1.04	95.655700	Y 242.219
B (249.678 nm)	5.661710 o	ppm	0.003607	0.06	140145.000000	Y 242.219
Ba (493.408 nm)	0.608987	ppm	0.000898	0.15	68729.700000	Y_R 488.368
Be (234.861 nm)	-0.000210 u	ppm	0.000042	19.91	-27.939900	Y_R 488.368
Bi (223.061 nm)	-0.003463 u	ppm	0.003201	92.42	12.126700	Y 377.433
Ca (315.887 nm)	194.538827 o	ppm	0.849420	0.44	163987.047297	Y_R 377.433
Cd (214.439 nm)	-0.000022 u	ppm	0.000062	> 100.00	0.670595	Y 377.433
Co (228.615 nm)	0.015674	ppm	0.000229	1.46	273.693000	Y 242.219
Cr (205.560 nm)	0.023806	ppm	0.000111	0.47	352.395000	Y 377.433
Cu (324.754 nm)	0.001172	ppm	0.000298	25.38	541.897000	Y 377.433
Fe (238.204 nm)	1.729734	ppm	0.005613	0.32	6372.474957	Y_R 377.433
Fe H (259.940 nm)	1.597130 u	ppm	0.003353	0.21	3354.700000	Y_R 377.433
K (766.491 nm)	142.869000 o	ppm	0.122041	0.09	161897.000000	Y_R2 488.368
Li (670.783 nm)	0.014535	ppm	0.002378	16.36	-559.362000	Y_R2 488.368
Mg (279.078 nm)	146.216000 o	ppm	0.388731	0.27	864921.000000	Y 377.433
Mn (257.610 nm)	4.894000 o	ppm	0.005578	0.11	1239710.000000	Y 377.433
Mo (202.032 nm)	0.001403	ppm	0.000480	34.25	9.832760	Y 377.433
Na (589.592 nm)	909.299000 o	ppm	3.382250	0.37	5921550.000000	Y_R2 488.368
Na H (589.593 nm)	995.136426	ppm	1.717560	0.17	3856250.108208	Y_R 488.368
Ni (231.604 nm)	0.065631	ppm	0.000440	0.67	483.887000	Y 377.433
P (213.618 nm)	0.379411	ppm	0.001822	0.48	883.906000	Y 242.219
Pb (220.353 nm)	-0.000158 u	ppm	0.000714	> 100.00	7.110550	Y 242.219
S (181.972 nm)	11.559047 o	ppm	0.017179	0.15	5086.325571	Y 377.433
Sb (206.834 nm)	0.010386	ppm	0.001179	11.35	-2.824730	Y 377.433
Se (196.026 nm)	0.003852	ppm	0.000996	25.86	17.775300	Y 242.219
Si (288.158 nm)	26.450300 o	ppm	0.186092	0.70	233526.000000	Y 377.433
Sn (189.925 nm)	0.003831	ppm	0.000559	14.59	16.335300	Y 377.433
Sr (421.552 nm)	2.323038 o	ppm	0.011323	0.49	490966.853639	Y_R 488.368
Th (288.505 nm)	0.013651	ppm	0.004490	32.89	207.171000	Y 377.433
Ti (336.122 nm)	0.020727	ppm	0.000043	0.21	3399.980000	Y 377.433
Tl (190.794 nm)	0.000933	ppm	0.000806	86.39	-0.146022	Y 377.433
U (409.013 nm)	-0.037042 u	ppm	0.003452	9.32	-326.405000	Y 377.433
V (292.401 nm)	0.023034	ppm	0.000205	0.89	990.231000	Y 377.433
Zn (206.200 nm)	0.002133	ppm	0.000135	6.32	12.887900	Y 377.433
Zr (343.823 nm)	0.018655	ppm	0.000052	0.28	2578.140000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.891434	15987.005974	0.003043	0.34
Y 377.433	0.900414	878121.079094	0.002220	0.25
Y_R 377.433	0.953693	68612.000000	0.005542	0.58
Y_R 488.368	0.965325	38147.800000	0.002706	0.28
Y_R2 488.368	0.973788	74173.055854	0.007125	0.73

Sample Name: 280-123135-D-4-B

Date: 5/14/2019 6:38:56 AM

Rack:Tube: 4:38

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.036551 n	ppm	0.033487	91.62	-2248.560334	Y_R 488.368
Ag (328.068 nm)	0.001853	ppm	0.000044	2.37	-262.318000	Y 377.433
Al (167.019 nm)	0.004475	ppm	0.003024	67.57	8.366780	Y_R 377.433
Al H (396.152 nm)	-0.066405 u	ppm	0.003469	5.22	262.791122	Y_R 377.433
As (188.980 nm)	0.037880	ppm	0.000070	0.19	45.266800	Y 242.219
B (249.678 nm)	2.759740 o	ppm	0.000054	0.00	68337.100000	Y 242.219
Ba (493.408 nm)	0.619461	ppm	0.001234	0.20	69915.900000	Y_R 488.368
Be (234.861 nm)	-0.000452 u	ppm	0.000032	7.05	72.669500	Y_R 488.368
Bi (223.061 nm)	-0.000110 u	ppm	0.001173	> 100.00	21.719500	Y 377.433
Ca (315.887 nm)	238.746304 o	ppm	0.409179	0.17	201273.897571	Y_R 377.433
Cd (214.439 nm)	-0.000093 u	ppm	0.000068	73.45	1.857060	Y 377.433
Co (228.615 nm)	0.007754	ppm	0.000454	5.85	115.005000	Y 242.219
Cr (205.560 nm)	0.011489	ppm	0.000002	0.02	167.262000	Y 377.433
Cu (324.754 nm)	0.000297 u	ppm	0.000421	> 100.00	465.379000	Y 377.433
Fe (238.204 nm)	7.192586 o	ppm	0.016472	0.23	26447.978582	Y_R 377.433
Fe H (259.940 nm)	7.332720	ppm	0.026413	0.36	14065.100000	Y_R 377.433
K (766.491 nm)	53.654800	ppm	0.053537	0.10	60370.900000	Y_R2 488.368
Li (670.783 nm)	0.015744	ppm	0.000480	3.05	-522.286000	Y_R2 488.368
Mg (279.078 nm)	144.327000 o	ppm	0.247084	0.17	853733.000000	Y 377.433
Mn (257.610 nm)	7.920150 o	ppm	0.002221	0.03	2006220.000000	Y 377.433
Mo (202.032 nm)	0.001121	ppm	0.000026	2.33	7.377400	Y 377.433
Na (589.592 nm)	553.760000 o	ppm	0.098366	0.02	3607050.000000	Y_R2 488.368
Na H (589.593 nm)	596.815754	ppm	0.072619	0.01	2317321.966175	Y_R 488.368
Ni (231.604 nm)	0.040386	ppm	0.000519	1.28	296.936000	Y 377.433
P (213.618 nm)	0.215639	ppm	0.000500	0.23	509.579000	Y 242.219
Pb (220.353 nm)	-0.001737 u	ppm	0.001121	64.56	2.785250	Y 242.219
S (181.972 nm)	5.355328	ppm	0.025040	0.47	2380.847596	Y 377.433
Sb (206.834 nm)	0.001429 u	ppm	0.004396	> 100.00	-28.428400	Y 377.433
Se (196.026 nm)	0.001233	ppm	0.001238	> 100.00	16.642000	Y 242.219
Si (288.158 nm)	26.256100 o	ppm	0.069107	0.26	231818.000000	Y 377.433
Sn (189.925 nm)	0.001141 u	ppm	0.002082	> 100.00	10.630800	Y 377.433
Sr (421.552 nm)	2.110495 o	ppm	0.003670	0.17	446057.153303	Y_R 488.368
Th (288.505 nm)	0.015553	ppm	0.000709	4.56	282.242000	Y 377.433
Ti (336.122 nm)	0.003196	ppm	0.000148	4.63	1022.390000	Y 377.433
Tl (190.794 nm)	0.000417 u	ppm	0.001644	> 100.00	-1.452480	Y 377.433
U (409.013 nm)	-0.036632 u	ppm	0.005357	14.63	-326.805000	Y 377.433
V (292.401 nm)	0.008689	ppm	0.000246	2.84	390.062000	Y 377.433
Zn (206.200 nm)	0.001857	ppm	0.000365	19.67	11.448100	Y 377.433
Zr (343.823 nm)	0.005889	ppm	0.000045	0.77	860.364000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.913712	16386.537823	0.000039	0.00
Y 377.433	0.926525	903585.467220	0.000124	0.01
Y_R 377.433	0.971840	69917.500000	0.002226	0.23
Y_R 488.368	0.985856	38959.100000	0.002528	0.26
Y_R2 488.368	0.994671	75763.761055	0.003175	0.32

Sample Name: 280-123135-D-5-B

Date: 5/14/2019 6:42:20 AM

Rack:Tube: 4:39

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.186538 n	ppm	0.008923	4.78	-1882.442641	Y_R 488.368
Ag (328.068 nm)	0.001385	ppm	0.000018	1.33	-206.812000	Y 377.433
Al (167.019 nm)	0.106323	ppm	0.007509	7.06	68.711500	Y_R 377.433
Al H (396.152 nm)	0.037202 u	ppm	0.000118	0.32	450.209888	Y_R 377.433
As (188.980 nm)	0.460622	ppm	0.002728	0.59	551.651000	Y 242.219
B (249.678 nm)	20.557600 o	ppm	0.016890	0.08	508687.000000	Y 242.219
Ba (493.408 nm)	0.539344	ppm	0.000655	0.12	60917.300000	Y_R 488.368
Be (234.861 nm)	-0.000133 u	ppm	0.000020	14.67	140.948000	Y_R 488.368
Bi (223.061 nm)	-0.004690 u	ppm	0.002011	42.89	9.783220	Y 377.433
Ca (315.887 nm)	65.707103 o	ppm	0.056140	0.09	55323.773370	Y_R 377.433
Cd (214.439 nm)	0.000085	ppm	0.000061	71.70	11.981500	Y 377.433
Co (228.615 nm)	0.036631	ppm	0.000668	1.82	696.105000	Y 242.219
Cr (205.560 nm)	0.243649	ppm	0.000203	0.08	3628.410000	Y 377.433
Cu (324.754 nm)	0.003590	ppm	0.000154	4.30	798.173000	Y 377.433
Fe (238.204 nm)	6.436735 o	ppm	0.012129	0.19	23670.291872	Y_R 377.433
Fe H (259.940 nm)	6.543580	ppm	0.015806	0.24	12591.500000	Y_R 377.433
K (766.491 nm)	845.489000 bo	ppm	10.508200	1.24	961485.000000	Y_R2 488.368
Li (670.783 nm)	0.119935	ppm	0.002272	1.89	2674.550000	Y_R2 488.368
Mg (279.078 nm)	219.531000 o	ppm	0.196849	0.09	1298580.000000	Y 377.433
Mn (257.610 nm)	0.689727	ppm	0.000278	0.04	174780.000000	Y 377.433
Mo (202.032 nm)	0.005027	ppm	0.000226	4.49	41.445500	Y 377.433
Na (589.592 nm)	2248.000000 o	ppm	4.966960	0.22	14636200.000000	Y_R2 488.368
Na H (589.593 nm)	2328.437312	ppm	15.158585	0.65	9007477.123014	Y_R 488.368
Ni (231.604 nm)	0.098125	ppm	0.000331	0.34	725.070000	Y 377.433
P (213.618 nm)	5.484460 o	ppm	0.001599	0.03	12552.300000	Y 242.219
Pb (220.353 nm)	-0.002415 u	ppm	0.000703	29.11	0.636914	Y 242.219
S (181.972 nm)	52.561516 o	ppm	0.036689	0.07	23001.045387	Y 377.433
Sb (206.834 nm)	0.082746	ppm	0.000182	0.22	194.994000	Y 377.433
Se (196.026 nm)	0.002837	ppm	0.002474	87.21	12.722300	Y 242.219
Si (288.158 nm)	40.566800 o	ppm	0.048464	0.12	357713.000000	Y 377.433
Sn (189.925 nm)	0.016947	ppm	0.000681	4.02	44.147800	Y 377.433
Sr (421.552 nm)	1.380918 o	ppm	0.000202	0.01	291899.857836	Y_R 488.368
Th (288.505 nm)	0.012127	ppm	0.000153	1.26	108.286000	Y 377.433
Ti (336.122 nm)	0.129321	ppm	0.000118	0.09	18587.400000	Y 377.433
Tl (190.794 nm)	-0.001109 u	ppm	0.000294	26.49	-5.413600	Y 377.433
U (409.013 nm)	-0.045320 u	ppm	0.005000	11.03	-368.650000	Y 377.433
V (292.401 nm)	0.110440	ppm	0.000240	0.22	4624.450000	Y 377.433
Zn (206.200 nm)	0.008872	ppm	0.000251	2.83	48.013200	Y 377.433
Zr (343.823 nm)	0.434287	ppm	0.000310	0.07	59073.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.825282	14800.632014	0.001345	0.16
Y 377.433	0.832922	812300.755825	0.001983	0.24
Y_R 377.433	0.921360	66285.800000	0.002044	0.22
Y_R 488.368	0.936136	36994.300000	0.002881	0.31
Y_R2 488.368	0.924263	70400.767004	0.000815	0.09

Sample Name: 280-123135-D-5-B@5

Date: 5/14/2019 6:45:44 AM

Rack:Tube: 4:40

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.028876 nu	ppm	0.052572	> 100.00	-2267.295962	Y_R 488.368
Ag (328.068 nm)	0.000934	ppm	0.000053	5.68	-290.730000	Y 377.433
Al (167.019 nm)	0.022856	ppm	0.002400	10.50	14.983000	Y_R 377.433
Al H (396.152 nm)	-0.089066 u	ppm	0.005821	6.54	105.189872	Y_R 377.433
As (188.980 nm)	0.085877	ppm	0.001747	2.03	102.811000	Y 242.219
B (249.678 nm)	3.811080 o	ppm	0.003728	0.10	94358.000000	Y 242.219
Ba (493.408 nm)	0.103479	ppm	0.000128	0.12	12174.200000	Y_R 488.368
Be (234.861 nm)	0.000007	ppm	0.000008	> 100.00	22.119700	Y_R 488.368
Bi (223.061 nm)	-0.003819 u	ppm	0.001725	45.17	11.137700	Y 377.433
Ca (315.887 nm)	12.988395 o	ppm	0.014829	0.11	10858.115304	Y_R 377.433
Cd (214.439 nm)	0.000097	ppm	0.000000	0.22	7.454640	Y 377.433
Co (228.615 nm)	0.007562	ppm	0.000220	2.91	111.985000	Y 242.219
Cr (205.560 nm)	0.047789	ppm	0.000052	0.11	710.043000	Y 377.433
Cu (324.754 nm)	0.001981	ppm	0.000047	2.39	722.972000	Y 377.433
Fe (238.204 nm)	1.316435	ppm	0.002205	0.17	4853.633585	Y_R 377.433
Fe H (259.940 nm)	1.176500 u	ppm	0.003000	0.25	2569.220000	Y_R 377.433
K (766.491 nm)	163.748000 o	ppm	0.158201	0.10	185658.000000	Y_R2 488.368
Li (670.783 nm)	0.028273	ppm	0.000814	2.88	-137.867000	Y_R2 488.368
Mg (279.078 nm)	42.501700	ppm	0.011209	0.03	251427.000000	Y 377.433
Mn (257.610 nm)	0.136232	ppm	0.000014	0.01	34581.700000	Y 377.433
Mo (202.032 nm)	0.000955	ppm	0.000176	18.38	5.927600	Y 377.433
Na (589.592 nm)	503.765000 o	ppm	0.761404	0.15	3280560.000000	Y_R2 488.368
Na H (589.593 nm)	545.888530	ppm	2.656823	0.49	2120048.113668	Y_R 488.368
Ni (231.604 nm)	0.019463	ppm	0.000498	2.56	141.486000	Y 377.433
P (213.618 nm)	1.048810	ppm	0.000119	0.01	2413.940000	Y 242.219
Pb (220.353 nm)	-0.001736 u	ppm	0.000825	47.49	2.287670	Y 242.219
S (181.972 nm)	9.759420	ppm	0.044248	0.45	4289.616984	Y 377.433
Sb (206.834 nm)	0.017321	ppm	0.000157	0.91	16.330100	Y 377.433
Se (196.026 nm)	0.001748	ppm	0.000765	43.77	12.214800	Y 242.219
Si (288.158 nm)	7.783030	ppm	0.040437	0.52	69305.400000	Y 377.433
Sn (189.925 nm)	0.004490	ppm	0.001428	31.80	17.732500	Y 377.433
Sr (421.552 nm)	0.266311	ppm	0.000247	0.09	56386.607704	Y_R 488.368
Th (288.505 nm)	0.005341	ppm	0.002553	47.80	71.906200	Y 377.433
Ti (336.122 nm)	0.024772	ppm	0.000209	0.84	3404.360000	Y 377.433
Tl (190.794 nm)	-0.000804 u	ppm	0.000347	43.21	-4.197670	Y 377.433
U (409.013 nm)	-0.018517 u	ppm	0.002422	13.08	-208.691000	Y 377.433
V (292.401 nm)	0.021464	ppm	0.000388	1.81	914.956000	Y 377.433
Zn (206.200 nm)	0.004548	ppm	0.000367	8.08	25.473700	Y 377.433
Zr (343.823 nm)	0.082942	ppm	0.000148	0.18	11312.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.927140	16627.352750	0.005148	0.56
Y 377.433	0.928855	905858.168021	0.004684	0.50
Y_R 377.433	0.954700	68684.400000	0.011488	1.20
Y_R 488.368	0.968103	38257.600000	0.013954	1.44
Y_R2 488.368	0.961342	73225.075299	0.004879	0.51

Sample Name: CCVH-5699817

Date: 5/14/2019 6:49:08 AM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.092297	ppm	0.015225	16.50	-2112.485730	Y_R 488.368
Ag (328.068 nm)	0.000888	ppm	0.000142	15.93	-562.111000	Y 377.433
Al (167.019 nm)	41.313200 o	ppm	0.017955	0.04	24742.500000	Y_R 377.433
Al H (396.152 nm)	49.686808	ppm	0.102207	0.21	126791.246561	Y_R 377.433
As (188.980 nm)	0.001142	ppm	0.000357	31.25	0.908397	Y 242.219
B (249.678 nm)	0.015827	ppm	0.000365	2.31	385.871000	Y 242.219
Ba (493.408 nm)	0.002222	ppm	0.000117	5.26	894.653000	Y_R 488.368
Be (234.861 nm)	0.000813	ppm	0.000120	14.77	1707.420000	Y_R 488.368
Bi (223.061 nm)	0.985652	ppm	0.003441	0.35	2569.320000	Y 377.433
Ca (315.887 nm)	0.020070	ppm	0.001186	5.91	-80.033243	Y_R 377.433
Cd (214.439 nm)	0.001268	ppm	0.000052	4.10	125.784000	Y 377.433
Co (228.615 nm)	0.004381	ppm	0.000069	1.57	47.615500	Y 242.219
Cr (205.560 nm)	0.001250	ppm	0.000175	13.99	3.338900	Y 377.433
Cu (324.754 nm)	0.010057	ppm	0.000243	2.42	1644.420000	Y 377.433
Fe (238.204 nm)	47.654912 o	ppm	0.044171	0.09	175143.514690	Y_R 377.433
Fe H (259.940 nm)	49.723700	ppm	0.086326	0.17	93224.300000	Y_R 377.433
K (766.491 nm)	0.257737	ppm	0.028736	11.15	-395.449000	Y_R2 488.368
Li (670.783 nm)	0.009005	ppm	0.000470	5.22	-729.050000	Y_R2 488.368
Mg (279.078 nm)	0.038046	ppm	0.000009	0.02	-119.893000	Y 377.433
Mn (257.610 nm)	0.002967	ppm	0.000003	0.10	826.302000	Y 377.433
Mo (202.032 nm)	0.000454	ppm	0.000084	18.49	1.557310	Y 377.433
Na (589.592 nm)	232.894000 o	ppm	1.353250	0.58	1517010.000000	Y_R2 488.368
Na H (589.593 nm)	246.579363	ppm	4.007693	1.63	963545.304391	Y_R 488.368
Ni (231.604 nm)	0.004719	ppm	0.000612	12.97	34.286300	Y 377.433
P (213.618 nm)	-0.002200 u	ppm	0.000226	10.25	11.672600	Y 242.219
Pb (220.353 nm)	0.002866	ppm	0.000088	3.05	34.741200	Y 242.219
S (181.972 nm)	4.797513	ppm	0.004660	0.10	2120.316857	Y 377.433
Sb (206.834 nm)	-0.000289 u	ppm	0.002273	> 100.00	-76.698100	Y 377.433
Se (196.026 nm)	0.003043	ppm	0.000651	21.40	5.267830	Y 242.219
Si (288.158 nm)	0.214871	ppm	0.006300	2.93	2726.350000	Y 377.433
Sn (189.925 nm)	0.004467	ppm	0.001631	36.52	17.683700	Y 377.433
Sr (421.552 nm)	0.001964	ppm	0.000041	2.07	530.913901	Y_R 488.368
Th (288.505 nm)	5.001660	ppm	0.034462	0.69	14929.300000	Y 377.433
Ti (336.122 nm)	0.002401	ppm	0.000041	1.71	150.293000	Y 377.433
Tl (190.794 nm)	-0.001231 u	ppm	0.000920	74.75	-6.425250	Y 377.433
U (409.013 nm)	10.202800	ppm	0.016126	0.16	47963.200000	Y 377.433
V (292.401 nm)	0.005710	ppm	0.000221	3.87	58.921400	Y 377.433
Zn (206.200 nm)	0.003881	ppm	0.000089	2.28	22.000400	Y 377.433
Zr (343.823 nm)	-0.002722 u	ppm	0.000019	0.69	-184.306000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.965857	17321.716338	0.003008	0.31
Y 377.433	0.962135	938314.288559	0.004974	0.52
Y_R 377.433	0.961419	69167.900000	0.000032	0.00
Y_R 488.368	0.983872	38880.700000	0.015251	1.55
Y_R2 488.368	0.985867	75093.114950	0.004192	0.43

Sample Name: CCV-5699804

Date: 5/14/2019 6:52:31 AM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.997157	ppm	0.014319	1.44	96.271734	Y_R 488.368
Ag (328.068 nm)	0.493720	ppm	0.001264	0.26	22854.300000	Y 377.433
Al (167.019 nm)	0.467391	ppm	0.002049	0.44	281.673000	Y_R 377.433
Al H (396.152 nm)	0.423914 u	ppm	0.003096	0.73	1447.937441	Y_R 377.433
As (188.980 nm)	0.963430	ppm	0.004666	0.48	1153.970000	Y 242.219
B (249.678 nm)	0.500035	ppm	0.000199	0.04	12457.200000	Y 242.219
Ba (493.408 nm)	0.489231	ppm	0.002368	0.48	55308.500000	Y_R 488.368
Be (234.861 nm)	0.474527	ppm	0.001674	0.35	137326.000000	Y_R 488.368
Bi (223.061 nm)	-0.004661 u	ppm	0.000613	13.15	9.165200	Y 377.433
Ca (315.887 nm)	4.997272	ppm	0.010315	0.21	4118.287508	Y_R 377.433
Cd (214.439 nm)	0.488845	ppm	0.002245	0.46	29803.900000	Y 377.433
Co (228.615 nm)	0.494036	ppm	0.004093	0.83	9838.820000	Y 242.219
Cr (205.560 nm)	0.495282	ppm	0.000730	0.15	7375.790000	Y 377.433
Cu (324.754 nm)	0.492177	ppm	0.000184	0.04	33167.200000	Y 377.433
Fe (238.204 nm)	2.450057	ppm	0.006158	0.25	9019.597274	Y_R 377.433
Fe H (259.940 nm)	2.371730 u	ppm	0.013453	0.57	4801.150000	Y_R 377.433
K (766.491 nm)	47.894000	ppm	0.103300	0.22	53815.000000	Y_R2 488.368
Li (670.783 nm)	0.961218	ppm	0.001984	0.21	28487.200000	Y_R2 488.368
Mg (279.078 nm)	19.271300	ppm	0.024135	0.13	114012.000000	Y 377.433
Mn (257.610 nm)	0.492913	ppm	0.000371	0.08	124927.000000	Y 377.433
Mo (202.032 nm)	0.501805	ppm	0.000515	0.10	4374.610000	Y 377.433
Na (589.592 nm)	4.832760	ppm	0.016433	0.34	33323.200000	Y_R2 488.368
Na H (589.593 nm)	6.599123 u	ppm	0.134129	2.03	36851.003533	Y_R 488.368
Ni (231.604 nm)	0.503022	ppm	0.001649	0.33	3728.850000	Y 377.433
P (213.618 nm)	0.956872	ppm	0.004226	0.44	2203.790000	Y 242.219
Pb (220.353 nm)	0.980440	ppm	0.002052	0.21	2999.780000	Y 242.219
S (181.972 nm)	-0.006421 u	ppm	0.001336	20.80	21.384407	Y 377.433
Sb (206.834 nm)	1.018820	ppm	0.000685	0.07	2708.560000	Y 377.433
Se (196.026 nm)	0.957074	ppm	0.004174	0.44	902.160000	Y 242.219
Si (288.158 nm)	5.371330	ppm	0.053854	1.00	48089.100000	Y 377.433
Sn (189.925 nm)	0.990429	ppm	0.004673	0.47	2108.450000	Y 377.433
Sr (421.552 nm)	0.486471	ppm	0.001940	0.40	102905.851830	Y_R 488.368
Th (288.505 nm)	0.008319	ppm	0.001054	12.66	95.202300	Y 377.433
Ti (336.122 nm)	0.496490	ppm	0.000226	0.05	71129.400000	Y 377.433
Tl (190.794 nm)	0.991707	ppm	0.001968	0.20	2286.330000	Y 377.433
U (409.013 nm)	-0.004415 u	ppm	0.002037	46.14	-172.939000	Y 377.433
V (292.401 nm)	0.493506	ppm	0.000601	0.12	20743.900000	Y 377.433
Zn (206.200 nm)	0.489944	ppm	0.000177	0.04	2555.630000	Y 377.433
Zr (343.823 nm)	0.495843	ppm	0.000084	0.02	67425.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.984577	17657.436185	0.002220	0.23
Y 377.433	0.990016	965504.738401	0.001838	0.19
Y_R 377.433	0.999456	71904.400000	0.002878	0.29
Y_R 488.368	1.016270	40161.000000	0.001402	0.14
Y_R2 488.368	1.033950	78755.619788	0.001918	0.19

Sample Name: CCB

Date: 5/14/2019 6:55:53 AM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.072698 Z	ppm	0.005651	7.77	-2160.326389 Z	Y_R 488.368
Ag (328.068 nm)	0.000640	ppm	0.000507	79.16	-319.028000	Y 377.433
Al (167.019 nm)	0.008239	ppm	0.000612	7.43	5.263650	Y_R 377.433
Al H (396.152 nm)	-0.114564 Zu	ppm	0.000090	0.08	34.516328 Z	Y_R 377.433
As (188.980 nm)	0.000390 u	ppm	0.000968	> 100.00	0.422407	Y 242.219
B (249.678 nm)	0.007484	ppm	0.000518	6.92	252.717000	Y 242.219
Ba (493.408 nm)	-0.000417 u	ppm	0.000361	86.58	555.381000	Y_R 488.368
Be (234.861 nm)	0.000067	ppm	0.000013	19.83	-1.480820	Y_R 488.368
Bi (223.061 nm)	-0.001461 u	ppm	0.001134	77.62	16.987200	Y 377.433
Ca (315.887 nm)	0.008952	ppm	0.010397	> 100.00	-89.411897	Y_R 377.433
Cd (214.439 nm)	0.000121	ppm	0.000026	21.22	7.581210	Y 377.433
Co (228.615 nm)	0.000433	ppm	0.000258	59.59	-31.219900	Y 242.219
Cr (205.560 nm)	0.000093	ppm	0.000009	10.11	-0.623084	Y 377.433
Cu (324.754 nm)	0.000724	ppm	0.000201	27.72	645.475000	Y 377.433
Fe (238.204 nm)	0.004916	ppm	0.000153	3.12	33.916580	Y_R 377.433
Fe H (259.940 nm)	-0.190901 u	ppm	0.002336	1.22	15.795300	Y_R 377.433
K (766.491 nm)	0.018289 u	ppm	0.026910	> 100.00	-667.943000	Y_R2 488.368
Li (670.783 nm)	0.007253	ppm	0.000562	7.75	-782.791000	Y_R2 488.368
Mg (279.078 nm)	0.002727	ppm	0.001169	42.88	38.672500	Y 377.433
Mn (257.610 nm)	0.000063	ppm	0.000015	23.12	90.634200	Y 377.433
Mo (202.032 nm)	0.000199	ppm	0.000024	12.21	-0.670998	Y 377.433
Na (589.592 nm)	0.149864	ppm	0.016570	11.06	1858.400000	Y_R2 488.368
Na H (589.593 nm)	0.659307 u	ppm	0.018598	2.82	13415.328185	Y_R 488.368
Ni (231.604 nm)	0.000041 u	ppm	0.000389	> 100.00	-2.609020	Y 377.433
P (213.618 nm)	-0.001608 u	ppm	0.001108	68.91	13.025800	Y 242.219
Pb (220.353 nm)	-0.001124 u	ppm	0.000513	45.60	4.040800	Y 242.219
S (181.972 nm)	-0.012839 u	ppm	0.004560	35.51	17.541121	Y 377.433
Sb (206.834 nm)	0.001980	ppm	0.000130	6.55	-25.593500	Y 377.433
Se (196.026 nm)	-0.000419 u	ppm	0.003014	> 100.00	10.332700	Y 242.219
Si (288.158 nm)	0.113351	ppm	0.007787	6.87	1833.240000	Y 377.433
Sn (189.925 nm)	0.000618 u	ppm	0.001348	> 100.00	9.521300	Y 377.433
Sr (421.552 nm)	-0.000107 u	ppm	0.000067	62.36	93.305135	Y_R 488.368
Th (288.505 nm)	0.001126	ppm	0.000005	0.48	55.523200	Y 377.433
Ti (336.122 nm)	0.000152	ppm	0.000091	59.67	-172.703000	Y 377.433
Tl (190.794 nm)	0.000501	ppm	0.000291	57.98	-1.062430	Y 377.433
U (409.013 nm)	-0.001666 u	ppm	0.002187	> 100.00	-121.462000	Y 377.433
V (292.401 nm)	-0.000064 u	ppm	0.000202	> 100.00	16.679500	Y 377.433
Zn (206.200 nm)	-0.000366 u	ppm	0.000044	12.07	-0.137336	Y 377.433
Zr (343.823 nm)	0.000112	ppm	0.000019	16.72	52.910700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.991799	17786.946541	0.001006	0.10
Y 377.433	0.997751	973048.360341	0.000300	0.03
Y_R 377.433	0.999708	71922.500000	0.007568	0.76
Y_R 488.368	1.014730	40100.100000	0.015485	1.53
Y_R2 488.368	1.024716	78052.236121	0.002426	0.24

Sample Name: CCVL-5699389

Date: 5/14/2019 6:59:17 AM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.088280 Q	ppm	0.006949	7.87	-2122.289058 Q	Y_R 488.368
Ag (328.068 nm)	0.009940	ppm	0.000273	2.75	117.433000	Y 377.433
Al (167.019 nm)	0.090667	ppm	0.000868	0.96	54.631300	Y_R 377.433
Al H (396.152 nm)	-0.011407 u	ppm	0.002383	20.89	298.670300	Y_R 377.433
As (188.980 nm)	0.010802	ppm	0.004283	39.65	12.894100	Y 242.219
B (249.678 nm)	0.101877	ppm	0.000055	0.05	2588.440000	Y 242.219
Ba (493.408 nm)	0.009309	ppm	0.000140	1.51	1642.810000	Y_R 488.368
Be (234.861 nm)	0.000961	ppm	0.000014	1.44	259.434000	Y_R 488.368
Bi (223.061 nm)	0.096944	ppm	0.004102	4.23	270.618000	Y 377.433
Ca (315.887 nm)	0.217478	ppm	0.010067	4.63	86.472853	Y_R 377.433
Cd (214.439 nm)	0.004994	ppm	0.000035	0.71	304.780000	Y 377.433
Co (228.615 nm)	0.010462	ppm	0.000222	2.13	169.265000	Y 242.219
Cr (205.560 nm)	0.009751	ppm	0.000284	2.91	143.287000	Y 377.433
Cu (324.754 nm)	0.015851	ppm	0.000085	0.53	1646.690000	Y 377.433
Fe (238.204 nm)	0.102580	ppm	0.000143	0.14	392.825159	Y_R 377.433
Fe H (259.940 nm)	-0.090147 u	ppm	0.003737	4.15	203.938000	Y_R 377.433
K (766.491 nm)	2.951760	ppm	0.031524	1.07	2670.370000	Y_R2 488.368
Li (670.783 nm)	0.028587 Q	ppm	0.001749	6.12	-128.223000 Q	Y_R2 488.368
Mg (279.078 nm)	0.192627	ppm	0.001732	0.90	1160.910000	Y 377.433
Mn (257.610 nm)	0.010139	ppm	0.000046	0.45	2642.890000	Y 377.433
Mo (202.032 nm)	0.018983	ppm	0.000329	1.73	163.176000	Y 377.433
Na (589.592 nm)	1.038830	ppm	0.021368	2.06	7665.420000	Y_R2 488.368
Na H (589.593 nm)	1.166029 u	ppm	0.086168	7.39	15382.982195	Y_R 488.368
Ni (231.604 nm)	0.041639	ppm	0.000591	1.42	305.904000	Y 377.433
P (213.618 nm)	2.737600 o	ppm	0.007017	0.26	6273.920000	Y 242.219
Pb (220.353 nm)	0.007384	ppm	0.000214	2.89	30.013700	Y 242.219
S (181.972 nm)	0.070683	ppm	0.001684	2.38	54.072366	Y 377.433
Sb (206.834 nm)	0.020269	ppm	0.001796	8.86	23.501200	Y 377.433
Se (196.026 nm)	0.016912	ppm	0.000535	3.17	26.466700	Y 242.219
Si (288.158 nm)	0.773653 Q	ppm	0.022615	2.92	7642.100000 Q	Y 377.433
Sn (189.925 nm)	0.097830	ppm	0.001638	1.67	215.662000	Y 377.433
Sr (421.552 nm)	0.009920	ppm	0.000230	2.32	2212.147118	Y_R 488.368
Th (288.505 nm)	0.016292	ppm	0.001077	6.61	101.285000	Y 377.433
Ti (336.122 nm)	0.009620	ppm	0.000055	0.57	1187.640000	Y 377.433
Tl (190.794 nm)	0.015223	ppm	0.001565	10.28	32.880200	Y 377.433
U (409.013 nm)	0.055594	ppm	0.003197	5.75	147.311000	Y 377.433
V (292.401 nm)	0.009609	ppm	0.000009	0.09	421.635000	Y 377.433
Zn (206.200 nm)	0.019805	ppm	0.000204	1.03	105.006000	Y 377.433
Zr (343.823 nm)	0.010679	ppm	0.000074	0.70	1489.280000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.994792	17840.632288	0.001290	0.13
Y 377.433	1.000176	975413.202660	0.001959	0.20
Y_R 377.433	0.996716	71707.200000	0.002810	0.28
Y_R 488.368	1.009650	39899.400000	0.013928	1.38
Y_R2 488.368	1.037770	79046.568230	0.001327	0.13

Sample Name: 280-123135-D-6-B

Date: 5/14/2019 7:02:40 AM

Rack:Tube: 4:41

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.035203 n	ppm	0.000535	1.52	-2251.850996	Y_R 488.368
Ag (328.068 nm)	0.001267	ppm	0.000152	12.02	-291.940000	Y 377.433
Al (167.019 nm)	0.003716	ppm	0.001270	34.16	2.888560	Y_R 377.433
Al H (396.152 nm)	-0.089355 u	ppm	0.007293	8.16	158.762020	Y_R 377.433
As (188.980 nm)	0.003321	ppm	0.001465	44.11	3.929150	Y 242.219
B (249.678 nm)	0.293519	ppm	0.000557	0.19	7329.100000	Y 242.219
Ba (493.408 nm)	0.051620	ppm	0.000173	0.33	6403.430000	Y_R 488.368
Be (234.861 nm)	-0.000138 u	ppm	0.000013	9.23	-47.500800	Y_R 488.368
Bi (223.061 nm)	-0.001671 u	ppm	0.001001	59.88	16.523000	Y 377.433
Ca (315.887 nm)	134.303582 o	ppm	0.257411	0.19	113181.556351	Y_R 377.433
Cd (214.439 nm)	-0.000004 u	ppm	0.000082	> 100.00	0.430624	Y 377.433
Co (228.615 nm)	0.002765	ppm	0.000014	0.50	15.326200	Y 242.219
Cr (205.560 nm)	0.000816	ppm	0.000101	12.41	10.012200	Y 377.433
Cu (324.754 nm)	0.009118	ppm	0.000067	0.73	1110.950000	Y 377.433
Fe (238.204 nm)	0.446933	ppm	0.002731	0.61	1658.289607	Y_R 377.433
Fe H (259.940 nm)	0.258529 u	ppm	0.003603	1.39	855.042000	Y_R 377.433
K (766.491 nm)	3.937020	ppm	0.049504	1.26	3791.600000	Y_R2 488.368
Li (670.783 nm)	0.012920	ppm	0.000385	2.98	-608.911000	Y_R2 488.368
Mg (279.078 nm)	66.711100 o	ppm	0.108586	0.16	394633.000000	Y 377.433
Mn (257.610 nm)	2.725980 o	ppm	0.004935	0.18	690554.000000	Y 377.433
Mo (202.032 nm)	0.008272	ppm	0.000003	0.04	69.745500	Y 377.433
Na (589.592 nm)	595.355000 o	ppm	3.353670	0.56	3876700.000000	Y_R2 488.368
Na H (589.593 nm)	638.592792	ppm	1.736119	0.27	2478166.072747	Y_R 488.368
Ni (231.604 nm)	0.021418	ppm	0.000039	0.18	155.943000	Y 377.433
P (213.618 nm)	0.375589	ppm	0.001369	0.36	875.171000	Y 242.219
Pb (220.353 nm)	-0.001335 u	ppm	0.000675	50.59	3.364320	Y 242.219
S (181.972 nm)	192.877287 bo	ppm	0.556667	0.29	84342.160540	Y 377.433
Sb (206.834 nm)	-0.000671 u	ppm	0.000627	93.36	-32.803900	Y 377.433
Se (196.026 nm)	-0.002416 u	ppm	0.002661	> 100.00	10.497000	Y 242.219
Si (288.158 nm)	20.633200 o	ppm	0.210742	1.02	182351.000000	Y 377.433
Sn (189.925 nm)	0.002729	ppm	0.001060	38.82	13.998700	Y 377.433
Sr (421.552 nm)	0.834843	ppm	0.001735	0.21	176515.876845	Y_R 488.368
Th (288.505 nm)	0.009017	ppm	0.000804	8.92	142.683000	Y 377.433
Ti (336.122 nm)	0.000089	ppm	0.000056	62.34	244.714000	Y 377.433
Tl (190.794 nm)	-0.000744 u	ppm	0.000928	> 100.00	-3.965420	Y 377.433
U (409.013 nm)	-0.027531 u	ppm	0.001615	5.87	-269.543000	Y 377.433
V (292.401 nm)	0.015362	ppm	0.000095	0.62	671.880000	Y 377.433
Zn (206.200 nm)	0.002373	ppm	0.000694	29.23	14.140700	Y 377.433
Zr (343.823 nm)	0.000888	ppm	0.000118	13.34	159.837000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.920016	16499.586322	0.001011	0.11
Y 377.433	0.924369	901483.257738	0.000119	0.01
Y_R 377.433	0.953457	68595.000000	0.004887	0.51
Y_R 488.368	0.972046	38413.400000	0.005690	0.59
Y_R2 488.368	0.982843	74862.802836	0.002826	0.29

Sample Name: 280-123135-D-7-B

Date: 5/14/2019 7:06:05 AM

Rack:Tube: 4:42

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.025120 n	ppm	0.010624	42.29	-2276.464266	Y_R 488.368
Ag (328.068 nm)	0.001451	ppm	0.000130	8.97	-288.167000	Y 377.433
Al (167.019 nm)	0.109469	ppm	0.002835	2.59	68.723100	Y_R 377.433
Al H (396.152 nm)	0.063133 u	ppm	0.002678	4.24	584.932961	Y_R 377.433
As (188.980 nm)	0.040965	ppm	0.000364	0.89	48.991300	Y 242.219
B (249.678 nm)	6.303910 o	ppm	0.011715	0.19	156032.000000	Y 242.219
Ba (493.408 nm)	0.491326	ppm	0.000873	0.18	55583.800000	Y_R 488.368
Be (234.861 nm)	-0.000223 u	ppm	0.000020	8.84	36.766100	Y_R 488.368
Bi (223.061 nm)	-0.004347 u	ppm	0.000579	13.31	10.229900	Y 377.433
Ca (315.887 nm)	221.176919 o	ppm	0.838994	0.38	186454.978597	Y_R 377.433
Cd (214.439 nm)	0.000035 u	ppm	0.000116	> 100.00	6.370590	Y 377.433
Co (228.615 nm)	0.036317	ppm	0.000285	0.79	692.527000	Y 242.219
Cr (205.560 nm)	0.073692	ppm	0.000053	0.07	1095.460000	Y 377.433
Cu (324.754 nm)	0.001494	ppm	0.000017	1.12	546.638000	Y 377.433
Fe (238.204 nm)	3.926207	ppm	0.011139	0.28	14444.321553	Y_R 377.433
Fe H (259.940 nm)	3.920910 u	ppm	0.004420	0.11	7694.020000	Y_R 377.433
K (766.491 nm)	273.161000 o	ppm	0.045735	0.02	310171.000000	Y_R2 488.368
Li (670.783 nm)	0.032762	ppm	0.002141	6.54	-0.134746	Y_R2 488.368
Mg (279.078 nm)	133.200000 o	ppm	0.325060	0.24	787924.000000	Y 377.433
Mn (257.610 nm)	4.383850 o	ppm	0.001154	0.03	1110490.000000	Y 377.433
Mo (202.032 nm)	0.003654	ppm	0.000050	1.36	29.464700	Y 377.433
Na (589.592 nm)	906.371000 o	ppm	0.751166	0.08	5902260.000000	Y_R2 488.368
Na H (589.593 nm)	999.878831	ppm	1.165335	0.12	3874455.886081	Y_R 488.368
Ni (231.604 nm)	0.148187	ppm	0.000122	0.08	1096.210000	Y 377.433
P (213.618 nm)	1.774450	ppm	0.005553	0.31	4072.500000	Y 242.219
Pb (220.353 nm)	-0.001083 u	ppm	0.001197	> 100.00	4.436840	Y 242.219
S (181.972 nm)	55.525171 o	ppm	0.095064	0.17	24304.343719	Y 377.433
Sb (206.834 nm)	0.001306 u	ppm	0.001937	> 100.00	-26.324600	Y 377.433
Se (196.026 nm)	0.000598 u	ppm	0.001010	> 100.00	13.984400	Y 242.219
Si (288.158 nm)	24.955900 o	ppm	0.319281	1.28	220380.000000	Y 377.433
Sn (189.925 nm)	0.007562	ppm	0.000278	3.68	24.245600	Y 377.433
Sr (421.552 nm)	2.292334 o	ppm	0.004654	0.20	484479.193660	Y_R 488.368
Th (288.505 nm)	0.011551	ppm	0.005164	44.70	193.363000	Y 377.433
Ti (336.122 nm)	0.200255	ppm	0.000052	0.03	29269.200000	Y 377.433
Tl (190.794 nm)	-0.000682 u	ppm	0.001434	> 100.00	-4.670980	Y 377.433
U (409.013 nm)	-0.041954 u	ppm	0.004558	10.86	-356.316000	Y 377.433
V (292.401 nm)	0.125602	ppm	0.000249	0.20	5319.160000	Y 377.433
Zn (206.200 nm)	0.014187	ppm	0.000219	1.55	75.721800	Y 377.433
Zr (343.823 nm)	0.064424	ppm	0.000033	0.05	8804.580000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.868827	15581.576898	0.000358	0.04
Y 377.433	0.876146	854453.972571	0.002195	0.25
Y_R 377.433	0.928616	66807.800000	0.004145	0.45
Y_R 488.368	0.942221	37234.700000	0.003965	0.42
Y_R2 488.368	0.957220	72911.075237	0.003144	0.33

Sample Name: 280-123135-D-8-B

Date: 5/14/2019 7:09:29 AM

Rack:Tube: 4:43

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.039724 n	ppm	0.025487	64.16	-2240.814267	Y_R 488.368
Ag (328.068 nm)	0.001107	ppm	0.000050	4.53	-298.130000	Y 377.433
Al (167.019 nm)	0.008791	ppm	0.003183	36.21	6.663300	Y_R 377.433
Al H (396.152 nm)	-0.075523 u	ppm	0.001373	1.82	189.225462	Y_R 377.433
As (188.980 nm)	0.015914	ppm	0.001125	7.07	19.005000	Y 242.219
B (249.678 nm)	1.816590 o	ppm	0.004170	0.23	45011.000000	Y 242.219
Ba (493.408 nm)	0.291386	ppm	0.000087	0.03	33207.400000	Y_R 488.368
Be (234.861 nm)	-0.000107 u	ppm	0.000002	1.55	-7.178600	Y_R 488.368
Bi (223.061 nm)	-0.003506 u	ppm	0.004855	> 100.00	11.966500	Y 377.433
Ca (315.887 nm)	124.996586 o	ppm	0.319023	0.26	105331.559786	Y_R 377.433
Cd (214.439 nm)	-0.000002 u	ppm	0.000006	> 100.00	1.583280	Y 377.433
Co (228.615 nm)	0.007561	ppm	0.000340	4.49	111.205000	Y 242.219
Cr (205.560 nm)	0.006494	ppm	0.000067	1.04	94.387700	Y 377.433
Cu (324.754 nm)	0.001415	ppm	0.000072	5.09	608.249000	Y 377.433
Fe (238.204 nm)	1.439137	ppm	0.003773	0.26	5304.554904	Y_R 377.433
Fe H (259.940 nm)	1.304740 u	ppm	0.001392	0.11	2808.690000	Y_R 377.433
K (766.491 nm)	45.029000	ppm	0.086888	0.19	50554.600000	Y_R2 488.368
Li (670.783 nm)	0.011004	ppm	0.000180	1.64	-667.710000	Y_R2 488.368
Mg (279.078 nm)	66.325500 o	ppm	0.011733	0.02	392350.000000	Y 377.433
Mn (257.610 nm)	1.954450 o	ppm	0.000669	0.03	495130.000000	Y 377.433
Mo (202.032 nm)	0.000852	ppm	0.000370	43.46	5.023690	Y 377.433
Na (589.592 nm)	495.358000 o	ppm	0.053434	0.01	3226210.000000	Y_R2 488.368
Na H (589.593 nm)	532.102723	ppm	1.651463	0.31	2066972.822704	Y_R 488.368
Ni (231.604 nm)	0.039137	ppm	0.000212	0.54	287.391000	Y 377.433
P (213.618 nm)	0.416284	ppm	0.000578	0.14	968.186000	Y 242.219
Pb (220.353 nm)	-0.000943 u	ppm	0.000245	25.99	4.700600	Y 242.219
S (181.972 nm)	3.858381	ppm	0.018913	0.49	1713.901659	Y 377.433
Sb (206.834 nm)	-0.003365 u	ppm	0.000249	7.39	-40.059700	Y 377.433
Se (196.026 nm)	0.001410	ppm	0.001099	77.99	13.277200	Y 242.219
Si (288.158 nm)	31.260400 o	ppm	0.350794	1.12	275842.000000	Y 377.433
Sn (189.925 nm)	0.002422	ppm	0.000330	13.64	13.345900	Y 377.433
Sr (421.552 nm)	1.459432 o	ppm	0.001281	0.09	308489.648431	Y_R 488.368
Th (288.505 nm)	0.006929	ppm	0.001434	20.70	118.339000	Y 377.433
Ti (336.122 nm)	0.004774	ppm	0.000169	3.54	887.807000	Y 377.433
Tl (190.794 nm)	0.000322 u	ppm	0.001840	> 100.00	-1.510060	Y 377.433
U (409.013 nm)	-0.025052 u	ppm	0.004864	19.42	-255.183000	Y 377.433
V (292.401 nm)	0.009549	ppm	0.000133	1.40	424.394000	Y 377.433
Zn (206.200 nm)	0.003273	ppm	0.000035	1.07	18.829400	Y 377.433
Zr (343.823 nm)	0.002974	ppm	0.000163	5.48	446.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.922457	16543.380236	0.000097	0.01
Y 377.433	0.928624	905632.573087	0.001297	0.14
Y_R 377.433	0.957783	68906.200000	0.006766	0.71
Y_R 488.368	0.968740	38282.800000	0.008430	0.87
Y_R2 488.368	0.969392	73838.225519	0.001347	0.14

Sample Name: 280-123137-F-1-D

Date: 5/14/2019 7:12:53 AM

Rack:Tube: 4:44

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.063555 n	ppm	0.019203	30.21	-2182.643512	Y_R 488.368
Ag (328.068 nm)	0.001086	ppm	0.000117	10.73	-287.523000	Y 377.433
Al (167.019 nm)	0.148715	ppm	0.002596	1.75	90.086400	Y_R 377.433
Al H (396.152 nm)	0.080398 u	ppm	0.000331	0.41	570.839274	Y_R 377.433
As (188.980 nm)	0.144022	ppm	0.002431	1.69	172.461000	Y 242.219
B (249.678 nm)	10.476900 o	ppm	0.013643	0.13	259281.000000	Y 242.219
Ba (493.408 nm)	0.355673	ppm	0.001115	0.31	40385.700000	Y_R 488.368
Be (234.861 nm)	0.000002 u	ppm	0.000015	> 100.00	13.726600	Y_R 488.368
Bi (223.061 nm)	-0.001881 u	ppm	0.002487	> 100.00	16.094600	Y 377.433
Ca (315.887 nm)	90.374845 o	ppm	0.221459	0.25	76129.810458	Y_R 377.433
Cd (214.439 nm)	0.000058 u	ppm	0.000094	> 100.00	4.907610	Y 377.433
Co (228.615 nm)	0.022991	ppm	0.000075	0.33	422.871000	Y 242.219
Cr (205.560 nm)	0.132660	ppm	0.000608	0.46	1975.320000	Y 377.433
Cu (324.754 nm)	0.002746	ppm	0.000149	5.41	719.236000	Y 377.433
Fe (238.204 nm)	1.097746	ppm	0.000643	0.06	4049.972682	Y_R 377.433
Fe H (259.940 nm)	0.940807 u	ppm	0.009473	1.01	2129.100000	Y_R 377.433
K (766.491 nm)	432.688000 o	ppm	1.605650	0.37	491713.000000	Y_R2 488.368
Li (670.783 nm)	0.061793	ppm	0.000338	0.55	890.616000	Y_R2 488.368
Mg (279.078 nm)	104.196000 o	ppm	0.129477	0.12	616364.000000	Y 377.433
Mn (257.610 nm)	0.919967	ppm	0.001226	0.13	233099.000000	Y 377.433
Mo (202.032 nm)	0.001772	ppm	0.000071	3.98	13.049700	Y 377.433
Na (589.592 nm)	1262.980000 o	ppm	6.077340	0.48	8223510.000000	Y_R2 488.368
Na H (589.593 nm)	1371.117068	ppm	1.100147	0.08	5308624.342782	Y_R 488.368
Ni (231.604 nm)	0.088869	ppm	0.000547	0.62	656.185000	Y 377.433
P (213.618 nm)	2.843190 o	ppm	0.002382	0.08	6515.270000	Y 242.219
Pb (220.353 nm)	-0.002379 u	ppm	0.002595	> 100.00	0.242790	Y 242.219
S (181.972 nm)	22.465093 o	ppm	0.041879	0.19	9845.354169	Y 377.433
Sb (206.834 nm)	0.008758	ppm	0.003242	37.02	-4.136950	Y 377.433
Se (196.026 nm)	0.003069	ppm	0.001051	34.24	14.116200	Y 242.219
Si (288.158 nm)	22.983700 o	ppm	0.122532	0.53	203029.000000	Y 377.433
Sn (189.925 nm)	0.005701	ppm	0.000247	4.33	20.299900	Y 377.433
Sr (421.552 nm)	1.071237	ppm	0.004441	0.41	226465.222240	Y_R 488.368
Th (288.505 nm)	0.008551	ppm	0.002720	31.81	103.246000	Y 377.433
Ti (336.122 nm)	0.103246	ppm	0.000231	0.22	14920.900000	Y 377.433
Tl (190.794 nm)	0.001272	ppm	0.001037	81.53	0.310969	Y 377.433
U (409.013 nm)	-0.033533 u	ppm	0.003104	9.26	-298.700000	Y 377.433
V (292.401 nm)	0.104127	ppm	0.000360	0.35	4389.180000	Y 377.433
Zn (206.200 nm)	0.021156	ppm	0.000667	3.15	112.049000	Y 377.433
Zr (343.823 nm)	0.129001	ppm	0.000097	0.08	17571.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.859699	15417.873536	0.000434	0.05
Y 377.433	0.862252	840904.365186	0.000789	0.09
Y_R 377.433	0.924223	66491.800000	0.001052	0.11
Y_R 488.368	0.934956	36947.600000	0.006640	0.71
Y_R2 488.368	0.941615	71722.498556	0.000313	0.03

Sample Name: 280-123219-C-1-B

Date: 5/14/2019 7:16:18 AM

Rack:Tube: 4:45

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.050003 n	ppm	0.033671	67.34	-2215.723026	Y_R 488.368
Ag (328.068 nm)	0.000895	ppm	0.000246	27.53	-307.121000	Y 377.433
Al (167.019 nm)	0.002508 u	ppm	0.003815	> 100.00	1.878140	Y_R 377.433
Al H (396.152 nm)	-0.104037 u	ppm	0.002145	2.06	76.982526	Y_R 377.433
As (188.980 nm)	0.014869	ppm	0.000840	5.65	17.766100	Y 242.219
B (249.678 nm)	0.018928	ppm	0.000876	4.63	535.796000	Y 242.219
Ba (493.408 nm)	0.039528	ppm	0.000185	0.47	5028.960000	Y_R 488.368
Be (234.861 nm)	-0.000026 u	ppm	0.000012	47.60	-26.759600	Y_R 488.368
Bi (223.061 nm)	-0.002769 u	ppm	0.001951	70.47	13.625300	Y 377.433
Ca (315.887 nm)	35.541010 o	ppm	0.111983	0.32	29880.145210	Y_R 377.433
Cd (214.439 nm)	-0.000029 u	ppm	0.000090	> 100.00	-1.456440	Y 377.433
Co (228.615 nm)	0.000155	ppm	0.000111	71.73	-36.780500	Y 242.219
Cr (205.560 nm)	0.001002	ppm	0.000003	0.33	12.903000	Y 377.433
Cu (324.754 nm)	0.001110	ppm	0.000243	21.89	646.546000	Y 377.433
Fe (238.204 nm)	0.060841	ppm	0.000111	0.18	239.438325	Y_R 377.433
Fe H (259.940 nm)	-0.136098 u	ppm	0.001466	1.08	118.132000	Y_R 377.433
K (766.491 nm)	1.278350	ppm	0.015278	1.20	766.022000	Y_R2 488.368
Li (670.783 nm)	0.009089	ppm	0.000641	7.05	-726.473000	Y_R2 488.368
Mg (279.078 nm)	11.719200	ppm	0.001101	0.01	69344.400000	Y 377.433
Mn (257.610 nm)	0.034839	ppm	0.000114	0.33	8899.140000	Y 377.433
Mo (202.032 nm)	0.000010 u	ppm	0.000057	> 100.00	-2.318810	Y 377.433
Na (589.592 nm)	11.480600 o	ppm	0.029552	0.26	75701.200000	Y_R2 488.368
Na H (589.593 nm)	14.728558	ppm	0.083577	0.57	67812.843879	Y_R 488.368
Ni (231.604 nm)	-0.000657 u	ppm	0.000084	12.82	-7.783490	Y 377.433
P (213.618 nm)	0.292505	ppm	0.000961	0.33	685.269000	Y 242.219
Pb (220.353 nm)	-0.001248 u	ppm	0.000666	53.36	3.665440	Y 242.219
S (181.972 nm)	2.137827	ppm	0.012479	0.58	957.743819	Y 377.433
Sb (206.834 nm)	0.000283 u	ppm	0.000840	> 100.00	-30.116500	Y 377.433
Se (196.026 nm)	0.000532 u	ppm	0.001235	> 100.00	11.234100	Y 242.219
Si (288.158 nm)	17.104000 o	ppm	0.042832	0.25	151304.000000	Y 377.433
Sn (189.925 nm)	0.001082	ppm	0.000863	79.76	10.504300	Y 377.433
Sr (421.552 nm)	0.076148	ppm	0.000067	0.09	16205.934803	Y_R 488.368
Th (288.505 nm)	-0.001533 u	ppm	0.000937	61.14	48.520500	Y 377.433
Ti (336.122 nm)	-0.000079 u	ppm	0.000063	80.71	-93.241100	Y 377.433
Tl (190.794 nm)	-0.001305 u	ppm	0.000285	21.82	-5.233630	Y 377.433
U (409.013 nm)	-0.008115 u	ppm	0.000060	0.75	-158.801000	Y 377.433
V (292.401 nm)	0.000302	ppm	0.000135	44.66	32.566900	Y 377.433
Zn (206.200 nm)	0.002550	ppm	0.000419	16.42	15.063800	Y 377.433
Zr (343.823 nm)	-0.000032 u	ppm	0.000107	> 100.00	33.528300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.969081	17379.535540	0.002939	0.30
Y 377.433	0.975449	951298.584529	0.005360	0.55
Y_R 377.433	0.982820	70707.500000	0.001038	0.11
Y_R 488.368	0.997522	39420.200000	0.001587	0.16
Y_R2 488.368	1.002524	76361.926107	0.002818	0.28

Sample Name: 280-123219-C-2-B

Date: 5/14/2019 7:19:41 AM

Rack:Tube: 4:46

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.054374 n	ppm	0.027602	50.76	-2205.055275	Y_R 488.368
Ag (328.068 nm)	0.000761	ppm	0.000207	27.23	-313.462000	Y 377.433
Al (167.019 nm)	0.001055	ppm	0.000125	11.88	0.981915	Y_R 377.433
Al H (396.152 nm)	-0.113382 u	ppm	0.004107	3.62	37.534197	Y_R 377.433
As (188.980 nm)	-0.003325 u	ppm	0.000577	17.34	-4.027990	Y 242.219
B (249.678 nm)	0.008909	ppm	0.000067	0.75	287.960000	Y 242.219
Ba (493.408 nm)	-0.000404 u	ppm	0.000237	58.72	556.858000	Y_R 488.368
Be (234.861 nm)	-0.000035 u	ppm	0.000012	35.35	-30.361200	Y_R 488.368
Bi (223.061 nm)	-0.001258 u	ppm	0.000418	33.22	17.515300	Y 377.433
Ca (315.887 nm)	0.024058	ppm	0.002833	11.78	-76.670779	Y_R 377.433
Cd (214.439 nm)	-0.000038 u	ppm	0.000012	30.67	-2.045870	Y 377.433
Co (228.615 nm)	0.000381	ppm	0.000121	31.82	-32.258200	Y 242.219
Cr (205.560 nm)	0.000305	ppm	0.000049	16.07	2.530110	Y 377.433
Cu (324.754 nm)	0.000958	ppm	0.000092	9.65	660.286000	Y 377.433
Fe (238.204 nm)	0.024973	ppm	0.000055	0.22	107.626369	Y_R 377.433
Fe H (259.940 nm)	-0.169155 u	ppm	0.000506	0.30	56.403000	Y_R 377.433
K (766.491 nm)	0.045572	ppm	0.052635	> 100.00	-636.896000	Y_R2 488.368
Li (670.783 nm)	0.007572	ppm	0.000589	7.78	-773.021000	Y_R2 488.368
Mg (279.078 nm)	0.001494	ppm	0.000820	54.87	31.319200	Y 377.433
Mn (257.610 nm)	0.000383	ppm	0.000001	0.31	171.826000	Y 377.433
Mo (202.032 nm)	0.000291	ppm	0.000014	4.96	0.132320	Y 377.433
Na (589.592 nm)	0.155686	ppm	0.017369	11.16	1896.560000	Y_R2 488.368
Na H (589.593 nm)	1.265837 u	ppm	0.007288	0.58	15758.829025	Y_R 488.368
Ni (231.604 nm)	0.000379	ppm	0.000127	33.62	-0.098754	Y 377.433
P (213.618 nm)	-0.001402 u	ppm	0.001450	> 100.00	13.496200	Y 242.219
Pb (220.353 nm)	-0.001009 u	ppm	0.001372	> 100.00	4.398520	Y 242.219
S (181.972 nm)	0.001987	ppm	0.001159	58.33	24.022705	Y 377.433
Sb (206.834 nm)	0.000959	ppm	0.000244	25.49	-28.334600	Y 377.433
Se (196.026 nm)	-0.001330 u	ppm	0.003179	> 100.00	9.480460	Y 242.219
Si (288.158 nm)	0.057615	ppm	0.001810	3.14	1342.920000	Y 377.433
Sn (189.925 nm)	0.001343	ppm	0.001074	79.95	11.058800	Y 377.433
Sr (421.552 nm)	0.000091	ppm	0.000018	19.76	135.207534	Y_R 488.368
Th (288.505 nm)	-0.000447 u	ppm	0.002093	> 100.00	50.940700	Y 377.433
Ti (336.122 nm)	0.000140	ppm	0.000106	76.05	-174.483000	Y 377.433
Tl (190.794 nm)	-0.000315 u	ppm	0.001145	> 100.00	-2.947900	Y 377.433
U (409.013 nm)	-0.001871 u	ppm	0.001933	> 100.00	-122.379000	Y 377.433
V (292.401 nm)	-0.000199 u	ppm	0.000058	29.27	10.706700	Y 377.433
Zn (206.200 nm)	0.000570	ppm	0.000211	37.07	4.740980	Y 377.433
Zr (343.823 nm)	-0.000150 u	ppm	0.000028	18.73	17.426800	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.980343	17581.497784	0.006512	0.66
Y 377.433	0.987286	962842.877166	0.005686	0.58
Y_R 377.433	0.980228	70521.000000	0.006733	0.69
Y_R 488.368	1.003410	39652.900000	0.007854	0.78
Y_R2 488.368	1.018080	77546.766463	0.001868	0.18

Sample Name: 280-123220-B-1-B

Date: 5/14/2019 7:23:06 AM

Rack:Tube: 4:47

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.029275 n	ppm	0.001186	4.05	-2266.320931	Y_R 488.368
Ag (328.068 nm)	0.000897	ppm	0.000018	2.00	-307.075000	Y 377.433
Al (167.019 nm)	0.002327 u	ppm	0.006484	> 100.00	1.749240	Y_R 377.433
Al H (396.152 nm)	-0.112978 u	ppm	0.002566	2.27	51.051342	Y_R 377.433
As (188.980 nm)	-0.000945 u	ppm	0.002650	> 100.00	-1.176570	Y 242.219
B (249.678 nm)	0.019012	ppm	0.000550	2.89	537.916000	Y 242.219
Ba (493.408 nm)	0.033750	ppm	0.000256	0.76	4381.520000	Y_R 488.368
Be (234.861 nm)	-0.000015 u	ppm	0.000016	> 100.00	-24.511400	Y_R 488.368
Bi (223.061 nm)	-0.002687 u	ppm	0.000945	35.18	13.831600	Y 377.433
Ca (315.887 nm)	28.343712 o	ppm	0.095421	0.34	23809.575998	Y_R 377.433
Cd (214.439 nm)	-0.000060 u	ppm	0.000032	52.99	-3.374800	Y 377.433
Co (228.615 nm)	0.000118	ppm	0.000124	> 100.00	-37.509200	Y 242.219
Cr (205.560 nm)	0.000670	ppm	0.000137	20.38	7.971710	Y 377.433
Cu (324.754 nm)	0.002394	ppm	0.000022	0.94	735.772000	Y 377.433
Fe (238.204 nm)	0.033463	ppm	0.002597	7.76	138.824239	Y_R 377.433
Fe H (259.940 nm)	-0.163182 u	ppm	0.000077	0.05	67.556100	Y_R 377.433
K (766.491 nm)	0.243337	ppm	0.031171	12.81	-411.837000	Y_R2 488.368
Li (670.783 nm)	0.009710	ppm	0.001270	13.08	-707.411000	Y_R2 488.368
Mg (279.078 nm)	10.557100	ppm	0.020813	0.20	62469.900000	Y 377.433
Mn (257.610 nm)	0.000590	ppm	0.000013	2.14	224.229000	Y 377.433
Mo (202.032 nm)	0.000165	ppm	0.000122	73.82	-0.967682	Y 377.433
Na (589.592 nm)	15.670400 o	ppm	0.012057	0.08	102964.000000	Y_R2 488.368
Na H (589.593 nm)	16.998506	ppm	0.055519	0.33	76577.083930	Y_R 488.368
Ni (231.604 nm)	0.001196	ppm	0.000002	0.20	5.959780	Y 377.433
P (213.618 nm)	0.013465	ppm	0.001404	10.43	47.475700	Y 242.219
Pb (220.353 nm)	-0.001828 u	ppm	0.002105	> 100.00	1.895780	Y 242.219
S (181.972 nm)	3.747736	ppm	0.007869	0.21	1661.418204	Y 377.433
Sb (206.834 nm)	-0.000463 u	ppm	0.001507	> 100.00	-32.126700	Y 377.433
Se (196.026 nm)	0.002851	ppm	0.001426	50.00	13.373200	Y 242.219
Si (288.158 nm)	15.864700 o	ppm	0.002537	0.02	140402.000000	Y 377.433
Sn (189.925 nm)	-0.001077 u	ppm	0.000683	63.37	5.926650	Y 377.433
Sr (421.552 nm)	0.145581	ppm	0.000544	0.37	30876.895120	Y_R 488.368
Th (288.505 nm)	-0.002810 u	ppm	0.000493	17.56	44.039900	Y 377.433
Ti (336.122 nm)	-0.000046 u	ppm	0.000017	35.88	-111.502000	Y 377.433
Tl (190.794 nm)	0.000395	ppm	0.000447	> 100.00	-1.306500	Y 377.433
U (409.013 nm)	-0.008175 u	ppm	0.000743	9.09	-157.675000	Y 377.433
V (292.401 nm)	0.000198 u	ppm	0.000414	> 100.00	27.723500	Y 377.433
Zn (206.200 nm)	0.001830	ppm	0.000176	9.59	11.309300	Y 377.433
Zr (343.823 nm)	-0.000095 u	ppm	0.000161	> 100.00	24.911700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.973693	17462.241779	0.000863	0.09
Y 377.433	0.979270	955025.247359	0.000481	0.05
Y_R 377.433	0.977979	70359.200000	0.002173	0.22
Y_R 488.368	0.986608	38988.900000	0.007224	0.73
Y_R2 488.368	1.009309	76878.683950	0.003310	0.33

Sample Name: 280-123220-B-2-B

Date: 5/14/2019 7:26:31 AM

Rack:Tube: 4:48

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.069542 n	ppm	0.006096	8.77	-2168.029717	Y_R 488.368
Ag (328.068 nm)	0.000912	ppm	0.000083	9.05	-306.291000	Y 377.433
Al (167.019 nm)	0.004871	ppm	0.004398	90.30	3.266720	Y_R 377.433
Al H (396.152 nm)	-0.108411 u	ppm	0.004702	4.34	61.801079	Y_R 377.433
As (188.980 nm)	-0.001476 u	ppm	0.000619	41.97	-1.812300	Y 242.219
B (249.678 nm)	0.016378	ppm	0.000180	1.10	472.756000	Y 242.219
Ba (493.408 nm)	0.030936	ppm	0.000566	1.83	4066.480000	Y_R 488.368
Be (234.861 nm)	-0.000011 u	ppm	0.000009	85.61	-23.415300	Y_R 488.368
Bi (223.061 nm)	-0.003125 u	ppm	0.000693	22.17	12.703400	Y 377.433
Ca (315.887 nm)	26.353350 o	ppm	0.122701	0.47	22130.802492	Y_R 377.433
Cd (214.439 nm)	-0.000003 u	ppm	0.000034	> 100.00	0.078428	Y 377.433
Co (228.615 nm)	0.000100 u	ppm	0.000382	> 100.00	-37.872000	Y 242.219
Cr (205.560 nm)	0.000674	ppm	0.000014	2.11	8.029760	Y 377.433
Cu (324.754 nm)	0.002984	ppm	0.000158	5.29	777.264000	Y 377.433
Fe (238.204 nm)	0.028483	ppm	0.000116	0.41	120.523900	Y_R 377.433
Fe H (259.940 nm)	-0.166939 u	ppm	0.002435	1.46	60.540500	Y_R 377.433
K (766.491 nm)	0.203989	ppm	0.079117	38.78	-456.615000	Y_R2 488.368
Li (670.783 nm)	0.009140	ppm	0.003004	32.87	-724.914000	Y_R2 488.368
Mg (279.078 nm)	9.809840	ppm	0.007536	0.08	58049.900000	Y 377.433
Mn (257.610 nm)	0.000432	ppm	0.000000	0.02	184.000000	Y 377.433
Mo (202.032 nm)	0.000127	ppm	0.000039	30.60	-1.294550	Y 377.433
Na (589.592 nm)	14.555100 o	ppm	0.034419	0.24	95698.500000	Y_R2 488.368
Na H (589.593 nm)	15.200054	ppm	0.052982	0.35	69625.937462	Y_R 488.368
Ni (231.604 nm)	0.000853	ppm	0.000485	56.88	3.412330	Y 377.433
P (213.618 nm)	0.011352	ppm	0.002342	20.63	42.647300	Y 242.219
Pb (220.353 nm)	-0.001125 u	ppm	0.000495	43.95	4.037750	Y 242.219
S (181.972 nm)	3.494822	ppm	0.019224	0.55	1550.860365	Y 377.433
Sb (206.834 nm)	0.001379 u	ppm	0.002669	> 100.00	-27.178400	Y 377.433
Se (196.026 nm)	0.000329 u	ppm	0.003657	> 100.00	11.024900	Y 242.219
Si (288.158 nm)	14.738000 o	ppm	0.041534	0.28	130490.000000	Y 377.433
Sn (189.925 nm)	-0.000835 u	ppm	0.000608	72.87	6.440140	Y 377.433
Sr (421.552 nm)	0.133449	ppm	0.000361	0.27	28313.374864	Y_R 488.368
Th (288.505 nm)	0.003255	ppm	0.004215	> 100.00	61.715400	Y 377.433
Ti (336.122 nm)	0.000032	ppm	0.000037	> 100.00	-106.466000	Y 377.433
Tl (190.794 nm)	-0.000698 u	ppm	0.001398	> 100.00	-3.830680	Y 377.433
U (409.013 nm)	-0.006529 u	ppm	0.001307	20.01	-149.543000	Y 377.433
V (292.401 nm)	0.000001 u	ppm	0.000124	> 100.00	19.933100	Y 377.433
Zn (206.200 nm)	0.002225	ppm	0.000337	15.14	13.365100	Y 377.433
Zr (343.823 nm)	-0.000091 u	ppm	0.000047	52.16	25.467500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.978539	17549.151303	0.000690	0.07
Y 377.433	0.985223	960830.427539	0.001143	0.12
Y_R 377.433	0.983583	70762.400000	0.007533	0.77
Y_R 488.368	1.006280	39766.400000	0.002533	0.25
Y_R2 488.368	1.019747	77673.784949	0.010575	1.04

Sample Name: 280-123220-B-3-B

Date: 5/14/2019 7:29:56 AM

Rack:Tube: 4:49

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.054751 n	ppm	0.009357	17.09	-2204.134980	Y_R 488.368
Ag (328.068 nm)	0.001163	ppm	0.000169	14.49	-294.513000	Y 377.433
Al (167.019 nm)	0.005305	ppm	0.003226	60.82	6.282930	Y_R 377.433
Al H (396.152 nm)	-0.103357 u	ppm	0.002040	1.97	86.305611	Y_R 377.433
As (188.980 nm)	0.000646 u	ppm	0.002106	> 100.00	0.697172	Y 242.219
B (249.678 nm)	0.032084	ppm	0.000236	0.74	855.658000	Y 242.219
Ba (493.408 nm)	0.026995	ppm	0.000278	1.03	3635.190000	Y_R 488.368
Be (234.861 nm)	-0.000177 u	ppm	0.000009	5.03	44.153200	Y_R 488.368
Bi (223.061 nm)	-0.000887 u	ppm	0.001758	> 100.00	19.115500	Y 377.433
Ca (315.887 nm)	52.483699 o	ppm	0.179362	0.34	44170.477363	Y_R 377.433
Cd (214.439 nm)	-0.000061 u	ppm	0.000092	> 100.00	0.255598	Y 377.433
Co (228.615 nm)	0.001025	ppm	0.000362	35.34	-19.408400	Y 242.219
Cr (205.560 nm)	0.000170 u	ppm	0.000341	> 100.00	-0.519217	Y 377.433
Cu (324.754 nm)	0.001339	ppm	0.000323	24.14	656.541000	Y 377.433
Fe (238.204 nm)	3.729212	ppm	0.010784	0.29	13720.380318	Y_R 377.433
Fe H (259.940 nm)	3.724470 u	ppm	0.005080	0.14	7327.200000	Y_R 377.433
K (766.491 nm)	0.603374	ppm	0.073183	12.13	-2.111560	Y_R2 488.368
Li (670.783 nm)	0.008196	ppm	0.000651	7.94	-753.859000	Y_R2 488.368
Mg (279.078 nm)	21.088300	ppm	0.037363	0.18	124758.000000	Y 377.433
Mn (257.610 nm)	2.200580 o	ppm	0.003637	0.17	557474.000000	Y 377.433
Mo (202.032 nm)	0.001144	ppm	0.000114	9.99	7.570680	Y 377.433
Na (589.592 nm)	31.141200 o	ppm	0.036975	0.12	203664.000000	Y_R2 488.368
Na H (589.593 nm)	32.353917	ppm	0.255504	0.79	135897.010048	Y_R 488.368
Ni (231.604 nm)	-0.001307 u	ppm	0.000263	20.11	-12.432500	Y 377.433
P (213.618 nm)	0.538542	ppm	0.001119	0.21	1247.630000	Y 242.219
Pb (220.353 nm)	0.000147 u	ppm	0.001001	> 100.00	8.262260	Y 242.219
S (181.972 nm)	0.132075	ppm	0.006731	5.10	85.524629	Y 377.433
Sb (206.834 nm)	0.002040	ppm	0.002024	99.24	-26.320600	Y 377.433
Se (196.026 nm)	-0.000476 u	ppm	0.000970	> 100.00	11.278200	Y 242.219
Si (288.158 nm)	18.904800 o	ppm	0.219269	1.16	167146.000000	Y 377.433
Sn (189.925 nm)	-0.000002 u	ppm	0.002652	> 100.00	8.206910	Y 377.433
Sr (421.552 nm)	0.219048	ppm	0.001538	0.70	46400.187791	Y_R 488.368
Th (288.505 nm)	0.003545	ppm	0.001578	44.53	113.627000	Y 377.433
Ti (336.122 nm)	-0.000001 u	ppm	0.000050	> 100.00	-28.251400	Y 377.433
Tl (190.794 nm)	-0.000825 u	ppm	0.001225	> 100.00	-4.231870	Y 377.433
U (409.013 nm)	-0.010323 u	ppm	0.005939	57.54	-168.914000	Y 377.433
V (292.401 nm)	-0.000015 u	ppm	0.000364	> 100.00	20.754500	Y 377.433
Zn (206.200 nm)	0.000369	ppm	0.000108	29.35	3.692360	Y 377.433
Zr (343.823 nm)	-0.000080 u	ppm	0.000073	91.08	38.469000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.968567	17370.303473	0.002133	0.22
Y 377.433	0.976215	952045.222730	0.003307	0.34
Y_R 377.433	0.977856	70350.400000	0.001299	0.13
Y_R 488.368	0.993296	39253.100000	0.005523	0.56
Y_R2 488.368	1.007857	76768.078890	0.003828	0.38

Sample Name: CCVH-5699817

Date: 5/14/2019 7:33:20 AM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.082998	ppm	0.014089	16.98	-2135.182405	Y_R 488.368
Ag (328.068 nm)	0.000648	ppm	0.000038	5.80	-572.777000	Y 377.433
Al (167.019 nm)	40.998200 o	ppm	0.027550	0.07	24554.300000	Y_R 377.433
Al H (396.152 nm)	49.735995	ppm	0.235328	0.47	126916.462796	Y_R 377.433
As (188.980 nm)	-0.000738 u	ppm	0.001785	> 100.00	-1.345460	Y 242.219
B (249.678 nm)	0.004549	ppm	0.000453	9.96	106.540000	Y 242.219
Ba (493.408 nm)	0.001647	ppm	0.000083	5.04	830.487000	Y_R 488.368
Be (234.861 nm)	0.000813	ppm	0.000052	6.37	1713.330000	Y_R 488.368
Bi (223.061 nm)	0.986206	ppm	0.003997	0.41	2570.780000	Y 377.433
Ca (315.887 nm)	0.014344	ppm	0.006659	46.42	-84.862130	Y_R 377.433
Cd (214.439 nm)	0.001162	ppm	0.000048	4.16	119.543000	Y 377.433
Co (228.615 nm)	0.004323	ppm	0.000024	0.57	46.466900	Y 242.219
Cr (205.560 nm)	0.001420	ppm	0.000103	7.23	5.827420	Y 377.433
Cu (324.754 nm)	0.009915	ppm	0.000023	0.23	1641.310000	Y 377.433
Fe (238.204 nm)	47.841208 o	ppm	0.097348	0.20	175828.134058	Y_R 377.433
Fe H (259.940 nm)	49.941000	ppm	0.132276	0.26	93630.000000	Y_R 377.433
K (766.491 nm)	0.150838	ppm	0.010296	6.83	-517.101000	Y_R2 488.368
Li (670.783 nm)	0.009629	ppm	0.002695	27.99	-709.899000	Y_R2 488.368
Mg (279.078 nm)	0.032742	ppm	0.001031	3.15	-150.930000	Y 377.433
Mn (257.610 nm)	0.002911	ppm	0.000034	1.15	811.938000	Y 377.433
Mo (202.032 nm)	0.000791	ppm	0.000153	19.31	4.497970	Y 377.433
Na (589.592 nm)	232.563000 o	ppm	1.411670	0.61	1514850.000000	Y_R2 488.368
Na H (589.593 nm)	245.712545	ppm	0.358939	0.15	960195.606666	Y_R 488.368
Ni (231.604 nm)	0.004861	ppm	0.000754	15.52	35.348900	Y 377.433
P (213.618 nm)	-0.002698 u	ppm	0.003120	> 100.00	10.533800	Y 242.219
Pb (220.353 nm)	0.002832	ppm	0.002498	88.20	34.560100	Y 242.219
S (181.972 nm)	4.792917	ppm	0.003052	0.06	2118.307832	Y 377.433
Sb (206.834 nm)	0.000408 u	ppm	0.000987	> 100.00	-74.803800	Y 377.433
Se (196.026 nm)	-0.003696 u	ppm	0.001640	44.38	-1.043570	Y 242.219
Si (288.158 nm)	0.065045	ppm	0.002227	3.42	1408.280000	Y 377.433
Sn (189.925 nm)	0.004448	ppm	0.000799	17.96	17.642300	Y 377.433
Sr (421.552 nm)	0.002007	ppm	0.000086	4.27	540.158146	Y_R 488.368
Th (288.505 nm)	5.015040	ppm	0.000266	0.01	14967.900000	Y 377.433
Ti (336.122 nm)	0.002318	ppm	0.000005	0.20	138.473000	Y 377.433
Tl (190.794 nm)	-0.001789 u	ppm	0.001059	59.17	-7.719280	Y 377.433
U (409.013 nm)	10.183500	ppm	0.009574	0.09	47872.600000	Y 377.433
V (292.401 nm)	0.005205	ppm	0.000106	2.03	40.783500	Y 377.433
Zn (206.200 nm)	0.003787	ppm	0.000005	0.13	21.507600	Y 377.433
Zr (343.823 nm)	-0.002981 u	ppm	0.000026	0.87	-218.875000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.958123	17182.998432	0.003304	0.34
Y 377.433	0.952595	929010.429198	0.003372	0.35
Y_R 377.433	0.962440	69241.300000	0.001987	0.21
Y_R 488.368	0.977998	38648.600000	0.004961	0.51
Y_R2 488.368	0.988970	75329.459264	0.020751	2.10

Sample Name: CCV-5699804

Date: 5/14/2019 7:36:43 AM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.969405	ppm	0.011782	1.22	28.529461	Y_R 488.368
Ag (328.068 nm)	0.494339	ppm	0.000196	0.04	22883.300000	Y 377.433
Al (167.019 nm)	0.472879	ppm	0.001076	0.23	284.951000	Y_R 377.433
Al H (396.152 nm)	0.432405 u	ppm	0.007374	1.71	1469.582934	Y_R 377.433
As (188.980 nm)	0.960372	ppm	0.001056	0.11	1150.310000	Y 242.219
B (249.678 nm)	0.491281	ppm	0.000660	0.13	12240.400000	Y 242.219
Ba (493.408 nm)	0.488731	ppm	0.001247	0.26	55252.900000	Y_R 488.368
Be (234.861 nm)	0.482421	ppm	0.001985	0.41	139609.000000	Y_R 488.368
Bi (223.061 nm)	-0.003961 u	ppm	0.001880	47.46	10.969600	Y 377.433
Ca (315.887 nm)	4.996948	ppm	0.016598	0.33	4118.016227	Y_R 377.433
Cd (214.439 nm)	0.491963	ppm	0.001081	0.22	29994.000000	Y 377.433
Co (228.615 nm)	0.491544	ppm	0.002267	0.46	9789.080000	Y 242.219
Cr (205.560 nm)	0.493461	ppm	0.001277	0.26	7348.590000	Y 377.433
Cu (324.754 nm)	0.492843	ppm	0.001880	0.38	33210.600000	Y 377.433
Fe (238.204 nm)	2.442222	ppm	0.010506	0.43	8990.806189	Y_R 377.433
Fe H (259.940 nm)	2.373380 u	ppm	0.008947	0.38	4804.220000	Y_R 377.433
K (766.491 nm)	47.607400	ppm	0.173061	0.36	53488.900000	Y_R2 488.368
Li (670.783 nm)	0.960520	ppm	0.000896	0.09	28465.700000	Y_R2 488.368
Mg (279.078 nm)	19.256800	ppm	0.013505	0.07	113926.000000	Y 377.433
Mn (257.610 nm)	0.492963	ppm	0.000026	0.01	124940.000000	Y 377.433
Mo (202.032 nm)	0.502210	ppm	0.000178	0.04	4378.140000	Y 377.433
Na (589.592 nm)	4.774970	ppm	0.001698	0.04	32946.200000	Y_R2 488.368
Na H (589.593 nm)	5.151304 u	ppm	0.040962	0.80	31256.843259	Y_R 488.368
Ni (231.604 nm)	0.504621	ppm	0.000166	0.03	3740.720000	Y 377.433
P (213.618 nm)	0.954270	ppm	0.004315	0.45	2197.840000	Y 242.219
Pb (220.353 nm)	0.980017	ppm	0.003927	0.40	2998.500000	Y 242.219
S (181.972 nm)	-0.007457 u	ppm	0.004319	57.92	20.931280	Y 377.433
Sb (206.834 nm)	1.017380	ppm	0.001768	0.17	2704.620000	Y 377.433
Se (196.026 nm)	0.953556	ppm	0.000080	0.01	898.885000	Y 242.219
Si (288.158 nm)	5.001330	ppm	0.006295	0.13	44834.100000	Y 377.433
Sn (189.925 nm)	0.989887	ppm	0.000468	0.05	2107.300000	Y 377.433
Sr (421.552 nm)	0.484947	ppm	0.001148	0.24	102583.887539	Y_R 488.368
Th (288.505 nm)	0.006609	ppm	0.001700	25.73	90.062300	Y 377.433
Ti (336.122 nm)	0.496614	ppm	0.000156	0.03	71147.300000	Y 377.433
Tl (190.794 nm)	0.995407	ppm	0.000112	0.01	2294.860000	Y 377.433
U (409.013 nm)	0.004293	ppm	0.000374	8.71	-131.921000	Y 377.433
V (292.401 nm)	0.493212	ppm	0.000484	0.10	20731.700000	Y 377.433
Zn (206.200 nm)	0.490099	ppm	0.000649	0.13	2556.440000	Y 377.433
Zr (343.823 nm)	0.495408	ppm	0.000171	0.03	67366.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.966792	17338.481196	0.000211	0.02
Y 377.433	0.969637	945630.042879	0.001055	0.11
Y_R 377.433	0.962520	69247.000000	0.006044	0.63
Y_R 488.368	0.979340	38701.600000	0.004841	0.49
Y_R2 488.368	0.993214	75652.777250	0.004233	0.43

Sample Name: CCB

Date: 5/14/2019 7:40:06 AM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.062586 Z	ppm	0.019146	30.59	-2185.009532 Z	Y_R 488.368
Ag (328.068 nm)	0.000806	ppm	0.000086	10.73	-311.226000	Y 377.433
Al (167.019 nm)	0.007115	ppm	0.001915	26.91	4.590600	Y_R 377.433
Al H (396.152 nm)	-0.112119 Zu	ppm	0.008289	7.39	40.735961 Z	Y_R 377.433
As (188.980 nm)	0.000489 u	ppm	0.004058	> 100.00	0.541389	Y 242.219
B (249.678 nm)	0.003327	ppm	0.000054	1.62	149.881000	Y 242.219
Ba (493.408 nm)	-0.000310 u	ppm	0.000236	76.17	567.364000	Y_R 488.368
Be (234.861 nm)	0.000046	ppm	0.000006	13.82	-7.825660	Y_R 488.368
Bi (223.061 nm)	-0.002131 u	ppm	0.000551	25.85	15.260000	Y 377.433
Ca (315.887 nm)	0.007880	ppm	0.004990	63.32	-90.315955	Y_R 377.433
Cd (214.439 nm)	0.000074	ppm	0.000004	5.01	4.732220	Y 377.433
Co (228.615 nm)	0.000368	ppm	0.000069	18.79	-32.513600	Y 242.219
Cr (205.560 nm)	0.000124 u	ppm	0.000201	> 100.00	-0.167332	Y 377.433
Cu (324.754 nm)	0.000720	ppm	0.000131	18.16	645.806000	Y 377.433
Fe (238.204 nm)	0.004197	ppm	0.000872	20.77	31.275818	Y_R 377.433
Fe H (259.940 nm)	-0.189503 u	ppm	0.001997	1.05	18.405200	Y_R 377.433
K (766.491 nm)	0.015924 u	ppm	0.075537	> 100.00	-670.635000	Y_R2 488.368
Li (670.783 nm)	0.006998	ppm	0.001147	16.39	-790.633000	Y_R2 488.368
Mg (279.078 nm)	0.002795	ppm	0.001854	66.32	39.107500	Y 377.433
Mn (257.610 nm)	0.000100	ppm	0.000002	1.99	100.079000	Y 377.433
Mo (202.032 nm)	0.000180	ppm	0.000071	39.40	-0.831240	Y 377.433
Na (589.592 nm)	0.105692	ppm	0.000637	0.60	1570.680000	Y_R2 488.368
Na H (589.593 nm)	-0.293040 u	ppm	0.082655	28.21	9735.791167	Y_R 488.368
Ni (231.604 nm)	0.000254	ppm	0.000354	> 100.00	-1.025780	Y 377.433
P (213.618 nm)	-0.002352 u	ppm	0.000646	27.46	11.323500	Y 242.219
Pb (220.353 nm)	-0.000806 u	ppm	0.000349	43.25	5.008420	Y 242.219
S (181.972 nm)	-0.008374 u	ppm	0.000256	3.05	19.493084	Y 377.433
Sb (206.834 nm)	0.000588 u	ppm	0.001944	> 100.00	-29.326100	Y 377.433
Se (196.026 nm)	0.000929	ppm	0.000806	86.79	11.587800	Y 242.219
Si (288.158 nm)	0.026666	ppm	0.001713	6.43	1070.650000	Y 377.433
Sn (189.925 nm)	-0.000469 u	ppm	0.000446	95.09	7.216030	Y 377.433
Sr (421.552 nm)	0.000063	ppm	0.000017	27.80	129.285704	Y_R 488.368
Th (288.505 nm)	0.001482	ppm	0.000579	39.08	56.536000	Y 377.433
Ti (336.122 nm)	0.000198	ppm	0.000034	17.24	-166.139000	Y 377.433
Tl (190.794 nm)	0.000407	ppm	0.000323	79.33	-1.278670	Y 377.433
U (409.013 nm)	-0.002461 u	ppm	0.000437	17.76	-125.197000	Y 377.433
V (292.401 nm)	-0.000162 u	ppm	0.000141	86.98	12.900600	Y 377.433
Zn (206.200 nm)	-0.000367 u	ppm	0.000092	25.08	-0.143902	Y 377.433
Zr (343.823 nm)	0.000022 u	ppm	0.000031	> 100.00	40.689900	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.966133	17326.660190	0.001668	0.17
Y 377.433	0.970312	946288.616308	0.000371	0.04
Y_R 377.433	0.971198	69871.300000	0.007497	0.77
Y_R 488.368	0.997252	39409.500000	0.023339	2.34
Y_R2 488.368	0.996936	75936.287450	0.009183	0.92

Sample Name: CCVL-5699389

Date: 5/14/2019 7:43:29 AM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
(Li) (610.365 nm)	0.069730 Q	ppm	0.011970	17.17	-2167.569636 Q	Y_R 488.368
Ag (328.068 nm)	0.009563	ppm	0.000136	1.42	99.670700	Y 377.433
Al (167.019 nm)	0.088536	ppm	0.001067	1.21	53.357000	Y_R 377.433
Al H (396.152 nm)	-0.014852 u	ppm	0.002873	19.34	289.906878	Y_R 377.433
As (188.980 nm)	0.012602	ppm	0.002485	19.72	15.049200	Y 242.219
B (249.678 nm)	0.098647	ppm	0.000045	0.05	2508.510000	Y 242.219
Ba (493.408 nm)	0.009825	ppm	0.000122	1.24	1700.490000	Y_R 488.368
Be (234.861 nm)	0.000934	ppm	0.000007	0.70	251.570000	Y_R 488.368
Bi (223.061 nm)	0.095536	ppm	0.001533	1.60	266.990000	Y 377.433
Ca (315.887 nm)	0.208402	ppm	0.021855	10.49	78.817349	Y_R 377.433
Cd (214.439 nm)	0.005124	ppm	0.000071	1.38	312.723000	Y 377.433
Co (228.615 nm)	0.010478	ppm	0.000034	0.33	169.601000	Y 242.219
Cr (205.560 nm)	0.009836	ppm	0.000020	0.20	144.552000	Y 377.433
Cu (324.754 nm)	0.015826	ppm	0.000018	0.11	1644.680000	Y 377.433
Fe (238.204 nm)	0.102727	ppm	0.000129	0.13	393.364966	Y_R 377.433
Fe H (259.940 nm)	-0.090750 u	ppm	0.000379	0.42	202.813000	Y_R 377.433
K (766.491 nm)	2.895820	ppm	0.031725	1.10	2606.710000	Y_R2 488.368
Li (670.783 nm)	0.027263 Q	ppm	0.000996	3.65	-168.857000 Q	Y_R2 488.368
Mg (279.078 nm)	0.192376	ppm	0.000993	0.52	1159.400000	Y 377.433
Mn (257.610 nm)	0.010153	ppm	0.000004	0.04	2646.370000	Y 377.433
Mo (202.032 nm)	0.019086	ppm	0.000070	0.37	164.075000	Y 377.433
Na (589.592 nm)	1.001550	ppm	0.000610	0.06	7423.660000	Y_R2 488.368
Na H (589.593 nm)	0.520543 u	ppm	0.056490	10.85	12889.561322	Y_R 488.368
Ni (231.604 nm)	0.041999	ppm	0.001602	3.82	308.566000	Y 377.433
P (213.618 nm)	2.731960 o	ppm	0.004586	0.17	6261.050000	Y 242.219
Pb (220.353 nm)	0.009495	ppm	0.000878	9.25	36.461600	Y 242.219
S (181.972 nm)	0.073618	ppm	0.001247	1.69	55.355260	Y 377.433
Sb (206.834 nm)	0.018191	ppm	0.002228	12.25	17.935500	Y 377.433
Se (196.026 nm)	0.019385	ppm	0.000678	3.50	28.769900	Y 242.219
Si (288.158 nm)	0.637912	ppm	0.024494	3.84	6447.940000	Y 377.433
Sn (189.925 nm)	0.097992	ppm	0.001145	1.17	216.007000	Y 377.433
Sr (421.552 nm)	0.009904	ppm	0.000080	0.81	2208.721197	Y_R 488.368
Th (288.505 nm)	0.016360	ppm	0.000977	5.97	101.508000	Y 377.433
Ti (336.122 nm)	0.009686	ppm	0.000007	0.08	1197.150000	Y 377.433
Tl (190.794 nm)	0.013100	ppm	0.001236	9.43	27.976000	Y 377.433
U (409.013 nm)	0.056165	ppm	0.000555	0.99	150.005000	Y 377.433
V (292.401 nm)	0.009538	ppm	0.000180	1.88	418.449000	Y 377.433
Zn (206.200 nm)	0.020115	ppm	0.000355	1.77	106.620000	Y 377.433
Zr (343.823 nm)	0.010695	ppm	0.000208	1.95	1491.450000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.972042	17432.624475	0.000027	0.00
Y 377.433	0.976047	951882.157388	0.000578	0.06
Y_R 377.433	0.970524	69822.800000	0.001391	0.14
Y_R 488.368	0.980275	38738.600000	0.005955	0.61
Y_R2 488.368	1.019422	77649.016778	0.005698	0.56

52A051019.esws

User: denmet

Thursday, May 16, 2019 9:52 AM

Workstation: DENPC507

Path: D:\My Results\52A051019.esws

Date created: 5/10/2019 10:22:13 AM

Instrument used: MY18171010

Software Version : 7.4.2.10790

Firmware Version : 3784

Notes:

Sample Name: icis-5695514

Date: 5/10/2019 10:33:02 AM

Rack:Tube: S1:5

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000000	ppm	N/A	N/A	-184.658000	Y 377.433
Al (394.401 nm)	0.000000	ppm	N/A	N/A	28.162800	Y 377.433
Al H (396.152 nm)	0.000000	ppm	N/A	N/A	32.574500	Y_R 377.433
As (188.980 nm)	0.000000	ppm	N/A	N/A	-1.825690	Y 242.219
B (249.678 nm)	0.000000	ppm	N/A	N/A	11.849100	Y 242.219
Ba (493.408 nm)	0.000000	ppm	N/A	N/A	1628.560000	Y_R 488.368
Be (234.861 nm)	0.000000	ppm	N/A	N/A	-0.806057	Y_R 488.368
Bi (223.061 nm)	0.000000	ppm	N/A	N/A	-10.883400	Y 377.433
Ca (315.887 nm)	0.000000	ppm	N/A	N/A	-73.238528	Y_R 377.433
Cd (214.439 nm)	0.000000	ppm	N/A	N/A	-6.786970	Y 377.433
Co (228.615 nm)	0.000000	ppm	N/A	N/A	-23.407700	Y 242.219
Cr (205.560 nm)	0.000000	ppm	N/A	N/A	-8.121450	Y 377.433
Cu (324.754 nm)	0.000000	ppm	N/A	N/A	510.538000	Y 377.433
Fe (238.204 nm)	0.000000	ppm	N/A	N/A	4.171039	Y_R 377.433
Fe H (259.940 nm)	0.000000	ppm	N/A	N/A	15.122100	Y_R 377.433
K (766.491 nm)	0.000000	ppm	N/A	N/A	2181.590000	Y_R2 488.368
Li (670.783 nm)	0.000000	ppm	N/A	N/A	-2886.020000	Y_R2 488.368
Mg (279.078 nm)	0.000000	ppm	N/A	N/A	15.894800	Y 377.433
Mn (257.610 nm)	0.000000	ppm	N/A	N/A	-23.492600	Y 377.433
Mo (202.032 nm)	0.000000	ppm	N/A	N/A	11.614700	Y 377.433
Na (589.592 nm)	0.000000	ppm	N/A	N/A	171.343000	Y_R2 488.368
Na H (589.593 nm)	0.000000	ppm	N/A	N/A	93.529845	Y_R4
Ni (231.604 nm)	0.000000	ppm	N/A	N/A	-10.459400	Y 377.433
P (213.618 nm)	0.000000	ppm	N/A	N/A	3.395650	Y 242.219
Pb (220.353 nm)	0.000000	ppm	N/A	N/A	8.060080	Y 242.219
S (181.972 nm)	0.000000	ppm	N/A	N/A	7.475459	Y 377.433
Sb (206.834 nm)	0.000000	ppm	N/A	N/A	2.280820	Y 377.433
Se (196.026 nm)	0.000000	ppm	N/A	N/A	5.582280	Y 242.219
Si (288.158 nm)	0.000000	ppm	N/A	N/A	508.405000	Y 377.433
Sn (189.925 nm)	0.000000	ppm	N/A	N/A	9.096750	Y 377.433
Sr (421.552 nm)	0.000000	ppm	N/A	N/A	103.006895	Y_R 488.368
Th (288.505 nm)	0.000000	ppm	N/A	N/A	19.395300	Y 377.433
Ti (336.122 nm)	0.000000	ppm	N/A	N/A	-520.908000	Y 377.433
Tl (190.794 nm)	0.000000	ppm	N/A	N/A	0.118290	Y 377.433
U (409.013 nm)	0.000000	ppm	N/A	N/A	30.017600	Y 377.433
V (292.401 nm)	0.000000	ppm	N/A	N/A	-95.582400	Y 377.433
Zn (206.200 nm)	0.000000	ppm	N/A	N/A	3.087530	Y 377.433
Zr (343.823 nm)	0.000000	ppm	N/A	N/A	-173.520000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.000000	18696.995863	0.000000	0.00
Y 377.433	1.000000	555576.495326	0.000000	0.00
Y_R 377.433	1.000000	48685.700000	0.000000	0.00
Y_R 488.368	1.000000	42766.200000	0.000000	0.00
Y_R2 488.368	1.000000	83520.864435	0.000000	0.00
Y_R4	1.000000	38446.900000	0.000000	0.00

Sample Name: ic1

Date: 5/10/2019 10:36:14 AM

Rack:Tube: 3:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	1.000000	ppm	N/A	N/A	36550.400000	Y 377.433
Al (394.401 nm)	1.000000	ppm	N/A	N/A	12592.200000	Y 377.433
Al H (396.152 nm)	1.000000	ppm	N/A	N/A	2030.940000	Y_R 377.433
As (188.980 nm)	2.000000	ppm	N/A	N/A	3180.300000	Y 242.219
B (249.678 nm)	1.000000	ppm	N/A	N/A	7672.940000	Y 242.219
Ba (493.408 nm)	1.000000	ppm	N/A	N/A	106554.000000	Y_R 488.368
Be (234.861 nm)	1.000000	ppm	N/A	N/A	106132.000000	Y_R 488.368
Bi (223.061 nm)		ppm	N/A	N/A	-0.746051	Y 377.433
Ca (315.887 nm)	10.000000	ppm	N/A	N/A	8197.751207	Y_R 377.433
Cd (214.439 nm)	1.000000	ppm	N/A	N/A	38304.700000	Y 377.433
Co (228.615 nm)	1.000000	ppm	N/A	N/A	25002.100000	Y 242.219
Cr (205.560 nm)	1.000000	ppm	N/A	N/A	6921.780000	Y 377.433
Cu (324.754 nm)	1.000000	ppm	N/A	N/A	49593.900000	Y 377.433
Fe (238.204 nm)	5.000000	ppm	N/A	N/A	12504.027001	Y_R 377.433
Fe H (259.940 nm)	5.000000	ppm	N/A	N/A	7158.180000	Y_R 377.433
K (766.491 nm)	100.000000	ppm	N/A	N/A	107360.000000	Y_R2 488.368
Li (670.783 nm)	2.000000	ppm	N/A	N/A	33499.200000	Y_R2 488.368
Mg (279.078 nm)	40.000000	ppm	N/A	N/A	140220.000000	Y 377.433
Mn (257.610 nm)	1.000000	ppm	N/A	N/A	288193.000000	Y 377.433
Mo (202.032 nm)	1.000000	ppm	N/A	N/A	13240.300000	Y 377.433
Na (589.592 nm)		ppm	N/A	N/A	9377.020000	Y_R2 488.368
Na H (589.593 nm)		ppm	N/A	N/A	5604.153032	Y_R4
Ni (231.604 nm)	1.000000	ppm	N/A	N/A	5415.710000	Y 377.433
P (213.618 nm)	2.000000	ppm	N/A	N/A	3093.170000	Y 242.219
Pb (220.353 nm)	2.000000	ppm	N/A	N/A	6742.260000	Y 242.219
S (181.972 nm)		ppm	N/A	N/A	18.731215	Y 377.433
Sb (206.834 nm)	2.000000	ppm	N/A	N/A	3729.520000	Y 377.433
Se (196.026 nm)	2.000000	ppm	N/A	N/A	3208.880000	Y 242.219
Si (288.158 nm)	10.000000	ppm	N/A	N/A	67308.500000	Y 377.433
Sn (189.925 nm)	2.000000	ppm	N/A	N/A	3300.460000	Y 377.433
Sr (421.552 nm)	1.000000	ppm	N/A	N/A	160697.164994	Y_R 488.368
Th (288.505 nm)		ppm	N/A	N/A	-34.014900	Y 377.433
Ti (336.122 nm)	1.000000	ppm	N/A	N/A	131405.000000	Y 377.433
Tl (190.794 nm)	2.000000	ppm	N/A	N/A	4890.340000	Y 377.433
U (409.013 nm)		ppm	N/A	N/A	-7.967200	Y 377.433
V (292.401 nm)	1.000000	ppm	N/A	N/A	54042.500000	Y 377.433
Zn (206.200 nm)	1.000000	ppm	N/A	N/A	4572.360000	Y 377.433
Zr (343.823 nm)	1.000000	ppm	N/A	N/A	58499.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.970301	18141.710523	0.002997	0.31
Y 377.433	0.975137	541763.334082	0.002724	0.28
Y_R 377.433	0.984394	47925.900000	0.002712	0.28
Y_R 488.368	0.973249	41622.200000	0.004461	0.46
Y_R2 488.368	0.977741	81661.740778	0.000179	0.02
Y_R4	0.995420	38270.800000	0.004007	0.40

Sample Name: ic3

Date: 5/10/2019 10:40:23 AM

Rack:Tube: 3:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)		ppm	N/A	N/A	-189.534000	Y 377.433
Al (394.401 nm)		ppm	N/A	N/A	514.478000	Y 377.433
Al H (396.152 nm)		ppm	N/A	N/A	128.490000	Y_R 377.433
As (188.980 nm)		ppm	N/A	N/A	-0.629662	Y 242.219
B (249.678 nm)		ppm	N/A	N/A	14.918800	Y 242.219
Ba (493.408 nm)		ppm	N/A	N/A	1677.780000	Y_R 488.368
Be (234.861 nm)		ppm	N/A	N/A	-5.851770	Y_R 488.368
Bi (223.061 nm)		ppm	N/A	N/A	-4.490070	Y 377.433
Ca (315.887 nm)		ppm	N/A	N/A	-74.939989	Y_R 377.433
Cd (214.439 nm)		ppm	N/A	N/A	-4.245760	Y 377.433
Co (228.615 nm)		ppm	N/A	N/A	-26.906400	Y 242.219
Cr (205.560 nm)		ppm	N/A	N/A	-6.077620	Y 377.433
Cu (324.754 nm)		ppm	N/A	N/A	498.082000	Y 377.433
Fe (238.204 nm)		ppm	N/A	N/A	120.377497	Y_R 377.433
Fe H (259.940 nm)		ppm	N/A	N/A	90.181100	Y_R 377.433
K (766.491 nm)		ppm	N/A	N/A	2303.860000	Y_R2 488.368
Li (670.783 nm)		ppm	N/A	N/A	-2937.100000	Y_R2 488.368
Mg (279.078 nm)		ppm	N/A	N/A	24.572700	Y 377.433
Mn (257.610 nm)		ppm	N/A	N/A	17.971300	Y 377.433
Mo (202.032 nm)		ppm	N/A	N/A	15.496100	Y 377.433
Na (589.592 nm)	50.000000	ppm	N/A	N/A	43636.800000	Y_R2 488.368
Na H (589.593 nm)	50.000000	ppm	N/A	N/A	29457.226010	Y_R4
Ni (231.604 nm)		ppm	N/A	N/A	-14.311600	Y 377.433
P (213.618 nm)		ppm	N/A	N/A	-0.115490	Y 242.219
Pb (220.353 nm)		ppm	N/A	N/A	13.556300	Y 242.219
S (181.972 nm)		ppm	N/A	N/A	12.536158	Y 377.433
Sb (206.834 nm)		ppm	N/A	N/A	5.528390	Y 377.433
Se (196.026 nm)		ppm	N/A	N/A	8.270760	Y 242.219
Si (288.158 nm)		ppm	N/A	N/A	545.747000	Y 377.433
Sn (189.925 nm)		ppm	N/A	N/A	5.062570	Y 377.433
Sr (421.552 nm)		ppm	N/A	N/A	107.645786	Y_R 488.368
Th (288.505 nm)		ppm	N/A	N/A	20.786200	Y 377.433
Ti (336.122 nm)		ppm	N/A	N/A	-510.305000	Y 377.433
Tl (190.794 nm)		ppm	N/A	N/A	6.096070	Y 377.433
U (409.013 nm)		ppm	N/A	N/A	76.357500	Y 377.433
V (292.401 nm)		ppm	N/A	N/A	-88.080800	Y 377.433
Zn (206.200 nm)		ppm	N/A	N/A	9.745730	Y 377.433
Zr (343.823 nm)		ppm	N/A	N/A	-169.616000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.018264	19038.479492	0.001542	0.15
Y 377.433	1.010052	561160.876897	0.001246	0.12
Y_R 377.433	1.017580	49541.800000	0.000299	0.03
Y_R 488.368	1.007220	43075.200000	0.001747	0.17
Y_R2 488.368	1.016239	84877.182245	0.001117	0.11
Y_R4	1.030490	39619.000000	0.001957	0.19

Sample Name: ic2

Date: 5/10/2019 10:44:31 AM

Rack:Tube: 3:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)		ppm	N/A	N/A	-362.554000	Y 377.433
Al (394.401 nm)	100.000000	ppm	N/A	N/A	1254270.000000	Y 377.433
Al H (396.152 nm)	100.000000	ppm	N/A	N/A	224884.000000	Y_R 377.433
As (188.980 nm)		ppm	N/A	N/A	2.971430	Y 242.219
B (249.678 nm)		ppm	N/A	N/A	43.302400	Y 242.219
Ba (493.408 nm)		ppm	N/A	N/A	2305.360000	Y_R 488.368
Be (234.861 nm)		ppm	N/A	N/A	-244.481000	Y_R 488.368
Bi (223.061 nm)	2.000000	ppm	N/A	N/A	4387.240000	Y 377.433
Ca (315.887 nm)		ppm	N/A	N/A	-36.255891	Y_R 377.433
Cd (214.439 nm)		ppm	N/A	N/A	133.254000	Y 377.433
Co (228.615 nm)		ppm	N/A	N/A	208.995000	Y 242.219
Cr (205.560 nm)		ppm	N/A	N/A	9.220010	Y 377.433
Cu (324.754 nm)		ppm	N/A	N/A	1966.610000	Y 377.433
Fe (238.204 nm)	100.000000	ppm	N/A	N/A	251494.593915	Y_R 377.433
Fe H (259.940 nm)	100.000000	ppm	N/A	N/A	143696.000000	Y_R 377.433
K (766.491 nm)		ppm	N/A	N/A	2877.180000	Y_R2 488.368
Li (670.783 nm)		ppm	N/A	N/A	-2888.620000	Y_R2 488.368
Mg (279.078 nm)		ppm	N/A	N/A	-248.042000	Y 377.433
Mn (257.610 nm)		ppm	N/A	N/A	910.116000	Y 377.433
Mo (202.032 nm)		ppm	N/A	N/A	38.025500	Y 377.433
Na (589.592 nm)	500.000000	ppm	N/A	N/A	408529.000000	Y_R2 488.368
Na H (589.593 nm)	500.000000	ppm	N/A	N/A	290270.879151	Y_R4
Ni (231.604 nm)		ppm	N/A	N/A	17.879300	Y 377.433
P (213.618 nm)		ppm	N/A	N/A	-51.753100	Y 242.219
Pb (220.353 nm)		ppm	N/A	N/A	96.725400	Y 242.219
S (181.972 nm)	10.000000	ppm	N/A	N/A	4894.274094	Y 377.433
Sb (206.834 nm)		ppm	N/A	N/A	20.768500	Y 377.433
Se (196.026 nm)		ppm	N/A	N/A	-7.794940	Y 242.219
Si (288.158 nm)		ppm	N/A	N/A	1023.390000	Y 377.433
Sn (189.925 nm)		ppm	N/A	N/A	14.252100	Y 377.433
Sr (421.552 nm)		ppm	N/A	N/A	573.323419	Y_R 488.368
Th (288.505 nm)	10.000000	ppm	N/A	N/A	17555.600000	Y 377.433
Ti (336.122 nm)		ppm	N/A	N/A	5.592240	Y 377.433
Tl (190.794 nm)		ppm	N/A	N/A	-14.425000	Y 377.433
U (409.013 nm)	20.000000	ppm	N/A	N/A	63915.400000	Y 377.433
V (292.401 nm)		ppm	N/A	N/A	-61.593200	Y 377.433
Zn (206.200 nm)		ppm	N/A	N/A	46.540300	Y 377.433
Zr (343.823 nm)		ppm	N/A	N/A	-513.213000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.980380	18330.164774	0.002895	0.30
Y 377.433	0.979502	544188.277034	0.004007	0.41
Y_R 377.433	1.014380	49385.800000	0.000316	0.03
Y_R 488.368	1.010450	43213.200000	0.000602	0.06
Y_R2 488.368	0.995251	83124.188963	0.004246	0.43
Y_R4	1.029010	39562.100000	0.000610	0.06

Sample Name: S1-5690580

Date: 5/10/2019 10:51:23 AM

Rack:Tube: 3:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.984528	ppm	0.000022	0.00	35791.400000	Y 377.433
Al (394.401 nm)	0.985348	ppm	0.000141	0.01	12666.000000	Y 377.433
Al H (396.152 nm)	0.948863 Q	ppm	0.005854	0.62	2426.820000 Q	Y_R 377.433
As (188.980 nm)	1.961070	ppm	0.003552	0.18	3118.160000	Y 242.219
B (249.678 nm)	0.983849	ppm	0.003216	0.33	7546.170000	Y 242.219
Ba (493.408 nm)	0.986840	ppm	0.000408	0.04	105177.000000	Y_R 488.368
Be (234.861 nm)	0.977702	ppm	0.005360	0.55	103721.000000	Y_R 488.368
Bi (223.061 nm)	0.005086	ppm	0.000957	18.82	1.369090	Y 377.433
Ca (315.887 nm)	9.916583	ppm	0.008860	0.09	8129.032334	Y_R 377.433
Cd (214.439 nm)	0.986509	ppm	0.001898	0.19	37789.900000	Y 377.433
Co (228.615 nm)	0.987188	ppm	0.002160	0.22	24730.400000	Y 242.219
Cr (205.560 nm)	0.985625	ppm	0.000663	0.07	6814.510000	Y 377.433
Cu (324.754 nm)	0.984826	ppm	0.000457	0.05	48846.900000	Y 377.433
Fe (238.204 nm)	4.946604	ppm	0.012571	0.25	12370.538433	Y_R 377.433
Fe H (259.940 nm)	4.953940	ppm	0.013231	0.27	7091.990000	Y_R 377.433
K (766.491 nm)	98.634300	ppm	0.192186	0.19	105923.000000	Y_R2 488.368
Li (670.783 nm)	1.989110	ppm	0.007108	0.36	33301.100000	Y_R2 488.368
Mg (279.078 nm)	39.401900	ppm	0.044909	0.11	138117.000000	Y 377.433
Mn (257.610 nm)	0.986128	ppm	0.000699	0.07	284194.000000	Y 377.433
Mo (202.032 nm)	0.986014	ppm	0.000331	0.03	13055.300000	Y 377.433
Na (589.592 nm)	10.333400	ppm	0.001378	0.01	9391.150000	Y_R2 488.368
Na H (589.593 nm)	10.121657 u	ppm	0.009540	0.09	6344.300738	Y_R4
Ni (231.604 nm)	0.985127	ppm	0.002479	0.25	5337.380000	Y 377.433
P (213.618 nm)	1.965740	ppm	0.009343	0.48	2753.390000	Y 242.219
Pb (220.353 nm)	1.973450	ppm	0.006734	0.34	6646.810000	Y 242.219
S (181.972 nm)	0.011101	ppm	0.004019	36.20	16.715457	Y 377.433
Sb (206.834 nm)	1.979620	ppm	0.004440	0.22	3684.920000	Y 377.433
Se (196.026 nm)	1.963740	ppm	0.002323	0.12	3151.080000	Y 242.219
Si (288.158 nm)	9.893930	ppm	0.034095	0.34	66599.900000	Y 377.433
Sn (189.925 nm)	1.965660	ppm	0.007298	0.37	3243.960000	Y 377.433
Sr (421.552 nm)	0.987653	ppm	0.001042	0.11	158715.100269	Y_R 488.368
Th (288.505 nm)	0.027886	ppm	0.002236	8.02	-34.150500	Y 377.433
Ti (336.122 nm)	0.986150	ppm	0.000271	0.03	129620.000000	Y 377.433
Tl (190.794 nm)	1.970260	ppm	0.001615	0.08	4810.780000	Y 377.433
U (409.013 nm)	0.021601	ppm	0.004471	20.70	-22.492000	Y 377.433
V (292.401 nm)	0.986980	ppm	0.000056	0.01	52922.900000	Y 377.433
Zn (206.200 nm)	0.989329	ppm	0.001534	0.16	4524.300000	Y 377.433
Zr (343.823 nm)	0.986218	ppm	0.000253	0.03	57691.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.982076	18361.873161	0.007255	0.74
Y 377.433	0.986785	548234.806586	0.006584	0.67
Y_R 377.433	1.002430	48804.200000	0.000304	0.03
Y_R 488.368	0.992548	42447.500000	0.001062	0.11
Y_R2 488.368	1.001036	83607.424941	0.003425	0.34
Y_R4	1.008010	38754.900000	0.003963	0.39

Sample Name: S3-5617381

Date: 5/10/2019 10:54:57 AM

Rack:Tube: 3:5

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000086	ppm	0.000093	> 100.00	-181.143000	Y 377.433
Al (394.401 nm)	0.041400	ppm	0.000613	1.48	547.224000	Y 377.433
Al H (396.152 nm)	0.150594 u	ppm	0.004369	2.90	118.897000	Y_R 377.433
As (188.980 nm)	0.002897	ppm	0.000762	26.29	2.779520	Y 242.219
B (249.678 nm)	0.000528	ppm	0.000131	24.77	15.828400	Y 242.219
Ba (493.408 nm)	-0.000564 u	ppm	0.000035	6.21	1569.440000	Y_R 488.368
Be (234.861 nm)	0.000026	ppm	0.000007	24.67	1.067790	Y_R 488.368
Bi (223.061 nm)	0.002156	ppm	0.001070	49.63	-6.124030	Y 377.433
Ca (315.887 nm)	0.005074	ppm	0.000827	16.31	-69.034022	Y_R 377.433
Cd (214.439 nm)	0.000131	ppm	0.000112	85.46	-1.722110	Y 377.433
Co (228.615 nm)	-0.000081 u	ppm	0.000009	10.89	-25.423300	Y 242.219
Cr (205.560 nm)	0.000237	ppm	0.000072	30.27	-6.477770	Y 377.433
Cu (324.754 nm)	0.000403	ppm	0.000166	41.27	531.045000	Y 377.433
Fe (238.204 nm)	0.104184	ppm	0.000533	0.51	264.627495	Y_R 377.433
Fe H (259.940 nm)	0.136477 u	ppm	0.003724	2.73	168.157000	Y_R 377.433
K (766.491 nm)	0.152920	ppm	0.111386	72.84	2342.430000	Y_R2 488.368
Li (670.783 nm)	-0.001726 u	ppm	0.001716	99.44	-2917.410000	Y_R2 488.368
Mg (279.078 nm)	0.003599	ppm	0.002880	80.04	28.400800	Y 377.433
Mn (257.610 nm)	0.000382	ppm	0.000011	2.76	86.517100	Y 377.433
Mo (202.032 nm)	0.000151 u	ppm	0.000348	> 100.00	13.614400	Y 377.433
Na (589.592 nm)	49.798700	ppm	0.009409	0.02	43461.600000	Y_R2 488.368
Na H (589.593 nm)	51.275003	ppm	0.097058	0.19	30196.199726	Y_R4
Ni (231.604 nm)	-0.000619 u	ppm	0.000759	> 100.00	-13.814500	Y 377.433
P (213.618 nm)	-0.006577 u	ppm	0.001057	16.08	-6.849070	Y 242.219
Pb (220.353 nm)	0.001875	ppm	0.000486	25.92	14.361700	Y 242.219
S (181.972 nm)	0.001798 u	ppm	0.005385	> 100.00	8.355157	Y 377.433
Sb (206.834 nm)	-0.001614 u	ppm	0.001739	> 100.00	-0.723189	Y 377.433
Se (196.026 nm)	0.003662	ppm	0.001117	30.50	11.420500	Y 242.219
Si (288.158 nm)	0.005060	ppm	0.001565	30.93	542.209000	Y 377.433
Sn (189.925 nm)	-0.003313 u	ppm	0.000309	9.33	3.645130	Y 377.433
Sr (421.552 nm)	-0.000063 u	ppm	0.000022	34.61	92.851127	Y_R 488.368
Th (288.505 nm)	0.002946	ppm	0.001019	34.58	24.631900	Y 377.433
Ti (336.122 nm)	0.000191	ppm	0.000117	61.23	-495.758000	Y 377.433
Tl (190.794 nm)	0.001280	ppm	0.000856	66.86	3.233780	Y 377.433
U (409.013 nm)	0.011316	ppm	0.003329	29.42	66.226900	Y 377.433
V (292.401 nm)	0.000374	ppm	0.000206	55.00	-74.793200	Y 377.433
Zn (206.200 nm)	0.001399	ppm	0.000240	17.18	9.495710	Y 377.433
Zr (343.823 nm)	0.000428	ppm	0.000086	20.06	-148.410000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.001743	18729.587603	0.004309	0.43
Y 377.433	1.003727	557647.204387	0.005261	0.52
Y_R 377.433	1.015560	49443.500000	0.002217	0.22
Y_R 488.368	1.015140	43413.900000	0.001499	0.15
Y_R2 488.368	1.011071	84445.548532	0.004684	0.46
Y_R4	1.017550	39121.500000	0.005251	0.52

Sample Name: S2-5690582

Date: 5/10/2019 10:58:27 AM

Rack:Tube: 3:6

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.003273	ppm	0.000104	3.19	-350.240000	Y 377.433
Al (394.401 nm)	98.687800 o	ppm	0.019333	0.02	1240170.000000	Y 377.433
Al H (396.152 nm)	98.913400	ppm	0.160044	0.16	222434.000000	Y_R 377.433
As (188.980 nm)	0.009322	ppm	0.001695	18.18	3.883100	Y 242.219
B (249.678 nm)	0.013175	ppm	0.000028	0.22	51.389900	Y 242.219
Ba (493.408 nm)	0.005713	ppm	0.000267	4.67	2311.020000	Y_R 488.368
Be (234.861 nm)	0.006161	ppm	0.000039	0.64	-244.693000	Y_R 488.368
Bi (223.061 nm)	1.979690	ppm	0.001468	0.07	4359.760000	Y 377.433
Ca (315.887 nm)	0.016524	ppm	0.002307	13.96	-33.901899	Y_R 377.433
Cd (214.439 nm)	0.002284	ppm	0.000031	1.36	122.398000	Y 377.433
Co (228.615 nm)	0.008739	ppm	0.000459	5.25	195.487000	Y 242.219
Cr (205.560 nm)	0.002683	ppm	0.000714	26.61	7.706640	Y 377.433
Cu (324.754 nm)	0.011244	ppm	0.000473	4.21	1905.030000	Y 377.433
Fe (238.204 nm)	99.622799 o	ppm	0.157670	0.16	249058.298002	Y_R 377.433
Fe H (259.940 nm)	98.958300	ppm	0.097161	0.10	142198.000000	Y_R 377.433
K (766.491 nm)	0.780851	ppm	0.424847	54.41	3002.870000	Y_R2 488.368
Li (670.783 nm)	-0.002277 u	ppm	0.000247	10.86	-2927.440000	Y_R2 488.368
Mg (279.078 nm)	0.058731	ppm	0.002440	4.15	-253.164000	Y 377.433
Mn (257.610 nm)	0.003183	ppm	0.000010	0.31	893.827000	Y 377.433
Mo (202.032 nm)	0.002051	ppm	0.000046	2.23	38.746900	Y 377.433
Na (589.592 nm)	464.992000 o	ppm	0.810935	0.17	404394.000000	Y_R2 488.368
Na H (589.593 nm)	496.895427	ppm	0.758626	0.15	288471.512303	Y_R4
Ni (231.604 nm)	0.004288	ppm	0.000491	11.46	12.812400	Y 377.433
P (213.618 nm)	-0.029204 u	ppm	0.001939	6.64	-55.779800	Y 242.219
Pb (220.353 nm)	0.016597	ppm	0.000982	5.92	96.774600	Y 242.219
S (181.972 nm)	9.877798	ppm	0.007419	0.08	4834.574889	Y 377.433
Sb (206.834 nm)	0.006474	ppm	0.004853	74.97	21.335200	Y 377.433
Se (196.026 nm)	0.006290	ppm	0.001164	18.51	-11.432900	Y 242.219
Si (288.158 nm)	0.075174	ppm	0.000036	0.05	1010.560000	Y 377.433
Sn (189.925 nm)	0.002260	ppm	0.002364	> 100.00	12.816800	Y 377.433
Sr (421.552 nm)	0.003025	ppm	0.000101	3.32	604.732953	Y_R 488.368
Th (288.505 nm)	9.878760	ppm	0.004365	0.04	17434.800000	Y 377.433
Ti (336.122 nm)	0.003733	ppm	0.000053	1.43	-28.275200	Y 377.433
Tl (190.794 nm)	-0.000405 u	ppm	0.001430	> 100.00	-10.977300	Y 377.433
U (409.013 nm)	19.755900	ppm	0.010597	0.05	63209.100000	Y 377.433
V (292.401 nm)	0.000395	ppm	0.000293	74.16	-61.598800	Y 377.433
Zn (206.200 nm)	0.005211	ppm	0.000678	13.01	40.913300	Y 377.433
Zr (343.823 nm)	-0.005821 u	ppm	0.000081	1.39	-515.032000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.982310	18366.247711	0.005878	0.60
Y 377.433	0.981001	545021.365258	0.005012	0.51
Y_R 377.433	1.003070	48835.200000	0.000380	0.04
Y_R 488.368	0.998703	42710.700000	0.002888	0.29
Y_R2 488.368	0.989479	82642.153393	0.002494	0.25
Y_R4	1.033060	39717.900000	0.001418	0.14

Sample Name: ICVH-5695586

Date: 5/10/2019 11:02:25 AM

Rack:Tube: 3:7

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000023 u	ppm	0.000135	> 100.00	-255.890000	Y 377.433
Al (394.401 nm)	39.735400 o	ppm	0.084161	0.21	499209.000000	Y 377.433
Al H (396.152 nm)	40.146100	ppm	0.013968	0.03	90146.300000	Y_R 377.433
As (188.980 nm)	0.001975	ppm	0.001728	87.48	-3.520820	Y 242.219
B (249.678 nm)	0.005247	ppm	0.000423	8.06	2.385900	Y 242.219
Ba (493.408 nm)	0.001036	ppm	0.000355	34.32	1804.410000	Y_R 488.368
Be (234.861 nm)	0.002889	ppm	0.000039	1.35	-420.358000	Y_R 488.368
Bi (223.061 nm)	0.466179	ppm	0.002117	0.45	1028.180000	Y 377.433
Ca (315.887 nm)	-0.010854 u	ppm	0.006990	64.40	-71.827858	Y_R 377.433
Cd (214.439 nm)	-0.000008 u	ppm	0.000096	> 100.00	26.643400	Y 377.433
Co (228.615 nm)	0.000777	ppm	0.000222	28.59	-3.946400	Y 242.219
Cr (205.560 nm)	0.000098	ppm	0.000117	> 100.00	-8.553080	Y 377.433
Cu (324.754 nm)	0.002705	ppm	0.000307	11.35	943.808000	Y 377.433
Fe (238.204 nm)	80.646767 o	ppm	0.076264	0.09	201618.764873	Y_R 377.433
Fe H (259.940 nm)	80.026600	ppm	0.101161	0.13	114989.000000	Y_R 377.433
K (766.491 nm)	0.030023 u	ppm	0.179493	> 100.00	2213.170000	Y_R2 488.368
Li (670.783 nm)	-0.000928 u	ppm	0.001966	> 100.00	-2902.900000	Y_R2 488.368
Mg (279.078 nm)	-0.010165 u	ppm	0.001710	16.82	-216.499000	Y 377.433
Mn (257.610 nm)	-0.000328 u	ppm	0.000047	14.30	-118.076000	Y 377.433
Mo (202.032 nm)	-0.000220 u	ppm	0.000041	18.65	8.701710	Y 377.433
Na (589.592 nm)	80.447800 o	ppm	0.015683	0.02	70105.600000	Y_R2 488.368
Na H (589.593 nm)	82.176345	ppm	0.178932	0.22	48106.181493	Y_R4
Ni (231.604 nm)	-0.001533 u	ppm	0.000136	8.88	-18.778400	Y 377.433
P (213.618 nm)	-0.014675 u	ppm	0.002515	17.14	-22.112900	Y 242.219
Pb (220.353 nm)	0.002859	ppm	0.001175	41.08	23.270200	Y 242.219
S (181.972 nm)	3.751056 Q	ppm	0.043699	1.16	1840.542496 Q	Y 377.433
Sb (206.834 nm)	0.001547	ppm	0.001990	> 100.00	11.724200	Y 377.433
Se (196.026 nm)	0.003363	ppm	0.002172	64.57	-10.948300	Y 242.219
Si (288.158 nm)	0.006122	ppm	0.001228	20.06	549.303000	Y 377.433
Sn (189.925 nm)	-0.003629 u	ppm	0.001201	33.09	3.124370	Y 377.433
Sr (421.552 nm)	-0.000093 u	ppm	0.000002	1.65	100.980027	Y_R 488.368
Th (288.505 nm)	2.991570	ppm	0.005311	0.18	5283.920000	Y 377.433
Ti (336.122 nm)	0.000468	ppm	0.000128	27.29	-459.150000	Y 377.433
Tl (190.794 nm)	0.000092	ppm	0.000082	89.18	-8.928670	Y 377.433
U (409.013 nm)	4.948460	ppm	0.015707	0.32	15896.200000	Y 377.433
V (292.401 nm)	-0.000666 u	ppm	0.000099	14.93	-82.684600	Y 377.433
Zn (206.200 nm)	-0.002472 u	ppm	0.000059	2.37	3.126500	Y 377.433
Zr (343.823 nm)	-0.000952 u	ppm	0.000043	4.53	-229.353000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.019752	19066.291736	0.000859	0.08
Y 377.433	1.015980	564454.855270	0.000358	0.04
Y_R 377.433	1.026490	49975.200000	0.000608	0.06
Y_R 488.368	1.019690	43608.400000	0.001585	0.16
Y_R2 488.368	1.024469	85564.534885	0.002493	0.24
Y_R4	1.027470	39502.800000	0.010143	0.99

Sample Name: ICVH-5695586

Date: 5/10/2019 11:06:05 AM

Rack:Tube: 3:7

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000423	ppm	0.000364	86.07	-241.656000	Y 377.433
Al (394.401 nm)	39.939200 o	ppm	0.086260	0.22	501776.000000	Y 377.433
Al H (396.152 nm)	40.423100	ppm	0.017817	0.04	90769.600000	Y_R 377.433
As (188.980 nm)	0.002573	ppm	0.000811	31.54	-2.541750	Y 242.219
B (249.678 nm)	0.005434	ppm	0.001091	20.08	4.875220	Y 242.219
Ba (493.408 nm)	0.000439	ppm	0.000103	23.41	1740.400000	Y_R 488.368
Be (234.861 nm)	0.002868	ppm	0.000016	0.57	-407.120000	Y_R 488.368
Bi (223.061 nm)	0.466416	ppm	0.005934	1.27	1028.400000	Y 377.433
Ca (315.887 nm)	-0.008422 u	ppm	0.000040	0.48	-69.730238	Y_R 377.433
Cd (214.439 nm)	0.000025 u	ppm	0.000161	> 100.00	27.186500	Y 377.433
Co (228.615 nm)	0.000430	ppm	0.000180	41.92	-12.637600	Y 242.219
Cr (205.560 nm)	0.000587	ppm	0.000058	9.85	-5.174220	Y 377.433
Cu (324.754 nm)	0.002728	ppm	0.000045	1.64	941.402000	Y 377.433
Fe (238.204 nm)	78.889051 o	ppm	0.146403	0.19	197224.526159	Y_R 377.433
Fe H (259.940 nm)	78.532400	ppm	0.142930	0.18	112842.000000	Y_R 377.433
K (766.491 nm)	-0.051321 u	ppm	0.205231	> 100.00	2127.610000	Y_R2 488.368
Li (670.783 nm)	0.001121 u	ppm	0.004438	> 100.00	-2865.620000	Y_R2 488.368
Mg (279.078 nm)	-0.010878 u	ppm	0.001330	12.23	-217.199000	Y 377.433
Mn (257.610 nm)	-0.000323 u	ppm	0.000006	1.79	-116.463000	Y 377.433
Mo (202.032 nm)	-0.000219 u	ppm	0.000490	> 100.00	8.713160	Y 377.433
Na (589.592 nm)	80.217700 o	ppm	0.088838	0.11	69905.400000	Y_R2 488.368
Na H (589.593 nm)	82.634947	ppm	0.138510	0.17	48371.981070	Y_R4
Ni (231.604 nm)	-0.001828 u	ppm	0.000156	8.52	-20.377600	Y 377.433
P (213.618 nm)	-0.016389 u	ppm	0.002117	12.92	-24.888500	Y 242.219
Pb (220.353 nm)	0.002315	ppm	0.000744	32.14	21.465900	Y 242.219
S (181.972 nm)	3.694511 Q	ppm	0.000385	0.01	1812.910404 Q	Y 377.433
Sb (206.834 nm)	-0.000060 u	ppm	0.000290	> 100.00	8.563860	Y 377.433
Se (196.026 nm)	0.001923	ppm	0.000552	28.71	-12.788300	Y 242.219
Si (288.158 nm)	0.009027	ppm	0.000485	5.37	568.706000	Y 377.433
Sn (189.925 nm)	-0.003203 u	ppm	0.001007	31.45	3.825320	Y 377.433
Sr (421.552 nm)	-0.000378 u	ppm	0.000055	14.54	54.926373	Y_R 488.368
Th (288.505 nm)	2.975730	ppm	0.009448	0.32	5256.480000	Y 377.433
Ti (336.122 nm)	0.000476	ppm	0.000062	13.09	-458.134000	Y 377.433
Tl (190.794 nm)	0.001322	ppm	0.001341	> 100.00	-5.697760	Y 377.433
U (409.013 nm)	4.969640	ppm	0.002629	0.05	15962.600000	Y 377.433
V (292.401 nm)	-0.000644 u	ppm	0.000094	14.61	-84.295800	Y 377.433
Zn (206.200 nm)	-0.000888 u	ppm	0.000907	> 100.00	10.122600	Y 377.433
Zr (343.823 nm)	-0.001253 u	ppm	0.000100	8.00	-247.066000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.979364	18311.163983	0.002018	0.21
Y 377.433	0.983451	546382.180932	0.001273	0.13
Y_R 377.433	0.999707	48671.400000	0.001307	0.13
Y_R 488.368	0.994056	42512.000000	0.005570	0.56
Y_R2 488.368	1.008814	84256.990685	0.003553	0.35
Y_R4	1.013200	38954.300000	0.006638	0.66

Sample Name: ICV-5695587

Date: 5/10/2019 11:09:47 AM

Rack:Tube: 3:8

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.244765	ppm	0.001208	0.49	8760.380000	Y 377.433
Al (394.401 nm)	0.246232	ppm	0.001505	0.61	3181.890000	Y 377.433
Al H (396.152 nm)	0.322088 u	ppm	0.005792	1.80	630.932000	Y_R 377.433
As (188.980 nm)	0.245035	ppm	0.002648	1.08	387.990000	Y 242.219
B (249.678 nm)	0.237332 Q	ppm	0.000103	0.04	1829.320000 Q	Y 242.219
Ba (493.408 nm)	0.245180	ppm	0.000959	0.39	27355.200000	Y_R 488.368
Be (234.861 nm)	0.244636	ppm	0.000581	0.24	25952.100000	Y_R 488.368
Bi (223.061 nm)	0.471595	ppm	0.002744	0.58	1026.450000	Y 377.433
Ca (315.887 nm)	2.472660 Q	ppm	0.010392	0.42	1971.963935 Q	Y_R 377.433
Cd (214.439 nm)	0.246482	ppm	0.000553	0.22	9436.830000	Y 377.433
Co (228.615 nm)	0.242922	ppm	0.000119	0.05	6067.850000	Y 242.219
Cr (205.560 nm)	0.244592	ppm	0.000294	0.12	1684.980000	Y 377.433
Cu (324.754 nm)	0.240984	ppm	0.000902	0.37	12339.900000	Y 377.433
Fe (238.204 nm)	1.221714 Q	ppm	0.003491	0.29	3058.421672 Q	Y_R 377.433
Fe H (259.940 nm)	1.255820 u	ppm	0.000510	0.04	1776.920000	Y_R 377.433
K (766.491 nm)	24.639500 Q	ppm	0.286273	1.16	28096.900000 Q	Y_R2 488.368
Li (670.783 nm)	0.247477	ppm	0.002445	0.99	1616.240000	Y_R2 488.368
Mg (279.078 nm)	9.734860	ppm	0.021613	0.22	34136.200000	Y 377.433
Mn (257.610 nm)	0.247975	ppm	0.000023	0.01	71447.100000	Y 377.433
Mo (202.032 nm)	0.243692	ppm	0.000509	0.21	3235.340000	Y 377.433
Na (589.592 nm)	12.427200 Q	ppm	0.047713	0.38	11033.400000 Q	Y_R2 488.368
Na H (589.593 nm)	12.698218 u	ppm	0.083016	0.65	7837.639524	Y_R4
Ni (231.604 nm)	0.243362	ppm	0.001323	0.54	1310.360000	Y 377.433
P (213.618 nm)	1.832130 Q	ppm	0.009394	0.51	2763.770000 Q	Y 242.219
Pb (220.353 nm)	0.248055	ppm	0.000440	0.18	841.729000	Y 242.219
S (181.972 nm)	0.001647 u	ppm	0.002629	> 100.00	9.233536	Y 377.433
Sb (206.834 nm)	0.240852	ppm	0.000991	0.41	449.639000	Y 377.433
Se (196.026 nm)	0.241623 Q	ppm	0.003867	1.60	392.653000 Q	Y 242.219
Si (288.158 nm)	2.441640 Q	ppm	0.000311	0.01	16818.600000 Q	Y 377.433
Sn (189.925 nm)	0.243074 Q	ppm	0.000375	0.15	409.121000 Q	Y 377.433
Sr (421.552 nm)	0.243500	ppm	0.000162	0.07	39207.833294	Y_R 488.368
Th (288.505 nm)	0.008218	ppm	0.000164	2.00	8.469080	Y 377.433
Ti (336.122 nm)	0.243302	ppm	0.000001	0.00	31587.200000	Y 377.433
Tl (190.794 nm)	0.247362 Q	ppm	0.002028	0.82	603.248000 Q	Y 377.433
U (409.013 nm)	0.006512 u	ppm	0.012571	> 100.00	20.720300	Y 377.433
V (292.401 nm)	0.245065	ppm	0.000271	0.11	13070.400000	Y 377.433
Zn (206.200 nm)	0.246212	ppm	0.000958	0.39	1128.270000	Y 377.433
Zr (343.823 nm)	0.243539	ppm	0.000088	0.04	14115.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.997123	18643.208116	0.000041	0.00
Y 377.433	0.999636	555374.376813	0.000874	0.09
Y_R 377.433	1.003620	48862.100000	0.000622	0.06
Y_R 488.368	0.991052	42383.500000	0.000511	0.05
Y_R2 488.368	1.003726	83832.055701	0.006770	0.67
Y_R4	1.016070	39064.600000	0.004996	0.49

Sample Name: ICV-5695587

Date: 5/10/2019 11:13:19 AM

Rack:Tube: 3:8

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.243652	ppm	0.000162	0.07	8719.430000	Y 377.433
Al (394.401 nm)	0.245451	ppm	0.000190	0.08	3173.540000	Y 377.433
Al H (396.152 nm)	0.320599 u	ppm	0.000035	0.01	627.299000	Y_R 377.433
As (188.980 nm)	0.240734	ppm	0.001172	0.49	381.146000	Y 242.219
B (249.678 nm)	0.236985 Q	ppm	0.001715	0.72	1826.660000 Q	Y 242.219
Ba (493.408 nm)	0.245066	ppm	0.000744	0.30	27343.200000	Y_R 488.368
Be (234.861 nm)	0.246114	ppm	0.002906	1.18	26108.900000	Y_R 488.368
Bi (223.061 nm)	0.472650	ppm	0.003873	0.82	1028.770000	Y 377.433
Ca (315.887 nm)	2.468142 Q	ppm	0.004314	0.17	1968.224213 Q	Y_R 377.433
Cd (214.439 nm)	0.245086	ppm	0.000253	0.10	9383.330000	Y 377.433
Co (228.615 nm)	0.240479	ppm	0.001321	0.55	6006.680000	Y 242.219
Cr (205.560 nm)	0.243396	ppm	0.000517	0.21	1676.700000	Y 377.433
Cu (324.754 nm)	0.241318	ppm	0.000121	0.05	12355.200000	Y 377.433
Fe (238.204 nm)	1.219629 Q	ppm	0.000078	0.01	3053.208024 Q	Y_R 377.433
Fe H (259.940 nm)	1.252510 u	ppm	0.000119	0.01	1772.160000	Y_R 377.433
K (766.491 nm)	24.535000 Q	ppm	0.132892	0.54	27987.000000 Q	Y_R2 488.368
Li (670.783 nm)	0.249972	ppm	0.006751	2.70	1661.630000	Y_R2 488.368
Mg (279.078 nm)	9.673160	ppm	0.015090	0.16	33919.900000	Y 377.433
Mn (257.610 nm)	0.247024	ppm	0.000072	0.03	71172.700000	Y 377.433
Mo (202.032 nm)	0.242523	ppm	0.000308	0.13	3219.880000	Y 377.433
Na (589.592 nm)	12.386000 Q	ppm	0.010659	0.09	10997.400000 Q	Y_R2 488.368
Na H (589.593 nm)	12.380462 u	ppm	0.051072	0.41	7653.472612	Y_R4
Ni (231.604 nm)	0.243138	ppm	0.000161	0.07	1309.140000	Y 377.433
P (213.618 nm)	1.826390 Q	ppm	0.003020	0.17	2754.950000 Q	Y 242.219
Pb (220.353 nm)	0.245291	ppm	0.001012	0.41	832.439000	Y 242.219
S (181.972 nm)	0.002732	ppm	0.001763	64.54	9.760558	Y 377.433
Sb (206.834 nm)	0.240291	ppm	0.000981	0.41	448.599000	Y 377.433
Se (196.026 nm)	0.240047 Q	ppm	0.001211	0.50	390.126000 Q	Y 242.219
Si (288.158 nm)	2.435160 Q	ppm	0.001032	0.04	16775.300000 Q	Y 377.433
Sn (189.925 nm)	0.241444 Q	ppm	0.002542	1.05	406.438000 Q	Y 377.433
Sr (421.552 nm)	0.243385	ppm	0.001066	0.44	39189.420113	Y_R 488.368
Th (288.505 nm)	0.004280	ppm	0.004242	99.12	1.604700	Y 377.433
Ti (336.122 nm)	0.242757	ppm	0.000012	0.01	31515.300000	Y 377.433
Tl (190.794 nm)	0.245410 Q	ppm	0.000647	0.26	598.477000 Q	Y 377.433
U (409.013 nm)	0.011151	ppm	0.007945	71.25	35.661600	Y 377.433
V (292.401 nm)	0.244400	ppm	0.000181	0.07	13034.300000	Y 377.433
Zn (206.200 nm)	0.244427	ppm	0.000883	0.36	1120.110000	Y 377.433
Zr (343.823 nm)	0.242770	ppm	0.000197	0.08	14070.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.010049	18884.888619	0.006258	0.62
Y 377.433	1.013311	562971.630655	0.006926	0.68
Y_R 377.433	1.009600	49153.300000	0.001867	0.18
Y_R 488.368	0.995909	42591.300000	0.005298	0.53
Y_R2 488.368	1.012338	84551.329618	0.001213	0.12
Y_R4	1.022410	39308.600000	0.003051	0.30

Sample Name: ICVL-5695588

Date: 5/10/2019 11:21:52 AM

Rack:Tube: 3:9

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009718	ppm	0.000323	3.32	170.136000	Y 377.433
Al (394.401 nm)	0.104070	ppm	0.000590	0.57	1341.910000	Y 377.433
Al H (396.152 nm)	0.212154 u	ppm	0.000048	0.02	263.018000	Y_R 377.433
As (188.980 nm)	0.013290	ppm	0.002555	19.23	19.309500	Y 242.219
B (249.678 nm)	0.092544	ppm	0.000780	0.84	720.773000	Y 242.219
Ba (493.408 nm)	0.009721	ppm	0.000357	3.67	2648.620000	Y_R 488.368
Be (234.861 nm)	0.000962	ppm	0.000025	2.62	100.369000	Y_R 488.368
Bi (223.061 nm)	0.091962	ppm	0.000938	1.02	191.369000	Y 377.433
Ca (315.887 nm)	0.204093	ppm	0.004360	2.14	95.593899	Y_R 377.433
Cd (214.439 nm)	0.005079	ppm	0.000153	3.01	187.831000	Y 377.433
Co (228.615 nm)	0.010053	ppm	0.000002	0.02	228.649000	Y 242.219
Cr (205.560 nm)	0.009742	ppm	0.000281	2.88	59.205400	Y 377.433
Cu (324.754 nm)	0.015105	ppm	0.000540	3.58	1251.520000	Y 377.433
Fe (238.204 nm)	0.097685	ppm	0.002625	2.69	248.380389	Y_R 377.433
Fe H (259.940 nm)	0.130510 u	ppm	0.002244	1.72	159.581000	Y_R 377.433
K (766.491 nm)	3.082670	ppm	0.021198	0.69	5423.880000	Y_R2 488.368
Li (670.783 nm)	0.024692	ppm	0.004523	18.32	-2436.800000	Y_R2 488.368
Mg (279.078 nm)	0.201724	ppm	0.001131	0.56	722.005000	Y 377.433
Mn (257.610 nm)	0.010436	ppm	0.000056	0.53	2984.350000	Y 377.433
Mo (202.032 nm)	0.019041	ppm	0.000490	2.57	263.505000	Y 377.433
Na (589.592 nm)	1.136340	ppm	0.002413	0.21	1161.520000	Y_R2 488.368
Na H (589.593 nm)	0.783084 u	ppm	0.016123	2.06	931.795663	Y_R4
Ni (231.604 nm)	0.042195	ppm	0.000273	0.65	218.516000	Y 377.433
P (213.618 nm)	2.720740	ppm	0.032353	1.19	4202.160000	Y 242.219
Pb (220.353 nm)	0.009868	ppm	0.000236	2.40	41.307700	Y 242.219
S (181.972 nm)	0.094842	ppm	0.000289	0.31	53.862441	Y 377.433
Sb (206.834 nm)	0.022412	ppm	0.000624	2.78	43.876000	Y 377.433
Se (196.026 nm)	0.023167	ppm	0.000217	0.94	42.679900	Y 242.219
Si (288.158 nm)	0.498565	ppm	0.005320	1.07	3838.820000	Y 377.433
Sn (189.925 nm)	0.095923	ppm	0.000074	0.08	166.955000	Y 377.433
Sr (421.552 nm)	0.008937	ppm	0.000093	1.04	1538.222175	Y_R 488.368
Th (288.505 nm)	0.012302	ppm	0.004072	33.10	40.375800	Y 377.433
Ti (336.122 nm)	0.009962	ppm	0.000021	0.21	794.084000	Y 377.433
Tl (190.794 nm)	0.014584	ppm	0.000710	4.87	35.659600	Y 377.433
U (409.013 nm)	0.061992	ppm	0.014491	23.38	226.814000	Y 377.433
V (292.401 nm)	0.010163	ppm	0.000339	3.34	448.543000	Y 377.433
Zn (206.200 nm)	0.021275	ppm	0.000077	0.36	100.313000	Y 377.433
Zr (343.823 nm)	0.010363 Q	ppm	0.000054	0.52	434.504000 Q	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.038082	19409.019045	0.003001	0.29
Y 377.433	1.038289	576849.081239	0.000867	0.08
Y_R 377.433	1.035200	50399.500000	0.000080	0.01
Y_R 488.368	1.020500	43643.000000	0.013517	1.32
Y_R2 488.368	1.041189	86960.983698	0.000802	0.08
Y_R4	1.030400	39615.800000	0.008198	0.80

Sample Name: CCVH-5690583

Date: 5/10/2019 11:25:34 AM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000822	ppm	0.000043	5.29	-296.498000	Y 377.433
Al (394.401 nm)	49.734000 o	ppm	0.023703	0.05	625010.000000	Y 377.433
Al H (396.152 nm)	49.841700	ppm	0.015637	0.03	111973.000000	Y_R 377.433
As (188.980 nm)	0.001486	ppm	0.001091	73.39	-4.004740	Y 242.219
B (249.678 nm)	0.005654	ppm	0.000041	0.73	25.232200	Y 242.219
Ba (493.408 nm)	0.002142	ppm	0.000451	21.03	1893.780000	Y_R 488.368
Be (234.861 nm)	0.002239	ppm	0.000051	2.27	-200.907000	Y_R 488.368
Bi (223.061 nm)	0.966669	ppm	0.003413	0.35	2123.260000	Y 377.433
Ca (315.887 nm)	0.022078	ppm	0.006985	31.64	-42.071374	Y_R 377.433
Cd (214.439 nm)	0.000701	ppm	0.000046	6.52	40.416700	Y 377.433
Co (228.615 nm)	0.003605	ppm	0.000117	3.25	66.891800	Y 242.219
Cr (205.560 nm)	0.000458	ppm	0.000629	> 100.00	-6.336230	Y 377.433
Cu (324.754 nm)	0.007973	ppm	0.000467	5.85	1313.310000	Y 377.433
Fe (238.204 nm)	48.748240 o	ppm	0.003088	0.01	121873.366432	Y_R 377.433
Fe H (259.940 nm)	48.607100	ppm	0.051783	0.11	69831.900000	Y_R 377.433
K (766.491 nm)	0.094196 u	ppm	0.189964	> 100.00	2280.660000	Y_R2 488.368
Li (670.783 nm)	0.002816	ppm	0.000306	10.86	-2834.790000	Y_R2 488.368
Mg (279.078 nm)	0.004679	ppm	0.001003	21.43	-203.123000	Y 377.433
Mn (257.610 nm)	0.001124	ppm	0.000003	0.30	300.448000	Y 377.433
Mo (202.032 nm)	0.000279	ppm	0.000047	16.86	15.300600	Y 377.433
Na (589.592 nm)	241.279000 o	ppm	0.058250	0.02	209918.000000	Y_R2 488.368
Na H (589.593 nm)	254.505920	ppm	0.092536	0.04	147985.972736	Y_R4
Ni (231.604 nm)	0.002041	ppm	0.000698	34.20	0.612792	Y 377.433
P (213.618 nm)	-0.019622 u	ppm	0.002742	13.97	-34.412200	Y 242.219
Pb (220.353 nm)	0.008331	ppm	0.001279	15.35	52.437700	Y 242.219
S (181.972 nm)	4.822523	ppm	0.012675	0.26	2364.152983	Y 377.433
Sb (206.834 nm)	0.000710 u	ppm	0.002650	> 100.00	6.981280	Y 377.433
Se (196.026 nm)	0.003961	ppm	0.001390	35.10	-1.281060	Y 242.219
Si (288.158 nm)	0.030195	ppm	0.001171	3.88	710.108000	Y 377.433
Sn (189.925 nm)	-0.001357 u	ppm	0.001967	> 100.00	6.864320	Y 377.433
Sr (421.552 nm)	0.000653	ppm	0.000133	20.34	215.659060	Y_R 488.368
Th (288.505 nm)	4.920850	ppm	0.005129	0.10	8694.800000	Y 377.433
Ti (336.122 nm)	0.001510	ppm	0.000059	3.93	-321.630000	Y 377.433
Tl (190.794 nm)	-0.002666 u	ppm	0.001116	41.87	-11.288300	Y 377.433
U (409.013 nm)	9.892620	ppm	0.013501	0.14	31665.600000	Y 377.433
V (292.401 nm)	-0.000472 u	ppm	0.000012	2.63	-119.466000	Y 377.433
Zn (206.200 nm)	0.001919	ppm	0.000557	29.02	18.690100	Y 377.433
Zr (343.823 nm)	-0.003366 u	ppm	0.000387	11.49	-371.041000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.981732	18355.439506	0.002439	0.25
Y 377.433	0.987073	548394.835310	0.002590	0.26
Y_R 377.433	1.006360	48995.500000	0.000612	0.06
Y_R 488.368	0.996364	42610.700000	0.011936	1.20
Y_R2 488.368	1.006751	84084.725263	0.003272	0.33
Y_R4	1.016370	39076.100000	0.007925	0.78

Sample Name: CCV-5690581

Date: 5/10/2019 11:29:16 AM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.488667	ppm	0.000198	0.04	17673.100000	Y 377.433
Al (394.401 nm)	0.498665	ppm	0.001017	0.20	6420.760000	Y 377.433
Al H (396.152 nm)	0.540516 u	ppm	0.004225	0.78	1249.010000	Y_R 377.433
As (188.980 nm)	0.971710	ppm	0.003092	0.32	1544.130000	Y 242.219
B (249.678 nm)	0.480359	ppm	0.000126	0.03	3690.420000	Y 242.219
Ba (493.408 nm)	0.488952	ppm	0.001286	0.26	52934.100000	Y_R 488.368
Be (234.861 nm)	0.486726	ppm	0.004090	0.84	51634.700000	Y_R 488.368
Bi (223.061 nm)	0.004582	ppm	0.002413	52.66	-0.278557	Y 377.433
Ca (315.887 nm)	4.929322	ppm	0.005492	0.11	4003.935996	Y_R 377.433
Cd (214.439 nm)	0.494414	ppm	0.000273	0.06	18936.000000	Y 377.433
Co (228.615 nm)	0.490250	ppm	0.001042	0.21	12269.600000	Y 242.219
Cr (205.560 nm)	0.489346	ppm	0.003039	0.62	3379.190000	Y 377.433
Cu (324.754 nm)	0.492672	ppm	0.000357	0.07	24690.800000	Y 377.433
Fe (238.204 nm)	2.446623	ppm	0.000920	0.04	6120.656901	Y_R 377.433
Fe H (259.940 nm)	2.471210 u	ppm	0.000828	0.03	3523.720000	Y_R 377.433
K (766.491 nm)	49.004500	ppm	0.186467	0.38	53723.600000	Y_R2 488.368
Li (670.783 nm)	0.986838	ppm	0.001997	0.20	15067.100000	Y_R2 488.368
Mg (279.078 nm)	19.502000	ppm	0.029320	0.15	68369.100000	Y 377.433
Mn (257.610 nm)	0.490073	ppm	0.000191	0.04	141223.000000	Y 377.433
Mo (202.032 nm)	0.490404	ppm	0.000613	0.13	6499.020000	Y 377.433
Na (589.592 nm)	25.096300	ppm	0.004031	0.02	22105.100000	Y_R2 488.368
Na H (589.593 nm)	25.683991 u	ppm	0.061486	0.24	15364.009922	Y_R4
Ni (231.604 nm)	0.491224	ppm	0.002109	0.43	2656.180000	Y 377.433
P (213.618 nm)	0.970341	ppm	0.004874	0.50	1359.300000	Y 242.219
Pb (220.353 nm)	0.984375	ppm	0.002111	0.21	3319.520000	Y 242.219
S (181.972 nm)	0.006866	ppm	0.008487	> 100.00	12.719651	Y 377.433
Sb (206.834 nm)	0.980510	ppm	0.002761	0.28	1826.290000	Y 377.433
Se (196.026 nm)	0.980242	ppm	0.001143	0.12	1575.730000	Y 242.219
Si (288.158 nm)	4.879700	ppm	0.011925	0.24	33104.800000	Y 377.433
Sn (189.925 nm)	0.988851	ppm	0.000867	0.09	1636.430000	Y 377.433
Sr (421.552 nm)	0.487661	ppm	0.001796	0.37	78418.837555	Y_R 488.368
Th (288.505 nm)	0.011645	ppm	0.003068	26.35	-10.797300	Y 377.433
Ti (336.122 nm)	0.489331	ppm	0.000239	0.05	64055.500000	Y 377.433
Tl (190.794 nm)	0.990759	ppm	0.002521	0.25	2419.240000	Y 377.433
U (409.013 nm)	0.016401	ppm	0.005247	31.99	22.172200	Y 377.433
V (292.401 nm)	0.488989	ppm	0.000316	0.06	26171.600000	Y 377.433
Zn (206.200 nm)	0.495493	ppm	0.001202	0.24	2267.470000	Y 377.433
Zr (343.823 nm)	0.490355	ppm	0.000306	0.06	28597.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.996543	18632.353081	0.002928	0.29
Y 377.433	0.999632	555371.950471	0.003578	0.36
Y_R 377.433	1.005650	48961.000000	0.002636	0.26
Y_R 488.368	0.996609	42621.200000	0.006068	0.61
Y_R2 488.368	1.013390	84639.239642	0.000635	0.06
Y_R4	1.009070	38795.400000	0.000830	0.08

Sample Name: ICB

Date: 5/10/2019 11:32:47 AM

Rack:Tube: S1:5

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000349	ppm	0.000315	90.31	-171.932000	Y 377.433
Al (394.401 nm)	0.000981	ppm	0.001166	> 100.00	41.855400	Y 377.433
Al H (396.152 nm)	0.106974 Zu	ppm	0.009034	8.44	20.733900 Z	Y_R 377.433
As (188.980 nm)	0.001045 u	ppm	0.002485	> 100.00	-0.162767	Y 242.219
B (249.678 nm)	-0.000472 u	ppm	0.000145	30.74	8.237230	Y 242.219
Ba (493.408 nm)	-0.000634 u	ppm	0.000049	7.69	1562.000000	Y_R 488.368
Be (234.861 nm)	-0.000062 u	ppm	0.000005	7.86	-7.424810	Y_R 488.368
Bi (223.061 nm)	0.003175	ppm	0.003456	> 100.00	-3.901380	Y 377.433
Ca (315.887 nm)	-0.005868 u	ppm	0.003000	51.12	-78.094265	Y_R 377.433
Cd (214.439 nm)	0.000046 u	ppm	0.000206	> 100.00	-5.038510	Y 377.433
Co (228.615 nm)	0.000167	ppm	0.000038	22.82	-19.229500	Y 242.219
Cr (205.560 nm)	0.000029 u	ppm	0.000838	> 100.00	-7.920560	Y 377.433
Cu (324.754 nm)	0.000019 u	ppm	0.000215	> 100.00	510.544000	Y 377.433
Fe (238.204 nm)	-0.001178 u	ppm	0.000611	51.87	1.225300	Y_R 377.433
Fe H (259.940 nm)	0.033504 u	ppm	0.006512	19.44	20.161100	Y_R 377.433
K (766.491 nm)	-0.115147 u	ppm	0.147055	> 100.00	2060.480000	Y_R2 488.368
Li (670.783 nm)	0.000843	ppm	0.000190	22.58	-2870.690000	Y_R2 488.368
Mg (279.078 nm)	0.001881 u	ppm	0.003849	> 100.00	22.449800	Y 377.433
Mn (257.610 nm)	0.000058	ppm	0.000006	9.93	-6.866730	Y 377.433
Mo (202.032 nm)	-0.000009 u	ppm	0.000522	> 100.00	11.499000	Y 377.433
Na (589.592 nm)	0.025271 u	ppm	0.038089	> 100.00	193.163000	Y_R2 488.368
Na H (589.593 nm)	0.080571 u	ppm	0.002273	2.82	524.629305	Y_R4
Ni (231.604 nm)	0.000078 u	ppm	0.001282	> 100.00	-10.032500	Y 377.433
P (213.618 nm)	-0.002827 u	ppm	0.000941	33.30	-0.907427	Y 242.219
Pb (220.353 nm)	0.000946 u	ppm	0.002217	> 100.00	11.253800	Y 242.219
S (181.972 nm)	-0.002079 u	ppm	0.004596	> 100.00	6.459283	Y 377.433
Sb (206.834 nm)	0.000155 u	ppm	0.000641	> 100.00	2.569120	Y 377.433
Se (196.026 nm)	0.006122	ppm	0.002142	34.99	15.388200	Y 242.219
Si (288.158 nm)	-0.001520 u	ppm	0.000006	0.42	498.251000	Y 377.433
Sn (189.925 nm)	-0.004735 u	ppm	0.000898	18.97	1.304710	Y 377.433
Sr (421.552 nm)	0.000002 u	ppm	0.000015	> 100.00	103.330450	Y_R 488.368
Th (288.505 nm)	-0.004677 u	ppm	0.001563	33.41	11.180400	Y 377.433
Ti (336.122 nm)	0.000242	ppm	0.000136	56.00	-488.944000	Y 377.433
Tl (190.794 nm)	-0.000051 u	ppm	0.000675	> 100.00	-0.004839	Y 377.433
U (409.013 nm)	0.004421 u	ppm	0.013559	> 100.00	44.113200	Y 377.433
V (292.401 nm)	0.000299	ppm	0.000045	14.96	-79.800500	Y 377.433
Zn (206.200 nm)	0.000303	ppm	0.000019	6.37	4.469870	Y 377.433
Zr (343.823 nm)	0.000461	ppm	0.000120	26.12	-146.461000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.033090	19315.681913	0.001372	0.13
Y 377.433	1.033021	573921.939292	0.000427	0.04
Y_R 377.433	1.034820	50381.000000	0.004981	0.48
Y_R 488.368	1.016610	43476.800000	0.004418	0.43
Y_R2 488.368	1.039364	86808.588407	0.002183	0.21
Y_R4	1.027980	39522.700000	0.005805	0.56

Sample Name: CRI-5695588

Date: 5/10/2019 11:35:59 AM

Rack:Tube: 3:10

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009804	ppm	0.000201	2.05	173.304000	Y 377.433
Al (394.401 nm)	0.102588	ppm	0.000228	0.22	1322.020000	Y 377.433
Al H (396.152 nm)	0.213596 u	ppm	0.004862	2.28	266.308000	Y_R 377.433
As (188.980 nm)	0.014908	ppm	0.000393	2.64	21.884800	Y 242.219
B (249.678 nm)	0.092098	ppm	0.000002	0.00	717.363000	Y 242.219
Ba (493.408 nm)	0.009652	ppm	0.000071	0.74	2641.340000	Y_R 488.368
Be (234.861 nm)	0.001019	ppm	0.000019	1.87	106.446000	Y_R 488.368
Bi (223.061 nm)	0.093856	ppm	0.002467	2.63	195.534000	Y 377.433
Ca (315.887 nm)	0.206643	ppm	0.010802	5.23	97.698165	Y_R 377.433
Cd (214.439 nm)	0.005266	ppm	0.000097	1.84	194.998000	Y 377.433
Co (228.615 nm)	0.010459	ppm	0.000438	4.19	238.827000	Y 242.219
Cr (205.560 nm)	0.010487	ppm	0.000419	4.00	64.370400	Y 377.433
Cu (324.754 nm)	0.015265	ppm	0.000134	0.88	1259.840000	Y 377.433
Fe (238.204 nm)	0.097615	ppm	0.000202	0.21	248.205468	Y_R 377.433
Fe H (259.940 nm)	0.130140 u	ppm	0.001841	1.41	159.050000	Y_R 377.433
K (766.491 nm)	3.002490	ppm	0.120474	4.01	5339.550000	Y_R2 488.368
Li (670.783 nm)	0.026730 Q	ppm	0.002067	7.73	-2399.730000 Q	Y_R2 488.368
Mg (279.078 nm)	0.200037	ppm	0.001767	0.88	716.255000	Y 377.433
Mn (257.610 nm)	0.010441	ppm	0.000004	0.04	2985.690000	Y 377.433
Mo (202.032 nm)	0.019447	ppm	0.000239	1.23	268.870000	Y 377.433
Na (589.592 nm)	1.131420	ppm	0.036353	3.21	1157.250000	Y_R2 488.368
Na H (589.593 nm)	0.895477 u	ppm	0.021561	2.41	996.936936	Y_R4
Ni (231.604 nm)	0.040795	ppm	0.000224	0.55	210.919000	Y 377.433
P (213.618 nm)	2.741690	ppm	0.008900	0.32	4234.510000	Y 242.219
Pb (220.353 nm)	0.008880	ppm	0.000098	1.10	37.959000	Y 242.219
S (181.972 nm)	0.091813	ppm	0.005657	6.16	52.383135	Y 377.433
Sb (206.834 nm)	0.017365	ppm	0.003067	17.66	34.472300	Y 377.433
Se (196.026 nm)	0.022697	ppm	0.001645	7.25	41.927200	Y 242.219
Si (288.158 nm)	0.500102	ppm	0.005167	1.03	3849.090000	Y 377.433
Sn (189.925 nm)	0.096379	ppm	0.000183	0.19	167.705000	Y 377.433
Sr (421.552 nm)	0.008981	ppm	0.000206	2.29	1545.246748	Y_R 488.368
Th (288.505 nm)	0.010858 Q	ppm	0.000535	4.93	37.800200 Q	Y 377.433
Ti (336.122 nm)	0.010002	ppm	0.000019	0.19	799.413000	Y 377.433
Tl (190.794 nm)	0.013681	ppm	0.002911	21.28	33.447400	Y 377.433
U (409.013 nm)	0.067783	ppm	0.006575	9.70	245.396000	Y 377.433
V (292.401 nm)	0.010044	ppm	0.000099	0.98	442.324000	Y 377.433
Zn (206.200 nm)	0.021624	ppm	0.000986	4.56	101.908000	Y 377.433
Zr (343.823 nm)	0.010189 Q	ppm	0.000214	2.10	424.287000 Q	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.034430	19340.728182	0.001632	0.16
Y 377.433	1.034912	574973.057174	0.000046	0.00
Y_R 377.433	1.029940	50143.400000	0.000532	0.05
Y_R 488.368	1.019200	43587.400000	0.005246	0.51
Y_R2 488.368	1.050162	87710.451942	0.000469	0.04
Y_R4	1.031580	39660.900000	0.001862	0.18

Sample Name: ICSA-5681701

Date: 5/10/2019 11:45:41 AM

Rack:Tube: 3:11

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.002234	ppm	0.000129	5.76	-106.759000	Y 377.433
Al (394.401 nm)	508.474000 o	ppm	0.324202	0.06	6388520.000000	Y 377.433
Al H (396.152 nm)	517.216000	ppm	0.316968	0.06	1163930.000000	Y_R 377.433
As (188.980 nm)	0.019582 K	ppm	0.001596	8.15	-9.002420 K	Y 242.219
B (249.678 nm)	0.021014 K	ppm	0.000690	3.28	56.921700 K	Y 242.219
Ba (493.408 nm)	0.001959	ppm	0.000117	5.99	1990.860000	Y_R 488.368
Be (234.861 nm)	0.007134 K	ppm	0.000216	3.03	-938.756000 K	Y_R 488.368
Bi (223.061 nm)	0.000893 u	ppm	0.003022	> 100.00	23.533700	Y 377.433
Ca (315.887 nm)	483.287480	ppm	0.284998	0.06	399787.935473	Y_R 377.433
Cd (214.439 nm)	0.001088	ppm	0.000094	8.64	113.625000	Y 377.433
Co (228.615 nm)	0.001431	ppm	0.000518	36.18	12.453300	Y 242.219
Cr (205.560 nm)	0.005112 K	ppm	0.001232	24.10	12.936500 K	Y 377.433
Cu (324.754 nm)	-0.001255 u	ppm	0.000611	48.66	282.795000	Y 377.433
Fe (238.204 nm)	188.754369 o	ppm	0.148656	0.08	471884.656528	Y_R 377.433
Fe H (259.940 nm)	189.436000	ppm	0.200969	0.11	272236.000000	Y_R 377.433
K (766.491 nm)	-0.072310 u	ppm	0.127677	> 100.00	2105.530000	Y_R2 488.368
Li (670.783 nm)	-0.000608 u	ppm	0.000574	94.37	-2897.080000	Y_R2 488.368
Mg (279.078 nm)	494.288000	ppm	0.604395	0.12	1732280.000000	Y 377.433
Mn (257.610 nm)	0.001148 K	ppm	0.000093	8.11	307.493000 K	Y 377.433
Mo (202.032 nm)	0.001236	ppm	0.000530	42.90	27.968700	Y 377.433
Na (589.592 nm)	0.248484	ppm	0.006541	2.63	387.936000	Y_R2 488.368
Na H (589.593 nm)	0.091989 u	ppm	0.005166	5.62	531.246535	Y_R4
Ni (231.604 nm)	-0.004281 u	ppm	0.000767	17.92	-33.685100	Y 377.433
P (213.618 nm)	0.016303 u	ppm	0.023118	> 100.00	30.471600	Y 242.219
Pb (220.353 nm)	0.008473 K	ppm	0.000253	2.98	-53.845800 K	Y 242.219
S (181.972 nm)	0.015830	ppm	0.006998	44.21	40.298113	Y 377.433
Sb (206.834 nm)	-0.001825 u	ppm	0.000948	51.92	4.729280	Y 377.433
Se (196.026 nm)	0.007038	ppm	0.001350	19.17	-34.303100	Y 242.219
Si (288.158 nm)	0.045737	ppm	0.001004	2.19	813.929000	Y 377.433
Sn (189.925 nm)	-0.003894 u	ppm	0.001678	43.08	2.688370	Y 377.433
Sr (421.552 nm)	0.007676 K	ppm	0.000004	0.05	1365.695614 K	Y_R 488.368
Th (288.505 nm)	0.010338 K	ppm	0.002319	22.43	9.893290 K	Y 377.433
Ti (336.122 nm)	-0.000798 u	ppm	0.000051	6.43	1050.290000	Y 377.433
Tl (190.794 nm)	0.010725 K	ppm	0.001350	12.59	-4.019740 K	Y 377.433
U (409.013 nm)	0.055456	ppm	0.002014	3.63	281.528000	Y 377.433
V (292.401 nm)	0.002362	ppm	0.000051	2.14	24.156700	Y 377.433
Zn (206.200 nm)	0.001396	ppm	0.000165	11.80	35.924700	Y 377.433
Zr (343.823 nm)	0.003666	ppm	0.000114	3.11	41.600400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.900708	16840.536010	0.002410	0.27
Y 377.433	0.911777	506561.785411	0.002656	0.29
Y_R 377.433	0.963104	46889.400000	0.001092	0.11
Y_R 488.368	0.951123	40675.900000	0.009888	1.04
Y_R2 488.368	0.970309	81041.016584	0.000545	0.06
Y_R4	0.979139	37644.800000	0.001012	0.10

Sample Name: ICSAB-5676207

Date: 5/10/2019 11:55:08 AM

Rack:Tube: 3:12

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	1.103190	ppm	0.000554	0.05	40135.800000	Y 377.433
Al (394.401 nm)	509.450000 o	ppm	0.408541	0.08	6400580.000000	Y 377.433
Al H (396.152 nm)	521.059000	ppm	0.421442	0.08	1173100.000000	Y_R 377.433
As (188.980 nm)	1.060420 G	ppm	0.000529	0.05	1646.760000 G	Y 242.219
B (249.678 nm)	10.223000 G	ppm	0.002406	0.02	78214.700000 G	Y 242.219
Ba (493.408 nm)	1.007890 G	ppm	0.001873	0.19	107540.000000 G	Y_R 488.368
Be (234.861 nm)	0.504312	ppm	0.000059	0.01	51818.000000	Y_R 488.368
Bi (223.061 nm)	0.996174	ppm	0.001267	0.13	2212.430000	Y 377.433
Ca (315.887 nm)	485.773951	ppm	0.447388	0.09	401845.494266	Y_R 377.433
Cd (214.439 nm)	0.949060	ppm	0.001411	0.15	36432.300000	Y 377.433
Co (228.615 nm)	0.915745 G	ppm	0.000452	0.05	22942.600000 G	Y 242.219
Cr (205.560 nm)	0.964316 G	ppm	0.001300	0.13	6653.160000 G	Y 377.433
Cu (324.754 nm)	1.026860 G	ppm	0.000815	0.08	51110.900000 G	Y 377.433
Fe (238.204 nm)	190.303237 o	ppm	0.260244	0.14	475756.782389	Y_R 377.433
Fe H (259.940 nm)	190.638000	ppm	0.213833	0.11	273964.000000	Y_R 377.433
K (766.491 nm)	11.315700 G	ppm	0.224422	1.98	14083.200000 G	Y_R2 488.368
Li (670.783 nm)	1.081270	ppm	0.000337	0.03	16785.100000	Y_R2 488.368
Mg (279.078 nm)	496.619000	ppm	0.395177	0.08	1740450.000000	Y 377.433
Mn (257.610 nm)	0.966731 G	ppm	0.000551	0.06	278604.000000 G	Y 377.433
Mo (202.032 nm)	0.968545	ppm	0.000120	0.01	12824.200000	Y 377.433
Na (589.592 nm)	11.976800	ppm	0.041603	0.35	10824.600000	Y_R2 488.368
Na H (589.593 nm)	10.328573 Gu	ppm	0.020964	0.20	6464.226583 G	Y_R4
Ni (231.604 nm)	0.908079	ppm	0.000422	0.05	4918.150000	Y 377.433
P (213.618 nm)	9.754590 G	ppm	0.014610	0.15	14775.700000 G	Y 242.219
Pb (220.353 nm)	0.960565	ppm	0.002415	0.25	3145.530000	Y 242.219
S (181.972 nm)	9.992656 G	ppm	0.010114	0.10	4919.005912 G	Y 377.433
Sb (206.834 nm)	0.973448	ppm	0.002728	0.28	1815.690000	Y 377.433
Se (196.026 nm)	1.061780 G	ppm	0.002252	0.21	1656.300000 G	Y 242.219
Si (288.158 nm)	10.309800	ppm	0.017105	0.17	69377.800000	Y 377.433
Sn (189.925 nm)	1.044810 G	ppm	0.002168	0.21	1728.520000 G	Y 377.433
Sr (421.552 nm)	1.012261	ppm	0.001296	0.13	162696.329874	Y_R 488.368
Th (288.505 nm)	2.017700	ppm	0.001426	0.07	3432.740000	Y 377.433
Ti (336.122 nm)	1.004110	ppm	0.000646	0.06	133633.000000	Y 377.433
Tl (190.794 nm)	1.026950 G	ppm	0.000752	0.07	2474.650000 G	Y 377.433
U (409.013 nm)	0.065814	ppm	0.014039	21.33	196.593000	Y 377.433
V (292.401 nm)	0.987292 G	ppm	0.000028	0.00	53139.400000 G	Y 377.433
Zn (206.200 nm)	0.939589	ppm	0.001654	0.18	4322.940000	Y 377.433
Zr (343.823 nm)	0.952936	ppm	0.002548	0.27	55738.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.900447	16835.659492	0.001878	0.21
Y 377.433	0.912526	506977.736393	0.001030	0.11
Y_R 377.433	0.953709	46432.000000	0.000110	0.01
Y_R 488.368	0.940753	40232.400000	0.001286	0.14
Y_R2 488.368	0.952577	79560.066478	0.002771	0.29
Y_R4	0.968771	37246.200000	0.001007	0.10

Sample Name: LRA-5681702

Date: 5/10/2019 12:05:00 PM

Rack:Tube: 3:13

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.002397	ppm	0.000042	1.74	-4145.650000	Y 377.433
Al (394.401 nm)	-0.187167 u	ppm	0.000301	0.16	295.206000	Y 377.433
Al H (396.152 nm)	-1.749460 u	ppm	0.002601	0.15	519.820000	Y_R 377.433
As (188.980 nm)	9.790760	ppm	0.002904	0.03	15562.500000	Y 242.219
B (249.678 nm)	9.942500	ppm	0.002104	0.02	75891.100000	Y 242.219
Ba (493.408 nm)	12.074600	ppm	0.012065	0.10	1268960.000000	Y_R 488.368
Be (234.861 nm)	0.016778	ppm	0.000062	0.37	-2476.110000	Y_R 488.368
Bi (223.061 nm)	-0.031940 u	ppm	0.001968	6.16	0.358330	Y 377.433
Ca (315.887 nm)	0.003834 u	ppm	0.008541	> 100.00	-70.007609	Y_R 377.433
Cd (214.439 nm)	1.964050	ppm	0.000307	0.02	75436.400000	Y 377.433
Co (228.615 nm)	5.040080	ppm	0.000834	0.02	126587.000000	Y 242.219
Cr (205.560 nm)	9.770980	ppm	0.002368	0.02	67661.100000	Y 377.433
Cu (324.754 nm)	10.305900	ppm	0.038782	0.38	506322.000000	Y 377.433
Fe (238.204 nm)	473.985375 o	ppm	0.995043	0.21	1184953.955287	Y_R 377.433
Fe H (259.940 nm)	475.216000	ppm	0.386602	0.08	682970.000000	Y_R 377.433
K (766.491 nm)	-0.344551 u	ppm	0.038024	11.04	1819.200000	Y_R2 488.368
Li (670.783 nm)	0.003916	ppm	0.000900	22.97	-2814.780000	Y_R2 488.368
Mg (279.078 nm)	-0.006775 u	ppm	0.001798	26.54	-669.128000	Y 377.433
Mn (257.610 nm)	9.648980	ppm	0.004996	0.05	2780970.000000	Y 377.433
Mo (202.032 nm)	4.832540	ppm	0.000982	0.02	63939.800000	Y 377.433
Na (589.592 nm)	5.436910	ppm	0.012549	0.23	7795.490000	Y_R2 488.368
Na H (589.593 nm)	-8.455015 u	ppm	0.022886	0.27	-4422.476386	Y_R4
Ni (231.604 nm)	9.864290	ppm	0.004136	0.04	53520.900000	Y 377.433
P (213.618 nm)	0.705681	ppm	0.002249	0.32	-1676.370000	Y 242.219
Pb (220.353 nm)	10.266500	ppm	0.003364	0.03	34532.800000	Y 242.219
S (181.972 nm)	-0.022805 u	ppm	0.000033	0.14	28.531582	Y 377.433
Sb (206.834 nm)	0.011441	ppm	0.003963	34.64	65.149300	Y 377.433
Se (196.026 nm)	4.935540	ppm	0.010174	0.21	7797.050000	Y 242.219
Si (288.158 nm)	48.506400	ppm	0.188613	0.39	324531.000000	Y 377.433
Sn (189.925 nm)	-0.004245 u	ppm	0.000117	2.75	2.110440	Y 377.433
Sr (421.552 nm)	9.993648	ppm	0.032632	0.33	1605099.864870	Y_R 488.368
Th (288.505 nm)	0.214352	ppm	0.005002	2.33	-547.415000	Y 377.433
Ti (336.122 nm)	9.665620	ppm	0.002005	0.02	1274710.000000	Y 377.433
Tl (190.794 nm)	5.044120	ppm	0.007158	0.14	12220.400000	Y 377.433
U (409.013 nm)	-0.020742 u	ppm	0.015723	75.80	310.425000	Y 377.433
V (292.401 nm)	9.700880	ppm	0.001719	0.02	521348.000000	Y 377.433
Zn (206.200 nm)	9.514790	ppm	0.004285	0.05	43545.200000	Y 377.433
Zr (343.823 nm)	0.010004	ppm	0.000708	7.08	413.439000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.976560	18258.732856	0.001585	0.16
Y 377.433	1.008216	560140.942031	0.001344	0.13
Y_R 377.433	1.012170	49278.300000	0.001213	0.12
Y_R 488.368	1.000080	42769.700000	0.003946	0.39
Y_R2 488.368	1.013434	84642.854839	0.001032	0.10
Y_R4	0.995362	38268.500000	0.001760	0.18

Sample Name: CCVH-5690583

Date: 5/10/2019 12:10:50 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000533	ppm	0.000453	84.92	-306.621000	Y 377.433
Al (394.401 nm)	49.462700 o	ppm	0.032379	0.07	621605.000000	Y 377.433
Al H (396.152 nm)	49.603100	ppm	0.080923	0.16	111436.000000	Y_R 377.433
As (188.980 nm)	0.006468	ppm	0.001940	30.00	3.943880	Y 242.219
B (249.678 nm)	0.011434	ppm	0.000686	6.00	69.654100	Y 242.219
Ba (493.408 nm)	0.001515	ppm	0.000036	2.36	1827.830000	Y_R 488.368
Be (234.861 nm)	0.002310	ppm	0.000006	0.24	-191.348000	Y_R 488.368
Bi (223.061 nm)	0.963947	ppm	0.003077	0.32	2117.240000	Y 377.433
Ca (315.887 nm)	0.023180	ppm	0.001196	5.16	-41.224083	Y_R 377.433
Cd (214.439 nm)	0.000463	ppm	0.000049	10.58	31.201000	Y 377.433
Co (228.615 nm)	0.004105	ppm	0.000188	4.58	79.387500	Y 242.219
Cr (205.560 nm)	0.000930	ppm	0.000242	26.06	-3.055230	Y 377.433
Cu (324.754 nm)	0.008363	ppm	0.000117	1.40	1327.180000	Y 377.433
Fe (238.204 nm)	48.612942 o	ppm	0.055846	0.11	121535.124669	Y_R 377.433
Fe H (259.940 nm)	48.449000	ppm	0.085303	0.18	69604.700000	Y_R 377.433
K (766.491 nm)	-0.104528 u	ppm	0.028682	27.44	2071.650000	Y_R2 488.368
Li (670.783 nm)	-0.000479 u	ppm	0.003246	> 100.00	-2894.730000	Y_R2 488.368
Mg (279.078 nm)	0.007589	ppm	0.000283	3.73	-191.680000	Y 377.433
Mn (257.610 nm)	0.001254	ppm	0.000015	1.16	337.900000	Y 377.433
Mo (202.032 nm)	0.000380	ppm	0.000069	18.21	16.646500	Y 377.433
Na (589.592 nm)	240.833000 o	ppm	0.470837	0.20	209530.000000	Y_R2 488.368
Na H (589.593 nm)	252.079123	ppm	0.049286	0.02	146579.435448	Y_R4
Ni (231.604 nm)	0.001052	ppm	0.000909	86.40	-4.754370	Y 377.433
P (213.618 nm)	-0.018879 u	ppm	0.000385	2.04	-33.158500	Y 242.219
Pb (220.353 nm)	0.006189	ppm	0.000485	7.84	45.127900	Y 242.219
S (181.972 nm)	4.809351	ppm	0.010463	0.22	2357.716375	Y 377.433
Sb (206.834 nm)	0.000566 u	ppm	0.000998	> 100.00	6.694860	Y 377.433
Se (196.026 nm)	0.002700 u	ppm	0.005512	> 100.00	-3.239680	Y 242.219
Si (288.158 nm)	0.031105	ppm	0.002428	7.81	716.189000	Y 377.433
Sn (189.925 nm)	-0.001777 u	ppm	0.001556	87.58	6.172600	Y 377.433
Sr (421.552 nm)	0.000709	ppm	0.000309	43.57	224.655765	Y_R 488.368
Th (288.505 nm)	4.901030	ppm	0.009139	0.19	8659.730000	Y 377.433
Ti (336.122 nm)	0.001572	ppm	0.000082	5.19	-313.477000	Y 377.433
Tl (190.794 nm)	-0.002334 u	ppm	0.002948	> 100.00	-10.454200	Y 377.433
U (409.013 nm)	9.854570	ppm	0.004707	0.05	31544.000000	Y 377.433
V (292.401 nm)	-0.000290 u	ppm	0.000025	8.72	-111.133000	Y 377.433
Zn (206.200 nm)	0.002405	ppm	0.000666	27.69	20.876800	Y 377.433
Zr (343.823 nm)	-0.003057 u	ppm	0.000010	0.33	-352.863000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.990577	18520.812916	0.003532	0.36
Y 377.433	0.999083	555066.875523	0.003784	0.38
Y_R 377.433	1.021660	49740.100000	0.000708	0.07
Y_R 488.368	1.018720	43566.700000	0.004389	0.43
Y_R2 488.368	1.006106	84030.804170	0.003786	0.38
Y_R4	1.018200	39146.400000	0.005229	0.51

Sample Name: CCV-5690581

Date: 5/10/2019 12:14:35 PM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.485499	ppm	0.000955	0.20	17557.300000	Y 377.433
Al (394.401 nm)	0.495392	ppm	0.000609	0.12	6377.970000	Y 377.433
Al H (396.152 nm)	0.539016 u	ppm	0.004702	0.87	1244.230000	Y_R 377.433
As (188.980 nm)	0.963263	ppm	0.001915	0.20	1530.680000	Y 242.219
B (249.678 nm)	0.481772	ppm	0.001091	0.23	3701.240000	Y 242.219
Ba (493.408 nm)	0.487022	ppm	0.001074	0.22	52731.500000	Y_R 488.368
Be (234.861 nm)	0.488847	ppm	0.000814	0.17	51859.900000	Y_R 488.368
Bi (223.061 nm)	0.004744	ppm	0.000465	9.80	0.074499	Y 377.433
Ca (315.887 nm)	4.910499	ppm	0.032595	0.66	3988.369433	Y_R 377.433
Cd (214.439 nm)	0.491948	ppm	0.001341	0.27	18841.500000	Y 377.433
Co (228.615 nm)	0.487369	ppm	0.000579	0.12	12197.300000	Y 242.219
Cr (205.560 nm)	0.491259	ppm	0.004830	0.98	3392.470000	Y 377.433
Cu (324.754 nm)	0.487985	ppm	0.002894	0.59	24461.500000	Y 377.433
Fe (238.204 nm)	2.442700	ppm	0.006960	0.28	6110.849611	Y_R 377.433
Fe H (259.940 nm)	2.467090 u	ppm	0.003951	0.16	3517.800000	Y_R 377.433
K (766.491 nm)	48.293300	ppm	0.398390	0.82	52975.500000	Y_R2 488.368
Li (670.783 nm)	0.983027	ppm	0.001089	0.11	14997.800000	Y_R2 488.368
Mg (279.078 nm)	19.409000	ppm	0.019413	0.10	68043.100000	Y 377.433
Mn (257.610 nm)	0.488235	ppm	0.000219	0.04	140694.000000	Y 377.433
Mo (202.032 nm)	0.489312	ppm	0.000038	0.01	6484.560000	Y 377.433
Na (589.592 nm)	24.957500	ppm	0.006650	0.03	21983.900000	Y_R2 488.368
Na H (589.593 nm)	25.252092 u	ppm	0.044605	0.18	15113.687684	Y_R4
Ni (231.604 nm)	0.488470	ppm	0.001240	0.25	2641.240000	Y 377.433
P (213.618 nm)	0.959288	ppm	0.007315	0.76	1343.920000	Y 242.219
Pb (220.353 nm)	0.977703	ppm	0.001412	0.14	3297.060000	Y 242.219
S (181.972 nm)	0.003213	ppm	0.003416	> 100.00	10.922673	Y 377.433
Sb (206.834 nm)	0.976861	ppm	0.000987	0.10	1819.540000	Y 377.433
Se (196.026 nm)	0.971928	ppm	0.002509	0.26	1562.410000	Y 242.219
Si (288.158 nm)	4.875300	ppm	0.000281	0.01	33075.400000	Y 377.433
Sn (189.925 nm)	0.987440	ppm	0.003698	0.37	1634.110000	Y 377.433
Sr (421.552 nm)	0.486034	ppm	0.001144	0.24	78157.622621	Y_R 488.368
Th (288.505 nm)	0.014154	ppm	0.001040	7.35	-6.093260	Y 377.433
Ti (336.122 nm)	0.487190	ppm	0.000127	0.03	63772.800000	Y 377.433
Tl (190.794 nm)	0.984891	ppm	0.001678	0.17	2404.900000	Y 377.433
U (409.013 nm)	0.020178	ppm	0.001627	8.06	34.688200	Y 377.433
V (292.401 nm)	0.486609	ppm	0.000199	0.04	26042.600000	Y 377.433
Zn (206.200 nm)	0.495093	ppm	0.002820	0.57	2265.650000	Y 377.433
Zr (343.823 nm)	0.487791	ppm	0.000158	0.03	28446.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.996913	18639.276585	0.002251	0.23
Y 377.433	0.999419	555253.551968	0.002561	0.26
Y_R 377.433	0.996886	48534.100000	0.000288	0.03
Y_R 488.368	0.985990	42167.000000	0.000687	0.07
Y_R2 488.368	1.010430	84392.001159	0.006483	0.64
Y_R4	1.010090	38835.000000	0.006864	0.68

Sample Name: CCB

Date: 5/10/2019 12:18:06 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000051 u	ppm	0.000470	> 100.00	-186.520000	Y 377.433
Al (394.401 nm)	0.001695	ppm	0.000045	2.68	50.430000	Y 377.433
Al H (396.152 nm)	0.117899 Zu	ppm	0.003727	3.16	45.327700 Z	Y_R 377.433
As (188.980 nm)	0.000678	ppm	0.000048	7.10	-0.745762	Y 242.219
B (249.678 nm)	0.001915	ppm	0.000072	3.77	26.522300	Y 242.219
Ba (493.408 nm)	-0.001042 u	ppm	0.000001	0.11	1519.180000	Y_R 488.368
Be (234.861 nm)	-0.000004 u	ppm	0.000044	> 100.00	-1.224480	Y_R 488.368
Bi (223.061 nm)	-0.000587 u	ppm	0.001878	> 100.00	-12.174200	Y 377.433
Ca (315.887 nm)	-0.005550 u	ppm	0.001228	22.13	-77.832228	Y_R 377.433
Cd (214.439 nm)	0.000100	ppm	0.000005	5.09	-2.964230	Y 377.433
Co (228.615 nm)	-0.000010 u	ppm	0.000445	> 100.00	-23.658800	Y 242.219
Cr (205.560 nm)	-0.000077 u	ppm	0.000039	50.77	-8.655280	Y 377.433
Cu (324.754 nm)	0.000026 u	ppm	0.000103	> 100.00	510.918000	Y 377.433
Fe (238.204 nm)	-0.000318 u	ppm	0.000085	26.86	3.376757	Y_R 377.433
Fe H (259.940 nm)	0.024286 u	ppm	0.000033	0.14	6.911970	Y_R 377.433
K (766.491 nm)	-0.117253 u	ppm	0.178925	> 100.00	2058.260000	Y_R2 488.368
Li (670.783 nm)	0.001181 u	ppm	0.002198	> 100.00	-2864.530000	Y_R2 488.368
Mg (279.078 nm)	-0.000080 u	ppm	0.001648	> 100.00	15.663800	Y 377.433
Mn (257.610 nm)	0.000083	ppm	0.000039	47.60	0.289154	Y 377.433
Mo (202.032 nm)	-0.000491 u	ppm	0.000277	56.52	5.123780	Y 377.433
Na (589.592 nm)	0.000042 u	ppm	0.000844	> 100.00	171.144000	Y_R2 488.368
Na H (589.593 nm)	0.000380 u	ppm	0.018268	> 100.00	478.151613	Y_R4
Ni (231.604 nm)	0.000433	ppm	0.000031	7.08	-8.110820	Y 377.433
P (213.618 nm)	-0.003579 u	ppm	0.000765	21.36	-2.113380	Y 242.219
Pb (220.353 nm)	0.001189 u	ppm	0.001783	> 100.00	12.059700	Y 242.219
S (181.972 nm)	-0.003837 u	ppm	0.002190	57.07	5.600244	Y 377.433
Sb (206.834 nm)	-0.004134 u	ppm	0.000685	16.57	-5.424600	Y 377.433
Se (196.026 nm)	0.002462	ppm	0.002812	> 100.00	9.525850	Y 242.219
Si (288.158 nm)	-0.001153 u	ppm	0.002271	> 100.00	500.703000	Y 377.433
Sn (189.925 nm)	-0.003211 u	ppm	0.000682	21.24	3.812500	Y 377.433
Sr (421.552 nm)	0.000034	ppm	0.000021	61.08	108.407625	Y_R 488.368
Th (288.505 nm)	-0.005355 u	ppm	0.001185	22.13	9.978140	Y 377.433
Ti (336.122 nm)	0.000216	ppm	0.000112	51.94	-492.374000	Y 377.433
Tl (190.794 nm)	0.001237	ppm	0.000774	62.58	3.143900	Y 377.433
U (409.013 nm)	0.006269	ppm	0.007894	> 100.00	50.024500	Y 377.433
V (292.401 nm)	0.000276	ppm	0.000184	66.58	-80.910800	Y 377.433
Zn (206.200 nm)	-0.000146 u	ppm	0.000331	> 100.00	2.420110	Y 377.433
Zr (343.823 nm)	0.000271	ppm	0.000275	> 100.00	-157.644000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.030956	19275.775774	0.000894	0.09
Y 377.433	1.030272	572394.898949	0.000631	0.06
Y_R 377.433	1.028610	50078.700000	0.005322	0.52
Y_R 488.368	1.022050	43709.100000	0.005441	0.53
Y_R2 488.368	1.023829	85511.053076	0.005324	0.52
Y_R4	1.010390	38846.100000	0.002463	0.24

Sample Name: CCVL-5695588

Date: 5/10/2019 12:21:19 PM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009859	ppm	0.000089	0.90	175.361000	Y 377.433
Al (394.401 nm)	0.102682	ppm	0.001092	1.06	1324.450000	Y 377.433
Al H (396.152 nm)	0.217434 u	ppm	0.008516	3.92	274.855000	Y_R 377.433
As (188.980 nm)	0.015295	ppm	0.000359	2.35	22.500400	Y 242.219
B (249.678 nm)	0.094998	ppm	0.000170	0.18	739.581000	Y 242.219
Ba (493.408 nm)	0.009133	ppm	0.000412	4.52	2586.900000	Y_R 488.368
Be (234.861 nm)	0.000876	ppm	0.000017	1.93	91.316100	Y_R 488.368
Bi (223.061 nm)	0.091232	ppm	0.002770	3.04	189.764000	Y 377.433
Ca (315.887 nm)	0.199412	ppm	0.005454	2.74	91.719600	Y_R 377.433
Cd (214.439 nm)	0.005252	ppm	0.000061	1.16	194.475000	Y 377.433
Co (228.615 nm)	0.010249	ppm	0.000106	1.03	233.565000	Y 242.219
Cr (205.560 nm)	0.010535	ppm	0.000179	1.70	64.703600	Y 377.433
Cu (324.754 nm)	0.014978	ppm	0.000133	0.89	1244.740000	Y 377.433
Fe (238.204 nm)	0.097486	ppm	0.001825	1.87	247.882062	Y_R 377.433
Fe H (259.940 nm)	0.131528 u	ppm	0.003367	2.56	161.045000	Y_R 377.433
K (766.491 nm)	3.027580	ppm	0.226026	7.47	5365.940000	Y_R2 488.368
Li (670.783 nm)	0.023824	ppm	0.001944	8.16	-2452.610000	Y_R2 488.368
Mg (279.078 nm)	0.200027	ppm	0.000383	0.19	716.222000	Y 377.433
Mn (257.610 nm)	0.010345	ppm	0.000014	0.14	2958.180000	Y 377.433
Mo (202.032 nm)	0.019186	ppm	0.000024	0.13	265.414000	Y 377.433
Na (589.592 nm)	1.061680	ppm	0.018231	1.72	1096.500000	Y_R2 488.368
Na H (589.593 nm)	0.819281 u	ppm	0.010435	1.27	952.774745	Y_R4
Ni (231.604 nm)	0.040656	ppm	0.000356	0.88	210.164000	Y 377.433
P (213.618 nm)	2.718450	ppm	0.001506	0.06	4198.750000	Y 242.219
Pb (220.353 nm)	0.011246	ppm	0.000513	4.57	45.925800	Y 242.219
S (181.972 nm)	0.090385	ppm	0.007586	8.39	51.684088	Y 377.433
Sb (206.834 nm)	0.017932	ppm	0.004854	27.07	35.532000	Y 377.433
Se (196.026 nm)	0.019186	ppm	0.000878	4.57	36.303800	Y 242.219
Si (288.158 nm)	0.506348	ppm	0.003720	0.73	3890.810000	Y 377.433
Sn (189.925 nm)	0.095040	ppm	0.001120	1.18	165.503000	Y 377.433
Sr (421.552 nm)	0.008916	ppm	0.000274	3.07	1534.855057	Y_R 488.368
Th (288.505 nm)	0.007253 Q	ppm	0.008808	> 100.00	31.477000 Q	Y 377.433
Ti (336.122 nm)	0.009946	ppm	0.000056	0.57	791.920000	Y 377.433
Tl (190.794 nm)	0.017677	ppm	0.002754	15.58	43.221800	Y 377.433
U (409.013 nm)	0.070155	ppm	0.001056	1.51	252.953000	Y 377.433
V (292.401 nm)	0.010208	ppm	0.000455	4.46	450.733000	Y 377.433
Zn (206.200 nm)	0.020680	ppm	0.000000	0.00	97.593600	Y 377.433
Zr (343.823 nm)	0.010234 Q	ppm	0.000246	2.41	426.934000 Q	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.041441	19471.821801	0.004707	0.45
Y 377.433	1.043718	579864.970707	0.003810	0.37
Y_R 377.433	1.042170	50738.700000	0.000052	0.01
Y_R 488.368	1.032190	44143.100000	0.001696	0.16
Y_R2 488.368	1.032864	86265.667897	0.003877	0.38
Y_R4	1.032840	39709.500000	0.002797	0.27

Sample Name: LB3 280-457379/1-C

Date: 5/10/2019 12:24:46 PM

Rack:Tube: 2:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000265 u	ppm	0.000267	> 100.00	-194.231000	Y 377.433
Al (394.401 nm)	0.002987	ppm	0.000971	32.52	64.586800	Y 377.433
Al H (396.152 nm)	0.112460 u	ppm	0.007333	6.52	33.089500	Y_R 377.433
As (188.980 nm)	-0.000122 u	ppm	0.001945	> 100.00	-2.020450	Y 242.219
B (249.678 nm)	0.011043	ppm	0.000828	7.50	96.444600	Y 242.219
Ba (493.408 nm)	-0.000600 u	ppm	0.000336	55.95	1565.570000	Y_R 488.368
Be (234.861 nm)	-0.000081 u	ppm	0.000018	22.69	-9.539980	Y_R 488.368
Bi (223.061 nm)	-0.000230 u	ppm	0.002300	> 100.00	-11.387900	Y 377.433
Ca (315.887 nm)	0.046874	ppm	0.000547	1.17	-34.471047	Y_R 377.433
Cd (214.439 nm)	0.000024 u	ppm	0.000151	> 100.00	-5.859930	Y 377.433
Co (228.615 nm)	0.000030 u	ppm	0.000187	> 100.00	-22.635800	Y 242.219
Cr (205.560 nm)	0.000637	ppm	0.000650	> 100.00	-3.708420	Y 377.433
Cu (324.754 nm)	-0.000079 u	ppm	0.000116	> 100.00	506.805000	Y 377.433
Fe (238.204 nm)	0.014319	ppm	0.002650	18.50	39.968430	Y_R 377.433
Fe H (259.940 nm)	0.045869 u	ppm	0.000347	0.76	37.933100	Y_R 377.433
K (766.491 nm)	-0.149771 u	ppm	0.128639	85.89	2024.060000	Y_R2 488.368
Li (670.783 nm)	0.005172	ppm	0.000030	0.59	-2791.930000	Y_R2 488.368
Mg (279.078 nm)	0.005413	ppm	0.002937	54.25	35.085600	Y 377.433
Mn (257.610 nm)	0.000418	ppm	0.000009	2.04	97.023300	Y 377.433
Mo (202.032 nm)	-0.000085 u	ppm	0.000288	> 100.00	10.488700	Y 377.433
Na (589.592 nm)	1.827650	ppm	0.035126	1.92	1759.990000	Y_R2 488.368
Na H (589.593 nm)	1.493893 u	ppm	0.004647	0.31	1343.770414	Y_R4
Ni (231.604 nm)	-0.000132 u	ppm	0.000393	> 100.00	-11.175000	Y 377.433
P (213.618 nm)	-0.003868 u	ppm	0.001296	33.52	-2.552920	Y 242.219
Pb (220.353 nm)	0.001278	ppm	0.000298	23.33	12.327200	Y 242.219
S (181.972 nm)	0.007783	ppm	0.004849	62.30	11.281000	Y 377.433
Sb (206.834 nm)	0.001097	ppm	0.000774	70.60	4.320570	Y 377.433
Se (196.026 nm)	0.004110	ppm	0.001461	35.56	12.162800	Y 242.219
Si (288.158 nm)	0.053088	ppm	0.000642	1.21	863.035000	Y 377.433
Sn (189.925 nm)	-0.002888 u	ppm	0.001028	35.60	4.343360	Y 377.433
Sr (421.552 nm)	-0.000035 u	ppm	0.000030	86.36	97.341795	Y_R 488.368
Th (288.505 nm)	-0.003528 u	ppm	0.004157	> 100.00	13.132700	Y 377.433
Ti (336.122 nm)	0.000121	ppm	0.000144	> 100.00	-504.887000	Y 377.433
Tl (190.794 nm)	0.001388	ppm	0.000273	19.65	3.504170	Y 377.433
U (409.013 nm)	0.007654	ppm	0.007553	98.68	54.478500	Y 377.433
V (292.401 nm)	0.000604	ppm	0.000048	7.98	-62.471300	Y 377.433
Zn (206.200 nm)	0.000565	ppm	0.000440	77.80	5.671920	Y 377.433
Zr (343.823 nm)	0.000193	ppm	0.000110	57.08	-162.179000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.027303	19207.475514	0.000329	0.03
Y 377.433	1.030410	572471.721071	0.000433	0.04
Y_R 377.433	1.032990	50291.800000	0.001536	0.15
Y_R 488.368	1.017620	43519.600000	0.002963	0.29
Y_R2 488.368	1.038612	86745.740818	0.004988	0.48
Y_R4	1.032120	39681.900000	0.002341	0.23

Sample Name: LCS 280-457379/2-C

Date: 5/10/2019 12:27:56 PM

Rack:Tube: 2:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.209640	ppm	0.000195	0.09	7449.340000	Y 377.433
Al (394.401 nm)	2.004660	ppm	0.000923	0.05	25276.600000	Y 377.433
Al H (396.152 nm)	2.142770	ppm	0.000571	0.03	4703.390000	Y_R 377.433
As (188.980 nm)	0.989285	ppm	0.001150	0.12	1572.000000	Y 242.219
B (249.678 nm)	0.203462	ppm	0.000710	0.35	1569.350000	Y 242.219
Ba (493.408 nm)	2.435620	ppm	0.008658	0.36	257189.000000	Y_R 488.368
Be (234.861 nm)	0.197366	ppm	0.001071	0.54	20928.100000	Y_R 488.368
Bi (223.061 nm)	0.374174	ppm	0.003116	0.83	812.315000	Y 377.433
Ca (315.887 nm)	10.192759	ppm	0.011638	0.11	8357.716006	Y_R 377.433
Cd (214.439 nm)	0.400895	ppm	0.000054	0.01	15353.000000	Y 377.433
Co (228.615 nm)	0.197540	ppm	0.000181	0.09	4929.970000	Y 242.219
Cr (205.560 nm)	1.212990	ppm	0.005964	0.49	8396.220000	Y 377.433
Cu (324.754 nm)	0.582493	ppm	0.003081	0.53	29108.500000	Y 377.433
Fe (238.204 nm)	2.024140	ppm	0.001169	0.06	5064.462997	Y_R 377.433
Fe H (259.940 nm)	2.059700 u	ppm	0.002377	0.12	2932.280000	Y_R 377.433
K (766.491 nm)	9.924830	ppm	0.124249	1.25	12620.300000	Y_R2 488.368
Li (670.783 nm)	0.205142	ppm	0.000612	0.30	846.056000	Y_R2 488.368
Mg (279.078 nm)	9.937050	ppm	0.006992	0.07	34836.600000	Y 377.433
Mn (257.610 nm)	0.202553	ppm	0.000151	0.07	58355.600000	Y 377.433
Mo (202.032 nm)	0.200211	ppm	0.000644	0.32	2660.140000	Y 377.433
Na (589.592 nm)	13.036900	ppm	0.051551	0.40	12088.900000	Y_R2 488.368
Na H (589.593 nm)	9.638496 u	ppm	0.063430	0.66	6064.267486	Y_R4
Ni (231.604 nm)	0.197967	ppm	0.000163	0.08	1064.220000	Y 377.433
P (213.618 nm)	3.841930	ppm	0.001237	0.03	5783.950000	Y 242.219
Pb (220.353 nm)	1.210980	ppm	0.000721	0.06	4083.270000	Y 242.219
S (181.972 nm)	1.857213	ppm	0.001801	0.10	916.248286	Y 377.433
Sb (206.834 nm)	0.201297	ppm	0.001991	0.99	384.615000	Y 377.433
Se (196.026 nm)	0.588366	ppm	0.003212	0.55	947.722000	Y 242.219
Si (288.158 nm)	0.464468	ppm	0.000861	0.19	3611.050000	Y 377.433
Sn (189.925 nm)	0.400657	ppm	0.000142	0.04	668.452000	Y 377.433
Sr (421.552 nm)	0.198304	ppm	0.000700	0.35	31949.716907	Y_R 488.368
Th (288.505 nm)	0.201645	ppm	0.000774	0.38	354.404000	Y 377.433
Ti (336.122 nm)	0.200567	ppm	0.000083	0.04	25975.400000	Y 377.433
Tl (190.794 nm)	0.402268	ppm	0.000635	0.16	981.898000	Y 377.433
U (409.013 nm)	0.421007	ppm	0.007509	1.78	1363.500000	Y 377.433
V (292.401 nm)	0.200046	ppm	0.000005	0.00	10260.100000	Y 377.433
Zn (206.200 nm)	0.501467	ppm	0.001204	0.24	2294.710000	Y 377.433
Zr (343.823 nm)	0.092068	ppm	0.000368	0.40	5228.390000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.012864	18937.507450	0.000003	0.00
Y 377.433	1.017939	565543.118019	0.000337	0.03
Y_R 377.433	1.019490	49634.800000	0.008446	0.83
Y_R 488.368	1.008860	43145.100000	0.005089	0.50
Y_R2 488.368	1.033687	86334.424833	0.002520	0.24
Y_R4	1.016820	39093.700000	0.003365	0.33

Sample Name: LCSD 280-457379/12-C

Date: 5/10/2019 12:31:28 PM

Rack:Tube: 2:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.209300	ppm	0.000355	0.17	7436.790000	Y 377.433
Al (394.401 nm)	2.003360	ppm	0.002266	0.11	25261.000000	Y 377.433
Al H (396.152 nm)	2.152630	ppm	0.016201	0.75	4725.610000	Y_R 377.433
As (188.980 nm)	0.990433	ppm	0.002744	0.28	1573.830000	Y 242.219
B (249.678 nm)	0.203008	ppm	0.000059	0.03	1565.870000	Y 242.219
Ba (493.408 nm)	2.434860	ppm	0.001243	0.05	257108.000000	Y_R 488.368
Be (234.861 nm)	0.198909	ppm	0.000454	0.23	21091.800000	Y_R 488.368
Bi (223.061 nm)	0.373442	ppm	0.000054	0.01	810.706000	Y 377.433
Ca (315.887 nm)	10.190273	ppm	0.024622	0.24	8355.662472	Y_R 377.433
Cd (214.439 nm)	0.401105	ppm	0.000997	0.25	15361.000000	Y 377.433
Co (228.615 nm)	0.197525	ppm	0.001198	0.61	4929.550000	Y 242.219
Cr (205.560 nm)	1.216660	ppm	0.008528	0.70	8421.640000	Y 377.433
Cu (324.754 nm)	0.583897	ppm	0.001384	0.24	29176.500000	Y 377.433
Fe (238.204 nm)	2.026956	ppm	0.002043	0.10	5071.503168	Y_R 377.433
Fe H (259.940 nm)	2.050150 u	ppm	0.001280	0.06	2918.560000	Y_R 377.433
K (766.491 nm)	9.780190	ppm	0.201146	2.06	12468.200000	Y_R2 488.368
Li (670.783 nm)	0.202671	ppm	0.004758	2.35	801.102000	Y_R2 488.368
Mg (279.078 nm)	9.929160	ppm	0.017300	0.17	34809.100000	Y 377.433
Mn (257.610 nm)	0.202419	ppm	0.000269	0.13	58316.900000	Y 377.433
Mo (202.032 nm)	0.200363	ppm	0.000860	0.43	2662.160000	Y 377.433
Na (589.592 nm)	12.962800	ppm	0.007089	0.05	12024.200000	Y_R2 488.368
Na H (589.593 nm)	9.551323 u	ppm	0.061932	0.65	6013.743084	Y_R4
Ni (231.604 nm)	0.198070	ppm	0.000388	0.20	1064.780000	Y 377.433
P (213.618 nm)	3.840670	ppm	0.009794	0.26	5782.280000	Y 242.219
Pb (220.353 nm)	1.210960	ppm	0.000943	0.08	4083.210000	Y 242.219
S (181.972 nm)	1.865181	ppm	0.005137	0.28	920.138648	Y 377.433
Sb (206.834 nm)	0.201551	ppm	0.002703	1.34	385.111000	Y 377.433
Se (196.026 nm)	0.590549	ppm	0.002172	0.37	951.217000	Y 242.219
Si (288.158 nm)	0.464914	ppm	0.000136	0.03	3614.030000	Y 377.433
Sn (189.925 nm)	0.400098	ppm	0.002363	0.59	667.532000	Y 377.433
Sr (421.552 nm)	0.198317	ppm	0.000233	0.12	31951.937933	Y_R 488.368
Th (288.505 nm)	0.198589	ppm	0.004872	2.45	349.028000	Y 377.433
Ti (336.122 nm)	0.200405	ppm	0.000273	0.14	25953.800000	Y 377.433
Tl (190.794 nm)	0.405945	ppm	0.000952	0.23	990.895000	Y 377.433
U (409.013 nm)	0.414275	ppm	0.011590	2.80	1342.180000	Y 377.433
V (292.401 nm)	0.200158	ppm	0.000093	0.05	10265.200000	Y 377.433
Zn (206.200 nm)	0.501861	ppm	0.001016	0.20	2296.510000	Y 377.433
Zr (343.823 nm)	0.090735	ppm	0.000123	0.14	5150.190000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.015590	18988.487689	0.001864	0.18
Y 377.433	1.021120	567310.090658	0.002953	0.29
Y_R 377.433	1.014600	49396.400000	0.002598	0.26
Y_R 488.368	1.004560	42961.300000	0.001840	0.18
Y_R2 488.368	1.011283	84463.200741	0.007894	0.78
Y_R4	1.028700	39550.500000	0.003736	0.36

Sample Name: 280-123327-B-1-C

Date: 5/10/2019 12:35:00 PM

Rack:Tube: 2:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000434	ppm	0.000103	23.80	-176.731000	Y 377.433
Al (394.401 nm)	0.184138	ppm	0.000352	0.19	2391.590000	Y 377.433
Al H (396.152 nm)	0.274239 bu	ppm	0.005241	1.91	369.423000	Y_R 377.433
As (188.980 nm)	0.009007 b	ppm	0.002929	32.52	-13.074300	Y 242.219
B (249.678 nm)	0.066350 b	ppm	0.001908	2.88	-33.916100	Y 242.219
Ba (493.408 nm)	0.029097 b	ppm	0.000121	0.42	5431.030000	Y_R 488.368
Be (234.861 nm)	0.033391 b	ppm	0.000756	2.26	-4559.250000	Y_R 488.368
Bi (223.061 nm)	-0.009927 bu	ppm	0.000025	0.25	122.403000	Y 377.433
Ca (315.887 nm)	1.989048	ppm	0.019559	0.98	1571.933550	Y_R 377.433
Cd (214.439 nm)	0.002071 b	ppm	0.000114	5.48	448.853000	Y 377.433
Co (228.615 nm)	0.086409	ppm	0.000377	0.44	2141.820000	Y 242.219
Cr (205.560 nm)	1.277740	ppm	0.002075	0.16	8843.750000	Y 377.433
Cu (324.754 nm)	0.118455	ppm	0.001666	1.41	6307.360000	Y 377.433
Fe (238.204 nm)	905.479696 bo	ppm	1.240693	0.14	2263677.325501	Y_R 377.433
Fe H (259.940 nm)	907.587000 bo	ppm	0.520853	0.06	1304390.000000	Y_R 377.433
K (766.491 nm)	-0.140457 u	ppm	0.090862	64.69	2033.860000	Y_R2 488.368
Li (670.783 nm)	-0.004184 u	ppm	0.002561	61.21	-2962.140000	Y_R2 488.368
Mg (279.078 nm)	0.253943 b	ppm	0.000884	0.35	-355.150000	Y 377.433
Mn (257.610 nm)	6.715670	ppm	0.006691	0.10	1935540.000000	Y 377.433
Mo (202.032 nm)	0.163370	ppm	0.000755	0.46	2172.790000	Y 377.433
Na (589.592 nm)	4.451210	ppm	0.002437	0.05	4049.080000	Y_R2 488.368
Na H (589.593 nm)	3.982427 u	ppm	0.014277	0.36	2786.089915	Y_R4
Ni (231.604 nm)	0.987559	ppm	0.002780	0.28	5348.210000	Y 377.433
P (213.618 nm)	0.193855	ppm	0.000419	0.22	276.827000	Y 242.219
Pb (220.353 nm)	0.032802	ppm	0.001994	6.08	116.780000	Y 242.219
S (181.972 nm)	2.005996	ppm	0.004898	0.24	1010.171831	Y 377.433
Sb (206.834 nm)	0.008575 b	ppm	0.002278	26.56	110.522000	Y 377.433
Se (196.026 nm)	0.015397 b	ppm	0.005042	32.75	-204.521000	Y 242.219
Si (288.158 nm)	0.794824	ppm	0.001583	0.20	5817.840000	Y 377.433
Sn (189.925 nm)	0.000635 u	ppm	0.001355	> 100.00	10.141800	Y 377.433
Sr (421.552 nm)	0.008078 b	ppm	0.000173	2.14	1543.607834	Y_R 488.368
Th (288.505 nm)	-0.004522 bu	ppm	0.007231	> 100.00	70.120500	Y 377.433
Ti (336.122 nm)	0.009325	ppm	0.000077	0.82	724.304000	Y 377.433
Tl (190.794 nm)	0.036887 b	ppm	0.004157	11.27	-25.997300	Y 377.433
U (409.013 nm)	0.034988 b	ppm	0.000636	1.82	800.886000	Y 377.433
V (292.401 nm)	0.004792	ppm	0.000016	0.34	-351.295000	Y 377.433
Zn (206.200 nm)	0.671311 b	ppm	0.000410	0.06	3196.970000	Y 377.433
Zr (343.823 nm)	0.018800	ppm	0.000036	0.19	929.515000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.971230	18159.090091	0.000674	0.07
Y 377.433	1.004044	557823.237620	0.002983	0.30
Y_R 377.433	1.006760	49015.000000	0.000258	0.03
Y_R 488.368	0.996824	42630.400000	0.004362	0.44
Y_R2 488.368	1.007825	84174.425027	0.001390	0.14
Y_R4	1.030700	39627.100000	0.003557	0.35

Sample Name: 280-123327-B-2-C

Date: 5/10/2019 12:38:54 PM

Rack:Tube: 2:5

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000065 u	ppm	0.000434	> 100.00	-190.132000	Y 377.433
Al (394.401 nm)	0.110615	ppm	0.003478	3.14	1460.560000	Y 377.433
Al H (396.152 nm)	0.207321 bu	ppm	0.005878	2.84	220.905000	Y_R 377.433
As (188.980 nm)	0.010073 b	ppm	0.001735	17.23	-7.447090	Y 242.219
B (249.678 nm)	0.056855 b	ppm	0.000187	0.33	-21.565700	Y 242.219
Ba (493.408 nm)	0.002569 b	ppm	0.000545	21.21	2532.530000	Y_R 488.368
Be (234.861 nm)	0.027600 b	ppm	0.000343	1.24	-3929.560000	Y_R 488.368
Bi (223.061 nm)	-0.042981 bu	ppm	0.000391	0.91	25.893300	Y 377.433
Ca (315.887 nm)	1.077796	ppm	0.004393	0.41	818.221181	Y_R 377.433
Cd (214.439 nm)	0.001576 b	ppm	0.000137	8.67	372.082000	Y 377.433
Co (228.615 nm)	0.073225	ppm	0.000494	0.67	1811.440000	Y 242.219
Cr (205.560 nm)	1.065150	ppm	0.003913	0.37	7370.890000	Y 377.433
Cu (324.754 nm)	0.107655	ppm	0.000526	0.49	5778.130000	Y 377.433
Fe (238.204 nm)	767.206950 bo	ppm	0.815736	0.11	1917999.444284	Y_R 377.433
Fe H (259.940 nm)	768.514000 bo	ppm	1.383340	0.18	1104510.000000	Y_R 377.433
K (766.491 nm)	-0.044400 u	ppm	0.123838	> 100.00	2134.890000	Y_R2 488.368
Li (670.783 nm)	-0.000928 u	ppm	0.001009	> 100.00	-2902.900000	Y_R2 488.368
Mg (279.078 nm)	0.150932 b	ppm	0.001306	0.87	-522.280000	Y 377.433
Mn (257.610 nm)	5.742400	ppm	0.004081	0.07	1655030.000000	Y 377.433
Mo (202.032 nm)	0.139796	ppm	0.000116	0.08	1860.940000	Y 377.433
Na (589.592 nm)	3.266570	ppm	0.014072	0.43	3012.650000	Y_R2 488.368
Na H (589.593 nm)	2.808242 u	ppm	0.019595	0.70	2105.548774	Y_R4
Ni (231.604 nm)	0.860880	ppm	0.000233	0.03	4660.830000	Y 377.433
P (213.618 nm)	0.146086	ppm	0.004134	2.83	205.282000	Y 242.219
Pb (220.353 nm)	0.029134	ppm	0.001168	4.01	104.693000	Y 242.219
S (181.972 nm)	1.290261	ppm	0.005444	0.42	657.118906	Y 377.433
Sb (206.834 nm)	0.004199 b	ppm	0.001509	35.94	88.063100	Y 377.433
Se (196.026 nm)	0.019597 b	ppm	0.000553	2.82	-161.659000	Y 242.219
Si (288.158 nm)	0.621257	ppm	0.001116	0.18	4658.400000	Y 377.433
Sn (189.925 nm)	-0.000644 u	ppm	0.000293	45.50	8.037700	Y 377.433
Sr (421.552 nm)	0.001045 b	ppm	0.000073	6.96	392.204956	Y_R 488.368
Th (288.505 nm)	-0.010170 bu	ppm	0.000768	7.55	52.007800	Y 377.433
Ti (336.122 nm)	0.005574	ppm	0.000062	1.11	225.210000	Y 377.433
Tl (190.794 nm)	0.031985 b	ppm	0.000872	2.73	-20.096300	Y 377.433
U (409.013 nm)	0.025749 b	ppm	0.000657	2.55	670.443000	Y 377.433
V (292.401 nm)	0.000285	ppm	0.000296	> 100.00	-510.787000	Y 377.433
Zn (206.200 nm)	0.548795 b	ppm	0.000821	0.15	2617.730000	Y 377.433
Zr (343.823 nm)	0.015575	ppm	0.000216	1.39	740.286000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.987150	18456.747106	0.002431	0.25
Y 377.433	1.015633	564261.976902	0.003140	0.31
Y_R 377.433	1.026470	49974.400000	0.001917	0.19
Y_R 488.368	1.012870	43316.700000	0.006789	0.67
Y_R2 488.368	1.018729	85085.123433	0.000857	0.08
Y_R4	1.038870	39941.400000	0.005243	0.50

Sample Name: 280-123327-B-3-C

Date: 5/10/2019 12:43:01 PM

Rack:Tube: 2:6

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000663	ppm	0.000051	7.69	-195.343000	Y 377.433
Al (394.401 nm)	0.478924	ppm	0.000871	0.18	6099.490000	Y 377.433
Al H (396.152 nm)	0.566437 bu	ppm	0.009437	1.67	1031.650000	Y_R 377.433
As (188.980 nm)	0.014384 b	ppm	0.001799	12.51	-7.972320	Y 242.219
B (249.678 nm)	0.077213 b	ppm	0.001913	2.48	-25.098700	Y 242.219
Ba (493.408 nm)	0.027457 b	ppm	0.000189	0.69	5359.620000	Y_R 488.368
Be (234.861 nm)	0.038630 b	ppm	0.000204	0.53	-5091.340000	Y_R 488.368
Bi (223.061 nm)	-0.011335 bu	ppm	0.004232	37.34	140.151000	Y 377.433
Ca (315.887 nm)	2.990836	ppm	0.008413	0.28	2400.588077	Y_R 377.433
Cd (214.439 nm)	0.004071 b	ppm	0.000047	1.16	575.997000	Y 377.433
Co (228.615 nm)	0.117168	ppm	0.000185	0.16	2940.790000	Y 242.219
Cr (205.560 nm)	1.774810	ppm	0.000003	0.00	12287.900000	Y 377.433
Cu (324.754 nm)	0.189411	ppm	0.000623	0.33	9782.430000	Y 377.433
Fe (238.204 nm)	1027.246389 bo	ppm	0.289026	0.03	2568090.550595	Y_R 377.433
Fe H (259.940 nm)	1034.260000 bo	ppm	0.213312	0.02	1486450.000000	Y_R 377.433
K (766.491 nm)	5.467550	ppm	0.235678	4.31	7932.250000	Y_R2 488.368
Li (670.783 nm)	-0.001412 u	ppm	0.000498	35.24	-2911.710000	Y_R2 488.368
Mg (279.078 nm)	0.394690 b	ppm	0.002576	0.65	-30.591500	Y 377.433
Mn (257.610 nm)	7.716490	ppm	0.003434	0.04	2223990.000000	Y 377.433
Mo (202.032 nm)	0.257873	ppm	0.000260	0.10	3422.930000	Y 377.433
Na (589.592 nm)	4.626260	ppm	0.005779	0.12	4201.090000	Y_R2 488.368
Na H (589.593 nm)	4.074738 u	ppm	0.046790	1.15	2839.591849	Y_R4
Ni (231.604 nm)	1.019300	ppm	0.000810	0.08	5520.430000	Y 377.433
P (213.618 nm)	1.242380	ppm	0.009932	0.80	1878.150000	Y 242.219
Pb (220.353 nm)	0.207449	ppm	0.004425	2.13	702.823000	Y 242.219
S (181.972 nm)	2.935128	ppm	0.000918	0.03	1467.590941	Y 377.433
Sb (206.834 nm)	0.007741 b	ppm	0.002142	27.68	120.428000	Y 377.433
Se (196.026 nm)	0.019482 b	ppm	0.002927	15.02	-229.352000	Y 242.219
Si (288.158 nm)	1.838460	ppm	0.002918	0.16	12789.300000	Y 377.433
Sn (189.925 nm)	0.052748	ppm	0.002268	4.30	95.903800	Y 377.433
Sr (421.552 nm)	0.013375 b	ppm	0.000045	0.34	2413.680143	Y_R 488.368
Th (288.505 nm)	-0.009985 bu	ppm	0.000445	4.46	62.650300	Y 377.433
Ti (336.122 nm)	0.631532	ppm	0.000201	0.03	82813.100000	Y 377.433
Tl (190.794 nm)	0.040130 b	ppm	0.000904	2.25	-37.225100	Y 377.433
U (409.013 nm)	0.041275 b	ppm	0.001759	4.26	908.756000	Y 377.433
V (292.401 nm)	0.061514	ppm	0.000204	0.33	2545.510000	Y 377.433
Zn (206.200 nm)	1.220960 b	ppm	0.000526	0.04	5725.420000	Y 377.433
Zr (343.823 nm)	0.027019	ppm	0.000099	0.37	1411.760000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.965239	18047.066366	0.001302	0.13
Y 377.433	1.000744	555990.009881	0.000063	0.01
Y_R 377.433	1.014260	49380.000000	0.003513	0.35
Y_R 488.368	1.005150	42986.600000	0.002389	0.24
Y_R2 488.368	0.996940	83265.303517	0.000994	0.10
Y_R4	1.021530	39274.600000	0.004409	0.43

Sample Name: 280-123327-B-1-C@5

Date: 5/10/2019 12:46:43 PM

Rack:Tube: 2:7

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000228 u	ppm	0.000145	63.76	-194.524000	Y 377.433
Al (394.401 nm)	0.035278	ppm	0.000702	1.99	478.566000	Y 377.433
Al H (396.152 nm)	0.142486 u	ppm	0.002014	1.41	95.283200	Y_R 377.433
As (188.980 nm)	0.004647	ppm	0.000785	16.90	0.775920	Y 242.219
B (249.678 nm)	0.011518	ppm	0.000396	3.44	-3.719780	Y 242.219
Ba (493.408 nm)	0.004335	ppm	0.000120	2.77	2223.850000	Y_R 488.368
Be (234.861 nm)	0.005226	ppm	0.000359	6.88	-964.187000	Y_R 488.368
Bi (223.061 nm)	0.007086	ppm	0.003993	56.36	33.760800	Y 377.433
Ca (315.887 nm)	0.356395	ppm	0.006662	1.87	221.538086	Y_R 377.433
Cd (214.439 nm)	0.000600	ppm	0.000196	32.61	86.696700	Y 377.433
Co (228.615 nm)	0.017078	ppm	0.001465	8.58	404.556000	Y 242.219
Cr (205.560 nm)	0.250837	ppm	0.017535	6.99	1729.610000	Y 377.433
Cu (324.754 nm)	0.022751	ppm	0.001651	7.26	1624.120000	Y 377.433
Fe (238.204 nm)	169.763328 o	ppm	2.145380	1.26	424407.600308	Y_R 377.433
Fe H (259.940 nm)	168.611000	ppm	2.136000	1.27	242306.000000	Y_R 377.433
K (766.491 nm)	-0.205434 u	ppm	0.065697	31.98	1965.520000	Y_R2 488.368
Li (670.783 nm)	0.000261 u	ppm	0.002410	> 100.00	-2881.280000	Y_R2 488.368
Mg (279.078 nm)	0.044814	ppm	0.002279	5.09	-62.819900	Y 377.433
Mn (257.610 nm)	1.358320	ppm	0.085706	6.31	391467.000000	Y 377.433
Mo (202.032 nm)	0.031670	ppm	0.001637	5.17	430.567000	Y 377.433
Na (589.592 nm)	0.811851	ppm	0.038826	4.78	878.322000	Y_R2 488.368
Na H (589.593 nm)	0.304621 u	ppm	0.003336	1.10	654.485062	Y_R4
Ni (231.604 nm)	0.199479	ppm	0.013889	6.96	1071.950000	Y 377.433
P (213.618 nm)	0.032021	ppm	0.004827	15.08	48.244700	Y 242.219
Pb (220.353 nm)	0.007438	ppm	0.001315	17.67	32.686700	Y 242.219
S (181.972 nm)	0.389496	ppm	0.018201	4.67	202.331685	Y 377.433
Sb (206.834 nm)	0.003965	ppm	0.001718	43.34	27.045000	Y 377.433
Se (196.026 nm)	0.005376	ppm	0.002704	50.29	-29.649900	Y 242.219
Si (288.158 nm)	0.151653	ppm	0.010005	6.60	1521.450000	Y 377.433
Sn (189.925 nm)	-0.002027 u	ppm	0.001688	83.27	5.760750	Y 377.433
Sr (421.552 nm)	0.000764	ppm	0.000329	43.06	252.606392	Y_R 488.368
Th (288.505 nm)	-0.007762 u	ppm	0.001599	20.60	18.526300	Y 377.433
Ti (336.122 nm)	0.001927	ppm	0.000309	16.05	-264.096000	Y 377.433
Tl (190.794 nm)	0.006976	ppm	0.001173	16.82	-4.617540	Y 377.433
U (409.013 nm)	-0.000625 u	ppm	0.006452	> 100.00	151.706000	Y 377.433
V (292.401 nm)	0.000979	ppm	0.000115	11.75	-143.062000	Y 377.433
Zn (206.200 nm)	0.135721	ppm	0.009588	7.06	646.930000	Y 377.433
Zr (343.823 nm)	0.004015	ppm	0.000171	4.27	62.043000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.041712	19476.890145	0.005565	0.53
Y 377.433	1.041882	578845.316607	0.003758	0.36
Y_R 377.433	1.048470	51045.400000	0.004771	0.46
Y_R 488.368	1.038120	44396.500000	0.004015	0.39
Y_R2 488.368	1.032262	86215.405248	0.004117	0.40
Y_R4	1.036920	39866.200000	0.003797	0.37

Sample Name: 280-123327-B-2-C@5

Date: 5/10/2019 12:50:19 PM

Rack:Tube: 2:8

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000157 u	ppm	0.000051	32.39	-191.404000	Y 377.433
Al (394.401 nm)	0.023006	ppm	0.001139	4.95	324.458000	Y 377.433
Al H (396.152 nm)	0.127505 u	ppm	0.001996	1.57	62.158000	Y_R 377.433
As (188.980 nm)	0.003082	ppm	0.000257	8.34	-0.948885	Y 242.219
B (249.678 nm)	0.010159	ppm	0.000782	7.70	2.431100	Y 242.219
Ba (493.408 nm)	0.000120	ppm	0.000035	29.44	1759.140000	Y_R 488.368
Be (234.861 nm)	0.004282	ppm	0.000351	8.20	-822.154000	Y_R 488.368
Bi (223.061 nm)	0.003070	ppm	0.001606	52.30	20.292400	Y 377.433
Ca (315.887 nm)	0.188787	ppm	0.005458	2.89	82.908802	Y_R 377.433
Cd (214.439 nm)	0.000441	ppm	0.000021	4.78	69.350400	Y 377.433
Co (228.615 nm)	0.014461	ppm	0.000609	4.21	338.942000	Y 242.219
Cr (205.560 nm)	0.206361	ppm	0.012030	5.83	1421.480000	Y 377.433
Cu (324.754 nm)	0.020266	ppm	0.001588	7.84	1502.650000	Y 377.433
Fe (238.204 nm)	142.743817 o	ppm	1.363224	0.96	356859.602654	Y_R 377.433
Fe H (259.940 nm)	141.694000	ppm	1.371570	0.97	203619.000000	Y_R 377.433
K (766.491 nm)	-0.227216 u	ppm	0.185096	81.46	1942.610000	Y_R2 488.368
Li (670.783 nm)	0.003530	ppm	0.002261	64.06	-2821.800000	Y_R2 488.368
Mg (279.078 nm)	0.020934	ppm	0.001218	5.82	-109.233000	Y 377.433
Mn (257.610 nm)	1.132950	ppm	0.063667	5.62	326511.000000	Y 377.433
Mo (202.032 nm)	0.026653	ppm	0.001700	6.38	364.203000	Y 377.433
Na (589.592 nm)	0.581639	ppm	0.034688	5.96	677.151000	Y_R2 488.368
Na H (589.593 nm)	0.104746 u	ppm	0.047910	45.74	538.640799	Y_R4
Ni (231.604 nm)	0.169409	ppm	0.010185	6.01	908.788000	Y 377.433
P (213.618 nm)	0.018157	ppm	0.003147	17.33	27.354400	Y 242.219
Pb (220.353 nm)	0.004906	ppm	0.000167	3.41	24.285800	Y 242.219
S (181.972 nm)	0.248232	ppm	0.023812	9.59	132.539028	Y 377.433
Sb (206.834 nm)	0.003468	ppm	0.002645	76.27	23.301900	Y 377.433
Se (196.026 nm)	0.003421	ppm	0.000667	19.48	-25.798900	Y 242.219
Si (288.158 nm)	0.116121	ppm	0.005411	4.66	1284.100000	Y 377.433
Sn (189.925 nm)	-0.003835 u	ppm	0.000599	15.62	2.784860	Y 377.433
Sr (421.552 nm)	-0.000043 u	ppm	0.000133	> 100.00	118.604645	Y_R 488.368
Th (288.505 nm)	-0.001278 u	ppm	0.006254	> 100.00	27.920300	Y 377.433
Ti (336.122 nm)	0.001131	ppm	0.000223	19.74	-369.944000	Y 377.433
Tl (190.794 nm)	0.006321	ppm	0.001892	29.93	-2.733610	Y 377.433
U (409.013 nm)	0.005590	ppm	0.004573	81.82	151.826000	Y 377.433
V (292.401 nm)	0.000174	ppm	0.000073	41.95	-168.927000	Y 377.433
Zn (206.200 nm)	0.107632	ppm	0.006548	6.08	514.801000	Y 377.433
Zr (343.823 nm)	0.003442	ppm	0.000352	10.23	28.453400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.046516	19566.697349	0.004402	0.42
Y 377.433	1.046017	581142.342059	0.005455	0.52
Y_R 377.433	1.050620	51150.200000	0.000440	0.04
Y_R 488.368	1.040390	44493.600000	0.000786	0.08
Y_R2 488.368	1.042916	87105.241195	0.003288	0.32
Y_R4	1.046670	40241.100000	0.007124	0.68

Sample Name: 280-123327-B-3-C@5

Date: 5/10/2019 12:53:55 PM

Rack:Tube: 2:9

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000187 u	ppm	0.000259	> 100.00	-197.744000	Y 377.433
Al (394.401 nm)	0.093815	ppm	0.004115	4.39	1218.620000	Y 377.433
Al H (396.152 nm)	0.191200 u	ppm	0.008501	4.45	205.954000	Y_R 377.433
As (188.980 nm)	0.003278	ppm	0.000503	15.34	-1.975270	Y 242.219
B (249.678 nm)	0.014432	ppm	0.000162	1.12	6.230560	Y 242.219
Ba (493.408 nm)	0.003966	ppm	0.000417	10.51	2201.830000	Y_R 488.368
Be (234.861 nm)	0.005809	ppm	0.000372	6.40	-1083.280000	Y_R 488.368
Bi (223.061 nm)	0.004074	ppm	0.001024	25.14	30.603600	Y 377.433
Ca (315.887 nm)	0.519604	ppm	0.003339	0.64	356.540631	Y_R 377.433
Cd (214.439 nm)	0.000838	ppm	0.000077	9.20	104.223000	Y 377.433
Co (228.615 nm)	0.022017	ppm	0.002723	12.37	533.712000	Y 242.219
Cr (205.560 nm)	0.340103	ppm	0.019386	5.70	2348.120000	Y 377.433
Cu (324.754 nm)	0.036446	ppm	0.002208	6.06	2293.140000	Y 377.433
Fe (238.204 nm)	190.167308 o	ppm	1.648315	0.87	475416.962257	Y_R 377.433
Fe H (259.940 nm)	189.465000	ppm	1.787960	0.94	272278.000000	Y_R 377.433
K (766.491 nm)	0.690602	ppm	0.031031	4.49	2907.950000	Y_R2 488.368
Li (670.783 nm)	0.003161	ppm	0.001088	34.42	-2828.510000	Y_R2 488.368
Mg (279.078 nm)	0.067006	ppm	0.003855	5.75	-13.506100	Y 377.433
Mn (257.610 nm)	1.536070	ppm	0.096040	6.25	442697.000000	Y 377.433
Mo (202.032 nm)	0.049871	ppm	0.002535	5.08	671.345000	Y 377.433
Na (589.592 nm)	0.797433	ppm	0.002413	0.30	865.714000	Y_R2 488.368
Na H (589.593 nm)	0.201558 u	ppm	0.017769	8.82	594.751646	Y_R4
Ni (231.604 nm)	0.200520	ppm	0.013150	6.56	1077.600000	Y 377.433
P (213.618 nm)	0.225450	ppm	0.017088	7.58	344.101000	Y 242.219
Pb (220.353 nm)	0.040362	ppm	0.003475	8.61	143.228000	Y 242.219
S (181.972 nm)	0.564272	ppm	0.026225	4.65	288.332829	Y 377.433
Sb (206.834 nm)	-0.002028 u	ppm	0.002794	> 100.00	17.750600	Y 377.433
Se (196.026 nm)	0.006458	ppm	0.001674	25.93	-33.119400	Y 242.219
Si (288.158 nm)	0.353095	ppm	0.022330	6.32	2867.080000	Y 377.433
Sn (189.925 nm)	0.006578	ppm	0.000515	7.83	19.922400	Y 377.433
Sr (421.552 nm)	0.001781	ppm	0.000032	1.78	419.101490	Y_R 488.368
Th (288.505 nm)	-0.004428 u	ppm	0.000454	10.25	25.142200	Y 377.433
Ti (336.122 nm)	0.122327	ppm	0.007655	6.26	15620.200000	Y 377.433
Tl (190.794 nm)	0.009646	ppm	0.000125	1.30	-1.368060	Y 377.433
U (409.013 nm)	0.013151	ppm	0.009741	74.07	210.407000	Y 377.433
V (292.401 nm)	0.012153	ppm	0.000629	5.18	428.986000	Y 377.433
Zn (206.200 nm)	0.237708	ppm	0.015464	6.51	1115.760000	Y 377.433
Zr (343.823 nm)	0.005648	ppm	0.000338	5.98	157.852000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.016973	19014.331184	0.007532	0.74
Y 377.433	1.028703	571523.068093	0.007600	0.74
Y_R 377.433	1.037150	50494.500000	0.001513	0.15
Y_R 488.368	1.018290	43548.500000	0.009060	0.89
Y_R2 488.368	1.033955	86356.809938	0.009346	0.90
Y_R4	1.022220	39301.100000	0.004179	0.41

Sample Name: CCVH-5690583

Date: 5/10/2019 12:57:33 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000003 u	ppm	0.000169	> 100.00	-323.564000	Y 377.433
Al (394.401 nm)	49.143300 o	ppm	0.031385	0.06	617572.000000	Y 377.433
Al H (396.152 nm)	49.028600	ppm	0.016814	0.03	110143.000000	Y_R 377.433
As (188.980 nm)	0.004022	ppm	0.001099	27.32	0.084310	Y 242.219
B (249.678 nm)	0.005573	ppm	0.001678	30.10	24.357600	Y 242.219
Ba (493.408 nm)	0.001995	ppm	0.000742	37.19	1878.730000	Y_R 488.368
Be (234.861 nm)	0.002343	ppm	0.000107	4.55	-193.563000	Y_R 488.368
Bi (223.061 nm)	0.958003	ppm	0.007460	0.78	2104.280000	Y 377.433
Ca (315.887 nm)	0.023072	ppm	0.005987	25.95	-41.522945	Y_R 377.433
Cd (214.439 nm)	0.000581	ppm	0.000142	24.47	35.981500	Y 377.433
Co (228.615 nm)	0.003691	ppm	0.000164	4.44	69.031900	Y 242.219
Cr (205.560 nm)	0.000899	ppm	0.000336	37.43	-3.249430	Y 377.433
Cu (324.754 nm)	0.007422	ppm	0.000473	6.37	1287.290000	Y 377.433
Fe (238.204 nm)	49.410259 o	ppm	0.035680	0.07	123528.396229	Y_R 377.433
Fe H (259.940 nm)	49.033500	ppm	0.039590	0.08	70444.700000	Y_R 377.433
K (766.491 nm)	0.022495	ppm	0.001850	8.22	2205.250000	Y_R2 488.368
Li (670.783 nm)	0.000774 u	ppm	0.002102	> 100.00	-2871.930000	Y_R2 488.368
Mg (279.078 nm)	0.008204	ppm	0.000142	1.74	-187.486000	Y 377.433
Mn (257.610 nm)	0.001179	ppm	0.000019	1.59	316.258000	Y 377.433
Mo (202.032 nm)	0.000179	ppm	0.000042	23.43	13.985900	Y 377.433
Na (589.592 nm)	241.106000 o	ppm	0.698091	0.29	209767.000000	Y_R2 488.368
Na H (589.593 nm)	243.391263	ppm	0.827981	0.34	141544.074412	Y_R4
Ni (231.604 nm)	0.001012	ppm	0.001220	> 100.00	-4.969120	Y 377.433
P (213.618 nm)	-0.016328 u	ppm	0.004113	25.19	-29.292000	Y 242.219
Pb (220.353 nm)	0.007155	ppm	0.001319	18.44	48.084500	Y 242.219
S (181.972 nm)	4.829241	ppm	0.023330	0.48	2367.435644	Y 377.433
Sb (206.834 nm)	-0.000643 u	ppm	0.000667	> 100.00	4.522050	Y 377.433
Se (196.026 nm)	0.003063	ppm	0.001537	50.18	-2.833080	Y 242.219
Si (288.158 nm)	0.028725	ppm	0.000754	2.63	700.291000	Y 377.433
Sn (189.925 nm)	-0.002829 u	ppm	0.000986	34.85	4.440300	Y 377.433
Sr (421.552 nm)	0.000707	ppm	0.000201	28.48	224.438099	Y_R 488.368
Th (288.505 nm)	4.912140	ppm	0.011023	0.22	8678.310000	Y 377.433
Ti (336.122 nm)	0.001239	ppm	0.000001	0.10	-357.332000	Y 377.433
Tl (190.794 nm)	0.000203 u	ppm	0.000407	> 100.00	-4.353620	Y 377.433
U (409.013 nm)	9.738940	ppm	0.012677	0.13	31175.100000	Y 377.433
V (292.401 nm)	-0.000689 u	ppm	0.000056	8.10	-125.477000	Y 377.433
Zn (206.200 nm)	0.001504	ppm	0.000073	4.83	16.850300	Y 377.433
Zr (343.823 nm)	-0.003632 u	ppm	0.000109	3.01	-386.629000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.006953	18826.999231	0.003318	0.33
Y 377.433	1.003807	557691.694300	0.003359	0.33
Y_R 377.433	1.030300	50160.800000	0.002110	0.20
Y_R 488.368	1.024020	43793.400000	0.002110	0.21
Y_R2 488.368	1.014847	84760.917958	0.004816	0.47
Y_R4	1.050910	40404.300000	0.002422	0.23

Sample Name: CCV-5690581

Date: 5/10/2019 1:01:40 PM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.482619	ppm	0.000325	0.07	17451.200000	Y 377.433
Al (394.401 nm)	0.493144	ppm	0.000995	0.20	6349.970000	Y 377.433
Al H (396.152 nm)	0.531986 u	ppm	0.003078	0.58	1225.040000	Y_R 377.433
As (188.980 nm)	0.967599	ppm	0.003812	0.39	1537.580000	Y 242.219
B (249.678 nm)	0.476431	ppm	0.000074	0.02	3660.320000	Y 242.219
Ba (493.408 nm)	0.478968	ppm	0.000231	0.05	51886.600000	Y_R 488.368
Be (234.861 nm)	0.480921	ppm	0.001263	0.26	51018.400000	Y_R 488.368
Bi (223.061 nm)	0.005079	ppm	0.000180	3.54	0.815047	Y 377.433
Ca (315.887 nm)	5.035704	ppm	0.014022	0.28	4091.922793	Y_R 377.433
Cd (214.439 nm)	0.499594	ppm	0.001186	0.24	19134.400000	Y 377.433
Co (228.615 nm)	0.489823	ppm	0.001903	0.39	12258.700000	Y 242.219
Cr (205.560 nm)	0.491079	ppm	0.001542	0.31	3391.220000	Y 377.433
Cu (324.754 nm)	0.487828	ppm	0.001953	0.40	24452.500000	Y 377.433
Fe (238.204 nm)	2.483856	ppm	0.001688	0.07	6213.738265	Y_R 377.433
Fe H (259.940 nm)	2.500350 u	ppm	0.002369	0.09	3565.600000	Y_R 377.433
K (766.491 nm)	47.793000	ppm	0.034627	0.07	52449.400000	Y_R2 488.368
Li (670.783 nm)	0.979929	ppm	0.003429	0.35	14941.400000	Y_R2 488.368
Mg (279.078 nm)	19.719300	ppm	0.052824	0.27	69130.400000	Y 377.433
Mn (257.610 nm)	0.490213	ppm	0.001096	0.22	141264.000000	Y 377.433
Mo (202.032 nm)	0.494248	ppm	0.000759	0.15	6549.860000	Y 377.433
Na (589.592 nm)	24.978000	ppm	0.045419	0.18	21999.900000	Y_R2 488.368
Na H (589.593 nm)	24.558433 u	ppm	0.026437	0.11	14711.652801	Y_R4
Ni (231.604 nm)	0.493568	ppm	0.002446	0.50	2668.900000	Y 377.433
P (213.618 nm)	0.960937	ppm	0.002331	0.24	1346.750000	Y 242.219
Pb (220.353 nm)	0.983463	ppm	0.006016	0.61	3316.480000	Y 242.219
S (181.972 nm)	0.004521	ppm	0.000438	9.69	11.564124	Y 377.433
Sb (206.834 nm)	0.977856	ppm	0.002468	0.25	1821.370000	Y 377.433
Se (196.026 nm)	0.974120	ppm	0.006808	0.70	1565.910000	Y 242.219
Si (288.158 nm)	4.830530	ppm	0.017898	0.37	32776.400000	Y 377.433
Sn (189.925 nm)	1.001360	ppm	0.000246	0.02	1657.020000	Y 377.433
Sr (421.552 nm)	0.480165	ppm	0.000338	0.07	77215.118845	Y_R 488.368
Th (288.505 nm)	0.005840	ppm	0.000698	11.96	-20.556500	Y 377.433
Ti (336.122 nm)	0.486761	ppm	0.000777	0.16	63716.600000	Y 377.433
Tl (190.794 nm)	0.994200	ppm	0.003056	0.31	2427.650000	Y 377.433
U (409.013 nm)	0.022854	ppm	0.008913	39.00	43.326400	Y 377.433
V (292.401 nm)	0.488813	ppm	0.000985	0.20	26161.500000	Y 377.433
Zn (206.200 nm)	0.502785	ppm	0.001167	0.23	2300.800000	Y 377.433
Zr (343.823 nm)	0.488042	ppm	0.000272	0.06	28461.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.021520	19099.358708	0.004005	0.39
Y 377.433	1.016423	564700.924115	0.004277	0.42
Y_R 377.433	1.031180	50203.900000	0.000909	0.09
Y_R 488.368	1.023450	43769.200000	0.001974	0.19
Y_R2 488.368	1.016778	84922.215553	0.001771	0.17
Y_R4	1.038450	39925.200000	0.000464	0.04

Sample Name: CCB

Date: 5/10/2019 1:05:13 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000041 u	ppm	0.000548	> 100.00	-183.128000	Y 377.433
Al (394.401 nm)	0.002304	ppm	0.001616	70.14	58.382000	Y 377.433
Al H (396.152 nm)	0.112570 Zu	ppm	0.002564	2.28	33.376700 Z	Y_R 377.433
As (188.980 nm)	-0.000109 u	ppm	0.000579	> 100.00	-1.999550	Y 242.219
B (249.678 nm)	0.000164 u	ppm	0.000935	> 100.00	13.101400	Y 242.219
Ba (493.408 nm)	-0.000439 u	ppm	0.000072	16.43	1582.550000	Y_R 488.368
Be (234.861 nm)	-0.000006 u	ppm	0.000000	7.38	-1.492810	Y_R 488.368
Bi (223.061 nm)	0.003286	ppm	0.001296	39.45	-3.656580	Y 377.433
Ca (315.887 nm)	-0.005064 u	ppm	0.006519	> 100.00	-77.427857	Y_R 377.433
Cd (214.439 nm)	-0.000068 u	ppm	0.000055	80.32	-9.399290	Y 377.433
Co (228.615 nm)	0.000203	ppm	0.000044	21.85	-18.342800	Y 242.219
Cr (205.560 nm)	0.000034 u	ppm	0.000577	> 100.00	-7.888470	Y 377.433
Cu (324.754 nm)	-0.000162 u	ppm	0.000810	> 100.00	501.529000	Y 377.433
Fe (238.204 nm)	0.001425	ppm	0.000438	30.75	7.734580	Y_R 377.433
Fe H (259.940 nm)	0.032083 u	ppm	0.000820	2.55	18.118400	Y_R 377.433
K (766.491 nm)	-0.162866 u	ppm	0.142457	87.47	2010.290000	Y_R2 488.368
Li (670.783 nm)	-0.001482 u	ppm	0.001069	72.12	-2912.990000	Y_R2 488.368
Mg (279.078 nm)	0.000745	ppm	0.001021	> 100.00	18.534200	Y 377.433
Mn (257.610 nm)	0.000069	ppm	0.000006	8.82	-3.617190	Y 377.433
Mo (202.032 nm)	0.000384	ppm	0.000031	8.05	16.699300	Y 377.433
Na (589.592 nm)	0.086835	ppm	0.042215	48.61	246.791000	Y_R2 488.368
Na H (589.593 nm)	0.086263 u	ppm	0.015584	18.07	527.927800	Y_R4
Ni (231.604 nm)	0.000416	ppm	0.000531	> 100.00	-8.201610	Y 377.433
P (213.618 nm)	-0.005980 u	ppm	0.000442	7.40	-5.676410	Y 242.219
Pb (220.353 nm)	0.000068 u	ppm	0.001371	> 100.00	8.282400	Y 242.219
S (181.972 nm)	-0.001529 u	ppm	0.005963	> 100.00	6.728219	Y 377.433
Sb (206.834 nm)	-0.002249 u	ppm	0.001921	85.41	-1.916880	Y 377.433
Se (196.026 nm)	0.000863 u	ppm	0.004103	> 100.00	6.964180	Y 242.219
Si (288.158 nm)	-0.002520 u	ppm	0.002953	> 100.00	491.571000	Y 377.433
Sn (189.925 nm)	-0.004215 u	ppm	0.000109	2.59	2.159990	Y 377.433
Sr (421.552 nm)	0.000024	ppm	0.000009	36.25	106.917391	Y_R 488.368
Th (288.505 nm)	-0.004078 u	ppm	0.003449	84.56	12.233800	Y 377.433
Ti (336.122 nm)	0.000095	ppm	0.000010	10.85	-508.435000	Y 377.433
Tl (190.794 nm)	0.002713	ppm	0.001885	69.48	6.747930	Y 377.433
U (409.013 nm)	-0.000600 u	ppm	0.009283	> 100.00	28.092800	Y 377.433
V (292.401 nm)	0.000216	ppm	0.000181	83.90	-84.435500	Y 377.433
Zn (206.200 nm)	0.000325	ppm	0.000344	> 100.00	4.570460	Y 377.433
Zr (343.823 nm)	0.000348	ppm	0.000090	25.82	-153.087000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.065224	19916.482885	0.003154	0.30
Y 377.433	1.055702	586523.140967	0.002736	0.26
Y_R 377.433	1.062180	51713.000000	0.003293	0.31
Y_R 488.368	1.051290	44959.900000	0.001786	0.17
Y_R2 488.368	1.039724	86838.619205	0.007868	0.76
Y_R4	1.038480	39926.200000	0.009142	0.88

Sample Name: CCVL-5695588

Date: 5/10/2019 1:08:29 PM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009149	ppm	0.000067	0.73	149.170000	Y 377.433
Al (394.401 nm)	0.103132	ppm	0.001213	1.18	1330.240000	Y 377.433
Al H (396.152 nm)	0.216671 u	ppm	0.003323	1.53	273.078000	Y_R 377.433
As (188.980 nm)	0.014126	ppm	0.001225	8.67	20.640800	Y 242.219
B (249.678 nm)	0.093086	ppm	0.001074	1.15	724.926000	Y 242.219
Ba (493.408 nm)	0.009062	ppm	0.000043	0.48	2579.520000	Y_R 488.368
Be (234.861 nm)	0.000917	ppm	0.000046	5.04	95.644200	Y_R 488.368
Bi (223.061 nm)	0.095788	ppm	0.000333	0.35	199.782000	Y 377.433
Ca (315.887 nm)	0.199474	ppm	0.010424	5.23	91.770971	Y_R 377.433
Cd (214.439 nm)	0.005072	ppm	0.000040	0.79	187.553000	Y 377.433
Co (228.615 nm)	0.010462	ppm	0.000085	0.81	238.904000	Y 242.219
Cr (205.560 nm)	0.010122	ppm	0.000206	2.03	61.845700	Y 377.433
Cu (324.754 nm)	0.014801	ppm	0.000325	2.19	1236.210000	Y 377.433
Fe (238.204 nm)	0.097474	ppm	0.001017	1.04	247.853736	Y_R 377.433
Fe H (259.940 nm)	0.130876 u	ppm	0.005720	4.37	160.108000	Y_R 377.433
K (766.491 nm)	2.770440	ppm	0.166788	6.02	5095.490000	Y_R2 488.368
Li (670.783 nm)	0.023076	ppm	0.002399	10.40	-2466.210000	Y_R2 488.368
Mg (279.078 nm)	0.202064	ppm	0.000494	0.24	723.264000	Y 377.433
Mn (257.610 nm)	0.010358	ppm	0.000002	0.02	2961.850000	Y 377.433
Mo (202.032 nm)	0.019190	ppm	0.000311	1.62	265.474000	Y 377.433
Na (589.592 nm)	1.116170	ppm	0.019949	1.79	1143.880000	Y_R2 488.368
Na H (589.593 nm)	0.693028 u	ppm	0.003709	0.54	879.600528	Y_R4
Ni (231.604 nm)	0.041805	ppm	0.000735	1.76	216.402000	Y 377.433
P (213.618 nm)	2.702150	ppm	0.022547	0.83	4173.520000	Y 242.219
Pb (220.353 nm)	0.011368	ppm	0.000717	6.30	46.351400	Y 242.219
S (181.972 nm)	0.096937	ppm	0.004550	4.69	54.886170	Y 377.433
Sb (206.834 nm)	0.017441	ppm	0.002747	15.75	34.614000	Y 377.433
Se (196.026 nm)	0.020439	ppm	0.000935	4.57	38.310100	Y 242.219
Si (288.158 nm)	0.497652	ppm	0.004418	0.89	3832.720000	Y 377.433
Sn (189.925 nm)	0.097393	ppm	0.001159	1.19	169.374000	Y 377.433
Sr (421.552 nm)	0.008764	ppm	0.000055	0.63	1510.538957	Y_R 488.368
Th (288.505 nm)	0.010945	ppm	0.002198	20.08	37.985100	Y 377.433
Ti (336.122 nm)	0.009980	ppm	0.000001	0.01	796.466000	Y 377.433
Tl (190.794 nm)	0.016773	ppm	0.000064	0.38	41.009800	Y 377.433
U (409.013 nm)	0.065493	ppm	0.004929	7.53	238.095000	Y 377.433
V (292.401 nm)	0.010010	ppm	0.000092	0.92	440.140000	Y 377.433
Zn (206.200 nm)	0.021015	ppm	0.000238	1.13	99.124100	Y 377.433
Zr (343.823 nm)	0.010234 Q	ppm	0.000408	3.99	426.954000 Q	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.040148	19447.649507	0.002304	0.22
Y 377.433	1.040214	577918.570056	0.003275	0.31
Y_R 377.433	1.046410	50945.200000	0.002839	0.27
Y_R 488.368	1.033700	44207.300000	0.000783	0.08
Y_R2 488.368	1.031033	86112.730217	0.001216	0.12
Y_R4	1.022560	39314.400000	0.000958	0.09

Sample Name: 160-33998-B-2-E

Date: 5/10/2019 1:11:55 PM

Rack:Tube: 2:10

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000077	ppm	0.000102	> 100.00	-181.788000	Y 377.433
Al (394.401 nm)	0.008550	ppm	0.001489	17.42	142.589000	Y 377.433
Al H (396.152 nm)	0.110446 u	ppm	0.013102	11.86	40.168700	Y_R 377.433
As (188.980 nm)	0.001046	ppm	0.000628	60.04	-0.162598	Y 242.219
B (249.678 nm)	0.014145	ppm	0.000600	4.24	120.194000	Y 242.219
Ba (493.408 nm)	0.117539	ppm	0.000095	0.08	13961.400000	Y_R 488.368
Be (234.861 nm)	-0.000090 u	ppm	0.000031	34.23	-10.717700	Y_R 488.368
Bi (223.061 nm)	0.000383 u	ppm	0.000572	> 100.00	-10.033700	Y 377.433
Ca (315.887 nm)	3.563134	ppm	0.009728	0.27	2873.824866	Y_R 377.433
Cd (214.439 nm)	0.000065	ppm	0.000022	34.00	-4.284140	Y 377.433
Co (228.615 nm)	-0.000283 u	ppm	0.000069	24.46	-30.465200	Y 242.219
Cr (205.560 nm)	-0.000128 u	ppm	0.000083	64.58	-9.015230	Y 377.433
Cu (324.754 nm)	0.000259	ppm	0.000024	9.43	521.003000	Y 377.433
Fe (238.204 nm)	0.036513	ppm	0.000521	1.43	95.451563	Y_R 377.433
Fe H (259.940 nm)	0.069176 u	ppm	0.002528	3.65	71.430200	Y_R 377.433
K (766.491 nm)	0.400077	ppm	0.140867	35.21	2602.380000	Y_R2 488.368
Li (670.783 nm)	-0.002263 u	ppm	0.000117	5.17	-2927.180000	Y_R2 488.368
Mg (279.078 nm)	0.534009	ppm	0.000233	0.04	1887.830000	Y 377.433
Mn (257.610 nm)	0.007020	ppm	0.000015	0.21	1999.880000	Y 377.433
Mo (202.032 nm)	0.001144	ppm	0.000011	0.98	26.747300	Y 377.433
Na (589.592 nm)	4.977170	ppm	0.056927	1.14	4526.290000	Y_R2 488.368
Na H (589.593 nm)	4.383811 u	ppm	0.044755	1.02	3018.726171	Y_R4
Ni (231.604 nm)	0.000166 u	ppm	0.000329	> 100.00	-9.559860	Y 377.433
P (213.618 nm)	-0.004895 u	ppm	0.001594	32.57	-4.303360	Y 242.219
Pb (220.353 nm)	0.000983	ppm	0.000387	39.38	11.331400	Y 242.219
S (181.972 nm)	0.914887	ppm	0.002443	0.27	454.761842	Y 377.433
Sb (206.834 nm)	0.000841	ppm	0.000056	6.62	3.834100	Y 377.433
Se (196.026 nm)	0.001816	ppm	0.001344	74.01	8.491680	Y 242.219
Si (288.158 nm)	0.501267	ppm	0.001618	0.32	3856.870000	Y 377.433
Sn (189.925 nm)	-0.003770 u	ppm	0.000540	14.31	2.892980	Y 377.433
Sr (421.552 nm)	0.029258	ppm	0.000043	0.15	4801.642040	Y_R 488.368
Th (288.505 nm)	-0.005143 u	ppm	0.001933	37.58	10.324300	Y 377.433
Ti (336.122 nm)	0.000151	ppm	0.000047	30.85	-489.196000	Y 377.433
Tl (190.794 nm)	0.000044 u	ppm	0.000121	> 100.00	0.067057	Y 377.433
U (409.013 nm)	0.008261	ppm	0.004732	57.28	55.998700	Y 377.433
V (292.401 nm)	0.000374	ppm	0.000034	9.09	-75.049900	Y 377.433
Zn (206.200 nm)	0.007369	ppm	0.000172	2.34	36.764900	Y 377.433
Zr (343.823 nm)	0.000349	ppm	0.000121	34.79	-153.053000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.012629	18933.114767	0.001630	0.16
Y 377.433	1.013740	563210.365241	0.000499	0.05
Y_R 377.433	0.999215	48647.500000	0.001601	0.16
Y_R 488.368	0.988653	42280.900000	0.002768	0.28
Y_R2 488.368	1.011734	84500.879181	0.006643	0.66
Y_R4	1.016340	39075.000000	0.001386	0.14

Sample Name: 160-33998-B-2-Esd@5

Date: 5/10/2019 1:15:21 PM

Rack:Tube: 2:11

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000241 u	ppm	0.000032	13.28	-193.332000	Y 377.433
Al (394.401 nm)	0.003187	ppm	0.000346	10.86	69.369400	Y 377.433
Al H (396.152 nm)	0.114140 u	ppm	0.007690	6.74	38.536600	Y_R 377.433
As (188.980 nm)	0.002426	ppm	0.001608	66.31	2.033530	Y 242.219
B (249.678 nm)	0.002631	ppm	0.000559	21.25	32.000400	Y 242.219
Ba (493.408 nm)	0.019708	ppm	0.000345	1.75	3696.380000	Y_R 488.368
Be (234.861 nm)	-0.000039 u	ppm	0.000028	71.82	-4.985060	Y_R 488.368
Bi (223.061 nm)	-0.000223 u	ppm	0.001610	> 100.00	-11.372700	Y 377.433
Ca (315.887 nm)	0.617135	ppm	0.004483	0.73	437.191940	Y_R 377.433
Cd (214.439 nm)	0.000184	ppm	0.000082	44.69	0.254768	Y 377.433
Co (228.615 nm)	0.000007 u	ppm	0.000097	> 100.00	-23.231100	Y 242.219
Cr (205.560 nm)	0.000204 u	ppm	0.001104	> 100.00	-6.707520	Y 377.433
Cu (324.754 nm)	-0.000275 u	ppm	0.000546	> 100.00	496.410000	Y 377.433
Fe (238.204 nm)	0.005102	ppm	0.000197	3.87	16.925377	Y_R 377.433
Fe H (259.940 nm)	0.032680 u	ppm	0.003672	11.24	18.976100	Y_R 377.433
K (766.491 nm)	-0.133126 u	ppm	0.022275	16.73	2041.570000	Y_R2 488.368
Li (670.783 nm)	0.001395	ppm	0.001172	84.06	-2860.640000	Y_R2 488.368
Mg (279.078 nm)	0.100886	ppm	0.007803	7.73	369.605000	Y 377.433
Mn (257.610 nm)	0.001352	ppm	0.000063	4.68	366.318000	Y 377.433
Mo (202.032 nm)	-0.000201 u	ppm	0.000077	38.35	8.959420	Y 377.433
Na (589.592 nm)	0.833836	ppm	0.000822	0.10	901.001000	Y_R2 488.368
Na H (589.593 nm)	0.378511 u	ppm	0.030968	8.18	697.310564	Y_R4
Ni (231.604 nm)	-0.000160 u	ppm	0.000479	> 100.00	-11.328000	Y 377.433
P (213.618 nm)	-0.004963 u	ppm	0.000934	18.82	-4.136160	Y 242.219
Pb (220.353 nm)	0.000195 u	ppm	0.001748	> 100.00	8.700910	Y 242.219
S (181.972 nm)	0.179310	ppm	0.007719	4.30	95.130645	Y 377.433
Sb (206.834 nm)	-0.000240 u	ppm	0.003595	> 100.00	1.836040	Y 377.433
Se (196.026 nm)	0.002372	ppm	0.001345	56.70	9.382170	Y 242.219
Si (288.158 nm)	0.092770	ppm	0.005279	5.69	1128.110000	Y 377.433
Sn (189.925 nm)	-0.004373 u	ppm	0.000454	10.39	1.899960	Y 377.433
Sr (421.552 nm)	0.004412	ppm	0.000128	2.91	811.608252	Y_R 488.368
Th (288.505 nm)	-0.001345 u	ppm	0.001504	> 100.00	17.033500	Y 377.433
Ti (336.122 nm)	0.000128	ppm	0.000020	15.67	-502.357000	Y 377.433
Tl (190.794 nm)	-0.000680 u	ppm	0.000865	> 100.00	-1.567600	Y 377.433
U (409.013 nm)	0.015474	ppm	0.004931	31.87	79.364800	Y 377.433
V (292.401 nm)	0.000230	ppm	0.000212	92.19	-83.263600	Y 377.433
Zn (206.200 nm)	0.001289	ppm	0.000394	30.58	8.979730	Y 377.433
Zr (343.823 nm)	0.000369	ppm	0.000162	43.97	-151.854000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.034236	19337.108407	0.001531	0.15
Y 377.433	1.036941	576100.320322	0.003061	0.30
Y_R 377.433	1.029880	50140.500000	0.002999	0.29
Y_R 488.368	1.015520	43429.800000	0.003033	0.30
Y_R2 488.368	1.021265	85296.956958	0.004349	0.43
Y_R4	1.026200	39454.200000	0.006626	0.65

Sample Name: 160-33998-B-2-F MS

Date: 5/10/2019 1:18:33 PM

Rack:Tube: 2:12

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.183742	ppm	0.000238	0.13	6500.670000	Y 377.433
Al (394.401 nm)	1.862030	ppm	0.000454	0.02	23486.700000	Y 377.433
Al H (396.152 nm)	1.993290	ppm	0.008987	0.45	4372.450000	Y_R 377.433
As (188.980 nm)	0.896152	ppm	0.004480	0.50	1423.840000	Y 242.219
B (249.678 nm)	0.200462	ppm	0.000180	0.09	1546.460000	Y 242.219
Ba (493.408 nm)	2.278560	ppm	0.000835	0.04	240709.000000	Y_R 488.368
Be (234.861 nm)	0.186084	ppm	0.000289	0.16	19732.000000	Y_R 488.368
Bi (223.061 nm)	0.364425	ppm	0.000703	0.19	790.850000	Y 377.433
Ca (315.887 nm)	12.742216	ppm	0.006907	0.05	10466.331375	Y_R 377.433
Cd (214.439 nm)	0.365471	ppm	0.000027	0.01	13995.700000	Y 377.433
Co (228.615 nm)	0.185047	ppm	0.000982	0.53	4616.720000	Y 242.219
Cr (205.560 nm)	1.070240	ppm	0.003247	0.30	7407.030000	Y 377.433
Cu (324.754 nm)	0.529470	ppm	0.000936	0.18	26504.400000	Y 377.433
Fe (238.204 nm)	1.881532	ppm	0.000508	0.03	4707.946321	Y_R 377.433
Fe H (259.940 nm)	1.923760 u	ppm	0.002343	0.12	2736.900000	Y_R 377.433
K (766.491 nm)	9.593780	ppm	0.110189	1.15	12272.100000	Y_R2 488.368
Li (670.783 nm)	0.192286	ppm	0.000982	0.51	612.159000	Y_R2 488.368
Mg (279.078 nm)	9.661310	ppm	0.013297	0.14	33870.900000	Y 377.433
Mn (257.610 nm)	0.196650	ppm	0.000254	0.13	56654.200000	Y 377.433
Mo (202.032 nm)	0.189972	ppm	0.000901	0.47	2524.690000	Y 377.433
Na (589.592 nm)	14.814000	ppm	0.026294	0.18	13595.700000	Y_R2 488.368
Na H (589.593 nm)	11.365473 u	ppm	0.086427	0.76	7065.198839	Y_R4
Ni (231.604 nm)	0.187760	ppm	0.000997	0.53	1008.810000	Y 377.433
P (213.618 nm)	3.543040	ppm	0.004660	0.13	5336.460000	Y 242.219
Pb (220.353 nm)	1.076200	ppm	0.000010	0.00	3629.710000	Y 242.219
S (181.972 nm)	2.589007	ppm	0.013482	0.52	1273.965733	Y 377.433
Sb (206.834 nm)	0.191709	ppm	0.009369	4.89	365.748000	Y 377.433
Se (196.026 nm)	0.547563	ppm	0.003596	0.66	882.399000	Y 242.219
Si (288.158 nm)	0.881086	ppm	0.001274	0.14	6394.070000	Y 377.433
Sn (189.925 nm)	0.379400	ppm	0.001259	0.33	633.470000	Y 377.433
Sr (421.552 nm)	0.215826	ppm	0.000215	0.10	34763.694489	Y_R 488.368
Th (288.505 nm)	0.197141	ppm	0.000829	0.42	347.597000	Y 377.433
Ti (336.122 nm)	0.189095	ppm	0.000440	0.23	24470.300000	Y 377.433
Tl (190.794 nm)	0.378806	ppm	0.001027	0.27	924.499000	Y 377.433
U (409.013 nm)	0.381036	ppm	0.003898	1.02	1236.900000	Y 377.433
V (292.401 nm)	0.189188	ppm	0.000167	0.09	9728.300000	Y 377.433
Zn (206.200 nm)	0.457518	ppm	0.002375	0.52	2093.880000	Y 377.433
Zr (343.823 nm)	0.080123	ppm	0.000367	0.46	4527.540000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.022646	19120.415876	0.002269	0.22
Y 377.433	1.028181	571233.155885	0.003197	0.31
Y_R 377.433	1.036250	50450.700000	0.003015	0.29
Y_R 488.368	1.023200	43758.500000	0.004280	0.42
Y_R2 488.368	1.024828	85594.494841	0.000270	0.03
Y_R4	1.021880	39288.100000	0.002097	0.21

Sample Name: 160-33998-B-2-G MSD

Date: 5/10/2019 1:22:05 PM

Rack:Tube: 2:13

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.207548	ppm	0.000021	0.01	7368.770000	Y 377.433
Al (394.401 nm)	2.047250	ppm	0.003228	0.16	25822.100000	Y 377.433
Al H (396.152 nm)	2.188040	ppm	0.017522	0.80	4820.920000	Y_R 377.433
As (188.980 nm)	1.004450	ppm	0.003403	0.34	1596.120000	Y 242.219
B (249.678 nm)	0.217352	ppm	0.000862	0.40	1675.740000	Y 242.219
Ba (493.408 nm)	2.562100	ppm	0.000450	0.02	270460.000000	Y_R 488.368
Be (234.861 nm)	0.206828	ppm	0.000411	0.20	21932.000000	Y_R 488.368
Bi (223.061 nm)	0.391375	ppm	0.000380	0.10	850.151000	Y 377.433
Ca (315.887 nm)	13.991747	ppm	0.007211	0.05	11499.867077	Y_R 377.433
Cd (214.439 nm)	0.406569	ppm	0.000072	0.02	15570.300000	Y 377.433
Co (228.615 nm)	0.203538	ppm	0.000849	0.42	5080.350000	Y 242.219
Cr (205.560 nm)	1.209990	ppm	0.001958	0.16	8375.360000	Y 377.433
Cu (324.754 nm)	0.589170	ppm	0.000069	0.01	29434.000000	Y 377.433
Fe (238.204 nm)	2.066151	ppm	0.005896	0.29	5169.490259	Y_R 377.433
Fe H (259.940 nm)	2.089890 u	ppm	0.009107	0.44	2975.670000	Y_R 377.433
K (766.491 nm)	10.456800	ppm	0.003956	0.04	13179.800000	Y_R2 488.368
Li (670.783 nm)	0.210091	ppm	0.006552	3.12	936.077000	Y_R2 488.368
Mg (279.078 nm)	10.632100	ppm	0.001223	0.01	37272.700000	Y 377.433
Mn (257.610 nm)	0.214658	ppm	0.000060	0.03	61844.500000	Y 377.433
Mo (202.032 nm)	0.208828	ppm	0.000232	0.11	2774.130000	Y 377.433
Na (589.592 nm)	16.281900	ppm	0.033190	0.20	14939.900000	Y_R2 488.368
Na H (589.593 nm)	12.449185 u	ppm	0.003965	0.03	7693.303101	Y_R4
Ni (231.604 nm)	0.203946	ppm	0.001330	0.65	1096.680000	Y 377.433
P (213.618 nm)	3.917400	ppm	0.020013	0.51	5899.040000	Y 242.219
Pb (220.353 nm)	1.214400	ppm	0.001198	0.10	4094.810000	Y 242.219
S (181.972 nm)	2.846384	ppm	0.024596	0.86	1399.864865	Y 377.433
Sb (206.834 nm)	0.206715	ppm	0.003401	1.65	394.592000	Y 377.433
Se (196.026 nm)	0.606206	ppm	0.004177	0.69	976.303000	Y 242.219
Si (288.158 nm)	0.958514	ppm	0.003560	0.37	6911.280000	Y 377.433
Sn (189.925 nm)	0.415176	ppm	0.002768	0.67	692.345000	Y 377.433
Sr (421.552 nm)	0.236297	ppm	0.000479	0.20	38051.203932	Y_R 488.368
Th (288.505 nm)	0.208829	ppm	0.004994	2.39	366.427000	Y 377.433
Ti (336.122 nm)	0.206919	ppm	0.000233	0.11	26826.300000	Y 377.433
Tl (190.794 nm)	0.416255	ppm	0.000686	0.16	1015.890000	Y 377.433
U (409.013 nm)	0.431132	ppm	0.004788	1.11	1396.030000	Y 377.433
V (292.401 nm)	0.207048	ppm	0.000192	0.09	10640.700000	Y 377.433
Zn (206.200 nm)	0.510954	ppm	0.001587	0.31	2338.070000	Y 377.433
Zr (343.823 nm)	0.087091	ppm	0.000168	0.19	4936.390000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.016680	19008.865698	0.004603	0.45
Y 377.433	1.022092	567850.045419	0.005598	0.55
Y_R 377.433	1.014330	49383.500000	0.002600	0.26
Y_R 488.368	1.001820	42844.100000	0.005731	0.57
Y_R2 488.368	1.005681	83995.387896	0.008776	0.87
Y_R4	1.021780	39284.000000	0.003197	0.31

Sample Name: 160-33998-B-2-Epds

Date: 5/10/2019 1:25:37 PM

Rack:Tube: 2:14

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.048943	ppm	0.000174	0.35	1597.810000	Y 377.433
Al (394.401 nm)	0.968018	ppm	0.000657	0.07	12232.900000	Y 377.433
Al H (396.152 nm)	1.074200	ppm	0.002945	0.27	2229.550000	Y_R 377.433
As (188.980 nm)	0.193864	ppm	0.000230	0.12	306.534000	Y 242.219
B (249.678 nm)	0.112283	ppm	0.001429	1.27	871.431000	Y 242.219
Ba (493.408 nm)	0.207601	ppm	0.000424	0.20	23412.100000	Y_R 488.368
Be (234.861 nm)	0.047877	ppm	0.000324	0.68	5071.240000	Y_R 488.368
Bi (223.061 nm)	0.002166	ppm	0.001743	80.44	-5.900860	Y 377.433
Ca (315.887 nm)	23.290528	ppm	0.037203	0.16	19190.582198	Y_R 377.433
Cd (214.439 nm)	0.049432	ppm	0.000397	0.80	1887.440000	Y 377.433
Co (228.615 nm)	0.047045	ppm	0.000200	0.42	1156.330000	Y 242.219
Cr (205.560 nm)	0.048242	ppm	0.000183	0.38	325.781000	Y 377.433
Cu (324.754 nm)	0.047918	ppm	0.000294	0.61	2856.080000	Y 377.433
Fe (238.204 nm)	1.034873	ppm	0.003525	0.34	2591.323620	Y_R 377.433
Fe H (259.940 nm)	1.057470 u	ppm	0.000150	0.01	1491.850000	Y_R 377.433
K (766.491 nm)	19.212700	ppm	0.143268	0.75	22389.100000	Y_R2 488.368
Li (670.783 nm)	0.094236	ppm	0.001320	1.40	-1171.620000	Y_R2 488.368
Mg (279.078 nm)	19.692600	ppm	0.045242	0.23	69030.700000	Y 377.433
Mn (257.610 nm)	0.055288	ppm	0.000149	0.27	15911.300000	Y 377.433
Mo (202.032 nm)	0.052279	ppm	0.000049	0.09	703.199000	Y 377.433
Na (589.592 nm)	24.171500	ppm	0.024586	0.10	21233.700000	Y_R2 488.368
Na H (589.593 nm)	23.210685 u	ppm	0.077751	0.33	13930.516661	Y_R4
Ni (231.604 nm)	0.046337	ppm	0.000955	2.06	241.207000	Y 377.433
P (213.618 nm)	1.813810	ppm	0.004123	0.23	2791.260000	Y 242.219
Pb (220.353 nm)	0.099485	ppm	0.000915	0.92	343.802000	Y 242.219
S (181.972 nm)	0.934987	ppm	0.004889	0.52	465.747050	Y 377.433
Sb (206.834 nm)	0.099185	ppm	0.002019	2.04	186.807000	Y 377.433
Se (196.026 nm)	0.195509	ppm	0.001370	0.70	318.530000	Y 242.219
Si (288.158 nm)	5.432840	ppm	0.022177	0.41	36799.800000	Y 377.433
Sn (189.925 nm)	0.098708	ppm	0.000679	0.69	171.539000	Y 377.433
Sr (421.552 nm)	0.076530	ppm	0.000268	0.35	12393.364783	Y_R 488.368
Th (288.505 nm)	0.199299	ppm	0.000013	0.01	365.966000	Y 377.433
Ti (336.122 nm)	0.050644	ppm	0.000031	0.06	6239.570000	Y 377.433
Tl (190.794 nm)	0.197244	ppm	0.001206	0.61	481.017000	Y 377.433
U (409.013 nm)	0.507937	ppm	0.001043	0.21	1643.940000	Y 377.433
V (292.401 nm)	0.049131	ppm	0.000113	0.23	2537.230000	Y 377.433
Zn (206.200 nm)	0.205769	ppm	0.000116	0.06	943.444000	Y 377.433
Zr (343.823 nm)	0.051200	ppm	0.000247	0.48	2830.550000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.038581	19418.340957	0.005240	0.50
Y 377.433	1.035132	575095.140838	0.005861	0.57
Y_R 377.433	1.046800	50964.100000	0.003544	0.34
Y_R 488.368	1.035930	44303.000000	0.006523	0.63
Y_R2 488.368	1.031738	86171.650193	0.006898	0.67
Y_R4	1.043150	40105.700000	0.001173	0.11

Sample Name: MB 280-456372/1-A

Date: 5/10/2019 1:29:05 PM

Rack:Tube: 1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000446 u	ppm	0.000046	10.38	-200.937000	Y 377.433
Al (394.401 nm)	0.007578	ppm	0.000506	6.68	122.797000	Y 377.433
Al H (396.152 nm)	0.122335 u	ppm	0.003917	3.20	55.276000	Y_R 377.433
As (188.980 nm)	0.000557 u	ppm	0.003378	> 100.00	-0.940057	Y 242.219
B (249.678 nm)	0.000062 u	ppm	0.000862	> 100.00	12.320700	Y 242.219
Ba (493.408 nm)	0.000224	ppm	0.000052	23.06	1652.050000	Y_R 488.368
Be (234.861 nm)	-0.000040 u	ppm	0.000052	> 100.00	-5.072060	Y_R 488.368
Bi (223.061 nm)	0.000339 u	ppm	0.003664	> 100.00	-10.137000	Y 377.433
Ca (315.887 nm)	0.014045	ppm	0.010334	73.58	-61.619429	Y_R 377.433
Cd (214.439 nm)	0.000022	ppm	0.000018	81.70	-5.928230	Y 377.433
Co (228.615 nm)	0.000039	ppm	0.000035	89.45	-22.431800	Y 242.219
Cr (205.560 nm)	0.000174 u	ppm	0.000270	> 100.00	-6.919260	Y 377.433
Cu (324.754 nm)	-0.000253 u	ppm	0.000138	54.72	498.143000	Y 377.433
Fe (238.204 nm)	0.002993	ppm	0.000470	15.71	11.653432	Y_R 377.433
Fe H (259.940 nm)	0.036043 u	ppm	0.000848	2.35	23.810000	Y_R 377.433
K (766.491 nm)	-0.287396 u	ppm	0.154806	53.87	1879.310000	Y_R2 488.368
Li (670.783 nm)	0.003043	ppm	0.001236	40.62	-2830.650000	Y_R2 488.368
Mg (279.078 nm)	0.000452 u	ppm	0.000849	> 100.00	17.616800	Y 377.433
Mn (257.610 nm)	0.000274	ppm	0.000023	8.45	55.572700	Y 377.433
Mo (202.032 nm)	0.000264 u	ppm	0.000532	> 100.00	15.101100	Y 377.433
Na (589.592 nm)	-0.002138 u	ppm	0.025807	> 100.00	169.559000	Y_R2 488.368
Na H (589.593 nm)	-0.341007 u	ppm	0.019733	5.79	280.288613	Y_R4
Ni (231.604 nm)	0.000202 u	ppm	0.000437	> 100.00	-9.365620	Y 377.433
P (213.618 nm)	-0.005341 u	ppm	0.001047	19.60	-4.670740	Y 242.219
Pb (220.353 nm)	0.002178	ppm	0.001289	59.17	15.368600	Y 242.219
S (181.972 nm)	0.011049	ppm	0.003632	32.87	12.875664	Y 377.433
Sb (206.834 nm)	-0.001360 u	ppm	0.000146	10.72	-0.258765	Y 377.433
Se (196.026 nm)	0.002977	ppm	0.003785	> 100.00	10.350700	Y 242.219
Si (288.158 nm)	0.002708	ppm	0.000847	31.29	526.493000	Y 377.433
Sn (189.925 nm)	-0.002917 u	ppm	0.000831	28.50	4.296140	Y 377.433
Sr (421.552 nm)	-0.000065 u	ppm	0.000019	29.39	92.646146	Y_R 488.368
Th (288.505 nm)	-0.002749 u	ppm	0.002860	> 100.00	14.538500	Y 377.433
Ti (336.122 nm)	0.000218	ppm	0.000081	37.28	-492.160000	Y 377.433
Tl (190.794 nm)	0.000204 u	ppm	0.001502	> 100.00	0.612919	Y 377.433
U (409.013 nm)	0.010133	ppm	0.000347	3.42	62.395200	Y 377.433
V (292.401 nm)	-0.000128 u	ppm	0.000111	86.72	-102.223000	Y 377.433
Zn (206.200 nm)	0.002237	ppm	0.000884	39.53	13.310600	Y 377.433
Zr (343.823 nm)	0.000356	ppm	0.000048	13.57	-152.620000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.037979	19407.088704	0.004966	0.48
Y 377.433	1.040058	577831.541648	0.005913	0.57
Y_R 377.433	1.043510	50804.000000	0.001781	0.17
Y_R 488.368	1.027060	43923.600000	0.005282	0.51
Y_R2 488.368	1.035596	86493.895154	0.002414	0.23
Y_R4	1.031320	39650.800000	0.003725	0.36

Sample Name: LCS 280-456372/2-A

Date: 5/10/2019 1:32:15 PM

Rack:Tube: 1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000564	ppm	0.000359	63.61	-493.375000	Y 377.433
Al (394.401 nm)	9.918240 o	ppm	0.021608	0.22	124935.000000	Y 377.433
Al H (396.152 nm)	9.992860	ppm	0.003492	0.03	22765.000000	Y_R 377.433
As (188.980 nm)	1.987700	ppm	0.003146	0.16	3159.820000	Y 242.219
B (249.678 nm)	0.973281	ppm	0.003433	0.35	7462.110000	Y 242.219
Ba (493.408 nm)	1.948950	ppm	0.003672	0.19	206131.000000	Y_R 488.368
Be (234.861 nm)	0.986244	ppm	0.000599	0.06	104582.000000	Y_R 488.368
Bi (223.061 nm)	1.989910	ppm	0.005972	0.30	4366.870000	Y 377.433
Ca (315.887 nm)	50.676491	ppm	0.025163	0.05	41843.841386	Y_R 377.433
Cd (214.439 nm)	0.990179	ppm	0.000757	0.08	37932.600000	Y 377.433
Co (228.615 nm)	0.954029	ppm	0.000124	0.01	23900.500000	Y 242.219
Cr (205.560 nm)	0.976797	ppm	0.008340	0.85	6753.180000	Y 377.433
Cu (324.754 nm)	0.948141	ppm	0.005129	0.54	47090.800000	Y 377.433
Fe (238.204 nm)	10.087189 o	ppm	0.008867	0.09	25221.854051	Y_R 377.433
Fe H (259.940 nm)	10.031500	ppm	0.000029	0.00	14389.700000	Y_R 377.433
K (766.491 nm)	49.035500	ppm	0.107516	0.22	53756.100000	Y_R2 488.368
Li (670.783 nm)	0.988284	ppm	0.004159	0.42	15093.400000	Y_R2 488.368
Mg (279.078 nm)	49.327100	ppm	0.060280	0.12	172864.000000	Y 377.433
Mn (257.610 nm)	0.986461	ppm	0.000181	0.02	284291.000000	Y 377.433
Mo (202.032 nm)	0.998055	ppm	0.000883	0.09	13214.600000	Y 377.433
Na (589.592 nm)	50.629500	ppm	0.016173	0.03	44651.500000	Y_R2 488.368
Na H (589.593 nm)	46.984328 u	ppm	0.189115	0.40	27709.384780	Y_R4
Ni (231.604 nm)	0.958683	ppm	0.002950	0.31	5193.850000	Y 377.433
P (213.618 nm)	19.194200	ppm	0.014542	0.08	29379.800000	Y 242.219
Pb (220.353 nm)	0.985203	ppm	0.000541	0.05	3322.760000	Y 242.219
S (181.972 nm)	9.349634	ppm	0.010801	0.12	4582.293535	Y 377.433
Sb (206.834 nm)	-0.002974 u	ppm	0.001501	50.47	-8.635600	Y 377.433
Se (196.026 nm)	1.977110	ppm	0.003856	0.20	3171.110000	Y 242.219
Si (288.158 nm)	2.056460	ppm	0.002622	0.13	14245.600000	Y 377.433
Sn (189.925 nm)	1.987130	ppm	0.003413	0.17	3279.290000	Y 377.433
Sr (421.552 nm)	0.974844	ppm	0.001129	0.12	156658.871974	Y_R 488.368
Th (288.505 nm)	1.019860	ppm	0.001161	0.11	1714.200000	Y 377.433
Ti (336.122 nm)	0.997027	ppm	0.000118	0.01	131193.000000	Y 377.433
Tl (190.794 nm)	1.958630	ppm	0.004835	0.25	4780.070000	Y 377.433
U (409.013 nm)	2.008630	ppm	0.007009	0.35	6386.080000	Y 377.433
V (292.401 nm)	0.992747	ppm	0.000056	0.01	53233.200000	Y 377.433
Zn (206.200 nm)	0.500149	ppm	0.001082	0.22	2289.800000	Y 377.433
Zr (343.823 nm)	0.491688	ppm	0.000730	0.15	28675.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.000535	18706.990655	0.001579	0.16
Y 377.433	1.004618	558142.073066	0.000886	0.09
Y_R 377.433	1.016770	49501.900000	0.000259	0.03
Y_R 488.368	1.005430	42998.200000	0.001432	0.14
Y_R2 488.368	1.007001	84105.566456	0.000974	0.10
Y_R4	1.035120	39797.300000	0.000393	0.04

Sample Name: LCSD 280-456372/3-A

Date: 5/10/2019 1:40:23 PM

Rack:Tube: 1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001415	ppm	0.000046	3.22	-464.763000	Y 377.433
Al (394.401 nm)	10.173500 o	ppm	0.008705	0.09	128153.000000	Y 377.433
Al H (396.152 nm)	10.282200	ppm	0.030393	0.30	23427.700000	Y_R 377.433
As (188.980 nm)	2.022280	ppm	0.002376	0.12	3214.810000	Y 242.219
B (249.678 nm)	0.989452	ppm	0.002850	0.29	7585.960000	Y 242.219
Ba (493.408 nm)	2.007440	ppm	0.000220	0.01	212268.000000	Y_R 488.368
Be (234.861 nm)	1.013910	ppm	0.001713	0.17	107518.000000	Y_R 488.368
Bi (223.061 nm)	2.018460	ppm	0.005638	0.28	4429.680000	Y 377.433
Ca (315.887 nm)	50.449922	ppm	0.155807	0.31	41656.523375	Y_R 377.433
Cd (214.439 nm)	0.989578	ppm	0.002744	0.28	37909.600000	Y 377.433
Co (228.615 nm)	0.967033	ppm	0.000561	0.06	24226.500000	Y 242.219
Cr (205.560 nm)	0.990370	ppm	0.009313	0.94	6847.160000	Y 377.433
Cu (324.754 nm)	0.970019	ppm	0.004450	0.46	48163.700000	Y 377.433
Fe (238.204 nm)	10.113033 o	ppm	0.034418	0.34	25286.461019	Y_R 377.433
Fe H (259.940 nm)	10.082000	ppm	0.038039	0.38	14462.200000	Y_R 377.433
K (766.491 nm)	50.249000	ppm	0.019674	0.04	55032.500000	Y_R2 488.368
Li (670.783 nm)	1.013830	ppm	0.001071	0.11	15558.200000	Y_R2 488.368
Mg (279.078 nm)	49.480400	ppm	0.056381	0.11	173401.000000	Y 377.433
Mn (257.610 nm)	0.994979	ppm	0.001013	0.10	286746.000000	Y 377.433
Mo (202.032 nm)	1.006390	ppm	0.001708	0.17	13324.900000	Y 377.433
Na (589.592 nm)	52.007800	ppm	0.084878	0.16	45863.500000	Y_R2 488.368
Na H (589.593 nm)	48.830026 u	ppm	0.131439	0.27	28779.125443	Y_R4
Ni (231.604 nm)	0.962528	ppm	0.001728	0.18	5214.730000	Y 377.433
P (213.618 nm)	19.510800	ppm	0.003240	0.02	29862.600000	Y 242.219
Pb (220.353 nm)	0.992879	ppm	0.002717	0.27	3348.590000	Y 242.219
S (181.972 nm)	9.455739	ppm	0.020313	0.21	4634.167574	Y 377.433
Sb (206.834 nm)	-0.005365 u	ppm	0.000648	12.07	-13.133000	Y 377.433
Se (196.026 nm)	2.001980	ppm	0.004543	0.23	3210.950000	Y 242.219
Si (288.158 nm)	2.083650	ppm	0.004712	0.23	14427.200000	Y 377.433
Sn (189.925 nm)	1.993480	ppm	0.004995	0.25	3289.740000	Y 377.433
Sr (421.552 nm)	1.000122	ppm	0.000497	0.05	160718.306327	Y_R 488.368
Th (288.505 nm)	1.027540	ppm	0.006411	0.62	1726.790000	Y 377.433
Ti (336.122 nm)	1.009970	ppm	0.000888	0.09	132900.000000	Y 377.433
Tl (190.794 nm)	1.970170	ppm	0.004991	0.25	4808.220000	Y 377.433
U (409.013 nm)	2.054940	ppm	0.002224	0.11	6533.190000	Y 377.433
V (292.401 nm)	1.001190	ppm	0.000688	0.07	53683.900000	Y 377.433
Zn (206.200 nm)	0.495514	ppm	0.000393	0.08	2268.630000	Y 377.433
Zr (343.823 nm)	0.498201	ppm	0.000477	0.10	29057.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.982889	18377.075207	0.002138	0.22
Y 377.433	0.996325	553534.881961	0.003407	0.34
Y_R 377.433	0.992948	48342.400000	0.005589	0.56
Y_R 488.368	0.980497	41932.100000	0.004030	0.41
Y_R2 488.368	0.993940	83014.749067	0.005019	0.51
Y_R4	1.020570	39237.700000	0.001402	0.14

Sample Name: 280-122932-J-23-A

Date: 5/10/2019 1:43:57 PM

Rack:Tube: 1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000672	ppm	0.000555	82.61	-160.996000	Y 377.433
Al (394.401 nm)	0.128443	ppm	0.003430	2.67	1724.790000	Y 377.433
Al H (396.152 nm)	0.191187 u	ppm	0.003124	1.63	313.193000	Y_R 377.433
As (188.980 nm)	0.003779	ppm	0.004190	> 100.00	4.151030	Y 242.219
B (249.678 nm)	0.007244	ppm	0.000704	9.72	66.762800	Y 242.219
Ba (493.408 nm)	0.161712	ppm	0.000863	0.53	18597.000000	Y_R 488.368
Be (234.861 nm)	0.000123	ppm	0.000099	80.96	3.655660	Y_R 488.368
Bi (223.061 nm)	0.000810 u	ppm	0.002215	> 100.00	-8.934990	Y 377.433
Ca (315.887 nm)	67.197882	ppm	0.175017	0.26	55506.094991	Y_R 377.433
Cd (214.439 nm)	0.000325	ppm	0.000018	5.43	6.080630	Y 377.433
Co (228.615 nm)	0.002364	ppm	0.000197	8.34	36.006900	Y 242.219
Cr (205.560 nm)	0.000861	ppm	0.000280	32.48	-2.192520	Y 377.433
Cu (324.754 nm)	-0.000166 u	ppm	0.000035	21.35	456.627000	Y 377.433
Fe (238.204 nm)	0.961643	ppm	0.002092	0.22	2408.250809	Y_R 377.433
Fe H (259.940 nm)	0.984173 u	ppm	0.004392	0.45	1386.500000	Y_R 377.433
K (766.491 nm)	1.309420	ppm	0.033433	2.55	3558.810000	Y_R2 488.368
Li (670.783 nm)	-0.007225 u	ppm	0.000993	13.74	-3017.460000	Y_R2 488.368
Mg (279.078 nm)	14.479400	ppm	0.010888	0.08	50765.700000	Y 377.433
Mn (257.610 nm)	3.804650	ppm	0.000311	0.01	1096540.000000	Y 377.433
Mo (202.032 nm)	0.003977	ppm	0.000010	0.25	64.224200	Y 377.433
Na (589.592 nm)	10.361800	ppm	0.044880	0.43	9217.870000	Y_R2 488.368
Na H (589.593 nm)	4.928395 u	ppm	1.358189	27.56	3334.359255	Y_R4
Ni (231.604 nm)	0.008930	ppm	0.000858	9.61	38.007200	Y 377.433
P (213.618 nm)	0.259872	ppm	0.000050	0.02	404.583000	Y 242.219
Pb (220.353 nm)	0.000491	ppm	0.000507	> 100.00	9.739370	Y 242.219
S (181.972 nm)	3.868366	ppm	0.014624	0.38	1913.901673	Y 377.433
Sb (206.834 nm)	-0.002267 u	ppm	0.000566	24.98	-1.908100	Y 377.433
Se (196.026 nm)	0.001319	ppm	0.001036	78.58	12.948200	Y 242.219
Si (288.158 nm)	12.802500	ppm	0.027487	0.21	86028.900000	Y 377.433
Sn (189.925 nm)	-0.002930 u	ppm	0.000288	9.82	4.275670	Y 377.433
Sr (421.552 nm)	0.279154	ppm	0.001064	0.38	44933.717970	Y_R 488.368
Th (288.505 nm)	-0.024189 u	ppm	0.001721	7.11	49.946700	Y 377.433
Ti (336.122 nm)	0.006054	ppm	0.000315	5.21	506.760000	Y 377.433
Tl (190.794 nm)	0.004611	ppm	0.000572	12.41	8.457160	Y 377.433
U (409.013 nm)	0.039147	ppm	0.005965	15.24	146.929000	Y 377.433
V (292.401 nm)	0.002112	ppm	0.000268	12.71	14.174100	Y 377.433
Zn (206.200 nm)	0.009473	ppm	0.001223	12.91	46.504300	Y 377.433
Zr (343.823 nm)	0.000946	ppm	0.000025	2.62	-118.005000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.017057	19015.904911	0.000741	0.07
Y 377.433	1.024112	568972.812611	0.000750	0.07
Y_R 377.433	1.026470	49974.500000	0.001665	0.16
Y_R 488.368	1.013450	43341.400000	0.001432	0.14
Y_R2 488.368	0.974300	81374.390949	0.007994	0.82
Y_R4	1.731670	66577.300000	0.322071	18.60

Sample Name: CCVH-5690583

Date: 5/10/2019 1:47:10 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000374	ppm	0.000101	27.06	-309.593000	Y 377.433
Al (394.401 nm)	49.291600 o	ppm	0.000579	0.00	619444.000000	Y 377.433
Al H (396.152 nm)	49.429400	ppm	0.015197	0.03	111045.000000	Y_R 377.433
As (188.980 nm)	0.003637	ppm	0.002905	79.88	-0.514995	Y 242.219
B (249.678 nm)	0.006255	ppm	0.000454	7.26	30.337400	Y 242.219
Ba (493.408 nm)	0.001612	ppm	0.000323	20.03	1837.480000	Y_R 488.368
Be (234.861 nm)	0.002246	ppm	0.000059	2.65	-192.786000	Y_R 488.368
Bi (223.061 nm)	0.956893	ppm	0.003929	0.41	2101.620000	Y 377.433
Ca (315.887 nm)	0.033601	ppm	0.002055	6.12	-32.726755	Y_R 377.433
Cd (214.439 nm)	0.000537	ppm	0.000056	10.36	33.790700	Y 377.433
Co (228.615 nm)	0.003830	ppm	0.000021	0.55	72.484300	Y 242.219
Cr (205.560 nm)	0.000692	ppm	0.000515	74.46	-4.696090	Y 377.433
Cu (324.754 nm)	0.006985	ppm	0.000313	4.48	1257.380000	Y 377.433
Fe (238.204 nm)	48.280264 o	ppm	0.062644	0.13	120703.440660	Y_R 377.433
Fe H (259.940 nm)	48.077400	ppm	0.017097	0.04	69070.600000	Y_R 377.433
K (766.491 nm)	0.061185	ppm	0.055655	90.96	2245.940000	Y_R2 488.368
Li (670.783 nm)	0.003553	ppm	0.000542	15.26	-2821.380000	Y_R2 488.368
Mg (279.078 nm)	0.007895	ppm	0.001802	22.82	-186.571000	Y 377.433
Mn (257.610 nm)	0.001290	ppm	0.000068	5.24	348.434000	Y 377.433
Mo (202.032 nm)	0.000692	ppm	0.000285	41.14	20.765000	Y 377.433
Na (589.592 nm)	242.981000 o	ppm	0.583195	0.24	211397.000000	Y_R2 488.368
Na H (589.593 nm)	248.402405	ppm	0.335827	0.14	144448.461636	Y_R4
Ni (231.604 nm)	0.001012	ppm	0.000821	81.09	-4.966680	Y 377.433
P (213.618 nm)	-0.016431 u	ppm	0.002357	14.35	-29.318200	Y 242.219
Pb (220.353 nm)	0.006843	ppm	0.000515	7.53	46.932800	Y 242.219
S (181.972 nm)	4.810244	ppm	0.020664	0.43	2358.152900	Y 377.433
Sb (206.834 nm)	0.001509	ppm	0.001442	95.56	8.405340	Y 377.433
Se (196.026 nm)	0.001484	ppm	0.000569	38.34	-5.027080	Y 242.219
Si (288.158 nm)	0.028541	ppm	0.001949	6.83	699.058000	Y 377.433
Sn (189.925 nm)	-0.003597 u	ppm	0.000724	20.14	3.177690	Y 377.433
Sr (421.552 nm)	0.000796	ppm	0.000142	17.89	238.402915	Y_R 488.368
Th (288.505 nm)	4.897280	ppm	0.015676	0.32	8652.290000	Y 377.433
Ti (336.122 nm)	0.001377	ppm	0.000014	1.01	-339.197000	Y 377.433
Tl (190.794 nm)	-0.000074 u	ppm	0.000975	> 100.00	-4.866060	Y 377.433
U (409.013 nm)	9.790060	ppm	0.001860	0.02	31337.500000	Y 377.433
V (292.401 nm)	-0.000865 u	ppm	0.000194	22.42	-139.248000	Y 377.433
Zn (206.200 nm)	0.002637	ppm	0.000023	0.87	21.855600	Y 377.433
Zr (343.823 nm)	-0.003324 u	ppm	0.000027	0.80	-368.549000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.996697	18635.235619	0.000541	0.05
Y 377.433	1.005207	558469.104720	0.001477	0.15
Y_R 377.433	1.021150	49715.600000	0.000345	0.03
Y_R 488.368	1.010670	43222.600000	0.002019	0.20
Y_R2 488.368	1.014804	84757.301172	0.001086	0.11
Y_R4	1.022640	39317.200000	0.001775	0.17

Sample Name: CCV-5690581

Date: 5/10/2019 1:51:17 PM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.483327	ppm	0.000544	0.11	17479.000000	Y 377.433
Al (394.401 nm)	0.494703	ppm	0.000612	0.12	6369.450000	Y 377.433
Al H (396.152 nm)	0.546675 u	ppm	0.003623	0.66	1258.920000	Y_R 377.433
As (188.980 nm)	0.965733	ppm	0.000586	0.06	1534.620000	Y 242.219
B (249.678 nm)	0.477663	ppm	0.002695	0.56	3669.790000	Y 242.219
Ba (493.408 nm)	0.485181	ppm	0.000437	0.09	52538.300000	Y_R 488.368
Be (234.861 nm)	0.483759	ppm	0.003025	0.63	51320.100000	Y_R 488.368
Bi (223.061 nm)	0.004321	ppm	0.000247	5.71	-0.861577	Y 377.433
Ca (315.887 nm)	4.912913	ppm	0.004968	0.10	3990.363360	Y_R 377.433
Cd (214.439 nm)	0.491609	ppm	0.000276	0.06	18828.500000	Y 377.433
Co (228.615 nm)	0.487897	ppm	0.000207	0.04	12210.300000	Y 242.219
Cr (205.560 nm)	0.488492	ppm	0.003109	0.64	3373.320000	Y 377.433
Cu (324.754 nm)	0.486047	ppm	0.002134	0.44	24365.200000	Y 377.433
Fe (238.204 nm)	2.426039	ppm	0.000204	0.01	6069.197586	Y_R 377.433
Fe H (259.940 nm)	2.453270 u	ppm	0.001829	0.07	3497.930000	Y_R 377.433
K (766.491 nm)	48.156100	ppm	0.035535	0.07	52831.200000	Y_R2 488.368
Li (670.783 nm)	0.984961	ppm	0.007269	0.74	15033.000000	Y_R2 488.368
Mg (279.078 nm)	19.351400	ppm	0.015335	0.08	67841.200000	Y 377.433
Mn (257.610 nm)	0.485496	ppm	0.000411	0.08	139904.000000	Y 377.433
Mo (202.032 nm)	0.490320	ppm	0.000688	0.14	6497.900000	Y 377.433
Na (589.592 nm)	25.100600	ppm	0.032732	0.13	22107.900000	Y_R2 488.368
Na H (589.593 nm)	24.948439 u	ppm	0.057346	0.23	14937.694855	Y_R4
Ni (231.604 nm)	0.488864	ppm	0.000636	0.13	2643.360000	Y 377.433
P (213.618 nm)	0.954145	ppm	0.000762	0.08	1337.180000	Y 242.219
Pb (220.353 nm)	0.977019	ppm	0.001894	0.19	3294.780000	Y 242.219
S (181.972 nm)	0.006965	ppm	0.007170	> 100.00	12.732910	Y 377.433
Sb (206.834 nm)	0.975522	ppm	0.000844	0.09	1817.070000	Y 377.433
Se (196.026 nm)	0.970902	ppm	0.003335	0.34	1560.760000	Y 242.219
Si (288.158 nm)	4.813520	ppm	0.003348	0.07	32662.700000	Y 377.433
Sn (189.925 nm)	0.981999	ppm	0.001441	0.15	1625.160000	Y 377.433
Sr (421.552 nm)	0.484040	ppm	0.001270	0.26	77837.433418	Y_R 488.368
Th (288.505 nm)	0.010494	ppm	0.004034	38.44	-12.038700	Y 377.433
Ti (336.122 nm)	0.484933	ppm	0.000179	0.04	63474.900000	Y 377.433
Tl (190.794 nm)	0.982988	ppm	0.000429	0.04	2400.280000	Y 377.433
U (409.013 nm)	0.012034	ppm	0.012130	> 100.00	8.933750	Y 377.433
V (292.401 nm)	0.484772	ppm	0.000064	0.01	25944.000000	Y 377.433
Zn (206.200 nm)	0.491422	ppm	0.000109	0.02	2248.860000	Y 377.433
Zr (343.823 nm)	0.486513	ppm	0.000372	0.08	28371.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.001104	18717.633735	0.000902	0.09
Y 377.433	1.005314	558528.719686	0.001722	0.17
Y_R 377.433	1.011840	49262.000000	0.007220	0.71
Y_R 488.368	0.999959	42764.400000	0.004979	0.50
Y_R2 488.368	1.012152	84535.839249	0.001729	0.17
Y_R4	1.021230	39263.100000	0.006588	0.65

Sample Name: CCB

Date: 5/10/2019 1:54:48 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000079 u	ppm	0.000442	> 100.00	-181.605000	Y 377.433
Al (394.401 nm)	0.003138	ppm	0.001257	40.07	67.126700	Y 377.433
Al H (396.152 nm)	0.111155 Zu	ppm	0.005981	5.38	30.174700 Z	Y_R 377.433
As (188.980 nm)	0.001615	ppm	0.000416	25.78	0.743772	Y 242.219
B (249.678 nm)	-0.000647 u	ppm	0.000657	> 100.00	6.891800	Y 242.219
Ba (493.408 nm)	-0.000446 u	ppm	0.000350	78.42	1581.770000	Y_R 488.368
Be (234.861 nm)	-0.000056 u	ppm	0.000007	12.68	-6.709840	Y_R 488.368
Bi (223.061 nm)	0.000767 u	ppm	0.001649	> 100.00	-9.198010	Y 377.433
Ca (315.887 nm)	-0.002853 u	ppm	0.002212	77.53	-75.597367	Y_R 377.433
Cd (214.439 nm)	-0.000002 u	ppm	0.000074	> 100.00	-6.857060	Y 377.433
Co (228.615 nm)	0.000078 u	ppm	0.000243	> 100.00	-21.464500	Y 242.219
Cr (205.560 nm)	-0.000202 u	ppm	0.000194	96.36	-9.521920	Y 377.433
Cu (324.754 nm)	-0.000360 u	ppm	0.000004	1.12	492.677000	Y 377.433
Fe (238.204 nm)	-0.000465 u	ppm	0.001935	> 100.00	3.009126	Y_R 377.433
Fe H (259.940 nm)	0.028747 u	ppm	0.002604	9.06	13.323700	Y_R 377.433
K (766.491 nm)	-0.166423 u	ppm	0.137477	82.61	2006.550000	Y_R2 488.368
Li (670.783 nm)	-0.000897 u	ppm	0.002087	> 100.00	-2902.330000	Y_R2 488.368
Mg (279.078 nm)	-0.000172 u	ppm	0.000953	> 100.00	15.477500	Y 377.433
Mn (257.610 nm)	0.000069	ppm	0.000022	32.46	-3.528350	Y 377.433
Mo (202.032 nm)	0.000114 u	ppm	0.000332	> 100.00	13.118400	Y 377.433
Na (589.592 nm)	0.072117	ppm	0.017278	23.96	233.957000	Y_R2 488.368
Na H (589.593 nm)	0.419015 u	ppm	0.011046	2.64	720.786619	Y_R4
Ni (231.604 nm)	-0.000631 u	ppm	0.000977	> 100.00	-13.884100	Y 377.433
P (213.618 nm)	-0.000904 u	ppm	0.001265	> 100.00	2.106530	Y 242.219
Pb (220.353 nm)	0.000564	ppm	0.000409	72.52	9.931730	Y 242.219
S (181.972 nm)	-0.001011 u	ppm	0.006097	> 100.00	6.981718	Y 377.433
Sb (206.834 nm)	0.000651	ppm	0.000011	1.75	3.489720	Y 377.433
Se (196.026 nm)	0.002736	ppm	0.001299	47.48	9.965060	Y 242.219
Si (288.158 nm)	-0.001155 u	ppm	0.000016	1.39	500.692000	Y 377.433
Sn (189.925 nm)	-0.001636 u	ppm	0.000619	37.84	6.405230	Y 377.433
Sr (421.552 nm)	-0.000010 u	ppm	0.000034	> 100.00	101.412294	Y_R 488.368
Th (288.505 nm)	-0.005083 u	ppm	0.005350	> 100.00	10.428000	Y 377.433
Ti (336.122 nm)	0.000137	ppm	0.000067	48.76	-502.908000	Y 377.433
Tl (190.794 nm)	0.001316	ppm	0.001114	84.66	3.335440	Y 377.433
U (409.013 nm)	0.003177	ppm	0.003752	> 100.00	40.172700	Y 377.433
V (292.401 nm)	0.000147	ppm	0.000034	22.92	-87.425000	Y 377.433
Zn (206.200 nm)	0.000156 u	ppm	0.000304	> 100.00	3.800920	Y 377.433
Zr (343.823 nm)	0.000167	ppm	0.000105	62.88	-163.725000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.062064	19857.409771	0.000840	0.08
Y 377.433	1.053491	585295.024359	0.001162	0.11
Y_R 377.433	1.048240	51034.300000	0.000559	0.05
Y_R 488.368	1.037800	44383.000000	0.000991	0.10
Y_R2 488.368	1.036276	86550.659895	0.001340	0.13
Y_R4	1.041110	40027.300000	0.006672	0.64

Sample Name: CCVL-5695588

Date: 5/10/2019 1:58:06 PM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009395	ppm	0.000115	1.22	158.194000	Y 377.433
Al (394.401 nm)	0.101385	ppm	0.000449	0.44	1307.720000	Y 377.433
Al H (396.152 nm)	0.216462 u	ppm	0.002294	1.06	272.553000	Y_R 377.433
As (188.980 nm)	0.012538	ppm	0.001583	12.63	18.114600	Y 242.219
B (249.678 nm)	0.092365	ppm	0.000191	0.21	719.405000	Y 242.219
Ba (493.408 nm)	0.009107	ppm	0.000122	1.34	2584.150000	Y_R 488.368
Be (234.861 nm)	0.000916	ppm	0.000029	3.21	95.512100	Y_R 488.368
Bi (223.061 nm)	0.091481	ppm	0.001646	1.80	190.311000	Y 377.433
Ca (315.887 nm)	0.202284	ppm	0.014480	7.16	94.095768	Y_R 377.433
Cd (214.439 nm)	0.005105	ppm	0.000161	3.15	188.838000	Y 377.433
Co (228.615 nm)	0.010345	ppm	0.000079	0.77	235.961000	Y 242.219
Cr (205.560 nm)	0.010209	ppm	0.000184	1.81	62.444500	Y 377.433
Cu (324.754 nm)	0.014621	ppm	0.000387	2.65	1227.850000	Y 377.433
Fe (238.204 nm)	0.097124	ppm	0.002314	2.38	246.978084	Y_R 377.433
Fe H (259.940 nm)	0.134427 u	ppm	0.000862	0.64	165.211000	Y_R 377.433
K (766.491 nm)	2.769110	ppm	0.170718	6.17	5094.080000	Y_R2 488.368
Li (670.783 nm)	0.025677	ppm	0.007980	31.08	-2418.880000	Y_R2 488.368
Mg (279.078 nm)	0.199808	ppm	0.000980	0.49	715.348000	Y 377.433
Mn (257.610 nm)	0.010344	ppm	0.000005	0.05	2957.920000	Y 377.433
Mo (202.032 nm)	0.019463	ppm	0.000405	2.08	269.087000	Y 377.433
Na (589.592 nm)	1.098270	ppm	0.021092	1.92	1128.330000	Y_R2 488.368
Na H (589.593 nm)	0.825197 u	ppm	0.025490	3.09	956.203913	Y_R4
Ni (231.604 nm)	0.040952	ppm	0.000709	1.73	211.771000	Y 377.433
P (213.618 nm)	2.678610	ppm	0.026456	0.99	4137.240000	Y 242.219
Pb (220.353 nm)	0.009533	ppm	0.000048	0.50	40.173600	Y 242.219
S (181.972 nm)	0.089404	ppm	0.000053	0.06	51.205036	Y 377.433
Sb (206.834 nm)	0.016921	ppm	0.000265	1.57	33.644600	Y 377.433
Se (196.026 nm)	0.020645	ppm	0.000373	1.81	38.641100	Y 242.219
Si (288.158 nm)	0.498150	ppm	0.003159	0.63	3836.050000	Y 377.433
Sn (189.925 nm)	0.095471	ppm	0.002018	2.11	166.212000	Y 377.433
Sr (421.552 nm)	0.008673	ppm	0.000082	0.94	1495.818786	Y_R 488.368
Th (288.505 nm)	0.008933 Q	ppm	0.000899	10.06	34.465900 Q	Y 377.433
Ti (336.122 nm)	0.009832	ppm	0.000097	0.99	776.872000	Y 377.433
Tl (190.794 nm)	0.016445	ppm	0.002032	12.36	40.207300	Y 377.433
U (409.013 nm)	0.063729	ppm	0.001822	2.86	232.472000	Y 377.433
V (292.401 nm)	0.009963	ppm	0.000184	1.84	437.817000	Y 377.433
Zn (206.200 nm)	0.021111	ppm	0.000191	0.91	99.562800	Y 377.433
Zr (343.823 nm)	0.010146 Q	ppm	0.000075	0.74	421.777000 Q	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.030444	19266.214658	0.000078	0.01
Y 377.433	1.030654	572607.231597	0.000101	0.01
Y_R 377.433	1.036540	50464.900000	0.001074	0.10
Y_R 488.368	1.028410	43981.100000	0.003136	0.30
Y_R2 488.368	1.046830	87432.136379	0.004178	0.40
Y_R4	1.032830	39709.200000	0.001674	0.16

Sample Name: MB 280-457241/1-A

Date: 5/10/2019 3:18:24 PM

Rack:Tube: 1:5

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000121 u	ppm	0.000214	> 100.00	-188.714000	Y 377.433
Al (394.401 nm)	0.008148	ppm	0.001772	21.75	127.292000	Y 377.433
Al H (396.152 nm)	0.119329 u	ppm	0.000530	0.44	48.561000	Y_R 377.433
As (188.980 nm)	0.000218 u	ppm	0.001258	> 100.00	-1.481980	Y 242.219
B (249.678 nm)	-0.000825 u	ppm	0.000592	71.79	5.435700	Y 242.219
Ba (493.408 nm)	-0.000172 u	ppm	0.000021	12.24	1610.670000	Y_R 488.368
Be (234.861 nm)	-0.000063 u	ppm	0.000010	15.76	-8.906070	Y_R 488.368
Bi (223.061 nm)	-0.000912 u	ppm	0.000422	46.23	-12.862800	Y 377.433
Ca (315.887 nm)	0.027168	ppm	0.003120	11.49	-50.771390	Y_R 377.433
Cd (214.439 nm)	-0.000001 u	ppm	0.000020	> 100.00	-6.750590	Y 377.433
Co (228.615 nm)	0.000055 u	ppm	0.000118	> 100.00	-21.998900	Y 242.219
Cr (205.560 nm)	0.000463	ppm	0.000072	15.53	-4.917680	Y 377.433
Cu (324.754 nm)	0.002653	ppm	0.000103	3.89	642.517000	Y 377.433
Fe (238.204 nm)	0.155987	ppm	0.002090	1.34	394.134336	Y_R 377.433
Fe H (259.940 nm)	0.189751 u	ppm	0.000032	0.02	244.725000	Y_R 377.433
K (766.491 nm)	-0.264438 u	ppm	0.030982	11.72	1903.460000	Y_R2 488.368
Li (670.783 nm)	-0.003829 u	ppm	0.000694	18.12	-2955.680000	Y_R2 488.368
Mg (279.078 nm)	0.005095	ppm	0.001878	36.85	33.779000	Y 377.433
Mn (257.610 nm)	0.001605	ppm	0.000022	1.35	439.009000	Y 377.433
Mo (202.032 nm)	0.000354	ppm	0.000123	34.72	16.291900	Y 377.433
Na (589.592 nm)	0.017526	ppm	0.018616	> 100.00	186.553000	Y_R2 488.368
Na H (589.593 nm)	-0.582241 u	ppm	0.018244	3.13	140.472419	Y_R4
Ni (231.604 nm)	-0.000086 u	ppm	0.000753	> 100.00	-10.923400	Y 377.433
P (213.618 nm)	-0.007435 u	ppm	0.000640	8.61	-8.566100	Y 242.219
Pb (220.353 nm)	-0.000532 u	ppm	0.000157	29.58	6.231700	Y 242.219
S (181.972 nm)	0.019223	ppm	0.004102	21.34	16.874556	Y 377.433
Sb (206.834 nm)	-0.001857 u	ppm	0.002166	> 100.00	-1.173780	Y 377.433
Se (196.026 nm)	-0.001397 u	ppm	0.001565	> 100.00	3.305190	Y 242.219
Si (288.158 nm)	0.003168	ppm	0.000810	25.55	529.569000	Y 377.433
Sn (189.925 nm)	-0.004501 u	ppm	0.000546	12.13	1.689750	Y 377.433
Sr (421.552 nm)	-0.000074 u	ppm	0.000071	96.06	91.092906	Y_R 488.368
Th (288.505 nm)	0.001779 u	ppm	0.004992	> 100.00	22.505200	Y 377.433
Ti (336.122 nm)	0.000324	ppm	0.000040	12.24	-478.077000	Y 377.433
Tl (190.794 nm)	0.001367	ppm	0.000091	6.67	3.433200	Y 377.433
U (409.013 nm)	0.010613	ppm	0.009365	88.24	64.015700	Y 377.433
V (292.401 nm)	-0.000051 u	ppm	0.000059	> 100.00	-97.193400	Y 377.433
Zn (206.200 nm)	0.002445	ppm	0.000091	3.71	14.282300	Y 377.433
Zr (343.823 nm)	0.000454	ppm	0.000044	9.68	-146.869000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.024120	19147.968593	0.004374	0.43
Y 377.433	1.027048	570603.905800	0.004770	0.46
Y_R 377.433	1.017980	49561.000000	0.002326	0.23
Y_R 488.368	0.997416	42655.700000	0.000727	0.07
Y_R2 488.368	0.999238	83457.210930	0.006628	0.66
Y_R4	0.996489	38311.900000	0.000395	0.04

Sample Name: LCS 280-457241/2-A

Date: 5/10/2019 3:21:53 PM

Rack:Tube: 1:6

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.051359	ppm	0.000328	0.64	1377.790000	Y 377.433
Al (394.401 nm)	9.899330 o	ppm	0.006487	0.07	124695.000000	Y 377.433
Al H (396.152 nm)	10.009500	ppm	0.028265	0.28	22801.000000	Y_R 377.433
As (188.980 nm)	1.972930	ppm	0.012696	0.64	3136.330000	Y 242.219
B (249.678 nm)	0.968025	ppm	0.004339	0.45	7421.990000	Y 242.219
Ba (493.408 nm)	1.967570	ppm	0.006454	0.33	208084.000000	Y_R 488.368
Be (234.861 nm)	0.968068	ppm	0.023673	2.45	102655.000000	Y_R 488.368
Bi (223.061 nm)	1.986850	ppm	0.009447	0.48	4360.100000	Y 377.433
Ca (315.887 nm)	49.277478	ppm	0.006245	0.01	40686.716430	Y_R 377.433
Cd (214.439 nm)	0.972884	ppm	0.000280	0.03	37269.900000	Y 377.433
Co (228.615 nm)	0.950223	ppm	0.002250	0.24	23804.700000	Y 242.219
Cr (205.560 nm)	0.965962	ppm	0.001195	0.12	6678.210000	Y 377.433
Cu (324.754 nm)	0.946886	ppm	0.001004	0.11	47030.500000	Y 377.433
Fe (238.204 nm)	9.862331 o	ppm	0.004166	0.04	24659.715038	Y_R 377.433
Fe H (259.940 nm)	9.867060	ppm	0.016073	0.16	14153.300000	Y_R 377.433
K (766.491 nm)	48.922400	ppm	0.185143	0.38	53637.200000	Y_R2 488.368
Li (670.783 nm)	0.994106	ppm	0.003451	0.35	15199.400000	Y_R2 488.368
Mg (279.078 nm)	48.307000	ppm	0.014063	0.03	169290.000000	Y 377.433
Mn (257.610 nm)	0.975002	ppm	0.000499	0.05	280988.000000	Y 377.433
Mo (202.032 nm)	0.989539	ppm	0.001885	0.19	13101.900000	Y 377.433
Na (589.592 nm)	50.632400	ppm	0.116909	0.23	44658.100000	Y_R2 488.368
Na H (589.593 nm)	47.145787 u	ppm	0.096372	0.20	27802.964165	Y_R4
Ni (231.604 nm)	0.946963	ppm	0.002134	0.23	5130.210000	Y 377.433
P (213.618 nm)	18.624400	ppm	0.068654	0.37	28501.000000	Y 242.219
Pb (220.353 nm)	0.978973	ppm	0.001141	0.12	3301.770000	Y 242.219
S (181.972 nm)	9.072936	ppm	0.019291	0.21	4446.939558	Y 377.433
Sb (206.834 nm)	0.996913	ppm	0.006162	0.62	1854.810000	Y 377.433
Se (196.026 nm)	1.955910	ppm	0.011763	0.60	3137.200000	Y 242.219
Si (288.158 nm)	2.012480	ppm	0.005389	0.27	13951.800000	Y 377.433
Sn (189.925 nm)	1.968400	ppm	0.006187	0.31	3248.460000	Y 377.433
Sr (421.552 nm)	0.978832	ppm	0.002587	0.26	157299.244130	Y_R 488.368
Th (288.505 nm)	1.010410	ppm	0.000416	0.04	1698.820000	Y 377.433
Ti (336.122 nm)	0.989643	ppm	0.001317	0.13	130213.000000	Y 377.433
Tl (190.794 nm)	1.931990	ppm	0.006804	0.35	4715.100000	Y 377.433
U (409.013 nm)	1.980610	ppm	0.002372	0.12	6296.850000	Y 377.433
V (292.401 nm)	0.984251	ppm	0.001102	0.11	52779.600000	Y 377.433
Zn (206.200 nm)	0.492486	ppm	0.000677	0.14	2254.760000	Y 377.433
Zr (343.823 nm)	0.491684	ppm	0.000297	0.06	28675.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.959580	17941.262500	0.005636	0.59
Y 377.433	0.971009	539470.001237	0.007131	0.73
Y_R 377.433	0.991885	48290.600000	0.011212	1.13
Y_R 488.368	0.979691	41897.700000	0.015582	1.59
Y_R2 488.368	1.012328	84550.495590	0.001988	0.20
Y_R4	1.009030	38794.100000	0.002855	0.28

Sample Name: 280-123366-L-1-A

Date: 5/10/2019 3:26:00 PM

Rack:Tube: 1:7

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000644	ppm	0.000032	4.90	-161.646000	Y 377.433
Al (394.401 nm)	0.010829	ppm	0.001031	9.52	296.388000	Y 377.433
Al H (396.152 nm)	0.018336 u	ppm	0.004188	22.84	6.906390	Y_R 377.433
As (188.980 nm)	0.002164	ppm	0.000892	41.20	1.614670	Y 242.219
B (249.678 nm)	0.102171	ppm	0.000633	0.62	794.537000	Y 242.219
Ba (493.408 nm)	0.159578	ppm	0.000308	0.19	18372.400000	Y_R 488.368
Be (234.861 nm)	-0.000084 u	ppm	0.000002	2.61	-10.459200	Y_R 488.368
Bi (223.061 nm)	-0.002020 u	ppm	0.001206	59.67	-15.304200	Y 377.433
Ca (315.887 nm)	100.614295	ppm	0.016433	0.02	83144.745311	Y_R 377.433
Cd (214.439 nm)	0.000268	ppm	0.000011	4.19	3.525700	Y 377.433
Co (228.615 nm)	-0.000318 u	ppm	0.000179	56.34	-31.346400	Y 242.219
Cr (205.560 nm)	0.000178 u	ppm	0.000441	> 100.00	-6.892690	Y 377.433
Cu (324.754 nm)	-0.000177 u	ppm	0.000452	> 100.00	441.625000	Y 377.433
Fe (238.204 nm)	0.086906	ppm	0.000109	0.13	221.432675	Y_R 377.433
Fe H (259.940 nm)	0.107726 u	ppm	0.002731	2.53	126.835000	Y_R 377.433
K (766.491 nm)	3.519500	ppm	0.176689	5.02	5883.330000	Y_R2 488.368
Li (670.783 nm)	0.022364	ppm	0.002844	12.72	-2479.150000	Y_R2 488.368
Mg (279.078 nm)	43.912900	ppm	0.015924	0.04	153934.000000	Y 377.433
Mn (257.610 nm)	0.000957	ppm	0.000014	1.41	252.351000	Y 377.433
Mo (202.032 nm)	0.000582	ppm	0.000170	29.21	19.309600	Y 377.433
Na (589.592 nm)	67.147700 o	ppm	0.044886	0.07	58581.900000	Y_R2 488.368
Na H (589.593 nm)	65.718956	ppm	0.051956	0.08	38567.711311	Y_R4
Ni (231.604 nm)	-0.001604 u	ppm	0.000702	43.75	-19.163700	Y 377.433
P (213.618 nm)	0.024391	ppm	0.000577	2.37	40.750800	Y 242.219
Pb (220.353 nm)	0.000455	ppm	0.000622	> 100.00	9.641540	Y 242.219
S (181.972 nm)	30.146263	ppm	0.065527	0.22	14744.439519	Y 377.433
Sb (206.834 nm)	-0.003794 u	ppm	0.001156	30.46	-4.789210	Y 377.433
Se (196.026 nm)	0.003209	ppm	0.000227	7.08	10.700800	Y 242.219
Si (288.158 nm)	12.176600	ppm	0.000143	0.00	81847.900000	Y 377.433
Sn (189.925 nm)	-0.003420 u	ppm	0.001279	37.39	3.468280	Y 377.433
Sr (421.552 nm)	0.495154	ppm	0.000096	0.02	79621.927546	Y_R 488.368
Th (288.505 nm)	-0.008354 u	ppm	0.008757	> 100.00	2.283340	Y 377.433
Ti (336.122 nm)	-0.000678 u	ppm	0.000110	16.17	-270.166000	Y 377.433
Tl (190.794 nm)	0.002270	ppm	0.000324	14.26	1.526850	Y 377.433
U (409.013 nm)	0.031852	ppm	0.001775	5.57	118.791000	Y 377.433
V (292.401 nm)	0.001640	ppm	0.000288	17.57	-8.508960	Y 377.433
Zn (206.200 nm)	0.002623	ppm	0.000723	27.56	15.082900	Y 377.433
Zr (343.823 nm)	0.000483	ppm	0.000194	40.26	-145.209000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.004648	18783.893341	0.000486	0.05
Y 377.433	1.004405	558024.050825	0.000707	0.07
Y_R 377.433	1.017570	49541.000000	0.000244	0.02
Y_R 488.368	1.009210	43160.300000	0.001266	0.13
Y_R2 488.368	1.006847	84092.724899	0.003001	0.30
Y_R4	1.037030	39870.500000	0.001919	0.19

Sample Name: 280-123366-L-1-Asd@5

Date: 5/10/2019 3:30:06 PM

Rack:Tube: 1:8

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000163 u	ppm	0.000295	> 100.00	-190.941000	Y 377.433
Al (394.401 nm)	0.003848	ppm	0.000420	10.92	103.158000	Y 377.433
Al H (396.152 nm)	0.092990 u	ppm	0.000902	0.97	23.294600	Y_R 377.433
As (188.980 nm)	0.002379	ppm	0.000239	10.07	1.958730	Y 242.219
B (249.678 nm)	0.019479	ppm	0.000290	1.49	161.067000	Y 242.219
Ba (493.408 nm)	0.029284	ppm	0.000527	1.80	4701.240000	Y_R 488.368
Be (234.861 nm)	-0.000038 u	ppm	0.000020	52.12	-4.978760	Y_R 488.368
Bi (223.061 nm)	0.001709 u	ppm	0.005273	> 100.00	-7.120880	Y 377.433
Ca (315.887 nm)	18.084906	ppm	0.129369	0.72	14884.769055	Y_R 377.433
Cd (214.439 nm)	-0.000003 u	ppm	0.000091	> 100.00	-6.908690	Y 377.433
Co (228.615 nm)	-0.000025 u	ppm	0.000021	85.67	-24.015800	Y 242.219
Cr (205.560 nm)	0.000165 u	ppm	0.000888	> 100.00	-6.978740	Y 377.433
Cu (324.754 nm)	-0.000276 u	ppm	0.000043	15.63	484.766000	Y 377.433
Fe (238.204 nm)	0.016393	ppm	0.000444	2.71	45.152160	Y_R 377.433
Fe H (259.940 nm)	0.047076 u	ppm	0.001339	2.84	39.667500	Y_R 377.433
K (766.491 nm)	0.353799	ppm	0.019051	5.38	2553.710000	Y_R2 488.368
Li (670.783 nm)	0.009720	ppm	0.001884	19.38	-2709.190000	Y_R2 488.368
Mg (279.078 nm)	8.556440	ppm	0.468799	5.48	30006.700000	Y 377.433
Mn (257.610 nm)	0.000268	ppm	0.000026	9.85	53.718300	Y 377.433
Mo (202.032 nm)	-0.000044 u	ppm	0.000058	> 100.00	11.035700	Y 377.433
Na (589.592 nm)	12.082900	ppm	0.039592	0.33	10682.300000	Y_R2 488.368
Na H (589.593 nm)	11.436949 u	ppm	0.028185	0.25	7106.625584	Y_R4
Ni (231.604 nm)	-0.001520 u	ppm	0.000056	3.65	-18.703700	Y 377.433
P (213.618 nm)	-0.001414 u	ppm	0.003343	> 100.00	1.285450	Y 242.219
Pb (220.353 nm)	-0.000721 u	ppm	0.000084	11.59	5.667210	Y 242.219
S (181.972 nm)	5.716662	ppm	0.296617	5.19	2802.006589	Y 377.433
Sb (206.834 nm)	-0.000664 u	ppm	0.000084	12.59	1.044710	Y 377.433
Se (196.026 nm)	0.001168	ppm	0.000668	57.17	7.447970	Y 242.219
Si (288.158 nm)	2.344130	ppm	0.129548	5.53	16167.200000	Y 377.433
Sn (189.925 nm)	-0.002956 u	ppm	0.000572	19.35	4.231580	Y 377.433
Sr (421.552 nm)	0.091092	ppm	0.000773	0.85	14731.778245	Y_R 488.368
Th (288.505 nm)	-0.007723 u	ppm	0.002392	30.97	5.455090	Y 377.433
Ti (336.122 nm)	-0.000028 u	ppm	0.000065	> 100.00	-463.605000	Y 377.433
Tl (190.794 nm)	0.001004	ppm	0.000620	61.79	1.830770	Y 377.433
U (409.013 nm)	0.019074	ppm	0.003988	20.91	88.621400	Y 377.433
V (292.401 nm)	0.000510	ppm	0.000169	33.07	-69.119500	Y 377.433
Zn (206.200 nm)	0.000779	ppm	0.000096	12.37	6.648310	Y 377.433
Zr (343.823 nm)	0.000345	ppm	0.000069	20.15	-153.291000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.002980	18752.705822	0.008842	0.88
Y 377.433	1.004905	558301.845888	0.009798	0.98
Y_R 377.433	1.009740	49160.100000	0.005139	0.51
Y_R 488.368	0.999098	42727.600000	0.005138	0.51
Y_R2 488.368	1.030194	86042.707915	0.000094	0.01
Y_R4	1.029170	39568.200000	0.004420	0.43

Sample Name: 280-123366-L-1-B MS

Date: 5/10/2019 3:33:36 PM

Rack:Tube: 1:9

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.051544	ppm	0.000318	0.62	1387.180000	Y 377.433
Al (394.401 nm)	9.818440 o	ppm	0.003856	0.04	123791.000000	Y 377.433
Al H (396.152 nm)	9.826740	ppm	0.004298	0.04	22571.200000	Y_R 377.433
As (188.980 nm)	1.982950	ppm	0.004774	0.24	3152.260000	Y 242.219
B (249.678 nm)	1.084020	ppm	0.002535	0.23	8310.540000	Y 242.219
Ba (493.408 nm)	2.066700	ppm	0.001365	0.07	218486.000000	Y_R 488.368
Be (234.861 nm)	0.957782	ppm	0.002110	0.22	101562.000000	Y_R 488.368
Bi (223.061 nm)	1.963480	ppm	0.002822	0.14	4308.750000	Y 377.433
Ca (315.887 nm)	151.095773	ppm	0.028003	0.02	124900.505330	Y_R 377.433
Cd (214.439 nm)	0.960943	ppm	0.004233	0.44	36812.500000	Y 377.433
Co (228.615 nm)	0.923393	ppm	0.002543	0.28	23132.700000	Y 242.219
Cr (205.560 nm)	0.963760	ppm	0.003528	0.37	6663.030000	Y 377.433
Cu (324.754 nm)	0.940422	ppm	0.000143	0.02	46658.000000	Y 377.433
Fe (238.204 nm)	10.055748 o	ppm	0.017349	0.17	25143.250544	Y_R 377.433
Fe H (259.940 nm)	9.970690	ppm	0.017890	0.18	14302.200000	Y_R 377.433
K (766.491 nm)	53.378700	ppm	0.456046	0.85	58324.300000	Y_R2 488.368
Li (670.783 nm)	1.008630	ppm	0.008740	0.87	15463.500000	Y_R2 488.368
Mg (279.078 nm)	93.137200	ppm	0.120684	0.13	326426.000000	Y 377.433
Mn (257.610 nm)	0.955922	ppm	0.000720	0.08	275489.000000	Y 377.433
Mo (202.032 nm)	0.980255	ppm	0.000912	0.09	12979.100000	Y 377.433
Na (589.592 nm)	116.635000 o	ppm	0.749149	0.64	102059.000000	Y_R2 488.368
Na H (589.593 nm)	115.075734	ppm	0.427123	0.37	67174.203789	Y_R4
Ni (231.604 nm)	0.924373	ppm	0.000598	0.06	5007.580000	Y 377.433
P (213.618 nm)	17.832000	ppm	0.049480	0.28	27277.600000	Y 242.219
Pb (220.353 nm)	0.955722	ppm	0.004454	0.47	3223.200000	Y 242.219
S (181.972 nm)	39.531219	ppm	0.187866	0.48	19336.416589	Y 377.433
Sb (206.834 nm)	1.006370	ppm	0.003493	0.35	1872.560000	Y 377.433
Se (196.026 nm)	1.953170	ppm	0.012663	0.65	3132.730000	Y 242.219
Si (288.158 nm)	14.340700	ppm	0.021713	0.15	96304.500000	Y 377.433
Sn (189.925 nm)	1.951800	ppm	0.005900	0.30	3221.140000	Y 377.433
Sr (421.552 nm)	1.463014	ppm	0.001660	0.11	235056.055911	Y_R 488.368
Th (288.505 nm)	0.999378	ppm	0.004186	0.42	1676.570000	Y 377.433
Ti (336.122 nm)	0.976947	ppm	0.000237	0.02	128885.000000	Y 377.433
Tl (190.794 nm)	1.881900	ppm	0.002248	0.12	4588.400000	Y 377.433
U (409.013 nm)	1.859760	ppm	0.007622	0.41	5898.510000	Y 377.433
V (292.401 nm)	0.975651	ppm	0.001243	0.13	52320.400000	Y 377.433
Zn (206.200 nm)	0.485373	ppm	0.000889	0.18	2222.280000	Y 377.433
Zr (343.823 nm)	0.484457	ppm	0.000346	0.07	28251.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.980669	18335.565960	0.002341	0.24
Y 377.433	0.989023	549477.848708	0.000863	0.09
Y_R 377.433	1.021500	49732.200000	0.000434	0.04
Y_R 488.368	1.010040	43195.500000	0.001994	0.20
Y_R2 488.368	1.005140	83950.146019	0.001118	0.11
Y_R4	1.031940	39675.000000	0.003271	0.32

Sample Name: 280-123366-L-1-C MSD

Date: 5/10/2019 3:37:42 PM

Rack:Tube: 1:10

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.051964	ppm	0.000445	0.86	1407.930000	Y 377.433
Al (394.401 nm)	9.796590 o	ppm	0.004494	0.05	123533.000000	Y 377.433
Al H (396.152 nm)	9.840680	ppm	0.012298	0.12	22601.900000	Y_R 377.433
As (188.980 nm)	1.956890	ppm	0.012898	0.66	3110.810000	Y 242.219
B (249.678 nm)	1.087160	ppm	0.001702	0.16	8334.730000	Y 242.219
Ba (493.408 nm)	2.072790	ppm	0.003915	0.19	219125.000000	Y_R 488.368
Be (234.861 nm)	0.961140	ppm	0.003085	0.32	101921.000000	Y_R 488.368
Bi (223.061 nm)	1.966370	ppm	0.004211	0.21	4315.070000	Y 377.433
Ca (315.887 nm)	147.103182	ppm	0.009210	0.01	121598.247277	Y_R 377.433
Cd (214.439 nm)	0.929026	ppm	0.001317	0.14	35589.600000	Y 377.433
Co (228.615 nm)	0.910208	ppm	0.001952	0.21	22802.000000	Y 242.219
Cr (205.560 nm)	0.937735	ppm	0.003160	0.34	6482.820000	Y 377.433
Cu (324.754 nm)	0.930368	ppm	0.001395	0.15	46159.300000	Y 377.433
Fe (238.204 nm)	9.786946 o	ppm	0.015105	0.15	24471.254921	Y_R 377.433
Fe H (259.940 nm)	9.767720	ppm	0.010972	0.11	14010.500000	Y_R 377.433
K (766.491 nm)	53.421400	ppm	0.247077	0.46	58369.200000	Y_R2 488.368
Li (670.783 nm)	1.001840	ppm	0.000798	0.08	15340.000000	Y_R2 488.368
Mg (279.078 nm)	91.100100	ppm	0.216557	0.24	319284.000000	Y 377.433
Mn (257.610 nm)	0.939010	ppm	0.001522	0.16	270614.000000	Y 377.433
Mo (202.032 nm)	0.960264	ppm	0.000674	0.07	12714.600000	Y 377.433
Na (589.592 nm)	116.786000 o	ppm	0.051295	0.04	102192.000000	Y_R2 488.368
Na H (589.593 nm)	117.791481	ppm	0.452410	0.38	68748.212245	Y_R4
Ni (231.604 nm)	0.902543	ppm	0.001277	0.14	4889.070000	Y 377.433
P (213.618 nm)	18.606900	ppm	0.129276	0.69	28477.400000	Y 242.219
Pb (220.353 nm)	0.942265	ppm	0.000664	0.07	3178.270000	Y 242.219
S (181.972 nm)	39.553786	ppm	0.201413	0.51	19347.204640	Y 377.433
Sb (206.834 nm)	0.993536	ppm	0.001283	0.13	1848.620000	Y 377.433
Se (196.026 nm)	1.922290	ppm	0.002512	0.13	3083.310000	Y 242.219
Si (288.158 nm)	14.323700	ppm	0.027996	0.20	96190.500000	Y 377.433
Sn (189.925 nm)	1.908150	ppm	0.011172	0.59	3149.310000	Y 377.433
Sr (421.552 nm)	1.464404	ppm	0.002642	0.18	235279.297531	Y_R 488.368
Th (288.505 nm)	0.994455	ppm	0.003617	0.36	1670.110000	Y 377.433
Ti (336.122 nm)	0.963892	ppm	0.000524	0.05	127150.000000	Y 377.433
Tl (190.794 nm)	1.837920	ppm	0.006799	0.37	4481.170000	Y 377.433
U (409.013 nm)	1.961110	ppm	0.004894	0.25	6222.600000	Y 377.433
V (292.401 nm)	0.958790	ppm	0.000987	0.10	51413.200000	Y 377.433
Zn (206.200 nm)	0.478441	ppm	0.001178	0.25	2190.570000	Y 377.433
Zr (343.823 nm)	0.484223	ppm	0.000333	0.07	28237.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.949852	17759.375458	0.001072	0.11
Y 377.433	0.966529	536980.577935	0.001051	0.11
Y_R 377.433	0.980247	47724.000000	0.000928	0.09
Y_R 488.368	0.967055	41357.300000	0.001859	0.19
Y_R2 488.368	0.978966	81764.077575	0.000099	0.01
Y_R4	0.988736	38013.800000	0.001818	0.18

Sample Name: 280-123366-L-1-Apds

Date: 5/10/2019 3:41:48 PM

Rack:Tube: 1:11

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.046590	ppm	0.000379	0.81	1510.760000	Y 377.433
Al (394.401 nm)	0.979370	ppm	0.002082	0.21	12495.100000	Y 377.433
Al H (396.152 nm)	0.993063	ppm	0.003867	0.39	2221.000000	Y_R 377.433
As (188.980 nm)	0.197460	ppm	0.004637	2.35	312.254000	Y 242.219
B (249.678 nm)	0.201688	ppm	0.000125	0.06	1556.350000	Y 242.219
Ba (493.408 nm)	0.253075	ppm	0.000737	0.29	28183.400000	Y_R 488.368
Be (234.861 nm)	0.048497	ppm	0.000615	1.27	5136.900000	Y_R 488.368
Bi (223.061 nm)	0.004862	ppm	0.001106	22.76	0.038927	Y 377.433
Ca (315.887 nm)	114.621274	ppm	0.135674	0.12	94730.153925	Y_R 377.433
Cd (214.439 nm)	0.047816	ppm	0.000146	0.30	1825.550000	Y 377.433
Co (228.615 nm)	0.046229	ppm	0.000701	1.52	1135.870000	Y 242.219
Cr (205.560 nm)	0.047414	ppm	0.000333	0.70	320.049000	Y 377.433
Cu (324.754 nm)	0.047259	ppm	0.000129	0.27	2770.960000	Y 377.433
Fe (238.204 nm)	1.060845	ppm	0.002866	0.27	2656.253911	Y_R 377.433
Fe H (259.940 nm)	1.068680 u	ppm	0.004371	0.41	1507.950000	Y_R 377.433
K (766.491 nm)	22.783100	ppm	0.243093	1.07	26144.400000	Y_R2 488.368
Li (670.783 nm)	0.124918	ppm	0.003707	2.97	-613.436000	Y_R2 488.368
Mg (279.078 nm)	60.713100	ppm	0.166371	0.27	212811.000000	Y 377.433
Mn (257.610 nm)	0.048346	ppm	0.000178	0.37	13910.600000	Y 377.433
Mo (202.032 nm)	0.051964	ppm	0.000204	0.39	699.033000	Y 377.433
Na (589.592 nm)	85.273600 o	ppm	0.204994	0.24	74361.100000	Y_R2 488.368
Na H (589.593 nm)	86.379147	ppm	0.393330	0.46	50542.066533	Y_R4
Ni (231.604 nm)	0.044093	ppm	0.001003	2.28	229.017000	Y 377.433
P (213.618 nm)	1.886850	ppm	0.030690	1.63	2903.850000	Y 242.219
Pb (220.353 nm)	0.095056	ppm	0.001756	1.85	328.905000	Y 242.219
S (181.972 nm)	29.301928	ppm	0.136338	0.47	14332.736800	Y 377.433
Sb (206.834 nm)	0.097819	ppm	0.000108	0.11	184.267000	Y 377.433
Se (196.026 nm)	0.196015	ppm	0.001290	0.66	319.324000	Y 242.219
Si (288.158 nm)	16.828400	ppm	0.118833	0.71	112923.000000	Y 377.433
Sn (189.925 nm)	0.098393	ppm	0.000920	0.93	171.020000	Y 377.433
Sr (421.552 nm)	0.539180	ppm	0.001159	0.21	86692.295853	Y_R 488.368
Th (288.505 nm)	0.209064	ppm	0.001159	0.55	380.528000	Y 377.433
Ti (336.122 nm)	0.050391	ppm	0.000257	0.51	6517.700000	Y 377.433
Tl (190.794 nm)	0.190312	ppm	0.000499	0.26	460.291000	Y 377.433
U (409.013 nm)	0.517090	ppm	0.010012	1.94	1661.250000	Y 377.433
V (292.401 nm)	0.050067	ppm	0.000163	0.32	2588.370000	Y 377.433
Zn (206.200 nm)	0.192409	ppm	0.000092	0.05	882.403000	Y 377.433
Zr (343.823 nm)	0.051330	ppm	0.000017	0.03	2838.190000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.983088	18380.799208	0.003309	0.34
Y 377.433	0.995638	553152.963257	0.001962	0.20
Y_R 377.433	1.002170	48791.500000	0.005918	0.59
Y_R 488.368	0.989847	42332.000000	0.006759	0.68
Y_R2 488.368	1.010268	84378.474700	0.002866	0.28
Y_R4	1.028410	39539.100000	0.002440	0.24

Sample Name: 280-123366-L-5-A

Date: 5/10/2019 3:45:23 PM

Rack:Tube: 1:12

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000337	ppm	0.000410	> 100.00	-173.327000	Y 377.433
Al (394.401 nm)	0.011438	ppm	0.001499	13.11	314.908000	Y 377.433
Al H (396.152 nm)	0.013975 u	ppm	0.004994	35.73	12.426700	Y_R 377.433
As (188.980 nm)	0.001521	ppm	0.000539	35.44	0.580512	Y 242.219
B (249.678 nm)	0.095032	ppm	0.000244	0.26	739.625000	Y 242.219
Ba (493.408 nm)	0.177501	ppm	0.000262	0.15	20253.300000	Y_R 488.368
Be (234.861 nm)	-0.000027 u	ppm	0.000051	> 100.00	-7.610980	Y_R 488.368
Bi (223.061 nm)	-0.002145 u	ppm	0.000581	27.09	-15.516800	Y 377.433
Ca (315.887 nm)	104.323649	ppm	0.127162	0.12	86212.748904	Y_R 377.433
Cd (214.439 nm)	0.000177	ppm	0.000104	58.72	0.183114	Y 377.433
Co (228.615 nm)	-0.000320 u	ppm	0.000201	62.65	-31.404600	Y 242.219
Cr (205.560 nm)	0.000794	ppm	0.000130	16.35	-2.620660	Y 377.433
Cu (324.754 nm)	-0.000582 u	ppm	0.000098	16.84	419.590000	Y 377.433
Fe (238.204 nm)	0.445668	ppm	0.002124	0.48	1118.327911	Y_R 377.433
Fe H (259.940 nm)	0.466097 u	ppm	0.000121	0.03	641.899000	Y_R 377.433
K (766.491 nm)	3.206610	ppm	0.192886	6.02	5554.240000	Y_R2 488.368
Li (670.783 nm)	0.026191	ppm	0.002587	9.88	-2409.530000	Y_R2 488.368
Mg (279.078 nm)	44.790300	ppm	0.054595	0.12	157009.000000	Y 377.433
Mn (257.610 nm)	0.003452	ppm	0.000067	1.95	971.435000	Y 377.433
Mo (202.032 nm)	0.000230	ppm	0.000192	83.37	14.654900	Y 377.433
Na (589.592 nm)	62.948200 o	ppm	0.248021	0.39	54935.300000	Y_R2 488.368
Na H (589.593 nm)	63.404123	ppm	0.152664	0.24	37226.066661	Y_R4
Ni (231.604 nm)	-0.001226 u	ppm	0.001080	88.11	-17.111900	Y 377.433
P (213.618 nm)	0.021693	ppm	0.000606	2.79	36.693700	Y 242.219
Pb (220.353 nm)	-0.000618 u	ppm	0.000826	> 100.00	6.041910	Y 242.219
S (181.972 nm)	30.722339	ppm	0.067592	0.22	15026.103641	Y 377.433
Sb (206.834 nm)	-0.004327 u	ppm	0.000462	10.69	-5.741160	Y 377.433
Se (196.026 nm)	0.001416	ppm	0.001412	99.73	7.735360	Y 242.219
Si (288.158 nm)	13.359300	ppm	0.049841	0.37	89748.300000	Y 377.433
Sn (189.925 nm)	-0.004100 u	ppm	0.000994	24.24	2.348950	Y 377.433
Sr (421.552 nm)	0.533409	ppm	0.000784	0.15	85765.409137	Y_R 488.368
Th (288.505 nm)	-0.012491 u	ppm	0.004200	33.63	-5.080430	Y 377.433
Ti (336.122 nm)	-0.000257 u	ppm	0.000014	5.30	-205.299000	Y 377.433
Tl (190.794 nm)	0.001357	ppm	0.001585	> 100.00	-0.862852	Y 377.433
U (409.013 nm)	0.036629	ppm	0.001865	5.09	133.968000	Y 377.433
V (292.401 nm)	0.001735	ppm	0.000230	13.28	-3.919010	Y 377.433
Zn (206.200 nm)	0.001067	ppm	0.000943	88.36	8.023820	Y 377.433
Zr (343.823 nm)	0.000720	ppm	0.000258	35.91	-131.290000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.988515	18482.268017	0.004731	0.48
Y 377.433	0.999509	555303.737615	0.004634	0.46
Y_R 377.433	1.010390	49191.400000	0.002423	0.24
Y_R 488.368	0.997072	42641.000000	0.003075	0.31
Y_R2 488.368	1.001163	83617.981340	0.003169	0.32
Y_R4	1.012520	38928.200000	0.002707	0.27

Sample Name: 280-123366-A-13-A

Date: 5/10/2019 3:48:54 PM

Rack:Tube: 1:13

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000274 u	ppm	0.000464	> 100.00	-174.945000	Y 377.433
Al (394.401 nm)	0.134983	ppm	0.000128	0.10	1782.890000	Y 377.433
Al H (396.152 nm)	0.195504 u	ppm	0.004870	2.49	304.013000	Y_R 377.433
As (188.980 nm)	0.007446	ppm	0.002971	39.90	9.986030	Y 242.219
B (249.678 nm)	0.058769	ppm	0.000925	1.57	461.497000	Y 242.219
Ba (493.408 nm)	0.110288	ppm	0.000331	0.30	13201.400000	Y_R 488.368
Be (234.861 nm)	-0.000015 u	ppm	0.000012	79.46	-10.993200	Y_R 488.368
Bi (223.061 nm)	-0.002684 u	ppm	0.000054	2.00	-16.616100	Y 377.433
Ca (315.887 nm)	42.860957	ppm	0.041816	0.10	35377.048877	Y_R 377.433
Cd (214.439 nm)	0.000054	ppm	0.000003	5.60	-4.310520	Y 377.433
Co (228.615 nm)	0.000308	ppm	0.000129	41.75	-15.588800	Y 242.219
Cr (205.560 nm)	0.002117	ppm	0.000226	10.67	6.533220	Y 377.433
Cu (324.754 nm)	-0.000728 u	ppm	0.000013	1.84	449.642000	Y 377.433
Fe (238.204 nm)	0.964699	ppm	0.001671	0.17	2415.890542	Y_R 377.433
Fe H (259.940 nm)	0.985615 u	ppm	0.004203	0.43	1388.570000	Y_R 377.433
K (766.491 nm)	2.418330	ppm	0.202313	8.37	4725.140000	Y_R2 488.368
Li (670.783 nm)	0.021994	ppm	0.003012	13.70	-2485.890000	Y_R2 488.368
Mg (279.078 nm)	36.822900	ppm	0.029498	0.08	129082.000000	Y 377.433
Mn (257.610 nm)	0.010125	ppm	0.000024	0.23	2894.650000	Y 377.433
Mo (202.032 nm)	0.002922	ppm	0.000619	21.19	50.271800	Y 377.433
Na (589.592 nm)	36.406200	ppm	0.043490	0.12	31846.100000	Y_R2 488.368
Na H (589.593 nm)	36.242755 u	ppm	0.179418	0.50	21483.720669	Y_R4
Ni (231.604 nm)	-0.000672 u	ppm	0.000454	67.63	-14.105900	Y 377.433
P (213.618 nm)	0.039765	ppm	0.001133	2.85	64.684100	Y 242.219
Pb (220.353 nm)	-0.000113 u	ppm	0.001260	> 100.00	7.676040	Y 242.219
S (181.972 nm)	5.924556	ppm	0.000616	0.01	2904.893774	Y 377.433
Sb (206.834 nm)	-0.006704 u	ppm	0.001699	25.34	-10.147300	Y 377.433
Se (196.026 nm)	0.004382	ppm	0.002772	63.24	12.357400	Y 242.219
Si (288.158 nm)	16.266300	ppm	0.000589	0.00	109168.000000	Y 377.433
Sn (189.925 nm)	-0.003940 u	ppm	0.000990	25.13	2.612410	Y 377.433
Sr (421.552 nm)	0.222128	ppm	0.000382	0.17	35775.552193	Y_R 488.368
Th (288.505 nm)	-0.002792 u	ppm	0.003008	> 100.00	13.528800	Y 377.433
Ti (336.122 nm)	0.002193	ppm	0.000037	1.70	-86.291300	Y 377.433
Tl (190.794 nm)	0.000176 u	ppm	0.001681	> 100.00	-1.362260	Y 377.433
U (409.013 nm)	0.027246	ppm	0.006412	23.53	112.095000	Y 377.433
V (292.401 nm)	0.001805	ppm	0.000188	10.41	0.766607	Y 377.433
Zn (206.200 nm)	0.004848	ppm	0.000288	5.95	25.374900	Y 377.433
Zr (343.823 nm)	0.000888	ppm	0.000187	21.11	-121.426000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.000360	18703.730638	0.004592	0.46
Y 377.433	1.008479	560287.156963	0.003888	0.39
Y_R 377.433	1.022760	49793.800000	0.003121	0.31
Y_R 488.368	1.011310	43249.800000	0.001931	0.19
Y_R2 488.368	1.015490	84814.636769	0.002521	0.25
Y_R4	1.006510	38697.300000	0.000097	0.01

Sample Name: 280-123366-A-14-A

Date: 5/10/2019 3:52:25 PM

Rack:Tube: 1:14

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001172	ppm	0.000139	11.84	-143.230000	Y 377.433
Al (394.401 nm)	0.018659	ppm	0.004641	24.87	386.407000	Y 377.433
Al H (396.152 nm)	0.039808 u	ppm	0.008839	22.20	32.827100	Y_R 377.433
As (188.980 nm)	0.004628	ppm	0.000220	4.75	5.518270	Y 242.219
B (249.678 nm)	0.089422	ppm	0.000465	0.52	696.530000	Y 242.219
Ba (493.408 nm)	0.165866	ppm	0.000493	0.30	19032.600000	Y_R 488.368
Be (234.861 nm)	-0.000073 u	ppm	0.000050	67.49	-14.273200	Y_R 488.368
Bi (223.061 nm)	-0.000193 u	ppm	0.000314	> 100.00	-11.193500	Y 377.433
Ca (315.887 nm)	130.587522	ppm	0.055591	0.04	107935.574710	Y_R 377.433
Cd (214.439 nm)	0.000284	ppm	0.000111	38.91	4.374570	Y 377.433
Co (228.615 nm)	0.000832	ppm	0.000176	21.11	-2.562720	Y 242.219
Cr (205.560 nm)	0.000319	ppm	0.000185	58.17	-5.915410	Y 377.433
Cu (324.754 nm)	-0.000832 u	ppm	0.000178	21.34	391.075000	Y 377.433
Fe (238.204 nm)	0.636671	ppm	0.000957	0.15	1595.831293	Y_R 377.433
Fe H (259.940 nm)	0.657848 u	ppm	0.000017	0.00	917.490000	Y_R 377.433
K (766.491 nm)	2.744810	ppm	0.204294	7.44	5068.520000	Y_R2 488.368
Li (670.783 nm)	0.025560	ppm	0.005707	22.33	-2421.020000	Y_R2 488.368
Mg (279.078 nm)	48.383300	ppm	0.041202	0.09	169603.000000	Y 377.433
Mn (257.610 nm)	0.241548	ppm	0.000129	0.05	69594.500000	Y 377.433
Mo (202.032 nm)	-0.000035 u	ppm	0.000244	> 100.00	11.150600	Y 377.433
Na (589.592 nm)	58.391400 o	ppm	0.030645	0.05	50971.300000	Y_R2 488.368
Na H (589.593 nm)	58.663268	ppm	0.298458	0.51	34478.334141	Y_R4
Ni (231.604 nm)	-0.000665 u	ppm	0.000337	50.65	-14.065000	Y 377.433
P (213.618 nm)	0.056398	ppm	0.003930	6.97	90.390600	Y 242.219
Pb (220.353 nm)	-0.000173 u	ppm	0.001558	> 100.00	7.536780	Y 242.219
S (181.972 nm)	4.477952	ppm	0.013961	0.31	2203.192584	Y 377.433
Sb (206.834 nm)	-0.002585 u	ppm	0.005606	> 100.00	-2.485070	Y 377.433
Se (196.026 nm)	0.002776	ppm	0.002619	94.34	10.205800	Y 242.219
Si (288.158 nm)	19.897300	ppm	0.042840	0.22	133423.000000	Y 377.433
Sn (189.925 nm)	-0.003748 u	ppm	0.000466	12.42	2.928720	Y 377.433
Sr (421.552 nm)	0.458642	ppm	0.001000	0.22	73758.258538	Y_R 488.368
Th (288.505 nm)	-0.005994 u	ppm	0.001608	26.82	10.109700	Y 377.433
Ti (336.122 nm)	-0.000563 u	ppm	0.000086	15.28	-151.703000	Y 377.433
Tl (190.794 nm)	0.001451	ppm	0.001594	> 100.00	-1.789510	Y 377.433
U (409.013 nm)	0.038878	ppm	0.000679	1.75	137.721000	Y 377.433
V (292.401 nm)	0.002889	ppm	0.000083	2.88	58.987500	Y 377.433
Zn (206.200 nm)	0.004319	ppm	0.001204	27.87	22.909100	Y 377.433
Zr (343.823 nm)	0.000639	ppm	0.000240	37.54	-136.017000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.999533	18688.268111	0.001903	0.19
Y 377.433	1.012353	562439.407889	0.001438	0.14
Y_R 377.433	1.013090	49323.200000	0.005393	0.53
Y_R 488.368	0.999806	42757.900000	0.004955	0.50
Y_R2 488.368	1.018703	85082.946495	0.000660	0.06
Y_R4	1.023980	39368.900000	0.005272	0.51

Sample Name: CCVH-5690583

Date: 5/10/2019 3:55:57 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000014 u	ppm	0.000335	> 100.00	-322.338000	Y 377.433
Al (394.401 nm)	49.181100 o	ppm	0.001590	0.00	618056.000000	Y 377.433
Al H (396.152 nm)	49.220300	ppm	0.083956	0.17	110574.000000	Y_R 377.433
As (188.980 nm)	0.002469	ppm	0.000783	31.70	-2.351760	Y 242.219
B (249.678 nm)	0.006546	ppm	0.000542	8.28	32.674400	Y 242.219
Ba (493.408 nm)	0.001626	ppm	0.000262	16.14	1838.850000	Y_R 488.368
Be (234.861 nm)	0.002262	ppm	0.000052	2.30	-189.519000	Y_R 488.368
Bi (223.061 nm)	0.957084	ppm	0.001384	0.14	2102.010000	Y 377.433
Ca (315.887 nm)	0.022521	ppm	0.002566	11.39	-41.958910	Y_R 377.433
Cd (214.439 nm)	0.000521	ppm	0.000035	6.77	33.077000	Y 377.433
Co (228.615 nm)	0.004011	ppm	0.000282	7.02	77.049000	Y 242.219
Cr (205.560 nm)	0.000111	ppm	0.000118	> 100.00	-8.709150	Y 377.433
Cu (324.754 nm)	0.007234	ppm	0.000176	2.44	1268.010000	Y 377.433
Fe (238.204 nm)	48.125465 o	ppm	0.114859	0.24	120316.447080	Y_R 377.433
Fe H (259.940 nm)	47.930400	ppm	0.173441	0.36	68859.200000	Y_R 377.433
K (766.491 nm)	0.105562	ppm	0.138980	> 100.00	2292.620000	Y_R2 488.368
Li (670.783 nm)	0.003545	ppm	0.000787	22.20	-2821.530000	Y_R2 488.368
Mg (279.078 nm)	0.007691	ppm	0.000460	5.99	-186.579000	Y 377.433
Mn (257.610 nm)	0.001125	ppm	0.000007	0.62	300.890000	Y 377.433
Mo (202.032 nm)	0.000363	ppm	0.000163	44.92	16.421600	Y 377.433
Na (589.592 nm)	242.606000 o	ppm	0.184577	0.08	211071.000000	Y_R2 488.368
Na H (589.593 nm)	249.394202	ppm	0.544371	0.22	145023.293021	Y_R4
Ni (231.604 nm)	0.000821	ppm	0.000098	11.98	-6.004280	Y 377.433
P (213.618 nm)	-0.020632 u	ppm	0.002702	13.10	-35.299600	Y 242.219
Pb (220.353 nm)	0.004944	ppm	0.001303	26.35	40.515100	Y 242.219
S (181.972 nm)	4.792013	ppm	0.017337	0.36	2349.243086	Y 377.433
Sb (206.834 nm)	-0.000337 u	ppm	0.000093	27.49	4.957240	Y 377.433
Se (196.026 nm)	-0.000060 u	ppm	0.002398	> 100.00	-7.452240	Y 242.219
Si (288.158 nm)	0.027214	ppm	0.000118	0.43	690.196000	Y 377.433
Sn (189.925 nm)	-0.002925 u	ppm	0.000240	8.20	4.283350	Y 377.433
Sr (421.552 nm)	0.000553	ppm	0.000104	18.89	199.357995	Y_R 488.368
Th (288.505 nm)	4.882350	ppm	0.000092	0.00	8625.970000	Y 377.433
Ti (336.122 nm)	0.001408	ppm	0.000034	2.41	-335.082000	Y 377.433
Tl (190.794 nm)	-0.001760 u	ppm	0.000529	30.05	-8.969490	Y 377.433
U (409.013 nm)	9.769460	ppm	0.003138	0.03	31271.500000	Y 377.433
V (292.401 nm)	-0.000842 u	ppm	0.000166	19.68	-138.161000	Y 377.433
Zn (206.200 nm)	0.001395	ppm	0.000715	51.27	16.153300	Y 377.433
Zr (343.823 nm)	-0.003246 u	ppm	0.000466	14.36	-363.997000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.995729	18617.138011	0.003130	0.31
Y 377.433	1.007079	559509.282674	0.002705	0.27
Y_R 377.433	1.024840	49895.300000	0.001864	0.18
Y_R 488.368	1.012790	43313.200000	0.001657	0.16
Y_R2 488.368	1.022223	85376.941719	0.003070	0.30
Y_R4	1.022430	39309.300000	0.002390	0.23

Sample Name: CCV-5690581

Date: 5/10/2019 4:00:05 PM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.479880	ppm	0.000492	0.10	17353.200000	Y 377.433
Al (394.401 nm)	0.490157	ppm	0.001440	0.29	6309.810000	Y 377.433
Al H (396.152 nm)	0.532057 u	ppm	0.001498	0.28	1224.060000	Y_R 377.433
As (188.980 nm)	0.960814	ppm	0.000033	0.00	1526.790000	Y 242.219
B (249.678 nm)	0.475845	ppm	0.001192	0.25	3655.880000	Y 242.219
Ba (493.408 nm)	0.482920	ppm	0.001148	0.24	52301.100000	Y_R 488.368
Be (234.861 nm)	0.477947	ppm	0.002917	0.61	50703.600000	Y_R 488.368
Bi (223.061 nm)	0.005737	ppm	0.001639	28.56	2.247800	Y 377.433
Ca (315.887 nm)	4.876725	ppm	0.015873	0.33	3960.429860	Y_R 377.433
Cd (214.439 nm)	0.487355	ppm	0.001054	0.22	18665.500000	Y 377.433
Co (228.615 nm)	0.485080	ppm	0.000014	0.00	12139.600000	Y 242.219
Cr (205.560 nm)	0.483805	ppm	0.001873	0.39	3340.890000	Y 377.433
Cu (324.754 nm)	0.486268	ppm	0.002518	0.52	24377.400000	Y 377.433
Fe (238.204 nm)	2.407441	ppm	0.003407	0.14	6022.704894	Y_R 377.433
Fe H (259.940 nm)	2.429060 u	ppm	0.003107	0.13	3463.140000	Y_R 377.433
K (766.491 nm)	47.993900	ppm	0.005407	0.01	52660.700000	Y_R2 488.368
Li (670.783 nm)	0.981577	ppm	0.001301	0.13	14971.400000	Y_R2 488.368
Mg (279.078 nm)	19.151200	ppm	0.033545	0.18	67139.400000	Y 377.433
Mn (257.610 nm)	0.481747	ppm	0.000598	0.12	138824.000000	Y 377.433
Mo (202.032 nm)	0.487213	ppm	0.000387	0.08	6456.800000	Y 377.433
Na (589.592 nm)	25.051900	ppm	0.020269	0.08	22065.000000	Y_R2 488.368
Na H (589.593 nm)	24.955022 u	ppm	0.045956	0.18	14941.510071	Y_R4
Ni (231.604 nm)	0.484733	ppm	0.001753	0.36	2620.940000	Y 377.433
P (213.618 nm)	0.946081	ppm	0.008363	0.88	1324.280000	Y 242.219
Pb (220.353 nm)	0.972743	ppm	0.000519	0.05	3280.420000	Y 242.219
S (181.972 nm)	0.009511	ppm	0.000466	4.90	13.955845	Y 377.433
Sb (206.834 nm)	0.972152	ppm	0.000396	0.04	1810.800000	Y 377.433
Se (196.026 nm)	0.966456	ppm	0.003268	0.34	1553.640000	Y 242.219
Si (288.158 nm)	4.819800	ppm	0.004019	0.08	32704.700000	Y 377.433
Sn (189.925 nm)	0.972901	ppm	0.006471	0.67	1610.180000	Y 377.433
Sr (421.552 nm)	0.482283	ppm	0.000828	0.17	77555.238906	Y_R 488.368
Th (288.505 nm)	0.010299	ppm	0.008470	82.24	-11.891300	Y 377.433
Ti (336.122 nm)	0.482259	ppm	0.000446	0.09	63121.800000	Y 377.433
Tl (190.794 nm)	0.978099	ppm	0.001111	0.11	2388.350000	Y 377.433
U (409.013 nm)	0.017303	ppm	0.015457	89.33	26.276400	Y 377.433
V (292.401 nm)	0.481358	ppm	0.000581	0.12	25762.300000	Y 377.433
Zn (206.200 nm)	0.486922	ppm	0.001644	0.34	2228.300000	Y 377.433
Zr (343.823 nm)	0.484054	ppm	0.000525	0.11	28227.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.004373	18778.756714	0.001261	0.13
Y 377.433	1.010703	561523.103941	0.002535	0.25
Y_R 377.433	1.024970	49901.400000	0.006552	0.64
Y_R 488.368	1.009930	43190.900000	0.005555	0.55
Y_R2 488.368	1.026325	85719.590086	0.000593	0.06
Y_R4	1.021890	39288.600000	0.006129	0.60

Sample Name: CCB

Date: 5/10/2019 4:03:39 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000575 u	ppm	0.000197	34.22	-205.345000	Y 377.433
Al (394.401 nm)	0.001846 u	ppm	0.002750	> 100.00	47.966100	Y 377.433
Al H (396.152 nm)	0.114999 Zu	ppm	0.013929	12.11	38.804600 Z	Y_R 377.433
As (188.980 nm)	0.000516 u	ppm	0.001100	> 100.00	-1.004930	Y 242.219
B (249.678 nm)	0.000180 u	ppm	0.000317	> 100.00	13.231000	Y 242.219
Ba (493.408 nm)	-0.000920 u	ppm	0.000440	47.80	1532.000000	Y_R 488.368
Be (234.861 nm)	-0.000033 u	ppm	0.000001	3.42	-4.302100	Y_R 488.368
Bi (223.061 nm)	0.001563	ppm	0.002070	> 100.00	-7.445900	Y 377.433
Ca (315.887 nm)	0.006231	ppm	0.001257	20.17	-68.084654	Y_R 377.433
Cd (214.439 nm)	-0.000041 u	ppm	0.000011	27.84	-8.346910	Y 377.433
Co (228.615 nm)	0.000071	ppm	0.000065	91.65	-21.631200	Y 242.219
Cr (205.560 nm)	0.000026 u	ppm	0.000174	> 100.00	-7.943800	Y 377.433
Cu (324.754 nm)	-0.000357 u	ppm	0.000446	> 100.00	494.828000	Y 377.433
Fe (238.204 nm)	-0.000471 u	ppm	0.001628	> 100.00	2.993927	Y_R 377.433
Fe H (259.940 nm)	0.026435 u	ppm	0.003058	11.57	10.001600	Y_R 377.433
K (766.491 nm)	-0.193075 u	ppm	0.053061	27.48	1978.520000	Y_R2 488.368
Li (670.783 nm)	0.006110	ppm	0.000984	16.11	-2774.860000	Y_R2 488.368
Mg (279.078 nm)	0.000947 u	ppm	0.002084	> 100.00	19.488300	Y 377.433
Mn (257.610 nm)	0.000048	ppm	0.000004	8.74	-9.581760	Y 377.433
Mo (202.032 nm)	-0.000097 u	ppm	0.000380	> 100.00	10.333200	Y 377.433
Na (589.592 nm)	0.012179 u	ppm	0.040690	> 100.00	181.664000	Y_R2 488.368
Na H (589.593 nm)	0.023476 u	ppm	0.045543	> 100.00	491.537682	Y_R4
Ni (231.604 nm)	-0.000187 u	ppm	0.000246	> 100.00	-11.475700	Y 377.433
P (213.618 nm)	-0.004406 u	ppm	0.000373	8.48	-3.219850	Y 242.219
Pb (220.353 nm)	0.000275 u	ppm	0.001053	> 100.00	8.943640	Y 242.219
S (181.972 nm)	-0.003062 u	ppm	0.003368	> 100.00	5.979300	Y 377.433
Sb (206.834 nm)	-0.002661 u	ppm	0.000519	19.50	-2.686220	Y 377.433
Se (196.026 nm)	0.002363	ppm	0.002662	> 100.00	9.366620	Y 242.219
Si (288.158 nm)	-0.001631 u	ppm	0.003065	> 100.00	497.512000	Y 377.433
Sn (189.925 nm)	-0.002752 u	ppm	0.000264	9.60	4.567570	Y 377.433
Sr (421.552 nm)	-0.000094 u	ppm	0.000141	> 100.00	87.978939	Y_R 488.368
Th (288.505 nm)	0.001562	ppm	0.001686	> 100.00	22.092000	Y 377.433
Ti (336.122 nm)	0.000279	ppm	0.000087	31.33	-484.145000	Y 377.433
Tl (190.794 nm)	-0.000041 u	ppm	0.000186	> 100.00	0.014809	Y 377.433
U (409.013 nm)	0.009616	ppm	0.005480	56.99	60.701800	Y 377.433
V (292.401 nm)	-0.000261 u	ppm	0.000046	17.49	-108.265000	Y 377.433
Zn (206.200 nm)	-0.000193 u	ppm	0.000293	> 100.00	2.207700	Y 377.433
Zr (343.823 nm)	0.000435	ppm	0.000061	14.13	-148.010000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.033195	19317.634687	0.002344	0.23
Y 377.433	1.037839	576599.167468	0.003129	0.30
Y_R 377.433	1.042380	50749.000000	0.001717	0.16
Y_R 488.368	1.033540	44200.600000	0.007512	0.73
Y_R2 488.368	1.040876	86934.834216	0.001954	0.19
Y_R4	1.040170	39991.400000	0.007078	0.68

Sample Name: CCVL-5695588

Date: 5/10/2019 4:06:51 PM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.008813	ppm	0.000174	1.98	136.931000	Y 377.433
Al (394.401 nm)	0.101807	ppm	0.000755	0.74	1313.040000	Y 377.433
Al H (396.152 nm)	0.210835 u	ppm	0.002419	1.15	259.859000	Y_R 377.433
As (188.980 nm)	0.015452	ppm	0.000724	4.68	22.750900	Y 242.219
B (249.678 nm)	0.094568	ppm	0.000458	0.48	736.281000	Y 242.219
Ba (493.408 nm)	0.009068	ppm	0.000009	0.10	2580.070000	Y_R 488.368
Be (234.861 nm)	0.000926	ppm	0.000103	11.15	96.630500	Y_R 488.368
Bi (223.061 nm)	0.092530	ppm	0.000355	0.38	192.617000	Y 377.433
Ca (315.887 nm)	0.202148	ppm	0.004782	2.37	93.982145	Y_R 377.433
Cd (214.439 nm)	0.005089	ppm	0.000119	2.34	188.226000	Y 377.433
Co (228.615 nm)	0.010264	ppm	0.000030	0.29	233.939000	Y 242.219
Cr (205.560 nm)	0.010180	ppm	0.000120	1.18	62.250700	Y 377.433
Cu (324.754 nm)	0.014805	ppm	0.000036	0.25	1236.800000	Y 377.433
Fe (238.204 nm)	0.096566	ppm	0.002318	2.40	245.582937	Y_R 377.433
Fe H (259.940 nm)	0.129449 u	ppm	0.004782	3.69	158.056000	Y_R 377.433
K (766.491 nm)	2.673950	ppm	0.046833	1.75	4993.990000	Y_R2 488.368
Li (670.783 nm)	0.024715	ppm	0.001614	6.53	-2436.380000	Y_R2 488.368
Mg (279.078 nm)	0.199165	ppm	0.001122	0.56	713.112000	Y 377.433
Mn (257.610 nm)	0.010276	ppm	0.000024	0.23	2938.170000	Y 377.433
Mo (202.032 nm)	0.019219	ppm	0.000339	1.76	265.860000	Y 377.433
Na (589.592 nm)	1.070140	ppm	0.000825	0.08	1103.800000	Y_R2 488.368
Na H (589.593 nm)	0.824361 u	ppm	0.000746	0.09	955.719039	Y_R4
Ni (231.604 nm)	0.040729	ppm	0.000723	1.77	210.562000	Y 377.433
P (213.618 nm)	2.673590	ppm	0.005544	0.21	4129.490000	Y 242.219
Pb (220.353 nm)	0.009462	ppm	0.000425	4.49	39.930900	Y 242.219
S (181.972 nm)	0.086142	ppm	0.004382	5.09	49.610484	Y 377.433
Sb (206.834 nm)	0.017952	ppm	0.001217	6.78	35.574500	Y 377.433
Se (196.026 nm)	0.017518	ppm	0.001720	9.82	33.632600	Y 242.219
Si (288.158 nm)	0.499328	ppm	0.006215	1.24	3843.920000	Y 377.433
Sn (189.925 nm)	0.094401	ppm	0.002897	3.07	164.451000	Y 377.433
Sr (421.552 nm)	0.008690	ppm	0.000041	0.47	1498.633347	Y_R 488.368
Th (288.505 nm)	0.010776	ppm	0.000930	8.63	37.719900	Y 377.433
Ti (336.122 nm)	0.009810	ppm	0.000100	1.02	774.002000	Y 377.433
Tl (190.794 nm)	0.015720	ppm	0.001888	12.01	38.437400	Y 377.433
U (409.013 nm)	0.062625	ppm	0.001557	2.49	228.942000	Y 377.433
V (292.401 nm)	0.009779	ppm	0.000255	2.60	427.666000	Y 377.433
Zn (206.200 nm)	0.020883	ppm	0.001088	5.21	98.519300	Y 377.433
Zr (343.823 nm)	0.010281 Q	ppm	0.000334	3.25	429.706000 Q	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.043496	19510.238089	0.003078	0.29
Y 377.433	1.047787	582125.657480	0.003156	0.30
Y_R 377.433	1.056350	51429.200000	0.004167	0.39
Y_R 488.368	1.042500	44583.700000	0.000382	0.04
Y_R2 488.368	1.050010	87697.771255	0.000643	0.06
Y_R4	1.034300	39765.500000	0.010333	1.00

Sample Name: 280-123401-L-1-A

Date: 5/10/2019 4:10:19 PM

Rack:Tube: 1:15

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000839	ppm	0.000345	41.07	-155.309000	Y 377.433
Al (394.401 nm)	0.015555	ppm	0.000712	4.58	408.767000	Y 377.433
Al H (396.152 nm)	-0.015146 u	ppm	0.002566	16.94	2.184230	Y_R 377.433
As (188.980 nm)	0.003887	ppm	0.001233	31.73	4.330850	Y 242.219
B (249.678 nm)	0.305467	ppm	0.000211	0.07	2351.490000	Y 242.219
Ba (493.408 nm)	0.325481	ppm	0.000427	0.13	35780.500000	Y_R 488.368
Be (234.861 nm)	-0.000048 u	ppm	0.000043	88.39	-14.241000	Y_R 488.368
Bi (223.061 nm)	0.000114 u	ppm	0.004770	> 100.00	-10.462900	Y 377.433
Ca (315.887 nm)	186.051158	ppm	0.040508	0.02	153809.489119	Y_R 377.433
Cd (214.439 nm)	0.000359	ppm	0.000060	16.60	7.351460	Y 377.433
Co (228.615 nm)	-0.000196 u	ppm	0.000275	> 100.00	-28.308600	Y 242.219
Cr (205.560 nm)	0.000538	ppm	0.000283	52.58	-4.399760	Y 377.433
Cu (324.754 nm)	-0.000652 u	ppm	0.000295	45.17	369.630000	Y 377.433
Fe (238.204 nm)	0.932230	ppm	0.000935	0.10	2334.719210	Y_R 377.433
Fe H (259.940 nm)	0.943476 u	ppm	0.007542	0.80	1328.000000	Y_R 377.433
K (766.491 nm)	4.581520	ppm	0.182988	3.99	7000.340000	Y_R2 488.368
Li (670.783 nm)	0.029197	ppm	0.003201	10.96	-2354.850000	Y_R2 488.368
Mg (279.078 nm)	66.403100	ppm	0.124617	0.19	232763.000000	Y 377.433
Mn (257.610 nm)	0.004736	ppm	0.000006	0.13	1341.560000	Y 377.433
Mo (202.032 nm)	0.000397	ppm	0.000055	13.74	16.871800	Y 377.433
Na (589.592 nm)	100.099000 o	ppm	0.157319	0.16	87265.900000	Y_R2 488.368
Na H (589.593 nm)	102.643162	ppm	0.339248	0.33	59968.460194	Y_R4
Ni (231.604 nm)	0.000052	ppm	0.000040	76.19	-10.175200	Y 377.433
P (213.618 nm)	0.025618	ppm	0.001579	6.17	42.547800	Y 242.219
Pb (220.353 nm)	-0.001264 u	ppm	0.000005	0.37	3.825200	Y 242.219
S (181.972 nm)	32.128224	ppm	0.073259	0.23	15717.365564	Y 377.433
Sb (206.834 nm)	-0.005285 u	ppm	0.004507	85.28	-7.489650	Y 377.433
Se (196.026 nm)	0.003410	ppm	0.001253	36.75	10.800300	Y 242.219
Si (288.158 nm)	14.538800	ppm	0.086940	0.60	97627.700000	Y 377.433
Sn (189.925 nm)	-0.003459 u	ppm	0.000083	2.41	3.403960	Y 377.433
Sr (421.552 nm)	0.709890	ppm	0.000530	0.07	114107.404561	Y_R 488.368
Th (288.505 nm)	-0.002154 u	ppm	0.001898	88.13	10.703800	Y 377.433
Ti (336.122 nm)	-0.001030 u	ppm	0.000063	6.11	-24.493400	Y 377.433
Tl (190.794 nm)	0.002990	ppm	0.001050	35.10	-0.360317	Y 377.433
U (409.013 nm)	0.035005	ppm	0.001599	4.57	118.347000	Y 377.433
V (292.401 nm)	0.002669	ppm	0.000307	11.52	48.339200	Y 377.433
Zn (206.200 nm)	0.034420	ppm	0.000168	0.49	160.492000	Y 377.433
Zr (343.823 nm)	0.000388	ppm	0.000062	16.08	-150.740000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.977477	18275.874803	0.005044	0.52
Y 377.433	0.993802	552132.911528	0.006208	0.62
Y_R 377.433	1.015630	49446.800000	0.000408	0.04
Y_R 488.368	1.000780	42799.600000	0.000012	0.00
Y_R2 488.368	1.000212	83538.560359	0.001115	0.11
Y_R4	1.004080	38603.700000	0.006524	0.65

Sample Name: 280-123401-L-3-A

Date: 5/10/2019 4:13:51 PM

Rack:Tube: 1:16

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001146	ppm	0.000008	0.67	-143.753000	Y 377.433
Al (394.401 nm)	0.021726	ppm	0.000911	4.19	486.689000	Y 377.433
Al H (396.152 nm)	-0.001657 u	ppm	0.000156	9.40	30.143500	Y_R 377.433
As (188.980 nm)	0.002685	ppm	0.000093	3.46	2.438360	Y 242.219
B (249.678 nm)	0.296468	ppm	0.000529	0.18	2282.970000	Y 242.219
Ba (493.408 nm)	0.316900	ppm	0.000591	0.19	34879.700000	Y_R 488.368
Be (234.861 nm)	-0.000062 u	ppm	0.000019	30.29	-9.389990	Y_R 488.368
Bi (223.061 nm)	-0.003347 u	ppm	0.000629	18.79	-18.194500	Y 377.433
Ca (315.887 nm)	187.376905	ppm	0.277062	0.15	154906.015815	Y_R 377.433
Cd (214.439 nm)	0.000363	ppm	0.000049	13.46	7.224410	Y 377.433
Co (228.615 nm)	0.000011 u	ppm	0.000467	> 100.00	-23.104700	Y 242.219
Cr (205.560 nm)	0.000708	ppm	0.000225	31.81	-3.222120	Y 377.433
Cu (324.754 nm)	-0.000778 u	ppm	0.000077	9.86	362.215000	Y 377.433
Fe (238.204 nm)	0.227668	ppm	0.001514	0.67	573.333764	Y_R 377.433
Fe H (259.940 nm)	0.241829 u	ppm	0.005150	2.13	319.573000	Y_R 377.433
K (766.491 nm)	4.388600	ppm	0.210003	4.79	6797.430000	Y_R2 488.368
Li (670.783 nm)	0.035335	ppm	0.002401	6.80	-2243.180000	Y_R2 488.368
Mg (279.078 nm)	65.641100	ppm	0.025234	0.04	230093.000000	Y 377.433
Mn (257.610 nm)	0.008201	ppm	0.000041	0.50	2340.300000	Y 377.433
Mo (202.032 nm)	0.000431	ppm	0.000222	51.50	17.313700	Y 377.433
Na (589.592 nm)	97.560900 o	ppm	0.023624	0.02	85057.800000	Y_R2 488.368
Na H (589.593 nm)	99.744094	ppm	0.466117	0.47	58288.201237	Y_R4
Ni (231.604 nm)	0.000214 u	ppm	0.001025	> 100.00	-9.295830	Y 377.433
P (213.618 nm)	0.025796	ppm	0.002301	8.92	42.903700	Y 242.219
Pb (220.353 nm)	-0.000901 u	ppm	0.001784	> 100.00	5.083770	Y 242.219
S (181.972 nm)	32.058328	ppm	0.049757	0.16	15683.279764	Y 377.433
Sb (206.834 nm)	-0.006303 u	ppm	0.002975	47.20	-9.450110	Y 377.433
Se (196.026 nm)	0.001512 u	ppm	0.002171	> 100.00	7.955760	Y 242.219
Si (288.158 nm)	14.605200	ppm	0.043276	0.30	98071.000000	Y 377.433
Sn (189.925 nm)	-0.003569 u	ppm	0.001528	42.83	3.223850	Y 377.433
Sr (421.552 nm)	0.705172	ppm	0.000013	0.00	113349.561921	Y_R 488.368
Th (288.505 nm)	-0.000787 u	ppm	0.002727	> 100.00	13.404300	Y 377.433
Ti (336.122 nm)	-0.000400 u	ppm	0.000037	9.14	62.604700	Y 377.433
Tl (190.794 nm)	0.002667	ppm	0.002059	77.23	-1.109280	Y 377.433
U (409.013 nm)	0.032885	ppm	0.011731	35.67	110.893000	Y 377.433
V (292.401 nm)	0.002639	ppm	0.000238	9.03	45.977500	Y 377.433
Zn (206.200 nm)	0.006660	ppm	0.000686	10.30	33.550300	Y 377.433
Zr (343.823 nm)	0.000581	ppm	0.000059	10.09	-139.450000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.975790	18244.338441	0.001841	0.19
Y 377.433	0.991175	550673.707449	0.000952	0.10
Y_R 377.433	1.027600	50029.400000	0.000476	0.05
Y_R 488.368	1.012710	43309.900000	0.002654	0.26
Y_R2 488.368	1.021637	85327.979453	0.005089	0.50
Y_R4	1.029300	39573.300000	0.004000	0.39

Sample Name: 280-123401-O-5-A

Date: 5/10/2019 4:17:23 PM

Rack:Tube: 1:17

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001030	ppm	0.000255	24.80	-147.722000	Y 377.433
Al (394.401 nm)	0.012616	ppm	0.000186	1.47	349.897000	Y 377.433
Al H (396.152 nm)	-0.003002 u	ppm	0.002129	70.93	0.907194	Y_R 377.433
As (188.980 nm)	0.001255	ppm	0.001447	> 100.00	0.167364	Y 242.219
B (249.678 nm)	0.255135	ppm	0.001133	0.44	1966.420000	Y 242.219
Ba (493.408 nm)	0.224538	ppm	0.000436	0.19	25188.300000	Y_R 488.368
Be (234.861 nm)	-0.000068 u	ppm	0.000010	14.54	-8.578240	Y_R 488.368
Bi (223.061 nm)	-0.000387 u	ppm	0.000681	> 100.00	-11.713700	Y 377.433
Ca (315.887 nm)	142.293335	ppm	0.142530	0.10	117617.438697	Y_R 377.433
Cd (214.439 nm)	0.000238	ppm	0.000044	18.51	2.359040	Y 377.433
Co (228.615 nm)	-0.000171 u	ppm	0.000028	16.05	-27.683800	Y 242.219
Cr (205.560 nm)	0.000201 u	ppm	0.000453	> 100.00	-6.728900	Y 377.433
Cu (324.754 nm)	0.004522	ppm	0.000034	0.75	648.061000	Y 377.433
Fe (238.204 nm)	0.063695	ppm	0.001379	2.16	163.406278	Y_R 377.433
Fe H (259.940 nm)	0.082095 u	ppm	0.003352	4.08	89.997200	Y_R 377.433
K (766.491 nm)	5.054150	ppm	0.138559	2.74	7497.440000	Y_R2 488.368
Li (670.783 nm)	0.030635	ppm	0.003766	12.29	-2328.690000	Y_R2 488.368
Mg (279.078 nm)	58.269600	ppm	0.089115	0.15	204256.000000	Y 377.433
Mn (257.610 nm)	0.001957	ppm	0.000018	0.93	540.679000	Y 377.433
Mo (202.032 nm)	0.000215	ppm	0.000141	65.67	14.454500	Y 377.433
Na (589.592 nm)	81.852400 o	ppm	0.068572	0.08	71380.100000	Y_R2 488.368
Na H (589.593 nm)	81.626202	ppm	0.077343	0.09	47787.326854	Y_R4
Ni (231.604 nm)	-0.000990 u	ppm	0.000121	12.22	-15.830600	Y 377.433
P (213.618 nm)	0.422728	ppm	0.004100	0.97	654.877000	Y 242.219
Pb (220.353 nm)	0.000104 u	ppm	0.001537	> 100.00	8.435190	Y 242.219
S (181.972 nm)	35.524274	ppm	0.142661	0.40	17374.680156	Y 377.433
Sb (206.834 nm)	-0.007585 u	ppm	0.001106	14.58	-11.849400	Y 377.433
Se (196.026 nm)	0.003178	ppm	0.002583	81.29	10.658800	Y 242.219
Si (288.158 nm)	13.442600	ppm	0.042494	0.32	90305.000000	Y 377.433
Sn (189.925 nm)	-0.002314 u	ppm	0.001254	54.19	5.289440	Y 377.433
Sr (421.552 nm)	0.618016	ppm	0.000096	0.02	99352.832487	Y_R 488.368
Th (288.505 nm)	-0.006962 u	ppm	0.006113	87.82	3.546820	Y 377.433
Ti (336.122 nm)	-0.000751 u	ppm	0.000138	18.37	-138.609000	Y 377.433
Tl (190.794 nm)	0.003181	ppm	0.000097	3.04	2.048860	Y 377.433
U (409.013 nm)	0.030065	ppm	0.002235	7.44	107.659000	Y 377.433
V (292.401 nm)	0.001939	ppm	0.000181	9.36	7.767590	Y 377.433
Zn (206.200 nm)	0.029222	ppm	0.000580	1.99	136.619000	Y 377.433
Zr (343.823 nm)	0.000581	ppm	0.000014	2.43	-139.446000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.014213	18962.743031	0.003549	0.35
Y 377.433	1.018378	565786.930594	0.002779	0.27
Y_R 377.433	1.037440	50508.600000	0.002339	0.23
Y_R 488.368	1.025800	43869.800000	0.001055	0.10
Y_R2 488.368	1.015852	84844.797182	0.002391	0.24
Y_R4	1.036490	39850.000000	0.004284	0.41

Sample Name: 280-123401-O-7-A

Date: 5/10/2019 4:20:54 PM

Rack:Tube: 1:18

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000669	ppm	0.000391	58.49	-161.207000	Y 377.433
Al (394.401 nm)	0.010394	ppm	0.000635	6.11	316.661000	Y 377.433
Al H (396.152 nm)	-0.003753 u	ppm	0.012620	> 100.00	-9.338580	Y_R 377.433
As (188.980 nm)	0.002085	ppm	0.001835	88.05	1.487280	Y 242.219
B (249.678 nm)	0.256998	ppm	0.000189	0.07	1980.680000	Y 242.219
Ba (493.408 nm)	0.217677	ppm	0.000061	0.03	24468.500000	Y_R 488.368
Be (234.861 nm)	-0.000085 u	ppm	0.000076	88.99	-10.690300	Y_R 488.368
Bi (223.061 nm)	0.000058 u	ppm	0.001711	> 100.00	-10.729800	Y 377.433
Ca (315.887 nm)	133.559827	ppm	0.181804	0.14	110393.960696	Y_R 377.433
Cd (214.439 nm)	0.000379	ppm	0.000031	8.26	7.781680	Y 377.433
Co (228.615 nm)	-0.000419 u	ppm	0.000024	5.65	-33.876600	Y 242.219
Cr (205.560 nm)	0.000111 u	ppm	0.000448	> 100.00	-7.356300	Y 377.433
Cu (324.754 nm)	0.003759	ppm	0.000278	7.39	615.285000	Y 377.433
Fe (238.204 nm)	0.096772	ppm	0.001340	1.38	246.098108	Y_R 377.433
Fe H (259.940 nm)	0.112505 u	ppm	0.004072	3.62	133.704000	Y_R 377.433
K (766.491 nm)	4.584990	ppm	0.106909	2.33	7003.990000	Y_R2 488.368
Li (670.783 nm)	0.025280	ppm	0.002825	11.18	-2426.100000	Y_R2 488.368
Mg (279.078 nm)	54.517700	ppm	0.073851	0.14	191105.000000	Y 377.433
Mn (257.610 nm)	0.001226	ppm	0.000028	2.30	329.943000	Y 377.433
Mo (202.032 nm)	0.000222	ppm	0.000013	5.79	14.551200	Y 377.433
Na (589.592 nm)	77.764800 o	ppm	0.273708	0.35	67825.100000	Y_R2 488.368
Na H (589.593 nm)	78.460899	ppm	0.151951	0.19	45952.761798	Y_R4
Ni (231.604 nm)	-0.000852 u	ppm	0.000967	> 100.00	-15.080500	Y 377.433
P (213.618 nm)	0.364248	ppm	0.002440	0.67	564.788000	Y 242.219
Pb (220.353 nm)	-0.000675 u	ppm	0.000649	96.22	5.837260	Y 242.219
S (181.972 nm)	32.631872	ppm	0.143926	0.44	15960.772703	Y 377.433
Sb (206.834 nm)	-0.005550 u	ppm	0.000013	0.23	-8.059950	Y 377.433
Se (196.026 nm)	0.001835	ppm	0.000395	21.53	8.498090	Y 242.219
Si (288.158 nm)	12.477800	ppm	0.006656	0.05	83859.900000	Y 377.433
Sn (189.925 nm)	-0.004006 u	ppm	0.000233	5.82	2.504700	Y 377.433
Sr (421.552 nm)	0.593338	ppm	0.001193	0.20	95389.678961	Y_R 488.368
Th (288.505 nm)	-0.003272 u	ppm	0.000108	3.30	10.249600	Y 377.433
Ti (336.122 nm)	-0.000378 u	ppm	0.000082	21.69	-119.277000	Y 377.433
Tl (190.794 nm)	0.002784	ppm	0.002616	93.94	1.436230	Y 377.433
U (409.013 nm)	0.037310	ppm	0.003636	9.74	131.993000	Y 377.433
V (292.401 nm)	0.001815	ppm	0.000010	0.55	1.025620	Y 377.433
Zn (206.200 nm)	0.026946	ppm	0.000296	1.10	126.223000	Y 377.433
Zr (343.823 nm)	0.000751	ppm	0.000223	29.66	-129.448000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.990387	18517.262785	0.002955	0.30
Y 377.433	1.006041	558932.645047	0.003107	0.31
Y_R 377.433	1.010100	49177.300000	0.008664	0.86
Y_R 488.368	0.995662	42580.700000	0.006633	0.67
Y_R2 488.368	1.003859	83843.195486	0.006939	0.69
Y_R4	1.006420	38693.600000	0.004368	0.43

Sample Name: 280-123401-L-9-A

Date: 5/10/2019 4:24:23 PM

Rack:Tube: 1:19

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000841	ppm	0.000102	12.10	-155.378000	Y 377.433
Al (394.401 nm)	0.011166	ppm	0.000548	4.91	419.759000	Y 377.433
Al H (396.152 nm)	-0.050483 u	ppm	0.007922	15.69	13.829600	Y_R 377.433
As (188.980 nm)	0.003826	ppm	0.001552	40.56	4.256280	Y 242.219
B (249.678 nm)	0.336211	ppm	0.001283	0.38	2587.530000	Y 242.219
Ba (493.408 nm)	0.531671	ppm	0.001475	0.28	57414.400000	Y_R 488.368
Be (234.861 nm)	-0.000082 u	ppm	0.000037	45.24	-10.353500	Y_R 488.368
Bi (223.061 nm)	-0.000076 u	ppm	0.002404	> 100.00	-11.021800	Y 377.433
Ca (315.887 nm)	246.428576	ppm	0.166865	0.07	203747.595570	Y_R 377.433
Cd (214.439 nm)	0.000638	ppm	0.000050	7.81	17.701600	Y 377.433
Co (228.615 nm)	0.004188	ppm	0.000028	0.68	81.592900	Y 242.219
Cr (205.560 nm)	0.000743	ppm	0.000748	> 100.00	-3.130280	Y 377.433
Cu (324.754 nm)	0.007149	ppm	0.000190	2.66	715.901000	Y 377.433
Fe (238.204 nm)	0.095198	ppm	0.000073	0.08	242.163742	Y_R 377.433
Fe H (259.940 nm)	0.104740 u	ppm	0.000614	0.59	122.544000	Y_R 377.433
K (766.491 nm)	6.171970	ppm	0.066444	1.08	8673.140000	Y_R2 488.368
Li (670.783 nm)	0.048072	ppm	0.000920	1.91	-2011.460000	Y_R2 488.368
Mg (279.078 nm)	95.918200	ppm	0.086605	0.09	336218.000000	Y 377.433
Mn (257.610 nm)	0.891564	ppm	0.000771	0.09	256940.000000	Y 377.433
Mo (202.032 nm)	0.000681	ppm	0.000452	66.34	20.618500	Y 377.433
Na (589.592 nm)	207.255000 o	ppm	0.551041	0.27	180467.000000	Y_R2 488.368
Na H (589.593 nm)	214.273203	ppm	0.014880	0.01	124667.657463	Y_R4
Ni (231.604 nm)	0.081611	ppm	0.000315	0.39	432.377000	Y 377.433
P (213.618 nm)	0.023219	ppm	0.000496	2.13	36.777100	Y 242.219
Pb (220.353 nm)	0.001994	ppm	0.000691	34.67	14.767600	Y 242.219
S (181.972 nm)	28.756898	ppm	0.043132	0.15	14075.845901	Y 377.433
Sb (206.834 nm)	-0.003574 u	ppm	0.000808	22.62	-4.368780	Y 377.433
Se (196.026 nm)	0.002279	ppm	0.002586	> 100.00	10.493800	Y 242.219
Si (288.158 nm)	13.887000	ppm	0.031500	0.23	93273.500000	Y 377.433
Sn (189.925 nm)	-0.002611 u	ppm	0.001279	48.99	4.800690	Y 377.433
Sr (421.552 nm)	0.961124	ppm	0.002121	0.22	154453.944870	Y_R 488.368
Th (288.505 nm)	0.000750	ppm	0.000780	> 100.00	31.632500	Y 377.433
Ti (336.122 nm)	-0.001420 u	ppm	0.000052	3.68	128.636000	Y 377.433
Tl (190.794 nm)	0.005999	ppm	0.000170	2.83	4.654920	Y 377.433
U (409.013 nm)	0.036438	ppm	0.005509	15.12	114.534000	Y 377.433
V (292.401 nm)	0.003217	ppm	0.000073	2.27	77.065200	Y 377.433
Zn (206.200 nm)	0.003510	ppm	0.000860	24.50	19.137300	Y 377.433
Zr (343.823 nm)	0.000580	ppm	0.000019	3.21	-139.482000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.964986	18042.337482	0.005565	0.58
Y 377.433	0.984757	547108.046375	0.006530	0.66
Y_R 377.433	1.016500	49488.800000	0.004467	0.44
Y_R 488.368	1.001080	42812.200000	0.002461	0.25
Y_R2 488.368	1.017217	84958.863037	0.004872	0.48
Y_R4	1.017010	39101.000000	0.006902	0.68

Sample Name: 280-123401-A-12-A

Date: 5/10/2019 4:27:57 PM

Rack:Tube: 1:20

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000101 u	ppm	0.000092	91.42	-189.258000	Y 377.433
Al (394.401 nm)	0.432159	ppm	0.001962	0.45	5502.350000	Y 377.433
Al H (396.152 nm)	0.528562 u	ppm	0.001494	0.28	1019.080000	Y_R 377.433
As (188.980 nm)	0.002979	ppm	0.001179	39.58	2.858900	Y 242.219
B (249.678 nm)	0.045418	ppm	0.001156	2.55	359.211000	Y 242.219
Ba (493.408 nm)	0.054488	ppm	0.000323	0.59	7346.510000	Y_R 488.368
Be (234.861 nm)	-0.000011 u	ppm	0.000012	> 100.00	-10.525100	Y_R 488.368
Bi (223.061 nm)	0.000830	ppm	0.000842	> 100.00	-8.890440	Y 377.433
Ca (315.887 nm)	59.596058	ppm	0.034018	0.06	49218.716138	Y_R 377.433
Cd (214.439 nm)	0.000161	ppm	0.000097	60.19	-0.234614	Y 377.433
Co (228.615 nm)	0.000390	ppm	0.000165	42.30	-13.384500	Y 242.219
Cr (205.560 nm)	0.009729	ppm	0.000255	2.62	59.279400	Y 377.433
Cu (324.754 nm)	0.000449	ppm	0.000220	49.08	494.877000	Y 377.433
Fe (238.204 nm)	0.966227	ppm	0.002791	0.29	2419.711497	Y_R 377.433
Fe H (259.940 nm)	1.000250 u	ppm	0.004123	0.41	1409.600000	Y_R 377.433
K (766.491 nm)	1.064980	ppm	0.128760	12.09	3301.720000	Y_R2 488.368
Li (670.783 nm)	0.007682	ppm	0.004181	54.43	-2746.260000	Y_R2 488.368
Mg (279.078 nm)	15.927700	ppm	0.027844	0.17	55842.200000	Y 377.433
Mn (257.610 nm)	0.015647	ppm	0.000020	0.13	4486.260000	Y 377.433
Mo (202.032 nm)	0.001455	ppm	0.000016	1.08	30.857200	Y 377.433
Na (589.592 nm)	41.878600	ppm	0.229669	0.55	36589.900000	Y_R2 488.368
Na H (589.593 nm)	42.392523 u	ppm	0.082562	0.19	25048.039359	Y_R4
Ni (231.604 nm)	-0.000151 u	ppm	0.000171	> 100.00	-11.279700	Y 377.433
P (213.618 nm)	0.064583	ppm	0.002426	3.76	102.922000	Y 242.219
Pb (220.353 nm)	-0.000410 u	ppm	0.000540	> 100.00	6.640570	Y 242.219
S (181.972 nm)	4.893449	ppm	0.045797	0.94	2401.871515	Y 377.433
Sb (206.834 nm)	-0.002405 u	ppm	0.000587	24.42	-2.092470	Y 377.433
Se (196.026 nm)	0.002298	ppm	0.000652	28.36	9.025900	Y 242.219
Si (288.158 nm)	10.797600	ppm	0.007600	0.07	72636.200000	Y 377.433
Sn (189.925 nm)	-0.003292 u	ppm	0.001310	39.79	3.679830	Y 377.433
Sr (421.552 nm)	0.149831	ppm	0.000064	0.04	24165.198487	Y_R 488.368
Th (288.505 nm)	-0.009248 u	ppm	0.001420	15.35	1.893140	Y 377.433
Ti (336.122 nm)	0.006955	ppm	0.000283	4.07	598.202000	Y 377.433
Tl (190.794 nm)	0.001708	ppm	0.001197	70.09	1.701950	Y 377.433
U (409.013 nm)	0.024249	ppm	0.012797	52.77	100.416000	Y 377.433
V (292.401 nm)	0.001602	ppm	0.000024	1.51	-14.482200	Y 377.433
Zn (206.200 nm)	0.005740	ppm	0.000226	3.94	29.451000	Y 377.433
Zr (343.823 nm)	0.000936	ppm	0.000001	0.07	-118.585000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.008910	18863.588376	0.000077	0.01
Y 377.433	1.019362	566333.401538	0.000699	0.07
Y_R 377.433	1.019410	49630.500000	0.005100	0.50
Y_R 488.368	1.006740	43054.200000	0.006194	0.62
Y_R2 488.368	1.012257	84544.548950	0.006473	0.64
Y_R4	1.005220	38647.600000	0.006362	0.63

Sample Name: 280-123401-A-13-A

Date: 5/10/2019 4:31:27 PM

Rack:Tube: 1:21

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000418	ppm	0.000141	33.82	-170.012000	Y 377.433
Al (394.401 nm)	0.037493	ppm	0.000455	1.21	573.421000	Y 377.433
Al H (396.152 nm)	0.093408 u	ppm	0.000783	0.84	83.808600	Y_R 377.433
As (188.980 nm)	0.001749	ppm	0.000626	35.78	0.952728	Y 242.219
B (249.678 nm)	0.078934	ppm	0.001442	1.83	616.524000	Y 242.219
Ba (493.408 nm)	0.176878	ppm	0.000360	0.20	20187.600000	Y_R 488.368
Be (234.861 nm)	-0.000082 u	ppm	0.000016	20.00	-10.255800	Y_R 488.368
Bi (223.061 nm)	-0.002144 u	ppm	0.000514	24.00	-15.577600	Y 377.433
Ca (315.887 nm)	82.890525	ppm	0.054620	0.07	68485.439904	Y_R 377.433
Cd (214.439 nm)	0.000299	ppm	0.000079	26.30	4.705310	Y 377.433
Co (228.615 nm)	-0.000143 u	ppm	0.000042	29.40	-26.963300	Y 242.219
Cr (205.560 nm)	0.000379	ppm	0.000438	> 100.00	-5.496450	Y 377.433
Cu (324.754 nm)	-0.001239 u	ppm	0.000033	2.70	398.830000	Y 377.433
Fe (238.204 nm)	0.079190	ppm	0.003331	4.21	202.143516	Y_R 377.433
Fe H (259.940 nm)	0.099410 u	ppm	0.000084	0.08	114.883000	Y_R 377.433
K (766.491 nm)	3.078780	ppm	0.173199	5.63	5419.780000	Y_R2 488.368
Li (670.783 nm)	0.018116	ppm	0.005695	31.44	-2556.430000	Y_R2 488.368
Mg (279.078 nm)	17.564700	ppm	0.009505	0.05	61581.400000	Y 377.433
Mn (257.610 nm)	0.001963	ppm	0.000034	1.73	542.335000	Y 377.433
Mo (202.032 nm)	0.000965	ppm	0.000189	19.58	24.380600	Y 377.433
Na (589.592 nm)	59.925500 o	ppm	0.011238	0.02	52307.500000	Y_R2 488.368
Na H (589.593 nm)	60.472484	ppm	0.022575	0.04	35526.930241	Y_R4
Ni (231.604 nm)	-0.001888 u	ppm	0.000070	3.70	-20.706500	Y 377.433
P (213.618 nm)	0.035953	ppm	0.003392	9.44	58.953800	Y 242.219
Pb (220.353 nm)	-0.000395 u	ppm	0.000276	69.98	6.770700	Y 242.219
S (181.972 nm)	14.757221	ppm	0.034390	0.23	7223.227861	Y 377.433
Sb (206.834 nm)	-0.005930 u	ppm	0.000309	5.21	-8.773580	Y 377.433
Se (196.026 nm)	0.004852	ppm	0.002425	49.99	13.335100	Y 242.219
Si (288.158 nm)	15.955600	ppm	0.067574	0.42	107092.000000	Y 377.433
Sn (189.925 nm)	-0.003503 u	ppm	0.000603	17.23	3.332030	Y 377.433
Sr (421.552 nm)	0.267343	ppm	0.000855	0.32	43036.700050	Y_R 488.368
Th (288.505 nm)	-0.010401 u	ppm	0.003682	35.40	-0.866117	Y 377.433
Ti (336.122 nm)	-0.000106 u	ppm	0.000075	70.78	-254.910000	Y 377.433
Tl (190.794 nm)	0.000012 u	ppm	0.000043	> 100.00	-3.263590	Y 377.433
U (409.013 nm)	0.035964	ppm	0.005455	15.17	134.262000	Y 377.433
V (292.401 nm)	0.001858	ppm	0.000314	16.91	2.966470	Y 377.433
Zn (206.200 nm)	0.000845	ppm	0.000260	30.74	6.959960	Y 377.433
Zr (343.823 nm)	0.000520	ppm	0.000038	7.38	-143.028000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.000899	18713.803100	0.001715	0.17
Y 377.433	1.011573	562006.067386	0.001744	0.17
Y_R 377.433	1.022230	49768.000000	0.003764	0.37
Y_R 488.368	1.009530	43173.700000	0.000202	0.02
Y_R2 488.368	1.017106	84949.586765	0.006495	0.64
Y_R4	1.019860	39210.200000	0.001602	0.16

Sample Name: CCVH-5690583

Date: 5/10/2019 4:34:57 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000353	ppm	0.000148	42.01	-308.595000	Y 377.433
Al (394.401 nm)	48.646500 o	ppm	0.002985	0.01	611340.000000	Y 377.433
Al H (396.152 nm)	48.742100	ppm	0.041411	0.08	109498.000000	Y_R 377.433
As (188.980 nm)	0.004652	ppm	0.000390	8.39	1.173680	Y 242.219
B (249.678 nm)	0.007387	ppm	0.001137	15.40	39.486300	Y 242.219
Ba (493.408 nm)	0.001849	ppm	0.000309	16.74	1861.700000	Y_R 488.368
Be (234.861 nm)	0.002483	ppm	0.000103	4.14	-160.642000	Y_R 488.368
Bi (223.061 nm)	0.945813	ppm	0.004708	0.50	2077.120000	Y 377.433
Ca (315.887 nm)	0.021558	ppm	0.003085	14.31	-42.896710	Y_R 377.433
Cd (214.439 nm)	0.000863	ppm	0.000047	5.43	45.931100	Y 377.433
Co (228.615 nm)	0.003943	ppm	0.000130	3.29	75.355400	Y 242.219
Cr (205.560 nm)	0.000867	ppm	0.000381	43.94	-3.457280	Y 377.433
Cu (324.754 nm)	0.005828	ppm	0.000548	9.40	1195.040000	Y 377.433
Fe (238.204 nm)	47.554235 o	ppm	0.051668	0.11	118888.388825	Y_R 377.433
Fe H (259.940 nm)	47.466900	ppm	0.031050	0.07	68193.100000	Y_R 377.433
K (766.491 nm)	-0.019452 u	ppm	0.093508	> 100.00	2161.130000	Y_R2 488.368
Li (670.783 nm)	0.006318	ppm	0.001188	18.80	-2771.080000	Y_R2 488.368
Mg (279.078 nm)	0.015966	ppm	0.000280	1.75	-155.158000	Y 377.433
Mn (257.610 nm)	0.001331	ppm	0.000009	0.67	360.239000	Y 377.433
Mo (202.032 nm)	0.000544	ppm	0.000341	62.74	18.814000	Y 377.433
Na (589.592 nm)	238.894000 o	ppm	0.981992	0.41	207845.000000	Y_R2 488.368
Na H (589.593 nm)	247.393914	ppm	0.123872	0.05	143863.954417	Y_R4
Ni (231.604 nm)	0.002235	ppm	0.000027	1.23	1.670190	Y 377.433
P (213.618 nm)	-0.014366 u	ppm	0.000119	0.83	-25.638100	Y 242.219
Pb (220.353 nm)	0.008113	ppm	0.002019	24.89	51.044300	Y 242.219
S (181.972 nm)	4.762688	ppm	0.018455	0.39	2334.912987	Y 377.433
Sb (206.834 nm)	0.000467 u	ppm	0.001769	> 100.00	6.411440	Y 377.433
Se (196.026 nm)	0.003968	ppm	0.003088	77.84	-0.838700	Y 242.219
Si (288.158 nm)	0.030420	ppm	0.005496	18.07	711.613000	Y 377.433
Sn (189.925 nm)	-0.002563 u	ppm	0.001491	58.20	4.879690	Y 377.433
Sr (421.552 nm)	0.000925	ppm	0.000016	1.68	259.101657	Y_R 488.368
Th (288.505 nm)	4.871450	ppm	0.006217	0.13	8606.440000	Y 377.433
Ti (336.122 nm)	0.001720	ppm	0.000007	0.38	-293.878000	Y 377.433
Tl (190.794 nm)	-0.000794 u	ppm	0.001024	> 100.00	-6.549540	Y 377.433
U (409.013 nm)	9.695110	ppm	0.015982	0.16	31033.600000	Y 377.433
V (292.401 nm)	-0.000878 u	ppm	0.000107	12.24	-140.319000	Y 377.433
Zn (206.200 nm)	0.002928	ppm	0.000326	11.15	23.075700	Y 377.433
Zr (343.823 nm)	-0.002829 u	ppm	0.000010	0.37	-339.492000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.990484	18519.077602	0.000081	0.01
Y 377.433	1.001786	556568.734093	0.000593	0.06
Y_R 377.433	1.020490	49683.500000	0.000912	0.09
Y_R 488.368	1.010910	43233.000000	0.008310	0.82
Y_R2 488.368	1.025022	85610.759017	0.003040	0.30
Y_R4	1.036270	39841.400000	0.002000	0.19

Sample Name: CCV-5690581

Date: 5/10/2019 4:38:39 PM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.479462	ppm	0.000333	0.07	17337.900000	Y 377.433
Al (394.401 nm)	0.491818	ppm	0.003078	0.63	6330.320000	Y 377.433
Al H (396.152 nm)	0.527990 u	ppm	0.003558	0.67	1214.150000	Y_R 377.433
As (188.980 nm)	0.961991	ppm	0.001847	0.19	1528.670000	Y 242.219
B (249.678 nm)	0.473702	ppm	0.000448	0.09	3639.460000	Y 242.219
Ba (493.408 nm)	0.482796	ppm	0.000249	0.05	52288.100000	Y_R 488.368
Be (234.861 nm)	0.475961	ppm	0.000275	0.06	50492.800000	Y_R 488.368
Bi (223.061 nm)	0.003770	ppm	0.001866	49.50	-2.079610	Y 377.433
Ca (315.887 nm)	4.884376	ppm	0.000761	0.02	3966.755770	Y_R 377.433
Cd (214.439 nm)	0.485668	ppm	0.000421	0.09	18600.900000	Y 377.433
Co (228.615 nm)	0.484747	ppm	0.000645	0.13	12131.200000	Y 242.219
Cr (205.560 nm)	0.482151	ppm	0.000477	0.10	3329.440000	Y 377.433
Cu (324.754 nm)	0.480894	ppm	0.005581	1.16	24113.100000	Y 377.433
Fe (238.204 nm)	2.408439	ppm	0.004058	0.17	6025.200239	Y_R 377.433
Fe H (259.940 nm)	2.421710 u	ppm	0.004075	0.17	3452.570000	Y_R 377.433
K (766.491 nm)	47.634100	ppm	0.398432	0.84	52282.200000	Y_R2 488.368
Li (670.783 nm)	0.971376	ppm	0.002808	0.29	14785.800000	Y_R2 488.368
Mg (279.078 nm)	19.096600	ppm	0.024687	0.13	66948.200000	Y 377.433
Mn (257.610 nm)	0.480071	ppm	0.000006	0.00	138341.000000	Y 377.433
Mo (202.032 nm)	0.484697	ppm	0.000409	0.08	6423.520000	Y 377.433
Na (589.592 nm)	24.898300	ppm	0.043438	0.17	21931.400000	Y_R2 488.368
Na H (589.593 nm)	25.062210 u	ppm	0.078482	0.31	15003.634384	Y_R4
Ni (231.604 nm)	0.484533	ppm	0.000887	0.18	2619.850000	Y 377.433
P (213.618 nm)	0.943351	ppm	0.004463	0.47	1322.120000	Y 242.219
Pb (220.353 nm)	0.967612	ppm	0.001215	0.13	3263.130000	Y 242.219
S (181.972 nm)	-0.005730 u	ppm	0.003378	58.96	6.500758	Y 377.433
Sb (206.834 nm)	0.969009	ppm	0.001064	0.11	1804.970000	Y 377.433
Se (196.026 nm)	0.965136	ppm	0.002362	0.24	1551.520000	Y 242.219
Si (288.158 nm)	4.768660	ppm	0.046169	0.97	32363.000000	Y 377.433
Sn (189.925 nm)	0.970937	ppm	0.000319	0.03	1606.950000	Y 377.433
Sr (421.552 nm)	0.481519	ppm	0.000636	0.13	77432.602977	Y_R 488.368
Th (288.505 nm)	0.008719	ppm	0.004465	51.22	-14.619800	Y 377.433
Ti (336.122 nm)	0.481107	ppm	0.000192	0.04	62969.900000	Y 377.433
Tl (190.794 nm)	0.974668	ppm	0.001521	0.16	2379.990000	Y 377.433
U (409.013 nm)	0.013997	ppm	0.000518	3.70	16.021300	Y 377.433
V (292.401 nm)	0.480322	ppm	0.000213	0.04	25707.200000	Y 377.433
Zn (206.200 nm)	0.484254	ppm	0.000897	0.19	2216.110000	Y 377.433
Zr (343.823 nm)	0.482984	ppm	0.000763	0.16	28164.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.013283	18945.346370	0.001260	0.12
Y 377.433	1.021060	567276.967665	0.002236	0.22
Y_R 377.433	1.034780	50378.800000	0.001009	0.10
Y_R 488.368	1.021870	43701.500000	0.001108	0.11
Y_R2 488.368	1.019343	85136.392829	0.003407	0.33
Y_R4	1.028010	39523.700000	0.002564	0.25

Sample Name: CCB

Date: 5/10/2019 4:42:12 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000093 u	ppm	0.000034	36.53	-187.935000	Y 377.433
Al (394.401 nm)	0.003034	ppm	0.000576	18.99	64.155800	Y 377.433
Al H (396.152 nm)	0.109922 Zu	ppm	0.000563	0.51	27.409100 Z	Y_R 377.433
As (188.980 nm)	0.001028	ppm	0.000866	84.24	-0.188623	Y 242.219
B (249.678 nm)	0.000311	ppm	0.000116	37.27	14.231600	Y 242.219
Ba (493.408 nm)	-0.000604 u	ppm	0.000303	50.05	1565.150000	Y_R 488.368
Be (234.861 nm)	-0.000034 u	ppm	0.000015	44.79	-4.368740	Y_R 488.368
Bi (223.061 nm)	0.002667 u	ppm	0.005242	> 100.00	-5.019800	Y 377.433
Ca (315.887 nm)	-0.004080 u	ppm	0.005232	> 100.00	-76.619990	Y_R 377.433
Cd (214.439 nm)	-0.000002 u	ppm	0.000060	> 100.00	-6.845450	Y 377.433
Co (228.615 nm)	0.000205 u	ppm	0.000440	> 100.00	-18.276000	Y 242.219
Cr (205.560 nm)	-0.000219 u	ppm	0.000147	67.19	-9.640970	Y 377.433
Cu (324.754 nm)	-0.000181 u	ppm	0.000241	> 100.00	502.644000	Y 377.433
Fe (238.204 nm)	-0.001665 u	ppm	0.000656	39.43	0.009304	Y_R 377.433
Fe H (259.940 nm)	0.030476 u	ppm	0.000685	2.25	15.808700	Y_R 377.433
K (766.491 nm)	-0.255745 u	ppm	0.296157	> 100.00	1912.600000	Y_R2 488.368
Li (670.783 nm)	0.003646	ppm	0.002767	75.89	-2819.680000	Y_R2 488.368
Mg (279.078 nm)	0.002216	ppm	0.001110	50.09	23.891900	Y 377.433
Mn (257.610 nm)	0.000074	ppm	0.000015	20.87	-2.217370	Y 377.433
Mo (202.032 nm)	0.000326	ppm	0.000384	> 100.00	15.921100	Y 377.433
Na (589.592 nm)	0.046158	ppm	0.002648	5.74	211.308000	Y_R2 488.368
Na H (589.593 nm)	0.053356 u	ppm	0.019608	36.75	508.855820	Y_R4
Ni (231.604 nm)	0.000339	ppm	0.000062	18.25	-8.617210	Y 377.433
P (213.618 nm)	-0.004311 u	ppm	0.002708	62.82	-3.129880	Y 242.219
Pb (220.353 nm)	0.000846	ppm	0.000657	77.65	10.878300	Y 242.219
S (181.972 nm)	-0.004660 u	ppm	0.003897	83.61	5.198160	Y 377.433
Sb (206.834 nm)	-0.002336 u	ppm	0.002123	90.89	-2.083660	Y 377.433
Se (196.026 nm)	0.003219	ppm	0.001057	32.85	10.739100	Y 242.219
Si (288.158 nm)	-0.002599 u	ppm	0.000444	17.09	491.041000	Y 377.433
Sn (189.925 nm)	-0.002980 u	ppm	0.000131	4.40	4.191920	Y 377.433
Sr (421.552 nm)	-0.000041 u	ppm	0.000042	> 100.00	96.373364	Y_R 488.368
Th (288.505 nm)	-0.001702 u	ppm	0.004066	> 100.00	16.323700	Y 377.433
Ti (336.122 nm)	0.000256	ppm	0.000028	10.84	-487.106000	Y 377.433
Tl (190.794 nm)	0.000165	ppm	0.000088	53.13	0.517274	Y 377.433
U (409.013 nm)	-0.000056 u	ppm	0.003633	> 100.00	29.824600	Y 377.433
V (292.401 nm)	0.000163	ppm	0.000163	> 100.00	-85.761000	Y 377.433
Zn (206.200 nm)	0.000089 u	ppm	0.000740	> 100.00	3.495900	Y 377.433
Zr (343.823 nm)	0.000361	ppm	0.000049	13.67	-152.333000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.032945	19312.976645	0.010335	1.00
Y 377.433	1.035957	575553.500718	0.012153	1.17
Y_R 377.433	1.044320	50843.300000	0.000334	0.03
Y_R 488.368	1.026220	43887.700000	0.002198	0.21
Y_R2 488.368	1.035241	86464.227076	0.004978	0.48
Y_R4	1.031400	39654.000000	0.000743	0.07

Sample Name: CCVL-5695588

Date: 5/10/2019 4:45:25 PM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009483	ppm	0.000164	1.73	161.694000	Y 377.433
Al (394.401 nm)	0.101405	ppm	0.001009	1.00	1308.300000	Y 377.433
Al H (396.152 nm)	0.208964 u	ppm	0.003265	1.56	255.783000	Y_R 377.433
As (188.980 nm)	0.015203	ppm	0.001179	7.76	22.355200	Y 242.219
B (249.678 nm)	0.092984	ppm	0.000121	0.13	724.147000	Y 242.219
Ba (493.408 nm)	0.009013	ppm	0.000272	3.02	2574.360000	Y_R 488.368
Be (234.861 nm)	0.000989	ppm	0.000097	9.78	103.349000	Y_R 488.368
Bi (223.061 nm)	0.088503	ppm	0.002031	2.29	183.762000	Y 377.433
Ca (315.887 nm)	0.203407	ppm	0.005376	2.64	95.022324	Y_R 377.433
Cd (214.439 nm)	0.005124	ppm	0.000085	1.66	189.568000	Y 377.433
Co (228.615 nm)	0.010282	ppm	0.000236	2.30	234.389000	Y 242.219
Cr (205.560 nm)	0.009395	ppm	0.000247	2.63	56.806100	Y 377.433
Cu (324.754 nm)	0.014644	ppm	0.000287	1.96	1228.250000	Y 377.433
Fe (238.204 nm)	0.096303	ppm	0.000656	0.68	244.926947	Y_R 377.433
Fe H (259.940 nm)	0.128618 u	ppm	0.000753	0.59	156.862000	Y_R 377.433
K (766.491 nm)	2.693150	ppm	0.107989	4.01	5014.190000	Y_R2 488.368
Li (670.783 nm)	0.027792 Q	ppm	0.001222	4.40	-2380.410000 Q	Y_R2 488.368
Mg (279.078 nm)	0.197344	ppm	0.002631	1.33	706.888000	Y 377.433
Mn (257.610 nm)	0.010254	ppm	0.000012	0.12	2931.980000	Y 377.433
Mo (202.032 nm)	0.019150	ppm	0.000225	1.17	264.949000	Y 377.433
Na (589.592 nm)	1.106600	ppm	0.041153	3.72	1135.550000	Y_R2 488.368
Na H (589.593 nm)	0.868703 u	ppm	0.018691	2.15	981.418996	Y_R4
Ni (231.604 nm)	0.041427	ppm	0.000499	1.21	214.348000	Y 377.433
P (213.618 nm)	2.685050	ppm	0.034509	1.29	4147.200000	Y 242.219
Pb (220.353 nm)	0.010392	ppm	0.000073	0.71	43.041200	Y 242.219
S (181.972 nm)	0.088690	ppm	0.000275	0.31	50.855585	Y 377.433
Sb (206.834 nm)	0.017993	ppm	0.002392	13.29	35.639100	Y 377.433
Se (196.026 nm)	0.020677	ppm	0.001791	8.66	38.692200	Y 242.219
Si (288.158 nm)	0.490885	ppm	0.006392	1.30	3787.520000	Y 377.433
Sn (189.925 nm)	0.096127	ppm	0.001519	1.58	167.292000	Y 377.433
Sr (421.552 nm)	0.008937	ppm	0.000001	0.01	1538.317687	Y_R 488.368
Th (288.505 nm)	0.006338 Q	ppm	0.001893	29.87	29.876700 Q	Y 377.433
Ti (336.122 nm)	0.009849	ppm	0.000076	0.78	779.081000	Y 377.433
Tl (190.794 nm)	0.015784	ppm	0.000193	1.23	38.593100	Y 377.433
U (409.013 nm)	0.062152	ppm	0.002736	4.40	227.397000	Y 377.433
V (292.401 nm)	0.009901	ppm	0.000297	3.00	434.560000	Y 377.433
Zn (206.200 nm)	0.020904	ppm	0.000670	3.21	98.615900	Y 377.433
Zr (343.823 nm)	0.010355 Q	ppm	0.000041	0.40	434.013000 Q	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.050159	19634.816807	0.004156	0.40
Y 377.433	1.052363	584668.238445	0.002874	0.27
Y_R 377.433	1.061590	51684.100000	0.001094	0.10
Y_R 488.368	1.042640	44589.600000	0.008285	0.79
Y_R2 488.368	1.058981	88447.046111	0.001612	0.15
Y_R4	1.043630	40124.200000	0.001517	0.15

Sample Name: MB 280-457361/1-A

Date: 5/10/2019 4:48:51 PM

Rack:Tube: 1:22

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000529 u	ppm	0.000048	9.15	-203.817000	Y 377.433
Al (394.401 nm)	0.009545	ppm	0.001180	12.36	148.269000	Y 377.433
Al H (396.152 nm)	0.115735 u	ppm	0.006901	5.96	40.407300	Y_R 377.433
As (188.980 nm)	-0.001429 u	ppm	0.001077	75.36	-4.100150	Y 242.219
B (249.678 nm)	-0.000190 u	ppm	0.000277	> 100.00	10.372500	Y 242.219
Ba (493.408 nm)	-0.000951 u	ppm	0.000148	15.55	1528.820000	Y_R 488.368
Be (234.861 nm)	-0.000066 u	ppm	0.000075	> 100.00	-8.078420	Y_R 488.368
Bi (223.061 nm)	0.000932	ppm	0.000582	62.40	-8.828680	Y 377.433
Ca (315.887 nm)	0.047291	ppm	0.002778	5.88	-34.124193	Y_R 377.433
Cd (214.439 nm)	0.000006 u	ppm	0.000030	> 100.00	-6.558360	Y 377.433
Co (228.615 nm)	0.000215	ppm	0.000089	41.13	-17.995200	Y 242.219
Cr (205.560 nm)	0.000601	ppm	0.000225	37.43	-3.957250	Y 377.433
Cu (324.754 nm)	0.002421	ppm	0.000121	4.98	628.658000	Y 377.433
Fe (238.204 nm)	0.029977	ppm	0.000843	2.81	79.112566	Y_R 377.433
Fe H (259.940 nm)	0.067069 u	ppm	0.003500	5.22	68.401200	Y_R 377.433
K (766.491 nm)	-0.229386 u	ppm	0.172057	75.01	1940.320000	Y_R2 488.368
Li (670.783 nm)	0.004572	ppm	0.001109	24.25	-2802.840000	Y_R2 488.368
Mg (279.078 nm)	0.008513	ppm	0.000394	4.63	45.877500	Y 377.433
Mn (257.610 nm)	0.000888	ppm	0.000015	1.70	232.384000	Y 377.433
Mo (202.032 nm)	0.000187	ppm	0.000237	> 100.00	14.087600	Y 377.433
Na (589.592 nm)	0.107079	ppm	0.012329	11.51	264.142000	Y_R2 488.368
Na H (589.593 nm)	-0.142746 u	ppm	0.000794	0.56	395.197379	Y_R4
Ni (231.604 nm)	0.002328	ppm	0.000880	37.79	2.173150	Y 377.433
P (213.618 nm)	0.009379	ppm	0.003653	38.94	17.428400	Y 242.219
Pb (220.353 nm)	0.001107 u	ppm	0.002081	> 100.00	11.756000	Y 242.219
S (181.972 nm)	0.013446	ppm	0.003252	24.19	14.049583	Y 377.433
Sb (206.834 nm)	0.003424	ppm	0.000069	2.03	8.658740	Y 377.433
Se (196.026 nm)	0.003769	ppm	0.002770	73.49	11.611800	Y 242.219
Si (288.158 nm)	0.001131	ppm	0.000988	87.32	515.961000	Y 377.433
Sn (189.925 nm)	0.015386	ppm	0.001807	11.74	34.417300	Y 377.433
Sr (421.552 nm)	-0.000020 u	ppm	0.000018	89.67	99.846446	Y_R 488.368
Th (288.505 nm)	-0.005345 u	ppm	0.004508	84.35	10.018700	Y 377.433
Ti (336.122 nm)	0.000556	ppm	0.000018	3.32	-447.474000	Y 377.433
Tl (190.794 nm)	0.000285 u	ppm	0.000639	> 100.00	0.810073	Y 377.433
U (409.013 nm)	0.013669	ppm	0.007672	56.13	73.720500	Y 377.433
V (292.401 nm)	-0.000062 u	ppm	0.000001	1.55	-99.281900	Y 377.433
Zn (206.200 nm)	0.003346	ppm	0.000167	4.98	18.382100	Y 377.433
Zr (343.823 nm)	0.000426	ppm	0.000110	25.84	-148.513000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.042555	19492.654922	0.006032	0.58
Y 377.433	1.048711	582638.966264	0.006382	0.61
Y_R 377.433	1.056470	51435.100000	0.000286	0.03
Y_R 488.368	1.042800	44596.700000	0.001189	0.11
Y_R2 488.368	1.061864	88687.825043	0.002113	0.20
Y_R4	1.035220	39800.900000	0.010394	1.00

Sample Name: LCS 280-457361/2-A

Date: 5/10/2019 4:52:03 PM

Rack:Tube: 1:23

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.049783	ppm	0.000113	0.23	1323.520000	Y 377.433
Al (394.401 nm)	9.595310 o	ppm	0.005057	0.05	120879.000000	Y 377.433
Al H (396.152 nm)	9.795340	ppm	0.003077	0.03	22311.800000	Y_R 377.433
As (188.980 nm)	1.930870	ppm	0.006523	0.34	3069.420000	Y 242.219
B (249.678 nm)	0.914083	ppm	0.003002	0.33	7008.860000	Y 242.219
Ba (493.408 nm)	1.930100	ppm	0.004120	0.21	204153.000000	Y_R 488.368
Be (234.861 nm)	0.962987	ppm	0.001648	0.17	102118.000000	Y_R 488.368
Bi (223.061 nm)	1.890570	ppm	0.000094	0.00	4148.340000	Y 377.433
Ca (315.887 nm)	48.086738	ppm	0.041241	0.09	39701.812292	Y_R 377.433
Cd (214.439 nm)	0.946294	ppm	0.000135	0.01	36251.200000	Y 377.433
Co (228.615 nm)	0.933788	ppm	0.000857	0.09	23392.600000	Y 242.219
Cr (205.560 nm)	0.951319	ppm	0.010428	1.10	6576.870000	Y 377.433
Cu (324.754 nm)	0.932922	ppm	0.001733	0.19	46339.700000	Y 377.433
Fe (238.204 nm)	9.623649 o	ppm	0.002014	0.02	24063.016414	Y_R 377.433
Fe H (259.940 nm)	9.623180	ppm	0.018271	0.19	13802.800000	Y_R 377.433
K (766.491 nm)	47.912600	ppm	0.108376	0.23	52575.100000	Y_R2 488.368
Li (670.783 nm)	0.966372	ppm	0.005997	0.62	14694.800000	Y_R2 488.368
Mg (279.078 nm)	46.759400	ppm	0.043981	0.09	163866.000000	Y 377.433
Mn (257.610 nm)	0.955264	ppm	0.000470	0.05	275299.000000	Y 377.433
Mo (202.032 nm)	0.961693	ppm	0.000266	0.03	12733.500000	Y 377.433
Na (589.592 nm)	49.488900	ppm	0.014268	0.03	43655.500000	Y_R2 488.368
Na H (589.593 nm)	47.299713 u	ppm	0.173006	0.37	27892.177870	Y_R4
Ni (231.604 nm)	0.925524	ppm	0.000090	0.01	5013.830000	Y 377.433
P (213.618 nm)	18.586800	ppm	0.030265	0.16	28446.200000	Y 242.219
Pb (220.353 nm)	0.953984	ppm	0.001452	0.15	3217.760000	Y 242.219
S (181.972 nm)	8.967272	ppm	0.005607	0.06	4395.208193	Y 377.433
Sb (206.834 nm)	0.911104	ppm	0.001536	0.17	1695.030000	Y 377.433
Se (196.026 nm)	1.905820	ppm	0.001335	0.07	3057.000000	Y 242.219
Si (288.158 nm)	0.957127	ppm	0.003500	0.37	6902.020000	Y 377.433
Sn (189.925 nm)	1.930260	ppm	0.001896	0.10	3185.690000	Y 377.433
Sr (421.552 nm)	0.960776	ppm	0.002831	0.29	154399.480521	Y_R 488.368
Th (288.505 nm)	0.973790	ppm	0.000234	0.02	1636.320000	Y 377.433
Ti (336.122 nm)	0.970491	ppm	0.001692	0.17	127683.000000	Y 377.433
Tl (190.794 nm)	1.883630	ppm	0.004483	0.24	4597.070000	Y 377.433
U (409.013 nm)	1.978150	ppm	0.001636	0.08	6291.060000	Y 377.433
V (292.401 nm)	0.961847	ppm	0.000032	0.00	51571.100000	Y 377.433
Zn (206.200 nm)	0.469006	ppm	0.000117	0.02	2147.440000	Y 377.433
Zr (343.823 nm)	0.472613	ppm	0.000754	0.16	27556.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.986881	18451.710013	0.001585	0.16
Y 377.433	1.002954	557217.613876	0.002736	0.27
Y_R 377.433	0.999867	48679.200000	0.002015	0.20
Y_R 488.368	0.989151	42302.200000	0.000627	0.06
Y_R2 488.368	0.998593	83403.309134	0.000732	0.07
Y_R4	1.014530	39005.400000	0.000836	0.08

Sample Name: 280-123421-A-1-A

Date: 5/10/2019 4:55:39 PM

Rack:Tube: 1:24

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.002987	ppm	0.000356	11.91	-244.247000	Y 377.433
Al (394.401 nm)	98.637400 o	ppm	0.206772	0.21	1240790.000000	Y 377.433
Al H (396.152 nm)	98.869800	ppm	0.200602	0.20	224748.000000	Y_R 377.433
As (188.980 nm)	0.100423	ppm	0.001587	1.58	144.057000	Y 242.219
B (249.678 nm)	0.087980	ppm	0.000550	0.63	521.581000	Y 242.219
Ba (493.408 nm)	6.273420	ppm	0.000694	0.01	660092.000000	Y_R 488.368
Be (234.861 nm)	0.015049	ppm	0.000084	0.56	-806.103000	Y_R 488.368
Bi (223.061 nm)	-0.008758 u	ppm	0.002936	33.52	15.880500	Y 377.433
Ca (315.887 nm)	90.115507	ppm	0.120853	0.13	74486.975664	Y_R 377.433
Cd (214.439 nm)	0.004106	ppm	0.000132	3.21	262.102000	Y 377.433
Co (228.615 nm)	0.061192	ppm	0.000086	0.14	1731.320000	Y 242.219
Cr (205.560 nm)	0.084000	ppm	0.000169	0.20	570.853000	Y 377.433
Cu (324.754 nm)	0.362065	ppm	0.000009	0.00	18214.100000	Y 377.433
Fe (238.204 nm)	269.652079 o	ppm	0.732037	0.27	674126.600009	Y_R 377.433
Fe H (259.940 nm)	271.740000	ppm	0.484039	0.18	390526.000000	Y_R 377.433
K (766.491 nm)	13.388900	ppm	0.010324	0.08	16263.800000	Y_R2 488.368
Li (670.783 nm)	0.154063	ppm	0.000607	0.39	-83.209100	Y_R2 488.368
Mg (279.078 nm)	38.726800	ppm	0.109061	0.28	135385.000000	Y 377.433
Mn (257.610 nm)	5.535000	ppm	0.006811	0.12	1595250.000000	Y 377.433
Mo (202.032 nm)	0.048407	ppm	0.000198	0.41	651.982000	Y 377.433
Na (589.592 nm)	14.451600	ppm	0.053558	0.37	14238.700000	Y_R2 488.368
Na H (589.593 nm)	6.495226 u	ppm	0.001987	0.03	4242.472786	Y_R4
Ni (231.604 nm)	0.080302	ppm	0.002130	2.65	425.283000	Y 377.433
P (213.618 nm)	15.412000	ppm	0.031254	0.20	23724.200000	Y 242.219
Pb (220.353 nm)	0.277984	ppm	0.000035	0.01	919.503000	Y 242.219
S (181.972 nm)	27.999725	ppm	0.099043	0.35	13713.263800	Y 377.433
Sb (206.834 nm)	0.002720	ppm	0.001072	39.39	6.732770	Y 377.433
Se (196.026 nm)	0.009251	ppm	0.005814	62.85	-44.109400	Y 242.219
Si (288.158 nm)	3.300570	ppm	0.008793	0.27	22556.200000	Y 377.433
Sn (189.925 nm)	0.021783	ppm	0.000079	0.36	44.945400	Y 377.433
Sr (421.552 nm)	5.767968	ppm	0.010168	0.18	926447.516996	Y_R 488.368
Th (288.505 nm)	0.053421	ppm	0.001788	3.35	142.069000	Y 377.433
Ti (336.122 nm)	4.763220	ppm	0.006041	0.13	628178.000000	Y 377.433
Tl (190.794 nm)	0.018459	ppm	0.000380	2.06	-14.578900	Y 377.433
U (409.013 nm)	-0.064581 u	ppm	0.002370	3.67	-11.120900	Y 377.433
V (292.401 nm)	0.478122	ppm	0.000864	0.18	25943.000000	Y 377.433
Zn (206.200 nm)	0.735940	ppm	0.002154	0.29	3403.300000	Y 377.433
Zr (343.823 nm)	0.157539	ppm	0.000352	0.22	9069.810000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.054675	19719.256266	0.001341	0.13
Y 377.433	1.068724	593758.130571	0.003302	0.31
Y_R 377.433	1.086670	52905.100000	0.003695	0.34
Y_R 488.368	1.073670	45916.700000	0.002459	0.23
Y_R2 488.368	1.073645	89671.758250	0.002493	0.23
Y_R4	1.087270	41802.100000	0.005978	0.55

Sample Name: 280-123421-A-1-Asd@5

Date: 5/10/2019 4:59:30 PM

Rack:Tube: 1:25

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000517	ppm	0.000271	52.42	-200.905000	Y 377.433
Al (394.401 nm)	20.692000 o	ppm	1.315530	6.36	260292.000000	Y 377.433
Al H (396.152 nm)	19.290600	ppm	0.172618	0.89	43673.300000	Y_R 377.433
As (188.980 nm)	0.024170	ppm	0.000862	3.57	33.899300	Y 242.219
B (249.678 nm)	0.018596	ppm	0.000677	3.64	121.651000	Y 242.219
Ba (493.408 nm)	1.220770	ppm	0.010077	0.83	129762.000000	Y_R 488.368
Be (234.861 nm)	0.002652	ppm	0.000069	2.59	-197.024000	Y_R 488.368
Bi (223.061 nm)	0.004335	ppm	0.001554	35.85	7.798230	Y 377.433
Ca (315.887 nm)	17.778228	ppm	0.188013	1.06	14636.110565	Y_R 377.433
Cd (214.439 nm)	0.000880	ppm	0.000073	8.28	49.109900	Y 377.433
Co (228.615 nm)	0.013078	ppm	0.000895	6.85	351.041000	Y 242.219
Cr (205.560 nm)	0.018450	ppm	0.001538	8.34	119.123000	Y 377.433
Cu (324.754 nm)	0.075430	ppm	0.004726	6.27	4198.060000	Y 377.433
Fe (238.204 nm)	53.624597 o	ppm	0.434693	0.81	134064.119353	Y_R 377.433
Fe H (259.940 nm)	53.487400	ppm	0.479217	0.90	76845.900000	Y_R 377.433
K (766.491 nm)	2.322810	ppm	0.048784	2.10	4624.670000	Y_R2 488.368
Li (670.783 nm)	0.030428	ppm	0.000619	2.03	-2332.450000	Y_R2 488.368
Mg (279.078 nm)	8.330760	ppm	0.479564	5.76	29142.200000	Y 377.433
Mn (257.610 nm)	1.212350	ppm	0.072338	5.97	349394.000000	Y 377.433
Mo (202.032 nm)	0.009658	ppm	0.000475	4.92	139.382000	Y 377.433
Na (589.592 nm)	2.666220	ppm	0.002823	0.11	2781.860000	Y_R2 488.368
Na H (589.593 nm)	0.889718 u	ppm	0.017887	2.01	993.599045	Y_R4
Ni (231.604 nm)	0.016553	ppm	0.001613	9.75	79.363900	Y 377.433
P (213.618 nm)	3.214030	ppm	0.182524	5.68	4950.630000	Y 242.219
Pb (220.353 nm)	0.061221	ppm	0.002314	3.78	209.308000	Y 242.219
S (181.972 nm)	5.797280	ppm	0.346790	5.98	2845.386450	Y 377.433
Sb (206.834 nm)	0.001068 u	ppm	0.001768	> 100.00	3.883260	Y 377.433
Se (196.026 nm)	0.002955	ppm	0.001212	41.00	-2.350810	Y 242.219
Si (288.158 nm)	0.728335	ppm	0.046711	6.41	5373.690000	Y 377.433
Sn (189.925 nm)	-0.000145 u	ppm	0.001629	> 100.00	8.857390	Y 377.433
Sr (421.552 nm)	1.125014	ppm	0.010755	0.96	180782.184268	Y_R 488.368
Th (288.505 nm)	0.005271	ppm	0.001188	22.53	35.999000	Y 377.433
Ti (336.122 nm)	1.009750	ppm	0.061867	6.13	132751.000000	Y 377.433
Tl (190.794 nm)	0.004926	ppm	0.001847	37.49	-0.037025	Y 377.433
U (409.013 nm)	0.005727	ppm	0.004736	82.70	80.955300	Y 377.433
V (292.401 nm)	0.101471	ppm	0.006203	6.11	5429.720000	Y 377.433
Zn (206.200 nm)	0.158717	ppm	0.010654	6.71	735.766000	Y 377.433
Zr (343.823 nm)	0.033725	ppm	0.002226	6.60	1805.210000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.034554	19343.045820	0.007460	0.72
Y 377.433	1.044417	580253.747086	0.005161	0.49
Y_R 377.433	1.048450	51044.400000	0.001529	0.15
Y_R 488.368	1.034870	44257.600000	0.001418	0.14
Y_R2 488.368	1.034154	86373.429451	0.000611	0.06
Y_R4	1.043150	40106.000000	0.001985	0.19

Sample Name: 280-123421-A-1-B MS

Date: 5/10/2019 5:03:09 PM

Rack:Tube: 1:26

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.050267	ppm	0.000304	0.60	1133.660000	Y 377.433
Al (394.401 nm)	173.464000 o	ppm	0.097941	0.06	2179940.000000	Y 377.433
Al H (396.152 nm)	174.690000	ppm	0.331933	0.19	393834.000000	Y_R 377.433
As (188.980 nm)	1.833880	ppm	0.000415	0.02	2897.530000	Y 242.219
B (249.678 nm)	0.964918	ppm	0.000166	0.02	7243.920000	Y 242.219
Ba (493.408 nm)	2.865210	ppm	0.001933	0.07	302479.000000	Y_R 488.368
Be (234.861 nm)	0.880227	ppm	0.004220	0.48	91076.600000	Y_R 488.368
Bi (223.061 nm)	1.768440	ppm	0.000544	0.03	3923.050000	Y 377.433
Ca (315.887 nm)	147.082442	ppm	0.049295	0.03	121623.666715	Y_R 377.433
Cd (214.439 nm)	0.850784	ppm	0.002409	0.28	32696.900000	Y 377.433
Co (228.615 nm)	0.929369	ppm	0.001176	0.13	23620.400000	Y 242.219
Cr (205.560 nm)	0.989790	ppm	0.001688	0.17	6839.510000	Y 377.433
Cu (324.754 nm)	1.291610	ppm	0.000479	0.04	63852.900000	Y 377.433
Fe (238.204 nm)	263.135640 o	ppm	0.260583	0.10	657835.689967	Y_R 377.433
Fe H (259.940 nm)	265.687000	ppm	0.134988	0.05	381827.000000	Y_R 377.433
K (766.491 nm)	70.752600	ppm	0.412418	0.58	76597.800000	Y_R2 488.368
Li (670.783 nm)	1.098790	ppm	0.003740	0.34	17103.800000	Y_R2 488.368
Mg (279.078 nm)	99.538000	ppm	0.148041	0.15	348514.000000	Y 377.433
Mn (257.610 nm)	8.319700	ppm	0.001118	0.01	2397850.000000	Y 377.433
Mo (202.032 nm)	0.862982	ppm	0.001988	0.23	11427.700000	Y 377.433
Na (589.592 nm)	51.819600	ppm	0.314917	0.61	45905.900000	Y_R2 488.368
Na H (589.593 nm)	47.804705 u	ppm	0.095330	0.20	28184.863749	Y_R4
Ni (231.604 nm)	0.952091	ppm	0.001581	0.17	5157.710000	Y 377.433
P (213.618 nm)	26.486700	ppm	0.043997	0.17	40568.000000	Y 242.219
Pb (220.353 nm)	1.186840	ppm	0.001853	0.16	3962.380000	Y 242.219
S (181.972 nm)	9.874723	ppm	0.027844	0.28	4868.070859	Y 377.433
Sb (206.834 nm)	0.469256	ppm	0.002008	0.43	856.982000	Y 377.433
Se (196.026 nm)	1.740730	ppm	0.000425	0.02	2735.080000	Y 242.219
Si (288.158 nm)	7.489190	ppm	0.008287	0.11	50536.200000	Y 377.433
Sn (189.925 nm)	1.679830	ppm	0.000585	0.03	2773.560000	Y 377.433
Sr (421.552 nm)	1.871094	ppm	0.000542	0.03	300631.168947	Y_R 488.368
Th (288.505 nm)	0.970255	ppm	0.000880	0.09	1685.110000	Y 377.433
Ti (336.122 nm)	8.212880	ppm	0.002678	0.03	1083480.000000	Y 377.433
Tl (190.794 nm)	1.682140	ppm	0.001566	0.09	4035.920000	Y 377.433
U (409.013 nm)	1.725030	ppm	0.008554	0.50	5633.540000	Y 377.433
V (292.401 nm)	1.538860	ppm	0.001176	0.08	83086.500000	Y 377.433
Zn (206.200 nm)	1.334960	ppm	0.002012	0.15	6139.470000	Y 377.433
Zr (343.823 nm)	0.637086	ppm	0.000262	0.04	37206.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.030953	19275.731052	0.000158	0.02
Y 377.433	1.050018	583365.049276	0.001165	0.11
Y_R 377.433	1.077710	52469.200000	0.004264	0.40
Y_R 488.368	1.064390	45520.100000	0.006112	0.57
Y_R2 488.368	1.069381	89315.603287	0.008052	0.75
Y_R4	1.087390	41806.600000	0.001359	0.12

Sample Name: 280-123421-A-1-C MSD

Date: 5/10/2019 5:07:00 PM

Rack:Tube: 1:27

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.051925	ppm	0.000164	0.32	1240.970000	Y 377.433
Al (394.401 nm)	137.098000 o	ppm	0.165716	0.12	1723000.000000	Y 377.433
Al H (396.152 nm)	138.250000	ppm	0.349777	0.25	311753.000000	Y_R 377.433
As (188.980 nm)	1.916480	ppm	0.004524	0.24	3033.270000	Y 242.219
B (249.678 nm)	0.979420	ppm	0.003336	0.34	7398.650000	Y 242.219
Ba (493.408 nm)	2.712040	ppm	0.002133	0.08	286348.000000	Y_R 488.368
Be (234.861 nm)	0.916333	ppm	0.003481	0.38	95546.600000	Y_R 488.368
Bi (223.061 nm)	1.816440	ppm	0.002868	0.16	4016.370000	Y 377.433
Ca (315.887 nm)	136.181793	ppm	0.182068	0.13	112598.314048	Y_R 377.433
Cd (214.439 nm)	0.892667	ppm	0.002380	0.27	34271.800000	Y 377.433
Co (228.615 nm)	0.946920	ppm	0.001771	0.19	23969.700000	Y 242.219
Cr (205.560 nm)	1.015360	ppm	0.002001	0.20	7017.410000	Y 377.433
Cu (324.754 nm)	1.342000	ppm	0.005484	0.41	66347.100000	Y 377.433
Fe (238.204 nm)	191.869047 o	ppm	0.165630	0.09	479671.260443	Y_R 377.433
Fe H (259.940 nm)	191.601000	ppm	0.181032	0.09	275348.000000	Y_R 377.433
K (766.491 nm)	67.103500	ppm	0.042659	0.06	72759.800000	Y_R2 488.368
Li (670.783 nm)	1.087340	ppm	0.003028	0.28	16895.500000	Y_R2 488.368
Mg (279.078 nm)	84.669900	ppm	0.181865	0.21	296498.000000	Y 377.433
Mn (257.610 nm)	5.797100	ppm	0.007653	0.13	1670800.000000	Y 377.433
Mo (202.032 nm)	0.910812	ppm	0.001076	0.12	12060.500000	Y 377.433
Na (589.592 nm)	51.885500	ppm	0.129340	0.25	45926.200000	Y_R2 488.368
Na H (589.593 nm)	48.196646 u	ppm	0.063523	0.13	28412.027683	Y_R4
Ni (231.604 nm)	0.970023	ppm	0.002770	0.29	5255.110000	Y 377.433
P (213.618 nm)	24.743600	ppm	0.069636	0.28	37859.300000	Y 242.219
Pb (220.353 nm)	1.231330	ppm	0.005360	0.44	4121.200000	Y 242.219
S (181.972 nm)	10.068505	ppm	0.065141	0.65	4953.832446	Y 377.433
Sb (206.834 nm)	0.535457	ppm	0.001359	0.25	983.796000	Y 377.433
Se (196.026 nm)	1.822070	ppm	0.006010	0.33	2880.950000	Y 242.219
Si (288.158 nm)	8.350000	ppm	0.068120	0.82	56286.400000	Y 377.433
Sn (189.925 nm)	1.784290	ppm	0.005940	0.33	2945.480000	Y 377.433
Sr (421.552 nm)	1.721102	ppm	0.001386	0.08	276532.055044	Y_R 488.368
Th (288.505 nm)	0.978939	ppm	0.004849	0.50	1671.330000	Y 377.433
Ti (336.122 nm)	6.288460	ppm	0.013603	0.22	829561.000000	Y 377.433
Tl (190.794 nm)	1.759910	ppm	0.003556	0.20	4244.350000	Y 377.433
U (409.013 nm)	1.809390	ppm	0.001978	0.11	5856.880000	Y 377.433
V (292.401 nm)	1.414130	ppm	0.002168	0.15	76248.200000	Y 377.433
Zn (206.200 nm)	1.157660	ppm	0.002807	0.24	5319.360000	Y 377.433
Zr (343.823 nm)	0.600885	ppm	0.000092	0.02	35082.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.015141	18980.084925	0.000881	0.09
Y 377.433	1.034379	574676.528544	0.000581	0.06
Y_R 377.433	1.063080	51756.600000	0.004055	0.38
Y_R 488.368	1.048870	44856.200000	0.001928	0.18
Y_R2 488.368	1.054531	88075.304802	0.004483	0.43
Y_R4	1.074270	41302.400000	0.008259	0.77

Sample Name: 280-123421-A-1-Apds

Date: 5/10/2019 5:10:44 PM

Rack:Tube: 1:28

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.048684	ppm	0.000258	0.53	1421.040000	Y 377.433
Al (394.401 nm)	98.486800 o	ppm	0.051335	0.05	1238910.000000	Y 377.433
Al H (396.152 nm)	98.607200	ppm	0.041548	0.04	224140.000000	Y_R 377.433
As (188.980 nm)	0.282023	ppm	0.004311	1.53	433.103000	Y 242.219
B (249.678 nm)	0.181485	ppm	0.000651	0.36	1239.740000	Y 242.219
Ba (493.408 nm)	6.325310	ppm	0.022889	0.36	665534.000000	Y_R 488.368
Be (234.861 nm)	0.059076	ppm	0.000039	0.07	3893.060000	Y_R 488.368
Bi (223.061 nm)	-0.009702 u	ppm	0.004346	44.80	13.339400	Y 377.433
Ca (315.887 nm)	106.982095	ppm	0.086234	0.08	88437.207752	Y_R 377.433
Cd (214.439 nm)	0.047878	ppm	0.000102	0.21	1937.830000	Y 377.433
Co (228.615 nm)	0.103570	ppm	0.000069	0.07	2791.420000	Y 242.219
Cr (205.560 nm)	0.127008	ppm	0.000878	0.69	868.581000	Y 377.433
Cu (324.754 nm)	0.404645	ppm	0.003340	0.83	20299.300000	Y 377.433
Fe (238.204 nm)	266.777891 o	ppm	0.415364	0.16	666941.212614	Y_R 377.433
Fe H (259.940 nm)	269.394000	ppm	0.267517	0.10	387154.000000	Y_R 377.433
K (766.491 nm)	31.767800	ppm	0.086746	0.27	35594.400000	Y_R2 488.368
Li (670.783 nm)	0.244230	ppm	0.001563	0.64	1557.160000	Y_R2 488.368
Mg (279.078 nm)	55.834000	ppm	0.118429	0.21	195343.000000	Y 377.433
Mn (257.610 nm)	5.498640	ppm	0.002111	0.04	1584780.000000	Y 377.433
Mo (202.032 nm)	0.094862	ppm	0.000464	0.49	1266.520000	Y 377.433
Na (589.592 nm)	32.798500	ppm	0.050334	0.15	30200.000000	Y_R2 488.368
Na H (589.593 nm)	24.314144 u	ppm	0.053388	0.22	14570.066037	Y_R4
Ni (231.604 nm)	0.124515	ppm	0.000793	0.64	665.378000	Y 377.433
P (213.618 nm)	16.876000	ppm	0.067879	0.40	25973.400000	Y 242.219
Pb (220.353 nm)	0.360011	ppm	0.002340	0.65	1196.850000	Y 242.219
S (181.972 nm)	27.697899	ppm	0.046702	0.17	13566.479907	Y 377.433
Sb (206.834 nm)	0.097339	ppm	0.003814	3.92	182.732000	Y 377.433
Se (196.026 nm)	0.189640	ppm	0.001973	1.04	245.555000	Y 242.219
Si (288.158 nm)	8.157190	ppm	0.063079	0.77	54998.500000	Y 377.433
Sn (189.925 nm)	0.115275	ppm	0.001407	1.22	198.804000	Y 377.433
Sr (421.552 nm)	5.737942	ppm	0.012824	0.22	921624.962974	Y_R 488.368
Th (288.505 nm)	0.253672	ppm	0.003489	1.38	490.006000	Y 377.433
Ti (336.122 nm)	4.769120	ppm	0.001923	0.04	629014.000000	Y 377.433
Tl (190.794 nm)	0.190328	ppm	0.000473	0.25	405.339000	Y 377.433
U (409.013 nm)	0.409647	ppm	0.001721	0.42	1493.580000	Y 377.433
V (292.401 nm)	0.518662	ppm	0.000327	0.06	28109.100000	Y 377.433
Zn (206.200 nm)	0.897472	ppm	0.001090	0.12	4140.970000	Y 377.433
Zr (343.823 nm)	0.204213	ppm	0.000241	0.12	11808.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.035875	19367.743760	0.007222	0.70
Y 377.433	1.052791	584905.940917	0.008602	0.82
Y_R 377.433	1.073670	52272.200000	0.007031	0.65
Y_R 488.368	1.059450	45308.600000	0.003678	0.35
Y_R2 488.368	1.062464	88737.943198	0.000339	0.03
Y_R4	1.077890	41441.600000	0.004567	0.42

Sample Name: CCVH-5690583

Date: 5/10/2019 5:14:32 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000348 u	ppm	0.000512	> 100.00	-308.747000	Y 377.433
Al (394.401 nm)	48.659100 o	ppm	0.003021	0.01	611494.000000	Y 377.433
Al H (396.152 nm)	48.720800	ppm	0.112580	0.23	109450.000000	Y_R 377.433
As (188.980 nm)	0.002038	ppm	0.002096	> 100.00	-2.990490	Y 242.219
B (249.678 nm)	0.006746	ppm	0.000036	0.53	34.463200	Y 242.219
Ba (493.408 nm)	0.001427	ppm	0.000191	13.41	1817.650000	Y_R 488.368
Be (234.861 nm)	0.002480	ppm	0.000013	0.51	-162.680000	Y_R 488.368
Bi (223.061 nm)	0.945196	ppm	0.002383	0.25	2075.800000	Y 377.433
Ca (315.887 nm)	0.015064	ppm	0.002979	19.78	-48.270343	Y_R 377.433
Cd (214.439 nm)	0.000706	ppm	0.000007	0.94	39.995700	Y 377.433
Co (228.615 nm)	0.004028	ppm	0.000066	1.64	77.479300	Y 242.219
Cr (205.560 nm)	0.001019	ppm	0.000122	12.00	-2.401730	Y 377.433
Cu (324.754 nm)	0.006200	ppm	0.000050	0.81	1215.320000	Y 377.433
Fe (238.204 nm)	47.871746 o	ppm	0.100278	0.21	119682.157872	Y_R 377.433
Fe H (259.940 nm)	47.635500	ppm	0.066319	0.14	68435.400000	Y_R 377.433
K (766.491 nm)	0.428186	ppm	0.018820	4.40	2631.950000	Y_R2 488.368
Li (670.783 nm)	0.006835	ppm	0.003116	45.60	-2761.680000	Y_R2 488.368
Mg (279.078 nm)	0.017087	ppm	0.001803	10.55	-151.328000	Y 377.433
Mn (257.610 nm)	0.001418	ppm	0.000026	1.85	385.235000	Y 377.433
Mo (202.032 nm)	0.000276	ppm	0.000375	> 100.00	15.264500	Y 377.433
Na (589.592 nm)	240.442000 o	ppm	0.356821	0.15	209190.000000	Y_R2 488.368
Na H (589.593 nm)	246.903986	ppm	0.034222	0.01	143579.998899	Y_R4
Ni (231.604 nm)	0.002044	ppm	0.000349	17.08	0.631738	Y 377.433
P (213.618 nm)	-0.014871 u	ppm	0.002486	16.72	-26.449300	Y 242.219
Pb (220.353 nm)	0.007306	ppm	0.000413	5.66	48.303800	Y 242.219
S (181.972 nm)	4.760061	ppm	0.006301	0.13	2333.629573	Y 377.433
Sb (206.834 nm)	0.003894	ppm	0.000042	1.08	12.818200	Y 377.433
Se (196.026 nm)	0.001927	ppm	0.000153	7.94	-4.156850	Y 242.219
Si (288.158 nm)	0.031133	ppm	0.000431	1.38	716.370000	Y 377.433
Sn (189.925 nm)	-0.002613 u	ppm	0.000945	36.18	4.797370	Y 377.433
Sr (421.552 nm)	0.001094	ppm	0.000098	8.92	286.231501	Y_R 488.368
Th (288.505 nm)	4.864090	ppm	0.000172	0.00	8593.440000	Y 377.433
Ti (336.122 nm)	0.001990	ppm	0.000015	0.75	-258.313000	Y 377.433
Tl (190.794 nm)	-0.000018 u	ppm	0.000469	> 100.00	-4.674480	Y 377.433
U (409.013 nm)	9.700530	ppm	0.005818	0.06	31051.000000	Y 377.433
V (292.401 nm)	-0.000672 u	ppm	0.000070	10.36	-127.934000	Y 377.433
Zn (206.200 nm)	0.002676	ppm	0.000272	10.16	21.952000	Y 377.433
Zr (343.823 nm)	-0.003133 u	ppm	0.000097	3.10	-357.344000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.993093	18567.847193	0.006557	0.66
Y 377.433	1.004523	558089.482776	0.007050	0.70
Y_R 377.433	1.024720	49889.300000	0.001127	0.11
Y_R 488.368	1.011470	43256.900000	0.001282	0.13
Y_R2 488.368	1.025149	85621.359459	0.000191	0.02
Y_R4	1.034180	39760.900000	0.000531	0.05

Sample Name: CCV-5690581

Date: 5/10/2019 5:18:14 PM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.478309	ppm	0.000839	0.18	17295.800000	Y 377.433
Al (394.401 nm)	0.490384	ppm	0.000382	0.08	6313.120000	Y 377.433
Al H (396.152 nm)	0.540663 u	ppm	0.004469	0.83	1241.540000	Y_R 377.433
As (188.980 nm)	0.952451	ppm	0.001916	0.20	1513.480000	Y 242.219
B (249.678 nm)	0.472852	ppm	0.000941	0.20	3632.950000	Y 242.219
Ba (493.408 nm)	0.480140	ppm	0.000753	0.16	52009.400000	Y_R 488.368
Be (234.861 nm)	0.480181	ppm	0.001695	0.35	50940.700000	Y_R 488.368
Bi (223.061 nm)	0.005190	ppm	0.001119	21.55	1.044710	Y 377.433
Ca (315.887 nm)	4.882303	ppm	0.015075	0.31	3965.046910	Y_R 377.433
Cd (214.439 nm)	0.484207	ppm	0.000162	0.03	18544.900000	Y 377.433
Co (228.615 nm)	0.483531	ppm	0.000201	0.04	12100.700000	Y 242.219
Cr (205.560 nm)	0.479309	ppm	0.002415	0.50	3309.750000	Y 377.433
Cu (324.754 nm)	0.479318	ppm	0.002598	0.54	24035.100000	Y 377.433
Fe (238.204 nm)	2.405725	ppm	0.001931	0.08	6018.414339	Y_R 377.433
Fe H (259.940 nm)	2.427800 u	ppm	0.012080	0.50	3461.320000	Y_R 377.433
K (766.491 nm)	47.924400	ppm	0.174360	0.36	52587.600000	Y_R2 488.368
Li (670.783 nm)	0.972489	ppm	0.006711	0.69	14806.100000	Y_R2 488.368
Mg (279.078 nm)	19.059800	ppm	0.007405	0.04	66819.300000	Y 377.433
Mn (257.610 nm)	0.479624	ppm	0.000344	0.07	138212.000000	Y 377.433
Mo (202.032 nm)	0.483973	ppm	0.001068	0.22	6413.950000	Y 377.433
Na (589.592 nm)	25.058100	ppm	0.058360	0.23	22069.600000	Y_R2 488.368
Na H (589.593 nm)	24.835457 u	ppm	0.023488	0.09	14872.211964	Y_R4
Ni (231.604 nm)	0.483470	ppm	0.000557	0.12	2614.080000	Y 377.433
P (213.618 nm)	0.938407	ppm	0.005642	0.60	1314.840000	Y 242.219
Pb (220.353 nm)	0.969118	ppm	0.002898	0.30	3268.220000	Y 242.219
S (181.972 nm)	0.008631	ppm	0.002191	25.38	13.516915	Y 377.433
Sb (206.834 nm)	0.966994	ppm	0.002368	0.24	1801.220000	Y 377.433
Se (196.026 nm)	0.957409	ppm	0.003724	0.39	1539.150000	Y 242.219
Si (288.158 nm)	4.760130	ppm	0.025216	0.53	32306.100000	Y 377.433
Sn (189.925 nm)	0.970402	ppm	0.005794	0.60	1606.070000	Y 377.433
Sr (421.552 nm)	0.479892	ppm	0.001104	0.23	77171.244569	Y_R 488.368
Th (288.505 nm)	0.005797 u	ppm	0.008289	> 100.00	-19.623000	Y 377.433
Ti (336.122 nm)	0.480372	ppm	0.000377	0.08	62872.900000	Y 377.433
Tl (190.794 nm)	0.971945	ppm	0.000408	0.04	2373.330000	Y 377.433
U (409.013 nm)	0.017077	ppm	0.006471	37.89	25.939000	Y 377.433
V (292.401 nm)	0.479614	ppm	0.000195	0.04	25668.800000	Y 377.433
Zn (206.200 nm)	0.484922	ppm	0.000188	0.04	2219.160000	Y 377.433
Zr (343.823 nm)	0.482834	ppm	0.000468	0.10	28156.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.004830	18787.293168	0.002941	0.29
Y 377.433	1.013606	563135.681951	0.002541	0.25
Y_R 377.433	1.012940	49315.700000	0.000460	0.05
Y_R 488.368	1.001890	42847.100000	0.001451	0.14
Y_R2 488.368	0.999709	83496.575057	0.002781	0.28
Y_R4	1.021170	39260.900000	0.003522	0.34

Sample Name: CCB

Date: 5/10/2019 5:21:47 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000099 u	ppm	0.000436	> 100.00	-187.971000	Y 377.433
Al (394.401 nm)	0.003053	ppm	0.000835	27.36	64.604300	Y 377.433
Al H (396.152 nm)	0.110853 Zu	ppm	0.001716	1.55	29.442800 Z	Y_R 377.433
As (188.980 nm)	0.002325	ppm	0.000204	8.77	1.873190	Y 242.219
B (249.678 nm)	-0.000308 u	ppm	0.001071	> 100.00	9.490190	Y 242.219
Ba (493.408 nm)	-0.000232 u	ppm	0.000349	> 100.00	1604.190000	Y_R 488.368
Be (234.861 nm)	-0.000031 u	ppm	0.000001	4.63	-4.064490	Y_R 488.368
Bi (223.061 nm)	0.002041	ppm	0.002179	> 100.00	-6.394560	Y 377.433
Ca (315.887 nm)	-0.001055 u	ppm	0.006596	> 100.00	-74.112244	Y_R 377.433
Cd (214.439 nm)	0.000050 u	ppm	0.000172	> 100.00	-4.881420	Y 377.433
Co (228.615 nm)	0.000284	ppm	0.000106	37.26	-16.297200	Y 242.219
Cr (205.560 nm)	-0.000279 u	ppm	0.000341	> 100.00	-10.054200	Y 377.433
Cu (324.754 nm)	-0.000241 u	ppm	0.000214	89.12	499.173000	Y 377.433
Fe (238.204 nm)	0.000638 u	ppm	0.002359	> 100.00	5.766562	Y_R 377.433
Fe H (259.940 nm)	0.031505 u	ppm	0.006015	19.09	17.287800	Y_R 377.433
K (766.491 nm)	-0.104542 u	ppm	0.192610	> 100.00	2071.630000	Y_R2 488.368
Li (670.783 nm)	0.000265 u	ppm	0.002532	> 100.00	-2881.190000	Y_R2 488.368
Mg (279.078 nm)	0.000050 u	ppm	0.001619	> 100.00	16.420800	Y 377.433
Mn (257.610 nm)	0.000070	ppm	0.000017	25.01	-3.336370	Y 377.433
Mo (202.032 nm)	0.000020 u	ppm	0.000091	> 100.00	11.874200	Y 377.433
Na (589.592 nm)	0.056663	ppm	0.000230	0.41	220.541000	Y_R2 488.368
Na H (589.593 nm)	-0.024530 u	ppm	0.024094	98.22	463.714177	Y_R4
Ni (231.604 nm)	-0.000356 u	ppm	0.000090	25.34	-12.388700	Y 377.433
P (213.618 nm)	-0.001429 u	ppm	0.004142	> 100.00	1.408040	Y 242.219
Pb (220.353 nm)	0.000023 u	ppm	0.001302	> 100.00	8.085180	Y 242.219
S (181.972 nm)	0.000163 u	ppm	0.003334	> 100.00	7.553461	Y 377.433
Sb (206.834 nm)	-0.000867 u	ppm	0.001562	> 100.00	0.656872	Y 377.433
Se (196.026 nm)	0.001752	ppm	0.001376	78.54	8.387690	Y 242.219
Si (288.158 nm)	-0.002789 u	ppm	0.002864	> 100.00	489.773000	Y 377.433
Sn (189.925 nm)	-0.002053 u	ppm	0.000569	27.74	5.718850	Y 377.433
Sr (421.552 nm)	-0.000137 u	ppm	0.000013	9.78	81.044207	Y_R 488.368
Th (288.505 nm)	-0.004842 u	ppm	0.000037	0.76	10.814800	Y 377.433
Ti (336.122 nm)	0.000457	ppm	0.000093	20.34	-460.723000	Y 377.433
Tl (190.794 nm)	0.001275 u	ppm	0.002325	> 100.00	3.234620	Y 377.433
U (409.013 nm)	-0.000789 u	ppm	0.005996	> 100.00	27.508900	Y 377.433
V (292.401 nm)	-0.000261 u	ppm	0.000106	40.43	-108.856000	Y 377.433
Zn (206.200 nm)	-0.000095 u	ppm	0.000124	> 100.00	2.654740	Y 377.433
Zr (343.823 nm)	0.000317	ppm	0.000251	79.11	-154.913000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.038065	19408.704573	0.002712	0.26
Y 377.433	1.041832	578817.412258	0.001945	0.19
Y_R 377.433	1.037370	50505.200000	0.000110	0.01
Y_R 488.368	1.017690	43522.700000	0.011267	1.11
Y_R2 488.368	1.026555	85738.797216	0.002951	0.29
Y_R4	1.021220	39262.800000	0.009533	0.93

Sample Name: CCVL-5695588

Date: 5/10/2019 5:24:58 PM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009121	ppm	0.000202	2.22	148.459000	Y 377.433
Al (394.401 nm)	0.101679	ppm	0.000228	0.22	1309.230000	Y 377.433
Al H (396.152 nm)	0.215912 u	ppm	0.003181	1.47	271.203000	Y_R 377.433
As (188.980 nm)	0.014735	ppm	0.001003	6.81	21.610800	Y 242.219
B (249.678 nm)	0.094427	ppm	0.000246	0.26	735.203000	Y 242.219
Ba (493.408 nm)	0.008868	ppm	0.000018	0.20	2559.160000	Y_R 488.368
Be (234.861 nm)	0.000889	ppm	0.000048	5.43	92.638200	Y_R 488.368
Bi (223.061 nm)	0.090070	ppm	0.003360	3.73	187.208000	Y 377.433
Ca (315.887 nm)	0.203128	ppm	0.004029	1.98	94.791457	Y_R 377.433
Cd (214.439 nm)	0.005049	ppm	0.000040	0.79	186.672000	Y 377.433
Co (228.615 nm)	0.010213	ppm	0.000265	2.60	232.654000	Y 242.219
Cr (205.560 nm)	0.010030	ppm	0.000252	2.52	61.204700	Y 377.433
Cu (324.754 nm)	0.014651	ppm	0.000137	0.94	1230.040000	Y 377.433
Fe (238.204 nm)	0.097432	ppm	0.000947	0.97	247.748291	Y_R 377.433
Fe H (259.940 nm)	0.127466 u	ppm	0.002409	1.89	155.207000	Y_R 377.433
K (766.491 nm)	2.802540	ppm	0.166505	5.94	5129.240000	Y_R2 488.368
Li (670.783 nm)	0.026541 Q	ppm	0.000429	1.62	-2403.170000 Q	Y_R2 488.368
Mg (279.078 nm)	0.198503	ppm	0.002740	1.38	711.084000	Y 377.433
Mn (257.610 nm)	0.010271	ppm	0.000025	0.24	2936.680000	Y 377.433
Mo (202.032 nm)	0.019026	ppm	0.000335	1.76	263.308000	Y 377.433
Na (589.592 nm)	1.068580	ppm	0.014380	1.35	1102.420000	Y_R2 488.368
Na H (589.593 nm)	0.768608 u	ppm	0.005247	0.68	923.405781	Y_R4
Ni (231.604 nm)	0.041642	ppm	0.001467	3.52	215.513000	Y 377.433
P (213.618 nm)	2.671970	ppm	0.008445	0.32	4126.990000	Y 242.219
Pb (220.353 nm)	0.008403	ppm	0.001507	17.93	36.324000	Y 242.219
S (181.972 nm)	0.086938	ppm	0.006242	7.18	49.998795	Y 377.433
Sb (206.834 nm)	0.019657	ppm	0.001048	5.33	38.746800	Y 377.433
Se (196.026 nm)	0.017751	ppm	0.000290	1.64	34.004700	Y 242.219
Si (288.158 nm)	0.493625	ppm	0.004641	0.94	3805.820000	Y 377.433
Sn (189.925 nm)	0.095204	ppm	0.000011	0.01	165.772000	Y 377.433
Sr (421.552 nm)	0.008493	ppm	0.000071	0.83	1467.004574	Y_R 488.368
Th (288.505 nm)	0.012894	ppm	0.000983	7.63	41.333200	Y 377.433
Ti (336.122 nm)	0.010067	ppm	0.000022	0.22	807.859000	Y 377.433
Tl (190.794 nm)	0.017258	ppm	0.000400	2.32	42.197800	Y 377.433
U (409.013 nm)	0.062749	ppm	0.001385	2.21	229.334000	Y 377.433
V (292.401 nm)	0.009612	ppm	0.000063	0.66	419.582000	Y 377.433
Zn (206.200 nm)	0.020566	ppm	0.000670	3.26	97.070800	Y 377.433
Zr (343.823 nm)	0.010142 Q	ppm	0.000256	2.52	421.543000 Q	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.053608	19699.313355	0.000546	0.05
Y 377.433	1.058582	588123.071669	0.000156	0.01
Y_R 377.433	1.057270	51473.800000	0.001580	0.15
Y_R 488.368	1.054650	45103.400000	0.004722	0.45
Y_R2 488.368	1.056241	88218.141839	0.001720	0.16
Y_R4	1.046970	40252.600000	0.002389	0.23

Sample Name: MB 280-457645/1-A

Date: 5/10/2019 5:28:26 PM

Rack:Tube: 1:49

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000641 u	ppm	0.000522	81.57	-208.050000	Y 377.433
Al (394.401 nm)	0.018805	ppm	0.000540	2.87	263.871000	Y 377.433
Al H (396.152 nm)	0.132978 u	ppm	0.004962	3.73	79.302900	Y_R 377.433
As (188.980 nm)	0.002185	ppm	0.002559	> 100.00	1.650130	Y 242.219
B (249.678 nm)	0.017756	ppm	0.001259	7.09	147.870000	Y 242.219
Ba (493.408 nm)	-0.000553 u	ppm	0.000043	7.77	1570.520000	Y_R 488.368
Be (234.861 nm)	0.000052	ppm	0.000027	51.82	4.605780	Y_R 488.368
Bi (223.061 nm)	0.002130	ppm	0.001258	59.06	-6.195690	Y 377.433
Ca (315.887 nm)	0.029941	ppm	0.001302	4.35	-48.473334	Y_R 377.433
Cd (214.439 nm)	0.000102	ppm	0.000083	81.79	-2.874240	Y 377.433
Co (228.615 nm)	0.000268	ppm	0.000111	41.33	-16.667400	Y 242.219
Cr (205.560 nm)	0.000360	ppm	0.000341	94.63	-5.627960	Y 377.433
Cu (324.754 nm)	0.000771	ppm	0.000182	23.63	548.212000	Y 377.433
Fe (238.204 nm)	0.017786	ppm	0.000653	3.67	48.634401	Y_R 377.433
Fe H (259.940 nm)	0.055041 u	ppm	0.001727	3.14	51.114600	Y_R 377.433
K (766.491 nm)	-0.190753 u	ppm	0.181138	94.96	1980.960000	Y_R2 488.368
Li (670.783 nm)	0.004987	ppm	0.000935	18.75	-2795.290000	Y_R2 488.368
Mg (279.078 nm)	0.010374	ppm	0.001761	16.98	52.442500	Y 377.433
Mn (257.610 nm)	0.000636	ppm	0.000001	0.20	159.851000	Y 377.433
Mo (202.032 nm)	-0.000410 u	ppm	0.000159	38.83	6.189860	Y 377.433
Na (589.592 nm)	0.061284	ppm	0.016431	26.81	224.468000	Y_R2 488.368
Na H (589.593 nm)	-0.242162 u	ppm	0.038767	16.01	337.577507	Y_R4
Ni (231.604 nm)	0.000144	ppm	0.000049	33.96	-9.673640	Y 377.433
P (213.618 nm)	0.004152	ppm	0.002696	64.93	9.726820	Y 242.219
Pb (220.353 nm)	-0.000614 u	ppm	0.001314	> 100.00	5.959370	Y 242.219
S (181.972 nm)	0.003567	ppm	0.002794	78.34	9.220858	Y 377.433
Sb (206.834 nm)	0.000053 u	ppm	0.000628	> 100.00	2.374080	Y 377.433
Se (196.026 nm)	0.004262	ppm	0.002005	47.05	12.404200	Y 242.219
Si (288.158 nm)	0.076478	ppm	0.000545	0.71	1019.280000	Y 377.433
Sn (189.925 nm)	0.007858	ppm	0.000409	5.21	22.027800	Y 377.433
Sr (421.552 nm)	0.000059	ppm	0.000002	3.83	112.526406	Y_R 488.368
Th (288.505 nm)	-0.002867 u	ppm	0.001844	64.33	14.309400	Y 377.433
Ti (336.122 nm)	0.000937	ppm	0.000102	10.86	-397.227000	Y 377.433
Tl (190.794 nm)	0.000655	ppm	0.000428	65.31	1.712820	Y 377.433
U (409.013 nm)	0.005292	ppm	0.002790	52.73	46.943700	Y 377.433
V (292.401 nm)	-0.000031 u	ppm	0.000069	> 100.00	-97.137000	Y 377.433
Zn (206.200 nm)	0.003230	ppm	0.000148	4.57	17.850200	Y 377.433
Zr (343.823 nm)	0.000622	ppm	0.000013	2.07	-137.046000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.044279	19524.886574	0.000918	0.09
Y 377.433	1.049513	583084.487492	0.000254	0.02
Y_R 377.433	1.040310	50648.400000	0.001178	0.11
Y_R 488.368	1.026480	43898.600000	0.000351	0.03
Y_R2 488.368	1.044449	87233.260565	0.000425	0.04
Y_R4	1.031110	39642.900000	0.009419	0.91

Sample Name: LCS 280-457645/2-A

Date: 5/10/2019 5:31:38 PM

Rack:Tube: 1:50

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.049147	ppm	0.000317	0.64	1303.410000	Y 377.433
Al (394.401 nm)	9.745040 o	ppm	0.001760	0.02	122756.000000	Y 377.433
Al H (396.152 nm)	9.935320	ppm	0.001863	0.02	22624.500000	Y_R 377.433
As (188.980 nm)	1.918820	ppm	0.003437	0.18	3050.240000	Y 242.219
B (249.678 nm)	1.193910	ppm	0.002753	0.23	9152.650000	Y 242.219
Ba (493.408 nm)	1.926340	ppm	0.001342	0.07	203758.000000	Y_R 488.368
Be (234.861 nm)	0.949990	ppm	0.004465	0.47	100738.000000	Y_R 488.368
Bi (223.061 nm)	1.912230	ppm	0.003200	0.17	4195.980000	Y 377.433
Ca (315.887 nm)	48.301244	ppm	0.034867	0.07	39879.255483	Y_R 377.433
Cd (214.439 nm)	0.941672	ppm	0.000378	0.04	36074.100000	Y 377.433
Co (228.615 nm)	0.925525	ppm	0.000677	0.07	23185.700000	Y 242.219
Cr (205.560 nm)	0.940952	ppm	0.001717	0.18	6505.080000	Y 377.433
Cu (324.754 nm)	0.924169	ppm	0.005642	0.61	45912.300000	Y 377.433
Fe (238.204 nm)	9.662267 o	ppm	0.018026	0.19	24159.559591	Y_R 377.433
Fe H (259.940 nm)	9.669910	ppm	0.001596	0.02	13869.900000	Y_R 377.433
K (766.491 nm)	48.534500	ppm	0.092039	0.19	53229.200000	Y_R2 488.368
Li (670.783 nm)	0.974374	ppm	0.003064	0.31	14840.400000	Y_R2 488.368
Mg (279.078 nm)	46.979000	ppm	0.030629	0.07	164636.000000	Y 377.433
Mn (257.610 nm)	0.950115	ppm	0.001052	0.11	273815.000000	Y 377.433
Mo (202.032 nm)	0.963192	ppm	0.000700	0.07	12753.400000	Y 377.433
Na (589.592 nm)	50.072700	ppm	0.036880	0.07	44161.600000	Y_R2 488.368
Na H (589.593 nm)	47.342217 u	ppm	0.002419	0.01	27916.812529	Y_R4
Ni (231.604 nm)	0.917846	ppm	0.000075	0.01	4972.160000	Y 377.433
P (213.618 nm)	18.396100	ppm	0.060215	0.33	28154.500000	Y 242.219
Pb (220.353 nm)	0.952179	ppm	0.000633	0.07	3211.670000	Y 242.219
S (181.972 nm)	8.880553	ppm	0.003979	0.04	4352.807650	Y 377.433
Sb (206.834 nm)	0.958858	ppm	0.004127	0.43	1784.000000	Y 377.433
Se (196.026 nm)	1.894430	ppm	0.000736	0.04	3038.740000	Y 242.219
Si (288.158 nm)	2.673830	ppm	0.003638	0.14	18369.600000	Y 377.433
Sn (189.925 nm)	1.922890	ppm	0.005291	0.28	3173.570000	Y 377.433
Sr (421.552 nm)	0.959151	ppm	0.001272	0.13	154138.586412	Y_R 488.368
Th (288.505 nm)	0.982075	ppm	0.005166	0.53	1651.420000	Y 377.433
Ti (336.122 nm)	0.969221	ppm	0.001169	0.12	127516.000000	Y 377.433
Tl (190.794 nm)	1.879420	ppm	0.005662	0.30	4586.740000	Y 377.433
U (409.013 nm)	1.978210	ppm	0.002272	0.11	6290.690000	Y 377.433
V (292.401 nm)	0.958851	ppm	0.000850	0.09	51412.900000	Y 377.433
Zn (206.200 nm)	0.476749	ppm	0.000165	0.03	2182.820000	Y 377.433
Zr (343.823 nm)	0.478379	ppm	0.000481	0.10	27894.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.991186	18532.204602	0.000644	0.06
Y 377.433	1.007724	559867.615536	0.000286	0.03
Y_R 377.433	1.017560	49540.400000	0.003051	0.30
Y_R 488.368	1.004160	42944.000000	0.003970	0.40
Y_R2 488.368	1.010245	84376.562809	0.000931	0.09
Y_R4	1.019250	39186.900000	0.003124	0.31

Sample Name: GB 280-454060/20-B

Date: 5/10/2019 5:35:14 PM

Rack:Tube: 1:51

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000489 u	ppm	0.000375	76.76	-205.931000	Y 377.433
Al (394.401 nm)	2.634660	ppm	0.004371	0.17	33133.600000	Y 377.433
Al H (396.152 nm)	2.835520	ppm	0.006456	0.23	6176.900000	Y_R 377.433
As (188.980 nm)	0.013451	ppm	0.002468	18.35	18.258700	Y 242.219
B (249.678 nm)	0.012007	ppm	0.000115	0.96	79.013400	Y 242.219
Ba (493.408 nm)	0.088728	ppm	0.000057	0.06	10972.000000	Y_R 488.368
Be (234.861 nm)	0.002467	ppm	0.000022	0.89	-101.951000	Y_R 488.368
Bi (223.061 nm)	0.005114	ppm	0.001425	27.87	7.315820	Y 377.433
Ca (315.887 nm)	4.090788	ppm	0.001076	0.03	3310.948366	Y_R 377.433
Cd (214.439 nm)	0.001179	ppm	0.000058	4.96	55.232900	Y 377.433
Co (228.615 nm)	0.012368	ppm	0.000094	0.76	290.534000	Y 242.219
Cr (205.560 nm)	3.152080	ppm	0.016608	0.53	21835.300000	Y 377.433
Cu (324.754 nm)	0.026326	ppm	0.000061	0.23	1803.600000	Y 377.433
Fe (238.204 nm)	40.896114 o	ppm	0.003368	0.01	102243.278350	Y_R 377.433
Fe H (259.940 nm)	40.722900	ppm	0.003769	0.01	58500.500000	Y_R 377.433
K (766.491 nm)	1.161030	ppm	0.080689	6.95	3402.730000	Y_R2 488.368
Li (670.783 nm)	0.004491	ppm	0.003693	82.24	-2804.320000	Y_R2 488.368
Mg (279.078 nm)	0.972336	ppm	0.003610	0.37	3368.300000	Y 377.433
Mn (257.610 nm)	0.348551	ppm	0.000691	0.20	100435.000000	Y 377.433
Mo (202.032 nm)	0.009899	ppm	0.000167	1.69	142.570000	Y 377.433
Na (589.592 nm)	0.470806	ppm	0.012177	2.59	601.959000	Y_R2 488.368
Na H (589.593 nm)	0.034980 u	ppm	0.019149	54.74	498.204989	Y_R4
Ni (231.604 nm)	0.043112	ppm	0.000563	1.31	223.477000	Y 377.433
P (213.618 nm)	1.053100	ppm	0.011453	1.09	1624.190000	Y 242.219
Pb (220.353 nm)	0.012412	ppm	0.001061	8.55	43.763900	Y 242.219
S (181.972 nm)	0.125334	ppm	0.004880	3.89	70.075186	Y 377.433
Sb (206.834 nm)	-0.001365 u	ppm	0.001002	73.42	28.432200	Y 377.433
Se (196.026 nm)	0.007611	ppm	0.000381	5.01	7.318980	Y 242.219
Si (288.158 nm)	5.830840	ppm	0.116544	2.00	39458.400000	Y 377.433
Sn (189.925 nm)	0.008440	ppm	0.000926	10.97	22.985900	Y 377.433
Sr (421.552 nm)	0.038295	ppm	0.000030	0.08	6259.361960	Y_R 488.368
Th (288.505 nm)	0.008524	ppm	0.002424	28.44	35.786400	Y 377.433
Ti (336.122 nm)	0.093954	ppm	0.000163	0.17	11887.900000	Y 377.433
Tl (190.794 nm)	0.004650	ppm	0.000353	7.60	5.740330	Y 377.433
U (409.013 nm)	-0.010915 u	ppm	0.006641	60.85	22.603100	Y 377.433
V (292.401 nm)	0.016999	ppm	0.000211	1.24	-375.214000	Y 377.433
Zn (206.200 nm)	0.011935	ppm	0.000477	4.00	63.288800	Y 377.433
Zr (343.823 nm)	0.013938	ppm	0.000063	0.45	644.284000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.053960	19705.888666	0.000471	0.04
Y 377.433	1.063642	590934.225207	0.002337	0.22
Y_R 377.433	1.059200	51567.900000	0.000386	0.04
Y_R 488.368	1.044360	44663.100000	0.003725	0.36
Y_R2 488.368	1.043677	87168.846419	0.000824	0.08
Y_R4	1.044370	40152.600000	0.004270	0.41

Sample Name: LCSSRM 280-454060/21-B

Date: 5/10/2019 5:38:52 PM

Rack:Tube: 1:52

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	1.328960	ppm	0.001533	0.12	48180.900000	Y 377.433
Al (394.401 nm)	180.909000 o	ppm	0.185649	0.10	2273400.000000	Y 377.433
Al H (396.152 nm)	181.322000	ppm	0.038414	0.02	408808.000000	Y_R 377.433
As (188.980 nm)	3.710430	ppm	0.019714	0.53	5882.120000	Y 242.219
B (249.678 nm)	2.706870	ppm	0.005033	0.19	20573.600000	Y 242.219
Ba (493.408 nm)	5.090350	ppm	0.023431	0.46	535973.000000	Y_R 488.368
Be (234.861 nm)	1.748340	ppm	0.001126	0.06	182983.000000	Y_R 488.368
Bi (223.061 nm)	-0.021177 u	ppm	0.000167	0.79	-8.109420	Y 377.433
Ca (315.887 nm)	88.859092	ppm	0.062141	0.07	73468.845987	Y_R 377.433
Cd (214.439 nm)	2.497330	ppm	0.000766	0.03	95789.100000	Y 377.433
Co (228.615 nm)	3.147990	ppm	0.005018	0.16	79099.700000	Y 242.219
Cr (205.560 nm)	3.714950	ppm	0.004872	0.13	25717.600000	Y 377.433
Cu (324.754 nm)	2.018980	ppm	0.003896	0.19	99577.300000	Y 377.433
Fe (238.204 nm)	289.742928 o	ppm	0.360839	0.12	724353.144996	Y_R 377.433
Fe H (259.940 nm)	291.608000	ppm	0.113902	0.04	419082.000000	Y_R 377.433
K (766.491 nm)	46.701400	ppm	0.137803	0.30	51301.100000	Y_R2 488.368
Li (670.783 nm)	0.156513	ppm	0.004273	2.73	-38.634700	Y_R2 488.368
Mg (279.078 nm)	44.514500	ppm	0.012278	0.03	155640.000000	Y 377.433
Mn (257.610 nm)	6.136080	ppm	0.003609	0.06	1768500.000000	Y 377.433
Mo (202.032 nm)	1.850460	ppm	0.000983	0.05	24490.800000	Y 377.433
Na (589.592 nm)	6.669910	ppm	0.021699	0.33	7190.200000	Y_R2 488.368
Na H (589.593 nm)	0.365264 u	ppm	0.044412	12.16	689.633224	Y_R4
Ni (231.604 nm)	1.645850	ppm	0.000797	0.05	8921.450000	Y 377.433
P (213.618 nm)	9.756640	ppm	0.019676	0.20	14504.500000	Y 242.219
Pb (220.353 nm)	1.350810	ppm	0.001952	0.14	4503.870000	Y 242.219
S (181.972 nm)	1.529496	ppm	0.001703	0.11	779.704009	Y 377.433
Sb (206.834 nm)	0.741292	ppm	0.000256	0.03	1387.180000	Y 377.433
Se (196.026 nm)	0.919666	ppm	0.002526	0.27	1410.110000	Y 242.219
Si (288.158 nm)	9.600750	ppm	0.055775	0.58	64641.400000	Y 377.433
Sn (189.925 nm)	1.324810	ppm	0.003915	0.30	2189.320000	Y 377.433
Sr (421.552 nm)	1.741330	ppm	0.001649	0.09	279795.999044	Y_R 488.368
Th (288.505 nm)	0.297022	ppm	0.003870	1.30	491.043000	Y 377.433
Ti (336.122 nm)	7.258780	ppm	0.009286	0.13	957416.000000	Y 377.433
Tl (190.794 nm)	1.087280	ppm	0.002107	0.19	2590.980000	Y 377.433
U (409.013 nm)	0.107216	ppm	0.001837	1.71	556.979000	Y 377.433
V (292.401 nm)	1.141910	ppm	0.000755	0.07	60454.400000	Y 377.433
Zn (206.200 nm)	4.759560	ppm	0.001533	0.03	21791.000000	Y 377.433
Zr (343.823 nm)	0.115123	ppm	0.000094	0.08	6581.110000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.087370	20330.557718	0.001731	0.16
Y 377.433	1.101608	612027.538041	0.002813	0.26
Y_R 377.433	1.125100	54776.200000	0.003054	0.27
Y_R 488.368	1.109500	47449.200000	0.003298	0.30
Y_R2 488.368	1.128072	94217.514895	0.007120	0.63
Y_R4	1.152790	44321.300000	0.004880	0.42

Sample Name: 280-122205-A-1-D

Date: 5/10/2019 5:42:40 PM

Rack:Tube: 1:53

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000705	ppm	0.000384	54.44	-421.391000	Y 377.433
Al (394.401 nm)	224.553000 o	ppm	0.199270	0.09	2821420.000000	Y 377.433
Al H (396.152 nm)	222.716000	ppm	0.273878	0.12	501331.000000	Y_R 377.433
As (188.980 nm)	0.117583	ppm	0.000595	0.51	159.874000	Y 242.219
B (249.678 nm)	0.139228	ppm	0.000566	0.41	833.483000	Y 242.219
Ba (493.408 nm)	1.944260	ppm	0.002585	0.13	205962.000000	Y_R 488.368
Be (234.861 nm)	0.024254	ppm	0.000212	0.88	-1009.410000	Y_R 488.368
Bi (223.061 nm)	-0.023167 u	ppm	0.000062	0.27	6.923470	Y 377.433
Ca (315.887 nm)	98.787777	ppm	0.014714	0.01	81691.465257	Y_R 377.433
Cd (214.439 nm)	0.004037	ppm	0.000090	2.22	314.275000	Y 377.433
Co (228.615 nm)	0.137682	ppm	0.000291	0.21	4006.650000	Y 242.219
Cr (205.560 nm)	1.202450	ppm	0.001258	0.10	8317.710000	Y 377.433
Cu (324.754 nm)	0.291668	ppm	0.000458	0.16	14716.700000	Y 377.433
Fe (238.204 nm)	403.762809 o	ppm	0.026822	0.01	1009399.562552	Y_R 377.433
Fe H (259.940 nm)	404.685000	ppm	0.785535	0.19	581600.000000	Y_R 377.433
K (766.491 nm)	73.545100	ppm	0.117276	0.16	79534.800000	Y_R2 488.368
Li (670.783 nm)	0.233068	ppm	0.001467	0.63	1354.100000	Y_R2 488.368
Mg (279.078 nm)	84.031300	ppm	0.156951	0.19	293998.000000	Y 377.433
Mn (257.610 nm)	7.063340	ppm	0.001667	0.02	2035740.000000	Y 377.433
Mo (202.032 nm)	0.011940	ppm	0.000244	2.04	169.567000	Y 377.433
Na (589.592 nm)	5.188620	ppm	0.025017	0.48	5148.070000	Y_R2 488.368
Na H (589.593 nm)	2.451915 u	ppm	0.002034	0.08	1899.026679	Y_R4
Ni (231.604 nm)	0.438328	ppm	0.000151	0.03	2367.990000	Y 377.433
P (213.618 nm)	16.568400	ppm	0.020882	0.13	25530.800000	Y 242.219
Pb (220.353 nm)	1.384080	ppm	0.004207	0.30	4609.820000	Y 242.219
S (181.972 nm)	1.976859	ppm	0.016410	0.83	1001.881219	Y 377.433
Sb (206.834 nm)	0.021345	ppm	0.003779	17.70	23.021900	Y 377.433
Se (196.026 nm)	0.006513	ppm	0.004063	62.38	-81.923900	Y 242.219
Si (288.158 nm)	2.827480	ppm	0.042458	1.50	19396.000000	Y 377.433
Sn (189.925 nm)	0.019128	ppm	0.004912	25.68	40.575600	Y 377.433
Sr (421.552 nm)	0.595375	ppm	0.000296	0.05	95780.202786	Y_R 488.368
Th (288.505 nm)	0.201068	ppm	0.000080	0.04	397.743000	Y 377.433
Ti (336.122 nm)	12.503800	ppm	0.001511	0.01	1649390.000000	Y 377.433
Tl (190.794 nm)	0.027916	ppm	0.000968	3.47	-44.365900	Y 377.433
U (409.013 nm)	-0.216654 u	ppm	0.000303	0.14	-396.276000	Y 377.433
V (292.401 nm)	0.666115	ppm	0.000185	0.03	35998.900000	Y 377.433
Zn (206.200 nm)	1.275140	ppm	0.004455	0.35	5885.480000	Y 377.433
Zr (343.823 nm)	0.114546	ppm	0.000204	0.18	6547.270000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.149793	21497.675085	0.002209	0.19
Y 377.433	1.182736	657100.293719	0.002601	0.22
Y_R 377.433	1.221210	59455.300000	0.003382	0.28
Y_R 488.368	1.200800	51353.800000	0.002517	0.21
Y_R2 488.368	1.199794	100207.848066	0.000746	0.06
Y_R4	1.233790	47435.400000	0.002571	0.21

Sample Name: 280-122205-A-2-D

Date: 5/10/2019 5:46:47 PM

Rack:Tube: 1:54

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000979	ppm	0.000048	4.89	-405.273000	Y 377.433
Al (394.401 nm)	227.610000 o	ppm	0.151663	0.07	2859840.000000	Y 377.433
Al H (396.152 nm)	225.405000	ppm	0.347022	0.15	507384.000000	Y_R 377.433
As (188.980 nm)	0.111521	ppm	0.000167	0.15	149.924000	Y 242.219
B (249.678 nm)	0.142563	ppm	0.000898	0.63	856.393000	Y 242.219
Ba (493.408 nm)	1.928080	ppm	0.004312	0.22	204268.000000	Y_R 488.368
Be (234.861 nm)	0.024794	ppm	0.000111	0.45	-990.668000	Y_R 488.368
Bi (223.061 nm)	-0.024518 u	ppm	0.002126	8.67	4.694620	Y 377.433
Ca (315.887 nm)	99.336348	ppm	0.045712	0.05	82145.938300	Y_R 377.433
Cd (214.439 nm)	0.004192	ppm	0.000183	4.37	322.005000	Y 377.433
Co (228.615 nm)	0.133656	ppm	0.001010	0.76	3900.910000	Y 242.219
Cr (205.560 nm)	1.443900	ppm	0.001473	0.10	9990.850000	Y 377.433
Cu (324.754 nm)	0.287079	ppm	0.000047	0.02	14487.500000	Y 377.433
Fe (238.204 nm)	407.686176 o	ppm	0.321832	0.08	1019207.865805	Y_R 377.433
Fe H (259.940 nm)	408.843000	ppm	0.713326	0.17	587576.000000	Y_R 377.433
K (766.491 nm)	74.573300	ppm	0.157393	0.21	80616.300000	Y_R2 488.368
Li (670.783 nm)	0.240610	ppm	0.002832	1.18	1491.300000	Y_R2 488.368
Mg (279.078 nm)	82.018300	ppm	0.065558	0.08	286936.000000	Y 377.433
Mn (257.610 nm)	7.127610	ppm	0.006609	0.09	2054270.000000	Y 377.433
Mo (202.032 nm)	0.010091	ppm	0.000153	1.52	145.107000	Y 377.433
Na (589.592 nm)	5.398000	ppm	0.002375	0.04	5326.220000	Y_R2 488.368
Na H (589.593 nm)	2.620860 u	ppm	0.011176	0.43	1996.944813	Y_R4
Ni (231.604 nm)	0.434239	ppm	0.000548	0.13	2345.800000	Y 377.433
P (213.618 nm)	16.184700	ppm	0.001013	0.01	24939.100000	Y 242.219
Pb (220.353 nm)	0.430270	ppm	0.003100	0.72	1397.580000	Y 242.219
S (181.972 nm)	2.201028	ppm	0.001048	0.05	1111.684899	Y 377.433
Sb (206.834 nm)	0.006991	ppm	0.001698	24.28	-0.907999	Y 377.433
Se (196.026 nm)	0.005876	ppm	0.002258	38.43	-84.010700	Y 242.219
Si (288.158 nm)	2.946520	ppm	0.046917	1.59	20191.200000	Y 377.433
Sn (189.925 nm)	0.017788	ppm	0.000310	1.74	38.369600	Y 377.433
Sr (421.552 nm)	0.593440	ppm	0.001288	0.22	95470.114747	Y_R 488.368
Th (288.505 nm)	0.207435	ppm	0.002809	1.35	412.007000	Y 377.433
Ti (336.122 nm)	12.394500	ppm	0.011795	0.10	1634980.000000	Y 377.433
Tl (190.794 nm)	0.023737	ppm	0.000649	2.73	-54.541100	Y 377.433
U (409.013 nm)	-0.208135 u	ppm	0.000524	0.25	-365.516000	Y 377.433
V (292.401 nm)	0.649268	ppm	0.000545	0.08	34987.300000	Y 377.433
Zn (206.200 nm)	1.318580	ppm	0.002929	0.22	6084.570000	Y 377.433
Zr (343.823 nm)	0.111485	ppm	0.000066	0.06	6367.650000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.149363	21489.642933	0.002412	0.21
Y 377.433	1.184840	658269.089407	0.000788	0.07
Y_R 377.433	1.223480	59566.100000	0.003892	0.32
Y_R 488.368	1.205300	51546.100000	0.002224	0.18
Y_R2 488.368	1.213156	101323.872070	0.006853	0.56
Y_R4	1.229530	47271.700000	0.001349	0.11

Sample Name: 280-122205-A-3-P

Date: 5/10/2019 5:50:30 PM

Rack:Tube: 1:55

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000832	ppm	0.000344	41.38	-394.131000	Y 377.433
Al (394.401 nm)	219.610000 o	ppm	0.152447	0.07	2759310.000000	Y 377.433
Al H (396.152 nm)	217.663000	ppm	0.167564	0.08	489945.000000	Y_R 377.433
As (188.980 nm)	0.112843	ppm	0.000401	0.36	153.094000	Y 242.219
B (249.678 nm)	0.134685	ppm	0.000323	0.24	808.387000	Y 242.219
Ba (493.408 nm)	1.918760	ppm	0.000264	0.01	203274.000000	Y_R 488.368
Be (234.861 nm)	0.025028	ppm	0.000059	0.24	-785.300000	Y_R 488.368
Bi (223.061 nm)	-0.027764 u	ppm	0.000601	2.17	-5.903460	Y 377.433
Ca (315.887 nm)	94.309245	ppm	0.119014	0.13	77986.000078	Y_R 377.433
Cd (214.439 nm)	0.005316	ppm	0.000134	2.52	356.683000	Y 377.433
Co (228.615 nm)	0.135364	ppm	0.000150	0.11	3895.210000	Y 242.219
Cr (205.560 nm)	2.201200	ppm	0.002131	0.10	15239.100000	Y 377.433
Cu (324.754 nm)	0.284121	ppm	0.000217	0.08	14358.000000	Y 377.433
Fe (238.204 nm)	386.822725 o	ppm	0.560542	0.14	967049.839080	Y_R 377.433
Fe H (259.940 nm)	388.992000	ppm	0.367352	0.09	559045.000000	Y_R 377.433
K (766.491 nm)	73.440700	ppm	0.360138	0.49	79425.100000	Y_R2 488.368
Li (670.783 nm)	0.236946	ppm	0.001336	0.56	1424.650000	Y_R2 488.368
Mg (279.078 nm)	80.577100	ppm	0.171861	0.21	281913.000000	Y 377.433
Mn (257.610 nm)	6.888920	ppm	0.009469	0.14	1985480.000000	Y 377.433
Mo (202.032 nm)	0.013875	ppm	0.000003	0.02	195.167000	Y 377.433
Na (589.592 nm)	5.029910	ppm	0.008260	0.16	5003.990000	Y_R2 488.368
Na H (589.593 nm)	2.215285 u	ppm	0.010534	0.48	1761.879402	Y_R4
Ni (231.604 nm)	0.415043	ppm	0.000417	0.10	2241.650000	Y 377.433
P (213.618 nm)	15.883600	ppm	0.094449	0.59	24475.300000	Y 242.219
Pb (220.353 nm)	0.411270	ppm	0.000044	0.01	1335.090000	Y 242.219
S (181.972 nm)	2.062122	ppm	0.007050	0.34	1042.765090	Y 377.433
Sb (206.834 nm)	0.001907 u	ppm	0.005522	> 100.00	-0.967280	Y 377.433
Se (196.026 nm)	0.009765	ppm	0.007048	72.17	-72.673500	Y 242.219
Si (288.158 nm)	2.365560	ppm	0.012793	0.54	16310.300000	Y 377.433
Sn (189.925 nm)	0.018763	ppm	0.000302	1.61	39.974700	Y 377.433
Sr (421.552 nm)	0.562623	ppm	0.000578	0.10	90517.840946	Y_R 488.368
Th (288.505 nm)	0.190421	ppm	0.000211	0.11	383.360000	Y 377.433
Ti (336.122 nm)	11.357400	ppm	0.024265	0.21	1498140.000000	Y 377.433
Tl (190.794 nm)	0.026170	ppm	0.000932	3.56	-40.715800	Y 377.433
U (409.013 nm)	-0.205686 u	ppm	0.002619	1.27	-372.190000	Y 377.433
V (292.401 nm)	0.615276	ppm	0.001164	0.19	32820.700000	Y 377.433
Zn (206.200 nm)	1.283720	ppm	0.005431	0.42	5922.470000	Y 377.433
Zr (343.823 nm)	0.113985	ppm	0.000103	0.09	6514.370000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.154016	21576.640797	0.002206	0.19
Y 377.433	1.188341	660214.390521	0.004202	0.35
Y_R 377.433	1.226850	59730.200000	0.001720	0.14
Y_R 488.368	1.207140	51624.900000	0.000327	0.03
Y_R2 488.368	1.212721	101287.498582	0.000758	0.06
Y_R4	1.249890	48054.300000	0.001313	0.11

Sample Name: 280-122205-A-3-Psd@5

Date: 5/10/2019 5:54:14 PM

Rack:Tube: 1:56

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000082	ppm	0.000083	> 100.00	-234.733000	Y 377.433
Al (394.401 nm)	48.392200 o	ppm	0.058462	0.12	608053.000000	Y 377.433
Al H (396.152 nm)	49.151700	ppm	0.022587	0.05	110476.000000	Y_R 377.433
As (188.980 nm)	0.025926	ppm	0.001863	7.19	33.770600	Y 242.219
B (249.678 nm)	0.037797	ppm	0.000393	1.04	246.045000	Y 242.219
Ba (493.408 nm)	0.427234	ppm	0.000306	0.07	46531.200000	Y_R 488.368
Be (234.861 nm)	0.005572	ppm	0.000066	1.19	-219.052000	Y_R 488.368
Bi (223.061 nm)	-0.000139 u	ppm	0.001326	> 100.00	4.346110	Y 377.433
Ca (315.887 nm)	22.964247	ppm	0.014727	0.06	18933.112522	Y_R 377.433
Cd (214.439 nm)	0.001280	ppm	0.000010	0.79	79.860200	Y 377.433
Co (228.615 nm)	0.030887	ppm	0.000729	2.36	869.661000	Y 242.219
Cr (205.560 nm)	0.499425	ppm	0.002974	0.60	3451.300000	Y 377.433
Cu (324.754 nm)	0.061494	ppm	0.000269	0.44	3507.720000	Y 377.433
Fe (238.204 nm)	90.941800 o	ppm	0.134531	0.15	227356.050973	Y_R 377.433
Fe H (259.940 nm)	90.703200	ppm	0.085852	0.09	130334.000000	Y_R 377.433
K (766.491 nm)	16.483800	ppm	0.166960	1.01	19518.900000	Y_R2 488.368
Li (670.783 nm)	0.055668	ppm	0.001168	2.10	-1873.270000	Y_R2 488.368
Mg (279.078 nm)	19.651000	ppm	0.040705	0.21	68769.400000	Y 377.433
Mn (257.610 nm)	1.611810	ppm	0.000841	0.05	464527.000000	Y 377.433
Mo (202.032 nm)	0.002602	ppm	0.000155	5.97	46.039900	Y 377.433
Na (589.592 nm)	6.323770	ppm	0.047897	0.76	5771.060000	Y_R2 488.368
Na H (589.593 nm)	5.065136 u	ppm	0.040914	0.81	3413.612681	Y_R4
Ni (231.604 nm)	0.094132	ppm	0.001424	1.51	500.319000	Y 377.433
P (213.618 nm)	3.520750	ppm	0.018025	0.51	5428.310000	Y 242.219
Pb (220.353 nm)	0.092361	ppm	0.000287	0.31	305.923000	Y 242.219
S (181.972 nm)	2.871757	ppm	0.008497	0.30	1417.325946	Y 377.433
Sb (206.834 nm)	0.000419 u	ppm	0.003546	> 100.00	1.876810	Y 377.433
Se (196.026 nm)	0.002881	ppm	0.000879	30.51	-11.913700	Y 242.219
Si (288.158 nm)	0.555071	ppm	0.002924	0.53	4216.290000	Y 377.433
Sn (189.925 nm)	0.000608	ppm	0.000246	40.45	10.097300	Y 377.433
Sr (421.552 nm)	0.150698	ppm	0.000085	0.06	24318.594928	Y_R 488.368
Th (288.505 nm)	0.036614	ppm	0.005002	13.66	91.115300	Y 377.433
Ti (336.122 nm)	2.567710	ppm	0.000123	0.00	338305.000000	Y 377.433
Tl (190.794 nm)	0.007422	ppm	0.002324	31.32	-5.954340	Y 377.433
U (409.013 nm)	-0.029265 u	ppm	0.008672	29.63	-3.360870	Y 377.433
V (292.401 nm)	0.138725	ppm	0.000318	0.23	7326.620000	Y 377.433
Zn (206.200 nm)	0.295533	ppm	0.001026	0.35	1366.090000	Y 377.433
Zr (343.823 nm)	0.026050	ppm	0.000149	0.57	1354.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.053471	19696.741077	0.006478	0.61
Y 377.433	1.063576	590897.805187	0.005916	0.56
Y_R 377.433	1.078590	52511.700000	0.001084	0.10
Y_R 488.368	1.064980	45545.000000	0.001940	0.18
Y_R2 488.368	1.064999	88949.633284	0.000618	0.06
Y_R4	1.087270	41802.300000	0.002329	0.21

Sample Name: 280-122205-A-3-Q MS

Date: 5/10/2019 5:57:51 PM

Rack:Tube: 1:57

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.043908	ppm	0.000306	0.70	874.009000	Y 377.433
Al (394.401 nm)	280.794000 o	ppm	0.141064	0.05	3528300.000000	Y 377.433
Al H (396.152 nm)	282.088000	ppm	0.432392	0.15	635411.000000	Y_R 377.433
As (188.980 nm)	1.724830	ppm	0.001869	0.11	2712.910000	Y 242.219
B (249.678 nm)	0.940912	ppm	0.001270	0.13	6966.190000	Y 242.219
Ba (493.408 nm)	3.623700	ppm	0.015888	0.44	382190.000000	Y_R 488.368
Be (234.861 nm)	0.808782	ppm	0.000367	0.05	82122.100000	Y_R 488.368
Bi (223.061 nm)	1.522590	ppm	0.000659	0.04	3408.780000	Y 377.433
Ca (315.887 nm)	147.253649	ppm	0.087449	0.06	121792.972971	Y_R 377.433
Cd (214.439 nm)	0.763247	ppm	0.001495	0.20	29406.900000	Y 377.433
Co (228.615 nm)	0.920084	ppm	0.001625	0.18	23723.800000	Y 242.219
Cr (205.560 nm)	3.131470	ppm	0.001344	0.04	21678.300000	Y 377.433
Cu (324.754 nm)	1.112870	ppm	0.008219	0.74	55036.600000	Y 377.433
Fe (238.204 nm)	418.310038 o	ppm	0.270921	0.06	1045767.216318	Y_R 377.433
Fe H (259.940 nm)	420.587000	ppm	0.363672	0.09	604454.000000	Y_R 377.433
K (766.491 nm)	124.445000	ppm	0.024060	0.02	133071.000000	Y_R2 488.368
Li (670.783 nm)	1.100720	ppm	0.003407	0.31	17139.000000	Y_R2 488.368
Mg (279.078 nm)	128.278000	ppm	0.011986	0.01	449039.000000	Y 377.433
Mn (257.610 nm)	7.928100	ppm	0.007408	0.09	2284980.000000	Y 377.433
Mo (202.032 nm)	0.766918	ppm	0.001772	0.23	10156.900000	Y 377.433
Na (589.592 nm)	49.171500	ppm	0.126140	0.26	43785.300000	Y_R2 488.368
Na H (589.593 nm)	43.742586 u	ppm	0.038697	0.09	25830.516835	Y_R4
Ni (231.604 nm)	1.193930	ppm	0.000046	0.00	6469.740000	Y 377.433
P (213.618 nm)	31.940100	ppm	0.057195	0.18	49043.600000	Y 242.219
Pb (220.353 nm)	1.197420	ppm	0.000114	0.01	3965.350000	Y 242.219
S (181.972 nm)	9.608446	ppm	0.037754	0.39	4736.656871	Y 377.433
Sb (206.834 nm)	0.203309	ppm	0.000791	0.39	357.035000	Y 377.433
Se (196.026 nm)	1.588570	ppm	0.004802	0.30	2449.370000	Y 242.219
Si (288.158 nm)	4.256800	ppm	0.001611	0.04	28943.900000	Y 377.433
Sn (189.925 nm)	1.449020	ppm	0.001972	0.14	2393.720000	Y 377.433
Sr (421.552 nm)	1.485821	ppm	0.004083	0.27	238782.949619	Y_R 488.368
Th (288.505 nm)	1.013750	ppm	0.006392	0.63	1746.390000	Y 377.433
Ti (336.122 nm)	15.407300	ppm	0.004684	0.03	2032610.000000	Y 377.433
Tl (190.794 nm)	1.500000	ppm	0.003277	0.22	3537.530000	Y 377.433
U (409.013 nm)	1.418180	ppm	0.005765	0.41	4791.250000	Y 377.433
V (292.401 nm)	1.486760	ppm	0.000568	0.04	79737.800000	Y 377.433
Zn (206.200 nm)	1.697320	ppm	0.004346	0.26	7816.580000	Y 377.433
Zr (343.823 nm)	0.428558	ppm	0.000221	0.05	24971.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.133893	21200.384922	0.001656	0.15
Y 377.433	1.175720	653202.502105	0.002572	0.22
Y_R 377.433	1.223680	59575.900000	0.001910	0.16
Y_R 488.368	1.205880	51570.900000	0.000508	0.04
Y_R2 488.368	1.212134	101238.449182	0.001894	0.16
Y_R4	1.240080	47677.300000	0.005595	0.45

Sample Name: 280-122205-A-3-R MSD

Date: 5/10/2019 6:01:58 PM

Rack:Tube: 1:58

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.043193	ppm	0.000536	1.24	834.402000	Y 377.433
Al (394.401 nm)	280.349000 o	ppm	0.110159	0.04	3522710.000000	Y 377.433
Al H (396.152 nm)	279.490000	ppm	0.542490	0.19	629551.000000	Y_R 377.433
As (188.980 nm)	1.700780	ppm	0.003447	0.20	2674.190000	Y 242.219
B (249.678 nm)	0.928638	ppm	0.001539	0.17	6858.470000	Y 242.219
Ba (493.408 nm)	3.547220	ppm	0.052403	1.48	374184.000000	Y_R 488.368
Be (234.861 nm)	0.797420	ppm	0.005843	0.73	80716.000000	Y_R 488.368
Bi (223.061 nm)	1.510850	ppm	0.006006	0.40	3386.800000	Y 377.433
Ca (315.887 nm)	150.530367	ppm	0.143057	0.10	124502.382780	Y_R 377.433
Cd (214.439 nm)	0.765146	ppm	0.000014	0.00	29489.000000	Y 377.433
Co (228.615 nm)	0.912792	ppm	0.000812	0.09	23556.500000	Y 242.219
Cr (205.560 nm)	3.154320	ppm	0.002177	0.07	21836.700000	Y 377.433
Cu (324.754 nm)	1.090650	ppm	0.000523	0.05	53939.300000	Y 377.433
Fe (238.204 nm)	441.072865 o	ppm	0.215617	0.05	1102673.626760	Y_R 377.433
Fe H (259.940 nm)	440.987000	ppm	0.515700	0.12	633774.000000	Y_R 377.433
K (766.491 nm)	123.825000	ppm	0.090526	0.07	132419.000000	Y_R2 488.368
Li (670.783 nm)	1.079900	ppm	0.002124	0.20	16760.100000	Y_R2 488.368
Mg (279.078 nm)	130.210000	ppm	0.030075	0.02	455781.000000	Y 377.433
Mn (257.610 nm)	8.002590	ppm	0.011553	0.14	2306450.000000	Y 377.433
Mo (202.032 nm)	0.763578	ppm	0.001313	0.17	10112.700000	Y 377.433
Na (589.592 nm)	48.630200	ppm	0.055438	0.11	43296.500000	Y_R2 488.368
Na H (589.593 nm)	42.480150 u	ppm	0.122837	0.29	25098.827256	Y_R4
Ni (231.604 nm)	1.198230	ppm	0.000960	0.08	6493.020000	Y 377.433
P (213.618 nm)	31.823500	ppm	0.017098	0.05	48870.000000	Y 242.219
Pb (220.353 nm)	1.194890	ppm	0.002017	0.17	3956.790000	Y 242.219
S (181.972 nm)	9.605117	ppm	0.018972	0.20	4735.412027	Y 377.433
Sb (206.834 nm)	0.200969	ppm	0.002012	1.00	353.432000	Y 377.433
Se (196.026 nm)	1.579930	ppm	0.000370	0.02	2429.590000	Y 242.219
Si (288.158 nm)	5.298090	ppm	0.020899	0.39	35899.600000	Y 377.433
Sn (189.925 nm)	1.458390	ppm	0.003552	0.24	2409.150000	Y 377.433
Sr (421.552 nm)	1.463660	ppm	0.005646	0.39	235227.572563	Y_R 488.368
Th (288.505 nm)	1.000040	ppm	0.000760	0.08	1718.400000	Y 377.433
Ti (336.122 nm)	15.741000	ppm	0.005986	0.04	2076650.000000	Y 377.433
Tl (190.794 nm)	1.498950	ppm	0.002200	0.15	3530.200000	Y 377.433
U (409.013 nm)	1.374640	ppm	0.006671	0.49	4668.910000	Y 377.433
V (292.401 nm)	1.516350	ppm	0.001399	0.09	81345.100000	Y 377.433
Zn (206.200 nm)	1.729540	ppm	0.001962	0.11	7966.940000	Y 377.433
Zr (343.823 nm)	0.422659	ppm	0.000598	0.14	24625.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.162352	21732.489658	0.000503	0.04
Y 377.433	1.193972	663342.818752	0.000411	0.03
Y_R 377.433	1.251160	60913.700000	0.005419	0.43
Y_R 488.368	1.234370	52789.400000	0.009540	0.77
Y_R2 488.368	1.218647	101782.441196	0.003736	0.31
Y_R4	1.269680	48815.200000	0.000264	0.02

Sample Name: CCVH-5690583

Date: 5/10/2019 6:05:45 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000406	ppm	0.000024	5.95	-306.257000	Y 377.433
Al (394.401 nm)	48.609400 o	ppm	0.007502	0.02	610868.000000	Y 377.433
Al H (396.152 nm)	48.724700	ppm	0.059516	0.12	109459.000000	Y_R 377.433
As (188.980 nm)	0.005954	ppm	0.000855	14.36	3.239210	Y 242.219
B (249.678 nm)	0.006952	ppm	0.000965	13.88	36.074100	Y 242.219
Ba (493.408 nm)	0.001753	ppm	0.000239	13.61	1851.800000	Y_R 488.368
Be (234.861 nm)	0.002475	ppm	0.000123	4.96	-162.715000	Y_R 488.368
Bi (223.061 nm)	0.947532	ppm	0.004819	0.51	2080.930000	Y 377.433
Ca (315.887 nm)	0.014910	ppm	0.000973	6.52	-48.386803	Y_R 377.433
Cd (214.439 nm)	0.000748	ppm	0.000053	7.14	41.595000	Y 377.433
Co (228.615 nm)	0.004119	ppm	0.000031	0.75	79.813000	Y 242.219
Cr (205.560 nm)	0.001516	ppm	0.000784	51.70	1.035480	Y 377.433
Cu (324.754 nm)	0.006187	ppm	0.000894	14.45	1215.730000	Y 377.433
Fe (238.204 nm)	47.664680 o	ppm	0.051047	0.11	119164.497530	Y_R 377.433
Fe H (259.940 nm)	47.576800	ppm	0.016105	0.03	68351.000000	Y_R 377.433
K (766.491 nm)	1.194170	ppm	0.077080	6.45	3437.590000	Y_R2 488.368
Li (670.783 nm)	0.000661 u	ppm	0.004391	> 100.00	-2873.990000	Y_R2 488.368
Mg (279.078 nm)	0.019866	ppm	0.000357	1.80	-141.458000	Y 377.433
Mn (257.610 nm)	0.001588	ppm	0.000100	6.32	434.236000	Y 377.433
Mo (202.032 nm)	0.000831	ppm	0.000318	38.32	22.606900	Y 377.433
Na (589.592 nm)	240.034000 o	ppm	1.149220	0.48	208836.000000	Y_R2 488.368
Na H (589.593 nm)	245.054580	ppm	1.350125	0.55	142508.109477	Y_R4
Ni (231.604 nm)	0.001921	ppm	0.000027	1.41	-0.033902	Y 377.433
P (213.618 nm)	-0.015120 u	ppm	0.001951	12.90	-26.923300	Y 242.219
Pb (220.353 nm)	0.006133	ppm	0.000646	10.53	44.335700	Y 242.219
S (181.972 nm)	4.718236	ppm	0.022774	0.48	2313.190733	Y 377.433
Sb (206.834 nm)	0.003492	ppm	0.000765	21.91	12.053800	Y 377.433
Se (196.026 nm)	0.000695 u	ppm	0.003509	> 100.00	-6.115330	Y 242.219
Si (288.158 nm)	0.034891	ppm	0.004945	14.17	741.476000	Y 377.433
Sn (189.925 nm)	-0.003578 u	ppm	0.000197	5.50	3.208750	Y 377.433
Sr (421.552 nm)	0.000740	ppm	0.000082	11.08	229.391628	Y_R 488.368
Th (288.505 nm)	4.863800	ppm	0.004125	0.08	8592.940000	Y 377.433
Ti (336.122 nm)	0.003038	ppm	0.000413	13.60	-120.099000	Y 377.433
Tl (190.794 nm)	0.000539 u	ppm	0.001709	> 100.00	-3.311330	Y 377.433
U (409.013 nm)	9.685530	ppm	0.006542	0.07	31002.900000	Y 377.433
V (292.401 nm)	-0.000729 u	ppm	0.000054	7.46	-130.484000	Y 377.433
Zn (206.200 nm)	0.002380	ppm	0.000511	21.46	20.589300	Y 377.433
Zr (343.823 nm)	-0.002826 u	ppm	0.000281	9.95	-339.329000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.991358	18535.420585	0.005372	0.54
Y 377.433	1.002601	557021.542609	0.005175	0.52
Y_R 377.433	1.027370	50018.200000	0.004236	0.41
Y_R 488.368	1.021840	43700.300000	0.011981	1.17
Y_R2 488.368	1.018341	85052.726819	0.007884	0.77
Y_R4	1.031230	39647.400000	0.008974	0.87

Sample Name: CCV-5690581

Date: 5/10/2019 6:09:53 PM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.478927	ppm	0.000716	0.15	17318.500000	Y 377.433
Al (394.401 nm)	0.489344	ppm	0.000100	0.02	6298.730000	Y 377.433
Al H (396.152 nm)	0.524688 u	ppm	0.003207	0.61	1206.580000	Y_R 377.433
As (188.980 nm)	0.960495	ppm	0.005460	0.57	1526.290000	Y 242.219
B (249.678 nm)	0.472962	ppm	0.000756	0.16	3633.790000	Y 242.219
Ba (493.408 nm)	0.480761	ppm	0.000780	0.16	52074.600000	Y_R 488.368
Be (234.861 nm)	0.477839	ppm	0.000433	0.09	50692.100000	Y_R 488.368
Bi (223.061 nm)	0.004408	ppm	0.001966	44.60	-0.675349	Y 377.433
Ca (315.887 nm)	4.885137	ppm	0.009876	0.20	3967.383727	Y_R 377.433
Cd (214.439 nm)	0.485046	ppm	0.000527	0.11	18577.000000	Y 377.433
Co (228.615 nm)	0.484417	ppm	0.000682	0.14	12123.000000	Y 242.219
Cr (205.560 nm)	0.485344	ppm	0.001390	0.29	3351.570000	Y 377.433
Cu (324.754 nm)	0.483518	ppm	0.001757	0.36	24242.500000	Y 377.433
Fe (238.204 nm)	2.400954	ppm	0.010777	0.45	6006.485994	Y_R 377.433
Fe H (259.940 nm)	2.438420 u	ppm	0.005891	0.24	3476.590000	Y_R 377.433
K (766.491 nm)	48.050700	ppm	0.127339	0.27	52720.300000	Y_R2 488.368
Li (670.783 nm)	0.983261	ppm	0.004452	0.45	15002.100000	Y_R2 488.368
Mg (279.078 nm)	19.080600	ppm	0.050980	0.27	66892.300000	Y 377.433
Mn (257.610 nm)	0.480484	ppm	0.000867	0.18	138460.000000	Y 377.433
Mo (202.032 nm)	0.483519	ppm	0.000655	0.14	6407.930000	Y 377.433
Na (589.592 nm)	24.987000	ppm	0.109924	0.44	22008.100000	Y_R2 488.368
Na H (589.593 nm)	24.634114 u	ppm	0.000511	0.00	14755.516130	Y_R4
Ni (231.604 nm)	0.481681	ppm	0.002114	0.44	2604.360000	Y 377.433
P (213.618 nm)	0.940943	ppm	0.007301	0.78	1317.470000	Y 242.219
Pb (220.353 nm)	0.966807	ppm	0.002754	0.28	3260.420000	Y 242.219
S (181.972 nm)	0.009252	ppm	0.000934	10.10	13.825015	Y 377.433
Sb (206.834 nm)	0.964567	ppm	0.001215	0.13	1796.710000	Y 377.433
Se (196.026 nm)	0.962154	ppm	0.004844	0.50	1546.750000	Y 242.219
Si (288.158 nm)	4.764140	ppm	0.017834	0.37	32332.900000	Y 377.433
Sn (189.925 nm)	0.969942	ppm	0.003030	0.31	1605.310000	Y 377.433
Sr (421.552 nm)	0.480947	ppm	0.000492	0.10	77340.685272	Y_R 488.368
Th (288.505 nm)	0.009695	ppm	0.000446	4.60	-12.840700	Y 377.433
Ti (336.122 nm)	0.481885	ppm	0.000728	0.15	63072.500000	Y 377.433
Tl (190.794 nm)	0.974472	ppm	0.001846	0.19	2379.500000	Y 377.433
U (409.013 nm)	0.014012	ppm	0.003158	22.54	16.016800	Y 377.433
V (292.401 nm)	0.479813	ppm	0.000583	0.12	25678.700000	Y 377.433
Zn (206.200 nm)	0.485672	ppm	0.001032	0.21	2222.590000	Y 377.433
Zr (343.823 nm)	0.483327	ppm	0.000271	0.06	28184.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.014514	18968.368182	0.000451	0.04
Y 377.433	1.022915	568307.415307	0.001024	0.10
Y_R 377.433	1.029470	50120.700000	0.000265	0.03
Y_R 488.368	1.016130	43456.200000	0.000534	0.05
Y_R2 488.368	1.032618	86245.174428	0.000991	0.10
Y_R4	1.035680	39818.800000	0.002441	0.24

Sample Name: CCB

Date: 5/10/2019 6:13:24 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000385 u	ppm	0.000631	> 100.00	-198.329000	Y 377.433
Al (394.401 nm)	0.002694	ppm	0.000114	4.24	60.127900	Y 377.433
Al H (396.152 nm)	0.118174 Zu	ppm	0.001580	1.34	45.878300 Z	Y_R 377.433
As (188.980 nm)	0.002046	ppm	0.002126	> 100.00	1.430080	Y 242.219
B (249.678 nm)	0.000462 u	ppm	0.000841	> 100.00	15.392200	Y 242.219
Ba (493.408 nm)	-0.001109 u	ppm	0.000256	23.11	1512.210000	Y_R 488.368
Be (234.861 nm)	0.000008 u	ppm	0.000014	> 100.00	0.006417	Y_R 488.368
Bi (223.061 nm)	0.002237	ppm	0.001153	51.55	-5.964000	Y 377.433
Ca (315.887 nm)	0.003242	ppm	0.001110	34.24	-70.557192	Y_R 377.433
Cd (214.439 nm)	0.000038	ppm	0.000031	83.23	-5.348350	Y 377.433
Co (228.615 nm)	0.000260 u	ppm	0.000481	> 100.00	-16.906000	Y 242.219
Cr (205.560 nm)	-0.000084 u	ppm	0.000488	> 100.00	-8.706290	Y 377.433
Cu (324.754 nm)	-0.000539 u	ppm	0.000099	18.39	484.626000	Y 377.433
Fe (238.204 nm)	0.000159 u	ppm	0.001323	> 100.00	4.569201	Y_R 377.433
Fe H (259.940 nm)	0.029484 u	ppm	0.005260	17.84	14.383300	Y_R 377.433
K (766.491 nm)	-0.071740 u	ppm	0.012838	17.90	2106.130000	Y_R2 488.368
Li (670.783 nm)	0.004386	ppm	0.002375	54.16	-2806.230000	Y_R2 488.368
Mg (279.078 nm)	-0.000098 u	ppm	0.001985	> 100.00	15.848200	Y 377.433
Mn (257.610 nm)	0.000113	ppm	0.000032	28.45	9.129040	Y 377.433
Mo (202.032 nm)	-0.000018 u	ppm	0.000276	> 100.00	11.376000	Y 377.433
Na (589.592 nm)	0.038129	ppm	0.021033	55.16	204.200000	Y_R2 488.368
Na H (589.593 nm)	-0.067338 u	ppm	0.020686	30.72	438.903240	Y_R4
Ni (231.604 nm)	-0.000286 u	ppm	0.001035	> 100.00	-12.009100	Y 377.433
P (213.618 nm)	-0.000974 u	ppm	0.000766	78.60	2.143780	Y 242.219
Pb (220.353 nm)	-0.000189 u	ppm	0.000920	> 100.00	7.379970	Y 242.219
S (181.972 nm)	-0.000056 u	ppm	0.002815	> 100.00	7.448087	Y 377.433
Sb (206.834 nm)	-0.000491 u	ppm	0.002911	> 100.00	1.361110	Y 377.433
Se (196.026 nm)	0.001688	ppm	0.000052	3.08	8.286630	Y 242.219
Si (288.158 nm)	-0.001877 u	ppm	0.001504	80.15	495.870000	Y 377.433
Sn (189.925 nm)	-0.003760 u	ppm	0.001286	34.20	2.908740	Y 377.433
Sr (421.552 nm)	-0.000044 u	ppm	0.000052	> 100.00	95.959306	Y_R 488.368
Th (288.505 nm)	-0.002114 u	ppm	0.006549	> 100.00	15.666800	Y 377.433
Ti (336.122 nm)	0.000408	ppm	0.000080	19.54	-467.046000	Y 377.433
Tl (190.794 nm)	0.002249	ppm	0.001095	48.69	5.617420	Y 377.433
U (409.013 nm)	0.004697	ppm	0.002165	46.10	45.041200	Y 377.433
V (292.401 nm)	-0.000068 u	ppm	0.000030	44.09	-98.297400	Y 377.433
Zn (206.200 nm)	0.000029 u	ppm	0.000447	> 100.00	3.218940	Y 377.433
Zr (343.823 nm)	0.000547	ppm	0.000112	20.44	-141.424000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.050916	19648.980451	0.001233	0.12
Y 377.433	1.056064	586724.331585	0.001403	0.13
Y_R 377.433	1.058730	51544.800000	0.006454	0.61
Y_R 488.368	1.042270	44573.900000	0.003780	0.36
Y_R2 488.368	1.042316	87055.116032	0.001934	0.19
Y_R4	1.053350	40497.800000	0.003321	0.32

Sample Name: CCVL-5695588

Date: 5/10/2019 6:16:37 PM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009156	ppm	0.000030	0.33	149.723000	Y 377.433
Al (394.401 nm)	0.101994	ppm	0.002145	2.10	1311.950000	Y 377.433
Al H (396.152 nm)	0.205706 u	ppm	0.005539	2.69	248.285000	Y_R 377.433
As (188.980 nm)	0.015867	ppm	0.000164	1.03	23.410900	Y 242.219
B (249.678 nm)	0.094404	ppm	0.000192	0.20	735.030000	Y 242.219
Ba (493.408 nm)	0.009171	ppm	0.000242	2.63	2590.910000	Y_R 488.368
Be (234.861 nm)	0.000952	ppm	0.000074	7.79	99.420800	Y_R 488.368
Bi (223.061 nm)	0.087428	ppm	0.004993	5.71	181.399000	Y 377.433
Ca (315.887 nm)	0.192409	ppm	0.005871	3.05	85.924732	Y_R 377.433
Cd (214.439 nm)	0.005136	ppm	0.000069	1.34	190.017000	Y 377.433
Co (228.615 nm)	0.010185	ppm	0.000452	4.44	231.968000	Y 242.219
Cr (205.560 nm)	0.009996	ppm	0.000014	0.14	60.969700	Y 377.433
Cu (324.754 nm)	0.014503	ppm	0.000455	3.14	1223.580000	Y 377.433
Fe (238.204 nm)	0.096039	ppm	0.001481	1.54	244.266303	Y_R 377.433
Fe H (259.940 nm)	0.129887 u	ppm	0.001640	1.26	158.686000	Y_R 377.433
K (766.491 nm)	2.894740	ppm	0.058403	2.02	5226.220000	Y_R2 488.368
Li (670.783 nm)	0.022989	ppm	0.001415	6.15	-2467.790000	Y_R2 488.368
Mg (279.078 nm)	0.197497	ppm	0.001682	0.85	707.624000	Y 377.433
Mn (257.610 nm)	0.010253	ppm	0.000002	0.02	2931.580000	Y 377.433
Mo (202.032 nm)	0.019145	ppm	0.000189	0.99	264.881000	Y 377.433
Na (589.592 nm)	1.092780	ppm	0.042153	3.86	1123.570000	Y_R2 488.368
Na H (589.593 nm)	0.725846 u	ppm	0.039727	5.47	898.621513	Y_R4
Ni (231.604 nm)	0.041069	ppm	0.000130	0.32	212.404000	Y 377.433
P (213.618 nm)	2.662420	ppm	0.030894	1.16	4112.260000	Y 242.219
Pb (220.353 nm)	0.008668	ppm	0.001110	12.80	37.207000	Y 242.219
S (181.972 nm)	0.086681	ppm	0.004866	5.61	49.873211	Y 377.433
Sb (206.834 nm)	0.016207	ppm	0.001463	9.03	32.317900	Y 377.433
Se (196.026 nm)	0.019475	ppm	0.002644	13.58	36.767300	Y 242.219
Si (288.158 nm)	0.490406	ppm	0.005634	1.15	3784.320000	Y 377.433
Sn (189.925 nm)	0.095671	ppm	0.000636	0.66	166.541000	Y 377.433
Sr (421.552 nm)	0.008607	ppm	0.000191	2.22	1485.267621	Y_R 488.368
Th (288.505 nm)	0.014629	ppm	0.004979	34.03	44.332100	Y 377.433
Ti (336.122 nm)	0.009999	ppm	0.000128	1.28	798.941000	Y 377.433
Tl (190.794 nm)	0.014605	ppm	0.000586	4.01	35.708400	Y 377.433
U (409.013 nm)	0.067438	ppm	0.000098	0.15	244.314000	Y 377.433
V (292.401 nm)	0.009795	ppm	0.000231	2.36	429.968000	Y 377.433
Zn (206.200 nm)	0.021102	ppm	0.000399	1.89	99.521200	Y 377.433
Zr (343.823 nm)	0.010249 Q	ppm	0.000035	0.34	427.797000 Q	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.054906	19723.582246	0.000772	0.07
Y 377.433	1.061921	589978.515643	0.002087	0.20
Y_R 377.433	1.050410	51139.700000	0.001623	0.15
Y_R 488.368	1.039660	44462.400000	0.003195	0.31
Y_R2 488.368	1.045341	87307.803847	0.002212	0.21
Y_R4	1.049660	40356.100000	0.000815	0.08

Sample Name: 280-122205-A-3-Ppds

Date: 5/10/2019 6:20:02 PM

Rack:Tube: 1:59

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.042933	ppm	0.000017	0.04	1144.660000	Y 377.433
Al (394.401 nm)	216.286000 o	ppm	0.054779	0.03	2717570.000000	Y 377.433
Al H (396.152 nm)	214.677000	ppm	0.676310	0.32	483236.000000	Y_R 377.433
As (188.980 nm)	0.273921	ppm	0.003365	1.23	409.785000	Y 242.219
B (249.678 nm)	0.218396	ppm	0.001695	0.78	1453.990000	Y 242.219
Ba (493.408 nm)	1.963850	ppm	0.001998	0.10	207999.000000	Y_R 488.368
Be (234.861 nm)	0.064388	ppm	0.000024	0.04	3454.900000	Y_R 488.368
Bi (223.061 nm)	-0.024694 u	ppm	0.001965	7.96	-0.320708	Y 377.433
Ca (315.887 nm)	108.486300	ppm	0.143922	0.13	89710.979752	Y_R 377.433
Cd (214.439 nm)	0.044301	ppm	0.000091	0.21	1847.320000	Y 377.433
Co (228.615 nm)	0.171633	ppm	0.000296	0.17	4794.500000	Y 242.219
Cr (205.560 nm)	2.190910	ppm	0.002651	0.12	15167.600000	Y 377.433
Cu (324.754 nm)	0.317462	ppm	0.000108	0.03	16000.400000	Y 377.433
Fe (238.204 nm)	380.365147 o	ppm	0.249322	0.07	950906.081105	Y_R 377.433
Fe H (259.940 nm)	382.325000	ppm	0.030789	0.01	549463.000000	Y_R 377.433
K (766.491 nm)	88.456300	ppm	0.169355	0.19	95218.100000	Y_R2 488.368
Li (670.783 nm)	0.316184	ppm	0.000926	0.29	2866.200000	Y_R2 488.368
Mg (279.078 nm)	94.980400	ppm	0.134100	0.14	332400.000000	Y 377.433
Mn (257.610 nm)	6.778960	ppm	0.003396	0.05	1953780.000000	Y 377.433
Mo (202.032 nm)	0.054241	ppm	0.000198	0.36	729.156000	Y 377.433
Na (589.592 nm)	22.055600	ppm	0.058047	0.26	19815.200000	Y_R2 488.368
Na H (589.593 nm)	18.852952 u	ppm	0.011647	0.06	11404.836350	Y_R4
Ni (231.604 nm)	0.444120	ppm	0.000148	0.03	2399.580000	Y 377.433
P (213.618 nm)	17.421600	ppm	0.046167	0.26	26842.100000	Y 242.219
Pb (220.353 nm)	0.481774	ppm	0.001429	0.30	1574.200000	Y 242.219
S (181.972 nm)	2.217757	ppm	0.015518	0.70	1119.105322	Y 377.433
Sb (206.834 nm)	0.090669	ppm	0.001117	1.23	164.249000	Y 377.433
Se (196.026 nm)	0.174672	ppm	0.002439	1.40	193.178000	Y 242.219
Si (288.158 nm)	6.550340	ppm	0.057529	0.88	44264.700000	Y 377.433
Sn (189.925 nm)	0.101304	ppm	0.001177	1.16	175.812000	Y 377.433
Sr (421.552 nm)	0.594445	ppm	0.001252	0.21	95627.260269	Y_R 488.368
Th (288.505 nm)	0.372655	ppm	0.003153	0.85	699.565000	Y 377.433
Ti (336.122 nm)	11.189600	ppm	0.017306	0.15	1476040.000000	Y 377.433
Tl (190.794 nm)	0.177412	ppm	0.002301	1.30	330.228000	Y 377.433
U (409.013 nm)	0.206574	ppm	0.006918	3.35	932.841000	Y 377.433
V (292.401 nm)	0.643573	ppm	0.000746	0.12	34345.200000	Y 377.433
Zn (206.200 nm)	1.409190	ppm	0.002167	0.15	6494.790000	Y 377.433
Zr (343.823 nm)	0.154251	ppm	0.000129	0.08	8876.880000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.146756	21440.887184	0.003287	0.29
Y 377.433	1.182899	657190.873592	0.002711	0.23
Y_R 377.433	1.226800	59727.600000	0.000114	0.01
Y_R 488.368	1.208130	51667.200000	0.001031	0.09
Y_R2 488.368	1.214355	101424.010676	0.001532	0.13
Y_R4	1.244020	47828.800000	0.004632	0.37

Sample Name: 280-122205-A-3-S DU

Date: 5/10/2019 6:23:49 PM

Rack:Tube: 1:60

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000183	ppm	0.000060	32.69	-435.539000	Y 377.433
Al (394.401 nm)	223.761000 o	ppm	0.071777	0.03	2811470.000000	Y 377.433
Al H (396.152 nm)	221.955000	ppm	0.296147	0.13	499606.000000	Y_R 377.433
As (188.980 nm)	0.110674	ppm	0.002666	2.41	148.869000	Y 242.219
B (249.678 nm)	0.135728	ppm	0.000262	0.19	805.127000	Y 242.219
Ba (493.408 nm)	1.920580	ppm	0.002870	0.15	203480.000000	Y_R 488.368
Be (234.861 nm)	0.025031	ppm	0.000009	0.04	-949.495000	Y_R 488.368
Bi (223.061 nm)	-0.030738 u	ppm	0.004749	15.45	-9.291050	Y 377.433
Ca (315.887 nm)	95.637717	ppm	0.293002	0.31	79085.813436	Y_R 377.433
Cd (214.439 nm)	0.004682	ppm	0.000203	4.34	340.003000	Y 377.433
Co (228.615 nm)	0.136367	ppm	0.000062	0.05	3952.290000	Y 242.219
Cr (205.560 nm)	2.285700	ppm	0.002828	0.12	15824.500000	Y 377.433
Cu (324.754 nm)	0.288411	ppm	0.000532	0.18	14566.100000	Y 377.433
Fe (238.204 nm)	405.994636 o	ppm	0.265844	0.07	1014979.065493	Y_R 377.433
Fe H (259.940 nm)	407.409000	ppm	1.107880	0.27	585515.000000	Y_R 377.433
K (766.491 nm)	74.711200	ppm	0.085147	0.11	80761.400000	Y_R2 488.368
Li (670.783 nm)	0.238313	ppm	0.004074	1.71	1449.520000	Y_R2 488.368
Mg (279.078 nm)	81.489000	ppm	0.112792	0.14	285083.000000	Y 377.433
Mn (257.610 nm)	6.828160	ppm	0.002982	0.04	1967960.000000	Y 377.433
Mo (202.032 nm)	0.013838	ppm	0.000388	2.81	194.675000	Y 377.433
Na (589.592 nm)	5.099180	ppm	0.007051	0.14	5064.630000	Y_R2 488.368
Na H (589.593 nm)	2.405355 u	ppm	0.009148	0.38	1872.041302	Y_R4
Ni (231.604 nm)	0.422373	ppm	0.001653	0.39	2281.420000	Y 377.433
P (213.618 nm)	16.262300	ppm	0.148941	0.92	25058.800000	Y 242.219
Pb (220.353 nm)	0.407491	ppm	0.002836	0.70	1320.540000	Y 242.219
S (181.972 nm)	2.077950	ppm	0.020440	0.98	1050.242718	Y 377.433
Sb (206.834 nm)	0.006128	ppm	0.002082	33.98	5.878190	Y 377.433
Se (196.026 nm)	0.007987	ppm	0.002072	25.95	-80.596100	Y 242.219
Si (288.158 nm)	2.939230	ppm	0.031723	1.08	20142.500000	Y 377.433
Sn (189.925 nm)	0.020917	ppm	0.001887	9.02	43.519900	Y 377.433
Sr (421.552 nm)	0.567997	ppm	0.001078	0.19	91383.771999	Y_R 488.368
Th (288.505 nm)	0.199305	ppm	0.000566	0.28	391.195000	Y 377.433
Ti (336.122 nm)	12.057200	ppm	0.012669	0.11	1590460.000000	Y 377.433
Tl (190.794 nm)	0.025860	ppm	0.002397	9.27	-47.213200	Y 377.433
U (409.013 nm)	-0.209836 u	ppm	0.005391	2.57	-371.964000	Y 377.433
V (292.401 nm)	0.657443	ppm	0.000607	0.09	35099.800000	Y 377.433
Zn (206.200 nm)	1.308320	ppm	0.005755	0.44	6037.440000	Y 377.433
Zr (343.823 nm)	0.114266	ppm	0.000135	0.12	6530.850000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.142008	21352.121346	0.000330	0.03
Y 377.433	1.176208	653473.265815	0.001562	0.13
Y_R 377.433	1.217830	59291.100000	0.014145	1.16
Y_R 488.368	1.199060	51279.100000	0.017187	1.43
Y_R2 488.368	1.220468	101934.575141	0.000746	0.06
Y_R4	1.258620	48390.000000	0.004992	0.40

Sample Name: 280-122205-A-3-T TRL

Date: 5/10/2019 6:27:44 PM

Rack:Tube: 1:61

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000809	ppm	0.000230	28.45	-420.801000	Y 377.433
Al (394.401 nm)	225.869000 o	ppm	0.321470	0.14	2837950.000000	Y 377.433
Al H (396.152 nm)	223.677000	ppm	0.121371	0.05	503485.000000	Y_R 377.433
As (188.980 nm)	0.115317	ppm	0.002467	2.14	156.003000	Y 242.219
B (249.678 nm)	0.140567	ppm	0.000480	0.34	839.016000	Y 242.219
Ba (493.408 nm)	1.912340	ppm	0.000865	0.05	202619.000000	Y_R 488.368
Be (234.861 nm)	0.025953	ppm	0.000407	1.57	-898.238000	Y_R 488.368
Bi (223.061 nm)	-0.030958 u	ppm	0.000071	0.23	-8.883800	Y 377.433
Ca (315.887 nm)	95.179245	ppm	0.078795	0.08	78707.046692	Y_R 377.433
Cd (214.439 nm)	0.005625	ppm	0.000073	1.29	378.329000	Y 377.433
Co (228.615 nm)	0.137310	ppm	0.000411	0.30	3988.400000	Y 242.219
Cr (205.560 nm)	2.285120	ppm	0.001999	0.09	15820.500000	Y 377.433
Cu (324.754 nm)	0.289837	ppm	0.001120	0.39	14634.400000	Y 377.433
Fe (238.204 nm)	411.124489 o	ppm	0.667166	0.16	1027803.549723	Y_R 377.433
Fe H (259.940 nm)	413.445000	ppm	0.938586	0.23	594190.000000	Y_R 377.433
K (766.491 nm)	74.864100	ppm	0.261732	0.35	80922.100000	Y_R2 488.368
Li (670.783 nm)	0.239036	ppm	0.002203	0.92	1462.670000	Y_R2 488.368
Mg (279.078 nm)	81.206700	ppm	0.167037	0.21	284086.000000	Y 377.433
Mn (257.610 nm)	6.864770	ppm	0.011287	0.16	1978520.000000	Y 377.433
Mo (202.032 nm)	0.014499	ppm	0.000127	0.87	203.413000	Y 377.433
Na (589.592 nm)	5.236940	ppm	0.048474	0.93	5182.350000	Y_R2 488.368
Na H (589.593 nm)	2.465359 u	ppm	0.016855	0.68	1906.818657	Y_R4
Ni (231.604 nm)	0.421765	ppm	0.000281	0.07	2278.120000	Y 377.433
P (213.618 nm)	16.136100	ppm	0.224321	1.39	24863.600000	Y 242.219
Pb (220.353 nm)	0.411241	ppm	0.001709	0.42	1332.510000	Y 242.219
S (181.972 nm)	2.089559	ppm	0.004869	0.23	1056.018044	Y 377.433
Sb (206.834 nm)	0.005470	ppm	0.000270	4.93	3.782710	Y 377.433
Se (196.026 nm)	0.008844	ppm	0.001058	11.96	-80.574200	Y 242.219
Si (288.158 nm)	2.723750	ppm	0.033034	1.21	18703.100000	Y 377.433
Sn (189.925 nm)	0.020561	ppm	0.001172	5.70	42.934300	Y 377.433
Sr (421.552 nm)	0.570338	ppm	0.000613	0.11	91760.573615	Y_R 488.368
Th (288.505 nm)	0.209318	ppm	0.006352	3.03	406.704000	Y 377.433
Ti (336.122 nm)	12.323100	ppm	0.000038	0.00	1625540.000000	Y 377.433
Tl (190.794 nm)	0.026579	ppm	0.000881	3.31	-47.428200	Y 377.433
U (409.013 nm)	-0.203385 u	ppm	0.004600	2.26	-347.991000	Y 377.433
V (292.401 nm)	0.678681	ppm	0.001685	0.25	36260.000000	Y 377.433
Zn (206.200 nm)	1.291840	ppm	0.006545	0.51	5962.840000	Y 377.433
Zr (343.823 nm)	0.117876	ppm	0.000093	0.08	6742.680000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.155645	21607.088254	0.003001	0.26
Y 377.433	1.191536	661989.589101	0.004381	0.37
Y_R 377.433	1.234940	60123.800000	0.004765	0.39
Y_R 488.368	1.217000	52046.400000	0.003276	0.27
Y_R2 488.368	1.205185	100658.081655	0.002338	0.19
Y_R4	1.260390	48458.100000	0.002417	0.19

Sample Name: 280-122205-A-4-D

Date: 5/10/2019 6:31:33 PM

Rack:Tube: 1:62

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000567	ppm	0.000479	84.48	-357.693000	Y 377.433
Al (394.401 nm)	264.502000 o	ppm	0.102843	0.04	3323300.000000	Y 377.433
Al H (396.152 nm)	261.703000	ppm	1.360310	0.52	589032.000000	Y_R 377.433
As (188.980 nm)	0.117255	ppm	0.000181	0.15	158.259000	Y 242.219
B (249.678 nm)	0.142018	ppm	0.001454	1.02	884.332000	Y 242.219
Ba (493.408 nm)	2.012740	ppm	0.001913	0.10	213108.000000	Y_R 488.368
Be (234.861 nm)	0.024645	ppm	0.000390	1.58	-536.949000	Y_R 488.368
Bi (223.061 nm)	-0.020479 u	ppm	0.000316	1.55	4.602010	Y 377.433
Ca (315.887 nm)	66.066505	ppm	0.084762	0.13	54637.748960	Y_R 377.433
Cd (214.439 nm)	0.003313	ppm	0.000181	5.48	266.518000	Y 377.433
Co (228.615 nm)	0.118675	ppm	0.000080	0.07	3481.510000	Y 242.219
Cr (205.560 nm)	0.874791	ppm	0.000024	0.00	6046.250000	Y 377.433
Cu (324.754 nm)	0.249472	ppm	0.000055	0.02	12689.700000	Y 377.433
Fe (238.204 nm)	354.851187 o	ppm	0.235377	0.07	887121.915391	Y_R 377.433
Fe H (259.940 nm)	357.159000	ppm	0.758417	0.21	513293.000000	Y_R 377.433
K (766.491 nm)	82.456400	ppm	0.124926	0.15	88907.600000	Y_R2 488.368
Li (670.783 nm)	0.284981	ppm	0.001026	0.36	2298.520000	Y_R2 488.368
Mg (279.078 nm)	72.038800	ppm	0.052539	0.07	252030.000000	Y 377.433
Mn (257.610 nm)	6.721040	ppm	0.002534	0.04	1937090.000000	Y 377.433
Mo (202.032 nm)	0.009651	ppm	0.000476	4.93	139.284000	Y 377.433
Na (589.592 nm)	3.824040	ppm	0.040966	1.07	3978.230000	Y_R2 488.368
Na H (589.593 nm)	1.009928 u	ppm	0.003640	0.36	1063.271214	Y_R4
Ni (231.604 nm)	0.307730	ppm	0.001494	0.49	1659.350000	Y 377.433
P (213.618 nm)	10.377700	ppm	0.034680	0.33	15977.300000	Y 242.219
Pb (220.353 nm)	0.509456	ppm	0.001337	0.26	1660.240000	Y 242.219
S (181.972 nm)	0.994131	ppm	0.007190	0.72	518.811696	Y 377.433
Sb (206.834 nm)	0.009866	ppm	0.000792	8.03	-1.290220	Y 377.433
Se (196.026 nm)	0.009680	ppm	0.005066	52.34	-64.348000	Y 242.219
Si (288.158 nm)	8.658190	ppm	0.028818	0.33	58345.200000	Y 377.433
Sn (189.925 nm)	0.020191	ppm	0.000766	3.79	42.325200	Y 377.433
Sr (421.552 nm)	0.431942	ppm	0.000123	0.03	69526.131115	Y_R 488.368
Th (288.505 nm)	0.219559	ppm	0.001950	0.89	444.682000	Y 377.433
Ti (336.122 nm)	11.457000	ppm	0.001735	0.02	1511190.000000	Y 377.433
Tl (190.794 nm)	0.019512	ppm	0.001484	7.60	-51.023400	Y 377.433
U (409.013 nm)	-0.185721 u	ppm	0.006768	3.64	-332.743000	Y 377.433
V (292.401 nm)	0.521043	ppm	0.000161	0.03	28231.700000	Y 377.433
Zn (206.200 nm)	0.909416	ppm	0.002378	0.26	4207.660000	Y 377.433
Zr (343.823 nm)	0.149740	ppm	0.000144	0.10	8612.230000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.176737	22001.446758	0.002774	0.24
Y 377.433	1.208418	671368.862485	0.001508	0.12
Y_R 377.433	1.248230	60770.700000	0.001469	0.12
Y_R 488.368	1.228810	52551.400000	0.000458	0.04
Y_R2 488.368	1.229290	102671.367274	0.010029	0.82
Y_R4	1.265910	48670.100000	0.005888	0.47

Sample Name: 280-122205-A-5-D

Date: 5/10/2019 6:35:19 PM

Rack:Tube: 1:63

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000337	ppm	0.000102	30.38	-349.008000	Y 377.433
Al (394.401 nm)	241.125000 o	ppm	0.438266	0.18	3029590.000000	Y 377.433
Al H (396.152 nm)	238.230000	ppm	0.705416	0.30	536189.000000	Y_R 377.433
As (188.980 nm)	0.109525	ppm	0.001566	1.43	147.888000	Y 242.219
B (249.678 nm)	0.132165	ppm	0.000219	0.17	818.650000	Y 242.219
Ba (493.408 nm)	1.864590	ppm	0.004352	0.23	197550.000000	Y_R 488.368
Be (234.861 nm)	0.023250	ppm	0.000199	0.86	-541.645000	Y_R 488.368
Bi (223.061 nm)	-0.024519 u	ppm	0.001748	7.13	-7.040710	Y 377.433
Ca (315.887 nm)	61.380149	ppm	0.065537	0.11	50755.649346	Y_R 377.433
Cd (214.439 nm)	0.003449	ppm	0.000088	2.55	265.081000	Y 377.433
Co (228.615 nm)	0.114041	ppm	0.000148	0.13	3303.640000	Y 242.219
Cr (205.560 nm)	1.930620	ppm	0.002447	0.13	13363.700000	Y 377.433
Cu (324.754 nm)	0.243348	ppm	0.000685	0.28	12391.200000	Y 377.433
Fe (238.204 nm)	337.632779 o	ppm	1.082996	0.32	844076.392201	Y_R 377.433
Fe H (259.940 nm)	339.272000	ppm	0.473239	0.14	487586.000000	Y_R 377.433
K (766.491 nm)	76.053400	ppm	0.015706	0.02	82173.100000	Y_R2 488.368
Li (670.783 nm)	0.259385	ppm	0.002645	1.02	1832.870000	Y_R2 488.368
Mg (279.078 nm)	66.398200	ppm	0.120239	0.18	232281.000000	Y 377.433
Mn (257.610 nm)	6.287900	ppm	0.010870	0.17	1812250.000000	Y 377.433
Mo (202.032 nm)	0.010482	ppm	0.000715	6.82	150.280000	Y 377.433
Na (589.592 nm)	3.705530	ppm	0.042760	1.15	3839.670000	Y_R2 488.368
Na H (589.593 nm)	0.978780 u	ppm	0.005904	0.60	1045.218115	Y_R4
Ni (231.604 nm)	0.299324	ppm	0.000842	0.28	1613.730000	Y 377.433
P (213.618 nm)	11.192600	ppm	0.023520	0.21	17237.300000	Y 242.219
Pb (220.353 nm)	0.467414	ppm	0.002076	0.44	1522.780000	Y 242.219
S (181.972 nm)	1.052884	ppm	0.010030	0.95	545.871979	Y 377.433
Sb (206.834 nm)	0.005591	ppm	0.000794	14.20	4.744300	Y 377.433
Se (196.026 nm)	0.007750	ppm	0.000040	0.52	-63.732000	Y 242.219
Si (288.158 nm)	6.287270	ppm	0.015178	0.24	42507.400000	Y 377.433
Sn (189.925 nm)	0.018631	ppm	0.003472	18.63	39.757900	Y 377.433
Sr (421.552 nm)	0.412107	ppm	0.000957	0.23	66338.228318	Y_R 488.368
Th (288.505 nm)	0.220702	ppm	0.004316	1.96	444.675000	Y 377.433
Ti (336.122 nm)	10.126000	ppm	0.014540	0.14	1335570.000000	Y 377.433
Tl (190.794 nm)	0.023106	ppm	0.000578	2.50	-33.856700	Y 377.433
U (409.013 nm)	-0.185157 u	ppm	0.010149	5.48	-340.994000	Y 377.433
V (292.401 nm)	0.481215	ppm	0.000749	0.16	25617.500000	Y 377.433
Zn (206.200 nm)	0.880994	ppm	0.001090	0.12	4075.550000	Y 377.433
Zr (343.823 nm)	0.140951	ppm	0.000011	0.01	8096.530000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.161268	21712.230940	0.000583	0.05
Y 377.433	1.194018	663368.204970	0.003655	0.31
Y_R 377.433	1.235550	60153.600000	0.000220	0.02
Y_R 488.368	1.218370	52105.200000	0.002919	0.24
Y_R2 488.368	1.210292	101084.601572	0.003279	0.27
Y_R4	1.237840	47591.000000	0.007435	0.60

Sample Name: 280-122205-A-6-D

Date: 5/10/2019 6:39:05 PM

Rack:Tube: 1:64

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000277	ppm	0.000060	21.63	-362.653000	Y 377.433
Al (394.401 nm)	259.091000 o	ppm	0.388571	0.15	3255310.000000	Y 377.433
Al H (396.152 nm)	256.124000	ppm	0.667901	0.26	576476.000000	Y_R 377.433
As (188.980 nm)	0.114640	ppm	0.000445	0.39	154.343000	Y 242.219
B (249.678 nm)	0.147619	ppm	0.001043	0.71	925.489000	Y 242.219
Ba (493.408 nm)	1.981350	ppm	0.001239	0.06	209816.000000	Y_R 488.368
Be (234.861 nm)	0.024767	ppm	0.000127	0.51	-549.614000	Y_R 488.368
Bi (223.061 nm)	-0.021451 u	ppm	0.004323	20.15	2.954350	Y 377.433
Ca (315.887 nm)	65.324449	ppm	0.003739	0.01	54022.666335	Y_R 377.433
Cd (214.439 nm)	0.003848	ppm	0.000051	1.33	288.184000	Y 377.433
Co (228.615 nm)	0.118314	ppm	0.000340	0.29	3455.250000	Y 242.219
Cr (205.560 nm)	1.137570	ppm	0.001566	0.14	7867.440000	Y 377.433
Cu (324.754 nm)	0.248182	ppm	0.000282	0.11	12629.000000	Y 377.433
Fe (238.204 nm)	356.791283 o	ppm	0.011971	0.00	891972.100860	Y_R 377.433
Fe H (259.940 nm)	358.239000	ppm	0.152383	0.04	514845.000000	Y_R 377.433
K (766.491 nm)	81.842300	ppm	0.013179	0.02	88261.700000	Y_R2 488.368
Li (670.783 nm)	0.274793	ppm	0.000764	0.28	2113.180000	Y_R2 488.368
Mg (279.078 nm)	71.894100	ppm	0.091895	0.13	251518.000000	Y 377.433
Mn (257.610 nm)	6.862180	ppm	0.005426	0.08	1977770.000000	Y 377.433
Mo (202.032 nm)	0.007701	ppm	0.000216	2.81	113.485000	Y 377.433
Na (589.592 nm)	4.007550	ppm	0.042556	1.06	4130.230000	Y_R2 488.368
Na H (589.593 nm)	1.117159 u	ppm	0.024789	2.22	1125.420670	Y_R4
Ni (231.604 nm)	0.322226	ppm	0.001906	0.59	1738.000000	Y 377.433
P (213.618 nm)	10.550700	ppm	0.052340	0.50	16244.800000	Y 242.219
Pb (220.353 nm)	1.130830	ppm	0.001872	0.17	3753.450000	Y 242.219
S (181.972 nm)	0.974011	ppm	0.006573	0.67	509.392067	Y 377.433
Sb (206.834 nm)	0.008912	ppm	0.003820	42.87	1.237390	Y 377.433
Se (196.026 nm)	0.006535	ppm	0.002969	45.44	-69.950000	Y 242.219
Si (288.158 nm)	7.702410	ppm	0.131810	1.71	51960.600000	Y 377.433
Sn (189.925 nm)	0.019972	ppm	0.001663	8.33	41.964100	Y 377.433
Sr (421.552 nm)	0.435270	ppm	0.000203	0.05	70061.083010	Y_R 488.368
Th (288.505 nm)	0.218421	ppm	0.000724	0.33	447.039000	Y 377.433
Ti (336.122 nm)	11.082000	ppm	0.008404	0.08	1461700.000000	Y 377.433
Tl (190.794 nm)	0.018895	ppm	0.003607	19.09	-51.077500	Y 377.433
U (409.013 nm)	-0.184863 u	ppm	0.000884	0.48	-327.501000	Y 377.433
V (292.401 nm)	0.507660	ppm	0.000796	0.16	27392.500000	Y 377.433
Zn (206.200 nm)	0.899051	ppm	0.002240	0.25	4160.700000	Y 377.433
Zr (343.823 nm)	0.148190	ppm	0.000257	0.17	8521.270000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.168091	21839.785106	0.000543	0.05
Y 377.433	1.200990	667241.694464	0.003171	0.26
Y_R 377.433	1.245930	60658.800000	0.006030	0.48
Y_R 488.368	1.229910	52598.500000	0.004377	0.36
Y_R2 488.368	1.225826	102382.076607	0.002647	0.22
Y_R4	1.257990	48365.600000	0.001590	0.13

Sample Name: 280-122205-A-7-D

Date: 5/10/2019 6:42:58 PM

Rack:Tube: 1:65

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000215 u	ppm	0.000359	> 100.00	-364.133000	Y 377.433
Al (394.401 nm)	304.436000 o	ppm	0.394958	0.13	3825020.000000	Y 377.433
Al H (396.152 nm)	303.928000	ppm	0.315241	0.10	684079.000000	Y_R 377.433
As (188.980 nm)	0.129287	ppm	0.001445	1.12	174.430000	Y 242.219
B (249.678 nm)	0.164255	ppm	0.000809	0.49	1048.350000	Y 242.219
Ba (493.408 nm)	2.249750	ppm	0.002094	0.09	237985.000000	Y_R 488.368
Be (234.861 nm)	0.026964	ppm	0.000048	0.18	-383.419000	Y_R 488.368
Bi (223.061 nm)	-0.022914 u	ppm	0.005598	24.43	1.037480	Y 377.433
Ca (315.887 nm)	52.765338	ppm	0.012224	0.02	43647.308553	Y_R 377.433
Cd (214.439 nm)	0.002847	ppm	0.000262	9.22	252.972000	Y 377.433
Co (228.615 nm)	0.123830	ppm	0.000042	0.03	3610.180000	Y 242.219
Cr (205.560 nm)	0.352607	ppm	0.000712	0.20	2426.420000	Y 377.433
Cu (324.754 nm)	0.258970	ppm	0.000860	0.33	13177.700000	Y 377.433
Fe (238.204 nm)	364.185830 o	ppm	0.488429	0.13	910458.255161	Y_R 377.433
Fe H (259.940 nm)	366.383000	ppm	1.133070	0.31	526550.000000	Y_R 377.433
K (766.491 nm)	90.067200	ppm	0.161093	0.18	96912.500000	Y_R2 488.368
Li (670.783 nm)	0.333884	ppm	0.001976	0.59	3188.200000	Y_R2 488.368
Mg (279.078 nm)	77.015200	ppm	0.135800	0.18	269458.000000	Y 377.433
Mn (257.610 nm)	7.327190	ppm	0.010322	0.14	2111790.000000	Y 377.433
Mo (202.032 nm)	0.007086	ppm	0.000354	5.00	105.347000	Y 377.433
Na (589.592 nm)	3.619440	ppm	0.000363	0.01	3857.170000	Y_R2 488.368
Na H (589.593 nm)	0.498880 u	ppm	0.017286	3.46	767.075095	Y_R4
Ni (231.604 nm)	0.299438	ppm	0.000503	0.17	1614.350000	Y 377.433
P (213.618 nm)	7.479560	ppm	0.036664	0.49	11497.200000	Y 242.219
Pb (220.353 nm)	0.211678	ppm	0.000297	0.14	651.108000	Y 242.219
S (181.972 nm)	0.593026	ppm	0.007601	1.28	324.177307	Y 377.433
Sb (206.834 nm)	0.004889	ppm	0.000403	8.23	-14.755300	Y 377.433
Se (196.026 nm)	0.008918	ppm	0.004179	46.86	-67.471500	Y 242.219
Si (288.158 nm)	11.531000	ppm	0.063453	0.55	77535.400000	Y 377.433
Sn (189.925 nm)	0.016233	ppm	0.001397	8.60	35.811300	Y 377.433
Sr (421.552 nm)	0.415933	ppm	0.000271	0.07	66956.880545	Y_R 488.368
Th (288.505 nm)	0.242241	ppm	0.003790	1.56	496.865000	Y 377.433
Ti (336.122 nm)	11.438700	ppm	0.021910	0.19	1508720.000000	Y 377.433
Tl (190.794 nm)	0.019650	ppm	0.000090	0.46	-50.243700	Y 377.433
U (409.013 nm)	-0.199202 u	ppm	0.005817	2.92	-368.451000	Y 377.433
V (292.401 nm)	0.510538	ppm	0.000548	0.11	27863.900000	Y 377.433
Zn (206.200 nm)	0.892671	ppm	0.000056	0.01	4132.590000	Y 377.433
Zr (343.823 nm)	0.165328	ppm	0.000043	0.03	9526.830000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.188034	22212.659048	0.000427	0.04
Y 377.433	1.219053	677277.453223	0.001814	0.15
Y_R 377.433	1.263520	61515.300000	0.000465	0.04
Y_R 488.368	1.244250	53211.700000	0.001495	0.12
Y_R2 488.368	1.243800	103883.234767	0.004437	0.36
Y_R4	1.284270	49376.100000	0.006622	0.52

Sample Name: 280-122205-A-8-D

Date: 5/10/2019 6:46:45 PM

Rack:Tube: 1:66

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000701	ppm	0.000390	55.55	-349.273000	Y 377.433
Al (394.401 nm)	297.076000 o	ppm	0.362917	0.12	3732550.000000	Y 377.433
Al H (396.152 nm)	295.793000	ppm	0.433010	0.15	665770.000000	Y_R 377.433
As (188.980 nm)	0.129610	ppm	0.000994	0.77	175.411000	Y 242.219
B (249.678 nm)	0.158229	ppm	0.001133	0.72	1001.360000	Y 242.219
Ba (493.408 nm)	2.240490	ppm	0.001514	0.07	237014.000000	Y_R 488.368
Be (234.861 nm)	0.026848	ppm	0.000151	0.56	-407.824000	Y_R 488.368
Bi (223.061 nm)	-0.021565 u	ppm	0.002191	10.16	4.233650	Y 377.433
Ca (315.887 nm)	53.338066	ppm	0.003458	0.01	44118.945591	Y_R 377.433
Cd (214.439 nm)	0.002897	ppm	0.000259	8.93	255.449000	Y 377.433
Co (228.615 nm)	0.125834	ppm	0.000384	0.31	3636.830000	Y 242.219
Cr (205.560 nm)	1.450390	ppm	0.003421	0.24	10034.100000	Y 377.433
Cu (324.754 nm)	0.265870	ppm	0.000313	0.12	13520.400000	Y 377.433
Fe (238.204 nm)	366.688761 o	ppm	0.638464	0.17	916715.509733	Y_R 377.433
Fe H (259.940 nm)	367.938000	ppm	0.887443	0.24	528786.000000	Y_R 377.433
K (766.491 nm)	88.394500	ppm	0.058141	0.07	95153.200000	Y_R2 488.368
Li (670.783 nm)	0.331124	ppm	0.000003	0.00	3137.990000	Y_R2 488.368
Mg (279.078 nm)	77.524700	ppm	0.206494	0.27	271242.000000	Y 377.433
Mn (257.610 nm)	7.273140	ppm	0.009667	0.13	2096210.000000	Y 377.433
Mo (202.032 nm)	0.009400	ppm	0.000294	3.12	135.960000	Y 377.433
Na (589.592 nm)	3.524640	ppm	0.056704	1.61	3772.540000	Y_R2 488.368
Na H (589.593 nm)	0.320966 u	ppm	0.012388	3.86	663.958658	Y_R4
Ni (231.604 nm)	0.314041	ppm	0.000066	0.02	1693.590000	Y 377.433
P (213.618 nm)	8.687490	ppm	0.042438	0.49	13362.100000	Y 242.219
Pb (220.353 nm)	0.219033	ppm	0.001938	0.88	676.098000	Y 242.219
S (181.972 nm)	0.669064	ppm	0.002589	0.39	361.191294	Y 377.433
Sb (206.834 nm)	0.005740	ppm	0.001278	22.27	-1.555110	Y 377.433
Se (196.026 nm)	0.008832	ppm	0.000107	1.21	-68.050200	Y 242.219
Si (288.158 nm)	10.868100	ppm	0.034653	0.32	73107.600000	Y 377.433
Sn (189.925 nm)	0.019223	ppm	0.002027	10.54	40.731400	Y 377.433
Sr (421.552 nm)	0.421514	ppm	0.000265	0.06	67853.355312	Y_R 488.368
Th (288.505 nm)	0.242251	ppm	0.000489	0.20	495.532000	Y 377.433
Ti (336.122 nm)	10.933700	ppm	0.016495	0.15	1442100.000000	Y 377.433
Tl (190.794 nm)	0.020664	ppm	0.001340	6.48	-45.587400	Y 377.433
U (409.013 nm)	-0.199587 u	ppm	0.001734	0.87	-367.467000	Y 377.433
V (292.401 nm)	0.517026	ppm	0.001046	0.20	27778.100000	Y 377.433
Zn (206.200 nm)	0.908452	ppm	0.003711	0.41	4204.890000	Y 377.433
Zr (343.823 nm)	0.154607	ppm	0.000341	0.22	8897.810000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.184948	22154.958780	0.005114	0.43
Y 377.433	1.215305	675194.886831	0.006850	0.56
Y_R 377.433	1.259950	61341.400000	0.000648	0.05
Y_R 488.368	1.239900	53025.900000	0.000173	0.01
Y_R2 488.368	1.243625	103868.619175	0.002356	0.19
Y_R4	1.282140	49294.100000	0.002730	0.21

Sample Name: 280-122205-A-9-D

Date: 5/10/2019 6:50:28 PM

Rack:Tube: 1:67

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000086 u	ppm	0.000073	84.31	-379.984000	Y 377.433
Al (394.401 nm)	313.691000 o	ppm	0.160241	0.05	3941310.000000	Y 377.433
Al H (396.152 nm)	313.032000	ppm	0.529396	0.17	704573.000000	Y_R 377.433
As (188.980 nm)	0.137523	ppm	0.003332	2.42	186.625000	Y 242.219
B (249.678 nm)	0.160249	ppm	0.000761	0.47	1010.740000	Y 242.219
Ba (493.408 nm)	2.307730	ppm	0.002483	0.11	244078.000000	Y_R 488.368
Be (234.861 nm)	0.028117	ppm	0.000446	1.59	-362.245000	Y_R 488.368
Bi (223.061 nm)	-0.021792 u	ppm	0.004535	20.81	5.448630	Y 377.433
Ca (315.887 nm)	51.343833	ppm	0.057342	0.11	42473.984840	Y_R 377.433
Cd (214.439 nm)	0.002628	ppm	0.000168	6.40	249.258000	Y 377.433
Co (228.615 nm)	0.131415	ppm	0.000076	0.06	3808.620000	Y 242.219
Cr (205.560 nm)	1.596920	ppm	0.001168	0.07	11049.100000	Y 377.433
Cu (324.754 nm)	0.272318	ppm	0.000329	0.12	13834.800000	Y 377.433
Fe (238.204 nm)	375.536672 o	ppm	0.740966	0.20	938835.032361	Y_R 377.433
Fe H (259.940 nm)	376.547000	ppm	0.328749	0.09	541158.000000	Y_R 377.433
K (766.491 nm)	92.629600	ppm	0.255180	0.28	99607.600000	Y_R2 488.368
Li (670.783 nm)	0.349563	ppm	0.000146	0.04	3473.430000	Y_R2 488.368
Mg (279.078 nm)	79.188100	ppm	0.069112	0.09	277059.000000	Y 377.433
Mn (257.610 nm)	7.517000	ppm	0.004291	0.06	2166500.000000	Y 377.433
Mo (202.032 nm)	0.009703	ppm	0.000272	2.80	139.976000	Y 377.433
Na (589.592 nm)	3.659720	ppm	0.039372	1.08	3906.220000	Y_R2 488.368
Na H (589.593 nm)	0.415715 u	ppm	0.007401	1.78	718.873498	Y_R4
Ni (231.604 nm)	0.321522	ppm	0.000008	0.00	1734.180000	Y 377.433
P (213.618 nm)	7.416510	ppm	0.011229	0.15	11396.500000	Y 242.219
Pb (220.353 nm)	0.213090	ppm	0.000687	0.32	651.856000	Y 242.219
S (181.972 nm)	0.567194	ppm	0.003640	0.64	312.115562	Y 377.433
Sb (206.834 nm)	0.003161	ppm	0.000862	27.27	-7.998030	Y 377.433
Se (196.026 nm)	0.005595	ppm	0.000282	5.04	-75.571000	Y 242.219
Si (288.158 nm)	11.283600	ppm	0.026153	0.23	75882.600000	Y 377.433
Sn (189.925 nm)	0.020996	ppm	0.001918	9.13	43.649900	Y 377.433
Sr (421.552 nm)	0.416019	ppm	0.000484	0.12	66972.466914	Y_R 488.368
Th (288.505 nm)	0.246969	ppm	0.001184	0.48	506.294000	Y 377.433
Ti (336.122 nm)	11.624000	ppm	0.006274	0.05	1533160.000000	Y 377.433
Tl (190.794 nm)	0.021538	ppm	0.001380	6.41	-47.680600	Y 377.433
U (409.013 nm)	-0.210119 u	ppm	0.002420	1.15	-395.793000	Y 377.433
V (292.401 nm)	0.529894	ppm	0.000190	0.04	28444.600000	Y 377.433
Zn (206.200 nm)	0.907780	ppm	0.000244	0.03	4203.200000	Y 377.433
Zr (343.823 nm)	0.172476	ppm	0.000157	0.09	9946.190000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.200736	22450.161537	0.000373	0.03
Y 377.433	1.231206	684029.001570	0.001465	0.12
Y_R 377.433	1.280830	62358.200000	0.000572	0.04
Y_R 488.368	1.262560	53994.800000	0.000220	0.02
Y_R2 488.368	1.266558	105784.027846	0.007784	0.61
Y_R4	1.309430	50343.400000	0.011499	0.88

Sample Name: 280-122205-A-11-D

Date: 5/10/2019 6:54:34 PM

Rack:Tube: 1:68

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000791	ppm	0.000296	37.38	-342.380000	Y 377.433
Al (394.401 nm)	315.604000 o	ppm	0.019355	0.01	3965330.000000	Y 377.433
Al H (396.152 nm)	315.346000	ppm	0.914674	0.29	709782.000000	Y_R 377.433
As (188.980 nm)	0.133851	ppm	0.005179	3.87	180.444000	Y 242.219
B (249.678 nm)	0.139890	ppm	0.001522	1.09	850.074000	Y 242.219
Ba (493.408 nm)	2.326440	ppm	0.002597	0.11	246047.000000	Y_R 488.368
Be (234.861 nm)	0.028310	ppm	0.000047	0.17	-410.504000	Y_R 488.368
Bi (223.061 nm)	-0.027955 u	ppm	0.002160	7.73	-6.772660	Y 377.433
Ca (315.887 nm)	54.609514	ppm	0.048633	0.09	45175.526383	Y_R 377.433
Cd (214.439 nm)	0.003420	ppm	0.000108	3.15	282.807000	Y 377.433
Co (228.615 nm)	0.132642	ppm	0.000337	0.25	3845.650000	Y 242.219
Cr (205.560 nm)	1.024920	ppm	0.000836	0.08	7085.150000	Y 377.433
Cu (324.754 nm)	0.286727	ppm	0.000772	0.27	14542.800000	Y 377.433
Fe (238.204 nm)	382.514901 o	ppm	0.107511	0.03	956280.403348	Y_R 377.433
Fe H (259.940 nm)	384.679000	ppm	1.453610	0.38	552846.000000	Y_R 377.433
K (766.491 nm)	99.851600	ppm	0.344380	0.34	107204.000000	Y_R2 488.368
Li (670.783 nm)	0.341112	ppm	0.001776	0.52	3319.700000	Y_R2 488.368
Mg (279.078 nm)	83.305600	ppm	0.108665	0.13	291480.000000	Y 377.433
Mn (257.610 nm)	7.995240	ppm	0.005681	0.07	2304330.000000	Y 377.433
Mo (202.032 nm)	0.008173	ppm	0.000529	6.47	119.728000	Y 377.433
Na (589.592 nm)	3.307130	ppm	0.022850	0.69	3604.000000	Y_R2 488.368
Na H (589.593 nm)	0.062788 u	ppm	0.015135	24.11	514.322349	Y_R4
Ni (231.604 nm)	0.326709	ppm	0.000477	0.15	1762.330000	Y 377.433
P (213.618 nm)	8.157330	ppm	0.004685	0.06	12539.200000	Y 242.219
Pb (220.353 nm)	0.489434	ppm	0.000270	0.06	1582.800000	Y 242.219
S (181.972 nm)	0.811928	ppm	0.010072	1.24	433.419253	Y 377.433
Sb (206.834 nm)	0.007845	ppm	0.005247	66.88	-3.889050	Y 377.433
Se (196.026 nm)	0.008141	ppm	0.003353	41.18	-72.888700	Y 242.219
Si (288.158 nm)	13.047400	ppm	0.147400	1.13	87664.800000	Y 377.433
Sn (189.925 nm)	0.017717	ppm	0.001755	9.91	38.252600	Y 377.433
Sr (421.552 nm)	0.421459	ppm	0.000833	0.20	67847.242176	Y_R 488.368
Th (288.505 nm)	0.242795	ppm	0.006969	2.87	508.633000	Y 377.433
Ti (336.122 nm)	11.767600	ppm	0.015070	0.13	1552120.000000	Y 377.433
Tl (190.794 nm)	0.023309	ppm	0.002300	9.87	-45.080600	Y 377.433
U (409.013 nm)	-0.204981 u	ppm	0.005306	2.59	-374.917000	Y 377.433
V (292.401 nm)	0.517637	ppm	0.000315	0.06	28006.300000	Y 377.433
Zn (206.200 nm)	0.968003	ppm	0.002419	0.25	4479.450000	Y 377.433
Zr (343.823 nm)	0.178908	ppm	0.000208	0.12	10323.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.200027	22436.900883	0.001120	0.09
Y 377.433	1.230156	683445.809724	0.000385	0.03
Y_R 377.433	1.286190	62619.100000	0.001164	0.09
Y_R 488.368	1.265530	54122.100000	0.001895	0.15
Y_R2 488.368	1.271453	106192.819558	0.008016	0.63
Y_R4	1.304890	50168.800000	0.000498	0.04

Sample Name: CCVH-5690583

Date: 5/10/2019 6:58:18 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000105 u	ppm	0.000238	> 100.00	-317.339000	Y 377.433
Al (394.401 nm)	48.501900 o	ppm	0.009223	0.02	609524.000000	Y 377.433
Al H (396.152 nm)	48.666100	ppm	0.012426	0.03	109327.000000	Y_R 377.433
As (188.980 nm)	0.004182	ppm	0.001395	33.35	0.430978	Y 242.219
B (249.678 nm)	0.006728	ppm	0.000495	7.36	34.413100	Y 242.219
Ba (493.408 nm)	0.001702	ppm	0.000282	16.59	1846.380000	Y_R 488.368
Be (234.861 nm)	0.002463	ppm	0.000012	0.49	-163.185000	Y_R 488.368
Bi (223.061 nm)	0.945431	ppm	0.000775	0.08	2076.290000	Y 377.433
Ca (315.887 nm)	0.017985	ppm	0.002260	12.57	-45.875227	Y_R 377.433
Cd (214.439 nm)	0.000895	ppm	0.000014	1.57	47.189200	Y 377.433
Co (228.615 nm)	0.004348	ppm	0.000371	8.53	85.540500	Y 242.219
Cr (205.560 nm)	0.001027	ppm	0.000216	21.05	-2.345890	Y 377.433
Cu (324.754 nm)	0.005696	ppm	0.000735	12.90	1186.530000	Y 377.433
Fe (238.204 nm)	47.691273 o	ppm	0.105978	0.22	119230.978556	Y_R 377.433
Fe H (259.940 nm)	47.571700	ppm	0.022522	0.05	68343.700000	Y_R 377.433
K (766.491 nm)	1.992640	ppm	0.024129	1.21	4277.410000	Y_R2 488.368
Li (670.783 nm)	0.004358	ppm	0.003836	88.01	-2806.730000	Y_R2 488.368
Mg (279.078 nm)	0.019547	ppm	0.000050	0.26	-142.605000	Y 377.433
Mn (257.610 nm)	0.001598	ppm	0.000163	10.17	436.990000	Y 377.433
Mo (202.032 nm)	0.000725	ppm	0.000120	16.53	21.199900	Y 377.433
Na (589.592 nm)	240.435000 o	ppm	0.692706	0.29	209184.000000	Y_R2 488.368
Na H (589.593 nm)	244.440987	ppm	1.515042	0.62	142152.479526	Y_R4
Ni (231.604 nm)	0.002073	ppm	0.000171	8.26	0.787774	Y 377.433
P (213.618 nm)	-0.013390 u	ppm	0.001020	7.62	-24.044400	Y 242.219
Pb (220.353 nm)	0.006907	ppm	0.001079	15.62	46.989600	Y 242.219
S (181.972 nm)	4.721059	ppm	0.041967	0.89	2314.570565	Y 377.433
Sb (206.834 nm)	0.001572	ppm	0.001508	95.95	8.466650	Y 377.433
Se (196.026 nm)	0.003515	ppm	0.000296	8.42	-1.575530	Y 242.219
Si (288.158 nm)	0.044523	ppm	0.005385	12.10	805.819000	Y 377.433
Sn (189.925 nm)	-0.002861 u	ppm	0.002333	81.54	4.388460	Y 377.433
Sr (421.552 nm)	0.000977	ppm	0.000040	4.14	267.429309	Y_R 488.368
Th (288.505 nm)	4.860840	ppm	0.001010	0.02	8587.830000	Y 377.433
Ti (336.122 nm)	0.003052	ppm	0.000165	5.41	-118.260000	Y 377.433
Tl (190.794 nm)	-0.000684 u	ppm	0.000009	1.35	-6.290610	Y 377.433
U (409.013 nm)	9.697830	ppm	0.003404	0.04	31042.200000	Y 377.433
V (292.401 nm)	-0.000895 u	ppm	0.000182	20.29	-142.109000	Y 377.433
Zn (206.200 nm)	0.002994	ppm	0.000234	7.81	23.384000	Y 377.433
Zr (343.823 nm)	-0.002940 u	ppm	0.000178	6.07	-345.998000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.997970	18659.032985	0.003646	0.37
Y 377.433	1.009140	560654.625549	0.003740	0.37
Y_R 377.433	1.036520	50463.900000	0.005381	0.52
Y_R 488.368	1.018830	43571.300000	0.002823	0.28
Y_R2 488.368	1.011404	84473.321549	0.000768	0.08
Y_R4	1.037830	39901.400000	0.006036	0.58

Sample Name: CCV-5690581

Date: 5/10/2019 7:02:26 PM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.478723	ppm	0.001416	0.30	17310.900000	Y 377.433
Al (394.401 nm)	0.490073	ppm	0.000642	0.13	6309.760000	Y 377.433
Al H (396.152 nm)	0.525522 u	ppm	0.008639	1.64	1208.140000	Y_R 377.433
As (188.980 nm)	0.955000	ppm	0.001903	0.20	1517.540000	Y 242.219
B (249.678 nm)	0.470838	ppm	0.000037	0.01	3617.520000	Y 242.219
Ba (493.408 nm)	0.482679	ppm	0.000110	0.02	52275.900000	Y_R 488.368
Be (234.861 nm)	0.477645	ppm	0.001354	0.28	50671.500000	Y_R 488.368
Bi (223.061 nm)	0.005734	ppm	0.000301	5.25	2.241530	Y 377.433
Ca (315.887 nm)	4.877297	ppm	0.009764	0.20	3960.902752	Y_R 377.433
Cd (214.439 nm)	0.484584	ppm	0.001263	0.26	18559.400000	Y 377.433
Co (228.615 nm)	0.484306	ppm	0.000423	0.09	12120.200000	Y 242.219
Cr (205.560 nm)	0.481712	ppm	0.000829	0.17	3326.410000	Y 377.433
Cu (324.754 nm)	0.480647	ppm	0.001891	0.39	24100.600000	Y 377.433
Fe (238.204 nm)	2.413599	ppm	0.002483	0.10	6038.099668	Y_R 377.433
Fe H (259.940 nm)	2.431930 u	ppm	0.003896	0.16	3467.270000	Y_R 377.433
K (766.491 nm)	48.364200	ppm	0.047169	0.10	53050.100000	Y_R2 488.368
Li (670.783 nm)	0.975158	ppm	0.003991	0.41	14854.600000	Y_R2 488.368
Mg (279.078 nm)	19.034600	ppm	0.028593	0.15	66730.700000	Y 377.433
Mn (257.610 nm)	0.480040	ppm	0.000540	0.11	138332.000000	Y 377.433
Mo (202.032 nm)	0.483910	ppm	0.001871	0.39	6413.110000	Y 377.433
Na (589.592 nm)	24.986600	ppm	0.034125	0.14	22008.100000	Y_R2 488.368
Na H (589.593 nm)	24.741456 u	ppm	0.057020	0.23	14817.730202	Y_R4
Ni (231.604 nm)	0.483888	ppm	0.000041	0.01	2616.340000	Y 377.433
P (213.618 nm)	0.935556	ppm	0.003546	0.38	1310.470000	Y 242.219
Pb (220.353 nm)	0.970804	ppm	0.000615	0.06	3273.920000	Y 242.219
S (181.972 nm)	0.004451	ppm	0.000352	7.91	11.472995	Y 377.433
Sb (206.834 nm)	0.967182	ppm	0.004623	0.48	1801.580000	Y 377.433
Se (196.026 nm)	0.958452	ppm	0.003358	0.35	1540.820000	Y 242.219
Si (288.158 nm)	4.737050	ppm	0.021389	0.45	32151.900000	Y 377.433
Sn (189.925 nm)	0.969331	ppm	0.000278	0.03	1604.310000	Y 377.433
Sr (421.552 nm)	0.481476	ppm	0.000542	0.11	77425.644379	Y_R 488.368
Th (288.505 nm)	0.009167	ppm	0.000397	4.33	-13.740000	Y 377.433
Ti (336.122 nm)	0.482024	ppm	0.000212	0.04	63090.800000	Y 377.433
Tl (190.794 nm)	0.972627	ppm	0.004199	0.43	2375.000000	Y 377.433
U (409.013 nm)	0.014055	ppm	0.008856	63.01	16.106200	Y 377.433
V (292.401 nm)	0.480668	ppm	0.001353	0.28	25725.300000	Y 377.433
Zn (206.200 nm)	0.484467	ppm	0.001916	0.40	2217.080000	Y 377.433
Zr (343.823 nm)	0.483166	ppm	0.000323	0.07	28175.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.014716	18972.131669	0.000109	0.01
Y 377.433	1.024368	569114.651379	0.001008	0.10
Y_R 377.433	1.029700	50131.900000	0.003535	0.34
Y_R 488.368	1.015400	43424.700000	0.003712	0.37
Y_R2 488.368	1.013804	84673.782407	0.005253	0.52
Y_R4	1.031820	39670.300000	0.003397	0.33

Sample Name: CCB

Date: 5/10/2019 7:05:57 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000640 u	ppm	0.000233	36.41	-208.181000	Y 377.433
Al (394.401 nm)	0.002353	ppm	0.000225	9.56	58.367700	Y 377.433
Al H (396.152 nm)	0.112300 Zu	ppm	0.004957	4.41	32.658400 Z	Y_R 377.433
As (188.980 nm)	0.000587 u	ppm	0.001566	> 100.00	-0.891243	Y 242.219
B (249.678 nm)	-0.000499 u	ppm	0.000140	28.03	8.028600	Y 242.219
Ba (493.408 nm)	-0.000842 u	ppm	0.000177	20.99	1540.180000	Y_R 488.368
Be (234.861 nm)	0.000029	ppm	0.000016	56.83	2.267770	Y_R 488.368
Bi (223.061 nm)	0.004310	ppm	0.000985	22.85	-1.405230	Y 377.433
Ca (315.887 nm)	0.004526	ppm	0.004594	> 100.00	-69.496556	Y_R 377.433
Cd (214.439 nm)	0.000044	ppm	0.000045	> 100.00	-5.082990	Y 377.433
Co (228.615 nm)	0.000135	ppm	0.000098	72.32	-20.015800	Y 242.219
Cr (205.560 nm)	0.000273	ppm	0.000258	94.63	-6.232070	Y 377.433
Cu (324.754 nm)	-0.000547 u	ppm	0.000115	20.96	482.893000	Y 377.433
Fe (238.204 nm)	0.000371 u	ppm	0.003016	> 100.00	5.099345	Y_R 377.433
Fe H (259.940 nm)	0.030546 u	ppm	0.001652	5.41	15.909100	Y_R 377.433
K (766.491 nm)	0.003170 u	ppm	0.011493	> 100.00	2184.920000	Y_R2 488.368
Li (670.783 nm)	-0.001219 u	ppm	0.000887	72.77	-2908.190000	Y_R2 488.368
Mg (279.078 nm)	0.001017	ppm	0.000145	14.23	19.552500	Y 377.433
Mn (257.610 nm)	0.000118	ppm	0.000027	22.90	10.539600	Y 377.433
Mo (202.032 nm)	0.000168	ppm	0.000202	> 100.00	13.842100	Y 377.433
Na (589.592 nm)	0.017099	ppm	0.005509	32.22	185.980000	Y_R2 488.368
Na H (589.593 nm)	-0.072992 u	ppm	0.007405	10.14	435.625796	Y_R4
Ni (231.604 nm)	0.000134 u	ppm	0.000697	> 100.00	-9.726430	Y 377.433
P (213.618 nm)	-0.001325 u	ppm	0.002946	> 100.00	1.596360	Y 242.219
Pb (220.353 nm)	-0.000786 u	ppm	0.000514	65.46	5.400930	Y 242.219
S (181.972 nm)	-0.001913 u	ppm	0.008967	> 100.00	6.539618	Y 377.433
Sb (206.834 nm)	-0.003245 u	ppm	0.002245	69.17	-3.770590	Y 377.433
Se (196.026 nm)	0.003532	ppm	0.000422	11.94	11.239200	Y 242.219
Si (288.158 nm)	-0.002915 u	ppm	0.002155	73.95	488.936000	Y 377.433
Sn (189.925 nm)	-0.003481 u	ppm	0.000134	3.85	3.367700	Y 377.433
Sr (421.552 nm)	-0.000092 u	ppm	0.000030	33.10	88.287341	Y_R 488.368
Th (288.505 nm)	-0.005016 u	ppm	0.002640	52.64	10.535300	Y 377.433
Ti (336.122 nm)	0.000456	ppm	0.000030	6.57	-460.778000	Y 377.433
Tl (190.794 nm)	0.002233	ppm	0.002213	99.10	5.578910	Y 377.433
U (409.013 nm)	0.009709	ppm	0.000541	5.57	61.020400	Y 377.433
V (292.401 nm)	-0.000038 u	ppm	0.000083	> 100.00	-97.834900	Y 377.433
Zn (206.200 nm)	-0.000232 u	ppm	0.000103	44.37	2.029400	Y 377.433
Zr (343.823 nm)	0.000366	ppm	0.000012	3.14	-152.048000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.042067	19483.530714	0.002864	0.27
Y 377.433	1.046626	581480.635482	0.002996	0.29
Y_R 377.433	1.044300	50842.600000	0.002516	0.24
Y_R 488.368	1.032760	44167.400000	0.006758	0.65
Y_R2 488.368	1.035170	86458.286341	0.007640	0.74
Y_R4	1.036940	39867.200000	0.004976	0.48

Sample Name: CCVL-5695588

Date: 5/10/2019 7:09:09 PM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009019	ppm	0.000055	0.61	144.601000	Y 377.433
Al (394.401 nm)	0.102497	ppm	0.000152	0.15	1321.250000	Y 377.433
Al H (396.152 nm)	0.224179 u	ppm	0.011449	5.11	289.935000	Y_R 377.433
As (188.980 nm)	0.015094	ppm	0.000514	3.41	22.181500	Y 242.219
B (249.678 nm)	0.093661	ppm	0.000262	0.28	729.333000	Y 242.219
Ba (493.408 nm)	0.008990	ppm	0.000434	4.83	2571.930000	Y_R 488.368
Be (234.861 nm)	0.000924	ppm	0.000128	13.82	96.407000	Y_R 488.368
Bi (223.061 nm)	0.090903	ppm	0.002721	2.99	189.041000	Y 377.433
Ca (315.887 nm)	0.202429	ppm	0.009737	4.81	94.213901	Y_R 377.433
Cd (214.439 nm)	0.005064	ppm	0.000016	0.32	187.274000	Y 377.433
Co (228.615 nm)	0.010353	ppm	0.000076	0.73	236.170000	Y 242.219
Cr (205.560 nm)	0.010089	ppm	0.000153	1.52	61.619900	Y 377.433
Cu (324.754 nm)	0.014756	ppm	0.000104	0.71	1234.470000	Y 377.433
Fe (238.204 nm)	0.094604	ppm	0.000358	0.38	240.679085	Y_R 377.433
Fe H (259.940 nm)	0.132199 u	ppm	0.002041	1.54	162.009000	Y_R 377.433
K (766.491 nm)	2.948200	ppm	0.087709	2.98	5282.450000	Y_R2 488.368
Li (670.783 nm)	0.021883	ppm	0.003110	14.21	-2487.900000	Y_R2 488.368
Mg (279.078 nm)	0.198559	ppm	0.000846	0.43	711.090000	Y 377.433
Mn (257.610 nm)	0.010251	ppm	0.000039	0.38	2931.100000	Y 377.433
Mo (202.032 nm)	0.019344	ppm	0.000142	0.73	267.515000	Y 377.433
Na (589.592 nm)	1.074640	ppm	0.003566	0.33	1107.730000	Y_R2 488.368
Na H (589.593 nm)	0.731428 u	ppm	0.018766	2.57	901.856680	Y_R4
Ni (231.604 nm)	0.040777	ppm	0.000027	0.07	210.821000	Y 377.433
P (213.618 nm)	2.633120	ppm	0.005727	0.22	4066.970000	Y 242.219
Pb (220.353 nm)	0.009447	ppm	0.000152	1.61	39.868900	Y 242.219
S (181.972 nm)	0.083808	ppm	0.003213	3.83	48.469556	Y 377.433
Sb (206.834 nm)	0.019868	ppm	0.003058	15.39	39.137700	Y 377.433
Se (196.026 nm)	0.021274	ppm	0.002077	9.76	39.647900	Y 242.219
Si (288.158 nm)	0.489622	ppm	0.003929	0.80	3779.080000	Y 377.433
Sn (189.925 nm)	0.094792	ppm	0.000989	1.04	165.094000	Y 377.433
Sr (421.552 nm)	0.008834	ppm	0.000017	0.20	1521.704671	Y_R 488.368
Th (288.505 nm)	0.010338 Q	ppm	0.002696	26.08	36.921900 Q	Y 377.433
Ti (336.122 nm)	0.010032	ppm	0.000018	0.18	803.255000	Y 377.433
Tl (190.794 nm)	0.016737	ppm	0.000226	1.35	40.924200	Y 377.433
U (409.013 nm)	0.057768	ppm	0.004069	7.04	213.419000	Y 377.433
V (292.401 nm)	0.009482	ppm	0.000495	5.22	412.048000	Y 377.433
Zn (206.200 nm)	0.020425	ppm	0.000572	2.80	96.428300	Y 377.433
Zr (343.823 nm)	0.010518	ppm	0.000002	0.02	443.579000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.045369	19545.255463	0.001259	0.12
Y 377.433	1.050268	583504.223366	0.001125	0.11
Y_R 377.433	1.057340	51477.600000	0.002197	0.21
Y_R 488.368	1.041010	44520.200000	0.008511	0.82
Y_R2 488.368	1.045630	87331.900507	0.006978	0.67
Y_R4	1.035870	39825.900000	0.006356	0.61

Sample Name: 280-122205-A-12-D

Date: 5/10/2019 7:12:35 PM

Rack:Tube: 1:69

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000358	ppm	0.000258	72.18	-353.832000	Y 377.433
Al (394.401 nm)	316.880000 o	ppm	0.032676	0.01	3981360.000000	Y 377.433
Al H (396.152 nm)	316.617000	ppm	0.234249	0.07	712643.000000	Y_R 377.433
As (188.980 nm)	0.133557	ppm	0.002422	1.81	179.891000	Y 242.219
B (249.678 nm)	0.129810	ppm	0.000086	0.07	772.287000	Y 242.219
Ba (493.408 nm)	2.394560	ppm	0.000338	0.01	253195.000000	Y_R 488.368
Be (234.861 nm)	0.028615	ppm	0.000160	0.56	-386.297000	Y_R 488.368
Bi (223.061 nm)	-0.023087 u	ppm	0.000092	0.40	4.089590	Y 377.433
Ca (315.887 nm)	55.060669	ppm	0.086626	0.16	45548.916905	Y_R 377.433
Cd (214.439 nm)	0.003221	ppm	0.000033	1.02	275.579000	Y 377.433
Co (228.615 nm)	0.138131	ppm	0.000239	0.17	3953.180000	Y 242.219
Cr (205.560 nm)	0.745317	ppm	0.001353	0.18	5147.450000	Y 377.433
Cu (324.754 nm)	0.295833	ppm	0.000726	0.25	14998.300000	Y 377.433
Fe (238.204 nm)	385.601000 o	ppm	0.094345	0.02	963995.563511	Y_R 377.433
Fe H (259.940 nm)	387.572000	ppm	0.349825	0.09	557004.000000	Y_R 377.433
K (766.491 nm)	99.968500	ppm	0.109494	0.11	107326.000000	Y_R2 488.368
Li (670.783 nm)	0.342437	ppm	0.003016	0.88	3343.800000	Y_R2 488.368
Mg (279.078 nm)	85.643900	ppm	0.070321	0.08	299675.000000	Y 377.433
Mn (257.610 nm)	8.299280	ppm	0.000249	0.00	2391970.000000	Y 377.433
Mo (202.032 nm)	0.008895	ppm	0.000120	1.35	129.277000	Y 377.433
Na (589.592 nm)	3.111280	ppm	0.010842	0.35	3449.970000	Y_R2 488.368
Na H (589.593 nm)	-0.003624 u	ppm	0.039643	> 100.00	475.831010	Y_R4
Ni (231.604 nm)	0.339231	ppm	0.001158	0.34	1830.280000	Y 377.433
P (213.618 nm)	8.060740	ppm	0.003516	0.04	12387.700000	Y 242.219
Pb (220.353 nm)	0.324670	ppm	0.003710	1.14	1029.250000	Y 242.219
S (181.972 nm)	0.796905	ppm	0.005941	0.75	427.052841	Y 377.433
Sb (206.834 nm)	0.006216	ppm	0.003963	63.76	-6.069460	Y 377.433
Se (196.026 nm)	0.004976	ppm	0.002171	43.63	-77.789200	Y 242.219
Si (288.158 nm)	10.312900	ppm	0.103122	1.00	69398.500000	Y 377.433
Sn (189.925 nm)	0.018598	ppm	0.001233	6.63	39.702800	Y 377.433
Sr (421.552 nm)	0.420751	ppm	0.000070	0.02	67733.712515	Y_R 488.368
Th (288.505 nm)	0.245140	ppm	0.007085	2.89	518.967000	Y 377.433
Ti (336.122 nm)	11.139800	ppm	0.005383	0.05	1469290.000000	Y 377.433
Tl (190.794 nm)	0.023631	ppm	0.002454	10.38	-41.098000	Y 377.433
U (409.013 nm)	-0.208920 u	ppm	0.003889	1.86	-388.107000	Y 377.433
V (292.401 nm)	0.512900	ppm	0.000229	0.04	27833.000000	Y 377.433
Zn (206.200 nm)	0.973262	ppm	0.001451	0.15	4503.610000	Y 377.433
Zr (343.823 nm)	0.188356	ppm	0.000113	0.06	10877.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.207233	22571.626474	0.000582	0.05
Y 377.433	1.237991	687798.878120	0.000966	0.08
Y_R 377.433	1.289220	62766.800000	0.003324	0.26
Y_R 488.368	1.268090	54231.500000	0.004125	0.33
Y_R2 488.368	1.254414	104769.756563	0.002557	0.20
Y_R4	1.298320	49916.200000	0.006732	0.52

Sample Name: 280-122205-A-13-D

Date: 5/10/2019 7:16:23 PM

Rack:Tube: 1:70

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000486	ppm	0.000149	30.69	-356.767000	Y 377.433
Al (394.401 nm)	313.769000 o	ppm	0.261563	0.08	3942280.000000	Y 377.433
Al H (396.152 nm)	313.719000	ppm	0.815458	0.26	706126.000000	Y_R 377.433
As (188.980 nm)	0.137066	ppm	0.000495	0.36	185.713000	Y 242.219
B (249.678 nm)	0.151834	ppm	0.000749	0.49	942.666000	Y 242.219
Ba (493.408 nm)	2.332370	ppm	0.000499	0.02	246667.000000	Y_R 488.368
Be (234.861 nm)	0.028134	ppm	0.000116	0.41	-413.251000	Y_R 488.368
Bi (223.061 nm)	-0.028442 u	ppm	0.000601	2.11	-8.150520	Y 377.433
Ca (315.887 nm)	65.953388	ppm	0.065448	0.10	54557.611722	Y_R 377.433
Cd (214.439 nm)	0.003287	ppm	0.000099	3.01	276.947000	Y 377.433
Co (228.615 nm)	0.134354	ppm	0.000595	0.44	3903.710000	Y 242.219
Cr (205.560 nm)	1.667200	ppm	0.003195	0.19	11536.100000	Y 377.433
Cu (324.754 nm)	0.289153	ppm	0.000524	0.18	14650.000000	Y 377.433
Fe (238.204 nm)	382.768213 o	ppm	0.036814	0.01	956913.676409	Y_R 377.433
Fe H (259.940 nm)	384.799000	ppm	0.305157	0.08	553019.000000	Y_R 377.433
K (766.491 nm)	98.749800	ppm	0.043361	0.04	106045.000000	Y_R2 488.368
Li (670.783 nm)	0.333891	ppm	0.000439	0.13	3188.320000	Y_R2 488.368
Mg (279.078 nm)	82.450400	ppm	0.154078	0.19	288485.000000	Y 377.433
Mn (257.610 nm)	7.962930	ppm	0.000752	0.01	2295020.000000	Y 377.433
Mo (202.032 nm)	0.011233	ppm	0.000499	4.44	160.209000	Y 377.433
Na (589.592 nm)	3.261650	ppm	0.021372	0.66	3565.780000	Y_R2 488.368
Na H (589.593 nm)	0.188907 u	ppm	0.003039	1.61	587.419216	Y_R4
Ni (231.604 nm)	0.335305	ppm	0.001458	0.43	1808.970000	Y 377.433
P (213.618 nm)	9.438040	ppm	0.034647	0.37	14517.000000	Y 242.219
Pb (220.353 nm)	0.374774	ppm	0.000173	0.05	1195.460000	Y 242.219
S (181.972 nm)	0.970749	ppm	0.008226	0.85	511.494680	Y 377.433
Sb (206.834 nm)	0.005083	ppm	0.004817	94.77	-5.538580	Y 377.433
Se (196.026 nm)	0.006121	ppm	0.000403	6.58	-75.695200	Y 242.219
Si (288.158 nm)	9.834770	ppm	0.084388	0.86	66204.700000	Y 377.433
Sn (189.925 nm)	0.022174	ppm	0.002953	13.32	45.587500	Y 377.433
Sr (421.552 nm)	0.438372	ppm	0.000016	0.00	70563.062893	Y_R 488.368
Th (288.505 nm)	0.241658	ppm	0.001297	0.54	505.664000	Y 377.433
Ti (336.122 nm)	12.097900	ppm	0.006072	0.05	1595720.000000	Y 377.433
Tl (190.794 nm)	0.022193	ppm	0.002448	11.03	-49.777100	Y 377.433
U (409.013 nm)	-0.203420 u	ppm	0.004733	2.33	-371.304000	Y 377.433
V (292.401 nm)	0.521555	ppm	0.000594	0.11	27985.200000	Y 377.433
Zn (206.200 nm)	1.002220	ppm	0.002439	0.24	4635.530000	Y 377.433
Zr (343.823 nm)	0.167468	ppm	0.000633	0.38	9652.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.187105	22195.295931	0.001460	0.12
Y 377.433	1.215995	675578.097785	0.002561	0.21
Y_R 377.433	1.251440	60927.200000	0.005023	0.40
Y_R 488.368	1.234860	52810.300000	0.005089	0.41
Y_R2 488.368	1.253160	104665.040443	0.007447	0.59
Y_R4	1.280390	49227.000000	0.005504	0.43

Sample Name: 280-122205-A-14-D

Date: 5/10/2019 7:20:13 PM

Rack:Tube: 1:71

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000513	ppm	0.000007	1.45	-371.502000	Y 377.433
Al (394.401 nm)	338.851000 o	ppm	0.026598	0.01	4257420.000000	Y 377.433
Al H (396.152 nm)	336.555000	ppm	0.303008	0.09	757543.000000	Y_R 377.433
As (188.980 nm)	0.141649	ppm	0.001881	1.33	190.872000	Y 242.219
B (249.678 nm)	0.144384	ppm	0.000150	0.10	870.444000	Y 242.219
Ba (493.408 nm)	2.463860	ppm	0.000618	0.03	260485.000000	Y_R 488.368
Be (234.861 nm)	0.030142	ppm	0.000346	1.15	-421.615000	Y_R 488.368
Bi (223.061 nm)	-0.025353 u	ppm	0.002659	10.49	2.881920	Y 377.433
Ca (315.887 nm)	69.478786	ppm	0.028358	0.04	57479.312123	Y_R 377.433
Cd (214.439 nm)	0.002661	ppm	0.000099	3.72	263.272000	Y 377.433
Co (228.615 nm)	0.140000	ppm	0.000257	0.18	4074.830000	Y 242.219
Cr (205.560 nm)	1.882770	ppm	0.001476	0.08	13029.300000	Y 377.433
Cu (324.754 nm)	0.290960	ppm	0.002419	0.83	14739.500000	Y 377.433
Fe (238.204 nm)	405.797571 o	ppm	0.661217	0.16	1014486.409328	Y_R 377.433
Fe H (259.940 nm)	406.876000	ppm	0.975521	0.24	584748.000000	Y_R 377.433
K (766.491 nm)	97.870200	ppm	0.028293	0.03	105119.000000	Y_R2 488.368
Li (670.783 nm)	0.375772	ppm	0.000552	0.15	3950.240000	Y_R2 488.368
Mg (279.078 nm)	88.833600	ppm	0.082420	0.09	310825.000000	Y 377.433
Mn (257.610 nm)	7.972460	ppm	0.001734	0.02	2297770.000000	Y 377.433
Mo (202.032 nm)	0.009852	ppm	0.000064	0.65	141.943000	Y 377.433
Na (589.592 nm)	3.916160	ppm	0.033366	0.85	4166.910000	Y_R2 488.368
Na H (589.593 nm)	0.574121 u	ppm	0.014125	2.46	810.683576	Y_R4
Ni (231.604 nm)	0.349776	ppm	0.000494	0.14	1887.500000	Y 377.433
P (213.618 nm)	7.732060	ppm	0.004274	0.06	11879.600000	Y 242.219
Pb (220.353 nm)	0.218503	ppm	0.001777	0.81	664.023000	Y 242.219
S (181.972 nm)	0.756733	ppm	0.016627	2.20	407.118607	Y 377.433
Sb (206.834 nm)	0.006795	ppm	0.001506	22.17	-1.928600	Y 377.433
Se (196.026 nm)	0.009168	ppm	0.002415	26.34	-77.484400	Y 242.219
Si (288.158 nm)	9.703280	ppm	0.042236	0.44	65326.400000	Y 377.433
Sn (189.925 nm)	0.021661	ppm	0.000870	4.01	44.744500	Y 377.433
Sr (421.552 nm)	0.473795	ppm	0.000233	0.05	76255.803954	Y_R 488.368
Th (288.505 nm)	0.261595	ppm	0.003511	1.34	533.295000	Y 377.433
Ti (336.122 nm)	12.733900	ppm	0.013694	0.11	1679650.000000	Y 377.433
Tl (190.794 nm)	0.025398	ppm	0.000495	1.95	-47.870400	Y 377.433
U (409.013 nm)	-0.213357 u	ppm	0.002577	1.21	-387.619000	Y 377.433
V (292.401 nm)	0.568338	ppm	0.000981	0.17	30462.100000	Y 377.433
Zn (206.200 nm)	0.988326	ppm	0.001461	0.15	4575.520000	Y 377.433
Zr (343.823 nm)	0.185269	ppm	0.000178	0.10	10696.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.229056	22979.649019	0.001457	0.12
Y 377.433	1.248267	693507.790072	0.001813	0.15
Y_R 377.433	1.315550	64048.700000	0.001377	0.10
Y_R 488.368	1.296770	55457.800000	0.001206	0.09
Y_R2 488.368	1.276859	106644.393887	0.000002	0.00
Y_R4	1.340210	51526.900000	0.011592	0.86

Sample Name: 280-122205-A-15-D

Date: 5/10/2019 7:24:19 PM

Rack:Tube: 1:72

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000501	ppm	0.000353	70.44	-368.142000	Y 377.433
Al (394.401 nm)	336.732000 o	ppm	0.136757	0.04	4230800.000000	Y 377.433
Al H (396.152 nm)	337.220000	ppm	0.893778	0.27	759037.000000	Y_R 377.433
As (188.980 nm)	0.139224	ppm	0.001230	0.88	187.174000	Y 242.219
B (249.678 nm)	0.136112	ppm	0.000641	0.47	811.445000	Y 242.219
Ba (493.408 nm)	2.532840	ppm	0.003999	0.16	267716.000000	Y_R 488.368
Be (234.861 nm)	0.029820	ppm	0.000223	0.75	-391.857000	Y_R 488.368
Bi (223.061 nm)	-0.027928 u	ppm	0.001756	6.29	-4.006180	Y 377.433
Ca (315.887 nm)	64.343899	ppm	0.124675	0.19	53232.423820	Y_R 377.433
Cd (214.439 nm)	0.002780	ppm	0.000051	1.84	264.855000	Y 377.433
Co (228.615 nm)	0.138974	ppm	0.000011	0.01	4038.690000	Y 242.219
Cr (205.560 nm)	0.388297	ppm	0.000771	0.20	2672.770000	Y 377.433
Cu (324.754 nm)	0.287756	ppm	0.002204	0.77	14585.300000	Y 377.433
Fe (238.204 nm)	399.745243 o	ppm	1.921191	0.48	999355.763524	Y_R 377.433
Fe H (259.940 nm)	402.146000	ppm	1.689820	0.42	577951.000000	Y_R 377.433
K (766.491 nm)	97.381200	ppm	0.112952	0.12	104605.000000	Y_R2 488.368
Li (670.783 nm)	0.374789	ppm	0.006252	1.67	3932.360000	Y_R2 488.368
Mg (279.078 nm)	87.885500	ppm	0.099644	0.11	307511.000000	Y 377.433
Mn (257.610 nm)	8.231760	ppm	0.003014	0.04	2372500.000000	Y 377.433
Mo (202.032 nm)	0.007512	ppm	0.000101	1.34	110.984000	Y 377.433
Na (589.592 nm)	3.543100	ppm	0.009386	0.26	3858.500000	Y_R2 488.368
Na H (589.593 nm)	0.079705 u	ppm	0.039054	49.00	524.127094	Y_R4
Ni (231.604 nm)	0.335640	ppm	0.000260	0.08	1810.790000	Y 377.433
P (213.618 nm)	7.580690	ppm	0.010016	0.13	11646.800000	Y 242.219
Pb (220.353 nm)	0.227814	ppm	0.000695	0.31	698.143000	Y 242.219
S (181.972 nm)	0.779913	ppm	0.006448	0.83	419.025860	Y 377.433
Sb (206.834 nm)	0.009601	ppm	0.000078	0.82	-8.384620	Y 377.433
Se (196.026 nm)	0.007076	ppm	0.001401	19.81	-78.538300	Y 242.219
Si (288.158 nm)	7.837140	ppm	0.002913	0.04	52860.500000	Y 377.433
Sn (189.925 nm)	0.021256	ppm	0.001511	7.11	44.077600	Y 377.433
Sr (421.552 nm)	0.469241	ppm	0.000809	0.17	75523.285230	Y_R 488.368
Th (288.505 nm)	0.249542	ppm	0.006038	2.42	518.654000	Y 377.433
Ti (336.122 nm)	12.517700	ppm	0.010490	0.08	1651110.000000	Y 377.433
Tl (190.794 nm)	0.024469	ppm	0.000242	0.99	-47.843800	Y 377.433
U (409.013 nm)	-0.214993 u	ppm	0.000643	0.30	-398.020000	Y 377.433
V (292.401 nm)	0.556800	ppm	0.001333	0.24	30397.700000	Y 377.433
Zn (206.200 nm)	0.988278	ppm	0.003665	0.37	4574.310000	Y 377.433
Zr (343.823 nm)	0.190797	ppm	0.000090	0.05	11021.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.197842	22396.048182	0.001334	0.11
Y 377.433	1.230371	683565.287982	0.002518	0.20
Y_R 377.433	1.276540	62149.100000	0.002925	0.23
Y_R 488.368	1.257200	53765.600000	0.001612	0.13
Y_R2 488.368	1.254134	104746.392618	0.001990	0.16
Y_R4	1.296980	49864.900000	0.000790	0.06

Sample Name: 280-122205-A-16-D

Date: 5/10/2019 7:28:03 PM

Rack:Tube: 1:73

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000519	ppm	0.000067	12.85	-367.270000	Y 377.433
Al (394.401 nm)	337.540000 o	ppm	0.624694	0.19	4240960.000000	Y 377.433
Al H (396.152 nm)	338.441000	ppm	0.704170	0.21	761787.000000	Y_R 377.433
As (188.980 nm)	0.141697	ppm	0.000227	0.16	191.060000	Y 242.219
B (249.678 nm)	0.153571	ppm	0.001418	0.92	945.940000	Y 242.219
Ba (493.408 nm)	2.482030	ppm	0.000461	0.02	262384.000000	Y_R 488.368
Be (234.861 nm)	0.029338	ppm	0.000083	0.28	-432.125000	Y_R 488.368
Bi (223.061 nm)	-0.025578 u	ppm	0.003306	12.93	0.955017	Y 377.433
Ca (315.887 nm)	63.710681	ppm	0.022923	0.04	52709.025564	Y_R 377.433
Cd (214.439 nm)	0.002819	ppm	0.000103	3.64	265.841000	Y 377.433
Co (228.615 nm)	0.139211	ppm	0.000387	0.28	4062.240000	Y 242.219
Cr (205.560 nm)	1.658810	ppm	0.002351	0.14	11477.300000	Y 377.433
Cu (324.754 nm)	0.293751	ppm	0.002988	1.02	14872.400000	Y 377.433
Fe (238.204 nm)	398.930280 o	ppm	0.079924	0.02	997318.379873	Y_R 377.433
Fe H (259.940 nm)	401.157000	ppm	0.109511	0.03	576529.000000	Y_R 377.433
K (766.491 nm)	98.052600	ppm	0.329347	0.34	105311.000000	Y_R2 488.368
Li (670.783 nm)	0.374545	ppm	0.002372	0.63	3927.930000	Y_R2 488.368
Mg (279.078 nm)	86.783700	ppm	0.015142	0.02	303651.000000	Y 377.433
Mn (257.610 nm)	8.047090	ppm	0.006904	0.09	2319280.000000	Y 377.433
Mo (202.032 nm)	0.009742	ppm	0.000006	0.06	140.488000	Y 377.433
Na (589.592 nm)	3.799950	ppm	0.024815	0.65	4071.700000	Y_R2 488.368
Na H (589.593 nm)	0.393281 u	ppm	0.026507	6.74	705.871434	Y_R4
Ni (231.604 nm)	0.344145	ppm	0.000705	0.20	1856.940000	Y 377.433
P (213.618 nm)	7.808410	ppm	0.010515	0.13	11998.600000	Y 242.219
Pb (220.353 nm)	0.240419	ppm	0.001593	0.66	737.672000	Y 242.219
S (181.972 nm)	0.814468	ppm	0.002342	0.29	435.277467	Y 377.433
Sb (206.834 nm)	0.007551	ppm	0.002016	26.70	-3.911850	Y 377.433
Se (196.026 nm)	0.006987	ppm	0.000010	0.14	-78.619900	Y 242.219
Si (288.158 nm)	11.367000	ppm	0.195909	1.72	76440.100000	Y 377.433
Sn (189.925 nm)	0.022302	ppm	0.001619	7.26	45.798600	Y 377.433
Sr (421.552 nm)	0.465466	ppm	0.000002	0.00	74916.864195	Y_R 488.368
Th (288.505 nm)	0.257176	ppm	0.003047	1.18	528.454000	Y 377.433
Ti (336.122 nm)	12.895600	ppm	0.011538	0.09	1700960.000000	Y 377.433
Tl (190.794 nm)	0.024125	ppm	0.000695	2.88	-50.417000	Y 377.433
U (409.013 nm)	-0.215160 u	ppm	0.005224	2.43	-399.714000	Y 377.433
V (292.401 nm)	0.561729	ppm	0.000286	0.05	30192.700000	Y 377.433
Zn (206.200 nm)	0.980552	ppm	0.001153	0.12	4538.830000	Y 377.433
Zr (343.823 nm)	0.193182	ppm	0.000295	0.15	11161.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.198850	22414.885013	0.011356	0.95
Y 377.433	1.231233	684043.870402	0.009884	0.80
Y_R 377.433	1.291750	62889.700000	0.003187	0.25
Y_R 488.368	1.270230	54323.100000	0.001760	0.14
Y_R2 488.368	1.261677	105376.371956	0.006418	0.51
Y_R4	1.305510	50192.700000	0.007862	0.60

Sample Name: MB 280-457548/1-A

Date: 5/10/2019 7:31:48 PM

Rack:Tube: 1:74

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000699 u	ppm	0.000139	19.86	-209.879000	Y 377.433
Al (394.401 nm)	0.014978	ppm	0.007607	50.79	213.358000	Y 377.433
Al H (396.152 nm)	0.119907 u	ppm	0.000136	0.11	49.813800	Y_R 377.433
As (188.980 nm)	-0.000997 u	ppm	0.000355	35.65	-3.411510	Y 242.219
B (249.678 nm)	0.000288	ppm	0.000248	86.20	14.046400	Y 242.219
Ba (493.408 nm)	-0.001135 u	ppm	0.000759	66.82	1509.460000	Y_R 488.368
Be (234.861 nm)	-0.000045 u	ppm	0.000041	91.06	-5.644090	Y_R 488.368
Bi (223.061 nm)	0.004978	ppm	0.000087	1.75	0.066314	Y 377.433
Ca (315.887 nm)	0.013529	ppm	0.002662	19.67	-62.051077	Y_R 377.433
Cd (214.439 nm)	-0.000056 u	ppm	0.000083	> 100.00	-8.910140	Y 377.433
Co (228.615 nm)	0.000265	ppm	0.000119	44.97	-16.711400	Y 242.219
Cr (205.560 nm)	0.000950	ppm	0.001106	> 100.00	-1.540070	Y 377.433
Cu (324.754 nm)	-0.000466 u	ppm	0.000208	44.64	488.822000	Y 377.433
Fe (238.204 nm)	0.011762	ppm	0.000508	4.32	33.575190	Y_R 377.433
Fe H (259.940 nm)	0.042990 u	ppm	0.000990	2.30	33.794800	Y_R 377.433
K (766.491 nm)	0.256172	ppm	0.014454	5.64	2451.030000	Y_R2 488.368
Li (670.783 nm)	0.000790	ppm	0.000112	14.22	-2871.650000	Y_R2 488.368
Mg (279.078 nm)	0.004753	ppm	0.001786	37.57	32.914700	Y 377.433
Mn (257.610 nm)	0.000431	ppm	0.000100	23.19	100.599000	Y 377.433
Mo (202.032 nm)	0.000475	ppm	0.000576	> 100.00	17.903200	Y 377.433
Na (589.592 nm)	-0.000190 u	ppm	0.055405	> 100.00	170.902000	Y_R2 488.368
Na H (589.593 nm)	-0.482433 u	ppm	0.015091	3.13	198.320038	Y_R4
Ni (231.604 nm)	-0.000370 u	ppm	0.000677	> 100.00	-12.462500	Y 377.433
P (213.618 nm)	-0.003817 u	ppm	0.000993	26.00	-2.282410	Y 242.219
Pb (220.353 nm)	-0.000339 u	ppm	0.001956	> 100.00	6.859640	Y 242.219
S (181.972 nm)	0.005277	ppm	0.000283	5.36	10.055472	Y 377.433
Sb (206.834 nm)	-0.001407 u	ppm	0.001722	> 100.00	-0.345263	Y 377.433
Se (196.026 nm)	-0.000088 u	ppm	0.000941	> 100.00	5.438130	Y 242.219
Si (288.158 nm)	0.009312	ppm	0.006896	74.06	570.606000	Y 377.433
Sn (189.925 nm)	-0.005039 u	ppm	0.001464	29.06	0.804747	Y 377.433
Sr (421.552 nm)	-0.000073 u	ppm	0.000054	73.70	91.205747	Y_R 488.368
Th (288.505 nm)	-0.001806 u	ppm	0.005380	> 100.00	16.164800	Y 377.433
Ti (336.122 nm)	0.001555	ppm	0.000140	8.98	-315.828000	Y 377.433
Tl (190.794 nm)	0.002153	ppm	0.000943	43.83	5.372530	Y 377.433
U (409.013 nm)	-0.003510 u	ppm	0.007991	> 100.00	18.820600	Y 377.433
V (292.401 nm)	-0.000178 u	ppm	0.000339	> 100.00	-104.177000	Y 377.433
Zn (206.200 nm)	0.000080 u	ppm	0.000142	> 100.00	3.452450	Y 377.433
Zr (343.823 nm)	0.000502	ppm	0.000095	18.86	-144.065000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.037281	19394.041895	0.003538	0.34
Y 377.433	1.043203	579579.094690	0.002942	0.28
Y_R 377.433	1.038470	50558.800000	0.002280	0.22
Y_R 488.368	1.030540	44072.300000	0.004359	0.42
Y_R2 488.368	1.017801	85007.648499	0.000731	0.07
Y_R4	1.039520	39966.200000	0.005200	0.50

Sample Name: LCS 280-457548/2-A

Date: 5/10/2019 7:35:01 PM

Rack:Tube: 1:75

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.049651	ppm	0.000166	0.33	1321.230000	Y 377.433
Al (394.401 nm)	9.684520 o	ppm	0.018349	0.19	121997.000000	Y 377.433
Al H (396.152 nm)	9.858860	ppm	0.033829	0.34	22451.500000	Y_R 377.433
As (188.980 nm)	1.924690	ppm	0.002952	0.15	3059.580000	Y 242.219
B (249.678 nm)	0.932829	ppm	0.001339	0.14	7152.460000	Y 242.219
Ba (493.408 nm)	1.927390	ppm	0.005352	0.28	203868.000000	Y_R 488.368
Be (234.861 nm)	0.950137	ppm	0.002113	0.22	100754.000000	Y_R 488.368
Bi (223.061 nm)	1.919960	ppm	0.007210	0.38	4212.980000	Y 377.433
Ca (315.887 nm)	48.444239	ppm	0.050561	0.10	39997.505646	Y_R 377.433
Cd (214.439 nm)	0.944617	ppm	0.001724	0.18	36186.900000	Y 377.433
Co (228.615 nm)	0.927760	ppm	0.001307	0.14	23241.600000	Y 242.219
Cr (205.560 nm)	0.942101	ppm	0.000788	0.08	6513.040000	Y 377.433
Cu (324.754 nm)	0.922580	ppm	0.005793	0.63	45832.500000	Y 377.433
Fe (238.204 nm)	9.688481 o	ppm	0.027172	0.28	24225.095116	Y_R 377.433
Fe H (259.940 nm)	9.681150	ppm	0.027073	0.28	13886.100000	Y_R 377.433
K (766.491 nm)	48.939800	ppm	0.094417	0.19	53655.500000	Y_R2 488.368
Li (670.783 nm)	0.966709	ppm	0.003172	0.33	14700.900000	Y_R2 488.368
Mg (279.078 nm)	46.928300	ppm	0.093419	0.20	164458.000000	Y 377.433
Mn (257.610 nm)	0.952116	ppm	0.001677	0.18	274392.000000	Y 377.433
Mo (202.032 nm)	0.966561	ppm	0.001152	0.12	12797.900000	Y 377.433
Na (589.592 nm)	49.468300	ppm	0.205583	0.42	43636.600000	Y_R2 488.368
Na H (589.593 nm)	45.985388 u	ppm	0.001548	0.00	27130.413459	Y_R4
Ni (231.604 nm)	0.922087	ppm	0.001351	0.15	4995.160000	Y 377.433
P (213.618 nm)	18.425100	ppm	0.043381	0.24	28199.900000	Y 242.219
Pb (220.353 nm)	0.952910	ppm	0.000484	0.05	3214.130000	Y 242.219
S (181.972 nm)	8.953155	ppm	0.040257	0.45	4388.282880	Y 377.433
Sb (206.834 nm)	0.944221	ppm	0.003760	0.40	1756.720000	Y 377.433
Se (196.026 nm)	1.894240	ppm	0.001617	0.09	3038.430000	Y 242.219
Si (288.158 nm)	1.965190	ppm	0.000937	0.05	13635.900000	Y 377.433
Sn (189.925 nm)	1.913540	ppm	0.000111	0.01	3158.170000	Y 377.433
Sr (421.552 nm)	0.959010	ppm	0.002532	0.26	154115.946503	Y_R 488.368
Th (288.505 nm)	0.980122	ppm	0.004650	0.47	1647.920000	Y 377.433
Ti (336.122 nm)	0.970996	ppm	0.001670	0.17	127750.000000	Y 377.433
Tl (190.794 nm)	1.878000	ppm	0.007538	0.40	4583.260000	Y 377.433
U (409.013 nm)	1.978870	ppm	0.007364	0.37	6293.120000	Y 377.433
V (292.401 nm)	0.960552	ppm	0.002065	0.21	51504.300000	Y 377.433
Zn (206.200 nm)	0.470709	ppm	0.002541	0.54	2155.230000	Y 377.433
Zr (343.823 nm)	0.476743	ppm	0.001239	0.26	27798.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.988818	18487.919584	0.001949	0.20
Y 377.433	1.005830	558815.427181	0.000433	0.04
Y_R 377.433	1.013150	49325.700000	0.001344	0.13
Y_R 488.368	1.000630	42793.000000	0.003703	0.37
Y_R2 488.368	1.002334	83715.762301	0.005868	0.59
Y_R4	1.037760	39898.600000	0.005767	0.56

Sample Name: 280-123188-C-1-E

Date: 5/10/2019 7:38:45 PM

Rack:Tube: 1:76

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000270	ppm	0.000016	6.00	-175.803000	Y 377.433
Al (394.401 nm)	1.446700	ppm	0.000489	0.03	18346.700000	Y 377.433
Al H (396.152 nm)	1.498740	ppm	0.002848	0.19	3317.430000	Y_R 377.433
As (188.980 nm)	0.004376	ppm	0.001956	44.71	5.020880	Y 242.219
B (249.678 nm)	0.007349	ppm	0.001735	23.61	67.718700	Y 242.219
Ba (493.408 nm)	0.026014	ppm	0.000020	0.08	4358.650000	Y_R 488.368
Be (234.861 nm)	0.000110	ppm	0.000019	17.67	4.547560	Y_R 488.368
Bi (223.061 nm)	0.005085	ppm	0.000415	8.16	0.427367	Y 377.433
Ca (315.887 nm)	221.959502	ppm	0.044486	0.02	183509.627048	Y_R 377.433
Cd (214.439 nm)	0.001316	ppm	0.000003	0.19	43.924300	Y 377.433
Co (228.615 nm)	0.004269	ppm	0.000347	8.12	83.497500	Y 242.219
Cr (205.560 nm)	0.000189	ppm	0.000038	19.86	-6.861890	Y 377.433
Cu (324.754 nm)	0.099826	ppm	0.000284	0.28	5275.940000	Y 377.433
Fe (238.204 nm)	0.714322	ppm	0.002252	0.32	1789.955982	Y_R 377.433
Fe H (259.940 nm)	0.741850 u	ppm	0.005368	0.72	1038.220000	Y_R 377.433
K (766.491 nm)	3.147770	ppm	0.032133	1.02	5492.350000	Y_R2 488.368
Li (670.783 nm)	0.012286	ppm	0.003660	29.79	-2662.500000	Y_R2 488.368
Mg (279.078 nm)	12.680400	ppm	0.014997	0.12	44460.100000	Y 377.433
Mn (257.610 nm)	1.087000	ppm	0.000684	0.06	313266.000000	Y 377.433
Mo (202.032 nm)	0.000086	ppm	0.000111	> 100.00	12.758600	Y 377.433
Na (589.592 nm)	12.614000	ppm	0.010067	0.08	11143.000000	Y_R2 488.368
Na H (589.593 nm)	11.867908 u	ppm	0.069828	0.59	7356.403521	Y_R4
Ni (231.604 nm)	0.005061	ppm	0.000291	5.74	17.005600	Y 377.433
P (213.618 nm)	0.025301	ppm	0.004565	18.04	16.836300	Y 242.219
Pb (220.353 nm)	-0.001355 u	ppm	0.000401	29.56	3.338190	Y 242.219
S (181.972 nm)	191.319135 bo	ppm	0.597501	0.31	93516.126737	Y 377.433
Sb (206.834 nm)	-0.003027 u	ppm	0.002670	88.21	-3.339050	Y 377.433
Se (196.026 nm)	0.001922	ppm	0.002036	> 100.00	10.036300	Y 242.219
Si (288.158 nm)	3.625920	ppm	0.004626	0.13	24729.600000	Y 377.433
Sn (189.925 nm)	-0.003266 u	ppm	0.000598	18.30	3.721190	Y 377.433
Sr (421.552 nm)	0.511184	ppm	0.000905	0.18	82196.325494	Y_R 488.368
Th (288.505 nm)	-0.016426 u	ppm	0.004860	29.59	6.364900	Y 377.433
Ti (336.122 nm)	0.000491	ppm	0.000081	16.41	296.481000	Y 377.433
Tl (190.794 nm)	0.007001	ppm	0.000966	13.79	8.076510	Y 377.433
U (409.013 nm)	0.030252	ppm	0.003853	12.74	98.396700	Y 377.433
V (292.401 nm)	0.001434	ppm	0.000206	14.34	-21.737600	Y 377.433
Zn (206.200 nm)	0.151857	ppm	0.000655	0.43	697.063000	Y 377.433
Zr (343.823 nm)	0.000898	ppm	0.000266	29.61	-120.828000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.012707	18934.577819	0.000077	0.01
Y 377.433	1.027478	570842.458708	0.000198	0.02
Y_R 377.433	1.031650	50226.400000	0.002198	0.21
Y_R 488.368	1.018520	43558.300000	0.001182	0.12
Y_R2 488.368	1.021064	85280.143399	0.005634	0.55
Y_R4	1.028480	39541.900000	0.000401	0.04

Sample Name: 280-123188-C-1-Esd@5

Date: 5/10/2019 7:42:19 PM

Rack:Tube: 1:77

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000146 u	ppm	0.000682	> 100.00	-190.091000	Y 377.433
Al (394.401 nm)	0.292575	ppm	0.004112	1.41	3734.500000	Y 377.433
Al H (396.152 nm)	0.378495 u	ppm	0.002262	0.60	663.441000	Y_R 377.433
As (188.980 nm)	0.000929	ppm	0.000664	71.46	-0.369369	Y 242.219
B (249.678 nm)	0.002615	ppm	0.000056	2.13	31.803200	Y 242.219
Ba (493.408 nm)	0.004197	ppm	0.000174	4.14	2068.990000	Y_R 488.368
Be (234.861 nm)	0.000006 u	ppm	0.000024	> 100.00	-1.370780	Y_R 488.368
Bi (223.061 nm)	0.002767	ppm	0.000591	21.36	-4.773780	Y 377.433
Ca (315.887 nm)	43.109369	ppm	0.113410	0.26	35582.550169	Y_R 377.433
Cd (214.439 nm)	0.000376	ppm	0.000030	8.09	7.665200	Y 377.433
Co (228.615 nm)	0.000855	ppm	0.000142	16.63	-1.981550	Y 242.219
Cr (205.560 nm)	0.000106	ppm	0.000091	85.58	-7.396290	Y 377.433
Cu (324.754 nm)	0.018762	ppm	0.000062	0.33	1403.780000	Y 377.433
Fe (238.204 nm)	0.136115	ppm	0.000266	0.20	344.453589	Y_R 377.433
Fe H (259.940 nm)	0.165772 u	ppm	0.002995	1.81	210.262000	Y_R 377.433
K (766.491 nm)	0.578282	ppm	0.035279	6.10	2789.810000	Y_R2 488.368
Li (670.783 nm)	0.002645	ppm	0.000610	23.07	-2837.900000	Y_R2 488.368
Mg (279.078 nm)	2.555330	ppm	0.036890	1.44	8972.000000	Y 377.433
Mn (257.610 nm)	0.217381	ppm	0.003306	1.52	62629.100000	Y 377.433
Mo (202.032 nm)	0.000241	ppm	0.000264	> 100.00	14.801400	Y 377.433
Na (589.592 nm)	2.467750	ppm	0.018471	0.75	2317.610000	Y_R2 488.368
Na H (589.593 nm)	1.922537 u	ppm	0.011852	0.62	1592.206526	Y_R4
Ni (231.604 nm)	0.000406	ppm	0.000268	65.95	-8.254880	Y 377.433
P (213.618 nm)	-0.002495 u	ppm	0.001250	50.11	-5.140700	Y 242.219
Pb (220.353 nm)	-0.001911 u	ppm	0.001029	53.86	1.627800	Y 242.219
S (181.972 nm)	37.399484	ppm	0.537915	1.44	18286.740832	Y 377.433
Sb (206.834 nm)	-0.001976 u	ppm	0.002292	> 100.00	-1.402910	Y 377.433
Se (196.026 nm)	0.001757	ppm	0.000440	25.02	8.672840	Y 242.219
Si (288.158 nm)	0.692615	ppm	0.009012	1.30	5135.080000	Y 377.433
Sn (189.925 nm)	-0.003007 u	ppm	0.000512	17.02	4.148750	Y 377.433
Sr (421.552 nm)	0.098763	ppm	0.000302	0.31	15963.783979	Y_R 488.368
Th (288.505 nm)	-0.008671 u	ppm	0.001573	18.14	7.540260	Y 377.433
Ti (336.122 nm)	0.000395	ppm	0.000016	4.05	-323.480000	Y 377.433
Tl (190.794 nm)	0.001820	ppm	0.000263	14.47	2.795080	Y 377.433
U (409.013 nm)	0.021114	ppm	0.005368	25.42	92.017100	Y 377.433
V (292.401 nm)	0.000456	ppm	0.000284	62.36	-72.609100	Y 377.433
Zn (206.200 nm)	0.030178	ppm	0.000051	0.17	140.996000	Y 377.433
Zr (343.823 nm)	0.000460	ppm	0.000021	4.49	-146.513000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.031790	19291.368884	0.002888	0.28
Y 377.433	1.039563	577556.546950	0.002798	0.27
Y_R 377.433	1.041470	50704.800000	0.002669	0.26
Y_R 488.368	1.023310	43763.200000	0.003896	0.38
Y_R2 488.368	1.027431	85811.905492	0.000826	0.08
Y_R4	1.029200	39569.500000	0.005160	0.50

Sample Name: 280-123188-C-1-F MS

Date: 5/10/2019 7:45:49 PM

Rack:Tube: 1:78

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.051623	ppm	0.000339	0.66	1373.970000	Y 377.433
Al (394.401 nm)	11.487400 o	ppm	0.018549	0.16	144791.000000	Y 377.433
Al H (396.152 nm)	11.533000	ppm	0.010618	0.09	26395.600000	Y_R 377.433
As (188.980 nm)	2.013670	ppm	0.000490	0.02	3201.010000	Y 242.219
B (249.678 nm)	0.986343	ppm	0.000421	0.04	7561.850000	Y 242.219
Ba (493.408 nm)	1.993740	ppm	0.001716	0.09	210832.000000	Y_R 488.368
Be (234.861 nm)	0.963987	ppm	0.000392	0.04	102215.000000	Y_R 488.368
Bi (223.061 nm)	1.986390	ppm	0.001991	0.10	4359.230000	Y 377.433
Ca (315.887 nm)	268.034684	ppm	0.228384	0.09	221621.012482	Y_R 377.433
Cd (214.439 nm)	0.943095	ppm	0.002579	0.27	36129.000000	Y 377.433
Co (228.615 nm)	0.941229	ppm	0.000003	0.00	23579.400000	Y 242.219
Cr (205.560 nm)	0.957780	ppm	0.004108	0.43	6621.510000	Y 377.433
Cu (324.754 nm)	1.050800	ppm	0.004482	0.43	51998.100000	Y 377.433
Fe (238.204 nm)	10.644106 o	ppm	0.002701	0.03	26614.128158	Y_R 377.433
Fe H (259.940 nm)	10.646900	ppm	0.007474	0.07	15274.100000	Y_R 377.433
K (766.491 nm)	53.834900	ppm	0.017768	0.03	58804.100000	Y_R2 488.368
Li (670.783 nm)	1.013800	ppm	0.001718	0.17	15557.700000	Y_R2 488.368
Mg (279.078 nm)	60.158800	ppm	0.171729	0.29	210830.000000	Y 377.433
Mn (257.610 nm)	2.011090	ppm	0.002259	0.11	579606.000000	Y 377.433
Mo (202.032 nm)	0.983601	ppm	0.001544	0.16	13023.400000	Y 377.433
Na (589.592 nm)	63.535300 o	ppm	0.254076	0.40	55881.000000	Y_R2 488.368
Na H (589.593 nm)	60.240251	ppm	0.085590	0.14	35392.330829	Y_R4
Ni (231.604 nm)	0.929871	ppm	0.003966	0.43	5037.400000	Y 377.433
P (213.618 nm)	19.200400	ppm	0.004786	0.02	29363.100000	Y 242.219
Pb (220.353 nm)	0.958062	ppm	0.002506	0.26	3231.250000	Y 242.219
S (181.972 nm)	201.907733 bo	ppm	0.914014	0.45	98695.999247	Y 377.433
Sb (206.834 nm)	1.001250	ppm	0.003863	0.39	1863.020000	Y 377.433
Se (196.026 nm)	1.947490	ppm	0.007693	0.40	3125.020000	Y 242.219
Si (288.158 nm)	5.644150	ppm	0.007032	0.12	38211.300000	Y 377.433
Sn (189.925 nm)	1.942240	ppm	0.007494	0.39	3205.410000	Y 377.433
Sr (421.552 nm)	1.490343	ppm	0.003190	0.21	239445.043248	Y_R 488.368
Th (288.505 nm)	0.992723	ppm	0.000970	0.10	1682.850000	Y 377.433
Ti (336.122 nm)	0.987138	ppm	0.001178	0.12	130627.000000	Y 377.433
Tl (190.794 nm)	1.873720	ppm	0.005169	0.28	4563.570000	Y 377.433
U (409.013 nm)	2.043030	ppm	0.003027	0.15	6475.130000	Y 377.433
V (292.401 nm)	0.982176	ppm	0.001614	0.16	52667.400000	Y 377.433
Zn (206.200 nm)	0.612645	ppm	0.003846	0.63	2803.900000	Y 377.433
Zr (343.823 nm)	0.436721	ppm	0.000015	0.00	25450.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.978457	18294.202600	0.000084	0.01
Y 377.433	1.003596	557574.228370	0.002158	0.22
Y_R 377.433	1.021360	49725.600000	0.001383	0.14
Y_R 488.368	1.007860	43102.500000	0.000018	0.00
Y_R2 488.368	1.005213	83956.283737	0.005094	0.51
Y_R4	1.021770	39283.800000	0.010005	0.98

Sample Name: CCVH-5690583

Date: 5/10/2019 7:49:55 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000363	ppm	0.000112	30.85	-308.248000	Y 377.433
Al (394.401 nm)	48.532800 o	ppm	0.039712	0.08	609911.000000	Y 377.433
Al H (396.152 nm)	48.717000	ppm	0.014417	0.03	109442.000000	Y_R 377.433
As (188.980 nm)	0.005712	ppm	0.003031	53.07	2.860010	Y 242.219
B (249.678 nm)	0.007010	ppm	0.000291	4.15	36.575800	Y 242.219
Ba (493.408 nm)	0.001956	ppm	0.000397	20.30	1873.000000	Y_R 488.368
Be (234.861 nm)	0.002499	ppm	0.000065	2.59	-159.340000	Y_R 488.368
Bi (223.061 nm)	0.945749	ppm	0.001972	0.21	2076.990000	Y 377.433
Ca (315.887 nm)	0.018899	ppm	0.021952	> 100.00	-45.101239	Y_R 377.433
Cd (214.439 nm)	0.000860	ppm	0.000061	7.11	45.827000	Y 377.433
Co (228.615 nm)	0.004143	ppm	0.000311	7.50	80.373900	Y 242.219
Cr (205.560 nm)	0.001330	ppm	0.000371	27.91	-0.248563	Y 377.433
Cu (324.754 nm)	0.006248	ppm	0.000440	7.04	1215.870000	Y 377.433
Fe (238.204 nm)	47.591447 o	ppm	0.026441	0.06	118981.418088	Y_R 377.433
Fe H (259.940 nm)	47.499800	ppm	0.023155	0.05	68240.400000	Y_R 377.433
K (766.491 nm)	1.133390	ppm	0.179182	15.81	3373.660000	Y_R2 488.368
Li (670.783 nm)	-0.000511 u	ppm	0.005407	> 100.00	-2895.310000	Y_R2 488.368
Mg (279.078 nm)	0.017158	ppm	0.001503	8.76	-151.251000	Y 377.433
Mn (257.610 nm)	0.001396	ppm	0.000025	1.81	378.912000	Y 377.433
Mo (202.032 nm)	0.000624	ppm	0.000018	2.83	19.870600	Y 377.433
Na (589.592 nm)	239.118000 o	ppm	0.073826	0.03	208039.000000	Y_R2 488.368
Na H (589.593 nm)	244.157431	ppm	0.806295	0.33	141988.134309	Y_R4
Ni (231.604 nm)	0.002667	ppm	0.000303	11.37	4.015330	Y 377.433
P (213.618 nm)	-0.014394 u	ppm	0.000939	6.52	-25.751800	Y 242.219
Pb (220.353 nm)	0.008172	ppm	0.000577	7.07	51.274400	Y 242.219
S (181.972 nm)	4.741753	ppm	0.019198	0.40	2324.682324	Y 377.433
Sb (206.834 nm)	0.002518	ppm	0.000525	20.85	10.239900	Y 377.433
Se (196.026 nm)	0.001512 u	ppm	0.002396	> 100.00	-4.783480	Y 242.219
Si (288.158 nm)	0.029214	ppm	0.000833	2.85	703.554000	Y 377.433
Sn (189.925 nm)	-0.003645 u	ppm	0.001588	43.56	3.097450	Y 377.433
Sr (421.552 nm)	0.000903	ppm	0.000004	0.48	255.477251	Y_R 488.368
Th (288.505 nm)	4.864810	ppm	0.001368	0.03	8594.850000	Y 377.433
Ti (336.122 nm)	0.002010	ppm	0.000051	2.53	-255.704000	Y 377.433
Tl (190.794 nm)	0.001465	ppm	0.001857	> 100.00	-1.029880	Y 377.433
U (409.013 nm)	9.704930	ppm	0.026256	0.27	31064.900000	Y 377.433
V (292.401 nm)	-0.000774 u	ppm	0.000340	43.91	-135.039000	Y 377.433
Zn (206.200 nm)	0.003078	ppm	0.000281	9.13	23.767300	Y 377.433
Zr (343.823 nm)	-0.002700 u	ppm	0.000118	4.38	-331.951000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.998612	18671.049242	0.001241	0.12
Y 377.433	1.010685	561512.598489	0.000635	0.06
Y_R 377.433	1.031580	50223.000000	0.000592	0.06
Y_R 488.368	1.015040	43409.200000	0.000900	0.09
Y_R2 488.368	1.002130	83698.726062	0.003231	0.32
Y_R4	1.025630	39432.100000	0.002718	0.27

Sample Name: CCV-5690581

Date: 5/10/2019 7:54:01 PM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.478927	ppm	0.000581	0.12	17318.200000	Y 377.433
Al (394.401 nm)	0.490300	ppm	0.000678	0.14	6311.380000	Y 377.433
Al H (396.152 nm)	0.531670 u	ppm	0.007458	1.40	1221.670000	Y_R 377.433
As (188.980 nm)	0.956931	ppm	0.002233	0.23	1520.610000	Y 242.219
B (249.678 nm)	0.469479	ppm	0.001424	0.30	3607.110000	Y 242.219
Ba (493.408 nm)	0.481233	ppm	0.000849	0.18	52124.100000	Y_R 488.368
Be (234.861 nm)	0.473889	ppm	0.001732	0.37	50272.900000	Y_R 488.368
Bi (223.061 nm)	0.005542	ppm	0.000470	8.47	1.818630	Y 377.433
Ca (315.887 nm)	4.903399	ppm	0.000784	0.02	3982.491485	Y_R 377.433
Cd (214.439 nm)	0.484476	ppm	0.000788	0.16	18555.200000	Y 377.433
Co (228.615 nm)	0.484152	ppm	0.000189	0.04	12116.400000	Y 242.219
Cr (205.560 nm)	0.486302	ppm	0.000701	0.14	3358.210000	Y 377.433
Cu (324.754 nm)	0.482622	ppm	0.006750	1.40	24197.900000	Y 377.433
Fe (238.204 nm)	2.408962	ppm	0.004328	0.18	6026.507826	Y_R 377.433
Fe H (259.940 nm)	2.432770 u	ppm	0.005819	0.24	3468.460000	Y_R 377.433
K (766.491 nm)	48.217300	ppm	0.047413	0.10	52895.600000	Y_R2 488.368
Li (670.783 nm)	0.974752	ppm	0.002311	0.24	14847.200000	Y_R2 488.368
Mg (279.078 nm)	19.020400	ppm	0.039927	0.21	66681.100000	Y 377.433
Mn (257.610 nm)	0.480067	ppm	0.000636	0.13	138340.000000	Y 377.433
Mo (202.032 nm)	0.483951	ppm	0.000185	0.04	6413.650000	Y 377.433
Na (589.592 nm)	24.907700	ppm	0.042690	0.17	21939.200000	Y_R2 488.368
Na H (589.593 nm)	24.844190 u	ppm	0.051642	0.21	14877.273174	Y_R4
Ni (231.604 nm)	0.483795	ppm	0.002563	0.53	2615.840000	Y 377.433
P (213.618 nm)	0.934946	ppm	0.002162	0.23	1308.600000	Y 242.219
Pb (220.353 nm)	0.964611	ppm	0.003102	0.32	3253.030000	Y 242.219
S (181.972 nm)	0.006744	ppm	0.002716	40.27	12.599577	Y 377.433
Sb (206.834 nm)	0.969749	ppm	0.001384	0.14	1806.370000	Y 377.433
Se (196.026 nm)	0.955947	ppm	0.001499	0.16	1536.810000	Y 242.219
Si (288.158 nm)	4.750850	ppm	0.054358	1.14	32244.100000	Y 377.433
Sn (189.925 nm)	0.969796	ppm	0.002588	0.27	1605.080000	Y 377.433
Sr (421.552 nm)	0.479495	ppm	0.000479	0.10	77107.408746	Y_R 488.368
Th (288.505 nm)	0.007214	ppm	0.001590	22.04	-17.176200	Y 377.433
Ti (336.122 nm)	0.481301	ppm	0.000487	0.10	62995.600000	Y 377.433
Tl (190.794 nm)	0.976087	ppm	0.000780	0.08	2383.450000	Y 377.433
U (409.013 nm)	0.012175	ppm	0.007984	65.58	10.185400	Y 377.433
V (292.401 nm)	0.479887	ppm	0.000541	0.11	25682.100000	Y 377.433
Zn (206.200 nm)	0.483103	ppm	0.002296	0.48	2210.850000	Y 377.433
Zr (343.823 nm)	0.482973	ppm	0.000561	0.12	28164.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.016705	19009.328908	0.001133	0.11
Y 377.433	1.023716	568752.519131	0.000096	0.01
Y_R 377.433	1.031620	50225.400000	0.003432	0.33
Y_R 488.368	1.022750	43738.900000	0.000992	0.10
Y_R2 488.368	1.014440	84726.939506	0.001775	0.18
Y_R4	1.025420	39424.300000	0.000017	0.00

Sample Name: CCB

Date: 5/10/2019 7:57:31 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000125 u	ppm	0.000029	23.00	-188.807000	Y 377.433
Al (394.401 nm)	0.002074	ppm	0.001740	83.92	51.899800	Y 377.433
Al H (396.152 nm)	0.116605 Zu	ppm	0.000264	0.23	42.366900 Z	Y_R 377.433
As (188.980 nm)	0.002800	ppm	0.001251	44.67	2.630280	Y 242.219
B (249.678 nm)	0.000091 u	ppm	0.000241	> 100.00	12.549400	Y 242.219
Ba (493.408 nm)	-0.000927 u	ppm	0.000288	31.11	1531.330000	Y_R 488.368
Be (234.861 nm)	-0.000020 u	ppm	0.000048	> 100.00	-2.909490	Y_R 488.368
Bi (223.061 nm)	0.001522	ppm	0.000171	11.23	-7.536080	Y 377.433
Ca (315.887 nm)	0.003042	ppm	0.004174	> 100.00	-70.723091	Y_R 377.433
Cd (214.439 nm)	0.000012 u	ppm	0.000160	> 100.00	-6.312910	Y 377.433
Co (228.615 nm)	0.000233	ppm	0.000227	97.42	-17.585500	Y 242.219
Cr (205.560 nm)	-0.000063 u	ppm	0.000159	> 100.00	-8.556620	Y 377.433
Cu (324.754 nm)	-0.000541 u	ppm	0.000025	4.61	485.266000	Y 377.433
Fe (238.204 nm)	-0.001595 u	ppm	0.000326	20.43	0.183294	Y_R 377.433
Fe H (259.940 nm)	0.033303 u	ppm	0.002591	7.78	19.871900	Y_R 377.433
K (766.491 nm)	-0.101921 u	ppm	0.124492	> 100.00	2074.390000	Y_R2 488.368
Li (670.783 nm)	0.002324	ppm	0.000116	4.99	-2843.740000	Y_R2 488.368
Mg (279.078 nm)	-0.003114 u	ppm	0.001908	61.27	5.152570	Y 377.433
Mn (257.610 nm)	0.000087	ppm	0.000006	6.37	1.681880	Y 377.433
Mo (202.032 nm)	-0.000362 u	ppm	0.000046	12.81	6.825530	Y 377.433
Na (589.592 nm)	0.055858	ppm	0.047544	85.11	219.662000	Y_R2 488.368
Na H (589.593 nm)	0.030821 u	ppm	0.015805	51.28	495.794805	Y_R4
Ni (231.604 nm)	0.000113 u	ppm	0.000458	> 100.00	-9.848210	Y 377.433
P (213.618 nm)	-0.001100 u	ppm	0.002239	> 100.00	1.979570	Y 242.219
Pb (220.353 nm)	-0.000118 u	ppm	0.000649	> 100.00	7.639390	Y 242.219
S (181.972 nm)	0.003204	ppm	0.003424	> 100.00	9.040928	Y 377.433
Sb (206.834 nm)	-0.002816 u	ppm	0.005420	> 100.00	-2.971480	Y 377.433
Se (196.026 nm)	0.000663 u	ppm	0.002722	> 100.00	6.645180	Y 242.219
Si (288.158 nm)	-0.004397 u	ppm	0.000855	19.45	479.033000	Y 377.433
Sn (189.925 nm)	-0.004062 u	ppm	0.001557	38.34	2.411390	Y 377.433
Sr (421.552 nm)	-0.000062 u	ppm	0.000048	78.60	93.127010	Y_R 488.368
Th (288.505 nm)	0.000808	ppm	0.000321	39.74	20.838100	Y 377.433
Ti (336.122 nm)	0.000409	ppm	0.000092	22.52	-466.906000	Y 377.433
Tl (190.794 nm)	0.000176 u	ppm	0.001804	> 100.00	0.549687	Y 377.433
U (409.013 nm)	0.007006	ppm	0.002841	40.55	52.385600	Y 377.433
V (292.401 nm)	-0.000284 u	ppm	0.000194	68.32	-109.786000	Y 377.433
Zn (206.200 nm)	-0.000518 u	ppm	0.000011	2.17	0.721545	Y 377.433
Zr (343.823 nm)	0.000492	ppm	0.000028	5.75	-144.675000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.044690	19532.570880	0.001040	0.10
Y 377.433	1.049616	583141.806413	0.002466	0.23
Y_R 377.433	1.046160	50933.200000	0.000320	0.03
Y_R 488.368	1.036080	44309.300000	0.007379	0.71
Y_R2 488.368	1.031767	86174.066075	0.000647	0.06
Y_R4	1.030860	39633.500000	0.002464	0.24

Sample Name: CCVL-5695588

Date: 5/10/2019 8:00:43 PM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.008773	ppm	0.000093	1.06	135.407000	Y 377.433
Al (394.401 nm)	0.100879	ppm	0.000584	0.58	1301.540000	Y 377.433
Al H (396.152 nm)	0.214826 u	ppm	0.008403	3.91	268.780000	Y_R 377.433
As (188.980 nm)	0.013905	ppm	0.000813	5.85	20.288700	Y 242.219
B (249.678 nm)	0.093649	ppm	0.000049	0.05	729.241000	Y 242.219
Ba (493.408 nm)	0.008857	ppm	0.000225	2.54	2557.990000	Y_R 488.368
Be (234.861 nm)	0.000905	ppm	0.000028	3.09	94.426600	Y_R 488.368
Bi (223.061 nm)	0.090112	ppm	0.002669	2.96	187.301000	Y 377.433
Ca (315.887 nm)	0.204628	ppm	0.006030	2.95	96.033896	Y_R 377.433
Cd (214.439 nm)	0.005066	ppm	0.000068	1.35	187.337000	Y 377.433
Co (228.615 nm)	0.010385	ppm	0.000240	2.31	236.974000	Y 242.219
Cr (205.560 nm)	0.010284	ppm	0.000590	5.74	62.970800	Y 377.433
Cu (324.754 nm)	0.014527	ppm	0.000214	1.48	1222.950000	Y 377.433
Fe (238.204 nm)	0.094961	ppm	0.001527	1.61	241.569773	Y_R 377.433
Fe H (259.940 nm)	0.135374 u	ppm	0.004802	3.55	166.572000	Y_R 377.433
K (766.491 nm)	2.929370	ppm	0.067989	2.32	5262.640000	Y_R2 488.368
Li (670.783 nm)	0.021090	ppm	0.002362	11.20	-2502.350000	Y_R2 488.368
Mg (279.078 nm)	0.194391	ppm	0.001107	0.57	696.407000	Y 377.433
Mn (257.610 nm)	0.010250	ppm	0.000019	0.18	2930.620000	Y 377.433
Mo (202.032 nm)	0.018955	ppm	0.000025	0.13	262.370000	Y 377.433
Na (589.592 nm)	1.096020	ppm	0.005751	0.52	1126.230000	Y_R2 488.368
Na H (589.593 nm)	0.790848 u	ppm	0.005925	0.75	936.295336	Y_R4
Ni (231.604 nm)	0.040735	ppm	0.000712	1.75	210.592000	Y 377.433
P (213.618 nm)	2.658100	ppm	0.006959	0.26	4105.600000	Y 242.219
Pb (220.353 nm)	0.009313	ppm	0.000074	0.80	39.424500	Y 242.219
S (181.972 nm)	0.090320	ppm	0.001130	1.25	51.651986	Y 377.433
Sb (206.834 nm)	0.018230	ppm	0.001231	6.75	36.093900	Y 377.433
Se (196.026 nm)	0.020959	ppm	0.001430	6.82	39.143100	Y 242.219
Si (288.158 nm)	0.487887	ppm	0.001994	0.41	3767.490000	Y 377.433
Sn (189.925 nm)	0.095293	ppm	0.000759	0.80	165.919000	Y 377.433
Sr (421.552 nm)	0.008691	ppm	0.000074	0.85	1498.776764	Y_R 488.368
Th (288.505 nm)	0.006817 Q	ppm	0.001217	17.86	30.747000 Q	Y 377.433
Ti (336.122 nm)	0.010040	ppm	0.000059	0.59	804.326000	Y 377.433
Tl (190.794 nm)	0.014924	ppm	0.000820	5.49	36.493000	Y 377.433
U (409.013 nm)	0.063745	ppm	0.006581	10.32	232.532000	Y 377.433
V (292.401 nm)	0.009588	ppm	0.000118	1.23	417.176000	Y 377.433
Zn (206.200 nm)	0.020479	ppm	0.000208	1.02	96.673800	Y 377.433
Zr (343.823 nm)	0.010166 Q	ppm	0.000077	0.76	422.930000 Q	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.054143	19709.310823	0.003214	0.30
Y 377.433	1.057832	587706.487281	0.002570	0.24
Y_R 377.433	1.061560	51682.800000	0.006152	0.58
Y_R 488.368	1.048060	44821.500000	0.006835	0.65
Y_R2 488.368	1.046973	87444.112084	0.001512	0.14
Y_R4	1.047750	40282.600000	0.001896	0.18

Sample Name: 280-123188-C-1-G MSD

Date: 5/10/2019 8:04:09 PM

Rack:Tube: 1:79

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.052500	ppm	0.000007	0.01	1403.130000	Y 377.433
Al (394.401 nm)	11.488400 o	ppm	0.004900	0.04	144806.000000	Y 377.433
Al H (396.152 nm)	11.522700	ppm	0.023765	0.21	26376.700000	Y_R 377.433
As (188.980 nm)	2.028730	ppm	0.004366	0.22	3224.980000	Y 242.219
B (249.678 nm)	0.984911	ppm	0.000729	0.07	7550.910000	Y 242.219
Ba (493.408 nm)	2.010900	ppm	0.002781	0.14	212631.000000	Y_R 488.368
Be (234.861 nm)	0.972577	ppm	0.006867	0.71	103127.000000	Y_R 488.368
Bi (223.061 nm)	1.978000	ppm	0.005383	0.27	4340.770000	Y 377.433
Ca (315.887 nm)	270.430296	ppm	0.346088	0.13	223602.414644	Y_R 377.433
Cd (214.439 nm)	0.951282	ppm	0.000854	0.09	36442.600000	Y 377.433
Co (228.615 nm)	0.948462	ppm	0.003153	0.33	23760.800000	Y 242.219
Cr (205.560 nm)	0.961736	ppm	0.005511	0.57	6648.880000	Y 377.433
Cu (324.754 nm)	1.061340	ppm	0.005139	0.48	52514.600000	Y 377.433
Fe (238.204 nm)	10.599003 o	ppm	0.030290	0.29	26501.372240	Y_R 377.433
Fe H (259.940 nm)	10.609800	ppm	0.041551	0.39	15220.800000	Y_R 377.433
K (766.491 nm)	53.645300	ppm	0.225842	0.42	58604.600000	Y_R2 488.368
Li (670.783 nm)	1.019060	ppm	0.001916	0.19	15653.400000	Y_R2 488.368
Mg (279.078 nm)	60.260100	ppm	0.108513	0.18	211184.000000	Y 377.433
Mn (257.610 nm)	2.028440	ppm	0.001107	0.05	584606.000000	Y 377.433
Mo (202.032 nm)	0.991706	ppm	0.000979	0.10	13130.600000	Y 377.433
Na (589.592 nm)	63.926400 o	ppm	0.376785	0.59	56225.200000	Y_R2 488.368
Na H (589.593 nm)	61.104559	ppm	0.020745	0.03	35893.271874	Y_R4
Ni (231.604 nm)	0.938110	ppm	0.000705	0.08	5082.110000	Y 377.433
P (213.618 nm)	19.352800	ppm	0.048742	0.25	29595.900000	Y 242.219
Pb (220.353 nm)	0.969618	ppm	0.003176	0.33	3270.150000	Y 242.219
S (181.972 nm)	203.501250 bo	ppm	0.797146	0.39	99474.834709	Y 377.433
Sb (206.834 nm)	1.008080	ppm	0.001531	0.15	1875.720000	Y 377.433
Se (196.026 nm)	1.966170	ppm	0.012505	0.64	3154.950000	Y 242.219
Si (288.158 nm)	5.726690	ppm	0.003485	0.06	38762.800000	Y 377.433
Sn (189.925 nm)	1.956470	ppm	0.000973	0.05	3228.830000	Y 377.433
Sr (421.552 nm)	1.504391	ppm	0.001056	0.07	241701.014047	Y_R 488.368
Th (288.505 nm)	0.993608	ppm	0.006418	0.65	1683.860000	Y 377.433
Ti (336.122 nm)	0.994760	ppm	0.001028	0.10	131638.000000	Y 377.433
Tl (190.794 nm)	1.885750	ppm	0.006311	0.33	4592.880000	Y 377.433
U (409.013 nm)	2.056580	ppm	0.017133	0.83	6518.220000	Y 377.433
V (292.401 nm)	0.989968	ppm	0.000224	0.02	53085.900000	Y 377.433
Zn (206.200 nm)	0.613634	ppm	0.000577	0.09	2808.420000	Y 377.433
Zr (343.823 nm)	0.436104	ppm	0.000107	0.02	25414.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.964895	18040.631912	0.001683	0.17
Y 377.433	0.990372	550227.186141	0.002172	0.22
Y_R 377.433	1.008500	49099.500000	0.003197	0.32
Y_R 488.368	0.993433	42485.400000	0.003576	0.36
Y_R2 488.368	0.988311	82544.584963	0.008588	0.87
Y_R4	1.014870	39018.400000	0.005693	0.56

Sample Name: 280-123188-C-2-C

Date: 5/10/2019 8:07:46 PM

Rack:Tube: 1:80

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000860	ppm	0.000403	46.91	-153.318000	Y 377.433
Al (394.401 nm)	1.961170	ppm	0.003368	0.17	24989.700000	Y 377.433
Al H (396.152 nm)	1.926820	ppm	0.008459	0.44	4501.270000	Y_R 377.433
As (188.980 nm)	0.002764	ppm	0.000612	22.14	2.434520	Y 242.219
B (249.678 nm)	0.008245	ppm	0.000281	3.40	74.942300	Y 242.219
Ba (493.408 nm)	0.007633	ppm	0.000675	8.84	2429.520000	Y_R 488.368
Be (234.861 nm)	-0.000012 u	ppm	0.000073	> 100.00	-3.212510	Y_R 488.368
Bi (223.061 nm)	-0.000922 u	ppm	0.000763	82.79	-12.880500	Y 377.433
Ca (315.887 nm)	599.559385	ppm	1.060973	0.18	495822.263368	Y_R 377.433
Cd (214.439 nm)	0.001070	ppm	0.000149	13.89	34.263900	Y 377.433
Co (228.615 nm)	0.001099	ppm	0.000344	31.27	4.070740	Y 242.219
Cr (205.560 nm)	0.000498	ppm	0.000045	9.10	-4.734950	Y 377.433
Cu (324.754 nm)	0.041985	ppm	0.000021	0.05	2221.720000	Y 377.433
Fe (238.204 nm)	0.122487	ppm	0.000668	0.55	310.385419	Y_R 377.433
Fe H (259.940 nm)	0.143134 u	ppm	0.003244	2.27	177.725000	Y_R 377.433
K (766.491 nm)	4.222310	ppm	0.079924	1.89	6622.540000	Y_R2 488.368
Li (670.783 nm)	0.028893	ppm	0.000798	2.76	-2360.380000	Y_R2 488.368
Mg (279.078 nm)	28.670800	ppm	0.062847	0.22	100510.000000	Y 377.433
Mn (257.610 nm)	1.950770	ppm	0.003256	0.17	562220.000000	Y 377.433
Mo (202.032 nm)	0.000636	ppm	0.000018	2.89	20.024000	Y 377.433
Na (589.592 nm)	33.135000	ppm	0.109177	0.33	28977.600000	Y_R2 488.368
Na H (589.593 nm)	32.538693 u	ppm	0.191695	0.59	19336.898909	Y_R4
Ni (231.604 nm)	-0.000181 u	ppm	0.000442	> 100.00	-11.436400	Y 377.433
P (213.618 nm)	0.001265	ppm	0.001669	> 100.00	-6.404360	Y 242.219
Pb (220.353 nm)	-0.000076 u	ppm	0.001118	> 100.00	7.420740	Y 242.219
S (181.972 nm)	517.003495 bo	ppm	0.928666	0.18	252693.592212	Y 377.433
Sb (206.834 nm)	-0.003328 u	ppm	0.002157	64.82	-3.960900	Y 377.433
Se (196.026 nm)	0.001324 u	ppm	0.002634	> 100.00	10.485500	Y 242.219
Si (288.158 nm)	0.204848	ppm	0.000697	0.34	1876.790000	Y 377.433
Sn (189.925 nm)	-0.003365 u	ppm	0.000267	7.94	3.559500	Y 377.433
Sr (421.552 nm)	1.244273	ppm	0.005260	0.42	199925.993189	Y_R 488.368
Th (288.505 nm)	-0.007095 u	ppm	0.000584	8.23	30.142400	Y 377.433
Ti (336.122 nm)	-0.003069 u	ppm	0.000039	1.27	1111.660000	Y 377.433
Tl (190.794 nm)	0.013986	ppm	0.000576	4.12	9.668240	Y 377.433
U (409.013 nm)	0.032887	ppm	0.002974	9.04	57.360300	Y 377.433
V (292.401 nm)	0.001675	ppm	0.000226	13.47	-5.051530	Y 377.433
Zn (206.200 nm)	0.013917	ppm	0.000531	3.82	66.693600	Y 377.433
Zr (343.823 nm)	0.000334	ppm	0.000426	> 100.00	-153.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.983679	18391.848148	0.006435	0.65
Y 377.433	1.007608	559803.476019	0.008927	0.89
Y_R 377.433	1.034130	50347.500000	0.011511	1.11
Y_R 488.368	1.017060	43495.900000	0.007781	0.77
Y_R2 488.368	1.012014	84524.282659	0.002024	0.20
Y_R4	1.002020	38524.500000	0.000384	0.04

Sample Name: 280-123188-C-3-C

Date: 5/10/2019 8:11:18 PM

Rack:Tube: 1:81

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.003133	ppm	0.000068	2.17	-70.115300	Y 377.433
Al (394.401 nm)	85.336800 o	ppm	0.053339	0.06	1072440.000000	Y 377.433
Al H (396.152 nm)	87.195600	ppm	0.079304	0.09	196420.000000	Y_R 377.433
As (188.980 nm)	0.016146	ppm	0.004940	30.59	15.072800	Y 242.219
B (249.678 nm)	0.011402	ppm	0.000721	6.33	28.136800	Y 242.219
Ba (493.408 nm)	0.007296	ppm	0.000329	4.51	2490.190000	Y_R 488.368
Be (234.861 nm)	0.019026	ppm	0.000062	0.33	979.308000	Y_R 488.368
Bi (223.061 nm)	0.001836	ppm	0.000042	2.31	13.055700	Y 377.433
Ca (315.887 nm)	219.633256	ppm	0.339800	0.15	181607.691881	Y_R 377.433
Cd (214.439 nm)	0.111263	ppm	0.000254	0.23	4304.130000	Y 377.433
Co (228.615 nm)	0.374591	ppm	0.000483	0.13	9351.970000	Y 242.219
Cr (205.560 nm)	0.009258	ppm	0.000069	0.74	52.820200	Y 377.433
Cu (324.754 nm)	16.783700	ppm	0.041730	0.25	824214.000000	Y 377.433
Fe (238.204 nm)	117.063972 o	ppm	0.238532	0.20	292660.728531	Y_R 377.433
Fe H (259.940 nm)	116.898000	ppm	0.163587	0.14	167981.000000	Y_R 377.433
K (766.491 nm)	3.703180	ppm	0.057591	1.56	6076.520000	Y_R2 488.368
Li (670.783 nm)	0.037030	ppm	0.002527	6.82	-2212.340000	Y_R2 488.368
Mg (279.078 nm)	50.033900	ppm	0.078384	0.16	175229.000000	Y 377.433
Mn (257.610 nm)	21.932300	ppm	0.001246	0.01	6321230.000000	Y 377.433
Mo (202.032 nm)	-0.000361 u	ppm	0.000199	55.10	6.845420	Y 377.433
Na (589.592 nm)	32.473300	ppm	0.032798	0.10	28402.400000	Y_R2 488.368
Na H (589.593 nm)	31.342084 u	ppm	0.131015	0.42	18643.361100	Y_R4
Ni (231.604 nm)	0.413582	ppm	0.000601	0.15	2233.770000	Y 377.433
P (213.618 nm)	1.250870	ppm	0.026284	2.10	-2295.920000	Y 242.219
Pb (220.353 nm)	0.144250	ppm	0.000340	0.24	478.504000	Y 242.219
S (181.972 nm)	499.339275 bo	ppm	1.313094	0.26	244108.247121	Y 377.433
Sb (206.834 nm)	-0.000212 u	ppm	0.000390	> 100.00	10.682300	Y 377.433
Se (196.026 nm)	0.006558	ppm	0.001524	23.24	16.443600	Y 242.219
Si (288.158 nm)	26.990800	ppm	0.127259	0.47	180807.000000	Y 377.433
Sn (189.925 nm)	-0.002615 u	ppm	0.001146	43.81	4.793470	Y 377.433
Sr (421.552 nm)	0.988569	ppm	0.001034	0.10	158879.736773	Y_R 488.368
Th (288.505 nm)	-0.073369 u	ppm	0.002736	3.73	305.785000	Y 377.433
Ti (336.122 nm)	-0.000549 u	ppm	0.000209	38.12	155.324000	Y 377.433
Tl (190.794 nm)	0.016226	ppm	0.001107	6.82	20.115200	Y 377.433
U (409.013 nm)	0.011878	ppm	0.008022	67.54	124.246000	Y 377.433
V (292.401 nm)	-0.000204 u	ppm	0.000228	> 100.00	-103.690000	Y 377.433
Zn (206.200 nm)	11.131500	ppm	0.068729	0.62	50882.000000	Y 377.433
Zr (343.823 nm)	0.002776	ppm	0.000100	3.60	-10.613900	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.045786	19553.059088	0.002484	0.24
Y 377.433	1.064593	591463.033667	0.001801	0.17
Y_R 377.433	1.084430	52796.500000	0.000364	0.03
Y_R 488.368	1.073520	45910.400000	0.001576	0.15
Y_R2 488.368	1.063984	88864.835943	0.005820	0.55
Y_R4	1.078290	41457.000000	0.012516	1.16

Sample Name: 280-123148-E-1-C

Date: 5/10/2019 8:15:00 PM

Rack:Tube: 1:82

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000359 u	ppm	0.000141	39.42	-199.341000	Y 377.433
Al (394.401 nm)	0.744033	ppm	0.004508	0.61	9398.370000	Y 377.433
Al H (396.152 nm)	0.866173 u	ppm	0.009992	1.15	1761.420000	Y_R 377.433
As (188.980 nm)	0.053287	ppm	0.000922	1.73	82.811100	Y 242.219
B (249.678 nm)	0.079288	ppm	0.000073	0.09	617.159000	Y 242.219
Ba (493.408 nm)	0.048433	ppm	0.000571	1.18	6713.300000	Y_R 488.368
Be (234.861 nm)	0.000108	ppm	0.000073	67.47	-20.438500	Y_R 488.368
Bi (223.061 nm)	0.006532	ppm	0.001379	21.11	4.086740	Y 377.433
Ca (315.887 nm)	9.443465	ppm	0.008806	0.09	7737.637766	Y_R 377.433
Cd (214.439 nm)	0.000099 u	ppm	0.000203	> 100.00	-1.536260	Y 377.433
Co (228.615 nm)	0.001881	ppm	0.000190	10.08	24.751700	Y 242.219
Cr (205.560 nm)	0.001715	ppm	0.000217	12.66	3.729340	Y 377.433
Cu (324.754 nm)	0.013127	ppm	0.000414	3.15	1147.990000	Y 377.433
Fe (238.204 nm)	3.505329	ppm	0.002533	0.07	8767.393012	Y_R 377.433
Fe H (259.940 nm)	3.519230 u	ppm	0.006642	0.19	5029.970000	Y_R 377.433
K (766.491 nm)	5.002210	ppm	0.064754	1.29	7442.810000	Y_R2 488.368
Li (670.783 nm)	0.004226	ppm	0.003150	74.53	-2809.140000	Y_R2 488.368
Mg (279.078 nm)	3.463290	ppm	0.002731	0.08	12150.300000	Y 377.433
Mn (257.610 nm)	0.356529	ppm	0.000729	0.20	102734.000000	Y 377.433
Mo (202.032 nm)	0.001474	ppm	0.000408	27.66	31.111000	Y 377.433
Na (589.592 nm)	12.011000	ppm	0.019701	0.16	10624.200000	Y_R2 488.368
Na H (589.593 nm)	11.508750 u	ppm	0.071431	0.62	7148.240141	Y_R4
Ni (231.604 nm)	0.001275	ppm	0.000981	76.97	-3.542010	Y 377.433
P (213.618 nm)	0.680250	ppm	0.000053	0.01	1051.000000	Y 242.219
Pb (220.353 nm)	0.002446	ppm	0.000323	13.20	16.106100	Y 242.219
S (181.972 nm)	1.932870	ppm	0.006263	0.32	953.674479	Y 377.433
Sb (206.834 nm)	-0.002133 u	ppm	0.001291	60.53	-1.508660	Y 377.433
Se (196.026 nm)	0.002874	ppm	0.000912	31.72	9.761050	Y 242.219
Si (288.158 nm)	4.194510	ppm	0.002343	0.06	28527.700000	Y 377.433
Sn (189.925 nm)	-0.003286 u	ppm	0.000715	21.76	3.689530	Y 377.433
Sr (421.552 nm)	0.080921	ppm	0.000015	0.02	13098.939048	Y_R 488.368
Th (288.505 nm)	-0.005669 u	ppm	0.001429	25.21	15.394500	Y 377.433
Ti (336.122 nm)	0.024670	ppm	0.000097	0.39	2765.090000	Y 377.433
Tl (190.794 nm)	0.000701 u	ppm	0.001908	> 100.00	0.904018	Y 377.433
U (409.013 nm)	0.009492	ppm	0.003384	35.65	61.595800	Y 377.433
V (292.401 nm)	0.004558	ppm	0.000035	0.78	150.994000	Y 377.433
Zn (206.200 nm)	0.020343	ppm	0.001055	5.18	96.526000	Y 377.433
Zr (343.823 nm)	0.001205	ppm	0.000004	0.35	-102.814000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.044142	19522.319001	0.001962	0.19
Y 377.433	1.053903	585523.654472	0.002143	0.20
Y_R 377.433	1.060450	51628.800000	0.000641	0.06
Y_R 488.368	1.045340	44705.200000	0.001186	0.11
Y_R2 488.368	1.037052	86615.439581	0.003793	0.37
Y_R4	1.037850	39902.000000	0.002004	0.19

Sample Name: MB 280-457084/1-B

Date: 5/10/2019 8:18:34 PM

Rack:Tube: 1:83

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000897 u	ppm	0.000138	15.39	-217.047000	Y 377.433
Al (394.401 nm)	0.007035	ppm	0.000113	1.61	113.081000	Y 377.433
Al H (396.152 nm)	0.117593 u	ppm	0.003727	3.17	44.547900	Y_R 377.433
As (188.980 nm)	0.003242	ppm	0.003671	> 100.00	3.323010	Y 242.219
B (249.678 nm)	0.000031 u	ppm	0.001336	> 100.00	11.878200	Y 242.219
Ba (493.408 nm)	-0.000069 u	ppm	0.000178	> 100.00	1621.630000	Y_R 488.368
Be (234.861 nm)	-0.000016 u	ppm	0.000013	77.50	-5.636080	Y_R 488.368
Bi (223.061 nm)	0.001024 u	ppm	0.002487	> 100.00	-8.573530	Y 377.433
Ca (315.887 nm)	0.020740	ppm	0.005632	27.15	-56.085838	Y_R 377.433
Cd (214.439 nm)	-0.000007 u	ppm	0.000010	> 100.00	-6.894160	Y 377.433
Co (228.615 nm)	0.000090	ppm	0.000043	47.39	-21.137100	Y 242.219
Cr (205.560 nm)	0.000611	ppm	0.000741	> 100.00	-3.887060	Y 377.433
Cu (324.754 nm)	-0.000041 u	ppm	0.000126	> 100.00	509.684000	Y 377.433
Fe (238.204 nm)	0.349070	ppm	0.001616	0.46	876.836920	Y_R 377.433
Fe H (259.940 nm)	0.382581 u	ppm	0.003444	0.90	521.867000	Y_R 377.433
K (766.491 nm)	-0.280513 u	ppm	0.025101	8.95	1886.550000	Y_R2 488.368
Li (670.783 nm)	0.003274	ppm	0.000119	3.65	-2826.450000	Y_R2 488.368
Mg (279.078 nm)	-0.000881 u	ppm	0.000455	51.64	12.843300	Y 377.433
Mn (257.610 nm)	0.001600	ppm	0.000009	0.58	437.592000	Y 377.433
Mo (202.032 nm)	-0.000249 u	ppm	0.000092	37.07	8.322420	Y 377.433
Na (589.592 nm)	0.011654 u	ppm	0.042116	> 100.00	181.409000	Y_R2 488.368
Na H (589.593 nm)	-0.337272 u	ppm	0.006312	1.87	282.452983	Y_R4
Ni (231.604 nm)	0.000469	ppm	0.000281	59.90	-7.913750	Y 377.433
P (213.618 nm)	-0.003413 u	ppm	0.000838	24.55	-1.720450	Y 242.219
Pb (220.353 nm)	0.001689	ppm	0.000494	29.25	13.670300	Y 242.219
S (181.972 nm)	0.014514	ppm	0.004115	28.35	14.573320	Y 377.433
Sb (206.834 nm)	0.000362	ppm	0.000291	80.30	2.989760	Y 377.433
Se (196.026 nm)	0.001656	ppm	0.000185	11.16	8.143360	Y 242.219
Si (288.158 nm)	0.007467	ppm	0.001899	25.44	558.282000	Y 377.433
Sn (189.925 nm)	-0.003066 u	ppm	0.000031	1.03	4.051600	Y 377.433
Sr (421.552 nm)	-0.000164 u	ppm	0.000031	18.67	76.753754	Y_R 488.368
Th (288.505 nm)	-0.003782 u	ppm	0.002010	53.14	12.649000	Y 377.433
Ti (336.122 nm)	0.000648	ppm	0.000014	2.12	-435.434000	Y 377.433
Tl (190.794 nm)	0.000352 u	ppm	0.000550	> 100.00	0.932611	Y 377.433
U (409.013 nm)	-0.004101 u	ppm	0.003727	90.88	17.178100	Y 377.433
V (292.401 nm)	-0.000114 u	ppm	0.000112	98.35	-100.585000	Y 377.433
Zn (206.200 nm)	0.000774	ppm	0.000635	82.00	6.673450	Y 377.433
Zr (343.823 nm)	0.000553	ppm	0.000195	35.36	-141.101000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.050134	19634.357501	0.000546	0.05
Y 377.433	1.056332	586873.405007	0.000857	0.08
Y_R 377.433	1.058930	51554.800000	0.002740	0.26
Y_R 488.368	1.049980	44903.700000	0.011328	1.08
Y_R2 488.368	1.040454	86899.622516	0.002520	0.24
Y_R4	1.046740	40243.700000	0.008235	0.79

Sample Name: LCS 280-457084/2-B

Date: 5/10/2019 8:22:02 PM

Rack:Tube: 1:84

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.049590	ppm	0.000661	1.33	1316.060000	Y 377.433
Al (394.401 nm)	9.725510 o	ppm	0.002753	0.03	122519.000000	Y 377.433
Al H (396.152 nm)	9.869570	ppm	0.008316	0.08	22482.800000	Y_R 377.433
As (188.980 nm)	1.954510	ppm	0.000149	0.01	3107.030000	Y 242.219
B (249.678 nm)	0.946505	ppm	0.000182	0.02	7257.210000	Y 242.219
Ba (493.408 nm)	1.952470	ppm	0.006004	0.31	206500.000000	Y_R 488.368
Be (234.861 nm)	0.964410	ppm	0.000987	0.10	102268.000000	Y_R 488.368
Bi (223.061 nm)	1.945510	ppm	0.000070	0.00	4269.170000	Y 377.433
Ca (315.887 nm)	48.587160	ppm	0.082856	0.17	40115.725323	Y_R 377.433
Cd (214.439 nm)	0.953917	ppm	0.000945	0.10	36543.200000	Y 377.433
Co (228.615 nm)	0.939992	ppm	0.001101	0.12	23548.200000	Y 242.219
Cr (205.560 nm)	0.954389	ppm	0.001094	0.11	6598.100000	Y 377.433
Cu (324.754 nm)	0.934684	ppm	0.001881	0.20	46424.600000	Y 377.433
Fe (238.204 nm)	9.700570 o	ppm	0.004172	0.04	24255.317722	Y_R 377.433
Fe H (259.940 nm)	9.709170	ppm	0.005907	0.06	13926.400000	Y_R 377.433
K (766.491 nm)	48.652900	ppm	0.033821	0.07	53353.700000	Y_R2 488.368
Li (670.783 nm)	0.986196	ppm	0.004033	0.41	15055.500000	Y_R2 488.368
Mg (279.078 nm)	47.036000	ppm	0.042061	0.09	164835.000000	Y 377.433
Mn (257.610 nm)	0.961646	ppm	0.000486	0.05	277139.000000	Y 377.433
Mo (202.032 nm)	0.974995	ppm	0.000443	0.05	12909.500000	Y 377.433
Na (589.592 nm)	49.639900	ppm	0.019148	0.04	43791.900000	Y_R2 488.368
Na H (589.593 nm)	46.510330 u	ppm	0.109511	0.24	27434.662534	Y_R4
Ni (231.604 nm)	0.930398	ppm	0.000181	0.02	5040.290000	Y 377.433
P (213.618 nm)	18.708400	ppm	0.030280	0.16	28633.700000	Y 242.219
Pb (220.353 nm)	0.966551	ppm	0.000338	0.03	3260.050000	Y 242.219
S (181.972 nm)	9.112937	ppm	0.017912	0.20	4466.419587	Y 377.433
Sb (206.834 nm)	0.972255	ppm	0.002586	0.27	1808.920000	Y 377.433
Se (196.026 nm)	1.929690	ppm	0.007234	0.37	3095.220000	Y 242.219
Si (288.158 nm)	2.008140	ppm	0.011822	0.59	13922.800000	Y 377.433
Sn (189.925 nm)	1.924110	ppm	0.004617	0.24	3175.580000	Y 377.433
Sr (421.552 nm)	0.971186	ppm	0.001588	0.16	156071.395421	Y_R 488.368
Th (288.505 nm)	0.994052	ppm	0.003750	0.38	1671.390000	Y 377.433
Ti (336.122 nm)	0.980389	ppm	0.000309	0.03	128990.000000	Y 377.433
Tl (190.794 nm)	1.900450	ppm	0.000460	0.02	4638.090000	Y 377.433
U (409.013 nm)	1.996330	ppm	0.004955	0.25	6348.010000	Y 377.433
V (292.401 nm)	0.969464	ppm	0.000352	0.04	51979.800000	Y 377.433
Zn (206.200 nm)	0.473119	ppm	0.000050	0.01	2166.240000	Y 377.433
Zr (343.823 nm)	0.481610	ppm	0.000093	0.02	28084.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.004314	18777.655769	0.000554	0.06
Y 377.433	1.023168	568447.952577	0.001000	0.10
Y_R 377.433	1.030030	50147.900000	0.001105	0.11
Y_R 488.368	1.015920	43446.900000	0.001372	0.14
Y_R2 488.368	1.021143	85286.786230	0.001104	0.11
Y_R4	1.030230	39609.100000	0.003387	0.33

Sample Name: 280-123228-F-1-B

Date: 5/10/2019 8:25:37 PM

Rack:Tube: 1:85

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000507	ppm	0.000094	18.49	-167.197000	Y 377.433
Al (394.401 nm)	-0.016336 u	ppm	0.002355	14.41	428.256000	Y 377.433
Al H (396.152 nm)	-0.315014 u	ppm	0.009278	2.95	13.127600	Y_R 377.433
As (188.980 nm)	0.002340	ppm	0.000928	39.66	1.895870	Y 242.219
B (249.678 nm)	0.233735	ppm	0.002839	1.21	1802.490000	Y 242.219
Ba (493.408 nm)	0.069624	ppm	0.000340	0.49	8933.860000	Y_R 488.368
Be (234.861 nm)	0.000017 u	ppm	0.000047	> 100.00	0.654651	Y_R 488.368
Bi (223.061 nm)	0.000333 u	ppm	0.000581	> 100.00	-10.130200	Y 377.433
Ca (315.887 nm)	163.617560	ppm	0.097667	0.06	135254.680797	Y_R 377.433
Cd (214.439 nm)	0.000335	ppm	0.000085	25.33	6.052900	Y 377.433
Co (228.615 nm)	0.000241	ppm	0.000159	65.91	-17.375400	Y 242.219
Cr (205.560 nm)	0.000477	ppm	0.000131	27.53	-4.838710	Y 377.433
Cu (324.754 nm)	-0.000048 u	ppm	0.000141	> 100.00	410.900000	Y 377.433
Fe (238.204 nm)	0.039523	ppm	0.002415	6.11	102.978466	Y_R 377.433
Fe H (259.940 nm)	0.059171 u	ppm	0.007391	12.49	57.050000	Y_R 377.433
K (766.491 nm)	6.428290	ppm	0.090713	1.41	8942.730000	Y_R2 488.368
Li (670.783 nm)	0.051460	ppm	0.004286	8.33	-1949.830000	Y_R2 488.368
Mg (279.078 nm)	31.515400	ppm	0.064564	0.20	110480.000000	Y 377.433
Mn (257.610 nm)	0.025334	ppm	0.000015	0.06	7278.050000	Y 377.433
Mo (202.032 nm)	0.004120	ppm	0.000325	7.89	66.116600	Y 377.433
Na (589.592 nm)	224.174000 o	ppm	1.139090	0.51	195065.000000	Y_R2 488.368
Na H (589.593 nm)	232.592590	ppm	0.287703	0.12	135285.316035	Y_R4
Ni (231.604 nm)	-0.000162 u	ppm	0.000040	24.56	-11.335500	Y 377.433
P (213.618 nm)	0.095739	ppm	0.003886	4.06	150.708000	Y 242.219
Pb (220.353 nm)	-0.001453 u	ppm	0.000267	18.34	3.193640	Y 242.219
S (181.972 nm)	154.261841 bo	ppm	0.581707	0.38	75400.549127	Y 377.433
Sb (206.834 nm)	-0.004845 u	ppm	0.002094	43.23	-6.780140	Y 377.433
Se (196.026 nm)	0.008602	ppm	0.000773	8.98	19.387200	Y 242.219
Si (288.158 nm)	4.922420	ppm	0.027064	0.55	33390.200000	Y 377.433
Sn (189.925 nm)	-0.003083 u	ppm	0.000775	25.14	4.022310	Y 377.433
Sr (421.552 nm)	2.319517	ppm	0.000003	0.00	372603.925096	Y_R 488.368
Th (288.505 nm)	-0.008248 u	ppm	0.001040	12.61	1.178980	Y 377.433
Ti (336.122 nm)	-0.000455 u	ppm	0.000097	21.38	-23.741700	Y 377.433
Tl (190.794 nm)	0.003929	ppm	0.000831	21.15	2.941340	Y 377.433
U (409.013 nm)	0.044362	ppm	0.002629	5.93	150.479000	Y 377.433
V (292.401 nm)	0.002442	ppm	0.000272	11.15	35.092700	Y 377.433
Zn (206.200 nm)	0.012343	ppm	0.000026	0.21	59.491100	Y 377.433
Zr (343.823 nm)	0.000477	ppm	0.000140	29.40	-145.514000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.990344	18516.452416	0.000264	0.03
Y 377.433	1.007761	559888.504413	0.000361	0.04
Y_R 377.433	1.038400	50555.300000	0.001317	0.13
Y_R 488.368	1.023800	43784.200000	0.001767	0.17
Y_R2 488.368	1.022057	85363.085483	0.004389	0.43
Y_R4	1.018330	39151.800000	0.006199	0.61

Sample Name: 280-123228-F-2-B

Date: 5/10/2019 8:29:22 PM

Rack:Tube: 1:86

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000762	ppm	0.000283	37.17	-157.336000	Y 377.433
Al (394.401 nm)	-0.019477 u	ppm	0.001232	6.32	429.905000	Y 377.433
Al H (396.152 nm)	-0.357971 u	ppm	0.007997	2.23	-15.593400	Y_R 377.433
As (188.980 nm)	0.002559	ppm	0.002997	> 100.00	2.244450	Y 242.219
B (249.678 nm)	0.214794	ppm	0.001139	0.53	1657.390000	Y 242.219
Ba (493.408 nm)	0.052084	ppm	0.000522	1.00	7093.500000	Y_R 488.368
Be (234.861 nm)	-0.000064 u	ppm	0.000077	> 100.00	-7.723880	Y_R 488.368
Bi (223.061 nm)	0.001262	ppm	0.001498	> 100.00	-8.091490	Y 377.433
Ca (315.887 nm)	173.227512	ppm	0.033252	0.02	143203.064297	Y_R 377.433
Cd (214.439 nm)	0.000330	ppm	0.000063	19.04	5.864890	Y 377.433
Co (228.615 nm)	0.000331	ppm	0.000427	> 100.00	-15.129400	Y 242.219
Cr (205.560 nm)	0.000655	ppm	0.000279	42.61	-3.599050	Y 377.433
Cu (324.754 nm)	0.001057	ppm	0.000211	20.00	460.594000	Y 377.433
Fe (238.204 nm)	0.016781	ppm	0.000381	2.27	46.122492	Y_R 377.433
Fe H (259.940 nm)	0.036377 u	ppm	0.000663	1.82	24.290000	Y_R 377.433
K (766.491 nm)	6.416470	ppm	0.100949	1.57	8930.300000	Y_R2 488.368
Li (670.783 nm)	0.051390	ppm	0.003148	6.13	-1951.090000	Y_R2 488.368
Mg (279.078 nm)	33.042200	ppm	0.068824	0.21	115832.000000	Y 377.433
Mn (257.610 nm)	0.002589	ppm	0.000025	0.97	722.821000	Y 377.433
Mo (202.032 nm)	0.003474	ppm	0.000358	10.30	57.574100	Y 377.433
Na (589.592 nm)	232.490000 o	ppm	0.145901	0.06	202289.000000	Y_R2 488.368
Na H (589.593 nm)	241.618746	ppm	0.295143	0.12	140516.748529	Y_R4
Ni (231.604 nm)	-0.000402 u	ppm	0.001847	> 100.00	-12.643100	Y 377.433
P (213.618 nm)	0.031729	ppm	0.003025	9.53	51.523800	Y 242.219
Pb (220.353 nm)	-0.002124 u	ppm	0.001131	53.23	0.903136	Y 242.219
S (181.972 nm)	167.625127 bo	ppm	0.404353	0.24	81931.329180	Y 377.433
Sb (206.834 nm)	-0.003864 u	ppm	0.000500	12.94	-4.942980	Y 377.433
Se (196.026 nm)	0.005431	ppm	0.002066	38.05	14.281600	Y 242.219
Si (288.158 nm)	4.704760	ppm	0.022162	0.47	31936.200000	Y 377.433
Sn (189.925 nm)	-0.004942 u	ppm	0.001227	24.83	0.963395	Y 377.433
Sr (421.552 nm)	2.485823	ppm	0.006882	0.28	399311.614389	Y_R 488.368
Th (288.505 nm)	-0.007953 u	ppm	0.005234	65.81	1.042880	Y 377.433
Ti (336.122 nm)	-0.000747 u	ppm	0.000015	1.99	-29.835400	Y 377.433
Tl (190.794 nm)	0.001166	ppm	0.000253	21.68	-4.200300	Y 377.433
U (409.013 nm)	0.040576	ppm	0.000706	1.74	137.117000	Y 377.433
V (292.401 nm)	0.002112	ppm	0.000208	9.85	17.837900	Y 377.433
Zn (206.200 nm)	0.013445	ppm	0.000005	0.04	64.523700	Y 377.433
Zr (343.823 nm)	0.000424	ppm	0.000323	76.18	-148.630000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.979636	18316.248065	0.003175	0.32
Y 377.433	0.993206	551801.870461	0.004370	0.44
Y_R 377.433	1.014080	49371.000000	0.001960	0.19
Y_R 488.368	1.002390	42868.300000	0.003548	0.35
Y_R2 488.368	0.992359	82882.661955	0.004708	0.47
Y_R4	1.014230	38993.800000	0.002933	0.29

Sample Name: 280-123238-C-1-D

Date: 5/10/2019 8:33:27 PM

Rack:Tube: 1:87

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000798	ppm	0.000082	10.22	-156.027000	Y 377.433
Al (394.401 nm)	0.007937	ppm	0.001082	13.63	275.038000	Y 377.433
Al H (396.152 nm)	0.011939 u	ppm	0.011169	93.55	27.434800	Y_R 377.433
As (188.980 nm)	0.003423	ppm	0.000869	25.38	3.619590	Y 242.219
B (249.678 nm)	0.093932	ppm	0.001004	1.07	731.455000	Y 242.219
Ba (493.408 nm)	0.057740	ppm	0.000143	0.25	7687.010000	Y_R 488.368
Be (234.861 nm)	-0.000085 u	ppm	0.000006	6.88	-9.956950	Y_R 488.368
Bi (223.061 nm)	0.001400 u	ppm	0.003359	> 100.00	-7.788310	Y 377.433
Ca (315.887 nm)	69.477844	ppm	0.017197	0.02	57391.818495	Y_R 377.433
Cd (214.439 nm)	0.000185	ppm	0.000028	14.90	0.303876	Y 377.433
Co (228.615 nm)	0.000130	ppm	0.000021	16.12	-20.140000	Y 242.219
Cr (205.560 nm)	0.000152 u	ppm	0.000339	> 100.00	-7.100890	Y 377.433
Cu (324.754 nm)	0.000601	ppm	0.000015	2.51	498.129000	Y 377.433
Fe (238.204 nm)	0.020949	ppm	0.000843	4.02	56.543106	Y_R 377.433
Fe H (259.940 nm)	0.044844 u	ppm	0.002455	5.48	36.458900	Y_R 377.433
K (766.491 nm)	5.476250	ppm	0.091536	1.67	7941.400000	Y_R2 488.368
Li (670.783 nm)	0.027343	ppm	0.000130	0.48	-2388.570000	Y_R2 488.368
Mg (279.078 nm)	15.487500	ppm	0.009514	0.06	54300.900000	Y 377.433
Mn (257.610 nm)	0.001200	ppm	0.000011	0.94	322.501000	Y 377.433
Mo (202.032 nm)	0.006851	ppm	0.000429	6.26	102.239000	Y 377.433
Na (589.592 nm)	76.418100 o	ppm	0.052560	0.07	66616.200000	Y_R2 488.368
Na H (589.593 nm)	78.343157	ppm	0.230054	0.29	45884.520230	Y_R4
Ni (231.604 nm)	-0.001003 u	ppm	0.000084	8.42	-15.899800	Y 377.433
P (213.618 nm)	0.318590	ppm	0.004562	1.43	495.114000	Y 242.219
Pb (220.353 nm)	-0.001668 u	ppm	0.000892	53.46	2.423230	Y 242.219
S (181.972 nm)	36.328522	ppm	0.137441	0.38	17764.020045	Y 377.433
Sb (206.834 nm)	-0.003902 u	ppm	0.001786	45.78	-5.044630	Y 377.433
Se (196.026 nm)	0.001340 u	ppm	0.003573	> 100.00	7.726110	Y 242.219
Si (288.158 nm)	3.645520	ppm	0.000715	0.02	24860.500000	Y 377.433
Sn (189.925 nm)	-0.004090 u	ppm	0.000376	9.20	2.366080	Y 377.433
Sr (421.552 nm)	0.557861	ppm	0.001600	0.29	89692.304787	Y_R 488.368
Th (288.505 nm)	-0.013925 u	ppm	0.002878	20.67	-6.902200	Y 377.433
Ti (336.122 nm)	0.000041 u	ppm	0.000072	> 100.00	-279.988000	Y 377.433
Tl (190.794 nm)	0.001475	ppm	0.001803	> 100.00	0.824291	Y 377.433
U (409.013 nm)	0.028402	ppm	0.010332	36.38	111.763000	Y 377.433
V (292.401 nm)	0.001734	ppm	0.000021	1.24	-3.052070	Y 377.433
Zn (206.200 nm)	0.008288	ppm	0.000344	4.15	40.961500	Y 377.433
Zr (343.823 nm)	0.000399	ppm	0.000249	62.43	-150.084000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.018019	19033.906232	0.000096	0.01
Y 377.433	1.027999	571132.330021	0.000429	0.04
Y_R 377.433	1.033350	50309.200000	0.002768	0.27
Y_R 488.368	1.022970	43748.600000	0.000131	0.01
Y_R2 488.368	1.012630	84575.700291	0.005415	0.53
Y_R4	1.019680	39203.600000	0.005225	0.51

Sample Name: 280-123238-C-1-Dsd@5

Date: 5/10/2019 8:36:59 PM

Rack:Tube: 1:88

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000081	ppm	0.000007	8.69	-181.814000	Y 377.433
Al (394.401 nm)	0.004421	ppm	0.000793	17.93	112.181000	Y 377.433
Al H (396.152 nm)	0.094254 u	ppm	0.007173	7.61	35.410100	Y_R 377.433
As (188.980 nm)	0.001325	ppm	0.001662	> 100.00	0.282465	Y 242.219
B (249.678 nm)	0.018651	ppm	0.000527	2.83	154.724000	Y 242.219
Ba (493.408 nm)	0.010543	ppm	0.000313	2.97	2734.800000	Y_R 488.368
Be (234.861 nm)	-0.000072 u	ppm	0.000048	65.89	-8.606200	Y_R 488.368
Bi (223.061 nm)	0.003185	ppm	0.000809	25.40	-3.874410	Y 377.433
Ca (315.887 nm)	13.844900	ppm	0.026760	0.19	11377.863065	Y_R 377.433
Cd (214.439 nm)	0.000082	ppm	0.000069	84.02	-3.638320	Y 377.433
Co (228.615 nm)	0.000200	ppm	0.000197	98.41	-18.391700	Y 242.219
Cr (205.560 nm)	0.000389	ppm	0.000484	> 100.00	-5.429710	Y 377.433
Cu (324.754 nm)	-0.000259 u	ppm	0.000375	> 100.00	489.538000	Y 377.433
Fe (238.204 nm)	0.013729	ppm	0.004894	35.65	38.492088	Y_R 377.433
Fe H (259.940 nm)	0.048039 u	ppm	0.000396	0.82	41.051800	Y_R 377.433
K (766.491 nm)	0.896710	ppm	0.017221	1.92	3124.730000	Y_R2 488.368
Li (670.783 nm)	0.012222	ppm	0.002241	18.34	-2663.660000	Y_R2 488.368
Mg (279.078 nm)	3.106570	ppm	0.000652	0.02	10904.800000	Y 377.433
Mn (257.610 nm)	0.000360	ppm	0.000000	0.09	80.132600	Y 377.433
Mo (202.032 nm)	0.001607	ppm	0.000373	23.19	32.878700	Y 377.433
Na (589.592 nm)	15.343500	ppm	0.055557	0.36	13512.100000	Y_R2 488.368
Na H (589.593 nm)	15.742481 u	ppm	0.069623	0.44	9602.051341	Y_R4
Ni (231.604 nm)	-0.000135 u	ppm	0.000686	> 100.00	-11.189700	Y 377.433
P (213.618 nm)	0.058279	ppm	0.000460	0.79	93.541800	Y 242.219
Pb (220.353 nm)	-0.000503 u	ppm	0.002122	> 100.00	6.345450	Y 242.219
S (181.972 nm)	6.962938	ppm	0.023778	0.34	3410.821516	Y 377.433
Sb (206.834 nm)	-0.002548 u	ppm	0.000928	36.42	-2.481370	Y 377.433
Se (196.026 nm)	0.004097	ppm	0.002027	49.47	12.141300	Y 242.219
Si (288.158 nm)	0.696244	ppm	0.001399	0.20	5159.320000	Y 377.433
Sn (189.925 nm)	-0.003890 u	ppm	0.001283	32.98	2.695070	Y 377.433
Sr (421.552 nm)	0.109902	ppm	0.000385	0.35	17752.558046	Y_R 488.368
Th (288.505 nm)	-0.006494 u	ppm	0.001865	28.72	7.572960	Y 377.433
Ti (336.122 nm)	0.000268	ppm	0.000017	6.28	-438.954000	Y 377.433
Tl (190.794 nm)	0.000849 u	ppm	0.001491	> 100.00	1.615290	Y 377.433
U (409.013 nm)	0.008976	ppm	0.000292	3.25	56.904600	Y 377.433
V (292.401 nm)	0.000312	ppm	0.000162	51.88	-78.872100	Y 377.433
Zn (206.200 nm)	0.002186	ppm	0.000278	12.70	13.079000	Y 377.433
Zr (343.823 nm)	0.000403	ppm	0.000105	26.08	-149.873000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.034342	19339.092642	0.003138	0.30
Y 377.433	1.042159	578999.076649	0.003474	0.33
Y_R 377.433	1.052690	51250.800000	0.001973	0.19
Y_R 488.368	1.043160	44611.900000	0.007687	0.74
Y_R2 488.368	1.048423	87565.224791	0.000165	0.02
Y_R4	1.042810	40092.800000	0.008419	0.81

Sample Name: CCVH-5690583

Date: 5/10/2019 8:40:27 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000310	ppm	0.000389	> 100.00	-310.824000	Y 377.433
Al (394.401 nm)	48.399000 o	ppm	0.026630	0.06	608232.000000	Y 377.433
Al H (396.152 nm)	48.735000	ppm	0.015934	0.03	109482.000000	Y_R 377.433
As (188.980 nm)	0.004451	ppm	0.000660	14.83	0.843785	Y 242.219
B (249.678 nm)	0.006139	ppm	0.000624	10.16	29.847300	Y 242.219
Ba (493.408 nm)	0.001566	ppm	0.000142	9.06	1832.110000	Y_R 488.368
Be (234.861 nm)	0.002589	ppm	0.000041	1.59	-150.514000	Y_R 488.368
Bi (223.061 nm)	0.944987	ppm	0.006739	0.71	2075.330000	Y 377.433
Ca (315.887 nm)	0.018898	ppm	0.018715	99.03	-45.068145	Y_R 377.433
Cd (214.439 nm)	0.000838	ppm	0.000157	18.72	45.052200	Y 377.433
Co (228.615 nm)	0.004442	ppm	0.000016	0.37	87.847000	Y 242.219
Cr (205.560 nm)	0.001740	ppm	0.000336	19.32	2.586930	Y 377.433
Cu (324.754 nm)	0.006016	ppm	0.000292	4.86	1204.800000	Y 377.433
Fe (238.204 nm)	47.613036 o	ppm	0.041589	0.09	119035.389611	Y_R 377.433
Fe H (259.940 nm)	47.493600	ppm	0.048717	0.10	68231.500000	Y_R 377.433
K (766.491 nm)	0.320809	ppm	0.146041	45.52	2519.010000	Y_R2 488.368
Li (670.783 nm)	0.003635	ppm	0.002964	81.55	-2819.900000	Y_R2 488.368
Mg (279.078 nm)	0.015288	ppm	0.000367	2.40	-158.766000	Y 377.433
Mn (257.610 nm)	0.001323	ppm	0.000016	1.17	357.677000	Y 377.433
Mo (202.032 nm)	0.000189	ppm	0.000201	> 100.00	14.118600	Y 377.433
Na (589.592 nm)	237.664000 o	ppm	0.781678	0.33	206775.000000	Y_R2 488.368
Na H (589.593 nm)	245.144652	ppm	0.358245	0.15	142560.313874	Y_R4
Ni (231.604 nm)	0.001557	ppm	0.000853	54.75	-2.006330	Y 377.433
P (213.618 nm)	-0.013392 u	ppm	0.000370	2.76	-23.966900	Y 242.219
Pb (220.353 nm)	0.006657	ppm	0.000422	6.34	46.279600	Y 242.219
S (181.972 nm)	4.715009	ppm	0.024785	0.53	2311.612969	Y 377.433
Sb (206.834 nm)	0.000330 u	ppm	0.000681	> 100.00	6.167050	Y 377.433
Se (196.026 nm)	0.000725 u	ppm	0.001432	> 100.00	-6.066290	Y 242.219
Si (288.158 nm)	0.025380	ppm	0.000602	2.37	677.944000	Y 377.433
Sn (189.925 nm)	-0.002423 u	ppm	0.000122	5.05	5.108510	Y 377.433
Sr (421.552 nm)	0.000873	ppm	0.000050	5.69	250.649939	Y_R 488.368
Th (288.505 nm)	4.855090	ppm	0.007315	0.15	8578.020000	Y 377.433
Ti (336.122 nm)	0.002007	ppm	0.000191	9.49	-256.012000	Y 377.433
Tl (190.794 nm)	-0.000361 u	ppm	0.001501	> 100.00	-5.498930	Y 377.433
U (409.013 nm)	9.712760	ppm	0.011149	0.11	31089.800000	Y 377.433
V (292.401 nm)	-0.000697 u	ppm	0.000116	16.66	-131.661000	Y 377.433
Zn (206.200 nm)	0.002200	ppm	0.000445	20.23	19.767700	Y 377.433
Zr (343.823 nm)	-0.002663 u	ppm	0.000164	6.17	-329.738000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.005044	18791.311088	0.002446	0.24
Y 377.433	1.017531	565316.090554	0.000944	0.09
Y_R 377.433	1.036920	50483.000000	0.007452	0.72
Y_R 488.368	1.031310	44105.100000	0.014135	1.37
Y_R2 488.368	1.008790	84255.005703	0.004162	0.41
Y_R4	1.032510	39696.700000	0.002067	0.20

Sample Name: CCV-5690581

Date: 5/10/2019 8:44:23 PM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.478952	ppm	0.000197	0.04	17320.000000	Y 377.433
Al (394.401 nm)	0.491185	ppm	0.001504	0.31	6318.280000	Y 377.433
Al H (396.152 nm)	0.532779 u	ppm	0.000895	0.17	1225.280000	Y_R 377.433
As (188.980 nm)	0.953807	ppm	0.000516	0.05	1515.640000	Y 242.219
B (249.678 nm)	0.469478	ppm	0.001368	0.29	3607.090000	Y 242.219
Ba (493.408 nm)	0.481362	ppm	0.001007	0.21	52137.700000	Y_R 488.368
Be (234.861 nm)	0.471471	ppm	0.002080	0.44	50016.200000	Y_R 488.368
Bi (223.061 nm)	0.004895	ppm	0.000856	17.48	0.396530	Y 377.433
Ca (315.887 nm)	4.875512	ppm	0.008456	0.17	3959.426212	Y_R 377.433
Cd (214.439 nm)	0.483998	ppm	0.000858	0.18	18536.900000	Y 377.433
Co (228.615 nm)	0.483190	ppm	0.000211	0.04	12092.300000	Y 242.219
Cr (205.560 nm)	0.481725	ppm	0.001559	0.32	3326.480000	Y 377.433
Cu (324.754 nm)	0.481376	ppm	0.001145	0.24	24138.900000	Y 377.433
Fe (238.204 nm)	2.402311	ppm	0.004608	0.19	6009.880280	Y_R 377.433
Fe H (259.940 nm)	2.434050 u	ppm	0.009091	0.37	3470.310000	Y_R 377.433
K (766.491 nm)	48.128400	ppm	0.157433	0.33	52802.100000	Y_R2 488.368
Li (670.783 nm)	0.979291	ppm	0.002273	0.23	14929.800000	Y_R2 488.368
Mg (279.078 nm)	18.969900	ppm	0.037121	0.20	66504.800000	Y 377.433
Mn (257.610 nm)	0.479780	ppm	0.000359	0.07	138257.000000	Y 377.433
Mo (202.032 nm)	0.484518	ppm	0.000762	0.16	6421.150000	Y 377.433
Na (589.592 nm)	24.861400	ppm	0.029524	0.12	21898.900000	Y_R2 488.368
Na H (589.593 nm)	25.433702 u	ppm	0.039701	0.16	15218.946009	Y_R4
Ni (231.604 nm)	0.483352	ppm	0.000690	0.14	2613.440000	Y 377.433
P (213.618 nm)	0.936865	ppm	0.000604	0.06	1311.760000	Y 242.219
Pb (220.353 nm)	0.964176	ppm	0.000371	0.04	3251.490000	Y 242.219
S (181.972 nm)	0.000254	ppm	0.000056	22.11	9.432165	Y 377.433
Sb (206.834 nm)	0.963913	ppm	0.002386	0.25	1795.460000	Y 377.433
Se (196.026 nm)	0.955020	ppm	0.000853	0.09	1535.320000	Y 242.219
Si (288.158 nm)	4.732600	ppm	0.011067	0.23	32122.200000	Y 377.433
Sn (189.925 nm)	0.967703	ppm	0.004269	0.44	1601.630000	Y 377.433
Sr (421.552 nm)	0.480022	ppm	0.001101	0.23	77192.149751	Y_R 488.368
Th (288.505 nm)	0.011882	ppm	0.005428	45.68	-9.171960	Y 377.433
Ti (336.122 nm)	0.481226	ppm	0.000207	0.04	62985.600000	Y 377.433
Tl (190.794 nm)	0.969670	ppm	0.004199	0.43	2367.750000	Y 377.433
U (409.013 nm)	0.003318 u	ppm	0.006137	> 100.00	-18.434600	Y 377.433
V (292.401 nm)	0.479217	ppm	0.000791	0.17	25648.200000	Y 377.433
Zn (206.200 nm)	0.484719	ppm	0.001179	0.24	2218.230000	Y 377.433
Zr (343.823 nm)	0.482999	ppm	0.000243	0.05	28165.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.016650	19008.294589	0.004544	0.45
Y 377.433	1.023534	568651.183500	0.005217	0.51
Y_R 377.433	1.036180	50447.100000	0.003722	0.36
Y_R 488.368	1.025450	43854.500000	0.000082	0.01
Y_R2 488.368	1.012134	84534.327969	0.000097	0.01
Y_R4	1.005740	38667.500000	0.001085	0.11

Sample Name: CCB

Date: 5/10/2019 8:47:57 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000391 u	ppm	0.000194	49.66	-198.779000	Y 377.433
Al (394.401 nm)	0.003506	ppm	0.000335	9.56	70.184100	Y 377.433
Al H (396.152 nm)	0.113558 Zu	ppm	0.003823	3.37	35.569700 Z	Y_R 377.433
As (188.980 nm)	-0.000126 u	ppm	0.001744	> 100.00	-2.025910	Y 242.219
B (249.678 nm)	0.000212	ppm	0.000204	95.93	13.475300	Y 242.219
Ba (493.408 nm)	-0.000993 u	ppm	0.000082	8.29	1524.350000	Y_R 488.368
Be (234.861 nm)	-0.000024 u	ppm	0.000033	> 100.00	-3.296210	Y_R 488.368
Bi (223.061 nm)	0.002560	ppm	0.001015	39.64	-5.254190	Y 377.433
Ca (315.887 nm)	-0.003186 u	ppm	0.001618	50.79	-75.876113	Y_R 377.433
Cd (214.439 nm)	-0.000020 u	ppm	0.000009	44.41	-7.544270	Y 377.433
Co (228.615 nm)	0.000407	ppm	0.000128	31.36	-13.224200	Y 242.219
Cr (205.560 nm)	0.000051 u	ppm	0.000342	> 100.00	-7.766350	Y 377.433
Cu (324.754 nm)	-0.000453 u	ppm	0.000056	12.26	489.014000	Y 377.433
Fe (238.204 nm)	-0.000488 u	ppm	0.000156	31.88	2.951241	Y_R 377.433
Fe H (259.940 nm)	0.028372 u	ppm	0.001595	5.62	12.785700	Y_R 377.433
K (766.491 nm)	-0.191409 u	ppm	0.012929	6.75	1980.270000	Y_R2 488.368
Li (670.783 nm)	0.003555	ppm	0.003172	89.22	-2821.340000	Y_R2 488.368
Mg (279.078 nm)	0.001538	ppm	0.001791	> 100.00	21.585400	Y 377.433
Mn (257.610 nm)	0.000086	ppm	0.000011	13.10	1.371880	Y 377.433
Mo (202.032 nm)	0.000074	ppm	0.000070	94.61	12.599400	Y 377.433
Na (589.592 nm)	0.057067	ppm	0.023453	41.10	220.708000	Y_R2 488.368
Na H (589.593 nm)	0.335568 u	ppm	0.018406	5.48	672.421520	Y_R4
Ni (231.604 nm)	-0.000452 u	ppm	0.000162	35.82	-12.908000	Y 377.433
P (213.618 nm)	-0.003499 u	ppm	0.002332	66.65	-1.808240	Y 242.219
Pb (220.353 nm)	0.000106	ppm	0.000052	49.51	8.372650	Y 242.219
S (181.972 nm)	0.000569 u	ppm	0.005849	> 100.00	7.753368	Y 377.433
Sb (206.834 nm)	-0.001260 u	ppm	0.001393	> 100.00	-0.072477	Y 377.433
Se (196.026 nm)	-0.000700 u	ppm	0.000797	> 100.00	4.460690	Y 242.219
Si (288.158 nm)	-0.004247 u	ppm	0.000460	10.84	480.036000	Y 377.433
Sn (189.925 nm)	-0.004103 u	ppm	0.000909	22.15	2.344200	Y 377.433
Sr (421.552 nm)	0.000001 u	ppm	0.000089	> 100.00	103.126538	Y_R 488.368
Th (288.505 nm)	-0.001908 u	ppm	0.002229	> 100.00	15.951900	Y 377.433
Ti (336.122 nm)	0.000478	ppm	0.000110	22.95	-457.839000	Y 377.433
Tl (190.794 nm)	0.001301	ppm	0.000217	16.69	3.297900	Y 377.433
U (409.013 nm)	-0.000466 u	ppm	0.010526	> 100.00	28.517200	Y 377.433
V (292.401 nm)	-0.000127 u	ppm	0.000170	> 100.00	-101.508000	Y 377.433
Zn (206.200 nm)	0.000554 u	ppm	0.000929	> 100.00	5.617340	Y 377.433
Zr (343.823 nm)	0.000380	ppm	0.000061	16.12	-151.231000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.040881	19461.352461	0.001408	0.14
Y 377.433	1.044482	580289.696917	0.001352	0.13
Y_R 377.433	1.048900	51066.500000	0.001385	0.13
Y_R 488.368	1.036050	44307.700000	0.006069	0.59
Y_R2 488.368	1.040263	86883.675398	0.000139	0.01
Y_R4	1.033350	39729.200000	0.002555	0.25

Sample Name: CCVL-5695588

Date: 5/10/2019 8:51:10 PM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009103	ppm	0.000110	1.20	147.797000	Y 377.433
Al (394.401 nm)	0.101673	ppm	0.000664	0.65	1308.600000	Y 377.433
Al H (396.152 nm)	0.211294 u	ppm	0.007589	3.59	260.943000	Y_R 377.433
As (188.980 nm)	0.015156	ppm	0.000555	3.66	22.280500	Y 242.219
B (249.678 nm)	0.092650	ppm	0.000555	0.60	721.592000	Y 242.219
Ba (493.408 nm)	0.008778	ppm	0.000292	3.32	2549.710000	Y_R 488.368
Be (234.861 nm)	0.000917	ppm	0.000051	5.52	95.642800	Y_R 488.368
Bi (223.061 nm)	0.090766	ppm	0.001855	2.04	188.739000	Y 377.433
Ca (315.887 nm)	0.203904	ppm	0.002225	1.09	95.433944	Y_R 377.433
Cd (214.439 nm)	0.005027	ppm	0.000085	1.68	185.843000	Y 377.433
Co (228.615 nm)	0.010453	ppm	0.000008	0.08	238.662000	Y 242.219
Cr (205.560 nm)	0.010054	ppm	0.000287	2.85	61.376300	Y 377.433
Cu (324.754 nm)	0.014096	ppm	0.000220	1.56	1203.390000	Y 377.433
Fe (238.204 nm)	0.096175	ppm	0.004159	4.32	244.606500	Y_R 377.433
Fe H (259.940 nm)	0.135271 u	ppm	0.000654	0.48	166.424000	Y_R 377.433
K (766.491 nm)	2.798900	ppm	0.048398	1.73	5125.420000	Y_R2 488.368
Li (670.783 nm)	0.021990	ppm	0.000284	1.29	-2485.970000	Y_R2 488.368
Mg (279.078 nm)	0.194258	ppm	0.000819	0.42	696.173000	Y 377.433
Mn (257.610 nm)	0.010222	ppm	0.000036	0.35	2922.560000	Y 377.433
Mo (202.032 nm)	0.019086	ppm	0.000059	0.31	264.095000	Y 377.433
Na (589.592 nm)	1.121020	ppm	0.050129	4.47	1148.010000	Y_R2 488.368
Na H (589.593 nm)	1.018296 u	ppm	0.011563	1.14	1068.121209	Y_R4
Ni (231.604 nm)	0.040936	ppm	0.000116	0.28	211.687000	Y 377.433
P (213.618 nm)	2.626990	ppm	0.021303	0.81	4057.600000	Y 242.219
Pb (220.353 nm)	0.011348	ppm	0.000454	4.00	46.246000	Y 242.219
S (181.972 nm)	0.085505	ppm	0.001707	2.00	49.298906	Y 377.433
Sb (206.834 nm)	0.015706	ppm	0.003299	21.01	31.383400	Y 377.433
Se (196.026 nm)	0.020774	ppm	0.002123	10.22	38.846900	Y 242.219
Si (288.158 nm)	0.486745	ppm	0.004480	0.92	3759.870000	Y 377.433
Sn (189.925 nm)	0.094801	ppm	0.000284	0.30	165.109000	Y 377.433
Sr (421.552 nm)	0.008753	ppm	0.000128	1.47	1508.630568	Y_R 488.368
Th (288.505 nm)	0.012040	ppm	0.000574	4.76	39.860500	Y 377.433
Ti (336.122 nm)	0.010016	ppm	0.000059	0.59	801.124000	Y 377.433
Tl (190.794 nm)	0.016643	ppm	0.000717	4.31	40.695400	Y 377.433
U (409.013 nm)	0.059642	ppm	0.000053	0.09	219.420000	Y 377.433
V (292.401 nm)	0.009385	ppm	0.000272	2.90	407.539000	Y 377.433
Zn (206.200 nm)	0.020942	ppm	0.000183	0.88	98.788100	Y 377.433
Zr (343.823 nm)	0.010250 Q	ppm	0.000075	0.74	427.878000 Q	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.053022	19688.345127	0.001918	0.18
Y 377.433	1.057202	587356.793639	0.000641	0.06
Y_R 377.433	1.058560	51536.900000	0.002053	0.19
Y_R 488.368	1.055160	45125.200000	0.008384	0.79
Y_R2 488.368	1.044678	87252.410817	0.003522	0.34
Y_R4	1.035820	39823.900000	0.002124	0.21

Sample Name: 280-123238-C-1-E MS

Date: 5/10/2019 8:54:40 PM

Rack:Tube: 1:89

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.051897	ppm	0.000389	0.75	1391.550000	Y 377.433
Al (394.401 nm)	9.716240 o	ppm	0.006149	0.06	122551.000000	Y 377.433
Al H (396.152 nm)	9.768710	ppm	0.005954	0.06	22489.100000	Y_R 377.433
As (188.980 nm)	1.996750	ppm	0.001310	0.07	3174.220000	Y 242.219
B (249.678 nm)	1.073750	ppm	0.000580	0.05	8232.090000	Y 242.219
Ba (493.408 nm)	2.026680	ppm	0.004124	0.20	214286.000000	Y_R 488.368
Be (234.861 nm)	0.970734	ppm	0.001900	0.20	102940.000000	Y_R 488.368
Bi (223.061 nm)	1.970090	ppm	0.001080	0.05	4323.220000	Y 377.433
Ca (315.887 nm)	118.497786	ppm	0.062685	0.05	97938.741394	Y_R 377.433
Cd (214.439 nm)	0.953739	ppm	0.002485	0.26	36536.400000	Y 377.433
Co (228.615 nm)	0.946418	ppm	0.001133	0.12	23709.600000	Y 242.219
Cr (205.560 nm)	0.962266	ppm	0.000218	0.02	6652.580000	Y 377.433
Cu (324.754 nm)	0.953334	ppm	0.003392	0.36	47304.400000	Y 377.433
Fe (238.204 nm)	9.663200 o	ppm	0.001952	0.02	24161.893184	Y_R 377.433
Fe H (259.940 nm)	9.689590	ppm	0.019291	0.20	13898.200000	Y_R 377.433
K (766.491 nm)	55.030200	ppm	0.079195	0.14	60061.300000	Y_R2 488.368
Li (670.783 nm)	1.028430	ppm	0.003034	0.30	15823.900000	Y_R2 488.368
Mg (279.078 nm)	62.259500	ppm	0.113871	0.18	218194.000000	Y 377.433
Mn (257.610 nm)	0.966387	ppm	0.001198	0.12	278505.000000	Y 377.433
Mo (202.032 nm)	0.992183	ppm	0.002047	0.21	13136.900000	Y 377.433
Na (589.592 nm)	126.180000 o	ppm	0.516511	0.41	110347.000000	Y_R2 488.368
Na H (589.593 nm)	126.996772	ppm	0.308821	0.24	74083.469186	Y_R4
Ni (231.604 nm)	0.933403	ppm	0.001895	0.20	5056.590000	Y 377.433
P (213.618 nm)	19.625500	ppm	0.032923	0.17	30044.100000	Y 242.219
Pb (220.353 nm)	0.962179	ppm	0.000512	0.05	3245.350000	Y 242.219
S (181.972 nm)	46.496256	ppm	0.185737	0.40	22738.496049	Y 377.433
Sb (206.834 nm)	1.002520	ppm	0.000990	0.10	1865.210000	Y 377.433
Se (196.026 nm)	1.952040	ppm	0.002113	0.11	3131.050000	Y 242.219
Si (288.158 nm)	5.725350	ppm	0.004501	0.08	38753.800000	Y 377.433
Sn (189.925 nm)	1.942050	ppm	0.004586	0.24	3205.100000	Y 377.433
Sr (421.552 nm)	1.555571	ppm	0.002642	0.17	249920.168988	Y_R 488.368
Th (288.505 nm)	1.010310	ppm	0.001391	0.14	1696.600000	Y 377.433
Ti (336.122 nm)	0.992180	ppm	0.000370	0.04	130785.000000	Y 377.433
Tl (190.794 nm)	1.887130	ppm	0.001533	0.08	4602.520000	Y 377.433
U (409.013 nm)	2.059420	ppm	0.002701	0.13	6541.360000	Y 377.433
V (292.401 nm)	0.982898	ppm	0.001144	0.12	52704.800000	Y 377.433
Zn (206.200 nm)	0.486718	ppm	0.000748	0.15	2228.380000	Y 377.433
Zr (343.823 nm)	0.474921	ppm	0.000187	0.04	27691.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.976651	18260.435860	0.002958	0.30
Y 377.433	0.997262	554055.160335	0.003745	0.38
Y_R 377.433	1.013570	49346.200000	0.001279	0.13
Y_R 488.368	1.001000	42809.000000	0.000021	0.00
Y_R2 488.368	0.995961	83183.489246	0.002292	0.23
Y_R4	1.009720	38820.500000	0.005629	0.56

Sample Name: 280-123238-C-1-F MSD

Date: 5/10/2019 8:58:17 PM

Rack:Tube: 1:90

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.051651	ppm	0.000228	0.44	1384.610000	Y 377.433
Al (394.401 nm)	9.845250 o	ppm	0.014216	0.14	124170.000000	Y 377.433
Al H (396.152 nm)	9.887390	ppm	0.032814	0.33	22747.900000	Y_R 377.433
As (188.980 nm)	1.995140	ppm	0.005855	0.29	3171.660000	Y 242.219
B (249.678 nm)	1.066150	ppm	0.000041	0.00	8173.770000	Y 242.219
Ba (493.408 nm)	2.015040	ppm	0.006381	0.32	213066.000000	Y_R 488.368
Be (234.861 nm)	0.967470	ppm	0.003309	0.34	102592.000000	Y_R 488.368
Bi (223.061 nm)	1.956510	ppm	0.004362	0.22	4293.390000	Y 377.433
Ca (315.887 nm)	117.27236	ppm	0.263163	0.22	96929.252674	Y_R 377.433
Cd (214.439 nm)	0.948909	ppm	0.000777	0.08	36351.400000	Y 377.433
Co (228.615 nm)	0.943114	ppm	0.000963	0.10	23626.700000	Y 242.219
Cr (205.560 nm)	0.960673	ppm	0.001419	0.15	6641.580000	Y 377.433
Cu (324.754 nm)	0.952657	ppm	0.002558	0.27	47270.300000	Y 377.433
Fe (238.204 nm)	9.799587 o	ppm	0.039183	0.40	24502.856470	Y_R 377.433
Fe H (259.940 nm)	9.821500	ppm	0.021183	0.22	14087.800000	Y_R 377.433
K (766.491 nm)	55.638300	ppm	0.064488	0.12	60700.800000	Y_R2 488.368
Li (670.783 nm)	1.024550	ppm	0.001451	0.14	15753.200000	Y_R2 488.368
Mg (279.078 nm)	62.486900	ppm	0.094870	0.15	218991.000000	Y 377.433
Mn (257.610 nm)	0.961251	ppm	0.000615	0.06	277024.000000	Y 377.433
Mo (202.032 nm)	0.987629	ppm	0.001624	0.16	13076.600000	Y 377.433
Na (589.592 nm)	124.203000 o	ppm	0.034425	0.03	108625.000000	Y_R2 488.368
Na H (589.593 nm)	126.315671	ppm	0.592943	0.47	73688.712408	Y_R4
Ni (231.604 nm)	0.929279	ppm	0.000748	0.08	5034.200000	Y 377.433
P (213.618 nm)	19.471800	ppm	0.012370	0.06	29807.000000	Y 242.219
Pb (220.353 nm)	0.963492	ppm	0.004051	0.42	3249.800000	Y 242.219
S (181.972 nm)	45.521162	ppm	0.128349	0.28	22261.903107	Y 377.433
Sb (206.834 nm)	0.990920	ppm	0.001163	0.12	1843.650000	Y 377.433
Se (196.026 nm)	1.955430	ppm	0.000881	0.05	3136.420000	Y 242.219
Si (288.158 nm)	5.656600	ppm	0.013072	0.23	38294.500000	Y 377.433
Sn (189.925 nm)	1.935050	ppm	0.000850	0.04	3193.580000	Y 377.433
Sr (421.552 nm)	1.537895	ppm	0.004335	0.28	247081.447217	Y_R 488.368
Th (288.505 nm)	1.001780	ppm	0.003201	0.32	1682.230000	Y 377.433
Ti (336.122 nm)	0.987196	ppm	0.000653	0.07	130123.000000	Y 377.433
Tl (190.794 nm)	1.880160	ppm	0.007894	0.42	4585.560000	Y 377.433
U (409.013 nm)	2.049330	ppm	0.001896	0.09	6509.410000	Y 377.433
V (292.401 nm)	0.977435	ppm	0.000538	0.06	52408.800000	Y 377.433
Zn (206.200 nm)	0.482577	ppm	0.001606	0.33	2209.480000	Y 377.433
Zr (343.823 nm)	0.474369	ppm	0.000468	0.10	27659.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.983168	18382.282999	0.000279	0.03
Y 377.433	1.005803	558800.291984	0.002111	0.21
Y_R 377.433	1.021490	49732.200000	0.004401	0.43
Y_R 488.368	1.008550	43132.100000	0.004541	0.45
Y_R2 488.368	1.003446	83808.700629	0.001792	0.18
Y_R4	1.013840	38979.000000	0.004961	0.49

Sample Name: 280-123238-C-2-B

Date: 5/10/2019 9:01:56 PM

Rack:Tube: 2:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000344	ppm	0.000183	53.33	-172.435000	Y 377.433
Al (394.401 nm)	0.007076	ppm	0.000816	11.53	268.274000	Y 377.433
Al H (396.152 nm)	0.014235 u	ppm	0.001514	10.64	39.841300	Y_R 377.433
As (188.980 nm)	0.002761	ppm	0.000685	24.83	2.566190	Y 242.219
B (249.678 nm)	0.095745	ppm	0.000152	0.16	745.346000	Y 242.219
Ba (493.408 nm)	0.059578	ppm	0.000005	0.01	7879.840000	Y_R 488.368
Be (234.861 nm)	-0.000006 u	ppm	0.000016	> 100.00	-1.616800	Y_R 488.368
Bi (223.061 nm)	0.000563 u	ppm	0.002808	> 100.00	-9.629620	Y 377.433
Ca (315.887 nm)	71.186800	ppm	0.118557	0.17	58805.289402	Y_R 377.433
Cd (214.439 nm)	0.000203	ppm	0.000033	16.01	1.000650	Y 377.433
Co (228.615 nm)	0.000039 u	ppm	0.000067	> 100.00	-22.431000	Y 242.219
Cr (205.560 nm)	0.000546	ppm	0.000181	33.23	-4.369050	Y 377.433
Cu (324.754 nm)	0.000116	ppm	0.000152	> 100.00	474.535000	Y 377.433
Fe (238.204 nm)	0.019484	ppm	0.001835	9.42	52.879275	Y_R 377.433
Fe H (259.940 nm)	0.045705 u	ppm	0.006249	13.67	37.697000	Y_R 377.433
K (766.491 nm)	5.397700	ppm	0.035154	0.65	7858.780000	Y_R2 488.368
Li (670.783 nm)	0.031522	ppm	0.002417	7.67	-2312.560000	Y_R2 488.368
Mg (279.078 nm)	15.672600	ppm	0.012779	0.08	54949.500000	Y 377.433
Mn (257.610 nm)	0.001128	ppm	0.000007	0.61	301.503000	Y 377.433
Mo (202.032 nm)	0.006607	ppm	0.000486	7.35	99.021400	Y 377.433
Na (589.592 nm)	77.394100 o	ppm	0.066090	0.09	67465.100000	Y_R2 488.368
Na H (589.593 nm)	78.912718	ppm	0.112710	0.14	46214.629863	Y_R4
Ni (231.604 nm)	-0.000950 u	ppm	0.001089	> 100.00	-15.611400	Y 377.433
P (213.618 nm)	0.275456	ppm	0.002783	1.01	428.473000	Y 242.219
Pb (220.353 nm)	-0.000669 u	ppm	0.001846	> 100.00	5.815250	Y 242.219
S (181.972 nm)	36.945146	ppm	0.137488	0.37	18065.412962	Y 377.433
Sb (206.834 nm)	-0.005749 u	ppm	0.001153	20.06	-8.484620	Y 377.433
Se (196.026 nm)	0.003367	ppm	0.000786	23.34	10.972600	Y 242.219
Si (288.158 nm)	3.698620	ppm	0.004228	0.11	25215.200000	Y 377.433
Sn (189.925 nm)	-0.003669 u	ppm	0.000032	0.88	3.059370	Y 377.433
Sr (421.552 nm)	0.576997	ppm	0.000622	0.11	92765.324965	Y_R 488.368
Th (288.505 nm)	-0.006520 u	ppm	0.000527	8.08	6.195860	Y 377.433
Ti (336.122 nm)	-0.000004 u	ppm	0.000051	> 100.00	-281.814000	Y 377.433
Tl (190.794 nm)	0.004630	ppm	0.000430	9.28	8.489600	Y 377.433
U (409.013 nm)	0.023137	ppm	0.006772	29.27	94.752900	Y 377.433
V (292.401 nm)	0.001493	ppm	0.000324	21.70	-15.679800	Y 377.433
Zn (206.200 nm)	0.009472	ppm	0.000063	0.67	46.370600	Y 377.433
Zr (343.823 nm)	0.000673	ppm	0.000005	0.70	-134.044000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.011897	18919.439415	0.000105	0.01
Y 377.433	1.022283	567956.657439	0.001068	0.10
Y_R 377.433	1.028800	50087.800000	0.000848	0.08
Y_R 488.368	1.016580	43475.200000	0.001363	0.13
Y_R2 488.368	1.026676	85748.848964	0.008935	0.87
Y_R4	1.029200	39569.600000	0.004204	0.41

Sample Name: 280-123238-C-3-B

Date: 5/10/2019 9:05:28 PM

Rack:Tube: 2:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000304	ppm	0.000423	> 100.00	-174.196000	Y 377.433
Al (394.401 nm)	0.007011	ppm	0.001325	18.90	276.938000	Y 377.433
Al H (396.152 nm)	-0.001890 u	ppm	0.004313	> 100.00	18.320800	Y_R 377.433
As (188.980 nm)	0.002012	ppm	0.000625	31.07	1.375220	Y 242.219
B (249.678 nm)	0.080377	ppm	0.001027	1.28	627.619000	Y 242.219
Ba (493.408 nm)	0.059598	ppm	0.000191	0.32	7881.900000	Y_R 488.368
Be (234.861 nm)	-0.000055 u	ppm	0.000061	> 100.00	-6.748800	Y_R 488.368
Bi (223.061 nm)	0.000321	ppm	0.000007	2.21	-10.164100	Y 377.433
Ca (315.887 nm)	71.968704	ppm	0.121657	0.17	59452.005227	Y_R 377.433
Cd (214.439 nm)	0.000304	ppm	0.000037	12.24	4.846330	Y 377.433
Co (228.615 nm)	0.000023 u	ppm	0.000042	> 100.00	-22.816400	Y 242.219
Cr (205.560 nm)	0.000259	ppm	0.000219	84.58	-6.356750	Y 377.433
Cu (324.754 nm)	0.000363	ppm	0.000178	48.86	485.871000	Y 377.433
Fe (238.204 nm)	0.012665	ppm	0.000436	3.44	35.833911	Y_R 377.433
Fe H (259.940 nm)	0.040508 u	ppm	0.003727	9.20	30.226900	Y_R 377.433
K (766.491 nm)	4.721810	ppm	0.042287	0.90	7147.900000	Y_R2 488.368
Li (670.783 nm)	0.029268	ppm	0.000107	0.37	-2353.560000	Y_R2 488.368
Mg (279.078 nm)	16.173500	ppm	0.002643	0.02	56705.300000	Y 377.433
Mn (257.610 nm)	0.000911	ppm	0.000001	0.11	239.161000	Y 377.433
Mo (202.032 nm)	0.006795	ppm	0.000152	2.24	101.499000	Y 377.433
Na (589.592 nm)	73.458400 o	ppm	0.005394	0.01	64043.700000	Y_R2 488.368
Na H (589.593 nm)	74.552946	ppm	0.147558	0.20	43687.767139	Y_R4
Ni (231.604 nm)	-0.001504 u	ppm	0.000166	11.04	-18.620400	Y 377.433
P (213.618 nm)	0.188704	ppm	0.000495	0.26	294.427000	Y 242.219
Pb (220.353 nm)	-0.000778 u	ppm	0.000456	58.60	5.437430	Y 242.219
S (181.972 nm)	37.792824	ppm	0.109083	0.29	18479.694704	Y 377.433
Sb (206.834 nm)	-0.006740 u	ppm	0.003363	49.89	-10.330200	Y 377.433
Se (196.026 nm)	0.005775	ppm	0.003392	58.74	14.830400	Y 242.219
Si (288.158 nm)	3.408010	ppm	0.002304	0.07	23273.900000	Y 377.433
Sn (189.925 nm)	-0.003694 u	ppm	0.000946	25.61	3.017880	Y 377.433
Sr (421.552 nm)	0.612202	ppm	0.000044	0.01	98419.041963	Y_R 488.368
Th (288.505 nm)	-0.006244 u	ppm	0.005097	81.63	6.570950	Y 377.433
Ti (336.122 nm)	0.000080 u	ppm	0.000300	> 100.00	-268.035000	Y 377.433
Tl (190.794 nm)	0.002024	ppm	0.002799	> 100.00	2.088030	Y 377.433
U (409.013 nm)	0.020097	ppm	0.001431	7.12	84.976000	Y 377.433
V (292.401 nm)	0.001525	ppm	0.000395	25.88	-14.282900	Y 377.433
Zn (206.200 nm)	0.005876	ppm	0.000338	5.76	29.936800	Y 377.433
Zr (343.823 nm)	0.000533	ppm	0.000247	46.35	-142.223000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.012365	18928.183576	0.001060	0.10
Y 377.433	1.023130	568426.722185	0.000375	0.04
Y_R 377.433	1.033920	50337.200000	0.005316	0.51
Y_R 488.368	1.021160	43671.000000	0.004486	0.44
Y_R2 488.368	1.015566	84820.909237	0.001051	0.10
Y_R4	1.029170	39568.500000	0.002064	0.20

Sample Name: 280-123238-C-4-B

Date: 5/10/2019 9:09:00 PM

Rack:Tube: 2:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000376	ppm	0.000014	3.71	-171.016000	Y 377.433
Al (394.401 nm)	0.005059	ppm	0.000852	16.83	236.548000	Y 377.433
Al H (396.152 nm)	0.016661 u	ppm	0.000483	2.90	36.386100	Y_R 377.433
As (188.980 nm)	0.002175	ppm	0.001451	66.72	1.632880	Y 242.219
B (249.678 nm)	0.083958	ppm	0.000142	0.17	655.020000	Y 242.219
Ba (493.408 nm)	0.057001	ppm	0.000038	0.07	7609.420000	Y_R 488.368
Be (234.861 nm)	-0.000052 u	ppm	0.000042	80.46	-6.885700	Y_R 488.368
Bi (223.061 nm)	0.004013	ppm	0.000476	11.85	-2.036510	Y 377.433
Ca (315.887 nm)	65.522602	ppm	0.036356	0.06	54120.441268	Y_R 377.433
Cd (214.439 nm)	0.000190	ppm	0.000051	26.74	0.521538	Y 377.433
Co (228.615 nm)	0.000120 u	ppm	0.000189	> 100.00	-20.400300	Y 242.219
Cr (205.560 nm)	0.000490	ppm	0.000005	1.01	-4.758230	Y 377.433
Cu (324.754 nm)	0.000572	ppm	0.000480	83.99	499.423000	Y 377.433
Fe (238.204 nm)	0.060902	ppm	0.000818	1.34	156.424024	Y_R 377.433
Fe H (259.940 nm)	0.089158 u	ppm	0.003114	3.49	100.149000	Y_R 377.433
K (766.491 nm)	5.493550	ppm	0.069270	1.26	7959.600000	Y_R2 488.368
Li (670.783 nm)	0.025301	ppm	0.002646	10.46	-2425.720000	Y_R2 488.368
Mg (279.078 nm)	15.187400	ppm	0.009432	0.06	53249.000000	Y 377.433
Mn (257.610 nm)	0.001231	ppm	0.000009	0.73	331.395000	Y 377.433
Mo (202.032 nm)	0.007088	ppm	0.000547	7.72	105.383000	Y 377.433
Na (589.592 nm)	68.075200 o	ppm	0.081468	0.12	59363.400000	Y_R2 488.368
Na H (589.593 nm)	69.237117	ppm	0.198581	0.29	40606.787861	Y_R4
Ni (231.604 nm)	0.000172 u	ppm	0.000710	> 100.00	-9.526600	Y 377.433
P (213.618 nm)	0.396120	ppm	0.000914	0.23	614.895000	Y 242.219
Pb (220.353 nm)	0.001189	ppm	0.001150	96.75	12.038100	Y 242.219
S (181.972 nm)	34.350434	ppm	0.107078	0.31	16797.174071	Y 377.433
Sb (206.834 nm)	-0.003431 u	ppm	0.001003	29.22	-4.159530	Y 377.433
Se (196.026 nm)	0.004228	ppm	0.000067	1.60	12.341500	Y 242.219
Si (288.158 nm)	3.256260	ppm	0.000616	0.02	22260.200000	Y 377.433
Sn (189.925 nm)	-0.003909 u	ppm	0.001441	36.85	2.663840	Y 377.433
Sr (421.552 nm)	0.552121	ppm	0.000376	0.07	88770.404667	Y_R 488.368
Th (288.505 nm)	-0.008990 u	ppm	0.000862	9.59	1.941980	Y 377.433
Ti (336.122 nm)	-0.000055 u	ppm	0.000048	87.50	-305.573000	Y 377.433
Tl (190.794 nm)	0.000922	ppm	0.000225	24.46	-0.378004	Y 377.433
U (409.013 nm)	0.024081	ppm	0.000673	2.80	98.427900	Y 377.433
V (292.401 nm)	0.001036	ppm	0.000062	6.00	-40.847200	Y 377.433
Zn (206.200 nm)	0.007663	ppm	0.000596	7.78	38.112100	Y 377.433
Zr (343.823 nm)	0.000525	ppm	0.000086	16.47	-142.724000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.007161	18830.890054	0.000489	0.05
Y 377.433	1.018385	565790.502675	0.000016	0.00
Y_R 377.433	1.036350	50455.200000	0.003830	0.37
Y_R 488.368	1.021980	43706.000000	0.005506	0.54
Y_R2 488.368	1.020620	85243.106362	0.004709	0.46
Y_R4	1.023640	39355.500000	0.008355	0.82

Sample Name: 280-123238-C-5-B

Date: 5/10/2019 9:12:30 PM

Rack:Tube: 2:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000355	ppm	0.000495	> 100.00	-171.849000	Y 377.433
Al (394.401 nm)	0.005602	ppm	0.000202	3.60	255.663000	Y 377.433
Al H (396.152 nm)	-0.000951 u	ppm	0.001575	> 100.00	12.886300	Y_R 377.433
As (188.980 nm)	-0.000151 u	ppm	0.000279	> 100.00	-2.066880	Y 242.219
B (249.678 nm)	0.066347	ppm	0.001414	2.13	520.131000	Y 242.219
Ba (493.408 nm)	0.065957	ppm	0.000198	0.30	8549.140000	Y_R 488.368
Be (234.861 nm)	-0.000003 u	ppm	0.000094	> 100.00	-1.206060	Y_R 488.368
Bi (223.061 nm)	0.000212 u	ppm	0.001396	> 100.00	-10.405400	Y 377.433
Ca (315.887 nm)	68.814841	ppm	0.009629	0.01	56843.449557	Y_R 377.433
Cd (214.439 nm)	0.000171	ppm	0.000021	12.51	-0.248662	Y 377.433
Co (228.615 nm)	-0.000021 u	ppm	0.000001	3.33	-23.926400	Y 242.219
Cr (205.560 nm)	-0.000085 u	ppm	0.000446	> 100.00	-8.746200	Y 377.433
Cu (324.754 nm)	-0.000371 u	ppm	0.000247	66.67	450.487000	Y 377.433
Fe (238.204 nm)	0.012030	ppm	0.003011	25.03	34.246749	Y_R 377.433
Fe H (259.940 nm)	0.036850 u	ppm	0.005514	14.96	24.970100	Y_R 377.433
K (766.491 nm)	3.958030	ppm	0.019462	0.49	6344.570000	Y_R2 488.368
Li (670.783 nm)	0.023455	ppm	0.003973	16.94	-2459.310000	Y_R2 488.368
Mg (279.078 nm)	15.817600	ppm	0.025257	0.16	55458.000000	Y 377.433
Mn (257.610 nm)	0.000661	ppm	0.000005	0.68	166.894000	Y 377.433
Mo (202.032 nm)	0.006595	ppm	0.000537	8.15	98.861900	Y 377.433
Na (589.592 nm)	66.054200 o	ppm	0.027465	0.04	57608.700000	Y_R2 488.368
Na H (589.593 nm)	66.859031	ppm	0.071241	0.11	39228.482818	Y_R4
Ni (231.604 nm)	-0.000349 u	ppm	0.000228	65.46	-12.347500	Y 377.433
P (213.618 nm)	0.026947	ppm	0.003575	13.27	44.710400	Y 242.219
Pb (220.353 nm)	-0.001494 u	ppm	0.001886	> 100.00	3.027360	Y 242.219
S (181.972 nm)	33.597295	ppm	0.061971	0.18	16429.264869	Y 377.433
Sb (206.834 nm)	-0.004556 u	ppm	0.003281	72.01	-6.264900	Y 377.433
Se (196.026 nm)	0.004051	ppm	0.005333	> 100.00	12.069000	Y 242.219
Si (288.158 nm)	3.388470	ppm	0.007346	0.22	23143.400000	Y 377.433
Sn (189.925 nm)	-0.004723 u	ppm	0.000815	17.26	1.324060	Y 377.433
Sr (421.552 nm)	0.591973	ppm	0.001500	0.25	95170.360843	Y_R 488.368
Th (288.505 nm)	-0.011376 u	ppm	0.002602	22.88	-2.239590	Y 377.433
Ti (336.122 nm)	-0.000061 u	ppm	0.000050	81.62	-297.271000	Y 377.433
Tl (190.794 nm)	0.003098	ppm	0.001241	40.07	4.843170	Y 377.433
U (409.013 nm)	0.034748	ppm	0.001598	4.60	132.139000	Y 377.433
V (292.401 nm)	0.001100	ppm	0.000163	14.85	-37.646100	Y 377.433
Zn (206.200 nm)	0.005248	ppm	0.000764	14.56	27.070600	Y 377.433
Zr (343.823 nm)	0.000619	ppm	0.000240	38.80	-137.201000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.005079	18791.964409	0.000498	0.05
Y 377.433	1.015763	564334.060359	0.000090	0.01
Y_R 377.433	1.012990	49318.100000	0.002323	0.23
Y_R 488.368	1.001380	42825.400000	0.000505	0.05
Y_R2 488.368	0.991763	82832.881535	0.004637	0.47
Y_R4	1.017530	39120.900000	0.004522	0.44

Sample Name: MB 280-457064/1-A

Date: 5/10/2019 9:16:00 PM

Rack:Tube: 2:5

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000192 u	ppm	0.000401	> 100.00	-191.277000	Y 377.433
Al (394.401 nm)	0.009736	ppm	0.000174	1.79	148.651000	Y 377.433
Al H (396.152 nm)	0.112182 u	ppm	0.003242	2.89	32.464400	Y_R 377.433
As (188.980 nm)	0.000156	ppm	0.000171	> 100.00	-1.581200	Y 242.219
B (249.678 nm)	-0.000640 u	ppm	0.000033	5.12	6.860970	Y 242.219
Ba (493.408 nm)	-0.000668 u	ppm	0.000106	15.80	1558.610000	Y_R 488.368
Be (234.861 nm)	-0.000026 u	ppm	0.000053	> 100.00	-4.841300	Y_R 488.368
Bi (223.061 nm)	0.004940	ppm	0.003672	74.34	0.003829	Y 377.433
Ca (315.887 nm)	0.021107	ppm	0.001256	5.95	-55.782148	Y_R 377.433
Cd (214.439 nm)	0.000044 u	ppm	0.000105	> 100.00	-5.029660	Y 377.433
Co (228.615 nm)	0.000096	ppm	0.000096	99.61	-20.988200	Y 242.219
Cr (205.560 nm)	0.000088	ppm	0.000067	75.80	-7.511620	Y 377.433
Cu (324.754 nm)	-0.000306 u	ppm	0.000413	> 100.00	496.105000	Y 377.433
Fe (238.204 nm)	0.141996	ppm	0.000077	0.05	359.156072	Y_R 377.433
Fe H (259.940 nm)	0.176720 u	ppm	0.000648	0.37	225.996000	Y_R 377.433
K (766.491 nm)	-0.199551 u	ppm	0.002672	1.34	1971.700000	Y_R2 488.368
Li (670.783 nm)	0.004669	ppm	0.000646	13.84	-2801.090000	Y_R2 488.368
Mg (279.078 nm)	0.002678	ppm	0.001405	52.48	25.373600	Y 377.433
Mn (257.610 nm)	0.000895	ppm	0.000014	1.52	234.398000	Y 377.433
Mo (202.032 nm)	-0.000005 u	ppm	0.000016	> 100.00	11.547000	Y 377.433
Na (589.592 nm)	0.108571	ppm	0.019194	17.68	265.570000	Y_R2 488.368
Na H (589.593 nm)	0.327858 u	ppm	0.002236	0.68	667.952874	Y_R4
Ni (231.604 nm)	0.000886	ppm	0.000345	38.89	-5.650210	Y 377.433
P (213.618 nm)	-0.003466 u	ppm	0.000572	16.50	-1.744330	Y 242.219
Pb (220.353 nm)	-0.000255 u	ppm	0.000035	13.94	7.160110	Y 242.219
S (181.972 nm)	0.008431	ppm	0.002087	24.76	11.598370	Y 377.433
Sb (206.834 nm)	0.001518	ppm	0.001588	> 100.00	5.119860	Y 377.433
Se (196.026 nm)	0.003348	ppm	0.002259	67.48	10.907300	Y 242.219
Si (288.158 nm)	-0.003025 u	ppm	0.000914	30.22	488.201000	Y 377.433
Sn (189.925 nm)	-0.003331 u	ppm	0.000358	10.75	3.615740	Y 377.433
Sr (421.552 nm)	0.000007 u	ppm	0.000055	> 100.00	104.117058	Y_R 488.368
Th (288.505 nm)	-0.004114 u	ppm	0.002481	60.32	12.156900	Y 377.433
Ti (336.122 nm)	0.000478	ppm	0.000006	1.19	-457.862000	Y 377.433
Tl (190.794 nm)	0.000031 u	ppm	0.001759	> 100.00	0.174389	Y 377.433
U (409.013 nm)	0.006808	ppm	0.000355	5.21	51.869300	Y 377.433
V (292.401 nm)	-0.000255 u	ppm	0.000091	35.62	-108.582000	Y 377.433
Zn (206.200 nm)	0.001325	ppm	0.000478	36.07	9.162380	Y 377.433
Zr (343.823 nm)	0.000587	ppm	0.000016	2.68	-139.076000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.034906	19349.640691	0.000340	0.03
Y 377.433	1.041570	578672.070296	0.001582	0.15
Y_R 377.433	1.035400	50409.200000	0.002924	0.28
Y_R 488.368	1.017190	43501.400000	0.005800	0.57
Y_R2 488.368	1.027476	85815.661033	0.004679	0.46
Y_R4	1.024630	39393.800000	0.003238	0.32

Sample Name: LCS 280-457064/2-A

Date: 5/10/2019 9:19:26 PM

Rack:Tube: 2:6

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.050511	ppm	0.000456	0.90	1348.180000	Y 377.433
Al (394.401 nm)	9.524300 o	ppm	0.009694	0.10	119986.000000	Y 377.433
Al H (396.152 nm)	9.662520	ppm	0.005334	0.06	22019.300000	Y_R 377.433
As (188.980 nm)	1.960980	ppm	0.008902	0.45	3117.330000	Y 242.219
B (249.678 nm)	0.956116	ppm	0.001374	0.14	7330.790000	Y 242.219
Ba (493.408 nm)	1.959970	ppm	0.005017	0.26	207287.000000	Y_R 488.368
Be (234.861 nm)	0.957700	ppm	0.000073	0.01	101555.000000	Y_R 488.368
Bi (223.061 nm)	1.965130	ppm	0.001352	0.07	4312.320000	Y 377.433
Ca (315.887 nm)	47.599632	ppm	0.039115	0.08	39298.890544	Y_R 377.433
Cd (214.439 nm)	0.958759	ppm	0.001464	0.15	36728.700000	Y 377.433
Co (228.615 nm)	0.944997	ppm	0.001108	0.12	23673.800000	Y 242.219
Cr (205.560 nm)	0.955779	ppm	0.002021	0.21	6607.700000	Y 377.433
Cu (324.754 nm)	0.941564	ppm	0.003780	0.40	46768.500000	Y 377.433
Fe (238.204 nm)	9.783638 o	ppm	0.005223	0.05	24462.983883	Y_R 377.433
Fe H (259.940 nm)	9.782330	ppm	0.003282	0.03	14031.500000	Y_R 377.433
K (766.491 nm)	47.701000	ppm	0.134009	0.28	52352.600000	Y_R2 488.368
Li (670.783 nm)	0.989628	ppm	0.004122	0.42	15117.900000	Y_R2 488.368
Mg (279.078 nm)	46.098300	ppm	0.059579	0.13	161548.000000	Y 377.433
Mn (257.610 nm)	0.967355	ppm	0.001144	0.12	278784.000000	Y 377.433
Mo (202.032 nm)	0.980507	ppm	0.000552	0.06	12982.400000	Y 377.433
Na (589.592 nm)	48.979400	ppm	0.036200	0.07	43219.500000	Y_R2 488.368
Na H (589.593 nm)	46.332119 u	ppm	0.085820	0.19	27331.373785	Y_R4
Ni (231.604 nm)	0.935457	ppm	0.002573	0.28	5067.760000	Y 377.433
P (213.618 nm)	18.790100	ppm	0.038749	0.21	28758.000000	Y 242.219
Pb (220.353 nm)	0.971589	ppm	0.001848	0.19	3277.050000	Y 242.219
S (181.972 nm)	9.169641	ppm	0.028912	0.32	4494.104386	Y 377.433
Sb (206.834 nm)	0.985345	ppm	0.000083	0.01	1833.250000	Y 377.433
Se (196.026 nm)	1.937440	ppm	0.005739	0.30	3107.620000	Y 242.219
Si (288.158 nm)	2.013800	ppm	0.008209	0.41	13960.600000	Y 377.433
Sn (189.925 nm)	1.940230	ppm	0.002895	0.15	3202.110000	Y 377.433
Sr (421.552 nm)	0.975358	ppm	0.002279	0.23	156741.340820	Y_R 488.368
Th (288.505 nm)	1.004560	ppm	0.002198	0.22	1689.480000	Y 377.433
Ti (336.122 nm)	0.985257	ppm	0.000836	0.08	129629.000000	Y 377.433
Tl (190.794 nm)	1.914560	ppm	0.000320	0.02	4672.580000	Y 377.433
U (409.013 nm)	2.007530	ppm	0.002810	0.14	6383.490000	Y 377.433
V (292.401 nm)	0.974027	ppm	0.000696	0.07	52228.200000	Y 377.433
Zn (206.200 nm)	0.482260	ppm	0.001530	0.32	2208.020000	Y 377.433
Zr (343.823 nm)	0.486350	ppm	0.000300	0.06	28362.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.993143	18568.796164	0.000266	0.03
Y 377.433	1.011401	561910.850761	0.000849	0.08
Y_R 377.433	1.027790	50038.800000	0.001574	0.15
Y_R 488.368	1.015180	43415.600000	0.001211	0.12
Y_R2 488.368	1.007763	84169.216708	0.001404	0.14
Y_R4	1.023460	39348.700000	0.002868	0.28

Sample Name: 280-123238-B-1-G

Date: 5/10/2019 9:23:03 PM

Rack:Tube: 2:7

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000217 u	ppm	0.000719	> 100.00	-177.465000	Y 377.433
Al (394.401 nm)	0.997488	ppm	0.001914	0.19	12706.600000	Y 377.433
Al H (396.152 nm)	1.027610	ppm	0.000414	0.04	2311.790000	Y_R 377.433
As (188.980 nm)	0.002670	ppm	0.001759	65.87	2.311340	Y 242.219
B (249.678 nm)	0.094391	ppm	0.000121	0.13	733.972000	Y 242.219
Ba (493.408 nm)	0.070510	ppm	0.000516	0.73	9028.220000	Y_R 488.368
Be (234.861 nm)	0.000063	ppm	0.000085	> 100.00	-8.915830	Y_R 488.368
Bi (223.061 nm)	0.006264	ppm	0.003412	54.47	3.187470	Y 377.433
Ca (315.887 nm)	68.648282	ppm	0.086179	0.13	56705.947666	Y_R 377.433
Cd (214.439 nm)	0.000249	ppm	0.000045	18.26	3.440710	Y 377.433
Co (228.615 nm)	0.000588	ppm	0.000177	30.09	-7.449440	Y 242.219
Cr (205.560 nm)	0.001907	ppm	0.000327	17.13	5.027450	Y 377.433
Cu (324.754 nm)	0.005358	ppm	0.000182	3.39	731.817000	Y 377.433
Fe (238.204 nm)	1.666200	ppm	0.003775	0.23	4169.623564	Y_R 377.433
Fe H (259.940 nm)	1.692680 u	ppm	0.004458	0.26	2404.790000	Y_R 377.433
K (766.491 nm)	5.500900	ppm	0.296247	5.39	7967.330000	Y_R2 488.368
Li (670.783 nm)	0.029112	ppm	0.002957	10.16	-2356.400000	Y_R2 488.368
Mg (279.078 nm)	15.412900	ppm	0.023229	0.15	54037.200000	Y 377.433
Mn (257.610 nm)	0.142132	ppm	0.000099	0.07	40941.400000	Y 377.433
Mo (202.032 nm)	0.006695	ppm	0.000251	3.74	100.176000	Y 377.433
Na (589.592 nm)	75.031900 o	ppm	0.194757	0.26	65414.200000	Y_R2 488.368
Na H (589.593 nm)	75.819502	ppm	0.142140	0.19	44421.845380	Y_R4
Ni (231.604 nm)	0.001161	ppm	0.000578	49.78	-4.159150	Y 377.433
P (213.618 nm)	0.424579	ppm	0.005112	1.20	657.504000	Y 242.219
Pb (220.353 nm)	0.001743	ppm	0.001897	> 100.00	13.688600	Y 242.219
S (181.972 nm)	35.394426	ppm	0.029031	0.08	17307.975689	Y 377.433
Sb (206.834 nm)	-0.001736 u	ppm	0.001059	61.03	-0.994922	Y 377.433
Se (196.026 nm)	0.005250	ppm	0.001234	23.51	13.750200	Y 242.219
Si (288.158 nm)	6.011020	ppm	0.003016	0.05	40662.100000	Y 377.433
Sn (189.925 nm)	-0.002759 u	ppm	0.000204	7.39	4.556660	Y 377.433
Sr (421.552 nm)	0.554463	ppm	0.000834	0.15	89146.708948	Y_R 488.368
Th (288.505 nm)	-0.009614 u	ppm	0.001911	19.88	3.179810	Y 377.433
Ti (336.122 nm)	0.028503	ppm	0.000167	0.59	3472.480000	Y 377.433
Tl (190.794 nm)	0.001739	ppm	0.000013	0.72	1.186710	Y 377.433
U (409.013 nm)	0.032754	ppm	0.007988	24.39	126.774000	Y 377.433
V (292.401 nm)	0.003501	ppm	0.000138	3.93	92.881800	Y 377.433
Zn (206.200 nm)	0.024933	ppm	0.000083	0.33	117.244000	Y 377.433
Zr (343.823 nm)	0.001780	ppm	0.000077	4.34	-69.076100	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.005032	18791.077735	0.005223	0.52
Y 377.433	1.016125	564535.180242	0.004664	0.46
Y_R 377.433	1.030540	50172.600000	0.000046	0.00
Y_R 488.368	1.015760	43440.400000	0.001843	0.18
Y_R2 488.368	1.009544	84317.952605	0.002147	0.21
Y_R4	1.017210	39108.500000	0.003207	0.32

Sample Name: 280-123238-B-1-Gsd@5

Date: 5/10/2019 9:26:33 PM

Rack:Tube: 2:8

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000214 u	ppm	0.000103	48.03	-192.598000	Y 377.433
Al (394.401 nm)	0.203484	ppm	0.001478	0.73	2613.590000	Y 377.433
Al H (396.152 nm)	0.303654 u	ppm	0.003993	1.32	506.582000	Y_R 377.433
As (188.980 nm)	-0.000105 u	ppm	0.001586	> 100.00	-2.015270	Y 242.219
B (249.678 nm)	0.018517	ppm	0.000947	5.11	153.509000	Y 242.219
Ba (493.408 nm)	0.013837	ppm	0.000050	0.36	3080.720000	Y_R 488.368
Be (234.861 nm)	-0.000036 u	ppm	0.000037	> 100.00	-7.580540	Y_R 488.368
Bi (223.061 nm)	0.001823	ppm	0.001940	> 100.00	-6.815580	Y 377.433
Ca (315.887 nm)	13.831558	ppm	0.009494	0.07	11366.881205	Y_R 377.433
Cd (214.439 nm)	0.000091	ppm	0.000022	24.36	-3.155920	Y 377.433
Co (228.615 nm)	0.000452	ppm	0.000031	6.96	-11.881800	Y 242.219
Cr (205.560 nm)	0.000302 u	ppm	0.000501	> 100.00	-6.042760	Y 377.433
Cu (324.754 nm)	0.000750	ppm	0.000344	45.88	538.858000	Y 377.433
Fe (238.204 nm)	0.329746	ppm	0.001198	0.36	828.527626	Y_R 377.433
Fe H (259.940 nm)	0.364832 u	ppm	0.002085	0.57	496.357000	Y_R 377.433
K (766.491 nm)	0.907933	ppm	0.013440	1.48	3136.530000	Y_R2 488.368
Li (670.783 nm)	0.006069	ppm	0.004200	69.21	-2775.610000	Y_R2 488.368
Mg (279.078 nm)	3.116010	ppm	0.004541	0.15	10937.400000	Y 377.433
Mn (257.610 nm)	0.028885	ppm	0.000014	0.05	8301.690000	Y 377.433
Mo (202.032 nm)	0.001356	ppm	0.000519	38.26	29.558900	Y 377.433
Na (589.592 nm)	15.267800	ppm	0.093869	0.61	13447.100000	Y_R2 488.368
Na H (589.593 nm)	15.360167 u	ppm	0.002565	0.02	9380.467322	Y_R4
Ni (231.604 nm)	-0.000442 u	ppm	0.000210	47.38	-12.859400	Y 377.433
P (213.618 nm)	0.079652	ppm	0.000085	0.11	126.262000	Y 242.219
Pb (220.353 nm)	-0.000856 u	ppm	0.001463	> 100.00	5.122240	Y 242.219
S (181.972 nm)	6.917898	ppm	0.019821	0.29	3388.901998	Y 377.433
Sb (206.834 nm)	-0.001237 u	ppm	0.001302	> 100.00	-0.035466	Y 377.433
Se (196.026 nm)	0.000981	ppm	0.000685	69.88	7.106450	Y 242.219
Si (288.158 nm)	1.178300	ppm	0.001785	0.15	8379.470000	Y 377.433
Sn (189.925 nm)	-0.002902 u	ppm	0.001041	35.87	4.321700	Y 377.433
Sr (421.552 nm)	0.109969	ppm	0.000019	0.02	17763.471568	Y_R 488.368
Th (288.505 nm)	-0.004945 u	ppm	0.001344	27.18	10.864300	Y 377.433
Ti (336.122 nm)	0.006084	ppm	0.000106	1.74	328.108000	Y 377.433
Tl (190.794 nm)	0.000952	ppm	0.001219	> 100.00	1.812310	Y 377.433
U (409.013 nm)	0.012165	ppm	0.007451	61.25	67.319100	Y 377.433
V (292.401 nm)	0.000575	ppm	0.000085	14.70	-64.648700	Y 377.433
Zn (206.200 nm)	0.004842	ppm	0.000192	3.97	25.256400	Y 377.433
Zr (343.823 nm)	0.000599	ppm	0.000065	10.85	-138.356000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.017716	19028.223862	0.006014	0.59
Y 377.433	1.026575	570340.990100	0.005701	0.56
Y_R 377.433	1.021910	49752.600000	0.008065	0.79
Y_R 488.368	1.015790	43441.400000	0.008193	0.81
Y_R2 488.368	1.015967	84854.453868	0.004054	0.40
Y_R4	1.015550	39044.600000	0.001388	0.14

Sample Name: CCVH-5690583

Date: 5/10/2019 9:30:02 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000600	ppm	0.000394	65.80	-299.406000	Y 377.433
Al (394.401 nm)	48.506400 o	ppm	0.004907	0.01	609574.000000	Y 377.433
Al H (396.152 nm)	48.797000	ppm	0.079306	0.16	109622.000000	Y_R 377.433
As (188.980 nm)	0.005773	ppm	0.002118	36.70	2.949840	Y 242.219
B (249.678 nm)	0.006296	ppm	0.000838	13.31	31.107000	Y 242.219
Ba (493.408 nm)	0.002199	ppm	0.000130	5.93	1898.450000	Y_R 488.368
Be (234.861 nm)	0.002497	ppm	0.000031	1.23	-159.500000	Y_R 488.368
Bi (223.061 nm)	0.940482	ppm	0.002407	0.26	2065.410000	Y 377.433
Ca (315.887 nm)	0.012835	ppm	0.007681	59.84	-50.086019	Y_R 377.433
Cd (214.439 nm)	0.000859	ppm	0.000002	0.25	45.787600	Y 377.433
Co (228.615 nm)	0.004410	ppm	0.000346	7.85	87.033800	Y 242.219
Cr (205.560 nm)	0.001390	ppm	0.000453	32.58	0.160744	Y 377.433
Cu (324.754 nm)	0.005879	ppm	0.000174	2.96	1200.930000	Y 377.433
Fe (238.204 nm)	47.705812 o	ppm	0.032658	0.07	119267.327978	Y_R 377.433
Fe H (259.940 nm)	47.483200	ppm	0.026709	0.06	68216.500000	Y_R 377.433
K (766.491 nm)	0.371013	ppm	0.175216	47.23	2571.810000	Y_R2 488.368
Li (670.783 nm)	-0.001541 u	ppm	0.000493	31.95	-2914.060000	Y_R2 488.368
Mg (279.078 nm)	0.016357	ppm	0.002545	15.56	-153.808000	Y 377.433
Mn (257.610 nm)	0.001330	ppm	0.000012	0.88	359.958000	Y 377.433
Mo (202.032 nm)	0.000818	ppm	0.000191	23.34	22.438000	Y 377.433
Na (589.592 nm)	238.621000 o	ppm	0.376991	0.16	207607.000000	Y_R2 488.368
Na H (589.593 nm)	244.828370	ppm	0.019585	0.01	142377.001109	Y_R4
Ni (231.604 nm)	0.002275	ppm	0.000369	16.23	1.883840	Y 377.433
P (213.618 nm)	-0.011510 u	ppm	0.004548	39.51	-21.234800	Y 242.219
Pb (220.353 nm)	0.008407	ppm	0.000374	4.44	52.013600	Y 242.219
S (181.972 nm)	4.714477	ppm	0.021887	0.46	2311.353143	Y 377.433
Sb (206.834 nm)	0.000153 u	ppm	0.001399	> 100.00	5.827240	Y 377.433
Se (196.026 nm)	0.002617	ppm	0.000757	28.93	-3.011610	Y 242.219
Si (288.158 nm)	0.027352	ppm	0.001019	3.73	691.115000	Y 377.433
Sn (189.925 nm)	-0.000831 u	ppm	0.001632	> 100.00	7.729430	Y 377.433
Sr (421.552 nm)	0.000710	ppm	0.000084	11.81	224.513980	Y_R 488.368
Th (288.505 nm)	4.866420	ppm	0.001716	0.04	8597.590000	Y 377.433
Ti (336.122 nm)	0.001800	ppm	0.000044	2.44	-283.366000	Y 377.433
Tl (190.794 nm)	0.000048 u	ppm	0.000783	> 100.00	-4.489540	Y 377.433
U (409.013 nm)	9.696210	ppm	0.005544	0.06	31037.000000	Y 377.433
V (292.401 nm)	-0.001008 u	ppm	0.000038	3.78	-145.591000	Y 377.433
Zn (206.200 nm)	0.001761	ppm	0.000728	41.35	17.745900	Y 377.433
Zr (343.823 nm)	-0.002808 u	ppm	0.000007	0.23	-338.284000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.985088	18418.195083	0.000108	0.01
Y 377.433	0.996467	553613.433196	0.000537	0.05
Y_R 377.433	1.007460	49048.900000	0.000587	0.06
Y_R 488.368	0.986340	42182.000000	0.002648	0.27
Y_R2 488.368	0.998628	83406.303695	0.004651	0.47
Y_R4	1.019000	39177.200000	0.002886	0.28

Sample Name: CCV-5690581

Date: 5/10/2019 9:33:47 PM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.477957	ppm	0.000607	0.13	17282.400000	Y 377.433
Al (394.401 nm)	0.489010	ppm	0.001812	0.37	6294.650000	Y 377.433
Al H (396.152 nm)	0.534493 u	ppm	0.003315	0.62	1227.850000	Y_R 377.433
As (188.980 nm)	0.959768	ppm	0.000033	0.00	1525.130000	Y 242.219
B (249.678 nm)	0.469821	ppm	0.000593	0.13	3609.730000	Y 242.219
Ba (493.408 nm)	0.481988	ppm	0.000472	0.10	52203.300000	Y_R 488.368
Be (234.861 nm)	0.474485	ppm	0.001440	0.30	50336.200000	Y_R 488.368
Bi (223.061 nm)	0.006906	ppm	0.000562	8.14	4.816620	Y 377.433
Ca (315.887 nm)	4.888681	ppm	0.006588	0.13	3970.320311	Y_R 377.433
Cd (214.439 nm)	0.483830	ppm	0.000939	0.19	18530.400000	Y 377.433
Co (228.615 nm)	0.484459	ppm	0.000478	0.10	12124.000000	Y 242.219
Cr (205.560 nm)	0.480104	ppm	0.002431	0.51	3315.270000	Y 377.433
Cu (324.754 nm)	0.480718	ppm	0.001177	0.24	24104.700000	Y 377.433
Fe (238.204 nm)	2.405756	ppm	0.009798	0.41	6018.492574	Y_R 377.433
Fe H (259.940 nm)	2.424090 u	ppm	0.009305	0.38	3455.990000	Y_R 377.433
K (766.491 nm)	48.059100	ppm	0.410373	0.85	52729.200000	Y_R2 488.368
Li (670.783 nm)	0.972923	ppm	0.000051	0.01	14814.000000	Y_R2 488.368
Mg (279.078 nm)	18.970300	ppm	0.012884	0.07	66505.600000	Y 377.433
Mn (257.610 nm)	0.479148	ppm	0.000670	0.14	138075.000000	Y 377.433
Mo (202.032 nm)	0.483727	ppm	0.000651	0.13	6410.680000	Y 377.433
Na (589.592 nm)	24.846300	ppm	0.036367	0.15	21885.900000	Y_R2 488.368
Na H (589.593 nm)	25.276173 u	ppm	0.009006	0.04	15127.644382	Y_R4
Ni (231.604 nm)	0.483192	ppm	0.001000	0.21	2612.570000	Y 377.433
P (213.618 nm)	0.934698	ppm	0.005028	0.54	1308.790000	Y 242.219
Pb (220.353 nm)	0.966304	ppm	0.002705	0.28	3258.740000	Y 242.219
S (181.972 nm)	0.006071	ppm	0.001345	22.16	12.263638	Y 377.433
Sb (206.834 nm)	0.965621	ppm	0.000699	0.07	1798.670000	Y 377.433
Se (196.026 nm)	0.958082	ppm	0.000233	0.02	1540.230000	Y 242.219
Si (288.158 nm)	4.752950	ppm	0.015224	0.32	32258.200000	Y 377.433
Sn (189.925 nm)	0.968678	ppm	0.002733	0.28	1603.230000	Y 377.433
Sr (421.552 nm)	0.480277	ppm	0.000293	0.06	77233.020993	Y_R 488.368
Th (288.505 nm)	0.012303	ppm	0.000284	2.31	-8.331530	Y 377.433
Ti (336.122 nm)	0.480750	ppm	0.000176	0.04	62922.700000	Y 377.433
Tl (190.794 nm)	0.972762	ppm	0.002378	0.24	2375.340000	Y 377.433
U (409.013 nm)	0.016356	ppm	0.001748	10.69	23.614400	Y 377.433
V (292.401 nm)	0.481005	ppm	0.001717	0.36	25744.400000	Y 377.433
Zn (206.200 nm)	0.482291	ppm	0.002257	0.47	2207.140000	Y 377.433
Zr (343.823 nm)	0.482609	ppm	0.000223	0.05	28142.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.002606	18745.718685	0.004699	0.47
Y 377.433	1.012184	562345.872630	0.005404	0.53
Y_R 377.433	1.021070	49711.300000	0.000499	0.05
Y_R 488.368	1.008340	43123.100000	0.001552	0.15
Y_R2 488.368	1.005672	83994.609214	0.002804	0.28
Y_R4	1.006700	38704.600000	0.002026	0.20

Sample Name: CCB

Date: 5/10/2019 9:37:22 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000130 u	ppm	0.000140	> 100.00	-189.238000	Y 377.433
Al (394.401 nm)	0.002793	ppm	0.000910	32.58	63.671400	Y 377.433
Al H (396.152 nm)	0.107957 Zu	ppm	0.003270	3.03	22.975100 Z	Y_R 377.433
As (188.980 nm)	-0.000009 u	ppm	0.001588	> 100.00	-1.839720	Y 242.219
B (249.678 nm)	0.000132	ppm	0.000080	60.44	12.859800	Y 242.219
Ba (493.408 nm)	-0.000834 u	ppm	0.000712	85.34	1541.030000	Y_R 488.368
Be (234.861 nm)	0.000017	ppm	0.000002	9.23	1.046530	Y_R 488.368
Bi (223.061 nm)	0.004363	ppm	0.000273	6.25	-1.288400	Y 377.433
Ca (315.887 nm)	-0.001840 u	ppm	0.008728	> 100.00	-74.761992	Y_R 377.433
Cd (214.439 nm)	0.000130	ppm	0.000046	35.32	-1.800650	Y 377.433
Co (228.615 nm)	0.000238	ppm	0.000094	39.70	-17.459100	Y 242.219
Cr (205.560 nm)	0.000563	ppm	0.000322	57.26	-4.217560	Y 377.433
Cu (324.754 nm)	-0.000057 u	ppm	0.000313	> 100.00	507.027000	Y 377.433
Fe (238.204 nm)	0.000465	ppm	0.000495	> 100.00	5.333153	Y_R 377.433
Fe H (259.940 nm)	0.029280 u	ppm	0.004208	14.37	14.089700	Y_R 377.433
K (766.491 nm)	-0.220508 u	ppm	0.105676	47.92	1949.660000	Y_R2 488.368
Li (670.783 nm)	-0.001083 u	ppm	0.003338	> 100.00	-2905.710000	Y_R2 488.368
Mg (279.078 nm)	0.000333	ppm	0.000206	61.79	17.208900	Y 377.433
Mn (257.610 nm)	0.000050	ppm	0.000007	14.55	-9.024680	Y 377.433
Mo (202.032 nm)	-0.000217 u	ppm	0.000215	99.38	8.749600	Y 377.433
Na (589.592 nm)	0.064233	ppm	0.062237	96.89	227.006000	Y_R2 488.368
Na H (589.593 nm)	0.314665 u	ppm	0.046238	14.69	660.306440	Y_R4
Ni (231.604 nm)	-0.000572 u	ppm	0.000225	39.29	-13.559500	Y 377.433
P (213.618 nm)	-0.000331 u	ppm	0.002850	> 100.00	3.063590	Y 242.219
Pb (220.353 nm)	-0.000104 u	ppm	0.001282	> 100.00	7.688530	Y 242.219
S (181.972 nm)	0.000439	ppm	0.000377	85.81	7.690081	Y 377.433
Sb (206.834 nm)	-0.001308 u	ppm	0.001592	> 100.00	-0.156656	Y 377.433
Se (196.026 nm)	-0.001279 u	ppm	0.001216	95.09	3.533590	Y 242.219
Si (288.158 nm)	-0.004611 u	ppm	0.000587	12.73	477.603000	Y 377.433
Sn (189.925 nm)	-0.003584 u	ppm	0.002316	64.61	3.198170	Y 377.433
Sr (421.552 nm)	0.000069	ppm	0.000051	74.73	114.012625	Y_R 488.368
Th (288.505 nm)	-0.004319 u	ppm	0.000351	8.12	11.806000	Y 377.433
Ti (336.122 nm)	0.000363	ppm	0.000063	17.28	-473.076000	Y 377.433
Tl (190.794 nm)	0.002534	ppm	0.000068	2.66	6.314110	Y 377.433
U (409.013 nm)	-0.001345 u	ppm	0.000796	59.16	25.743600	Y 377.433
V (292.401 nm)	-0.000256 u	ppm	0.000016	6.44	-109.638000	Y 377.433
Zn (206.200 nm)	-0.000388 u	ppm	0.000157	40.36	1.314360	Y 377.433
Zr (343.823 nm)	0.000476	ppm	0.000224	47.00	-145.565000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.022236	19112.737996	0.002000	0.20
Y 377.433	1.025117	569531.022502	0.000413	0.04
Y_R 377.433	1.036600	50467.800000	0.000319	0.03
Y_R 488.368	1.025630	43862.300000	0.000236	0.02
Y_R2 488.368	1.018444	85061.337241	0.007367	0.72
Y_R4	1.012880	38942.200000	0.010263	1.01

Sample Name: CCVL-5695588

Date: 5/10/2019 9:40:34 PM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009368	ppm	0.000020	0.21	157.765000	Y 377.433
Al (394.401 nm)	0.102459	ppm	0.000541	0.53	1317.910000	Y 377.433
Al H (396.152 nm)	0.214030 u	ppm	0.000614	0.29	267.048000	Y_R 377.433
As (188.980 nm)	0.017698	ppm	0.001786	10.09	26.324000	Y 242.219
B (249.678 nm)	0.093905	ppm	0.000460	0.49	731.206000	Y 242.219
Ba (493.408 nm)	0.009755	ppm	0.000092	0.94	2652.200000	Y_R 488.368
Be (234.861 nm)	0.000950	ppm	0.000004	0.46	99.129700	Y_R 488.368
Bi (223.061 nm)	0.091125	ppm	0.006543	7.18	189.529000	Y 377.433
Ca (315.887 nm)	0.199966	ppm	0.000055	0.03	92.176699	Y_R 377.433
Cd (214.439 nm)	0.005071	ppm	0.000015	0.30	187.534000	Y 377.433
Co (228.615 nm)	0.010361	ppm	0.000254	2.45	236.369000	Y 242.219
Cr (205.560 nm)	0.010277	ppm	0.000395	3.84	62.921900	Y 377.433
Cu (324.754 nm)	0.014617	ppm	0.000152	1.04	1229.220000	Y 377.433
Fe (238.204 nm)	0.097356	ppm	0.000108	0.11	247.559230	Y_R 377.433
Fe H (259.940 nm)	0.127598 u	ppm	0.000341	0.27	155.397000	Y_R 377.433
K (766.491 nm)	2.946030	ppm	0.080616	2.74	5280.170000	Y_R2 488.368
Li (670.783 nm)	0.023629	ppm	0.003529	14.94	-2456.150000	Y_R2 488.368
Mg (279.078 nm)	0.195213	ppm	0.001820	0.93	699.564000	Y 377.433
Mn (257.610 nm)	0.010210	ppm	0.000020	0.19	2919.150000	Y 377.433
Mo (202.032 nm)	0.019052	ppm	0.000110	0.58	263.643000	Y 377.433
Na (589.592 nm)	1.093430	ppm	0.013362	1.22	1124.310000	Y_R2 488.368
Na H (589.593 nm)	1.044152 u	ppm	0.009193	0.88	1083.106715	Y_R4
Ni (231.604 nm)	0.041055	ppm	0.000043	0.10	212.329000	Y 377.433
P (213.618 nm)	2.652070	ppm	0.026855	1.01	4096.220000	Y 242.219
Pb (220.353 nm)	0.010449	ppm	0.000243	2.32	43.210200	Y 242.219
S (181.972 nm)	0.090179	ppm	0.000027	0.03	51.582290	Y 377.433
Sb (206.834 nm)	0.017679	ppm	0.001024	5.79	35.065200	Y 377.433
Se (196.026 nm)	0.021318	ppm	0.002330	10.93	39.717700	Y 242.219
Si (288.158 nm)	0.487724	ppm	0.001628	0.33	3766.410000	Y 377.433
Sn (189.925 nm)	0.093024	ppm	0.001893	2.04	162.185000	Y 377.433
Sr (421.552 nm)	0.008621	ppm	0.000015	0.17	1487.584144	Y_R 488.368
Th (288.505 nm)	0.012269	ppm	0.001023	8.34	40.254200	Y 377.433
Ti (336.122 nm)	0.009997	ppm	0.000034	0.34	798.694000	Y 377.433
Tl (190.794 nm)	0.015272	ppm	0.000103	0.67	37.341700	Y 377.433
U (409.013 nm)	0.055809	ppm	0.005870	10.52	207.099000	Y 377.433
V (292.401 nm)	0.009325	ppm	0.000056	0.60	404.313000	Y 377.433
Zn (206.200 nm)	0.020287	ppm	0.000039	0.19	95.797300	Y 377.433
Zr (343.823 nm)	0.010299 Q	ppm	0.000278	2.70	430.782000 Q	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.028574	19231.247387	0.002625	0.26
Y 377.433	1.032975	573896.893908	0.001413	0.14
Y_R 377.433	1.024340	49870.700000	0.006967	0.68
Y_R 488.368	1.009300	43163.900000	0.005949	0.59
Y_R2 488.368	1.006686	84079.306431	0.001024	0.10
Y_R4	1.002320	38536.000000	0.008993	0.90

Sample Name: 280-123238-B-1-H MS

Date: 5/10/2019 9:44:02 PM

Rack:Tube: 2:9

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.051864	ppm	0.000491	0.95	1377.330000	Y 377.433
Al (394.401 nm)	11.275300 o	ppm	0.004881	0.04	142148.000000	Y 377.433
Al H (396.152 nm)	11.261200	ppm	0.033164	0.29	25855.900000	Y_R 377.433
As (188.980 nm)	2.032040	ppm	0.007681	0.38	3230.250000	Y 242.219
B (249.678 nm)	1.076490	ppm	0.001427	0.13	8252.370000	Y 242.219
Ba (493.408 nm)	2.064310	ppm	0.003518	0.17	218236.000000	Y_R 488.368
Be (234.861 nm)	0.981177	ppm	0.001019	0.10	104038.000000	Y_R 488.368
Bi (223.061 nm)	1.964940	ppm	0.005797	0.29	4312.100000	Y 377.433
Ca (315.887 nm)	119.367949	ppm	0.148033	0.12	98658.835179	Y_R 377.433
Cd (214.439 nm)	0.967685	ppm	0.001271	0.13	37071.200000	Y 377.433
Co (228.615 nm)	0.961484	ppm	0.000113	0.01	24088.700000	Y 242.219
Cr (205.560 nm)	0.979711	ppm	0.000119	0.01	6773.340000	Y 377.433
Cu (324.754 nm)	0.975873	ppm	0.004321	0.44	48407.600000	Y 377.433
Fe (238.204 nm)	10.833080 o	ppm	0.007195	0.07	27086.559387	Y_R 377.433
Fe H (259.940 nm)	10.860500	ppm	0.007253	0.07	15581.100000	Y_R 377.433
K (766.491 nm)	55.567600	ppm	0.141204	0.25	60626.500000	Y_R2 488.368
Li (670.783 nm)	1.044450	ppm	0.002265	0.22	16115.200000	Y_R2 488.368
Mg (279.078 nm)	62.796500	ppm	0.023986	0.04	220075.000000	Y 377.433
Mn (257.610 nm)	1.122240	ppm	0.000110	0.01	323424.000000	Y 377.433
Mo (202.032 nm)	1.006850	ppm	0.000657	0.07	13331.000000	Y 377.433
Na (589.592 nm)	125.832000 o	ppm	0.164764	0.13	110053.000000	Y_R2 488.368
Na H (589.593 nm)	126.566327	ppm	0.070775	0.06	73833.989328	Y_R4
Ni (231.604 nm)	0.947689	ppm	0.003229	0.34	5134.140000	Y 377.433
P (213.618 nm)	19.716400	ppm	0.001670	0.01	30178.400000	Y 242.219
Pb (220.353 nm)	0.979375	ppm	0.003019	0.31	3302.900000	Y 242.219
S (181.972 nm)	46.743819	ppm	0.056091	0.12	22860.023499	Y 377.433
Sb (206.834 nm)	1.008060	ppm	0.000148	0.01	1875.470000	Y 377.433
Se (196.026 nm)	1.980980	ppm	0.007449	0.38	3177.310000	Y 242.219
Si (288.158 nm)	9.761380	ppm	0.057627	0.59	65714.500000	Y 377.433
Sn (189.925 nm)	1.975180	ppm	0.002129	0.11	3259.610000	Y 377.433
Sr (421.552 nm)	1.573083	ppm	0.001756	0.11	252732.622326	Y_R 488.368
Th (288.505 nm)	1.002790	ppm	0.010632	1.06	1684.650000	Y 377.433
Ti (336.122 nm)	1.037080	ppm	0.000835	0.08	136711.000000	Y 377.433
Tl (190.794 nm)	1.914810	ppm	0.004579	0.24	4669.820000	Y 377.433
U (409.013 nm)	2.054550	ppm	0.011067	0.54	6530.400000	Y 377.433
V (292.401 nm)	0.998948	ppm	0.000014	0.00	53566.800000	Y 377.433
Zn (206.200 nm)	0.498821	ppm	0.000602	0.12	2283.840000	Y 377.433
Zr (343.823 nm)	0.444380	ppm	0.000220	0.05	25899.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.969487	18126.488702	0.000661	0.07
Y 377.433	0.989821	549921.214584	0.001587	0.16
Y_R 377.433	1.011330	49237.400000	0.000370	0.04
Y_R 488.368	0.999356	42738.700000	0.002685	0.27
Y_R2 488.368	0.995110	83112.466855	0.001707	0.17
Y_R4	1.009740	38821.400000	0.001538	0.15

Sample Name: 280-123238-B-1-I MSD

Date: 5/10/2019 9:47:42 PM

Rack:Tube: 2:10

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.052771	ppm	0.000283	0.54	1419.190000	Y 377.433
Al (394.401 nm)	11.655000 o	ppm	0.000291	0.00	146913.000000	Y 377.433
Al H (396.152 nm)	11.656000	ppm	0.020153	0.17	26738.700000	Y_R 377.433
As (188.980 nm)	1.998310	ppm	0.001314	0.07	3176.550000	Y 242.219
B (249.678 nm)	1.096460	ppm	0.000248	0.02	8405.110000	Y 242.219
Ba (493.408 nm)	2.030230	ppm	0.004416	0.22	214660.000000	Y_R 488.368
Be (234.861 nm)	0.958173	ppm	0.008210	0.86	101593.000000	Y_R 488.368
Bi (223.061 nm)	2.005820	ppm	0.001681	0.08	4402.090000	Y 377.433
Ca (315.887 nm)	121.798971	ppm	0.007737	0.01	100669.635290	Y_R 377.433
Cd (214.439 nm)	0.950612	ppm	0.001516	0.16	36417.200000	Y 377.433
Co (228.615 nm)	0.943248	ppm	0.000266	0.03	23631.600000	Y 242.219
Cr (205.560 nm)	0.957349	ppm	0.008774	0.92	6618.490000	Y 377.433
Cu (324.754 nm)	0.962134	ppm	0.001585	0.16	47735.100000	Y 377.433
Fe (238.204 nm)	11.244555 o	ppm	0.025521	0.23	28115.234894	Y_R 377.433
Fe H (259.940 nm)	11.250800	ppm	0.031558	0.28	16142.000000	Y_R 377.433
K (766.491 nm)	57.506600	ppm	0.288264	0.50	62665.900000	Y_R2 488.368
Li (670.783 nm)	1.030740	ppm	0.000704	0.07	15865.700000	Y_R2 488.368
Mg (279.078 nm)	64.540300	ppm	0.092954	0.14	226186.000000	Y 377.433
Mn (257.610 nm)	1.106640	ppm	0.000987	0.09	318929.000000	Y 377.433
Mo (202.032 nm)	0.988858	ppm	0.000736	0.07	13092.900000	Y 377.433
Na (589.592 nm)	128.964000 o	ppm	0.132920	0.10	112768.000000	Y_R2 488.368
Na H (589.593 nm)	129.986262	ppm	0.043078	0.03	75816.135272	Y_R4
Ni (231.604 nm)	0.929810	ppm	0.001574	0.17	5037.080000	Y 377.433
P (213.618 nm)	19.974000	ppm	0.013945	0.07	30580.400000	Y 242.219
Pb (220.353 nm)	0.961552	ppm	0.002351	0.24	3242.960000	Y 242.219
S (181.972 nm)	47.317831	ppm	0.025120	0.05	23140.522832	Y 377.433
Sb (206.834 nm)	1.006860	ppm	0.002736	0.27	1873.290000	Y 377.433
Se (196.026 nm)	1.956620	ppm	0.007115	0.36	3138.160000	Y 242.219
Si (288.158 nm)	9.956430	ppm	0.005697	0.06	67017.400000	Y 377.433
Sn (189.925 nm)	1.939940	ppm	0.003834	0.20	3201.620000	Y 377.433
Sr (421.552 nm)	1.561492	ppm	0.003029	0.19	250871.302314	Y_R 488.368
Th (288.505 nm)	1.018480	ppm	0.000646	0.06	1714.050000	Y 377.433
Ti (336.122 nm)	1.020330	ppm	0.000742	0.07	134504.000000	Y 377.433
Tl (190.794 nm)	1.882290	ppm	0.003165	0.17	4590.320000	Y 377.433
U (409.013 nm)	2.076940	ppm	0.006402	0.31	6601.150000	Y 377.433
V (292.401 nm)	0.980857	ppm	0.000957	0.10	52597.100000	Y 377.433
Zn (206.200 nm)	0.508065	ppm	0.001304	0.26	2326.140000	Y 377.433
Zr (343.823 nm)	0.451868	ppm	0.000272	0.06	26339.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.973379	18199.270365	0.006495	0.67
Y 377.433	0.992596	551463.176392	0.006717	0.68
Y_R 377.433	1.019430	49631.800000	0.001091	0.11
Y_R 488.368	1.009010	43151.500000	0.002508	0.25
Y_R2 488.368	1.005065	83943.860631	0.000263	0.03
Y_R4	1.018510	39158.400000	0.000450	0.04

Sample Name: 280-123238-B-2-C

Date: 5/10/2019 9:51:20 PM

Rack:Tube: 2:11

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000641	ppm	0.000255	39.77	-162.228000	Y 377.433
Al (394.401 nm)	0.829972	ppm	0.000315	0.04	10609.000000	Y 377.433
Al H (396.152 nm)	0.848864 u	ppm	0.004608	0.54	1920.400000	Y_R 377.433
As (188.980 nm)	0.003812	ppm	0.001382	36.25	4.153030	Y 242.219
B (249.678 nm)	0.097519	ppm	0.000193	0.20	758.227000	Y 242.219
Ba (493.408 nm)	0.074510	ppm	0.000668	0.90	9447.480000	Y_R 488.368
Be (234.861 nm)	0.000060	ppm	0.000056	92.97	-5.011980	Y_R 488.368
Bi (223.061 nm)	0.005103	ppm	0.000138	2.71	0.552542	Y 377.433
Ca (315.887 nm)	71.605667	ppm	0.037382	0.05	59151.953727	Y_R 377.433
Cd (214.439 nm)	0.000440	ppm	0.000008	1.81	10.542800	Y 377.433
Co (228.615 nm)	0.000450	ppm	0.000044	9.78	-11.098100	Y 242.219
Cr (205.560 nm)	0.001120	ppm	0.000011	1.00	-0.418842	Y 377.433
Cu (324.754 nm)	0.004946	ppm	0.000324	6.55	710.277000	Y 377.433
Fe (238.204 nm)	1.185786	ppm	0.001438	0.12	2968.600911	Y_R 377.433
Fe H (259.940 nm)	1.209130 u	ppm	0.005592	0.46	1709.810000	Y_R 377.433
K (766.491 nm)	5.567690	ppm	0.032419	0.58	8037.570000	Y_R2 488.368
Li (670.783 nm)	0.028092	ppm	0.000689	2.45	-2374.950000	Y_R2 488.368
Mg (279.078 nm)	15.860800	ppm	0.004157	0.03	55607.900000	Y 377.433
Mn (257.610 nm)	0.176260	ppm	0.000000	0.00	50777.400000	Y 377.433
Mo (202.032 nm)	0.006819	ppm	0.000255	3.74	101.816000	Y 377.433
Na (589.592 nm)	77.089700 o	ppm	0.088746	0.12	67204.000000	Y_R2 488.368
Na H (589.593 nm)	78.598617	ppm	0.160280	0.20	46032.581353	Y_R4
Ni (231.604 nm)	0.000362	ppm	0.000026	7.22	-8.489980	Y 377.433
P (213.618 nm)	0.383251	ppm	0.003129	0.82	593.794000	Y 242.219
Pb (220.353 nm)	0.002351	ppm	0.001251	53.22	15.774800	Y 242.219
S (181.972 nm)	36.937206	ppm	0.052958	0.14	18062.127759	Y 377.433
Sb (206.834 nm)	-0.003954 u	ppm	0.000301	7.61	-5.154830	Y 377.433
Se (196.026 nm)	0.005477	ppm	0.000388	7.08	14.291600	Y 242.219
Si (288.158 nm)	5.684350	ppm	0.000149	0.00	38479.900000	Y 377.433
Sn (189.925 nm)	-0.003001 u	ppm	0.000086	2.87	4.158290	Y 377.433
Sr (421.552 nm)	0.580517	ppm	0.000848	0.15	93330.756358	Y_R 488.368
Th (288.505 nm)	-0.011173 u	ppm	0.001189	10.64	1.042770	Y 377.433
Ti (336.122 nm)	0.024488	ppm	0.000081	0.33	2950.400000	Y 377.433
Tl (190.794 nm)	0.004059	ppm	0.000101	2.50	6.841670	Y 377.433
U (409.013 nm)	0.023482	ppm	0.000400	1.71	96.578700	Y 377.433
V (292.401 nm)	0.003615	ppm	0.000100	2.76	99.280900	Y 377.433
Zn (206.200 nm)	0.024692	ppm	0.000186	0.76	116.075000	Y 377.433
Zr (343.823 nm)	0.001400	ppm	0.000233	16.62	-91.389200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.007319	18833.838804	0.001842	0.18
Y 377.433	1.016803	564911.711621	0.000994	0.10
Y_R 377.433	1.022160	49764.600000	0.000059	0.01
Y_R 488.368	1.009450	43170.500000	0.001996	0.20
Y_R2 488.368	1.002661	83743.148903	0.002658	0.27
Y_R4	1.008030	38755.500000	0.001136	0.11

Sample Name: 280-123238-B-3-C

Date: 5/10/2019 9:54:52 PM

Rack:Tube: 2:12

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000755	ppm	0.000442	58.56	-158.069000	Y 377.433
Al (394.401 nm)	0.950980	ppm	0.002556	0.27	12143.700000	Y 377.433
Al H (396.152 nm)	0.971241	ppm	0.012292	1.27	2214.170000	Y_R 377.433
As (188.980 nm)	0.001828	ppm	0.000612	33.49	0.989230	Y 242.219
B (249.678 nm)	0.083609	ppm	0.000430	0.51	651.709000	Y 242.219
Ba (493.408 nm)	0.072813	ppm	0.000111	0.15	9269.440000	Y_R 488.368
Be (234.861 nm)	0.000028	ppm	0.000014	51.48	-7.762700	Y_R 488.368
Bi (223.061 nm)	0.004801	ppm	0.000406	8.45	-0.125998	Y 377.433
Ca (315.887 nm)	73.572319	ppm	0.082726	0.11	60778.606070	Y_R 377.433
Cd (214.439 nm)	0.000223	ppm	0.000013	5.95	2.205090	Y 377.433
Co (228.615 nm)	0.000637	ppm	0.000171	26.89	-6.324670	Y 242.219
Cr (205.560 nm)	0.001176	ppm	0.000337	28.67	-0.032378	Y 377.433
Cu (324.754 nm)	0.004237	ppm	0.000135	3.19	672.887000	Y 377.433
Fe (238.204 nm)	1.111397	ppm	0.006400	0.58	2782.630449	Y_R 377.433
Fe H (259.940 nm)	1.132880 u	ppm	0.001522	0.13	1600.220000	Y_R 377.433
K (766.491 nm)	5.076930	ppm	0.059837	1.18	7521.410000	Y_R2 488.368
Li (670.783 nm)	0.032496	ppm	0.000298	0.92	-2294.840000	Y_R2 488.368
Mg (279.078 nm)	16.646900	ppm	0.007708	0.05	58363.200000	Y 377.433
Mn (257.610 nm)	0.154650	ppm	0.000066	0.04	44549.300000	Y 377.433
Mo (202.032 nm)	0.007166	ppm	0.000173	2.41	106.407000	Y 377.433
Na (589.592 nm)	74.126600 o	ppm	0.261548	0.35	64627.700000	Y_R2 488.368
Na H (589.593 nm)	75.351532	ppm	0.100371	0.13	44150.616474	Y_R4
Ni (231.604 nm)	-0.001059 u	ppm	0.001968	> 100.00	-16.201100	Y 377.433
P (213.618 nm)	0.294942	ppm	0.000296	0.10	457.600000	Y 242.219
Pb (220.353 nm)	0.000504	ppm	0.000147	29.11	9.561090	Y 242.219
S (181.972 nm)	38.411761	ppm	0.067504	0.18	18782.742093	Y 377.433
Sb (206.834 nm)	-0.002236 u	ppm	0.000439	19.61	-1.975350	Y 377.433
Se (196.026 nm)	0.005960	ppm	0.001832	30.74	15.054300	Y 242.219
Si (288.158 nm)	5.763810	ppm	0.016130	0.28	39010.700000	Y 377.433
Sn (189.925 nm)	-0.004066 u	ppm	0.001288	31.69	2.405440	Y 377.433
Sr (421.552 nm)	0.624463	ppm	0.000996	0.16	100388.317814	Y_R 488.368
Th (288.505 nm)	-0.016547 u	ppm	0.000731	4.42	-8.750420	Y 377.433
Ti (336.122 nm)	0.026272	ppm	0.000070	0.27	3192.440000	Y 377.433
Tl (190.794 nm)	0.002263	ppm	0.000223	9.87	2.372680	Y 377.433
U (409.013 nm)	0.036484	ppm	0.002213	6.07	137.751000	Y 377.433
V (292.401 nm)	0.003145	ppm	0.000062	1.97	72.755400	Y 377.433
Zn (206.200 nm)	0.019227	ppm	0.000214	1.12	91.094700	Y 377.433
Zr (343.823 nm)	0.001568	ppm	0.000108	6.92	-81.504200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.997493	18650.118254	0.001687	0.17
Y 377.433	1.007979	560009.468155	0.000767	0.08
Y_R 377.433	1.012110	49275.500000	0.000542	0.05
Y_R 488.368	1.000610	42792.200000	0.001690	0.17
Y_R2 488.368	1.014882	84763.838255	0.000295	0.03
Y_R4	1.029790	39592.200000	0.007828	0.76

Sample Name: 280-123238-B-4-C

Date: 5/10/2019 9:58:24 PM

Rack:Tube: 2:13

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000353	ppm	0.000300	84.90	-172.380000	Y 377.433
Al (394.401 nm)	0.760622	ppm	0.002325	0.31	9732.720000	Y 377.433
Al H (396.152 nm)	0.785634 u	ppm	0.002390	0.30	1771.120000	Y_R 377.433
As (188.980 nm)	0.000229 u	ppm	0.003849	> 100.00	-1.537140	Y 242.219
B (249.678 nm)	0.084722	ppm	0.000094	0.11	660.342000	Y 242.219
Ba (493.408 nm)	0.068296	ppm	0.000143	0.21	8795.340000	Y_R 488.368
Be (234.861 nm)	-0.000046 u	ppm	0.000027	59.46	-13.950800	Y_R 488.368
Bi (223.061 nm)	0.005891	ppm	0.001786	30.32	2.242650	Y 377.433
Ca (315.887 nm)	66.651976	ppm	0.047815	0.07	55054.743567	Y_R 377.433
Cd (214.439 nm)	0.000204	ppm	0.000041	19.89	1.410470	Y 377.433
Co (228.615 nm)	0.000601	ppm	0.000166	27.64	-7.473610	Y 242.219
Cr (205.560 nm)	0.001168	ppm	0.000103	8.84	-0.080561	Y 377.433
Cu (324.754 nm)	0.003698	ppm	0.000076	2.06	651.674000	Y 377.433
Fe (238.204 nm)	0.928041	ppm	0.000854	0.09	2324.246314	Y_R 377.433
Fe H (259.940 nm)	0.960764 u	ppm	0.007351	0.77	1352.850000	Y_R 377.433
K (766.491 nm)	5.662390	ppm	0.183724	3.24	8137.180000	Y_R2 488.368
Li (670.783 nm)	0.027662	ppm	0.000181	0.66	-2382.780000	Y_R2 488.368
Mg (279.078 nm)	15.445400	ppm	0.010212	0.07	54152.200000	Y 377.433
Mn (257.610 nm)	0.142080	ppm	0.000030	0.02	40926.200000	Y 377.433
Mo (202.032 nm)	0.006792	ppm	0.000386	5.69	101.458000	Y 377.433
Na (589.592 nm)	68.246500 o	ppm	0.041462	0.06	59514.900000	Y_R2 488.368
Na H (589.593 nm)	69.386303	ppm	0.052157	0.08	40693.253581	Y_R4
Ni (231.604 nm)	0.000098	ppm	0.000134	> 100.00	-9.928680	Y 377.433
P (213.618 nm)	0.487695	ppm	0.005677	1.16	755.596000	Y 242.219
Pb (220.353 nm)	0.002746	ppm	0.001066	38.80	17.122800	Y 242.219
S (181.972 nm)	34.715376	ppm	0.049005	0.14	16976.030087	Y 377.433
Sb (206.834 nm)	-0.004324 u	ppm	0.000619	14.32	-5.854410	Y 377.433
Se (196.026 nm)	0.004132	ppm	0.002436	58.95	12.158300	Y 242.219
Si (288.158 nm)	5.092030	ppm	0.023497	0.46	34523.200000	Y 377.433
Sn (189.925 nm)	-0.002968 u	ppm	0.001249	42.09	4.212810	Y 377.433
Sr (421.552 nm)	0.561500	ppm	0.000142	0.03	90276.788273	Y_R 488.368
Th (288.505 nm)	-0.012795 u	ppm	0.001704	13.32	-2.202610	Y 377.433
Ti (336.122 nm)	0.021058	ppm	0.000139	0.66	2483.050000	Y 377.433
Tl (190.794 nm)	0.001396	ppm	0.001148	82.20	0.557866	Y 377.433
U (409.013 nm)	0.019790	ppm	0.007154	36.15	85.196700	Y 377.433
V (292.401 nm)	0.002853	ppm	0.000193	6.77	57.972000	Y 377.433
Zn (206.200 nm)	0.017357	ppm	0.000453	2.61	82.526900	Y 377.433
Zr (343.823 nm)	0.001143	ppm	0.000001	0.09	-106.453000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.018003	19033.606780	0.000379	0.04
Y 377.433	1.028236	571263.842423	0.000719	0.07
Y_R 377.433	1.038700	50569.900000	0.004696	0.45
Y_R 488.368	1.025370	43851.100000	0.005239	0.51
Y_R2 488.368	1.021712	85334.298605	0.001411	0.14
Y_R4	1.023770	39360.700000	0.001882	0.18

Sample Name: 280-123238-B-5-C

Date: 5/10/2019 10:01:56 PM

Rack:Tube: 2:14

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000613	ppm	0.000267	43.54	-163.308000	Y 377.433
Al (394.401 nm)	0.701757	ppm	0.002509	0.36	9007.830000	Y 377.433
Al H (396.152 nm)	0.715852 u	ppm	0.002067	0.29	1632.870000	Y_R 377.433
As (188.980 nm)	0.002557	ppm	0.000090	3.51	2.172830	Y 242.219
B (249.678 nm)	0.067459	ppm	0.000200	0.30	528.137000	Y 242.219
Ba (493.408 nm)	0.077547	ppm	0.000663	0.86	9765.940000	Y_R 488.368
Be (234.861 nm)	0.000022	ppm	0.000007	29.30	-6.099280	Y_R 488.368
Bi (223.061 nm)	0.005452	ppm	0.001005	18.44	1.261700	Y 377.433
Ca (315.887 nm)	70.334202	ppm	0.118329	0.17	58100.293811	Y_R 377.433
Cd (214.439 nm)	0.000102	ppm	0.000025	24.35	-2.537400	Y 377.433
Co (228.615 nm)	0.000462	ppm	0.000233	50.40	-11.005900	Y 242.219
Cr (205.560 nm)	0.000288	ppm	0.000083	28.91	-6.171890	Y 377.433
Cu (324.754 nm)	0.002633	ppm	0.000131	4.98	596.672000	Y 377.433
Fe (238.204 nm)	0.852292	ppm	0.006718	0.79	2134.875380	Y_R 377.433
Fe H (259.940 nm)	0.877042 u	ppm	0.005313	0.61	1232.520000	Y_R 377.433
K (766.491 nm)	4.112130	ppm	0.025022	0.61	6506.650000	Y_R2 488.368
Li (670.783 nm)	0.027173	ppm	0.002298	8.46	-2391.660000	Y_R2 488.368
Mg (279.078 nm)	16.201200	ppm	0.002106	0.01	56801.100000	Y 377.433
Mn (257.610 nm)	0.147930	ppm	0.000004	0.00	42612.400000	Y 377.433
Mo (202.032 nm)	0.006437	ppm	0.000041	0.63	96.764900	Y 377.433
Na (589.592 nm)	66.677600 o	ppm	0.098616	0.15	58153.500000	Y_R2 488.368
Na H (589.593 nm)	67.694277	ppm	0.196430	0.29	39712.579390	Y_R4
Ni (231.604 nm)	-0.000748 u	ppm	0.000456	61.02	-14.513900	Y 377.433
P (213.618 nm)	0.094205	ppm	0.004177	4.43	147.934000	Y 242.219
Pb (220.353 nm)	-0.000490 u	ppm	0.000255	52.11	6.300930	Y 242.219
S (181.972 nm)	34.425721	ppm	0.069424	0.20	16834.663510	Y 377.433
Sb (206.834 nm)	-0.001046 u	ppm	0.004939	> 100.00	0.257404	Y 377.433
Se (196.026 nm)	0.000597 u	ppm	0.001267	> 100.00	6.522300	Y 242.219
Si (288.158 nm)	5.014350	ppm	0.008761	0.17	34004.300000	Y 377.433
Sn (189.925 nm)	-0.004643 u	ppm	0.000126	2.72	1.456200	Y 377.433
Sr (421.552 nm)	0.607716	ppm	0.000833	0.14	97698.762921	Y_R 488.368
Th (288.505 nm)	-0.012127 u	ppm	0.001343	11.07	-0.920020	Y 377.433
Ti (336.122 nm)	0.020062	ppm	0.000184	0.92	2362.490000	Y 377.433
Tl (190.794 nm)	0.001391	ppm	0.000330	23.74	0.431637	Y 377.433
U (409.013 nm)	0.045953	ppm	0.003167	6.89	168.281000	Y 377.433
V (292.401 nm)	0.002532	ppm	0.000172	6.78	39.883500	Y 377.433
Zn (206.200 nm)	0.009697	ppm	0.000152	1.56	47.516000	Y 377.433
Zr (343.823 nm)	0.001174	ppm	0.000195	16.63	-104.613000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.004182	18775.193178	0.008541	0.85
Y 377.433	1.014336	563540.962206	0.008432	0.83
Y_R 377.433	1.036610	50468.200000	0.001243	0.12
Y_R 488.368	1.024080	43796.000000	0.000669	0.07
Y_R2 488.368	1.024730	85586.336865	0.005778	0.56
Y_R4	1.025970	39445.200000	0.004016	0.39

Sample Name: 280-123314-B-1-A

Date: 5/10/2019 10:05:28 PM

Rack:Tube: 2:15

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000916	ppm	0.000578	63.16	-152.836000	Y 377.433
Al (394.401 nm)	0.104731	ppm	0.002164	2.07	2065.830000	Y 377.433
Al H (396.152 nm)	-0.278666 u	ppm	0.010649	3.82	258.490000	Y_R 377.433
As (188.980 nm)	0.002023	ppm	0.001250	61.75	1.379510	Y 242.219
B (249.678 nm)	0.986594	ppm	0.002018	0.20	7570.150000	Y 242.219
Ba (493.408 nm)	0.043019	ppm	0.000460	1.07	6142.450000	Y_R 488.368
Be (234.861 nm)	-0.000037 u	ppm	0.000060	> 100.00	-6.038710	Y_R 488.368
Bi (223.061 nm)	0.001393	ppm	0.000330	23.67	-7.759440	Y 377.433
Ca (315.887 nm)	276.743368	ppm	0.023465	0.01	228820.958625	Y_R 377.433
Cd (214.439 nm)	0.000356	ppm	0.000082	23.16	6.913730	Y 377.433
Co (228.615 nm)	-0.000048 u	ppm	0.000097	> 100.00	-24.484900	Y 242.219
Cr (205.560 nm)	0.001371	ppm	0.000264	19.22	1.314740	Y 377.433
Cu (324.754 nm)	0.001601	ppm	0.000297	18.55	425.316000	Y 377.433
Fe (238.204 nm)	0.144111	ppm	0.000735	0.51	364.445045	Y_R 377.433
Fe H (259.940 nm)	0.165154 u	ppm	0.001467	0.89	209.373000	Y_R 377.433
K (766.491 nm)	16.001600	ppm	0.108321	0.68	19011.700000	Y_R2 488.368
Li (670.783 nm)	0.036899	ppm	0.001009	2.74	-2214.720000	Y_R2 488.368
Mg (279.078 nm)	26.954700	ppm	0.023466	0.09	94494.200000	Y 377.433
Mn (257.610 nm)	0.011811	ppm	0.000009	0.08	3380.640000	Y 377.433
Mo (202.032 nm)	0.012883	ppm	0.000409	3.17	182.039000	Y 377.433
Na (589.592 nm)	121.890000 o	ppm	0.062810	0.05	106141.000000	Y_R2 488.368
Na H (589.593 nm)	125.142943	ppm	0.543685	0.43	73009.016139	Y_R4
Ni (231.604 nm)	-0.000711 u	ppm	0.001563	> 100.00	-14.312000	Y 377.433
P (213.618 nm)	0.065496	ppm	0.003596	5.49	103.008000	Y 242.219
Pb (220.353 nm)	-0.000972 u	ppm	0.000605	62.18	4.758150	Y 242.219
S (181.972 nm)	309.997357 bo	ppm	0.793557	0.26	151511.111239	Y 377.433
Sb (206.834 nm)	-0.003305 u	ppm	0.003324	> 100.00	-3.966340	Y 377.433
Se (196.026 nm)	0.010364	ppm	0.002985	28.81	22.161700	Y 242.219
Si (288.158 nm)	1.678610	ppm	0.000113	0.01	11721.600000	Y 377.433
Sn (189.925 nm)	-0.004916 u	ppm	0.000431	8.76	1.006460	Y 377.433
Sr (421.552 nm)	2.766597	ppm	0.008010	0.29	444402.406933	Y_R 488.368
Th (288.505 nm)	-0.008990 u	ppm	0.000239	2.66	-3.405010	Y 377.433
Ti (336.122 nm)	0.003020	ppm	0.000007	0.24	822.152000	Y 377.433
Tl (190.794 nm)	0.007949	ppm	0.000471	5.93	8.003170	Y 377.433
U (409.013 nm)	0.058336	ppm	0.000685	1.17	180.370000	Y 377.433
V (292.401 nm)	0.004061	ppm	0.000004	0.10	121.588000	Y 377.433
Zn (206.200 nm)	0.002778	ppm	0.000874	31.46	15.803200	Y 377.433
Zr (343.823 nm)	0.000536	ppm	0.000122	22.82	-142.076000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.985007	18416.678362	0.002410	0.24
Y 377.433	1.003239	557376.008568	0.001939	0.19
Y_R 377.433	1.034150	50348.300000	0.002020	0.20
Y_R 488.368	1.019080	43582.200000	0.002332	0.23
Y_R2 488.368	1.025929	85686.493095	0.006572	0.64
Y_R4	1.026290	39457.700000	0.004999	0.49

Sample Name: 280-123126-B-1-A

Date: 5/10/2019 10:09:01 PM

Rack:Tube: 2:16

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000363 u	ppm	0.000974	> 100.00	-181.068000	Y 377.433
Al (394.401 nm)	10.206400 o	ppm	0.010645	0.10	128742.000000	Y 377.433
Al H (396.152 nm)	10.190900	ppm	0.001496	0.01	23462.700000	Y_R 377.433
As (188.980 nm)	0.005494	ppm	0.001905	34.68	6.042720	Y 242.219
B (249.678 nm)	0.305273	ppm	0.000988	0.32	2345.980000	Y 242.219
Ba (493.408 nm)	0.046685	ppm	0.000149	0.32	6533.180000	Y_R 488.368
Be (234.861 nm)	0.000552	ppm	0.000002	0.29	-9.388560	Y_R 488.368
Bi (223.061 nm)	0.005676	ppm	0.000454	8.00	2.900880	Y 377.433
Ca (315.887 nm)	148.615104	ppm	0.079123	0.05	122848.859552	Y_R 377.433
Cd (214.439 nm)	0.000302	ppm	0.000102	33.86	7.888410	Y 377.433
Co (228.615 nm)	0.002247	ppm	0.000111	4.93	36.396400	Y 242.219
Cr (205.560 nm)	0.015738	ppm	0.000330	2.10	100.620000	Y 377.433
Cu (324.754 nm)	0.003140	ppm	0.000266	8.48	577.172000	Y 377.433
Fe (238.204 nm)	7.529201 o	ppm	0.003597	0.05	18826.957490	Y_R 377.433
Fe H (259.940 nm)	7.551480	ppm	0.003729	0.05	10825.300000	Y_R 377.433
K (766.491 nm)	7.912930	ppm	0.050752	0.64	10504.200000	Y_R2 488.368
Li (670.783 nm)	0.056147	ppm	0.003596	6.40	-1864.560000	Y_R2 488.368
Mg (279.078 nm)	16.799900	ppm	0.036323	0.22	58890.300000	Y 377.433
Mn (257.610 nm)	0.073219	ppm	0.000076	0.10	21079.400000	Y 377.433
Mo (202.032 nm)	0.003731	ppm	0.000112	3.00	60.972600	Y 377.433
Na (589.592 nm)	33.481300	ppm	0.094709	0.28	29288.100000	Y_R2 488.368
Na H (589.593 nm)	33.813564 u	ppm	0.104242	0.31	20075.796004	Y_R4
Ni (231.604 nm)	0.006702	ppm	0.000060	0.89	25.908700	Y 377.433
P (213.618 nm)	0.214862	ppm	0.004046	1.88	334.275000	Y 242.219
Pb (220.353 nm)	0.004371	ppm	0.001138	26.04	20.844200	Y 242.219
S (181.972 nm)	96.163839	ppm	0.207091	0.22	47008.629883	Y 377.433
Sb (206.834 nm)	-0.003653 u	ppm	0.001610	44.06	-4.354130	Y 377.433
Se (196.026 nm)	0.002159 u	ppm	0.003715	> 100.00	7.120110	Y 242.219
Si (288.158 nm)	22.987500	ppm	0.013490	0.06	154065.000000	Y 377.433
Sn (189.925 nm)	-0.004341 u	ppm	0.001759	40.52	1.953260	Y 377.433
Sr (421.552 nm)	1.838411	ppm	0.002148	0.12	295342.336404	Y_R 488.368
Th (288.505 nm)	-0.004873 u	ppm	0.005618	> 100.00	5.163550	Y 377.433
Ti (336.122 nm)	0.078780	ppm	0.000174	0.22	10379.000000	Y 377.433
Tl (190.794 nm)	0.004194	ppm	0.001958	46.67	3.150660	Y 377.433
U (409.013 nm)	0.028808	ppm	0.012641	43.88	107.576000	Y 377.433
V (292.401 nm)	0.025856	ppm	0.000085	0.33	1299.500000	Y 377.433
Zn (206.200 nm)	0.044616	ppm	0.000249	0.56	207.999000	Y 377.433
Zr (343.823 nm)	0.004874	ppm	0.000006	0.13	112.430000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.029229	19243.482084	0.005695	0.55
Y 377.433	1.046838	581598.751018	0.006413	0.61
Y_R 377.433	1.081610	52658.700000	0.002524	0.23
Y_R 488.368	1.066600	45614.600000	0.001067	0.10
Y_R2 488.368	1.060477	88571.956849	0.005184	0.49
Y_R4	1.059130	40720.100000	0.015268	1.44

Sample Name: 280-123126-B-2-A

Date: 5/10/2019 10:12:36 PM

Rack:Tube: 2:17

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000424	ppm	0.000282	66.49	-172.372000	Y 377.433
Al (394.401 nm)	3.867410 o	ppm	0.000879	0.02	49203.700000	Y 377.433
Al H (396.152 nm)	3.674710	ppm	0.008672	0.24	8970.130000	Y_R 377.433
As (188.980 nm)	0.004862	ppm	0.002598	53.43	5.577650	Y 242.219
B (249.678 nm)	0.543177	ppm	0.000906	0.17	4171.460000	Y 242.219
Ba (493.408 nm)	0.030169	ppm	0.000182	0.60	4796.380000	Y_R 488.368
Be (234.861 nm)	0.000178	ppm	0.000004	2.09	-7.049150	Y_R 488.368
Bi (223.061 nm)	0.005889	ppm	0.000341	5.79	2.567790	Y 377.433
Ca (315.887 nm)	146.266163	ppm	0.209053	0.14	120904.389193	Y_R 377.433
Cd (214.439 nm)	0.000366	ppm	0.000054	14.68	8.420050	Y 377.433
Co (228.615 nm)	0.000939	ppm	0.000096	10.19	1.795720	Y 242.219
Cr (205.560 nm)	0.005311	ppm	0.000141	2.65	28.540400	Y 377.433
Cu (324.754 nm)	0.000791	ppm	0.000037	4.67	463.902000	Y 377.433
Fe (238.204 nm)	2.809146	ppm	0.000417	0.01	7026.954418	Y_R 377.433
Fe H (259.940 nm)	2.813750 u	ppm	0.005305	0.19	4016.030000	Y_R 377.433
K (766.491 nm)	8.666450	ppm	0.138414	1.60	11296.800000	Y_R2 488.368
Li (670.783 nm)	0.106804	ppm	0.004161	3.90	-942.981000	Y_R2 488.368
Mg (279.078 nm)	27.749300	ppm	0.003239	0.01	97275.800000	Y 377.433
Mn (257.610 nm)	0.048954	ppm	0.000011	0.02	14085.900000	Y 377.433
Mo (202.032 nm)	0.006134	ppm	0.000150	2.44	92.760800	Y 377.433
Na (589.592 nm)	73.997200 o	ppm	0.098458	0.13	64505.000000	Y_R2 488.368
Na H (589.593 nm)	74.341508	ppm	0.105916	0.14	43565.220975	Y_R4
Ni (231.604 nm)	0.002015	ppm	0.000334	16.57	0.475516	Y 377.433
P (213.618 nm)	0.078537	ppm	0.000083	0.11	124.002000	Y 242.219
Pb (220.353 nm)	0.000079	ppm	0.000003	4.34	7.546220	Y 242.219
S (181.972 nm)	154.956596 bo	ppm	0.342839	0.22	75739.271938	Y 377.433
Sb (206.834 nm)	-0.004507 u	ppm	0.001040	23.07	-6.137770	Y 377.433
Se (196.026 nm)	0.003999	ppm	0.002751	68.80	11.300200	Y 242.219
Si (288.158 nm)	9.968870	ppm	0.023071	0.23	67100.500000	Y 377.433
Sn (189.925 nm)	-0.003473 u	ppm	0.001350	38.86	3.381600	Y 377.433
Sr (421.552 nm)	2.250661	ppm	0.003993	0.18	361546.394789	Y_R 488.368
Th (288.505 nm)	-0.006554 u	ppm	0.007192	> 100.00	3.920600	Y 377.433
Ti (336.122 nm)	0.038621	ppm	0.000301	0.78	5073.360000	Y 377.433
Tl (190.794 nm)	0.003796	ppm	0.000643	16.93	2.877420	Y 377.433
U (409.013 nm)	0.023583	ppm	0.000649	2.75	88.001200	Y 377.433
V (292.401 nm)	0.009611	ppm	0.000307	3.20	423.589000	Y 377.433
Zn (206.200 nm)	0.075709	ppm	0.001454	1.92	349.415000	Y 377.433
Zr (343.823 nm)	0.003085	ppm	0.000177	5.73	7.472900	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.019891	19068.904381	0.000049	0.00
Y 377.433	1.037451	576383.666021	0.000712	0.07
Y_R 377.433	1.060250	51618.900000	0.001015	0.10
Y_R 488.368	1.047180	44783.800000	0.002094	0.20
Y_R2 488.368	1.074216	89719.440988	0.009895	0.92
Y_R4	1.057850	40671.000000	0.008112	0.77

Sample Name: 280-123285-B-1-B

Date: 5/10/2019 10:16:09 PM

Rack:Tube: 2:18

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000849	ppm	0.000193	22.72	-155.644000	Y 377.433
Al (394.401 nm)	0.034256	ppm	0.000972	2.84	636.951000	Y 377.433
Al H (396.152 nm)	0.019556 u	ppm	0.007541	38.56	90.936200	Y_R 377.433
As (188.980 nm)	0.005208	ppm	0.001421	27.28	6.453750	Y 242.219
B (249.678 nm)	0.149635	ppm	0.000212	0.14	1158.130000	Y 242.219
Ba (493.408 nm)	0.026490	ppm	0.000189	0.71	4408.150000	Y_R 488.368
Be (234.861 nm)	0.000017 u	ppm	0.000053	> 100.00	-0.283728	Y_R 488.368
Bi (223.061 nm)	0.002539	ppm	0.000871	34.31	-5.263220	Y 377.433
Ca (315.887 nm)	102.993907	ppm	0.035560	0.03	85112.926238	Y_R 377.433
Cd (214.439 nm)	0.000196	ppm	0.000079	40.19	0.786621	Y 377.433
Co (228.615 nm)	0.000041 u	ppm	0.000357	> 100.00	-22.342100	Y 242.219
Cr (205.560 nm)	0.000840	ppm	0.000238	28.35	-2.336490	Y 377.433
Cu (324.754 nm)	0.002769	ppm	0.000135	4.86	586.318000	Y 377.433
Fe (238.204 nm)	0.143601	ppm	0.000305	0.21	363.168431	Y_R 377.433
Fe H (259.940 nm)	0.162525 u	ppm	0.002631	1.62	205.594000	Y_R 377.433
K (766.491 nm)	5.411090	ppm	0.015753	0.29	7872.870000	Y_R2 488.368
Li (670.783 nm)	0.124450	ppm	0.002729	2.19	-621.958000	Y_R2 488.368
Mg (279.078 nm)	48.297400	ppm	0.070871	0.15	169302.000000	Y 377.433
Mn (257.610 nm)	0.001681	ppm	0.000006	0.33	460.989000	Y 377.433
Mo (202.032 nm)	0.007019	ppm	0.000128	1.83	104.464000	Y 377.433
Na (589.592 nm)	177.956000 o	ppm	0.729157	0.41	154876.000000	Y_R2 488.368
Na H (589.593 nm)	182.427290	ppm	0.761248	0.42	106210.215515	Y_R4
Ni (231.604 nm)	-0.001473 u	ppm	0.000707	48.01	-18.450200	Y 377.433
P (213.618 nm)	0.060537	ppm	0.000246	0.41	95.654000	Y 242.219
Pb (220.353 nm)	-0.001027 u	ppm	0.001546	> 100.00	4.570530	Y 242.219
S (181.972 nm)	161.091544 bo	ppm	0.370395	0.23	78734.916553	Y 377.433
Sb (206.834 nm)	-0.003931 u	ppm	0.000669	17.01	-5.084990	Y 377.433
Se (196.026 nm)	0.002112	ppm	0.002095	99.21	8.930060	Y 242.219
Si (288.158 nm)	2.678080	ppm	0.005641	0.21	18398.000000	Y 377.433
Sn (189.925 nm)	-0.003398 u	ppm	0.001360	40.03	3.505510	Y 377.433
Sr (421.552 nm)	0.686765	ppm	0.000906	0.13	110393.517891	Y_R 488.368
Th (288.505 nm)	-0.004523 u	ppm	0.002573	56.89	8.316660	Y 377.433
Ti (336.122 nm)	0.000816	ppm	0.000083	10.12	-62.810300	Y 377.433
Tl (190.794 nm)	0.001808	ppm	0.001276	70.61	0.227387	Y 377.433
U (409.013 nm)	0.025625	ppm	0.000872	3.40	98.568400	Y 377.433
V (292.401 nm)	0.005291	ppm	0.000015	0.28	190.123000	Y 377.433
Zn (206.200 nm)	0.002473	ppm	0.000295	11.93	14.408100	Y 377.433
Zr (343.823 nm)	0.000785	ppm	0.000126	16.11	-127.485000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.012910	18938.365515	0.001926	0.19
Y 377.433	1.031885	573291.329275	0.002783	0.27
Y_R 377.433	1.052420	51237.600000	0.001721	0.16
Y_R 488.368	1.039470	44454.000000	0.002464	0.24
Y_R2 488.368	1.027434	85812.184974	0.001014	0.10
Y_R4	1.033360	39729.400000	0.002117	0.20

Sample Name: CCVH-5690583

Date: 5/10/2019 10:19:45 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000550	ppm	0.000125	22.74	-302.193000	Y 377.433
Al (394.401 nm)	48.449900 o	ppm	0.099115	0.20	608870.000000	Y 377.433
Al H (396.152 nm)	48.781700	ppm	0.037103	0.08	109587.000000	Y_R 377.433
As (188.980 nm)	0.005635	ppm	0.001155	20.49	2.723740	Y 242.219
B (249.678 nm)	0.006375	ppm	0.001096	17.18	31.696100	Y 242.219
Ba (493.408 nm)	0.001657	ppm	0.000168	10.15	1841.620000	Y_R 488.368
Be (234.861 nm)	0.002469	ppm	0.000000	0.01	-162.715000	Y_R 488.368
Bi (223.061 nm)	0.944304	ppm	0.006584	0.70	2073.820000	Y 377.433
Ca (315.887 nm)	0.023534	ppm	0.002065	8.77	-41.213773	Y_R 377.433
Cd (214.439 nm)	0.000825	ppm	0.000061	7.35	44.521900	Y 377.433
Co (228.615 nm)	0.004536	ppm	0.000187	4.13	90.172200	Y 242.219
Cr (205.560 nm)	0.000920	ppm	0.000027	2.96	-3.094070	Y 377.433
Cu (324.754 nm)	0.005985	ppm	0.000228	3.80	1204.850000	Y 377.433
Fe (238.204 nm)	47.548189 o	ppm	0.008781	0.02	118873.273497	Y_R 377.433
Fe H (259.940 nm)	47.476200	ppm	0.003339	0.01	68206.500000	Y_R 377.433
K (766.491 nm)	0.165902	ppm	0.022749	13.71	2356.080000	Y_R2 488.368
Li (670.783 nm)	0.007310	ppm	0.000292	4.00	-2753.030000	Y_R2 488.368
Mg (279.078 nm)	0.016161	ppm	0.001417	8.77	-155.562000	Y 377.433
Mn (257.610 nm)	0.001325	ppm	0.000015	1.15	358.293000	Y 377.433
Mo (202.032 nm)	0.000499	ppm	0.000108	21.56	18.212000	Y 377.433
Na (589.592 nm)	239.185000 o	ppm	0.290466	0.12	208097.000000	Y_R2 488.368
Na H (589.593 nm)	245.964749	ppm	0.976844	0.40	143035.630671	Y_R4
Ni (231.604 nm)	0.002001	ppm	0.000089	4.45	0.399046	Y 377.433
P (213.618 nm)	-0.015280 u	ppm	0.001733	11.34	-27.021300	Y 242.219
Pb (220.353 nm)	0.007176	ppm	0.001342	18.70	48.006000	Y 242.219
S (181.972 nm)	4.717338	ppm	0.013046	0.28	2312.751219	Y 377.433
Sb (206.834 nm)	0.002781	ppm	0.000378	13.61	10.727100	Y 377.433
Se (196.026 nm)	0.000472 u	ppm	0.002253	> 100.00	-6.455750	Y 242.219
Si (288.158 nm)	0.026031	ppm	0.000119	0.46	682.292000	Y 377.433
Sn (189.925 nm)	-0.002522 u	ppm	0.000473	18.74	4.945880	Y 377.433
Sr (421.552 nm)	0.000824	ppm	0.000033	3.99	242.890053	Y_R 488.368
Th (288.505 nm)	4.858100	ppm	0.000946	0.02	8583.350000	Y 377.433
Ti (336.122 nm)	0.001850	ppm	0.000019	1.02	-276.802000	Y 377.433
Tl (190.794 nm)	-0.002519 u	ppm	0.002708	> 100.00	-10.764400	Y 377.433
U (409.013 nm)	9.708680	ppm	0.020836	0.21	31077.000000	Y 377.433
V (292.401 nm)	-0.001056 u	ppm	0.000199	18.88	-150.096000	Y 377.433
Zn (206.200 nm)	0.002398	ppm	0.000258	10.74	20.661600	Y 377.433
Zr (343.823 nm)	-0.002874 u	ppm	0.000062	2.16	-342.164000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.996148	18624.973761	0.004695	0.47
Y 377.433	1.010749	561548.438666	0.005721	0.57
Y_R 377.433	1.029760	50134.700000	0.002534	0.25
Y_R 488.368	1.025410	43852.800000	0.001389	0.14
Y_R2 488.368	1.019165	85121.531800	0.001827	0.18
Y_R4	1.027080	39487.900000	0.004418	0.43

Sample Name: CCV-5690581

Date: 5/10/2019 10:23:37 PM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.479179	ppm	0.000840	0.18	17328.400000	Y 377.433
Al (394.401 nm)	0.489424	ppm	0.003148	0.64	6298.870000	Y 377.433
Al H (396.152 nm)	0.531296 u	ppm	0.001526	0.29	1221.970000	Y_R 377.433
As (188.980 nm)	0.953512	ppm	0.003750	0.39	1515.170000	Y 242.219
B (249.678 nm)	0.472398	ppm	0.001819	0.39	3629.470000	Y 242.219
Ba (493.408 nm)	0.481988	ppm	0.000287	0.06	52203.300000	Y_R 488.368
Be (234.861 nm)	0.475295	ppm	0.002585	0.54	50422.200000	Y_R 488.368
Bi (223.061 nm)	0.004994	ppm	0.000544	10.90	0.614308	Y 377.433
Ca (315.887 nm)	4.868125	ppm	0.010066	0.21	3953.317503	Y_R 377.433
Cd (214.439 nm)	0.482642	ppm	0.000991	0.21	18484.900000	Y 377.433
Co (228.615 nm)	0.484872	ppm	0.001013	0.21	12134.400000	Y 242.219
Cr (205.560 nm)	0.478204	ppm	0.003455	0.72	3302.090000	Y 377.433
Cu (324.754 nm)	0.482105	ppm	0.002602	0.54	24173.700000	Y 377.433
Fe (238.204 nm)	2.399336	ppm	0.009107	0.38	6002.441205	Y_R 377.433
Fe H (259.940 nm)	2.420120 u	ppm	0.008949	0.37	3450.290000	Y_R 377.433
K (766.491 nm)	48.130400	ppm	0.271498	0.56	52804.100000	Y_R2 488.368
Li (670.783 nm)	0.986575	ppm	0.001816	0.18	15062.400000	Y_R2 488.368
Mg (279.078 nm)	18.926200	ppm	0.040928	0.22	66351.200000	Y 377.433
Mn (257.610 nm)	0.478876	ppm	0.000599	0.12	137996.000000	Y 377.433
Mo (202.032 nm)	0.482571	ppm	0.000012	0.00	6395.400000	Y 377.433
Na (589.592 nm)	24.939700	ppm	0.036856	0.15	21967.100000	Y_R2 488.368
Na H (589.593 nm)	25.530776 u	ppm	0.093976	0.37	15275.208723	Y_R4
Ni (231.604 nm)	0.480455	ppm	0.000291	0.06	2597.720000	Y 377.433
P (213.618 nm)	0.942460	ppm	0.002431	0.26	1320.490000	Y 242.219
Pb (220.353 nm)	0.963550	ppm	0.005731	0.59	3249.440000	Y 242.219
S (181.972 nm)	0.008239	ppm	0.002505	30.41	13.325435	Y 377.433
Sb (206.834 nm)	0.965251	ppm	0.000505	0.05	1797.940000	Y 377.433
Se (196.026 nm)	0.960669	ppm	0.003779	0.39	1544.370000	Y 242.219
Si (288.158 nm)	4.751750	ppm	0.016434	0.35	32250.100000	Y 377.433
Sn (189.925 nm)	0.969677	ppm	0.004322	0.45	1604.880000	Y 377.433
Sr (421.552 nm)	0.481320	ppm	0.000553	0.11	77400.563100	Y_R 488.368
Th (288.505 nm)	0.005724	ppm	0.007009	> 100.00	-19.823400	Y 377.433
Ti (336.122 nm)	0.481278	ppm	0.000555	0.12	62992.200000	Y 377.433
Tl (190.794 nm)	0.971211	ppm	0.001171	0.12	2371.540000	Y 377.433
U (409.013 nm)	0.009262	ppm	0.009063	97.85	0.567746	Y 377.433
V (292.401 nm)	0.478932	ppm	0.001124	0.23	25633.600000	Y 377.433
Zn (206.200 nm)	0.480429	ppm	0.002927	0.61	2198.630000	Y 377.433
Zr (343.823 nm)	0.483106	ppm	0.000770	0.16	28171.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.023075	19128.427068	0.001516	0.15
Y 377.433	1.034058	574498.154646	0.001457	0.14
Y_R 377.433	1.042530	50756.200000	0.001861	0.18
Y_R 488.368	1.028040	43965.400000	0.004714	0.46
Y_R2 488.368	1.019492	85148.892361	0.005274	0.52
Y_R4	1.013240	38956.100000	0.002530	0.25

Sample Name: CCB

Date: 5/10/2019 10:27:09 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000212 u	ppm	0.000089	42.18	-191.935000	Y 377.433
Al (394.401 nm)	0.003298	ppm	0.000308	9.34	67.921400	Y 377.433
Al H (396.152 nm)	0.113031 Zu	ppm	0.002095	1.85	34.381100 Z	Y_R 377.433
As (188.980 nm)	0.002524 u	ppm	0.004428	> 100.00	2.190510	Y 242.219
B (249.678 nm)	-0.000052 u	ppm	0.000595	> 100.00	11.448800	Y 242.219
Ba (493.408 nm)	-0.001364 u	ppm	0.000122	8.96	1485.390000	Y_R 488.368
Be (234.861 nm)	-0.000040 u	ppm	0.000053	> 100.00	-5.005980	Y_R 488.368
Bi (223.061 nm)	0.005867	ppm	0.001956	33.35	2.016890	Y 377.433
Ca (315.887 nm)	-0.002514 u	ppm	0.000793	31.55	-75.320240	Y_R 377.433
Cd (214.439 nm)	0.000062	ppm	0.000040	65.04	-4.412290	Y 377.433
Co (228.615 nm)	0.000014 u	ppm	0.000127	> 100.00	-23.072400	Y 242.219
Cr (205.560 nm)	-0.000055 u	ppm	0.000476	> 100.00	-8.508730	Y 377.433
Cu (324.754 nm)	-0.000144 u	ppm	0.000118	81.84	503.703000	Y 377.433
Fe (238.204 nm)	0.000322	ppm	0.000303	94.00	4.975601	Y_R 377.433
Fe H (259.940 nm)	0.027892 u	ppm	0.000832	2.98	12.094700	Y_R 377.433
K (766.491 nm)	-0.194206 u	ppm	0.011441	5.89	1977.330000	Y_R2 488.368
Li (670.783 nm)	0.006059	ppm	0.000059	0.97	-2775.790000	Y_R2 488.368
Mg (279.078 nm)	-0.000362 u	ppm	0.001980	> 100.00	14.984000	Y 377.433
Mn (257.610 nm)	0.000054	ppm	0.000002	3.43	-8.016630	Y 377.433
Mo (202.032 nm)	0.000120 u	ppm	0.000194	> 100.00	13.199400	Y 377.433
Na (589.592 nm)	0.062021	ppm	0.059399	95.77	224.893000	Y_R2 488.368
Na H (589.593 nm)	0.467604 u	ppm	0.003420	0.73	748.948115	Y_R4
Ni (231.604 nm)	-0.000079 u	ppm	0.000295	> 100.00	-10.888300	Y 377.433
P (213.618 nm)	-0.003679 u	ppm	0.001767	48.03	-2.086090	Y 242.219
Pb (220.353 nm)	-0.000304 u	ppm	0.000114	37.62	6.983330	Y 242.219
S (181.972 nm)	0.000159 u	ppm	0.004755	> 100.00	7.552740	Y 377.433
Sb (206.834 nm)	-0.001292 u	ppm	0.001016	78.62	-0.134123	Y 377.433
Se (196.026 nm)	-0.001199 u	ppm	0.003183	> 100.00	3.662620	Y 242.219
Si (288.158 nm)	-0.005233 u	ppm	0.001132	21.63	473.446000	Y 377.433
Sn (189.925 nm)	-0.003360 u	ppm	0.001189	35.38	3.567680	Y 377.433
Sr (421.552 nm)	-0.000064 u	ppm	0.000015	23.06	92.654033	Y_R 488.368
Th (288.505 nm)	-0.005969 u	ppm	0.003347	56.07	8.870060	Y 377.433
Ti (336.122 nm)	0.000537	ppm	0.000033	6.14	-450.075000	Y 377.433
Tl (190.794 nm)	0.000205 u	ppm	0.001312	> 100.00	0.614353	Y 377.433
U (409.013 nm)	-0.003568 u	ppm	0.009363	> 100.00	18.606500	Y 377.433
V (292.401 nm)	-0.000446 u	ppm	0.000226	50.73	-119.122000	Y 377.433
Zn (206.200 nm)	0.000350	ppm	0.000407	> 100.00	4.686400	Y 377.433
Zr (343.823 nm)	0.000723	ppm	0.000148	20.40	-131.079000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.054403	19714.163160	0.005634	0.53
Y 377.433	1.060612	589251.092461	0.006400	0.60
Y_R 377.433	1.063200	51762.700000	0.000637	0.06
Y_R 488.368	1.055870	45155.700000	0.005123	0.49
Y_R2 488.368	1.045922	87356.288932	0.000385	0.04
Y_R4	1.035470	39810.600000	0.001770	0.17

Sample Name: CCVL-5695588

Date: 5/10/2019 10:30:23 PM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009229	ppm	0.000018	0.20	152.573000	Y 377.433
Al (394.401 nm)	0.101246	ppm	0.001301	1.29	1302.600000	Y 377.433
Al H (396.152 nm)	0.216000 u	ppm	0.000375	0.17	271.453000	Y_R 377.433
As (188.980 nm)	0.015483	ppm	0.000254	1.64	22.800400	Y 242.219
B (249.678 nm)	0.094647	ppm	0.000070	0.07	736.890000	Y 242.219
Ba (493.408 nm)	0.008332	ppm	0.000569	6.83	2502.890000	Y_R 488.368
Be (234.861 nm)	0.000910	ppm	0.000034	3.77	94.892800	Y_R 488.368
Bi (223.061 nm)	0.090846	ppm	0.002502	2.75	188.915000	Y 377.433
Ca (315.887 nm)	0.195025	ppm	0.004098	2.10	88.089416	Y_R 377.433
Cd (214.439 nm)	0.005037	ppm	0.000058	1.16	186.221000	Y 377.433
Co (228.615 nm)	0.010319	ppm	0.000262	2.54	235.309000	Y 242.219
Cr (205.560 nm)	0.010622	ppm	0.000790	7.44	65.311600	Y 377.433
Cu (324.754 nm)	0.014617	ppm	0.000032	0.22	1229.050000	Y 377.433
Fe (238.204 nm)	0.096313	ppm	0.001153	1.20	244.951942	Y_R 377.433
Fe H (259.940 nm)	0.127784 u	ppm	0.004433	3.47	155.663000	Y_R 377.433
K (766.491 nm)	2.874400	ppm	0.036764	1.28	5204.820000	Y_R2 488.368
Li (670.783 nm)	0.028009 Q	ppm	0.001334	4.76	-2376.460000 Q	Y_R2 488.368
Mg (279.078 nm)	0.197044	ppm	0.001901	0.96	706.066000	Y 377.433
Mn (257.610 nm)	0.010185	ppm	0.000048	0.47	2912.070000	Y 377.433
Mo (202.032 nm)	0.018702	ppm	0.000096	0.51	259.013000	Y 377.433
Na (589.592 nm)	1.090860	ppm	0.010248	0.94	1121.690000	Y_R2 488.368
Na H (589.593 nm)	1.111310 u	ppm	0.007858	0.71	1122.030970	Y_R4
Ni (231.604 nm)	0.040743	ppm	0.000054	0.13	210.631000	Y 377.433
P (213.618 nm)	2.652320	ppm	0.021147	0.80	4096.760000	Y 242.219
Pb (220.353 nm)	0.010016	ppm	0.000261	2.61	41.740000	Y 242.219
S (181.972 nm)	0.083960	ppm	0.002278	2.71	48.543579	Y 377.433
Sb (206.834 nm)	0.016201	ppm	0.002143	13.23	32.310500	Y 377.433
Se (196.026 nm)	0.018666	ppm	0.002123	11.38	35.470200	Y 242.219
Si (288.158 nm)	0.491402	ppm	0.006156	1.25	3790.970000	Y 377.433
Sn (189.925 nm)	0.096060	ppm	0.001867	1.94	167.180000	Y 377.433
Sr (421.552 nm)	0.008730	ppm	0.000055	0.63	1504.987758	Y_R 488.368
Th (288.505 nm)	0.011365	ppm	0.003498	30.78	38.630000	Y 377.433
Ti (336.122 nm)	0.010161	ppm	0.000046	0.45	820.337000	Y 377.433
Tl (190.794 nm)	0.012819	ppm	0.000778	6.07	31.343800	Y 377.433
U (409.013 nm)	0.056266	ppm	0.007780	13.83	208.598000	Y 377.433
V (292.401 nm)	0.009459	ppm	0.000080	0.85	411.694000	Y 377.433
Zn (206.200 nm)	0.020747	ppm	0.000285	1.38	97.900000	Y 377.433
Zr (343.823 nm)	0.010391 Q	ppm	0.000070	0.67	436.138000 Q	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.052728	19682.852835	0.003731	0.35
Y 377.433	1.059150	588439.107654	0.004147	0.39
Y_R 377.433	1.067170	51955.800000	0.002498	0.23
Y_R 488.368	1.060190	45340.300000	0.006816	0.64
Y_R2 488.368	1.055881	88188.069896	0.011078	1.05
Y_R4	1.053490	40503.400000	0.000564	0.05

Sample Name: 280-123285-B-2-B

Date: 5/10/2019 10:33:50 PM

Rack:Tube: 2:19

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000154 u	ppm	0.000110	71.18	-191.984000	Y 377.433
Al (394.401 nm)	0.413792	ppm	0.000498	0.12	5253.980000	Y 377.433
Al H (396.152 nm)	0.517477 u	ppm	0.005095	0.98	981.868000	Y_R 377.433
As (188.980 nm)	0.002538	ppm	0.000430	16.92	2.173620	Y 242.219
B (249.678 nm)	0.076604	ppm	0.000002	0.00	598.441000	Y 242.219
Ba (493.408 nm)	0.025657	ppm	0.000438	1.71	4321.030000	Y_R 488.368
Be (234.861 nm)	0.000004 u	ppm	0.000105	> 100.00	-4.420400	Y_R 488.368
Bi (223.061 nm)	0.003916	ppm	0.000248	6.33	-2.184930	Y 377.433
Ca (315.887 nm)	21.755482	ppm	0.022391	0.10	17920.805768	Y_R 377.433
Cd (214.439 nm)	0.000142	ppm	0.000071	50.25	-1.173030	Y 377.433
Co (228.615 nm)	0.000426	ppm	0.000014	3.37	-11.997000	Y 242.219
Cr (205.560 nm)	0.001251	ppm	0.000164	13.10	0.517309	Y 377.433
Cu (324.754 nm)	0.003840	ppm	0.000055	1.43	685.251000	Y 377.433
Fe (238.204 nm)	0.457266	ppm	0.001633	0.36	1147.322326	Y_R 377.433
Fe H (259.940 nm)	0.492321 u	ppm	0.004089	0.83	679.588000	Y_R 377.433
K (766.491 nm)	4.150190	ppm	0.004326	0.10	6546.670000	Y_R2 488.368
Li (670.783 nm)	0.030582	ppm	0.000560	1.83	-2329.660000	Y_R2 488.368
Mg (279.078 nm)	3.438200	ppm	0.008879	0.26	12066.600000	Y 377.433
Mn (257.610 nm)	0.028685	ppm	0.000013	0.05	8243.910000	Y 377.433
Mo (202.032 nm)	0.003098	ppm	0.000078	2.50	52.598500	Y 377.433
Na (589.592 nm)	6.982450	ppm	0.019148	0.27	6247.470000	Y_R2 488.368
Na H (589.593 nm)	6.930712 u	ppm	0.011735	0.17	4494.873920	Y_R4
Ni (231.604 nm)	-0.000243 u	ppm	0.000892	> 100.00	-11.775500	Y 377.433
P (213.618 nm)	0.114347	ppm	0.001853	1.62	178.983000	Y 242.219
Pb (220.353 nm)	0.000552 u	ppm	0.000835	> 100.00	9.796210	Y 242.219
S (181.972 nm)	5.281954	ppm	0.030687	0.58	2589.833970	Y 377.433
Sb (206.834 nm)	-0.001237 u	ppm	0.001515	> 100.00	-0.090069	Y 377.433
Se (196.026 nm)	0.005202	ppm	0.000872	16.77	13.832200	Y 242.219
Si (288.158 nm)	3.878330	ppm	0.005595	0.14	26415.700000	Y 377.433
Sn (189.925 nm)	-0.002194 u	ppm	0.000853	38.88	5.486410	Y 377.433
Sr (421.552 nm)	0.099008	ppm	0.000363	0.37	16003.136257	Y_R 488.368
Th (288.505 nm)	-0.011083 u	ppm	0.000243	2.20	-0.581718	Y 377.433
Ti (336.122 nm)	0.017490	ppm	0.000250	1.43	1858.640000	Y 377.433
Tl (190.794 nm)	0.000878 u	ppm	0.002190	> 100.00	1.241060	Y 377.433
U (409.013 nm)	0.019027	ppm	0.009072	47.68	88.317700	Y 377.433
V (292.401 nm)	0.004680	ppm	0.000160	3.42	157.275000	Y 377.433
Zn (206.200 nm)	0.026432	ppm	0.000653	2.47	123.926000	Y 377.433
Zr (343.823 nm)	0.001103	ppm	0.000014	1.26	-108.774000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.038843	19423.245534	0.001870	0.18
Y 377.433	1.048053	582273.856428	0.002862	0.27
Y_R 377.433	1.048550	51049.400000	0.002559	0.24
Y_R 488.368	1.037700	44378.500000	0.001106	0.11
Y_R2 488.368	1.043073	87118.341168	0.002617	0.25
Y_R4	1.032130	39682.200000	0.002952	0.29

Sample Name: MB 280-457261/1-A

Date: 5/10/2019 10:37:21 PM

Rack:Tube: 2:20

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000587 u	ppm	0.000006	1.10	-205.794000	Y 377.433
Al (394.401 nm)	0.007652	ppm	0.002036	26.61	121.451000	Y 377.433
Al H (396.152 nm)	0.119615 u	ppm	0.008617	7.20	49.152900	Y_R 377.433
As (188.980 nm)	0.001624	ppm	0.000269	16.54	0.757084	Y 242.219
B (249.678 nm)	-0.000087 u	ppm	0.000262	> 100.00	11.175900	Y 242.219
Ba (493.408 nm)	-0.001241 u	ppm	0.000606	48.83	1498.400000	Y_R 488.368
Be (234.861 nm)	0.000001 u	ppm	0.000041	> 100.00	-0.829530	Y_R 488.368
Bi (223.061 nm)	0.001739	ppm	0.000909	52.30	-7.058860	Y 377.433
Ca (315.887 nm)	0.006039	ppm	0.003382	55.99	-68.241790	Y_R 377.433
Cd (214.439 nm)	0.000032 u	ppm	0.000117	> 100.00	-5.573310	Y 377.433
Co (228.615 nm)	0.000215	ppm	0.000278	> 100.00	-18.011300	Y 242.219
Cr (205.560 nm)	0.000705	ppm	0.000261	36.99	-3.239440	Y 377.433
Cu (324.754 nm)	-0.000203 u	ppm	0.000064	31.54	501.580000	Y 377.433
Fe (238.204 nm)	0.011024	ppm	0.000726	6.59	31.730642	Y_R 377.433
Fe H (259.940 nm)	0.041603 u	ppm	0.003027	7.28	31.801800	Y_R 377.433
K (766.491 nm)	-0.297444 u	ppm	0.068363	22.98	1868.740000	Y_R2 488.368
Li (670.783 nm)	0.002637 u	ppm	0.003949	> 100.00	-2838.040000	Y_R2 488.368
Mg (279.078 nm)	-0.000894 u	ppm	0.000722	80.74	13.144700	Y 377.433
Mn (257.610 nm)	0.000821	ppm	0.000006	0.75	213.261000	Y 377.433
Mo (202.032 nm)	-0.000261 u	ppm	0.000308	> 100.00	8.161720	Y 377.433
Na (589.592 nm)	0.037373	ppm	0.021655	57.94	203.554000	Y_R2 488.368
Na H (589.593 nm)	-0.045523 u	ppm	0.002076	4.56	451.546685	Y_R4
Ni (231.604 nm)	0.000032 u	ppm	0.000102	> 100.00	-10.288000	Y 377.433
P (213.618 nm)	-0.006978 u	ppm	0.002121	30.40	-7.190430	Y 242.219
Pb (220.353 nm)	-0.000215 u	ppm	0.000115	53.54	7.273810	Y 242.219
S (181.972 nm)	0.010650	ppm	0.004678	43.92	12.682698	Y 377.433
Sb (206.834 nm)	-0.001108 u	ppm	0.000053	4.82	0.220656	Y 377.433
Se (196.026 nm)	0.000357 u	ppm	0.000980	> 100.00	6.152410	Y 242.219
Si (288.158 nm)	-0.000706 u	ppm	0.001056	> 100.00	503.686000	Y 377.433
Sn (189.925 nm)	-0.004273 u	ppm	0.000139	3.25	2.065160	Y 377.433
Sr (421.552 nm)	-0.000021 u	ppm	0.000009	40.20	99.591438	Y_R 488.368
Th (288.505 nm)	-0.001985 u	ppm	0.001047	52.74	15.838100	Y 377.433
Ti (336.122 nm)	0.000321	ppm	0.000182	56.66	-478.520000	Y 377.433
Tl (190.794 nm)	0.000162 u	ppm	0.000957	> 100.00	0.511139	Y 377.433
U (409.013 nm)	0.001001	ppm	0.000302	30.18	33.227700	Y 377.433
V (292.401 nm)	-0.000476 u	ppm	0.000279	58.67	-120.452000	Y 377.433
Zn (206.200 nm)	0.000914	ppm	0.000067	7.37	7.263210	Y 377.433
Zr (343.823 nm)	0.000583	ppm	0.000200	34.40	-139.336000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.045117	19540.552127	0.003620	0.35
Y 377.433	1.052164	584557.778314	0.003425	0.33
Y_R 377.433	1.054010	51315.100000	0.002128	0.20
Y_R 488.368	1.035160	44270.100000	0.006036	0.58
Y_R2 488.368	1.028526	85903.390442	0.005713	0.56
Y_R4	1.031890	39672.800000	0.000315	0.03

Sample Name: LCS 280-457261/2-A

Date: 5/10/2019 10:40:34 PM

Rack:Tube: 2:21

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000822	ppm	0.000244	29.74	-474.712000	Y 377.433
Al (394.401 nm)	9.753120 o	ppm	0.001915	0.02	122859.000000	Y 377.433
Al H (396.152 nm)	9.935260	ppm	0.009413	0.09	22629.100000	Y_R 377.433
As (188.980 nm)	1.942340	ppm	0.002822	0.15	3087.650000	Y 242.219
B (249.678 nm)	0.942437	ppm	0.001209	0.13	7226.010000	Y 242.219
Ba (493.408 nm)	1.940790	ppm	0.001828	0.09	205275.000000	Y_R 488.368
Be (234.861 nm)	0.948046	ppm	0.001107	0.12	100531.000000	Y_R 488.368
Bi (223.061 nm)	1.940340	ppm	0.003442	0.18	4257.820000	Y 377.433
Ca (315.887 nm)	48.714540	ppm	0.064194	0.13	40221.101409	Y_R 377.433
Cd (214.439 nm)	0.946393	ppm	0.001350	0.14	36255.000000	Y 377.433
Co (228.615 nm)	0.933832	ppm	0.001119	0.12	23394.000000	Y 242.219
Cr (205.560 nm)	0.948467	ppm	0.008023	0.85	6557.080000	Y 377.433
Cu (324.754 nm)	0.932626	ppm	0.000936	0.10	46328.400000	Y 377.433
Fe (238.204 nm)	9.739395 o	ppm	0.003468	0.04	24352.376856	Y_R 377.433
Fe H (259.940 nm)	9.747890	ppm	0.003136	0.03	13982.000000	Y_R 377.433
K (766.491 nm)	49.158200	ppm	0.114025	0.23	53885.300000	Y_R2 488.368
Li (670.783 nm)	0.984503	ppm	0.001282	0.13	15024.700000	Y_R2 488.368
Mg (279.078 nm)	47.169600	ppm	0.003754	0.01	165303.000000	Y 377.433
Mn (257.610 nm)	0.956697	ppm	0.000289	0.03	275712.000000	Y 377.433
Mo (202.032 nm)	0.970703	ppm	0.001213	0.12	12852.700000	Y 377.433
Na (589.592 nm)	50.128200	ppm	0.033183	0.07	44213.400000	Y_R2 488.368
Na H (589.593 nm)	47.623666 u	ppm	0.099283	0.21	28079.936626	Y_R4
Ni (231.604 nm)	0.924510	ppm	0.001188	0.13	5008.340000	Y 377.433
P (213.618 nm)	18.589000	ppm	0.015652	0.08	28449.200000	Y 242.219
Pb (220.353 nm)	0.957134	ppm	0.001281	0.13	3228.350000	Y 242.219
S (181.972 nm)	9.024613	ppm	0.006010	0.07	4423.268933	Y 377.433
Sb (206.834 nm)	-0.000824 u	ppm	0.002693	> 100.00	-4.560110	Y 377.433
Se (196.026 nm)	1.908550	ppm	0.003497	0.18	3061.340000	Y 242.219
Si (288.158 nm)	1.986340	ppm	0.007639	0.38	13777.200000	Y 377.433
Sn (189.925 nm)	1.919990	ppm	0.005619	0.29	3168.800000	Y 377.433
Sr (421.552 nm)	0.965372	ppm	0.001114	0.12	155137.691841	Y_R 488.368
Th (288.505 nm)	0.988555	ppm	0.001471	0.15	1662.010000	Y 377.433
Ti (336.122 nm)	0.976713	ppm	0.001962	0.20	128506.000000	Y 377.433
Tl (190.794 nm)	1.889990	ppm	0.001588	0.08	4612.500000	Y 377.433
U (409.013 nm)	1.989250	ppm	0.003450	0.17	6325.280000	Y 377.433
V (292.401 nm)	0.965477	ppm	0.001265	0.13	51769.000000	Y 377.433
Zn (206.200 nm)	0.471737	ppm	0.000113	0.02	2159.940000	Y 377.433
Zr (343.823 nm)	0.483087	ppm	0.000788	0.16	28170.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.999196	18681.963534	0.000793	0.08
Y 377.433	1.018195	565685.416594	0.000844	0.08
Y_R 377.433	1.032400	50263.100000	0.000076	0.01
Y_R 488.368	1.020200	43630.100000	0.001628	0.16
Y_R2 488.368	1.010084	84363.065406	0.004998	0.49
Y_R4	1.012190	38915.400000	0.000750	0.07

Sample Name: 280-123337-D-1-D

Date: 5/10/2019 10:44:10 PM

Rack:Tube: 2:22

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000301 u	ppm	0.000266	88.36	-195.458000	Y 377.433
Al (394.401 nm)	0.047850	ppm	0.000622	1.30	629.467000	Y 377.433
Al H (396.152 nm)	0.155805 u	ppm	0.002215	1.42	138.135000	Y_R 377.433
As (188.980 nm)	0.004116	ppm	0.000013	0.32	4.719760	Y 242.219
B (249.678 nm)	0.031714	ppm	0.001083	3.41	254.805000	Y 242.219
Ba (493.408 nm)	0.005998	ppm	0.000434	7.23	2257.970000	Y_R 488.368
Be (234.861 nm)	-0.000011 u	ppm	0.000066	> 100.00	-2.137940	Y_R 488.368
Bi (223.061 nm)	0.000111	ppm	0.000092	82.48	-10.622900	Y 377.433
Ca (315.887 nm)	2.968087	ppm	0.005037	0.17	2381.672392	Y_R 377.433
Cd (214.439 nm)	0.000156	ppm	0.000018	11.26	-0.800005	Y 377.433
Co (228.615 nm)	0.000238	ppm	0.000053	22.24	-17.443300	Y 242.219
Cr (205.560 nm)	0.001035	ppm	0.000274	26.44	-0.967381	Y 377.433
Cu (324.754 nm)	-0.000238 u	ppm	0.000008	3.44	499.472000	Y 377.433
Fe (238.204 nm)	0.016879	ppm	0.003032	17.96	46.368152	Y_R 377.433
Fe H (259.940 nm)	0.053396 u	ppm	0.004090	7.66	48.751000	Y_R 377.433
K (766.491 nm)	5.956380	ppm	0.120078	2.02	8446.390000	Y_R2 488.368
Li (670.783 nm)	0.000696 u	ppm	0.005333	> 100.00	-2873.350000	Y_R2 488.368
Mg (279.078 nm)	1.417290	ppm	0.006068	0.43	4984.070000	Y 377.433
Mn (257.610 nm)	0.002713	ppm	0.000007	0.24	758.472000	Y 377.433
Mo (202.032 nm)	0.002899	ppm	0.000201	6.93	49.967300	Y 377.433
Na (589.592 nm)	202.002000 o	ppm	0.252470	0.12	175775.000000	Y_R2 488.368
Na H (589.593 nm)	208.956926	ppm	0.218427	0.10	121586.418516	Y_R4
Ni (231.604 nm)	0.000283 u	ppm	0.000419	> 100.00	-8.919230	Y 377.433
P (213.618 nm)	0.009586	ppm	0.000249	2.59	18.200900	Y 242.219
Pb (220.353 nm)	0.000320	ppm	0.000401	> 100.00	9.050100	Y 242.219
S (181.972 nm)	3.487140	ppm	0.006344	0.18	1711.724522	Y 377.433
Sb (206.834 nm)	-0.000902 u	ppm	0.001028	> 100.00	0.579273	Y 377.433
Se (196.026 nm)	0.001770 u	ppm	0.002859	> 100.00	8.416890	Y 242.219
Si (288.158 nm)	0.277679	ppm	0.001383	0.50	2363.300000	Y 377.433
Sn (189.925 nm)	-0.002823 u	ppm	0.001029	36.44	4.450720	Y 377.433
Sr (421.552 nm)	0.018646	ppm	0.000049	0.26	3097.470615	Y_R 488.368
Th (288.505 nm)	0.003365	ppm	0.004451	> 100.00	25.099700	Y 377.433
Ti (336.122 nm)	0.000507	ppm	0.000045	8.82	-444.365000	Y 377.433
Tl (190.794 nm)	0.002067	ppm	0.002408	> 100.00	5.032020	Y 377.433
U (409.013 nm)	-0.004650 u	ppm	0.000648	13.93	14.812900	Y 377.433
V (292.401 nm)	-0.000127 u	ppm	0.000234	> 100.00	-101.129000	Y 377.433
Zn (206.200 nm)	0.006564	ppm	0.000278	4.23	33.083500	Y 377.433
Zr (343.823 nm)	0.000522	ppm	0.000008	1.51	-142.873000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.010148	18886.727105	0.004731	0.47
Y 377.433	1.020924	567201.446264	0.004912	0.48
Y_R 377.433	1.043930	50824.500000	0.002730	0.26
Y_R 488.368	1.031790	44125.600000	0.005190	0.50
Y_R2 488.368	1.019386	85140.015033	0.008410	0.83
Y_R4	1.020340	39228.800000	0.000487	0.05

Sample Name: 280-123337-D-1-Dsd@5

Date: 5/10/2019 10:47:47 PM

Rack:Tube: 2:23

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000414 u	ppm	0.000006	1.40	-199.222000	Y 377.433
Al (394.401 nm)	0.012799	ppm	0.000382	2.98	185.956000	Y 377.433
Al H (396.152 nm)	0.132879 u	ppm	0.005372	4.04	80.233600	Y_R 377.433
As (188.980 nm)	0.000525 u	ppm	0.001601	> 100.00	-0.991498	Y 242.219
B (249.678 nm)	0.006658	ppm	0.001102	16.55	62.853700	Y 242.219
Ba (493.408 nm)	0.000248	ppm	0.000190	76.75	1654.570000	Y_R 488.368
Be (234.861 nm)	-0.000049 u	ppm	0.000023	47.33	-6.038590	Y_R 488.368
Bi (223.061 nm)	0.000952	ppm	0.000499	52.42	-8.786780	Y 377.433
Ca (315.887 nm)	0.552496	ppm	0.006306	1.14	383.731405	Y_R 377.433
Cd (214.439 nm)	0.000008 u	ppm	0.000037	> 100.00	-6.459860	Y 377.433
Co (228.615 nm)	0.000341	ppm	0.000007	2.11	-14.857900	Y 242.219
Cr (205.560 nm)	0.000488	ppm	0.000153	31.28	-4.748240	Y 377.433
Cu (324.754 nm)	-0.000452 u	ppm	0.000033	7.24	489.320000	Y 377.433
Fe (238.204 nm)	0.005121	ppm	0.000473	9.24	16.972166	Y_R 377.433
Fe H (259.940 nm)	0.037156 u	ppm	0.000266	0.72	25.409400	Y_R 377.433
K (766.491 nm)	0.864593	ppm	0.038007	4.40	3090.950000	Y_R2 488.368
Li (670.783 nm)	0.003057	ppm	0.000373	12.20	-2830.410000	Y_R2 488.368
Mg (279.078 nm)	0.272548	ppm	0.005310	1.95	971.750000	Y 377.433
Mn (257.610 nm)	0.000599	ppm	0.000041	6.80	149.010000	Y 377.433
Mo (202.032 nm)	0.001180	ppm	0.000039	3.30	27.225800	Y 377.433
Na (589.592 nm)	38.555400	ppm	0.076079	0.20	33688.000000	Y_R2 488.368
Na H (589.593 nm)	39.321693 u	ppm	0.002920	0.01	23268.230072	Y_R4
Ni (231.604 nm)	0.000435	ppm	0.000100	22.96	-8.101820	Y 377.433
P (213.618 nm)	-0.001783 u	ppm	0.002327	> 100.00	0.776825	Y 242.219
Pb (220.353 nm)	-0.000387 u	ppm	0.000318	82.16	6.668170	Y 242.219
S (181.972 nm)	0.650773	ppm	0.012737	1.96	325.519313	Y 377.433
Sb (206.834 nm)	-0.001363 u	ppm	0.001278	93.79	-0.273967	Y 377.433
Se (196.026 nm)	0.004447	ppm	0.002475	55.66	12.703600	Y 242.219
Si (288.158 nm)	0.048350	ppm	0.000788	1.63	831.382000	Y 377.433
Sn (189.925 nm)	-0.004365 u	ppm	0.000332	7.61	1.913950	Y 377.433
Sr (421.552 nm)	0.002857	ppm	0.000098	3.41	561.837973	Y_R 488.368
Th (288.505 nm)	-0.003844 u	ppm	0.003466	90.16	12.540000	Y 377.433
Ti (336.122 nm)	0.000434	ppm	0.000046	10.66	-462.137000	Y 377.433
Tl (190.794 nm)	-0.000385 u	ppm	0.000106	27.41	-0.851731	Y 377.433
U (409.013 nm)	-0.005358 u	ppm	0.003055	57.02	12.867800	Y 377.433
V (292.401 nm)	-0.000346 u	ppm	0.000132	38.19	-112.877000	Y 377.433
Zn (206.200 nm)	0.001321	ppm	0.000680	51.46	9.125060	Y 377.433
Zr (343.823 nm)	0.000610	ppm	0.000242	39.63	-137.752000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.032026	19295.791725	0.000030	0.00
Y 377.433	1.041230	578482.751854	0.000726	0.07
Y_R 377.433	1.045010	50877.100000	0.001274	0.12
Y_R 488.368	1.031190	44100.000000	0.003658	0.35
Y_R2 488.368	1.031893	86184.603583	0.002795	0.27
Y_R4	1.028340	39536.500000	0.003967	0.39

Sample Name: 280-123337-D-1-E MS

Date: 5/10/2019 10:51:14 PM

Rack:Tube: 2:24

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001131	ppm	0.000012	1.09	-468.247000	Y 377.433
Al (394.401 nm)	9.946260 o	ppm	0.000660	0.01	125283.000000	Y 377.433
Al H (396.152 nm)	10.062100	ppm	0.010311	0.10	22929.200000	Y_R 377.433
As (188.980 nm)	1.987510	ppm	0.004039	0.20	3159.500000	Y 242.219
B (249.678 nm)	0.992770	ppm	0.002456	0.25	7611.530000	Y 242.219
Ba (493.408 nm)	1.972840	ppm	0.001954	0.10	208638.000000	Y_R 488.368
Be (234.861 nm)	0.966670	ppm	0.005102	0.53	102506.000000	Y_R 488.368
Bi (223.061 nm)	1.984700	ppm	0.001134	0.06	4355.410000	Y 377.433
Ca (315.887 nm)	52.210985	ppm	0.012728	0.02	43113.042768	Y_R 377.433
Cd (214.439 nm)	0.960462	ppm	0.000701	0.07	36794.100000	Y 377.433
Co (228.615 nm)	0.961552	ppm	0.000684	0.07	24088.600000	Y 242.219
Cr (205.560 nm)	0.963253	ppm	0.011461	1.19	6659.410000	Y 377.433
Cu (324.754 nm)	0.963696	ppm	0.000756	0.08	47858.000000	Y 377.433
Fe (238.204 nm)	9.882563 o	ppm	0.000055	0.00	24710.293895	Y_R 377.433
Fe H (259.940 nm)	9.875140	ppm	0.011018	0.11	14164.900000	Y_R 377.433
K (766.491 nm)	56.799400	ppm	0.171947	0.30	61922.100000	Y_R2 488.368
Li (670.783 nm)	1.007420	ppm	0.004348	0.43	15441.600000	Y_R2 488.368
Mg (279.078 nm)	48.931900	ppm	0.017260	0.04	171481.000000	Y 377.433
Mn (257.610 nm)	0.969547	ppm	0.000098	0.01	279416.000000	Y 377.433
Mo (202.032 nm)	0.987448	ppm	0.000990	0.10	13074.200000	Y 377.433
Na (589.592 nm)	256.102000 o	ppm	0.914866	0.36	223276.000000	Y_R2 488.368
Na H (589.593 nm)	262.775447	ppm	0.088205	0.03	152778.874032	Y_R4
Ni (231.604 nm)	0.949001	ppm	0.000133	0.01	5141.210000	Y 377.433
P (213.618 nm)	19.047900	ppm	0.001622	0.01	29148.700000	Y 242.219
Pb (220.353 nm)	0.964066	ppm	0.002187	0.23	3251.450000	Y 242.219
S (181.972 nm)	12.856743	ppm	0.029195	0.23	6296.170018	Y 377.433
Sb (206.834 nm)	-0.003858 u	ppm	0.000451	11.70	-10.317100	Y 377.433
Se (196.026 nm)	1.959200	ppm	0.004106	0.21	3142.460000	Y 242.219
Si (288.158 nm)	2.317580	ppm	0.004099	0.18	15989.800000	Y 377.433
Sn (189.925 nm)	1.954240	ppm	0.001830	0.09	3225.160000	Y 377.433
Sr (421.552 nm)	0.999161	ppm	0.000608	0.06	160563.922063	Y_R 488.368
Th (288.505 nm)	1.011200	ppm	0.003008	0.30	1699.380000	Y 377.433
Ti (336.122 nm)	0.994709	ppm	0.000268	0.03	130892.000000	Y 377.433
Tl (190.794 nm)	1.873850	ppm	0.004930	0.26	4572.850000	Y 377.433
U (409.013 nm)	2.016070	ppm	0.017130	0.85	6409.420000	Y 377.433
V (292.401 nm)	0.983188	ppm	0.000466	0.05	52726.300000	Y 377.433
Zn (206.200 nm)	0.482991	ppm	0.001962	0.41	2211.380000	Y 377.433
Zr (343.823 nm)	0.493282	ppm	0.000691	0.14	28769.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.977914	18284.050507	0.004619	0.47
Y 377.433	0.997225	554034.726551	0.003189	0.32
Y_R 377.433	1.016520	49490.200000	0.001518	0.15
Y_R 488.368	1.003480	42914.900000	0.001722	0.17
Y_R2 488.368	1.013573	84654.460493	0.001639	0.16
Y_R4	1.018300	39150.500000	0.008258	0.81

Sample Name: 280-123337-D-1-F MSD

Date: 5/10/2019 10:55:21 PM

Rack:Tube: 2:25

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000787	ppm	0.000153	19.42	-477.847000	Y 377.433
Al (394.401 nm)	9.763790 o	ppm	0.000899	0.01	122984.000000	Y 377.433
Al H (396.152 nm)	9.801870	ppm	0.012888	0.13	22330.600000	Y_R 377.433
As (188.980 nm)	1.961020	ppm	0.004453	0.23	3117.380000	Y 242.219
B (249.678 nm)	0.973948	ppm	0.001083	0.11	7467.330000	Y 242.219
Ba (493.408 nm)	1.909560	ppm	0.002376	0.12	201998.000000	Y_R 488.368
Be (234.861 nm)	0.941671	ppm	0.000815	0.09	99853.100000	Y_R 488.368
Bi (223.061 nm)	1.947220	ppm	0.004764	0.24	4272.970000	Y 377.433
Ca (315.887 nm)	52.535626	ppm	0.055041	0.10	43381.480215	Y_R 377.433
Cd (214.439 nm)	0.961638	ppm	0.000214	0.02	36839.100000	Y 377.433
Co (228.615 nm)	0.947377	ppm	0.000693	0.07	23733.000000	Y 242.219
Cr (205.560 nm)	0.955033	ppm	0.001472	0.15	6602.530000	Y 377.433
Cu (324.754 nm)	0.949782	ppm	0.001224	0.13	47172.900000	Y 377.433
Fe (238.204 nm)	9.899679 o	ppm	0.006576	0.07	24753.083407	Y_R 377.433
Fe H (259.940 nm)	9.863130	ppm	0.013867	0.14	14147.600000	Y_R 377.433
K (766.491 nm)	55.771500	ppm	0.094230	0.17	60841.000000	Y_R2 488.368
Li (670.783 nm)	0.982739	ppm	0.000665	0.07	14992.600000	Y_R2 488.368
Mg (279.078 nm)	49.144400	ppm	0.009682	0.02	172226.000000	Y 377.433
Mn (257.610 nm)	0.959755	ppm	0.000118	0.01	276594.000000	Y 377.433
Mo (202.032 nm)	0.977239	ppm	0.000080	0.01	12939.200000	Y 377.433
Na (589.592 nm)	244.711000 o	ppm	0.246859	0.10	213359.000000	Y_R2 488.368
Na H (589.593 nm)	247.995531	ppm	1.150458	0.46	144212.643159	Y_R4
Ni (231.604 nm)	0.946356	ppm	0.000543	0.06	5126.860000	Y 377.433
P (213.618 nm)	18.905600	ppm	0.006301	0.03	28933.000000	Y 242.219
Pb (220.353 nm)	0.952893	ppm	0.001600	0.17	3213.880000	Y 242.219
S (181.972 nm)	12.757271	ppm	0.038470	0.30	6247.540425	Y 377.433
Sb (206.834 nm)	-0.003358 u	ppm	0.001552	46.23	-9.278850	Y 377.433
Se (196.026 nm)	1.936790	ppm	0.007785	0.40	3106.550000	Y 242.219
Si (288.158 nm)	2.280660	ppm	0.002537	0.11	15743.200000	Y 377.433
Sn (189.925 nm)	1.946840	ppm	0.001914	0.10	3212.980000	Y 377.433
Sr (421.552 nm)	0.970518	ppm	0.001141	0.12	155964.025935	Y_R 488.368
Th (288.505 nm)	0.994115	ppm	0.005101	0.51	1670.630000	Y 377.433
Ti (336.122 nm)	0.978577	ppm	0.000474	0.05	128765.000000	Y 377.433
Tl (190.794 nm)	1.870090	ppm	0.000237	0.01	4563.710000	Y 377.433
U (409.013 nm)	1.974680	ppm	0.005038	0.26	6278.370000	Y 377.433
V (292.401 nm)	0.971554	ppm	0.000836	0.09	52099.600000	Y 377.433
Zn (206.200 nm)	0.487013	ppm	0.001062	0.22	2229.760000	Y 377.433
Zr (343.823 nm)	0.483402	ppm	0.000087	0.02	28189.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.009870	18881.529288	0.002776	0.27
Y 377.433	1.019240	566265.874450	0.002814	0.28
Y_R 377.433	1.054540	51341.000000	0.001477	0.14
Y_R 488.368	1.043400	44622.300000	0.002122	0.20
Y_R2 488.368	1.020716	85251.065033	0.004719	0.46
Y_R4	1.042230	40070.300000	0.012453	1.19

Sample Name: 280-123353-B-1-A

Date: 5/10/2019 10:58:59 PM

Rack:Tube: 2:26

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000126 u	ppm	0.000236	> 100.00	-195.549000	Y 377.433
Al (394.401 nm)	7.814670 o	ppm	0.002289	0.03	98250.000000	Y 377.433
Al H (396.152 nm)	8.252180	ppm	0.005142	0.06	18412.300000	Y_R 377.433
As (188.980 nm)	0.006403	ppm	0.000331	5.17	7.641170	Y 242.219
B (249.678 nm)	0.037005	ppm	0.000357	0.97	290.907000	Y 242.219
Ba (493.408 nm)	0.071220	ppm	0.000137	0.19	9107.350000	Y_R 488.368
Be (234.861 nm)	0.000645	ppm	0.000057	8.84	2.710460	Y_R 488.368
Bi (223.061 nm)	0.005222	ppm	0.002334	44.70	1.852480	Y 377.433
Ca (315.887 nm)	23.701391	ppm	0.019839	0.08	19532.261991	Y_R 377.433
Cd (214.439 nm)	0.000224	ppm	0.000126	56.04	4.828490	Y 377.433
Co (228.615 nm)	0.003062	ppm	0.000103	3.37	56.270800	Y 242.219
Cr (205.560 nm)	0.008936	ppm	0.000194	2.17	53.561200	Y 377.433
Cu (324.754 nm)	0.005164	ppm	0.000041	0.79	750.819000	Y 377.433
Fe (238.204 nm)	7.287713 o	ppm	0.003260	0.04	18223.243844	Y_R 377.433
Fe H (259.940 nm)	7.280960	ppm	0.019856	0.27	10436.500000	Y_R 377.433
K (766.491 nm)	3.901510	ppm	0.049923	1.28	6285.120000	Y_R2 488.368
Li (670.783 nm)	0.015543	ppm	0.001436	9.24	-2603.250000	Y_R2 488.368
Mg (279.078 nm)	3.935000	ppm	0.003178	0.08	13798.600000	Y 377.433
Mn (257.610 nm)	0.117670	ppm	0.000048	0.04	33891.000000	Y 377.433
Mo (202.032 nm)	0.001211	ppm	0.000133	11.01	27.630800	Y 377.433
Na (589.592 nm)	4.434390	ppm	0.015315	0.35	4043.330000	Y_R2 488.368
Na H (589.593 nm)	5.316102 u	ppm	0.007156	0.13	3559.069127	Y_R4
Ni (231.604 nm)	0.008161	ppm	0.001565	19.17	33.824500	Y 377.433
P (213.618 nm)	0.185815	ppm	0.003377	1.82	289.191000	Y 242.219
Pb (220.353 nm)	0.003464	ppm	0.001436	41.45	18.159600	Y 242.219
S (181.972 nm)	7.790168	ppm	0.009251	0.12	3815.961203	Y 377.433
Sb (206.834 nm)	-0.001191 u	ppm	0.001993	> 100.00	0.278370	Y 377.433
Se (196.026 nm)	0.001418	ppm	0.001644	> 100.00	6.062900	Y 242.219
Si (288.158 nm)	18.510600	ppm	0.057833	0.31	124159.000000	Y 377.433
Sn (189.925 nm)	-0.003542 u	ppm	0.000181	5.10	3.267700	Y 377.433
Sr (421.552 nm)	0.147350	ppm	0.000638	0.43	23767.640454	Y_R 488.368
Th (288.505 nm)	-0.006916 u	ppm	0.001913	27.67	6.161560	Y 377.433
Ti (336.122 nm)	0.066767	ppm	0.000140	0.21	8367.620000	Y 377.433
Tl (190.794 nm)	0.002044	ppm	0.001208	59.08	3.110640	Y 377.433
U (409.013 nm)	0.005255	ppm	0.001690	32.16	48.170200	Y 377.433
V (292.401 nm)	0.019965	ppm	0.000029	0.14	984.417000	Y 377.433
Zn (206.200 nm)	0.021939	ppm	0.000298	1.36	104.347000	Y 377.433
Zr (343.823 nm)	0.007227	ppm	0.000147	2.03	250.503000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.039961	19444.147174	0.000399	0.04
Y 377.433	1.049546	583102.927547	0.001253	0.12
Y_R 377.433	1.053830	51306.700000	0.000972	0.09
Y_R 488.368	1.041370	44535.400000	0.001990	0.19
Y_R2 488.368	1.052759	87927.352700	0.002736	0.26
Y_R4	1.051340	40420.700000	0.005105	0.49

Sample Name: 280-123353-B-2-A

Date: 5/10/2019 11:02:36 PM

Rack:Tube: 2:27

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000167 u	ppm	0.000193	> 100.00	-215.173000	Y 377.433
Al (394.401 nm)	25.790600 o	ppm	0.015108	0.06	324192.000000	Y 377.433
Al H (396.152 nm)	26.386000	ppm	0.012886	0.05	59362.600000	Y_R 377.433
As (188.980 nm)	0.017186	ppm	0.001699	9.89	23.126000	Y 242.219
B (249.678 nm)	0.068941	ppm	0.000158	0.23	524.316000	Y 242.219
Ba (493.408 nm)	0.154396	ppm	0.000019	0.01	17849.800000	Y_R 488.368
Be (234.861 nm)	0.002143	ppm	0.000025	1.17	-2.839030	Y_R 488.368
Bi (223.061 nm)	0.006638	ppm	0.001346	20.28	8.119610	Y 377.433
Ca (315.887 nm)	97.976745	ppm	0.002967	0.00	80970.031252	Y_R 377.433
Cd (214.439 nm)	0.000520	ppm	0.000038	7.24	23.800700	Y 377.433
Co (228.615 nm)	0.007725	ppm	0.000052	0.68	177.858000	Y 242.219
Cr (205.560 nm)	0.030701	ppm	0.000156	0.51	203.811000	Y 377.433
Cu (324.754 nm)	0.018459	ppm	0.000137	0.74	1362.490000	Y 377.433
Fe (238.204 nm)	25.748126 o	ppm	0.010713	0.04	64373.745397	Y_R 377.433
Fe H (259.940 nm)	25.701400	ppm	0.034788	0.14	36910.900000	Y_R 377.433
K (766.491 nm)	5.288040	ppm	0.058014	1.10	7743.440000	Y_R2 488.368
Li (670.783 nm)	0.032238	ppm	0.000606	1.88	-2299.530000	Y_R2 488.368
Mg (279.078 nm)	9.440730	ppm	0.016093	0.17	33070.800000	Y 377.433
Mn (257.610 nm)	0.200657	ppm	0.000240	0.12	57809.100000	Y 377.433
Mo (202.032 nm)	0.009107	ppm	0.000474	5.21	132.094000	Y 377.433
Na (589.592 nm)	16.754700	ppm	0.014798	0.09	14773.500000	Y_R2 488.368
Na H (589.593 nm)	16.722078 u	ppm	0.073038	0.44	10169.811801	Y_R4
Ni (231.604 nm)	0.027782	ppm	0.000711	2.56	140.290000	Y 377.433
P (213.618 nm)	0.356074	ppm	0.000506	0.14	548.939000	Y 242.219
Pb (220.353 nm)	0.010859	ppm	0.000485	4.47	39.735200	Y 242.219
S (181.972 nm)	46.620702	ppm	0.154367	0.33	22795.732084	Y 377.433
Sb (206.834 nm)	-0.003376 u	ppm	0.000912	27.03	-2.917230	Y 377.433
Se (196.026 nm)	0.003214	ppm	0.000725	22.56	4.095010	Y 242.219
Si (288.158 nm)	41.418900	ppm	0.084361	0.20	277187.000000	Y 377.433
Sn (189.925 nm)	-0.002699 u	ppm	0.000773	28.64	4.655840	Y 377.433
Sr (421.552 nm)	0.496990	ppm	0.000741	0.15	79920.699134	Y_R 488.368
Th (288.505 nm)	-0.001121 u	ppm	0.001426	> 100.00	9.273640	Y 377.433
Ti (336.122 nm)	0.170601	ppm	0.000406	0.24	22319.900000	Y 377.433
Tl (190.794 nm)	0.004658	ppm	0.001683	36.12	4.014620	Y 377.433
U (409.013 nm)	0.012935	ppm	0.002922	22.59	75.179900	Y 377.433
V (292.401 nm)	0.067782	ppm	0.000242	0.36	3567.450000	Y 377.433
Zn (206.200 nm)	0.067818	ppm	0.000358	0.53	316.547000	Y 377.433
Zr (343.823 nm)	0.017578	ppm	0.000102	0.58	857.842000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.019683	19065.008619	0.002126	0.21
Y 377.433	1.035012	575028.611166	0.001747	0.17
Y_R 377.433	1.040060	50635.900000	0.002122	0.20
Y_R 488.368	1.027410	43938.600000	0.004312	0.42
Y_R2 488.368	1.029745	86005.208320	0.002050	0.20
Y_R4	1.031220	39647.300000	0.000094	0.01

Sample Name: CCVH-5690583

Date: 5/10/2019 11:06:17 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000282 u	ppm	0.000424	> 100.00	-311.817000	Y 377.433
Al (394.401 nm)	48.416200 o	ppm	0.020044	0.04	608449.000000	Y 377.433
Al H (396.152 nm)	48.681100	ppm	0.044463	0.09	109361.000000	Y_R 377.433
As (188.980 nm)	0.005011	ppm	0.001241	24.76	1.740230	Y 242.219
B (249.678 nm)	0.005948	ppm	0.000281	4.73	28.435400	Y 242.219
Ba (493.408 nm)	0.001856	ppm	0.000180	9.68	1862.530000	Y_R 488.368
Be (234.861 nm)	0.002424	ppm	0.000148	6.09	-167.391000	Y_R 488.368
Bi (223.061 nm)	0.944995	ppm	0.006922	0.73	2075.330000	Y 377.433
Ca (315.887 nm)	0.026330	ppm	0.004597	17.46	-38.935601	Y_R 377.433
Cd (214.439 nm)	0.000820	ppm	0.000131	16.00	44.300100	Y 377.433
Co (228.615 nm)	0.004225	ppm	0.000105	2.49	82.414000	Y 242.219
Cr (205.560 nm)	0.001563	ppm	0.000196	12.53	1.360860	Y 377.433
Cu (324.754 nm)	0.005811	ppm	0.000162	2.78	1195.320000	Y 377.433
Fe (238.204 nm)	47.617185 o	ppm	0.059045	0.12	119045.760857	Y_R 377.433
Fe H (259.940 nm)	47.436600	ppm	0.023022	0.05	68149.600000	Y_R 377.433
K (766.491 nm)	0.179781	ppm	0.064190	35.70	2370.680000	Y_R2 488.368
Li (670.783 nm)	0.008038	ppm	0.003375	41.98	-2739.780000	Y_R2 488.368
Mg (279.078 nm)	0.013580	ppm	0.002191	16.14	-164.784000	Y 377.433
Mn (257.610 nm)	0.001351	ppm	0.000007	0.48	365.972000	Y 377.433
Mo (202.032 nm)	0.000379	ppm	0.000139	36.64	16.625100	Y 377.433
Na (589.592 nm)	239.572000 o	ppm	0.060771	0.03	208433.000000	Y_R2 488.368
Na H (589.593 nm)	244.281268	ppm	0.998500	0.41	142059.909059	Y_R4
Ni (231.604 nm)	0.001537	ppm	0.000192	12.51	-2.115250	Y 377.433
P (213.618 nm)	-0.016741 u	ppm	0.002792	16.68	-29.176200	Y 242.219
Pb (220.353 nm)	0.006676	ppm	0.001316	19.72	46.373500	Y 242.219
S (181.972 nm)	4.732431	ppm	0.001977	0.04	2320.127240	Y 377.433
Sb (206.834 nm)	0.000575	ppm	0.000343	59.57	6.616200	Y 377.433
Se (196.026 nm)	-0.001237 u	ppm	0.001687	> 100.00	-9.187780	Y 242.219
Si (288.158 nm)	0.108382	ppm	0.010838	10.00	1232.400000	Y 377.433
Sn (189.925 nm)	-0.002696 u	ppm	0.001213	45.01	4.659730	Y 377.433
Sr (421.552 nm)	0.000758	ppm	0.000090	11.85	232.275722	Y_R 488.368
Th (288.505 nm)	4.857900	ppm	0.002684	0.06	8583.040000	Y 377.433
Ti (336.122 nm)	0.001968	ppm	0.000149	7.55	-261.236000	Y 377.433
Tl (190.794 nm)	-0.000954 u	ppm	0.000077	8.05	-6.942030	Y 377.433
U (409.013 nm)	9.721130	ppm	0.005651	0.06	31116.500000	Y 377.433
V (292.401 nm)	-0.000821 u	ppm	0.000238	28.98	-138.287000	Y 377.433
Zn (206.200 nm)	0.002159	ppm	0.000615	28.47	19.569500	Y 377.433
Zr (343.823 nm)	-0.002981 u	ppm	0.000229	7.68	-348.406000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.006011	18809.383724	0.002672	0.27
Y 377.433	1.020065	566724.269464	0.003574	0.35
Y_R 377.433	1.041940	50727.700000	0.002557	0.25
Y_R 488.368	1.027320	43934.800000	0.009719	0.95
Y_R2 488.368	1.013063	84611.901887	0.001142	0.11
Y_R4	1.047640	40278.500000	0.006104	0.58

Sample Name: CCV-5690581

Date: 5/10/2019 11:09:59 PM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.478642	ppm	0.000312	0.07	17308.500000	Y 377.433
Al (394.401 nm)	0.490391	ppm	0.000462	0.09	6311.460000	Y 377.433
Al H (396.152 nm)	0.539258 u	ppm	0.010493	1.95	1239.960000	Y_R 377.433
As (188.980 nm)	0.956085	ppm	0.004391	0.46	1519.270000	Y 242.219
B (249.678 nm)	0.470856	ppm	0.000871	0.18	3617.650000	Y 242.219
Ba (493.408 nm)	0.481915	ppm	0.001340	0.28	52195.700000	Y_R 488.368
Be (234.861 nm)	0.474259	ppm	0.000822	0.17	50312.200000	Y_R 488.368
Bi (223.061 nm)	0.005367	ppm	0.001784	33.24	1.434000	Y 377.433
Ca (315.887 nm)	4.868456	ppm	0.001527	0.03	3953.593096	Y_R 377.433
Cd (214.439 nm)	0.482891	ppm	0.000153	0.03	18494.500000	Y 377.433
Co (228.615 nm)	0.483939	ppm	0.000363	0.07	12111.100000	Y 242.219
Cr (205.560 nm)	0.480550	ppm	0.005122	1.07	3318.350000	Y 377.433
Cu (324.754 nm)	0.480310	ppm	0.000810	0.17	24085.000000	Y 377.433
Fe (238.204 nm)	2.400580	ppm	0.003394	0.14	6005.551348	Y_R 377.433
Fe H (259.940 nm)	2.427250 u	ppm	0.007738	0.32	3460.530000	Y_R 377.433
K (766.491 nm)	48.322000	ppm	0.279190	0.58	53005.700000	Y_R2 488.368
Li (670.783 nm)	0.978890	ppm	0.004941	0.50	14922.500000	Y_R2 488.368
Mg (279.078 nm)	18.936800	ppm	0.014308	0.08	66388.300000	Y 377.433
Mn (257.610 nm)	0.479356	ppm	0.000084	0.02	138135.000000	Y 377.433
Mo (202.032 nm)	0.483337	ppm	0.000406	0.08	6405.530000	Y 377.433
Na (589.592 nm)	24.912300	ppm	0.116802	0.47	21943.200000	Y_R2 488.368
Na H (589.593 nm)	25.409626 u	ppm	0.014825	0.06	15204.992272	Y_R4
Ni (231.604 nm)	0.482341	ppm	0.000333	0.07	2607.950000	Y 377.433
P (213.618 nm)	0.933286	ppm	0.001932	0.21	1306.500000	Y 242.219
Pb (220.353 nm)	0.964825	ppm	0.004511	0.47	3253.710000	Y 242.219
S (181.972 nm)	0.002553 u	ppm	0.006689	> 100.00	10.553262	Y 377.433
Sb (206.834 nm)	0.963531	ppm	0.000117	0.01	1794.750000	Y 377.433
Se (196.026 nm)	0.955596	ppm	0.004462	0.47	1536.240000	Y 242.219
Si (288.158 nm)	4.760420	ppm	0.001900	0.04	32308.000000	Y 377.433
Sn (189.925 nm)	0.969191	ppm	0.002160	0.22	1604.080000	Y 377.433
Sr (421.552 nm)	0.482211	ppm	0.001074	0.22	77543.661075	Y_R 488.368
Th (288.505 nm)	0.006975	ppm	0.000697	9.99	-17.692000	Y 377.433
Ti (336.122 nm)	0.481677	ppm	0.000582	0.12	63045.200000	Y 377.433
Tl (190.794 nm)	0.972205	ppm	0.002911	0.30	2373.960000	Y 377.433
U (409.013 nm)	0.006301	ppm	0.005315	84.35	-8.899100	Y 377.433
V (292.401 nm)	0.479300	ppm	0.000740	0.15	25651.700000	Y 377.433
Zn (206.200 nm)	0.481851	ppm	0.002269	0.47	2205.130000	Y 377.433
Zr (343.823 nm)	0.483174	ppm	0.000069	0.01	28175.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.021782	19104.256212	0.002222	0.22
Y 377.433	1.031514	573085.000333	0.001100	0.11
Y_R 377.433	1.038280	50549.400000	0.002288	0.22
Y_R 488.368	1.027790	43954.800000	0.000815	0.08
Y_R2 488.368	1.017170	84954.950525	0.004169	0.41
Y_R4	1.034810	39785.400000	0.001963	0.19

Sample Name: CCB

Date: 5/10/2019 11:13:32 PM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000360 u	ppm	0.000138	38.39	-197.450000	Y 377.433
Al (394.401 nm)	0.002827	ppm	0.000929	32.85	62.343700	Y 377.433
Al H (396.152 nm)	0.114761 Zu	ppm	0.001772	1.54	38.253800 Z	Y_R 377.433
As (188.980 nm)	0.001051	ppm	0.000368	35.06	-0.153644	Y 242.219
B (249.678 nm)	-0.000064 u	ppm	0.000920	> 100.00	11.357700	Y 242.219
Ba (493.408 nm)	-0.001138 u	ppm	0.000122	10.69	1509.170000	Y_R 488.368
Be (234.861 nm)	-0.000039 u	ppm	0.000002	5.84	-4.977370	Y_R 488.368
Bi (223.061 nm)	0.001645	ppm	0.001121	68.18	-7.267000	Y 377.433
Ca (315.887 nm)	0.013026	ppm	0.001009	7.74	-62.463971	Y_R 377.433
Cd (214.439 nm)	0.000008	ppm	0.000001	17.10	-6.469690	Y 377.433
Co (228.615 nm)	0.000117 u	ppm	0.000352	> 100.00	-20.478700	Y 242.219
Cr (205.560 nm)	0.000425	ppm	0.000283	66.58	-5.174960	Y 377.433
Cu (324.754 nm)	-0.000619 u	ppm	0.000232	37.43	480.323000	Y 377.433
Fe (238.204 nm)	-0.001039 u	ppm	0.000424	40.84	1.573789	Y_R 377.433
Fe H (259.940 nm)	0.028049 u	ppm	0.001399	4.99	12.320400	Y_R 377.433
K (766.491 nm)	-0.288205 u	ppm	0.048435	16.81	1878.460000	Y_R2 488.368
Li (670.783 nm)	0.004996	ppm	0.000397	7.94	-2795.130000	Y_R2 488.368
Mg (279.078 nm)	0.001845	ppm	0.000907	49.16	22.664200	Y 377.433
Mn (257.610 nm)	0.000089	ppm	0.000012	13.53	2.227650	Y 377.433
Mo (202.032 nm)	-0.000029 u	ppm	0.000027	94.09	11.234700	Y 377.433
Na (589.592 nm)	0.087453	ppm	0.028280	32.34	247.091000	Y_R2 488.368
Na H (589.593 nm)	0.411554 u	ppm	0.002884	0.70	716.461859	Y_R4
Ni (231.604 nm)	-0.000028 u	ppm	0.000655	> 100.00	-10.609100	Y 377.433
P (213.618 nm)	-0.003274 u	ppm	0.000843	25.74	-1.374820	Y 242.219
Pb (220.353 nm)	-0.001225 u	ppm	0.000182	14.82	3.888150	Y 242.219
S (181.972 nm)	-0.000377 u	ppm	0.001153	> 100.00	7.290098	Y 377.433
Sb (206.834 nm)	-0.000771 u	ppm	0.000193	25.00	0.846305	Y 377.433
Se (196.026 nm)	0.001397	ppm	0.001034	73.99	7.820270	Y 242.219
Si (288.158 nm)	0.004138	ppm	0.001817	43.91	536.048000	Y 377.433
Sn (189.925 nm)	-0.003127 u	ppm	0.001381	44.16	3.951100	Y 377.433
Sr (421.552 nm)	-0.000142 u	ppm	0.000074	51.95	80.248112	Y_R 488.368
Th (288.505 nm)	-0.007993 Zu	ppm	0.001766	22.10	5.345140 Z	Y 377.433
Ti (336.122 nm)	0.000487	ppm	0.000052	10.66	-456.739000	Y 377.433
Tl (190.794 nm)	0.001849	ppm	0.000257	13.91	4.640790	Y 377.433
U (409.013 nm)	0.001590 u	ppm	0.003776	> 100.00	35.107800	Y 377.433
V (292.401 nm)	-0.000286 u	ppm	0.000305	> 100.00	-110.705000	Y 377.433
Zn (206.200 nm)	-0.000319 u	ppm	0.000308	96.45	1.630050	Y 377.433
Zr (343.823 nm)	0.000550	ppm	0.000020	3.58	-141.235000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.053826	19703.389417	0.003053	0.29
Y 377.433	1.059803	588801.742943	0.003880	0.37
Y_R 377.433	1.059680	51591.300000	0.002774	0.26
Y_R 488.368	1.047520	44798.300000	0.000723	0.07
Y_R2 488.368	1.044399	87229.100424	0.001801	0.17
Y_R4	1.047250	40263.300000	0.006313	0.60

Sample Name: CCVL-5695588

Date: 5/10/2019 11:16:45 PM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009446	ppm	0.000271	2.86	160.419000	Y 377.433
Al (394.401 nm)	0.102046	ppm	0.001293	1.27	1314.360000	Y 377.433
Al H (396.152 nm)	0.211554 u	ppm	0.001023	0.48	261.505000	Y_R 377.433
As (188.980 nm)	0.016513	ppm	0.000176	1.07	24.439200	Y 242.219
B (249.678 nm)	0.093777	ppm	0.001992	2.12	730.224000	Y 242.219
Ba (493.408 nm)	0.009349	ppm	0.000033	0.35	2609.620000	Y_R 488.368
Be (234.861 nm)	0.000983	ppm	0.000008	0.78	102.691000	Y_R 488.368
Bi (223.061 nm)	0.090776	ppm	0.002660	2.93	188.761000	Y 377.433
Ca (315.887 nm)	0.202304	ppm	0.001639	0.81	94.111434	Y_R 377.433
Cd (214.439 nm)	0.005098	ppm	0.000104	2.05	188.576000	Y 377.433
Co (228.615 nm)	0.010479	ppm	0.000010	0.09	239.321000	Y 242.219
Cr (205.560 nm)	0.009810	ppm	0.000229	2.33	59.685400	Y 377.433
Cu (324.754 nm)	0.014520	ppm	0.000240	1.65	1223.550000	Y 377.433
Fe (238.204 nm)	0.099411	ppm	0.001730	1.74	252.696330	Y_R 377.433
Fe H (259.940 nm)	0.129725 u	ppm	0.003610	2.78	158.454000	Y_R 377.433
K (766.491 nm)	2.899120	ppm	0.157357	5.43	5230.820000	Y_R2 488.368
Li (670.783 nm)	0.020595	ppm	0.004700	22.82	-2511.350000	Y_R2 488.368
Mg (279.078 nm)	0.195340	ppm	0.001090	0.56	699.890000	Y 377.433
Mn (257.610 nm)	0.010187	ppm	0.000009	0.09	2912.630000	Y 377.433
Mo (202.032 nm)	0.019343	ppm	0.000294	1.52	267.493000	Y 377.433
Na (589.592 nm)	1.105700	ppm	0.027897	2.52	1134.790000	Y_R2 488.368
Na H (589.593 nm)	1.163011 u	ppm	0.009954	0.86	1151.996204	Y_R4
Ni (231.604 nm)	0.041426	ppm	0.000471	1.14	214.342000	Y 377.433
P (213.618 nm)	2.647670	ppm	0.025750	0.97	4089.490000	Y 242.219
Pb (220.353 nm)	0.008396	ppm	0.000874	10.41	36.314500	Y 242.219
S (181.972 nm)	0.086701	ppm	0.000332	0.38	49.883219	Y 377.433
Sb (206.834 nm)	0.015575	ppm	0.000799	5.13	31.135100	Y 377.433
Se (196.026 nm)	0.020432	ppm	0.004504	22.04	38.298200	Y 242.219
Si (288.158 nm)	0.496252	ppm	0.005402	1.09	3823.370000	Y 377.433
Sn (189.925 nm)	0.094760	ppm	0.001206	1.27	165.042000	Y 377.433
Sr (421.552 nm)	0.008737	ppm	0.000094	1.08	1506.198591	Y_R 488.368
Th (288.505 nm)	0.010266 Q	ppm	0.006385	62.19	36.780700 Q	Y 377.433
Ti (336.122 nm)	0.010203	ppm	0.000159	1.55	825.837000	Y 377.433
Tl (190.794 nm)	0.015679	ppm	0.001405	8.96	38.334700	Y 377.433
U (409.013 nm)	0.050246	ppm	0.006093	12.13	189.399000	Y 377.433
V (292.401 nm)	0.009476	ppm	0.000228	2.41	412.145000	Y 377.433
Zn (206.200 nm)	0.021118	ppm	0.000479	2.27	99.595500	Y 377.433
Zr (343.823 nm)	0.010284 Q	ppm	0.000159	1.54	429.851000 Q	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.060561	19829.312102	0.001412	0.13
Y 377.433	1.066695	592630.688305	0.001034	0.10
Y_R 377.433	1.066390	51917.700000	0.001252	0.12
Y_R 488.368	1.039650	44461.900000	0.008761	0.84
Y_R2 488.368	1.045300	87304.380935	0.002976	0.28
Y_R4	1.030760	39629.600000	0.007847	0.76

Sample Name: MB 280-457066/1-A

Date: 5/10/2019 11:20:13 PM

Rack:Tube: 2:28

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000406 u	ppm	0.000053	13.03	-199.392000	Y 377.433
Al (394.401 nm)	0.003404	ppm	0.001462	42.94	70.766200	Y 377.433
Al H (396.152 nm)	0.123324 u	ppm	0.001969	1.60	57.486400	Y_R 377.433
As (188.980 nm)	0.001152 u	ppm	0.003524	> 100.00	0.006885	Y 242.219
B (249.678 nm)	0.000678	ppm	0.000279	41.13	17.028700	Y 242.219
Ba (493.408 nm)	-0.001144 u	ppm	0.000665	58.17	1508.570000	Y_R 488.368
Be (234.861 nm)	-0.000061 u	ppm	0.000039	64.04	-7.509450	Y_R 488.368
Bi (223.061 nm)	0.003696	ppm	0.000076	2.06	-2.752690	Y 377.433
Ca (315.887 nm)	0.012394	ppm	0.008537	68.89	-62.989453	Y_R 377.433
Cd (214.439 nm)	0.000077 u	ppm	0.000157	> 100.00	-3.814900	Y 377.433
Co (228.615 nm)	0.000241	ppm	0.000090	37.35	-17.370300	Y 242.219
Cr (205.560 nm)	0.000617	ppm	0.000421	68.31	-3.848740	Y 377.433
Cu (324.754 nm)	-0.000701 u	ppm	0.000385	54.99	475.842000	Y 377.433
Fe (238.204 nm)	0.021929	ppm	0.000466	2.13	58.992794	Y_R 377.433
Fe H (259.940 nm)	0.050061 u	ppm	0.004565	9.12	43.957500	Y_R 377.433
K (766.491 nm)	-0.217543 u	ppm	0.104282	47.94	1952.780000	Y_R2 488.368
Li (670.783 nm)	0.006646	ppm	0.003954	59.50	-2765.110000	Y_R2 488.368
Mg (279.078 nm)	0.002841	ppm	0.003595	> 100.00	25.955000	Y 377.433
Mn (257.610 nm)	0.000435	ppm	0.000008	1.76	101.798000	Y 377.433
Mo (202.032 nm)	0.000177	ppm	0.000073	41.12	13.955700	Y 377.433
Na (589.592 nm)	0.042296	ppm	0.037683	89.09	207.825000	Y_R2 488.368
Na H (589.593 nm)	0.099575 u	ppm	0.005295	5.32	535.643751	Y_R4
Ni (231.604 nm)	-0.000151 u	ppm	0.000366	> 100.00	-11.279300	Y 377.433
P (213.618 nm)	-0.007147 u	ppm	0.000612	8.56	-7.306830	Y 242.219
Pb (220.353 nm)	0.000070 u	ppm	0.001800	> 100.00	8.275210	Y 242.219
S (181.972 nm)	0.005037 u	ppm	0.007872	> 100.00	9.938187	Y 377.433
Sb (206.834 nm)	0.000270	ppm	0.000108	39.98	2.783070	Y 377.433
Se (196.026 nm)	0.004653	ppm	0.001457	31.32	13.030100	Y 242.219
Si (288.158 nm)	0.007381	ppm	0.001288	17.45	557.710000	Y 377.433
Sn (189.925 nm)	-0.003985 u	ppm	0.000710	17.80	2.538180	Y 377.433
Sr (421.552 nm)	-0.000089 u	ppm	0.000040	44.51	88.683268	Y_R 488.368
Th (288.505 nm)	-0.005338 u	ppm	0.007400	> 100.00	10.019400	Y 377.433
Ti (336.122 nm)	0.000559	ppm	0.000081	14.50	-447.149000	Y 377.433
Tl (190.794 nm)	-0.000222 u	ppm	0.000179	80.39	-0.432289	Y 377.433
U (409.013 nm)	0.004015	ppm	0.003438	85.63	42.863700	Y 377.433
V (292.401 nm)	-0.000437 u	ppm	0.000162	37.13	-119.264000	Y 377.433
Zn (206.200 nm)	0.000911	ppm	0.000079	8.66	7.253620	Y 377.433
Zr (343.823 nm)	0.000563	ppm	0.000027	4.84	-140.476000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.043228	19505.229376	0.000320	0.03
Y 377.433	1.051026	583925.412840	0.000379	0.04
Y_R 377.433	1.070040	52095.600000	0.003056	0.29
Y_R 488.368	1.051150	44953.600000	0.014970	1.42
Y_R2 488.368	1.051067	87786.031781	0.000203	0.02
Y_R4	1.049450	40348.100000	0.006675	0.64

Sample Name: LCS 280-457066/2-A

Date: 5/10/2019 11:23:31 PM

Rack:Tube: 2:29

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001202	ppm	0.000066	5.46	-461.480000	Y 377.433
Al (394.401 nm)	9.913040 o	ppm	0.005983	0.06	124872.000000	Y 377.433
Al H (396.152 nm)	10.114200	ppm	0.001937	0.02	23035.000000	Y_R 377.433
As (188.980 nm)	1.950320	ppm	0.002854	0.15	3100.340000	Y 242.219
B (249.678 nm)	0.958904	ppm	0.002139	0.22	7351.940000	Y 242.219
Ba (493.408 nm)	1.957880	ppm	0.005238	0.27	207068.000000	Y_R 488.368
Be (234.861 nm)	0.954754	ppm	0.005196	0.54	101240.000000	Y_R 488.368
Bi (223.061 nm)	1.980270	ppm	0.000138	0.01	4345.690000	Y 377.433
Ca (315.887 nm)	49.666024	ppm	0.006816	0.01	41008.116348	Y_R 377.433
Cd (214.439 nm)	0.952946	ppm	0.001790	0.19	36506.200000	Y 377.433
Co (228.615 nm)	0.940428	ppm	0.000773	0.08	23559.300000	Y 242.219
Cr (205.560 nm)	0.956371	ppm	0.004758	0.50	6611.830000	Y 377.433
Cu (324.754 nm)	0.941667	ppm	0.004421	0.47	46772.100000	Y 377.433
Fe (238.204 nm)	10.105795 o	ppm	0.024253	0.24	25268.366889	Y_R 377.433
Fe H (259.940 nm)	10.093600	ppm	0.006440	0.06	14478.900000	Y_R 377.433
K (766.491 nm)	50.009400	ppm	0.110396	0.22	54780.500000	Y_R2 488.368
Li (670.783 nm)	0.992058	ppm	0.000414	0.04	15162.100000	Y_R2 488.368
Mg (279.078 nm)	47.941600	ppm	0.046663	0.10	168008.000000	Y 377.433
Mn (257.610 nm)	0.962591	ppm	0.000393	0.04	277411.000000	Y 377.433
Mo (202.032 nm)	0.976200	ppm	0.002668	0.27	12925.500000	Y 377.433
Na (589.592 nm)	50.981300	ppm	0.042568	0.08	44959.300000	Y_R2 488.368
Na H (589.593 nm)	48.405394 u	ppm	0.106145	0.22	28533.014894	Y_R4
Ni (231.604 nm)	0.931504	ppm	0.000406	0.04	5046.290000	Y 377.433
P (213.618 nm)	18.904600	ppm	0.041305	0.22	28934.900000	Y 242.219
Pb (220.353 nm)	0.964147	ppm	0.000653	0.07	3251.990000	Y 242.219
S (181.972 nm)	9.229456	ppm	0.026701	0.29	4523.424920	Y 377.433
Sb (206.834 nm)	-0.002607 u	ppm	0.001155	44.32	-7.852340	Y 377.433
Se (196.026 nm)	1.926980	ppm	0.010495	0.54	3090.770000	Y 242.219
Si (288.158 nm)	1.997120	ppm	0.005817	0.29	13849.200000	Y 377.433
Sn (189.925 nm)	1.929020	ppm	0.002512	0.13	3183.660000	Y 377.433
Sr (421.552 nm)	0.974470	ppm	0.001468	0.15	156598.851500	Y_R 488.368
Th (288.505 nm)	1.008200	ppm	0.000363	0.04	1696.070000	Y 377.433
Ti (336.122 nm)	0.983821	ppm	0.001602	0.16	129447.000000	Y 377.433
Tl (190.794 nm)	1.898390	ppm	0.001801	0.09	4632.940000	Y 377.433
U (409.013 nm)	2.029390	ppm	0.007525	0.37	6452.690000	Y 377.433
V (292.401 nm)	0.971513	ppm	0.001417	0.15	52092.200000	Y 377.433
Zn (206.200 nm)	0.479523	ppm	0.001716	0.36	2195.560000	Y 377.433
Zr (343.823 nm)	0.491327	ppm	0.000407	0.08	28654.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.006588	18820.166621	0.001054	0.10
Y 377.433	1.026516	570308.316987	0.001128	0.11
Y_R 377.433	1.041650	50713.300000	0.004459	0.43
Y_R 488.368	1.028430	43981.900000	0.006212	0.60
Y_R2 488.368	1.024913	85601.651852	0.002542	0.25
Y_R4	1.041540	40043.800000	0.005529	0.53

Sample Name: LCSD 280-457066/3-A

Date: 5/10/2019 11:27:09 PM

Rack:Tube: 2:30

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000828	ppm	0.000187	22.56	-483.014000	Y 377.433
Al (394.401 nm)	10.014100 o	ppm	0.019306	0.19	126148.000000	Y 377.433
Al H (396.152 nm)	10.190800	ppm	0.003736	0.04	23218.500000	Y_R 377.433
As (188.980 nm)	1.999520	ppm	0.001166	0.06	3178.610000	Y 242.219
B (249.678 nm)	0.974246	ppm	0.000584	0.06	7469.530000	Y 242.219
Ba (493.408 nm)	2.000770	ppm	0.003394	0.17	211568.000000	Y_R 488.368
Be (234.861 nm)	0.978570	ppm	0.005030	0.51	103768.000000	Y_R 488.368
Bi (223.061 nm)	2.002530	ppm	0.002346	0.12	4394.610000	Y 377.433
Ca (315.887 nm)	50.062417	ppm	0.077023	0.15	41335.992655	Y_R 377.433
Cd (214.439 nm)	0.975617	ppm	0.002261	0.23	37374.700000	Y 377.433
Co (228.615 nm)	0.962323	ppm	0.000347	0.04	24108.400000	Y 242.219
Cr (205.560 nm)	0.973314	ppm	0.003530	0.36	6729.060000	Y 377.433
Cu (324.754 nm)	0.957228	ppm	0.002052	0.21	47537.000000	Y 377.433
Fe (238.204 nm)	10.075197 o	ppm	0.005492	0.05	25191.873387	Y_R 377.433
Fe H (259.940 nm)	10.049300	ppm	0.016046	0.16	14415.200000	Y_R 377.433
K (766.491 nm)	50.508600	ppm	0.155158	0.31	55305.600000	Y_R2 488.368
Li (670.783 nm)	1.016140	ppm	0.003740	0.37	15600.300000	Y_R2 488.368
Mg (279.078 nm)	48.481100	ppm	0.149743	0.31	169899.000000	Y 377.433
Mn (257.610 nm)	0.984805	ppm	0.001479	0.15	283813.000000	Y 377.433
Mo (202.032 nm)	0.998478	ppm	0.001408	0.14	13220.200000	Y 377.433
Na (589.592 nm)	51.570300	ppm	0.165841	0.32	45481.600000	Y_R2 488.368
Na H (589.593 nm)	49.063080 u	ppm	0.019757	0.04	28914.200579	Y_R4
Ni (231.604 nm)	0.952981	ppm	0.002678	0.28	5162.880000	Y 377.433
P (213.618 nm)	19.123500	ppm	0.000193	0.00	29268.400000	Y 242.219
Pb (220.353 nm)	0.986222	ppm	0.001923	0.19	3326.260000	Y 242.219
S (181.972 nm)	9.351563	ppm	0.032481	0.35	4583.193509	Y 377.433
Sb (206.834 nm)	-0.004320 u	ppm	0.001397	32.33	-11.239200	Y 377.433
Se (196.026 nm)	1.970410	ppm	0.006256	0.32	3160.390000	Y 242.219
Si (288.158 nm)	2.054350	ppm	0.003440	0.17	14231.500000	Y 377.433
Sn (189.925 nm)	1.972950	ppm	0.007454	0.38	3255.950000	Y 377.433
Sr (421.552 nm)	0.996508	ppm	0.002630	0.26	160137.971108	Y_R 488.368
Th (288.505 nm)	1.025070	ppm	0.002261	0.22	1723.520000	Y 377.433
Ti (336.122 nm)	1.005900	ppm	0.001864	0.19	132362.000000	Y 377.433
Tl (190.794 nm)	1.942370	ppm	0.002660	0.14	4740.330000	Y 377.433
U (409.013 nm)	2.055260	ppm	0.007881	0.38	6534.190000	Y 377.433
V (292.401 nm)	0.993637	ppm	0.001535	0.15	53283.000000	Y 377.433
Zn (206.200 nm)	0.487500	ppm	0.000539	0.11	2232.000000	Y 377.433
Zr (343.823 nm)	0.498315	ppm	0.001426	0.29	29064.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.003145	18755.796309	0.002720	0.27
Y 377.433	1.022951	568327.736767	0.004315	0.42
Y_R 377.433	1.038100	50540.800000	0.000985	0.09
Y_R 488.368	1.023400	43766.900000	0.003536	0.35
Y_R2 488.368	1.020780	85256.456796	0.006375	0.62
Y_R4	1.019980	39214.800000	0.003556	0.35

Sample Name: 280-122995-A-1-C

Date: 5/10/2019 11:30:48 PM

Rack:Tube: 2:31

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000047 u	ppm	0.000071	> 100.00	-182.802000	Y 377.433
Al (394.401 nm)	0.030951	ppm	0.001007	3.25	427.631000	Y 377.433
Al H (396.152 nm)	0.133758 u	ppm	0.005019	3.75	96.093600	Y_R 377.433
As (188.980 nm)	0.001292 u	ppm	0.002399	> 100.00	0.223921	Y 242.219
B (249.678 nm)	0.008667	ppm	0.000746	8.60	78.144800	Y 242.219
Ba (493.408 nm)	0.037003	ppm	0.000383	1.04	5511.210000	Y_R 488.368
Be (234.861 nm)	-0.000041 u	ppm	0.000025	61.82	-6.642560	Y_R 488.368
Bi (223.061 nm)	0.000341 u	ppm	0.000727	> 100.00	-10.103600	Y 377.433
Ca (315.887 nm)	9.512045	ppm	0.006252	0.07	7794.169650	Y_R 377.433
Cd (214.439 nm)	0.000457	ppm	0.000052	11.48	10.789100	Y 377.433
Co (228.615 nm)	0.000204 u	ppm	0.000454	> 100.00	-18.248300	Y 242.219
Cr (205.560 nm)	0.012673	ppm	0.000794	6.26	79.684700	Y 377.433
Cu (324.754 nm)	-0.000313 u	ppm	0.000012	3.74	489.202000	Y 377.433
Fe (238.204 nm)	0.166493	ppm	0.003168	1.90	420.399185	Y_R 377.433
Fe H (259.940 nm)	0.199362 u	ppm	0.000740	0.37	258.537000	Y_R 377.433
K (766.491 nm)	1.005370	ppm	0.053091	5.28	3239.020000	Y_R2 488.368
Li (670.783 nm)	0.016931	ppm	0.001651	9.75	-2578.010000	Y_R2 488.368
Mg (279.078 nm)	6.613370	ppm	0.002780	0.04	23196.300000	Y 377.433
Mn (257.610 nm)	0.001249	ppm	0.000000	0.01	336.418000	Y 377.433
Mo (202.032 nm)	0.000616	ppm	0.000393	63.88	19.758600	Y 377.433
Na (589.592 nm)	15.667700	ppm	0.097856	0.62	13800.300000	Y_R2 488.368
Na H (589.593 nm)	15.662347 u	ppm	0.023718	0.15	9555.606659	Y_R4
Ni (231.604 nm)	0.006244	ppm	0.000263	4.22	23.423800	Y 377.433
P (213.618 nm)	-0.000538 u	ppm	0.000460	85.51	2.719520	Y 242.219
Pb (220.353 nm)	-0.001524 u	ppm	0.000942	61.78	2.876000	Y 242.219
S (181.972 nm)	4.751568	ppm	0.022478	0.47	2329.949942	Y 377.433
Sb (206.834 nm)	-0.001525 u	ppm	0.004721	> 100.00	-0.460922	Y 377.433
Se (196.026 nm)	0.000984	ppm	0.001156	> 100.00	7.115190	Y 242.219
Si (288.158 nm)	9.289150	ppm	0.006253	0.07	62560.000000	Y 377.433
Sn (189.925 nm)	-0.004024 u	ppm	0.001107	27.51	2.475110	Y 377.433
Sr (421.552 nm)	0.040888	ppm	0.000102	0.25	6669.430689	Y_R 488.368
Th (288.505 nm)	-0.007445 u	ppm	0.003439	46.19	6.048650	Y 377.433
Ti (336.122 nm)	0.000899	ppm	0.000088	9.77	-370.528000	Y 377.433
Tl (190.794 nm)	0.001778	ppm	0.000816	45.89	4.049620	Y 377.433
U (409.013 nm)	0.008581	ppm	0.002628	30.63	56.295600	Y 377.433
V (292.401 nm)	-0.000053 u	ppm	0.000043	81.74	-103.230000	Y 377.433
Zn (206.200 nm)	0.008929	ppm	0.000004	0.04	43.911400	Y 377.433
Zr (343.823 nm)	0.000659	ppm	0.000101	15.28	-134.865000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.044031	19520.233962	0.003012	0.29
Y 377.433	1.053537	585320.416637	0.001740	0.17
Y_R 377.433	1.056270	51425.300000	0.002251	0.21
Y_R 488.368	1.043560	44629.000000	0.001996	0.19
Y_R2 488.368	1.043388	87144.707256	0.001027	0.10
Y_R4	1.037160	39875.700000	0.002622	0.25

Sample Name: 280-122995-A-3-G

Date: 5/10/2019 11:34:15 PM

Rack:Tube: 2:32

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000810 u	ppm	0.000141	17.39	-214.392000	Y 377.433
Al (394.401 nm)	0.093403	ppm	0.001632	1.75	1212.120000	Y 377.433
Al H (396.152 nm)	0.203016 u	ppm	0.001486	0.73	252.502000	Y_R 377.433
As (188.980 nm)	-0.000185 u	ppm	0.000697	> 100.00	-2.146690	Y 242.219
B (249.678 nm)	0.008292	ppm	0.000464	5.59	74.913600	Y 242.219
Ba (493.408 nm)	0.038513	ppm	0.000076	0.20	5670.150000	Y_R 488.368
Be (234.861 nm)	0.000022	ppm	0.000008	37.80	-5.217550	Y_R 488.368
Bi (223.061 nm)	0.001848	ppm	0.000567	30.66	-6.687840	Y 377.433
Ca (315.887 nm)	9.746646	ppm	0.024774	0.25	7988.226603	Y_R 377.433
Cd (214.439 nm)	0.000405	ppm	0.000066	16.21	9.026250	Y 377.433
Co (228.615 nm)	0.000120	ppm	0.000156	> 100.00	-20.293000	Y 242.219
Cr (205.560 nm)	0.016932	ppm	0.000454	2.68	109.199000	Y 377.433
Cu (324.754 nm)	-0.000587 u	ppm	0.000018	3.11	476.253000	Y 377.433
Fe (238.204 nm)	0.756020	ppm	0.000656	0.09	1894.199156	Y_R 377.433
Fe H (259.940 nm)	0.784041 u	ppm	0.000124	0.02	1098.860000	Y_R 377.433
K (766.491 nm)	1.128390	ppm	0.008407	0.75	3368.400000	Y_R2 488.368
Li (670.783 nm)	0.016399	ppm	0.002808	17.12	-2587.680000	Y_R2 488.368
Mg (279.078 nm)	6.785270	ppm	0.013019	0.19	23797.900000	Y 377.433
Mn (257.610 nm)	0.006613	ppm	0.000013	0.19	1882.420000	Y 377.433
Mo (202.032 nm)	0.000345	ppm	0.000424	> 100.00	16.173900	Y 377.433
Na (589.592 nm)	16.119000	ppm	0.002000	0.01	14193.000000	Y_R2 488.368
Na H (589.593 nm)	16.087839 u	ppm	0.065196	0.41	9802.215839	Y_R4
Ni (231.604 nm)	0.005869	ppm	0.000299	5.09	21.389600	Y 377.433
P (213.618 nm)	0.001184 u	ppm	0.001795	> 100.00	5.434890	Y 242.219
Pb (220.353 nm)	-0.000531 u	ppm	0.001603	> 100.00	6.208270	Y 242.219
S (181.972 nm)	4.923362	ppm	0.012407	0.25	2413.933360	Y 377.433
Sb (206.834 nm)	-0.001776 u	ppm	0.000334	18.79	-0.843918	Y 377.433
Se (196.026 nm)	0.003820	ppm	0.001432	37.48	11.507500	Y 242.219
Si (288.158 nm)	9.566950	ppm	0.024897	0.26	64415.700000	Y 377.433
Sn (189.925 nm)	-0.003243 u	ppm	0.000542	16.71	3.760490	Y 377.433
Sr (421.552 nm)	0.042441	ppm	0.000106	0.25	6918.939141	Y_R 488.368
Th (288.505 nm)	-0.003136 u	ppm	0.003566	> 100.00	13.665400	Y 377.433
Ti (336.122 nm)	0.002526	ppm	0.000598	23.66	-154.936000	Y 377.433
Tl (190.794 nm)	-0.000342 u	ppm	0.002754	> 100.00	-1.219460	Y 377.433
U (409.013 nm)	0.005835	ppm	0.005077	87.02	47.923600	Y 377.433
V (292.401 nm)	0.000191	ppm	0.000014	7.23	-91.222400	Y 377.433
Zn (206.200 nm)	0.007097	ppm	0.000201	2.83	35.619800	Y 377.433
Zr (343.823 nm)	0.001076	ppm	0.000384	35.71	-110.361000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.033834	19329.586949	0.000712	0.07
Y 377.433	1.044280	580177.179368	0.000752	0.07
Y_R 377.433	1.052320	51232.900000	0.001269	0.12
Y_R 488.368	1.038720	44422.100000	0.000655	0.06
Y_R2 488.368	1.051470	87819.719055	0.005076	0.48
Y_R4	1.046440	40232.300000	0.010258	0.98

Sample Name: 280-122995-A-3-H MS

Date: 5/10/2019 11:37:45 PM

Rack:Tube: 2:33

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001021	ppm	0.000404	39.55	-468.388000	Y 377.433
Al (394.401 nm)	9.899130 o	ppm	0.000516	0.01	124703.000000	Y 377.433
Al H (396.152 nm)	10.106700	ppm	0.019804	0.20	23030.000000	Y_R 377.433
As (188.980 nm)	1.947980	ppm	0.002862	0.15	3096.610000	Y 242.219
B (249.678 nm)	0.958208	ppm	0.002260	0.24	7346.620000	Y 242.219
Ba (493.408 nm)	1.984190	ppm	0.003195	0.16	209828.000000	Y_R 488.368
Be (234.861 nm)	0.951299	ppm	0.002108	0.22	100873.000000	Y_R 488.368
Bi (223.061 nm)	1.947960	ppm	0.004475	0.23	4274.630000	Y 377.433
Ca (315.887 nm)	58.512306	ppm	0.132762	0.23	48324.865492	Y_R 377.433
Cd (214.439 nm)	0.946705	ppm	0.000343	0.04	36267.100000	Y 377.433
Co (228.615 nm)	0.936296	ppm	0.000722	0.08	23455.700000	Y 242.219
Cr (205.560 nm)	0.963214	ppm	0.001843	0.19	6659.290000	Y 377.433
Cu (324.754 nm)	0.940107	ppm	0.003961	0.42	46690.200000	Y 377.433
Fe (238.204 nm)	10.146893 o	ppm	0.030054	0.30	25371.110107	Y_R 377.433
Fe H (259.940 nm)	10.140900	ppm	0.043558	0.43	14546.800000	Y_R 377.433
K (766.491 nm)	50.862300	ppm	0.112270	0.22	55677.500000	Y_R2 488.368
Li (670.783 nm)	1.001930	ppm	0.000810	0.08	15341.700000	Y_R2 488.368
Mg (279.078 nm)	53.985700	ppm	0.068743	0.13	189194.000000	Y 377.433
Mn (257.610 nm)	0.957819	ppm	0.000829	0.09	276036.000000	Y 377.433
Mo (202.032 nm)	0.969621	ppm	0.000655	0.07	12838.400000	Y 377.433
Na (589.592 nm)	66.079100 o	ppm	0.034979	0.05	58090.200000	Y_R2 488.368
Na H (589.593 nm)	63.447981	ppm	0.243550	0.38	37251.486155	Y_R4
Ni (231.604 nm)	0.928296	ppm	0.001990	0.21	5028.870000	Y 377.433
P (213.618 nm)	18.527800	ppm	0.034913	0.19	28353.300000	Y 242.219
Pb (220.353 nm)	0.959290	ppm	0.000121	0.01	3235.530000	Y 242.219
S (181.972 nm)	13.997646	ppm	0.052378	0.37	6853.976698	Y 377.433
Sb (206.834 nm)	-0.001540 u	ppm	0.001001	64.97	-5.701420	Y 377.433
Se (196.026 nm)	1.915820	ppm	0.000224	0.01	3072.880000	Y 242.219
Si (288.158 nm)	11.868800	ppm	0.042006	0.35	79791.900000	Y 377.433
Sn (189.925 nm)	1.923140	ppm	0.004215	0.22	3173.990000	Y 377.433
Sr (421.552 nm)	1.010511	ppm	0.001595	0.16	162386.717061	Y_R 488.368
Th (288.505 nm)	0.995907	ppm	0.002286	0.23	1674.430000	Y 377.433
Ti (336.122 nm)	0.979222	ppm	0.001041	0.11	128870.000000	Y 377.433
Tl (190.794 nm)	1.880470	ppm	0.001988	0.11	4588.800000	Y 377.433
U (409.013 nm)	1.989300	ppm	0.007906	0.40	6324.920000	Y 377.433
V (292.401 nm)	0.968073	ppm	0.000700	0.07	51904.400000	Y 377.433
Zn (206.200 nm)	0.477570	ppm	0.001299	0.27	2186.640000	Y 377.433
Zr (343.823 nm)	0.480007	ppm	0.000055	0.01	27990.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.002816	18749.646366	0.001714	0.17
Y 377.433	1.024438	569153.859614	0.001319	0.13
Y_R 377.433	1.040510	50657.800000	0.000065	0.01
Y_R 488.368	1.028960	44004.900000	0.000848	0.08
Y_R2 488.368	1.028917	85936.053957	0.000036	0.00
Y_R4	1.038840	39940.000000	0.011071	1.07

Sample Name: 280-122995-A-3-I MSD

Date: 5/10/2019 11:41:21 PM

Rack:Tube: 2:34

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001504	ppm	0.000230	15.26	-459.227000	Y 377.433
Al (394.401 nm)	10.148600 o	ppm	0.002843	0.03	127847.000000	Y 377.433
Al H (396.152 nm)	10.372400	ppm	0.024994	0.24	23643.400000	Y_R 377.433
As (188.980 nm)	1.993730	ppm	0.003875	0.19	3169.370000	Y 242.219
B (249.678 nm)	0.987872	ppm	0.000023	0.00	7573.720000	Y 242.219
Ba (493.408 nm)	2.043920	ppm	0.001318	0.06	216096.000000	Y_R 488.368
Be (234.861 nm)	0.969221	ppm	0.005815	0.60	102773.000000	Y_R 488.368
Bi (223.061 nm)	2.009950	ppm	0.002756	0.14	4411.000000	Y 377.433
Ca (315.887 nm)	59.573981	ppm	0.007187	0.01	49203.043728	Y_R 377.433
Cd (214.439 nm)	0.974651	ppm	0.000000	0.00	37337.800000	Y 377.433
Co (228.615 nm)	0.962236	ppm	0.000049	0.01	24106.400000	Y 242.219
Cr (205.560 nm)	0.996878	ppm	0.000798	0.08	6892.370000	Y 377.433
Cu (324.754 nm)	0.964777	ppm	0.005683	0.59	47903.000000	Y 377.433
Fe (238.204 nm)	10.362579 o	ppm	0.003010	0.03	25910.319394	Y_R 377.433
Fe H (259.940 nm)	10.384600	ppm	0.003778	0.04	14897.100000	Y_R 377.433
K (766.491 nm)	52.070600	ppm	0.131324	0.25	56948.400000	Y_R2 488.368
Li (670.783 nm)	1.028750	ppm	0.000985	0.10	15829.500000	Y_R2 488.368
Mg (279.078 nm)	55.108800	ppm	0.021376	0.04	193129.000000	Y 377.433
Mn (257.610 nm)	0.987030	ppm	0.000249	0.03	284455.000000	Y 377.433
Mo (202.032 nm)	0.999568	ppm	0.000492	0.05	13234.600000	Y 377.433
Na (589.592 nm)	67.238500 o	ppm	0.020497	0.03	59112.400000	Y_R2 488.368
Na H (589.593 nm)	64.751900	ppm	0.070112	0.11	38007.219046	Y_R4
Ni (231.604 nm)	0.955961	ppm	0.000398	0.04	5179.050000	Y 377.433
P (213.618 nm)	19.119700	ppm	0.018917	0.10	29260.500000	Y 242.219
Pb (220.353 nm)	0.987287	ppm	0.000469	0.05	3329.760000	Y 242.219
S (181.972 nm)	14.217575	ppm	0.051862	0.36	6961.592297	Y 377.433
Sb (206.834 nm)	-0.002016 u	ppm	0.002613	> 100.00	-6.748460	Y 377.433
Se (196.026 nm)	1.962210	ppm	0.005017	0.26	3147.170000	Y 242.219
Si (288.158 nm)	11.921100	ppm	0.053780	0.45	80141.700000	Y 377.433
Sn (189.925 nm)	1.987320	ppm	0.000720	0.04	3279.590000	Y 377.433
Sr (421.552 nm)	1.040527	ppm	0.000781	0.08	167207.251446	Y_R 488.368
Th (288.505 nm)	1.032350	ppm	0.003184	0.31	1735.870000	Y 377.433
Ti (336.122 nm)	1.010440	ppm	0.000681	0.07	132992.000000	Y 377.433
Tl (190.794 nm)	1.938840	ppm	0.000868	0.04	4731.270000	Y 377.433
U (409.013 nm)	2.074920	ppm	0.001822	0.09	6596.080000	Y 377.433
V (292.401 nm)	0.997146	ppm	0.000175	0.02	53464.800000	Y 377.433
Zn (206.200 nm)	0.491293	ppm	0.000084	0.02	2249.380000	Y 377.433
Zr (343.823 nm)	0.498075	ppm	0.000192	0.04	29050.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.990114	18512.154456	0.000667	0.07
Y 377.433	1.009639	560931.677426	0.000153	0.02
Y_R 377.433	1.036680	50471.400000	0.003707	0.36
Y_R 488.368	1.023370	43765.800000	0.005028	0.49
Y_R2 488.368	1.025742	85670.842494	0.003538	0.34
Y_R4	1.033430	39732.300000	0.003557	0.34

Sample Name: 280-122995-A-12-B

Date: 5/10/2019 11:44:56 PM

Rack:Tube: 2:35

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000246 u	ppm	0.000475	> 100.00	-175.440000	Y 377.433
Al (394.401 nm)	0.111321	ppm	0.001816	1.63	1443.350000	Y 377.433
Al H (396.152 nm)	0.216303 u	ppm	0.003558	1.64	289.199000	Y_R 377.433
As (188.980 nm)	0.002406 u	ppm	0.005243	> 100.00	1.994100	Y 242.219
B (249.678 nm)	0.010938	ppm	0.000406	3.71	95.613300	Y 242.219
Ba (493.408 nm)	0.020212	ppm	0.000395	1.95	3749.310000	Y_R 488.368
Be (234.861 nm)	0.000486	ppm	0.000085	17.50	50.343400	Y_R 488.368
Bi (223.061 nm)	0.001050	ppm	0.000489	46.62	-8.561350	Y 377.433
Ca (315.887 nm)	15.687394	ppm	0.029573	0.19	12901.816604	Y_R 377.433
Cd (214.439 nm)	0.001795	ppm	0.000086	4.79	62.015100	Y 377.433
Co (228.615 nm)	0.019164	ppm	0.000167	0.87	456.365000	Y 242.219
Cr (205.560 nm)	0.000597	ppm	0.000153	25.61	-4.114760	Y 377.433
Cu (324.754 nm)	-0.000489 u	ppm	0.000146	29.81	476.056000	Y 377.433
Fe (238.204 nm)	0.052169	ppm	0.001455	2.79	134.592910	Y_R 377.433
Fe H (259.940 nm)	0.078707 u	ppm	0.000947	1.20	85.128900	Y_R 377.433
K (766.491 nm)	1.967240	ppm	0.062968	3.20	4250.690000	Y_R2 488.368
Li (670.783 nm)	0.062453	ppm	0.000939	1.50	-1749.840000	Y_R2 488.368
Mg (279.078 nm)	10.492700	ppm	0.007572	0.07	36793.900000	Y 377.433
Mn (257.610 nm)	0.406223	ppm	0.000243	0.06	117057.000000	Y 377.433
Mo (202.032 nm)	0.000270	ppm	0.000270	> 100.00	15.191100	Y 377.433
Na (589.592 nm)	30.924900	ppm	0.028708	0.09	27059.400000	Y_R2 488.368
Na H (589.593 nm)	30.786639 u	ppm	0.050524	0.16	18321.433158	Y_R4
Ni (231.604 nm)	0.063541	ppm	0.000395	0.62	334.325000	Y 377.433
P (213.618 nm)	-0.000909 u	ppm	0.000162	17.77	2.108460	Y 242.219
Pb (220.353 nm)	0.000085 u	ppm	0.000693	> 100.00	8.276590	Y 242.219
S (181.972 nm)	29.599316	ppm	0.063167	0.21	14474.198556	Y 377.433
Sb (206.834 nm)	-0.002275 u	ppm	0.002112	92.87	-1.953200	Y 377.433
Se (196.026 nm)	0.001688	ppm	0.000958	56.75	8.859230	Y 242.219
Si (288.158 nm)	19.189000	ppm	0.005728	0.03	128691.000000	Y 377.433
Sn (189.925 nm)	-0.003649 u	ppm	0.000900	24.66	3.092140	Y 377.433
Sr (421.552 nm)	0.061880	ppm	0.000192	0.31	10040.608864	Y_R 488.368
Th (288.505 nm)	-0.005626 u	ppm	0.003624	64.41	16.979100	Y 377.433
Ti (336.122 nm)	0.000441	ppm	0.000011	2.50	-409.361000	Y 377.433
Tl (190.794 nm)	0.000909	ppm	0.000535	58.78	1.783750	Y 377.433
U (409.013 nm)	0.010297	ppm	0.008264	80.26	60.935200	Y 377.433
V (292.401 nm)	-0.000083 u	ppm	0.000125	> 100.00	-100.664000	Y 377.433
Zn (206.200 nm)	0.065855	ppm	0.001236	1.88	304.004000	Y 377.433
Zr (343.823 nm)	0.000740	ppm	0.000310	41.86	-130.113000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.040126	19447.236474	0.002666	0.26
Y 377.433	1.050735	583763.770872	0.002409	0.23
Y_R 377.433	1.059340	51574.500000	0.001082	0.10
Y_R 488.368	1.056030	45162.400000	0.002132	0.20
Y_R2 488.368	1.061334	88643.573374	0.001098	0.10
Y_R4	1.053200	40492.200000	0.001778	0.17

Sample Name: 280-123062-A-8-D

Date: 5/10/2019 11:48:25 PM

Rack:Tube: 2:36

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000168 u	ppm	0.000166	98.84	-190.912000	Y 377.433
Al (394.401 nm)	0.295688	ppm	0.001346	0.46	3752.280000	Y 377.433
Al H (396.152 nm)	0.400697 u	ppm	0.005680	1.42	698.708000	Y_R 377.433
As (188.980 nm)	0.000928 u	ppm	0.002123	> 100.00	-0.381033	Y 242.219
B (249.678 nm)	0.019569	ppm	0.001129	5.77	161.483000	Y 242.219
Ba (493.408 nm)	0.071153	ppm	0.000344	0.48	9094.670000	Y_R 488.368
Be (234.861 nm)	0.000232	ppm	0.000004	1.82	19.612600	Y_R 488.368
Bi (223.061 nm)	0.000847	ppm	0.000104	12.25	-8.940810	Y 377.433
Ca (315.887 nm)	7.464653	ppm	0.014278	0.19	6100.842722	Y_R 377.433
Cd (214.439 nm)	0.000142	ppm	0.000139	98.08	-1.149790	Y 377.433
Co (228.615 nm)	0.006839	ppm	0.000065	0.95	147.911000	Y 242.219
Cr (205.560 nm)	0.001437	ppm	0.000266	18.51	1.801280	Y 377.433
Cu (324.754 nm)	-0.000356 u	ppm	0.000329	92.47	489.999000	Y 377.433
Fe (238.204 nm)	0.472868	ppm	0.006313	1.34	1186.326938	Y_R 377.433
Fe H (259.940 nm)	0.501941 u	ppm	0.002344	0.47	693.415000	Y_R 377.433
K (766.491 nm)	0.155910	ppm	0.007496	4.81	2345.570000	Y_R2 488.368
Li (670.783 nm)	0.010166	ppm	0.000574	5.65	-2701.080000	Y_R2 488.368
Mg (279.078 nm)	8.125080	ppm	0.004213	0.05	28494.600000	Y 377.433
Mn (257.610 nm)	0.050980	ppm	0.000059	0.11	14669.800000	Y 377.433
Mo (202.032 nm)	0.000401	ppm	0.000028	6.87	16.915500	Y 377.433
Na (589.592 nm)	7.375330	ppm	0.038492	0.52	6599.870000	Y_R2 488.368
Na H (589.593 nm)	7.188998 u	ppm	0.016364	0.23	4644.573208	Y_R4
Ni (231.604 nm)	0.013901	ppm	0.000044	0.31	64.969800	Y 377.433
P (213.618 nm)	0.001847	ppm	0.001761	95.33	6.385930	Y 242.219
Pb (220.353 nm)	0.001130	ppm	0.000187	16.52	11.775900	Y 242.219
S (181.972 nm)	12.137856	ppm	0.019061	0.16	5939.541170	Y 377.433
Sb (206.834 nm)	-0.000718 u	ppm	0.001248	> 100.00	0.967340	Y 377.433
Se (196.026 nm)	0.002528	ppm	0.002238	88.50	9.578290	Y 242.219
Si (288.158 nm)	7.736690	ppm	0.049828	0.64	52189.500000	Y 377.433
Sn (189.925 nm)	-0.003034 u	ppm	0.000736	24.26	4.103910	Y 377.433
Sr (421.552 nm)	0.044065	ppm	0.000035	0.08	7179.730050	Y_R 488.368
Th (288.505 nm)	-0.002051 u	ppm	0.003065	> 100.00	16.442500	Y 377.433
Ti (336.122 nm)	0.003406	ppm	0.000194	5.69	-46.597900	Y 377.433
Tl (190.794 nm)	0.000723	ppm	0.000948	> 100.00	1.544310	Y 377.433
U (409.013 nm)	0.003891	ppm	0.001654	42.51	41.838900	Y 377.433
V (292.401 nm)	0.000400	ppm	0.000296	74.07	-73.258300	Y 377.433
Zn (206.200 nm)	0.015872	ppm	0.000184	1.16	75.677200	Y 377.433
Zr (343.823 nm)	0.000903	ppm	0.000071	7.88	-120.554000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.051544	19660.718996	0.000280	0.03
Y 377.433	1.060789	589349.428393	0.000596	0.06
Y_R 377.433	1.065540	51876.300000	0.002823	0.26
Y_R 488.368	1.053610	45058.800000	0.001968	0.19
Y_R2 488.368	1.051195	87796.724302	0.000598	0.06
Y_R4	1.041470	40041.300000	0.002431	0.23

Sample Name: 280-123062-A-8-Dsd@5

Date: 5/10/2019 11:51:55 PM

Rack:Tube: 2:37

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000524 u	ppm	0.000079	15.02	-203.498000	Y 377.433
Al (394.401 nm)	0.058773	ppm	0.000785	1.34	766.025000	Y 377.433
Al H (396.152 nm)	0.175337 u	ppm	0.001473	0.84	177.447000	Y_R 377.433
As (188.980 nm)	0.001165	ppm	0.000742	63.68	0.022172	Y 242.219
B (249.678 nm)	0.003950	ppm	0.000775	19.62	42.057800	Y 242.219
Ba (493.408 nm)	0.013038	ppm	0.000439	3.37	2996.660000	Y_R 488.368
Be (234.861 nm)	0.000063	ppm	0.000009	14.27	5.049580	Y_R 488.368
Bi (223.061 nm)	-0.000279 u	ppm	0.000915	> 100.00	-11.483000	Y 377.433
Ca (315.887 nm)	1.441438	ppm	0.002785	0.19	1118.987896	Y_R 377.433
Cd (214.439 nm)	-0.000040 u	ppm	0.000037	92.91	-8.275840	Y 377.433
Co (228.615 nm)	0.001514	ppm	0.000031	2.04	14.509100	Y 242.219
Cr (205.560 nm)	0.000616	ppm	0.000451	73.25	-3.858150	Y 377.433
Cu (324.754 nm)	-0.000815 u	ppm	0.000230	28.21	470.515000	Y 377.433
Fe (238.204 nm)	0.091431	ppm	0.001051	1.15	232.744976	Y_R 377.433
Fe H (259.940 nm)	0.123301 u	ppm	0.000066	0.05	149.221000	Y_R 377.433
K (766.491 nm)	-0.255513 u	ppm	0.138253	54.11	1912.840000	Y_R2 488.368
Li (670.783 nm)	0.009106	ppm	0.000802	8.81	-2720.360000	Y_R2 488.368
Mg (279.078 nm)	1.575560	ppm	0.014805	0.94	5538.660000	Y 377.433
Mn (257.610 nm)	0.010063	ppm	0.000112	1.11	2876.880000	Y 377.433
Mo (202.032 nm)	0.000134	ppm	0.000024	18.06	13.387100	Y 377.433
Na (589.592 nm)	1.447790	ppm	0.010893	0.75	1433.060000	Y_R2 488.368
Na H (589.593 nm)	1.319097 u	ppm	0.037972	2.88	1242.461391	Y_R4
Ni (231.604 nm)	0.001950	ppm	0.000061	3.14	0.125922	Y 377.433
P (213.618 nm)	-0.001242 u	ppm	0.001829	> 100.00	1.772820	Y 242.219
Pb (220.353 nm)	-0.000048 u	ppm	0.000326	> 100.00	7.824530	Y 242.219
S (181.972 nm)	2.376643	ppm	0.032495	1.37	1168.993959	Y 377.433
Sb (206.834 nm)	-0.002628 u	ppm	0.000130	4.94	-2.614240	Y 377.433
Se (196.026 nm)	0.001159	ppm	0.000446	38.45	7.427990	Y 242.219
Si (288.158 nm)	1.475810	ppm	0.009224	0.63	10366.800000	Y 377.433
Sn (189.925 nm)	-0.003992 u	ppm	0.000243	6.08	2.526970	Y 377.433
Sr (421.552 nm)	0.007404	ppm	0.000128	1.73	1292.111582	Y_R 488.368
Th (288.505 nm)	-0.003743 u	ppm	0.000241	6.44	12.897100	Y 377.433
Ti (336.122 nm)	0.001047	ppm	0.000050	4.79	-378.231000	Y 377.433
Tl (190.794 nm)	0.001542	ppm	0.000404	26.18	3.819990	Y 377.433
U (409.013 nm)	-0.003208 u	ppm	0.008234	> 100.00	19.677300	Y 377.433
V (292.401 nm)	-0.000131 u	ppm	0.000078	59.80	-101.910000	Y 377.433
Zn (206.200 nm)	0.005944	ppm	0.000209	3.51	30.259800	Y 377.433
Zr (343.823 nm)	0.000425	ppm	0.000116	27.30	-148.560000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.051874	19666.888289	0.001938	0.18
Y 377.433	1.059862	588834.522319	0.001072	0.10
Y_R 377.433	1.061560	51682.700000	0.000090	0.01
Y_R 488.368	1.047350	44791.000000	0.010992	1.05
Y_R2 488.368	1.045513	87322.180891	0.005436	0.52
Y_R4	1.031720	39666.500000	0.008631	0.84

Sample Name: CCVH-5690583

Date: 5/10/2019 11:55:23 PM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000675	ppm	0.000125	18.45	-296.559000	Y 377.433
Al (394.401 nm)	48.427500 o	ppm	0.001690	0.00	608585.000000	Y 377.433
Al H (396.152 nm)	48.746000	ppm	0.010521	0.02	109507.000000	Y_R 377.433
As (188.980 nm)	0.003982	ppm	0.000061	1.54	0.098681	Y 242.219
B (249.678 nm)	0.006547	ppm	0.000884	13.50	33.004800	Y 242.219
Ba (493.408 nm)	0.002203	ppm	0.000047	2.11	1898.920000	Y_R 488.368
Be (234.861 nm)	0.002498	ppm	0.000059	2.36	-159.867000	Y_R 488.368
Bi (223.061 nm)	0.945436	ppm	0.003369	0.36	2076.310000	Y 377.433
Ca (315.887 nm)	0.014495	ppm	0.002986	20.60	-48.714008	Y_R 377.433
Cd (214.439 nm)	0.000850	ppm	0.000057	6.73	45.487000	Y 377.433
Co (228.615 nm)	0.004002	ppm	0.000498	12.45	76.835700	Y 242.219
Cr (205.560 nm)	0.001288	ppm	0.000162	12.58	-0.542038	Y 377.433
Cu (324.754 nm)	0.005799	ppm	0.000003	0.06	1196.650000	Y 377.433
Fe (238.204 nm)	47.619264 o	ppm	0.018311	0.04	119050.958856	Y_R 377.433
Fe H (259.940 nm)	47.458600	ppm	0.011573	0.02	68181.200000	Y_R 377.433
K (766.491 nm)	0.270540	ppm	0.132492	48.97	2466.140000	Y_R2 488.368
Li (670.783 nm)	0.002609	ppm	0.000474	18.16	-2838.550000	Y_R2 488.368
Mg (279.078 nm)	0.016889	ppm	0.000016	0.10	-152.165000	Y 377.433
Mn (257.610 nm)	0.001346	ppm	0.000002	0.11	364.322000	Y 377.433
Mo (202.032 nm)	0.000477	ppm	0.000402	84.20	17.930200	Y 377.433
Na (589.592 nm)	239.054000 o	ppm	0.595350	0.25	207983.000000	Y_R2 488.368
Na H (589.593 nm)	245.297055	ppm	0.047859	0.02	142648.644376	Y_R4
Ni (231.604 nm)	0.001753	ppm	0.000843	48.07	-0.945052	Y 377.433
P (213.618 nm)	-0.014703 u	ppm	0.000627	4.26	-26.092100	Y 242.219
Pb (220.353 nm)	0.007255	ppm	0.000728	10.03	48.158400	Y 242.219
S (181.972 nm)	4.714730	ppm	0.005732	0.12	2311.476410	Y 377.433
Sb (206.834 nm)	0.002831	ppm	0.000345	12.18	10.817400	Y 377.433
Se (196.026 nm)	0.001864	ppm	0.000666	35.70	-4.229340	Y 242.219
Si (288.158 nm)	0.026252	ppm	0.000626	2.38	683.766000	Y 377.433
Sn (189.925 nm)	-0.000684 u	ppm	0.000785	> 100.00	7.971450	Y 377.433
Sr (421.552 nm)	0.000884	ppm	0.000217	24.55	252.430270	Y_R 488.368
Th (288.505 nm)	4.862390	ppm	0.000125	0.00	8590.610000	Y 377.433
Ti (336.122 nm)	0.001908	ppm	0.000105	5.50	-269.145000	Y 377.433
Tl (190.794 nm)	-0.000024 u	ppm	0.001156	> 100.00	-4.671740	Y 377.433
U (409.013 nm)	9.700780	ppm	0.019901	0.21	31051.600000	Y 377.433
V (292.401 nm)	-0.001034 u	ppm	0.000135	13.02	-147.241000	Y 377.433
Zn (206.200 nm)	0.002636	ppm	0.000812	30.82	21.751900	Y 377.433
Zr (343.823 nm)	-0.003091 u	ppm	0.000356	11.51	-354.907000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.993749	18580.114605	0.000791	0.08
Y 377.433	1.005886	558846.540950	0.000815	0.08
Y_R 377.433	1.019540	49637.000000	0.000237	0.02
Y_R 488.368	1.010670	43222.300000	0.001416	0.14
Y_R2 488.368	1.015135	84784.931773	0.003939	0.39
Y_R4	1.029240	39571.200000	0.005602	0.54

Sample Name: CCV-5690581

Date: 5/10/2019 11:59:05 PM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.477854	ppm	0.000031	0.01	17279.700000	Y 377.433
Al (394.401 nm)	0.489255	ppm	0.000730	0.15	6296.330000	Y 377.433
Al H (396.152 nm)	0.531267 u	ppm	0.014693	2.77	1221.060000	Y_R 377.433
As (188.980 nm)	0.958526	ppm	0.001691	0.18	1523.150000	Y 242.219
B (249.678 nm)	0.469824	ppm	0.001249	0.27	3609.750000	Y 242.219
Ba (493.408 nm)	0.481362	ppm	0.001048	0.22	52137.600000	Y_R 488.368
Be (234.861 nm)	0.472156	ppm	0.000669	0.14	50088.900000	Y_R 488.368
Bi (223.061 nm)	0.006217	ppm	0.001608	25.86	3.304330	Y 377.433
Ca (315.887 nm)	4.861103	ppm	0.009986	0.21	3947.507718	Y_R 377.433
Cd (214.439 nm)	0.482193	ppm	0.000231	0.05	18467.700000	Y 377.433
Co (228.615 nm)	0.483712	ppm	0.000038	0.01	12105.300000	Y 242.219
Cr (205.560 nm)	0.481591	ppm	0.001051	0.22	3325.580000	Y 377.433
Cu (324.754 nm)	0.482525	ppm	0.001801	0.37	24194.200000	Y 377.433
Fe (238.204 nm)	2.399145	ppm	0.008141	0.34	6001.965556	Y_R 377.433
Fe H (259.940 nm)	2.422390 u	ppm	0.000548	0.02	3453.560000	Y_R 377.433
K (766.491 nm)	48.380400	ppm	0.115754	0.24	53067.200000	Y_R2 488.368
Li (670.783 nm)	0.977723	ppm	0.002370	0.24	14901.300000	Y_R2 488.368
Mg (279.078 nm)	18.900900	ppm	0.013631	0.07	66262.600000	Y 377.433
Mn (257.610 nm)	0.478482	ppm	0.000036	0.01	137883.000000	Y 377.433
Mo (202.032 nm)	0.481068	ppm	0.000186	0.04	6375.510000	Y 377.433
Na (589.592 nm)	24.775400	ppm	0.032314	0.13	21824.000000	Y_R2 488.368
Na H (589.593 nm)	24.832360 u	ppm	0.014298	0.06	14870.416877	Y_R4
Ni (231.604 nm)	0.480658	ppm	0.001648	0.34	2598.820000	Y 377.433
P (213.618 nm)	0.930348	ppm	0.001354	0.15	1301.330000	Y 242.219
Pb (220.353 nm)	0.964635	ppm	0.000698	0.07	3253.100000	Y 242.219
S (181.972 nm)	0.006543	ppm	0.004384	67.00	12.498741	Y 377.433
Sb (206.834 nm)	0.960358	ppm	0.005305	0.55	1788.840000	Y 377.433
Se (196.026 nm)	0.957811	ppm	0.000286	0.03	1539.790000	Y 242.219
Si (288.158 nm)	4.760320	ppm	0.017135	0.36	32307.400000	Y 377.433
Sn (189.925 nm)	0.969911	ppm	0.004070	0.42	1605.260000	Y 377.433
Sr (421.552 nm)	0.480140	ppm	0.001790	0.37	77211.063753	Y_R 488.368
Th (288.505 nm)	0.005764	ppm	0.000850	14.74	-19.693000	Y 377.433
Ti (336.122 nm)	0.480736	ppm	0.000077	0.02	62920.900000	Y 377.433
Tl (190.794 nm)	0.967980	ppm	0.001269	0.13	2363.650000	Y 377.433
U (409.013 nm)	0.004995	ppm	0.004005	80.18	-12.949000	Y 377.433
V (292.401 nm)	0.478080	ppm	0.000223	0.05	25587.300000	Y 377.433
Zn (206.200 nm)	0.481350	ppm	0.000657	0.14	2202.840000	Y 377.433
Zr (343.823 nm)	0.482473	ppm	0.000112	0.02	28134.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.019856	19068.235800	0.001192	0.12
Y 377.433	1.030288	572403.718259	0.000023	0.00
Y_R 377.433	1.042470	50753.300000	0.001300	0.12
Y_R 488.368	1.029600	44031.900000	0.001499	0.15
Y_R2 488.368	1.018661	85079.488325	0.000463	0.05
Y_R4	1.029830	39593.500000	0.000673	0.07

Sample Name: CCB

Date: 5/11/2019 12:02:39 AM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000212 u	ppm	0.000278	> 100.00	-191.935000	Y 377.433
Al (394.401 nm)	0.001469	ppm	0.000447	30.40	45.455000	Y 377.433
Al H (396.152 nm)	0.106059 Zu	ppm	0.010020	9.45	18.652300 Z	Y_R 377.433
As (188.980 nm)	0.000927	ppm	0.001063	> 100.00	-0.350461	Y 242.219
B (249.678 nm)	0.000194 u	ppm	0.000676	> 100.00	13.333300	Y 242.219
Ba (493.408 nm)	-0.001805 u	ppm	0.000167	9.23	1439.210000	Y_R 488.368
Be (234.861 nm)	-0.000010 u	ppm	0.000020	> 100.00	-1.889280	Y_R 488.368
Bi (223.061 nm)	0.001957	ppm	0.000837	42.75	-6.579830	Y 377.433
Ca (315.887 nm)	-0.001231 u	ppm	0.001182	95.99	-74.259388	Y_R 377.433
Cd (214.439 nm)	0.000076	ppm	0.000057	75.05	-3.877870	Y 377.433
Co (228.615 nm)	0.000076 u	ppm	0.000117	> 100.00	-21.518700	Y 242.219
Cr (205.560 nm)	0.000382	ppm	0.000323	84.42	-5.472970	Y 377.433
Cu (324.754 nm)	-0.000423 u	ppm	0.000282	66.70	489.684000	Y 377.433
Fe (238.204 nm)	-0.000398 u	ppm	0.000766	> 100.00	3.176021	Y_R 377.433
Fe H (259.940 nm)	0.031646 u	ppm	0.001091	3.45	17.490400	Y_R 377.433
K (766.491 nm)	-0.219177 u	ppm	0.149568	68.24	1951.060000	Y_R2 488.368
Li (670.783 nm)	0.001341	ppm	0.000468	34.87	-2861.630000	Y_R2 488.368
Mg (279.078 nm)	-0.001107 u	ppm	0.001031	93.12	12.349800	Y 377.433
Mn (257.610 nm)	0.000084	ppm	0.000023	27.84	0.812304	Y 377.433
Mo (202.032 nm)	0.000095	ppm	0.000008	8.61	12.865900	Y 377.433
Na (589.592 nm)	0.032505	ppm	0.033308	> 100.00	199.166000	Y_R2 488.368
Na H (589.593 nm)	0.180424 u	ppm	0.059208	32.82	582.502150	Y_R4
Ni (231.604 nm)	-0.000144 u	ppm	0.000158	> 100.00	-11.238900	Y 377.433
P (213.618 nm)	-0.001097 u	ppm	0.001058	96.42	2.018040	Y 242.219
Pb (220.353 nm)	-0.001217 u	ppm	0.000665	54.67	3.912950	Y 242.219
S (181.972 nm)	-0.004608 u	ppm	0.000379	8.22	5.223575	Y 377.433
Sb (206.834 nm)	0.000377 u	ppm	0.002983	> 100.00	2.981080	Y 377.433
Se (196.026 nm)	0.000705	ppm	0.000309	43.83	6.711490	Y 242.219
Si (288.158 nm)	-0.005411 u	ppm	0.000851	15.74	472.259000	Y 377.433
Sn (189.925 nm)	-0.004144 u	ppm	0.000501	12.10	2.276950	Y 377.433
Sr (421.552 nm)	-0.000026 u	ppm	0.000050	> 100.00	98.894521	Y_R 488.368
Th (288.505 nm)	-0.007892 Zu	ppm	0.001812	22.96	5.524600 Z	Y 377.433
Ti (336.122 nm)	0.000572	ppm	0.000194	33.91	-445.517000	Y 377.433
Tl (190.794 nm)	0.000317	ppm	0.000263	83.21	0.891212	Y 377.433
U (409.013 nm)	-0.001044 u	ppm	0.004084	> 100.00	26.701100	Y 377.433
V (292.401 nm)	-0.000401 u	ppm	0.000472	> 100.00	-116.814000	Y 377.433
Zn (206.200 nm)	-0.000479 u	ppm	0.000246	51.34	0.896870	Y 377.433
Zr (343.823 nm)	0.000562	ppm	0.000117	20.83	-140.526000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.062953	19874.029211	0.001330	0.13
Y 377.433	1.068453	593607.481720	0.001909	0.18
Y_R 377.433	1.069180	52053.800000	0.001924	0.18
Y_R 488.368	1.068950	45714.800000	0.005532	0.52
Y_R2 488.368	1.051755	87843.480571	0.000445	0.04
Y_R4	1.046010	40215.800000	0.000401	0.04

Sample Name: CCVL-5695588

Date: 5/11/2019 12:05:51 AM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009290	ppm	0.000030	0.32	154.608000	Y 377.433
Al (394.401 nm)	0.100332	ppm	0.000755	0.75	1293.150000	Y 377.433
Al H (396.152 nm)	0.208701 u	ppm	0.005007	2.40	255.032000	Y_R 377.433
As (188.980 nm)	0.013963	ppm	0.000632	4.53	20.381400	Y 242.219
B (249.678 nm)	0.093256	ppm	0.000352	0.38	726.231000	Y 242.219
Ba (493.408 nm)	0.008818	ppm	0.000535	6.07	2553.840000	Y_R 488.368
Be (234.861 nm)	0.000940	ppm	0.000079	8.44	98.165200	Y_R 488.368
Bi (223.061 nm)	0.090288	ppm	0.002067	2.29	187.686000	Y 377.433
Ca (315.887 nm)	0.198994	ppm	0.001791	0.90	91.371165	Y_R 377.433
Cd (214.439 nm)	0.005072	ppm	0.000015	0.29	187.574000	Y 377.433
Co (228.615 nm)	0.010285	ppm	0.000101	0.98	234.462000	Y 242.219
Cr (205.560 nm)	0.009302	ppm	0.000416	4.47	56.163900	Y 377.433
Cu (324.754 nm)	0.014067	ppm	0.000187	1.33	1201.140000	Y 377.433
Fe (238.204 nm)	0.095382	ppm	0.000085	0.09	242.623244	Y_R 377.433
Fe H (259.940 nm)	0.126598 u	ppm	0.004045	3.19	153.959000	Y_R 377.433
K (766.491 nm)	2.689790	ppm	0.057335	2.13	5010.660000	Y_R2 488.368
Li (670.783 nm)	0.029886 Q	ppm	0.002473	8.28	-2342.320000 Q	Y_R2 488.368
Mg (279.078 nm)	0.194208	ppm	0.000202	0.10	695.901000	Y 377.433
Mn (257.610 nm)	0.010219	ppm	0.000005	0.05	2921.800000	Y 377.433
Mo (202.032 nm)	0.019137	ppm	0.000239	1.25	264.778000	Y 377.433
Na (589.592 nm)	1.064050	ppm	0.000846	0.08	1098.530000	Y_R2 488.368
Na H (589.593 nm)	0.946570 u	ppm	0.004810	0.51	1026.549840	Y_R4
Ni (231.604 nm)	0.041208	ppm	0.000084	0.20	213.159000	Y 377.433
P (213.618 nm)	2.656130	ppm	0.007733	0.29	4102.640000	Y 242.219
Pb (220.353 nm)	0.009320	ppm	0.000815	8.75	39.431300	Y 242.219
S (181.972 nm)	0.090146	ppm	0.002756	3.06	51.566218	Y 377.433
Sb (206.834 nm)	0.018958	ppm	0.002230	11.76	37.441000	Y 377.433
Se (196.026 nm)	0.021279	ppm	0.001954	9.18	39.655700	Y 242.219
Si (288.158 nm)	0.491372	ppm	0.007075	1.44	3790.770000	Y 377.433
Sn (189.925 nm)	0.093716	ppm	0.003228	3.44	163.324000	Y 377.433
Sr (421.552 nm)	0.008669	ppm	0.000022	0.25	1495.176822	Y_R 488.368
Th (288.505 nm)	0.010344 Q	ppm	0.002887	27.91	36.912800 Q	Y 377.433
Ti (336.122 nm)	0.010124	ppm	0.000111	1.10	815.364000	Y 377.433
Tl (190.794 nm)	0.015723	ppm	0.000383	2.44	38.443400	Y 377.433
U (409.013 nm)	0.065701	ppm	0.005662	8.62	238.766000	Y 377.433
V (292.401 nm)	0.009257	ppm	0.000152	1.64	400.270000	Y 377.433
Zn (206.200 nm)	0.020801	ppm	0.000304	1.46	98.144300	Y 377.433
Zr (343.823 nm)	0.010292 Q	ppm	0.000111	1.08	430.363000 Q	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.060123	19821.109308	0.002284	0.22
Y 377.433	1.067251	592939.693911	0.000545	0.05
Y_R 377.433	1.060210	51617.100000	0.001617	0.15
Y_R 488.368	1.051290	44959.900000	0.001467	0.14
Y_R2 488.368	1.068354	89229.843941	0.001474	0.14
Y_R4	1.066430	41001.000000	0.002973	0.28

Sample Name: 280-123062-A-8-E MS

Date: 5/11/2019 12:09:19 AM

Rack:Tube: 2:38

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000744	ppm	0.000243	32.63	-478.871000	Y 377.433
Al (394.401 nm)	10.134100 o	ppm	0.004694	0.05	127656.000000	Y 377.433
Al H (396.152 nm)	10.329200	ppm	0.005320	0.05	23533.900000	Y_R 377.433
As (188.980 nm)	1.949390	ppm	0.000918	0.05	3098.840000	Y 242.219
B (249.678 nm)	0.979281	ppm	0.000013	0.00	7507.990000	Y 242.219
Ba (493.408 nm)	2.017300	ppm	0.002574	0.13	213303.000000	Y_R 488.368
Be (234.861 nm)	0.951233	ppm	0.005365	0.56	100865.000000	Y_R 488.368
Bi (223.061 nm)	1.951580	ppm	0.002088	0.11	4282.620000	Y 377.433
Ca (315.887 nm)	56.178787	ppm	0.023380	0.04	46394.877158	Y_R 377.433
Cd (214.439 nm)	0.947707	ppm	0.001680	0.18	36305.500000	Y 377.433
Co (228.615 nm)	0.940996	ppm	0.000677	0.07	23573.500000	Y 242.219
Cr (205.560 nm)	0.950611	ppm	0.001087	0.11	6571.920000	Y 377.433
Cu (324.754 nm)	0.936960	ppm	0.004264	0.46	46537.800000	Y 377.433
Fe (238.204 nm)	10.202044 o	ppm	0.003202	0.03	25508.986125	Y_R 377.433
Fe H (259.940 nm)	10.197700	ppm	0.003902	0.04	14628.500000	Y_R 377.433
K (766.491 nm)	49.668300	ppm	0.193418	0.39	54421.800000	Y_R2 488.368
Li (670.783 nm)	0.994902	ppm	0.005787	0.58	15213.800000	Y_R2 488.368
Mg (279.078 nm)	55.237000	ppm	0.076985	0.14	193580.000000	Y 377.433
Mn (257.610 nm)	1.006950	ppm	0.000945	0.09	290196.000000	Y 377.433
Mo (202.032 nm)	0.969888	ppm	0.001612	0.17	12842.000000	Y 377.433
Na (589.592 nm)	57.282000 o	ppm	0.198850	0.35	50450.900000	Y_R2 488.368
Na H (589.593 nm)	54.656460	ppm	0.086371	0.16	32156.044459	Y_R4
Ni (231.604 nm)	0.934254	ppm	0.000769	0.08	5061.220000	Y 377.433
P (213.618 nm)	18.538100	ppm	0.009103	0.05	28369.600000	Y 242.219
Pb (220.353 nm)	0.959346	ppm	0.001387	0.14	3235.710000	Y 242.219
S (181.972 nm)	21.756980	ppm	0.043858	0.20	10645.866366	Y 377.433
Sb (206.834 nm)	-0.003133 u	ppm	0.002579	82.30	-8.798060	Y 377.433
Se (196.026 nm)	1.916590	ppm	0.003681	0.19	3074.160000	Y 242.219
Si (288.158 nm)	10.233900	ppm	0.017233	0.17	68870.800000	Y 377.433
Sn (189.925 nm)	1.934070	ppm	0.007553	0.39	3191.960000	Y 377.433
Sr (421.552 nm)	1.012120	ppm	0.000645	0.06	162645.180861	Y_R 488.368
Th (288.505 nm)	0.998420	ppm	0.004040	0.40	1679.720000	Y 377.433
Ti (336.122 nm)	0.980320	ppm	0.000521	0.05	129008.000000	Y 377.433
Tl (190.794 nm)	1.894180	ppm	0.003287	0.17	4622.430000	Y 377.433
U (409.013 nm)	1.980650	ppm	0.007031	0.35	6297.290000	Y 377.433
V (292.401 nm)	0.968611	ppm	0.000737	0.08	51937.400000	Y 377.433
Zn (206.200 nm)	0.485429	ppm	0.001366	0.28	2222.560000	Y 377.433
Zr (343.823 nm)	0.481655	ppm	0.000425	0.09	28086.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.995106	18605.484233	0.001379	0.14
Y 377.433	1.013613	563139.370060	0.002925	0.29
Y_R 377.433	1.027340	50016.900000	0.008126	0.79
Y_R 488.368	1.016890	43488.500000	0.008298	0.82
Y_R2 488.368	1.008984	84271.200710	0.004057	0.40
Y_R4	1.026090	39449.900000	0.000092	0.01

Sample Name: 280-123062-A-8-F MSD

Date: 5/11/2019 12:12:55 AM

Rack:Tube: 2:39

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001040	ppm	0.000223	21.48	-461.576000	Y 377.433
Al (394.401 nm)	10.089300 o	ppm	0.011626	0.12	127096.000000	Y 377.433
Al H (396.152 nm)	10.263400	ppm	0.039168	0.38	23378.300000	Y_R 377.433
As (188.980 nm)	1.918140	ppm	0.003375	0.18	3049.120000	Y 242.219
B (249.678 nm)	0.980358	ppm	0.001215	0.12	7516.300000	Y 242.219
Ba (493.408 nm)	1.989670	ppm	0.002311	0.12	210404.000000	Y_R 488.368
Be (234.861 nm)	0.932157	ppm	0.008987	0.96	98841.400000	Y_R 488.368
Bi (223.061 nm)	1.945200	ppm	0.006153	0.32	4268.570000	Y 377.433
Ca (315.887 nm)	55.733659	ppm	0.122116	0.22	46026.692064	Y_R 377.433
Cd (214.439 nm)	0.932297	ppm	0.000820	0.09	35715.100000	Y 377.433
Co (228.615 nm)	0.927049	ppm	0.000246	0.03	23223.700000	Y 242.219
Cr (205.560 nm)	0.934424	ppm	0.005050	0.54	6459.860000	Y 377.433
Cu (324.754 nm)	0.924950	ppm	0.003769	0.41	45943.200000	Y 377.433
Fe (238.204 nm)	10.118622 o	ppm	0.026307	0.26	25300.434913	Y_R 377.433
Fe H (259.940 nm)	10.116700	ppm	0.002799	0.03	14512.100000	Y_R 377.433
K (766.491 nm)	49.420400	ppm	0.275037	0.56	54161.000000	Y_R2 488.368
Li (670.783 nm)	0.980202	ppm	0.000167	0.02	14946.400000	Y_R2 488.368
Mg (279.078 nm)	54.871100	ppm	0.084077	0.15	192297.000000	Y 377.433
Mn (257.610 nm)	0.991137	ppm	0.001509	0.15	285638.000000	Y 377.433
Mo (202.032 nm)	0.954942	ppm	0.000526	0.06	12644.200000	Y 377.433
Na (589.592 nm)	56.915000 o	ppm	0.126744	0.22	50125.200000	Y_R2 488.368
Na H (589.593 nm)	54.231064	ppm	0.095893	0.18	31909.490830	Y_R4
Ni (231.604 nm)	0.923532	ppm	0.002407	0.26	5002.990000	Y 377.433
P (213.618 nm)	18.472100	ppm	0.012843	0.07	28271.600000	Y 242.219
Pb (220.353 nm)	0.943384	ppm	0.000168	0.02	3182.050000	Y 242.219
S (181.972 nm)	21.522301	ppm	0.053367	0.25	10531.103076	Y 377.433
Sb (206.834 nm)	-0.002207 u	ppm	0.003018	> 100.00	-7.036460	Y 377.433
Se (196.026 nm)	1.896300	ppm	0.008302	0.44	3041.670000	Y 242.219
Si (288.158 nm)	10.148700	ppm	0.068680	0.68	68302.000000	Y 377.433
Sn (189.925 nm)	1.899910	ppm	0.000972	0.05	3135.740000	Y 377.433
Sr (421.552 nm)	0.999229	ppm	0.001184	0.12	160574.974931	Y_R 488.368
Th (288.505 nm)	0.991178	ppm	0.002081	0.21	1668.670000	Y 377.433
Ti (336.122 nm)	0.965860	ppm	0.001728	0.18	127098.000000	Y 377.433
Tl (190.794 nm)	1.858830	ppm	0.003246	0.17	4536.110000	Y 377.433
U (409.013 nm)	1.978470	ppm	0.017579	0.89	6290.490000	Y 377.433
V (292.401 nm)	0.952663	ppm	0.001693	0.18	51079.600000	Y 377.433
Zn (206.200 nm)	0.483762	ppm	0.002317	0.48	2214.930000	Y 377.433
Zr (343.823 nm)	0.480770	ppm	0.000564	0.12	28034.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.002041	18735.161281	0.009362	0.93
Y 377.433	1.021433	567484.051605	0.008472	0.83
Y_R 377.433	1.043150	50786.500000	0.003963	0.38
Y_R 488.368	1.031010	44092.300000	0.000569	0.06
Y_R2 488.368	1.028769	85923.709043	0.000302	0.03
Y_R4	1.050000	40369.100000	0.012398	1.18

Sample Name: 280-123062-A-8-Dpds

Date: 5/11/2019 12:16:31 AM

Rack:Tube: 2:40

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.042068	ppm	0.000097	0.23	1345.690000	Y 377.433
Al (394.401 nm)	1.244710	ppm	0.000459	0.04	15711.300000	Y 377.433
Al H (396.152 nm)	1.375370	ppm	0.012372	0.90	2912.910000	Y_R 377.433
As (188.980 nm)	0.193260	ppm	0.000533	0.28	305.543000	Y 242.219
B (249.678 nm)	0.119855	ppm	0.000793	0.66	929.184000	Y 242.219
Ba (493.408 nm)	0.165759	ppm	0.000138	0.08	19022.000000	Y_R 488.368
Be (234.861 nm)	0.047526	ppm	0.000075	0.16	5030.330000	Y_R 488.368
Bi (223.061 nm)	0.004110	ppm	0.002044	49.72	-1.554750	Y 377.433
Ca (315.887 nm)	26.677364	ppm	0.005664	0.02	21991.908251	Y_R 377.433
Cd (214.439 nm)	0.047731	ppm	0.000016	0.03	1822.460000	Y 377.433
Co (228.615 nm)	0.052089	ppm	0.000821	1.58	1282.690000	Y 242.219
Cr (205.560 nm)	0.048230	ppm	0.001088	2.25	325.678000	Y 377.433
Cu (324.754 nm)	0.047065	ppm	0.000011	0.02	2812.890000	Y 377.433
Fe (238.204 nm)	1.451323	ppm	0.004914	0.34	3632.437439	Y_R 377.433
Fe H (259.940 nm)	1.479430 u	ppm	0.001784	0.12	2098.290000	Y_R 377.433
K (766.491 nm)	19.608700	ppm	0.132942	0.68	22805.600000	Y_R2 488.368
Li (670.783 nm)	0.107857	ppm	0.003749	3.48	-923.819000	Y_R2 488.368
Mg (279.078 nm)	26.288400	ppm	0.006363	0.02	92149.300000	Y 377.433
Mn (257.610 nm)	0.097011	ppm	0.000061	0.06	27936.600000	Y 377.433
Mo (202.032 nm)	0.050070	ppm	0.000074	0.15	673.978000	Y 377.433
Na (589.592 nm)	26.607300	ppm	0.042925	0.16	23341.100000	Y_R2 488.368
Na H (589.593 nm)	26.556810 u	ppm	0.018902	0.07	15869.883943	Y_R4
Ni (231.604 nm)	0.058062	ppm	0.000612	1.05	304.822000	Y 377.433
P (213.618 nm)	1.801860	ppm	0.009122	0.51	2773.150000	Y 242.219
Pb (220.353 nm)	0.096045	ppm	0.000780	0.81	332.122000	Y 242.219
S (181.972 nm)	12.055236	ppm	0.008229	0.07	5900.293400	Y 377.433
Sb (206.834 nm)	0.097048	ppm	0.002030	2.09	182.866000	Y 377.433
Se (196.026 nm)	0.190547	ppm	0.001550	0.81	310.531000	Y 242.219
Si (288.158 nm)	12.429400	ppm	0.048112	0.39	83536.800000	Y 377.433
Sn (189.925 nm)	0.097466	ppm	0.000402	0.41	169.495000	Y 377.433
Sr (421.552 nm)	0.091894	ppm	0.000265	0.29	14860.930014	Y_R 488.368
Th (288.505 nm)	0.194975	ppm	0.001903	0.98	359.060000	Y 377.433
Ti (336.122 nm)	0.053315	ppm	0.000011	0.02	6603.260000	Y 377.433
Tl (190.794 nm)	0.193806	ppm	0.000639	0.33	472.459000	Y 377.433
U (409.013 nm)	0.497332	ppm	0.010157	2.04	1610.000000	Y 377.433
V (292.401 nm)	0.048158	ppm	0.000234	0.49	2485.490000	Y 377.433
Zn (206.200 nm)	0.206032	ppm	0.001348	0.65	944.708000	Y 377.433
Zr (343.823 nm)	0.050946	ppm	0.000187	0.37	2815.620000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.027732	19215.496394	0.001021	0.10
Y 377.433	1.040666	578169.561966	0.000582	0.06
Y_R 377.433	1.046660	50957.300000	0.002076	0.20
Y_R 488.368	1.035610	44289.100000	0.003262	0.31
Y_R2 488.368	1.026725	85752.951776	0.002364	0.23
Y_R4	1.045680	40203.100000	0.005329	0.51

Sample Name: 280-123062-A-20-B

Date: 5/11/2019 12:20:04 AM

Rack:Tube: 2:41

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000151 u	ppm	0.000083	54.90	-190.458000	Y 377.433
Al (394.401 nm)	0.538285	ppm	0.001326	0.25	6795.410000	Y 377.433
Al H (396.152 nm)	0.670656 u	ppm	0.009206	1.37	1299.280000	Y_R 377.433
As (188.980 nm)	0.000940 u	ppm	0.002298	> 100.00	-0.397212	Y 242.219
B (249.678 nm)	0.029884	ppm	0.000475	1.59	240.094000	Y 242.219
Ba (493.408 nm)	0.023368	ppm	0.000085	0.36	4081.370000	Y_R 488.368
Be (234.861 nm)	0.000098	ppm	0.000014	14.01	-0.568021	Y_R 488.368
Bi (223.061 nm)	0.005835	ppm	0.000983	16.85	2.143370	Y 377.433
Ca (315.887 nm)	8.930283	ppm	0.007650	0.09	7313.131220	Y_R 377.433
Cd (214.439 nm)	0.000141	ppm	0.000155	> 100.00	-0.924255	Y 377.433
Co (228.615 nm)	0.000760	ppm	0.000328	43.15	-3.976920	Y 242.219
Cr (205.560 nm)	0.006224	ppm	0.000249	3.99	34.986700	Y 377.433
Cu (324.754 nm)	0.000260	ppm	0.000006	2.27	519.071000	Y 377.433
Fe (238.204 nm)	1.140521	ppm	0.000962	0.08	2855.440533	Y_R 377.433
Fe H (259.940 nm)	1.176120 u	ppm	0.000561	0.05	1662.360000	Y_R 377.433
K (766.491 nm)	0.149891	ppm	0.120961	80.70	2339.240000	Y_R2 488.368
Li (670.783 nm)	0.012768	ppm	0.002624	20.55	-2653.740000	Y_R2 488.368
Mg (279.078 nm)	5.287930	ppm	0.004248	0.08	18549.500000	Y 377.433
Mn (257.610 nm)	0.018738	ppm	0.000002	0.01	5377.170000	Y 377.433
Mo (202.032 nm)	0.000816	ppm	0.000072	8.77	22.414800	Y 377.433
Na (589.592 nm)	10.308100	ppm	0.054312	0.53	9137.850000	Y_R2 488.368
Na H (589.593 nm)	10.123960 u	ppm	0.031749	0.31	6345.635466	Y_R4
Ni (231.604 nm)	0.002708	ppm	0.000171	6.30	4.234180	Y 377.433
P (213.618 nm)	0.009932	ppm	0.001198	12.06	18.803200	Y 242.219
Pb (220.353 nm)	0.000516	ppm	0.000645	> 100.00	9.603840	Y 242.219
S (181.972 nm)	10.606516	ppm	0.047717	0.45	5191.175714	Y 377.433
Sb (206.834 nm)	-0.000662 u	ppm	0.000427	64.40	1.131760	Y 377.433
Se (196.026 nm)	0.001639	ppm	0.000005	0.31	7.927540	Y 242.219
Si (288.158 nm)	11.951900	ppm	0.088620	0.74	80347.000000	Y 377.433
Sn (189.925 nm)	-0.004723 u	ppm	0.000643	13.62	1.324280	Y 377.433
Sr (421.552 nm)	0.027845	ppm	0.000378	1.36	4574.968836	Y_R 488.368
Th (288.505 nm)	-0.006862 u	ppm	0.000996	14.52	7.083630	Y 377.433
Ti (336.122 nm)	0.010780	ppm	0.000460	4.27	931.139000	Y 377.433
Tl (190.794 nm)	-0.000322 u	ppm	0.000269	83.41	-1.215740	Y 377.433
U (409.013 nm)	0.006963	ppm	0.002530	36.34	51.905600	Y 377.433
V (292.401 nm)	0.001850	ppm	0.000068	3.65	3.679260	Y 377.433
Zn (206.200 nm)	0.006042	ppm	0.000980	16.22	30.853700	Y 377.433
Zr (343.823 nm)	0.000967	ppm	0.000024	2.48	-116.798000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.048624	19606.113664	0.000282	0.03
Y 377.433	1.057680	587621.981411	0.000633	0.06
Y_R 377.433	1.061890	51698.900000	0.002227	0.21
Y_R 488.368	1.046700	44763.400000	0.000019	0.00
Y_R2 488.368	1.038558	86741.301506	0.000161	0.02
Y_R4	1.043540	40120.800000	0.004210	0.40

Sample Name: 280-123062-A-28-B

Date: 5/11/2019 12:23:36 AM

Rack:Tube: 2:42

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000193	ppm	0.000225	> 100.00	-178.250000	Y 377.433
Al (394.401 nm)	0.622016	ppm	0.000859	0.14	7849.060000	Y 377.433
Al H (396.152 nm)	0.753305 u	ppm	0.012960	1.72	1485.170000	Y_R 377.433
As (188.980 nm)	0.002304	ppm	0.000372	16.16	1.758990	Y 242.219
B (249.678 nm)	0.028370	ppm	0.000904	3.19	228.310000	Y 242.219
Ba (493.408 nm)	0.023485	ppm	0.000261	1.11	4093.890000	Y_R 488.368
Be (234.861 nm)	0.000070	ppm	0.000022	32.22	-6.338250	Y_R 488.368
Bi (223.061 nm)	0.003364	ppm	0.002875	85.45	-3.237170	Y 377.433
Ca (315.887 nm)	8.897849	ppm	0.010138	0.11	7286.325746	Y_R 377.433
Cd (214.439 nm)	0.000096	ppm	0.000060	61.86	-2.496670	Y 377.433
Co (228.615 nm)	0.000742	ppm	0.000047	6.38	-4.425910	Y 242.219
Cr (205.560 nm)	0.007382	ppm	0.000067	0.91	43.004300	Y 377.433
Cu (324.754 nm)	-0.000030 u	ppm	0.000179	> 100.00	504.326000	Y 377.433
Fe (238.204 nm)	1.448100	ppm	0.004647	0.32	3624.380233	Y_R 377.433
Fe H (259.940 nm)	1.487320 u	ppm	0.004138	0.28	2109.640000	Y_R 377.433
K (766.491 nm)	0.137550	ppm	0.030693	22.31	2326.260000	Y_R2 488.368
Li (670.783 nm)	0.015265	ppm	0.000864	5.66	-2608.320000	Y_R2 488.368
Mg (279.078 nm)	5.256600	ppm	0.009440	0.18	18439.000000	Y 377.433
Mn (257.610 nm)	0.020912	ppm	0.000032	0.15	6003.610000	Y 377.433
Mo (202.032 nm)	0.000912	ppm	0.000140	15.32	23.682900	Y 377.433
Na (589.592 nm)	10.266500	ppm	0.039394	0.38	9101.730000	Y_R2 488.368
Na H (589.593 nm)	9.988322 u	ppm	0.034240	0.34	6267.021696	Y_R4
Ni (231.604 nm)	0.003963	ppm	0.000170	4.30	11.045300	Y 377.433
P (213.618 nm)	0.011917	ppm	0.000362	3.04	21.893700	Y 242.219
Pb (220.353 nm)	0.001460	ppm	0.000483	33.06	12.807600	Y 242.219
S (181.972 nm)	10.471508	ppm	0.029009	0.28	5125.205952	Y 377.433
Sb (206.834 nm)	-0.002705 u	ppm	0.002749	> 100.00	-2.640540	Y 377.433
Se (196.026 nm)	0.001335	ppm	0.000508	38.07	7.360810	Y 242.219
Si (288.158 nm)	12.076700	ppm	0.023052	0.19	81181.000000	Y 377.433
Sn (189.925 nm)	-0.003722 u	ppm	0.000852	22.90	2.971200	Y 377.433
Sr (421.552 nm)	0.027720	ppm	0.000168	0.61	4554.840128	Y_R 488.368
Th (288.505 nm)	-0.004629 u	ppm	0.001732	37.40	11.026000	Y 377.433
Ti (336.122 nm)	0.010611	ppm	0.000414	3.91	908.885000	Y 377.433
Tl (190.794 nm)	0.001735	ppm	0.000440	25.35	3.781380	Y 377.433
U (409.013 nm)	-0.000249 u	ppm	0.002195	> 100.00	29.083000	Y 377.433
V (292.401 nm)	0.002654	ppm	0.000080	3.01	46.235000	Y 377.433
Zn (206.200 nm)	0.006511	ppm	0.000282	4.34	33.040000	Y 377.433
Zr (343.823 nm)	0.001123	ppm	0.000083	7.37	-107.606000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.036271	19375.158024	0.005658	0.55
Y 377.433	1.046005	581135.830669	0.006520	0.62
Y_R 377.433	1.056610	51441.900000	0.003380	0.32
Y_R 488.368	1.044330	44661.900000	0.001280	0.12
Y_R2 488.368	1.038337	86722.787020	0.005095	0.49
Y_R4	1.042640	40086.100000	0.003819	0.37

Sample Name: 280-123051-A-1-B

Date: 5/11/2019 12:27:09 AM

Rack:Tube: 2:43

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001017	ppm	0.000030	2.94	-147.983000	Y 377.433
Al (394.401 nm)	-0.022180 u	ppm	0.001691	7.63	522.860000	Y 377.433
Al H (396.152 nm)	-0.429233 u	ppm	0.002798	0.65	-26.478000	Y_R 377.433
As (188.980 nm)	0.005250	ppm	0.000354	6.74	6.485680	Y 242.219
B (249.678 nm)	0.082060	ppm	0.000760	0.93	639.705000	Y 242.219
Ba (493.408 nm)	0.014226	ppm	0.000576	4.05	3122.310000	Y_R 488.368
Be (234.861 nm)	-0.000023 u	ppm	0.000066	> 100.00	-15.125200	Y_R 488.368
Bi (223.061 nm)	0.001586	ppm	0.001250	78.82	-7.158130	Y 377.433
Ca (315.887 nm)	380.218862	ppm	0.091911	0.02	314405.407116	Y_R 377.433
Cd (214.439 nm)	0.000205	ppm	0.000089	43.31	1.599460	Y 377.433
Co (228.615 nm)	0.002697	ppm	0.000071	2.63	44.098700	Y 242.219
Cr (205.560 nm)	0.000183	ppm	0.000159	86.61	-6.889340	Y 377.433
Cu (324.754 nm)	-0.001876 u	ppm	0.000266	14.16	192.721000	Y 377.433
Fe (238.204 nm)	1.328656	ppm	0.000313	0.02	3325.772995	Y_R 377.433
Fe H (259.940 nm)	1.332760 u	ppm	0.007114	0.53	1887.500000	Y_R 377.433
K (766.491 nm)	4.896090	ppm	0.075783	1.55	7331.200000	Y_R2 488.368
Li (670.783 nm)	0.124190	ppm	0.003780	3.04	-626.675000	Y_R2 488.368
Mg (279.078 nm)	140.030000	ppm	0.780737	0.56	490831.000000	Y 377.433
Mn (257.610 nm)	0.732572	ppm	0.001582	0.22	211116.000000	Y 377.433
Mo (202.032 nm)	0.005572	ppm	0.000288	5.16	85.330800	Y 377.433
Na (589.592 nm)	28.116900	ppm	0.062023	0.22	24616.900000	Y_R2 488.368
Na H (589.593 nm)	27.550099 u	ppm	0.010611	0.04	16445.580183	Y_R4
Ni (231.604 nm)	0.004146	ppm	0.000153	3.69	12.041900	Y 377.433
P (213.618 nm)	-0.004467 u	ppm	0.005404	> 100.00	-3.862170	Y 242.219
Pb (220.353 nm)	-0.000284 u	ppm	0.001248	> 100.00	7.153310	Y 242.219
S (181.972 nm)	335.817627 bo	ppm	0.567621	0.17	164136.567572	Y 377.433
Sb (206.834 nm)	-0.006847 u	ppm	0.000440	6.43	-10.403100	Y 377.433
Se (196.026 nm)	0.001496 u	ppm	0.003225	> 100.00	8.682840	Y 242.219
Si (288.158 nm)	9.794320	ppm	0.020109	0.21	65934.500000	Y 377.433
Sn (189.925 nm)	-0.004068 u	ppm	0.000058	1.43	2.402020	Y 377.433
Sr (421.552 nm)	2.956291	ppm	0.015711	0.53	474866.209951	Y_R 488.368
Th (288.505 nm)	-0.002605 u	ppm	0.000976	37.44	19.735000	Y 377.433
Ti (336.122 nm)	-0.001912 u	ppm	0.000090	4.68	520.589000	Y 377.433
Tl (190.794 nm)	0.007555	ppm	0.000197	2.60	2.719910	Y 377.433
U (409.013 nm)	0.050806	ppm	0.000531	1.05	143.866000	Y 377.433
V (292.401 nm)	0.001054	ppm	0.000067	6.33	-41.555100	Y 377.433
Zn (206.200 nm)	0.010137	ppm	0.000367	3.62	49.590300	Y 377.433
Zr (343.823 nm)	0.000625	ppm	0.000009	1.43	-136.854000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.023201	19130.792675	0.015221	1.49
Y 377.433	1.045802	581023.073882	0.010910	1.04
Y_R 377.433	1.071660	52174.700000	0.008693	0.81
Y_R 488.368	1.055090	45122.000000	0.015811	1.50
Y_R2 488.368	1.042511	87071.428521	0.000471	0.05
Y_R4	1.062570	40852.700000	0.000808	0.08

Sample Name: 280-123051-A-2-D

Date: 5/11/2019 12:30:41 AM

Rack:Tube: 2:44

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001379	ppm	0.000222	16.09	-134.128000	Y 377.433
Al (394.401 nm)	-0.141479 u	ppm	0.000274	0.19	792.063000	Y 377.433
Al H (396.152 nm)	-1.685180 u	ppm	0.003743	0.22	88.479100	Y_R 377.433
As (188.980 nm)	0.005980	ppm	0.001543	25.80	7.670930	Y 242.219
B (249.678 nm)	0.292591	ppm	0.001365	0.47	2253.100000	Y 242.219
Ba (493.408 nm)	0.024462	ppm	0.000434	1.77	4195.710000	Y_R 488.368
Be (234.861 nm)	-0.000025 u	ppm	0.000063	> 100.00	-8.093020	Y_R 488.368
Bi (223.061 nm)	0.000922	ppm	0.000898	97.38	-8.755070	Y 377.433
Ca (315.887 nm)	154.174021	ppm	0.034730	0.02	127443.948967	Y_R 377.433
Cd (214.439 nm)	0.000341	ppm	0.000008	2.36	6.498810	Y 377.433
Co (228.615 nm)	0.000240	ppm	0.000312	> 100.00	-17.369000	Y 242.219
Cr (205.560 nm)	0.000594	ppm	0.000219	36.85	-4.136310	Y 377.433
Cu (324.754 nm)	-0.000098 u	ppm	0.000048	49.02	416.057000	Y 377.433
Fe (238.204 nm)	0.515388	ppm	0.000427	0.08	1292.626082	Y_R 377.433
Fe H (259.940 nm)	0.532624 u	ppm	0.003773	0.71	737.514000	Y_R 377.433
K (766.491 nm)	5.355550	ppm	0.008225	0.15	7814.450000	Y_R2 488.368
Li (670.783 nm)	0.074456	ppm	0.000371	0.50	-1531.480000	Y_R2 488.368
Mg (279.078 nm)	67.936500	ppm	0.034254	0.05	238139.000000	Y 377.433
Mn (257.610 nm)	0.134542	ppm	0.000137	0.10	38753.600000	Y 377.433
Mo (202.032 nm)	0.027698	ppm	0.000277	1.00	378.025000	Y 377.433
Na (589.592 nm)	34.052600	ppm	0.040860	0.12	29779.400000	Y_R2 488.368
Na H (589.593 nm)	33.785861 u	ppm	0.044753	0.13	20059.739514	Y_R4
Ni (231.604 nm)	-0.000018 u	ppm	0.000122	> 100.00	-10.557000	Y 377.433
P (213.618 nm)	0.000590 u	ppm	0.002861	> 100.00	2.909580	Y 242.219
Pb (220.353 nm)	0.000287 u	ppm	0.000852	> 100.00	8.951420	Y 242.219
S (181.972 nm)	124.745990 bo	ppm	0.130155	0.10	60976.612408	Y 377.433
Sb (206.834 nm)	-0.005737 u	ppm	0.001150	20.05	-8.563420	Y 377.433
Se (196.026 nm)	0.001020 u	ppm	0.004478	> 100.00	7.276030	Y 242.219
Si (288.158 nm)	8.131060	ppm	0.039663	0.49	54824.000000	Y 377.433
Sn (189.925 nm)	-0.005206 u	ppm	0.000622	11.96	0.529175	Y 377.433
Sr (421.552 nm)	9.800639	ppm	0.007669	0.08	1574028.419085	Y_R 488.368
Th (288.505 nm)	-0.003139 u	ppm	0.001159	36.92	12.663700	Y 377.433
Ti (336.122 nm)	0.000056 u	ppm	0.000103	> 100.00	10.532000	Y 377.433
Tl (190.794 nm)	0.003437	ppm	0.000368	10.70	1.945620	Y 377.433
U (409.013 nm)	0.026516	ppm	0.007989	30.13	95.062300	Y 377.433
V (292.401 nm)	0.000847	ppm	0.000151	17.88	-52.106700	Y 377.433
Zn (206.200 nm)	0.011960	ppm	0.000656	5.48	57.808000	Y 377.433
Zr (343.823 nm)	0.000763	ppm	0.000010	1.37	-128.761000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.011325	18908.732908	0.002539	0.25
Y 377.433	1.031516	573086.033808	0.001876	0.18
Y_R 377.433	1.056830	51452.300000	0.005657	0.54
Y_R 488.368	1.036450	44325.200000	0.006506	0.63
Y_R2 488.368	1.054667	88086.679434	0.000958	0.09
Y_R4	1.042460	40079.200000	0.005177	0.50

Sample Name: 280-123051-A-2-E MS

Date: 5/11/2019 12:34:14 AM

Rack:Tube: 2:45

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.002422	ppm	0.000273	11.27	-418.184000	Y 377.433
Al (394.401 nm)	9.735570 o	ppm	0.001757	0.02	125061.000000	Y 377.433
Al H (396.152 nm)	8.333300	ppm	0.007481	0.09	22929.600000	Y_R 377.433
As (188.980 nm)	1.996060	ppm	0.001663	0.08	3173.100000	Y 242.219
B (249.678 nm)	1.269980	ppm	0.000605	0.05	9735.080000	Y 242.219
Ba (493.408 nm)	1.973490	ppm	0.001295	0.07	208706.000000	Y_R 488.368
Be (234.861 nm)	0.945159	ppm	0.001749	0.19	100221.000000	Y_R 488.368
Bi (223.061 nm)	1.960530	ppm	0.000978	0.05	4302.310000	Y 377.433
Ca (315.887 nm)	195.797670	ppm	0.262004	0.13	161873.449515	Y_R 377.433
Cd (214.439 nm)	0.928174	ppm	0.001254	0.14	35557.200000	Y 377.433
Co (228.615 nm)	0.922077	ppm	0.001400	0.15	23099.700000	Y 242.219
Cr (205.560 nm)	0.944992	ppm	0.005943	0.63	6532.940000	Y 377.433
Cu (324.754 nm)	0.948881	ppm	0.001199	0.13	47040.300000	Y 377.433
Fe (238.204 nm)	10.218545 o	ppm	0.008642	0.08	25550.239205	Y_R 377.433
Fe H (259.940 nm)	10.205400	ppm	0.014197	0.14	14639.600000	Y_R 377.433
K (766.491 nm)	56.034500	ppm	0.074240	0.13	61117.600000	Y_R2 488.368
Li (670.783 nm)	1.071870	ppm	0.000014	0.00	16614.100000	Y_R2 488.368
Mg (279.078 nm)	112.566000	ppm	0.092508	0.08	394523.000000	Y 377.433
Mn (257.610 nm)	1.074700	ppm	0.000582	0.05	309723.000000	Y 377.433
Mo (202.032 nm)	0.997215	ppm	0.001071	0.11	13203.500000	Y 377.433
Na (589.592 nm)	83.188800 o	ppm	0.071997	0.09	72961.200000	Y_R2 488.368
Na H (589.593 nm)	80.784395	ppm	0.450256	0.56	47299.427277	Y_R4
Ni (231.604 nm)	0.906529	ppm	0.000235	0.03	4910.710000	Y 377.433
P (213.618 nm)	18.977900	ppm	0.041834	0.22	29044.500000	Y 242.219
Pb (220.353 nm)	0.950635	ppm	0.000513	0.05	3206.420000	Y 242.219
S (181.972 nm)	130.162576 bo	ppm	0.152184	0.12	63628.801962	Y 377.433
Sb (206.834 nm)	-0.002410 u	ppm	0.000265	10.98	-7.659130	Y 377.433
Se (196.026 nm)	1.938440	ppm	0.000956	0.05	3109.270000	Y 242.219
Si (288.158 nm)	9.804880	ppm	0.002385	0.02	66005.000000	Y 377.433
Sn (189.925 nm)	1.906480	ppm	0.004880	0.26	3146.560000	Y 377.433
Sr (421.552 nm)	10.312950	ppm	0.028785	0.28	1656304.214430	Y_R 488.368
Th (288.505 nm)	1.004310	ppm	0.005214	0.52	1688.050000	Y 377.433
Ti (336.122 nm)	0.978922	ppm	0.000301	0.03	129297.000000	Y 377.433
Tl (190.794 nm)	1.843120	ppm	0.001078	0.06	4491.620000	Y 377.433
U (409.013 nm)	2.024410	ppm	0.004425	0.22	6419.340000	Y 377.433
V (292.401 nm)	0.969255	ppm	0.000400	0.04	51973.000000	Y 377.433
Zn (206.200 nm)	0.474416	ppm	0.000316	0.07	2172.240000	Y 377.433
Zr (343.823 nm)	0.479010	ppm	0.000190	0.04	27931.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.972461	18182.098832	0.002623	0.27
Y 377.433	1.000910	556082.015656	0.002175	0.22
Y_R 377.433	1.028380	50067.200000	0.002165	0.21
Y_R 488.368	1.014190	43372.900000	0.003548	0.35
Y_R2 488.368	1.014584	84738.894806	0.006861	0.68
Y_R4	1.017810	39131.600000	0.008026	0.79

Sample Name: 280-123051-A-2-F MSD

Date: 5/11/2019 12:37:50 AM

Rack:Tube: 2:46

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001505	ppm	0.000010	0.65	-452.355000	Y 377.433
Al (394.401 nm)	9.922090 o	ppm	0.009397	0.09	127393.000000	Y 377.433
Al H (396.152 nm)	8.437480	ppm	0.013578	0.16	23149.000000	Y_R 377.433
As (188.980 nm)	2.008640	ppm	0.006218	0.31	3193.110000	Y 242.219
B (249.678 nm)	1.291140	ppm	0.001471	0.11	9897.080000	Y 242.219
Ba (493.408 nm)	1.986420	ppm	0.001835	0.09	210063.000000	Y_R 488.368
Be (234.861 nm)	0.950013	ppm	0.000662	0.07	100735.000000	Y_R 488.368
Bi (223.061 nm)	2.008980	ppm	0.004316	0.21	4408.860000	Y 377.433
Ca (315.887 nm)	195.257109	ppm	0.132899	0.07	161426.378236	Y_R 377.433
Cd (214.439 nm)	0.932332	ppm	0.000242	0.03	35716.500000	Y 377.433
Co (228.615 nm)	0.925827	ppm	0.000445	0.05	23193.700000	Y 242.219
Cr (205.560 nm)	0.947259	ppm	0.002456	0.26	6548.630000	Y 377.433
Cu (324.754 nm)	0.952119	ppm	0.001033	0.11	47201.500000	Y 377.433
Fe (238.204 nm)	10.349798 o	ppm	0.003257	0.03	25878.368634	Y_R 377.433
Fe H (259.940 nm)	10.353500	ppm	0.016382	0.16	14852.400000	Y_R 377.433
K (766.491 nm)	56.566300	ppm	0.006988	0.01	61676.900000	Y_R2 488.368
Li (670.783 nm)	1.074480	ppm	0.000698	0.06	16661.500000	Y_R2 488.368
Mg (279.078 nm)	113.012000	ppm	0.013991	0.01	396085.000000	Y 377.433
Mn (257.610 nm)	1.078350	ppm	0.000816	0.08	310775.000000	Y 377.433
Mo (202.032 nm)	1.000830	ppm	0.001144	0.11	13251.300000	Y 377.433
Na (589.592 nm)	83.751700 o	ppm	0.118696	0.14	73453.500000	Y_R2 488.368
Na H (589.593 nm)	81.632215	ppm	0.086484	0.11	47790.811614	Y_R4
Ni (231.604 nm)	0.909793	ppm	0.001588	0.17	4928.430000	Y 377.433
P (213.618 nm)	19.412900	ppm	0.005464	0.03	29716.100000	Y 242.219
Pb (220.353 nm)	0.954106	ppm	0.001292	0.14	3218.110000	Y 242.219
S (181.972 nm)	130.579675 bo	ppm	0.107812	0.08	63832.603273	Y 377.433
Sb (206.834 nm)	-0.002608 u	ppm	0.002192	84.04	-8.026660	Y 377.433
Se (196.026 nm)	1.956850	ppm	0.004204	0.21	3138.720000	Y 242.219
Si (288.158 nm)	9.813840	ppm	0.001030	0.01	66064.900000	Y 377.433
Sn (189.925 nm)	1.918030	ppm	0.001156	0.06	3165.560000	Y 377.433
Sr (421.552 nm)	10.283877	ppm	0.016478	0.16	1651635.267122	Y_R 488.368
Th (288.505 nm)	1.025790	ppm	0.003973	0.39	1725.440000	Y 377.433
Ti (336.122 nm)	0.982899	ppm	0.000822	0.08	129819.000000	Y 377.433
Tl (190.794 nm)	1.855150	ppm	0.000311	0.02	4521.020000	Y 377.433
U (409.013 nm)	2.056820	ppm	0.001392	0.07	6522.450000	Y 377.433
V (292.401 nm)	0.972871	ppm	0.000185	0.02	52167.800000	Y 377.433
Zn (206.200 nm)	0.482069	ppm	0.000582	0.12	2207.220000	Y 377.433
Zr (343.823 nm)	0.486338	ppm	0.000162	0.03	28361.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.982567	18371.046231	0.002192	0.22
Y 377.433	1.010874	561618.086076	0.000878	0.09
Y_R 377.433	1.045920	50921.500000	0.000764	0.07
Y_R 488.368	1.027320	43934.500000	0.000252	0.02
Y_R2 488.368	1.023075	85448.093748	0.002650	0.26
Y_R4	1.020270	39226.200000	0.003480	0.34

Sample Name: 280-123051-A-3-B

Date: 5/11/2019 12:41:26 AM

Rack:Tube: 2:47

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001395	ppm	0.000211	15.16	-133.539000	Y 377.433
Al (394.401 nm)	-0.139910 u	ppm	0.000533	0.38	771.354000	Y 377.433
Al H (396.152 nm)	-1.653680 u	ppm	0.003065	0.19	96.246800	Y_R 377.433
As (188.980 nm)	0.004991	ppm	0.004183	83.81	6.098290	Y 242.219
B (249.678 nm)	0.289088	ppm	0.001211	0.42	2226.250000	Y 242.219
Ba (493.408 nm)	0.024357	ppm	0.000381	1.56	4184.670000	Y_R 488.368
Be (234.861 nm)	-0.000010 u	ppm	0.000019	> 100.00	-6.509890	Y_R 488.368
Bi (223.061 nm)	0.001069 u	ppm	0.002765	> 100.00	-8.431380	Y 377.433
Ca (315.887 nm)	151.993952	ppm	0.115642	0.08	125640.815144	Y_R 377.433
Cd (214.439 nm)	0.000357	ppm	0.000075	21.10	7.116950	Y 377.433
Co (228.615 nm)	0.000254	ppm	0.000195	76.48	-17.021800	Y 242.219
Cr (205.560 nm)	0.000510	ppm	0.000017	3.34	-4.717590	Y 377.433
Cu (324.754 nm)	0.000243	ppm	0.000015	6.13	434.801000	Y 377.433
Fe (238.204 nm)	0.526392	ppm	0.002480	0.47	1320.136835	Y_R 377.433
Fe H (259.940 nm)	0.543369 u	ppm	0.008274	1.52	752.957000	Y_R 377.433
K (766.491 nm)	5.396150	ppm	0.078130	1.45	7857.150000	Y_R2 488.368
Li (670.783 nm)	0.070343	ppm	0.000285	0.40	-1606.300000	Y_R2 488.368
Mg (279.078 nm)	66.995600	ppm	0.035035	0.05	234841.000000	Y 377.433
Mn (257.610 nm)	0.132528	ppm	0.000004	0.00	38173.300000	Y 377.433
Mo (202.032 nm)	0.027281	ppm	0.000321	1.18	372.501000	Y 377.433
Na (589.592 nm)	33.411200	ppm	0.047604	0.14	29221.800000	Y_R2 488.368
Na H (589.593 nm)	33.518591 u	ppm	0.028492	0.09	19904.833921	Y_R4
Ni (231.604 nm)	-0.000060 u	ppm	0.000429	> 100.00	-10.780300	Y 377.433
P (213.618 nm)	0.000667 u	ppm	0.001609	> 100.00	3.052290	Y 242.219
Pb (220.353 nm)	0.000109 u	ppm	0.000472	> 100.00	8.335530	Y 242.219
S (181.972 nm)	123.240331 bo	ppm	0.476894	0.39	60240.698428	Y 377.433
Sb (206.834 nm)	-0.006116 u	ppm	0.000168	2.75	-9.269060	Y 377.433
Se (196.026 nm)	0.000438 u	ppm	0.001234	> 100.00	6.337670	Y 242.219
Si (288.158 nm)	7.990230	ppm	0.002430	0.03	53883.200000	Y 377.433
Sn (189.925 nm)	-0.003570 u	ppm	0.001538	43.08	3.221900	Y 377.433
Sr (421.552 nm)	9.663546	ppm	0.010125	0.10	1552012.111631	Y_R 488.368
Th (288.505 nm)	-0.001730 u	ppm	0.000628	36.29	15.077800	Y 377.433
Ti (336.122 nm)	-0.000056 u	ppm	0.000032	56.76	-12.388600	Y 377.433
Tl (190.794 nm)	0.004047	ppm	0.000146	3.61	3.536530	Y 377.433
U (409.013 nm)	0.022633	ppm	0.002932	12.96	82.985600	Y 377.433
V (292.401 nm)	0.000846	ppm	0.000075	8.88	-51.470800	Y 377.433
Zn (206.200 nm)	0.012375	ppm	0.000274	2.22	59.706000	Y 377.433
Zr (343.823 nm)	0.000828	ppm	0.000100	12.10	-124.927000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.009186	18868.744868	0.003971	0.39
Y 377.433	1.029271	571838.609914	0.004642	0.45
Y_R 377.433	1.039410	50604.400000	0.002783	0.27
Y_R 488.368	1.018050	43538.000000	0.003724	0.37
Y_R2 488.368	1.032093	86201.302221	0.002658	0.26
Y_R4	1.014630	39009.300000	0.008903	0.88

Sample Name: CCVH-5690583

Date: 5/11/2019 12:44:56 AM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000245	ppm	0.000128	52.20	-312.578000	Y 377.433
Al (394.401 nm)	48.385200 o	ppm	0.004883	0.01	608058.000000	Y 377.433
Al H (396.152 nm)	48.659400	ppm	0.026233	0.05	109312.000000	Y_R 377.433
As (188.980 nm)	0.004006	ppm	0.000116	2.90	0.153183	Y 242.219
B (249.678 nm)	0.005785	ppm	0.000867	14.99	27.296100	Y 242.219
Ba (493.408 nm)	0.001727	ppm	0.000487	28.20	1848.850000	Y_R 488.368
Be (234.861 nm)	0.002437	ppm	0.000037	1.54	-164.318000	Y_R 488.368
Bi (223.061 nm)	0.943078	ppm	0.004782	0.51	2071.080000	Y 377.433
Ca (315.887 nm)	0.028249	ppm	0.012360	43.75	-37.373890	Y_R 377.433
Cd (214.439 nm)	0.000782	ppm	0.000024	3.03	42.796200	Y 377.433
Co (228.615 nm)	0.004321	ppm	0.000132	3.06	84.804400	Y 242.219
Cr (205.560 nm)	0.001069	ppm	0.000146	13.69	-2.057910	Y 377.433
Cu (324.754 nm)	0.005723	ppm	0.000100	1.75	1188.820000	Y 377.433
Fe (238.204 nm)	47.445072 o	ppm	0.029161	0.06	118615.484623	Y_R 377.433
Fe H (259.940 nm)	47.337200	ppm	0.030096	0.06	68006.600000	Y_R 377.433
K (766.491 nm)	0.216070	ppm	0.088134	40.79	2408.850000	Y_R2 488.368
Li (670.783 nm)	0.006032	ppm	0.004898	81.20	-2776.270000	Y_R2 488.368
Mg (279.078 nm)	0.019437	ppm	0.003780	19.45	-143.161000	Y 377.433
Mn (257.610 nm)	0.001361	ppm	0.000011	0.80	368.890000	Y 377.433
Mo (202.032 nm)	0.000669	ppm	0.000858	> 100.00	20.468600	Y 377.433
Na (589.592 nm)	238.949000 o	ppm	0.557973	0.23	207892.000000	Y_R2 488.368
Na H (589.593 nm)	244.421245	ppm	0.602576	0.25	142141.037591	Y_R4
Ni (231.604 nm)	0.001977	ppm	0.000658	33.28	0.267035	Y 377.433
P (213.618 nm)	-0.014394 u	ppm	0.000823	5.72	-25.437900	Y 242.219
Pb (220.353 nm)	0.007215	ppm	0.000880	12.20	48.079900	Y 242.219
S (181.972 nm)	4.736648	ppm	0.001377	0.03	2322.188101	Y 377.433
Sb (206.834 nm)	0.002372	ppm	0.001791	75.50	9.947700	Y 377.433
Se (196.026 nm)	0.004599	ppm	0.000552	12.01	0.210590	Y 242.219
Si (288.158 nm)	0.028198	ppm	0.000259	0.92	696.769000	Y 377.433
Sn (189.925 nm)	-0.003392 u	ppm	0.001146	33.79	3.513960	Y 377.433
Sr (421.552 nm)	0.001113	ppm	0.000004	0.33	289.237106	Y_R 488.368
Th (288.505 nm)	4.861910	ppm	0.002332	0.05	8589.850000	Y 377.433
Ti (336.122 nm)	0.001983	ppm	0.000001	0.06	-259.178000	Y 377.433
Tl (190.794 nm)	-0.000952 u	ppm	0.000417	43.82	-6.917920	Y 377.433
U (409.013 nm)	9.709400	ppm	0.011242	0.12	31079.000000	Y 377.433
V (292.401 nm)	-0.001242 u	ppm	0.000261	21.06	-161.100000	Y 377.433
Zn (206.200 nm)	0.001927	ppm	0.000089	4.63	18.484100	Y 377.433
Zr (343.823 nm)	-0.002758 u	ppm	0.000049	1.79	-335.367000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.005370	18797.404868	0.000472	0.05
Y 377.433	1.019049	566159.908786	0.000647	0.06
Y_R 377.433	1.035040	50391.800000	0.006443	0.62
Y_R 488.368	1.023570	43774.300000	0.007645	0.75
Y_R2 488.368	1.015171	84787.918907	0.001595	0.16
Y_R4	1.036810	39862.100000	0.001031	0.10

Sample Name: CCV-5690581

Date: 5/11/2019 12:48:38 AM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.478270	ppm	0.000008	0.00	17294.900000	Y 377.433
Al (394.401 nm)	0.491447	ppm	0.001164	0.24	6324.770000	Y 377.433
Al H (396.152 nm)	0.530744 u	ppm	0.005242	0.99	1220.010000	Y_R 377.433
As (188.980 nm)	0.955406	ppm	0.000857	0.09	1518.190000	Y 242.219
B (249.678 nm)	0.469916	ppm	0.001163	0.25	3610.460000	Y 242.219
Ba (493.408 nm)	0.481975	ppm	0.000613	0.13	52201.900000	Y_R 488.368
Be (234.861 nm)	0.473718	ppm	0.000879	0.19	50254.800000	Y_R 488.368
Bi (223.061 nm)	0.005670	ppm	0.003087	54.44	2.099050	Y 377.433
Ca (315.887 nm)	4.877109	ppm	0.007675	0.16	3960.746826	Y_R 377.433
Cd (214.439 nm)	0.481597	ppm	0.000469	0.10	18444.900000	Y 377.433
Co (228.615 nm)	0.482769	ppm	0.001243	0.26	12081.700000	Y 242.219
Cr (205.560 nm)	0.482312	ppm	0.000650	0.13	3330.580000	Y 377.433
Cu (324.754 nm)	0.482303	ppm	0.000490	0.10	24183.000000	Y 377.433
Fe (238.204 nm)	2.397937	ppm	0.007783	0.32	5998.943438	Y_R 377.433
Fe H (259.940 nm)	2.421880 u	ppm	0.010305	0.43	3452.810000	Y_R 377.433
K (766.491 nm)	48.284600	ppm	0.046536	0.10	52966.300000	Y_R2 488.368
Li (670.783 nm)	0.979711	ppm	0.001121	0.11	14937.500000	Y_R2 488.368
Mg (279.078 nm)	18.873900	ppm	0.010477	0.06	66167.900000	Y 377.433
Mn (257.610 nm)	0.477987	ppm	0.000385	0.08	137740.000000	Y 377.433
Mo (202.032 nm)	0.481566	ppm	0.000097	0.02	6382.090000	Y 377.433
Na (589.592 nm)	24.700300	ppm	0.009669	0.04	21759.000000	Y_R2 488.368
Na H (589.593 nm)	24.743944 u	ppm	0.076329	0.31	14819.172062	Y_R4
Ni (231.604 nm)	0.481738	ppm	0.000718	0.15	2604.680000	Y 377.433
P (213.618 nm)	0.929559	ppm	0.005793	0.62	1300.600000	Y 242.219
Pb (220.353 nm)	0.966644	ppm	0.001983	0.21	3259.880000	Y 242.219
S (181.972 nm)	0.007965	ppm	0.004426	55.57	13.185349	Y 377.433
Sb (206.834 nm)	0.961478	ppm	0.004968	0.52	1790.950000	Y 377.433
Se (196.026 nm)	0.951014	ppm	0.002506	0.26	1528.900000	Y 242.219
Si (288.158 nm)	4.756920	ppm	0.010768	0.23	32284.700000	Y 377.433
Sn (189.925 nm)	0.967422	ppm	0.003597	0.37	1601.170000	Y 377.433
Sr (421.552 nm)	0.480948	ppm	0.000232	0.05	77340.878134	Y_R 488.368
Th (288.505 nm)	0.008582	ppm	0.000139	1.62	-14.645900	Y 377.433
Ti (336.122 nm)	0.480520	ppm	0.000003	0.00	62892.200000	Y 377.433
Tl (190.794 nm)	0.967998	ppm	0.004898	0.51	2363.690000	Y 377.433
U (409.013 nm)	0.010177	ppm	0.004982	48.95	3.832930	Y 377.433
V (292.401 nm)	0.478061	ppm	0.000192	0.04	25585.200000	Y 377.433
Zn (206.200 nm)	0.479565	ppm	0.000318	0.07	2194.680000	Y 377.433
Zr (343.823 nm)	0.482405	ppm	0.000647	0.13	28130.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.029034	19239.852826	0.002143	0.21
Y 377.433	1.039930	577760.422613	0.003533	0.34
Y_R 377.433	1.047500	50998.200000	0.002106	0.20
Y_R 488.368	1.035200	44271.700000	0.002221	0.21
Y_R2 488.368	1.030838	86096.480819	0.003705	0.36
Y_R4	1.017070	39103.300000	0.001667	0.16

Sample Name: CCB

Date: 5/11/2019 12:52:12 AM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000200 u	ppm	0.000008	3.90	-191.306000	Y 377.433
Al (394.401 nm)	0.003651	ppm	0.000225	6.16	70.721500	Y 377.433
Al H (396.152 nm)	0.109278 Zu	ppm	0.005785	5.29	25.902000 Z	Y_R 377.433
As (188.980 nm)	0.001770	ppm	0.000726	41.04	0.990914	Y 242.219
B (249.678 nm)	0.000889	ppm	0.000069	7.76	18.657000	Y 242.219
Ba (493.408 nm)	-0.001510 u	ppm	0.000395	26.13	1470.110000	Y_R 488.368
Be (234.861 nm)	0.000036	ppm	0.000022	60.79	3.052340	Y_R 488.368
Bi (223.061 nm)	0.002097	ppm	0.002242	> 100.00	-6.273700	Y 377.433
Ca (315.887 nm)	0.001771 u	ppm	0.003775	> 100.00	-71.777710	Y_R 377.433
Cd (214.439 nm)	0.000046 u	ppm	0.000096	> 100.00	-5.035980	Y 377.433
Co (228.615 nm)	0.000203	ppm	0.000034	16.84	-18.329500	Y 242.219
Cr (205.560 nm)	-0.000082 u	ppm	0.000015	18.40	-8.690900	Y 377.433
Cu (324.754 nm)	-0.000386 u	ppm	0.000107	27.68	492.851000	Y 377.433
Fe (238.204 nm)	-0.000084 u	ppm	0.001628	> 100.00	3.962032	Y_R 377.433
Fe H (259.940 nm)	0.026699 u	ppm	0.002946	11.04	10.380000	Y_R 377.433
K (766.491 nm)	-0.270514 u	ppm	0.102866	38.03	1897.070000	Y_R2 488.368
Li (670.783 nm)	0.008975	ppm	0.000786	8.75	-2722.740000	Y_R2 488.368
Mg (279.078 nm)	0.000817	ppm	0.000950	> 100.00	19.188500	Y 377.433
Mn (257.610 nm)	0.000080	ppm	0.000011	13.75	-0.482534	Y 377.433
Mo (202.032 nm)	-0.000026 u	ppm	0.000198	> 100.00	11.272900	Y 377.433
Na (589.592 nm)	0.018746	ppm	0.023776	> 100.00	187.261000	Y_R2 488.368
Na H (589.593 nm)	0.127433 u	ppm	0.026165	20.53	551.789828	Y_R4
Ni (231.604 nm)	-0.000159 u	ppm	0.000557	> 100.00	-11.322600	Y 377.433
P (213.618 nm)	-0.004092 u	ppm	0.000506	12.36	-2.610690	Y 242.219
Pb (220.353 nm)	-0.000248 u	ppm	0.000336	> 100.00	7.164470	Y 242.219
S (181.972 nm)	-0.004536 u	ppm	0.000775	17.09	5.258650	Y 377.433
Sb (206.834 nm)	-0.001416 u	ppm	0.000040	2.85	-0.358942	Y 377.433
Se (196.026 nm)	-0.000620 u	ppm	0.000163	26.26	4.588820	Y 242.219
Si (288.158 nm)	-0.006350 u	ppm	0.001186	18.68	465.991000	Y 377.433
Sn (189.925 nm)	-0.003245 u	ppm	0.000106	3.27	3.756770	Y 377.433
Sr (421.552 nm)	-0.000146 u	ppm	0.000037	25.56	79.615145	Y_R 488.368
Th (288.505 nm)	-0.001319 u	ppm	0.002017	> 100.00	17.038500	Y 377.433
Ti (336.122 nm)	0.000610	ppm	0.000108	17.67	-440.411000	Y 377.433
Tl (190.794 nm)	0.001861	ppm	0.001318	70.81	4.670510	Y 377.433
U (409.013 nm)	0.006673	ppm	0.008056	> 100.00	51.329400	Y 377.433
V (292.401 nm)	-0.000324 u	ppm	0.000086	26.72	-111.789000	Y 377.433
Zn (206.200 nm)	0.000208	ppm	0.000105	50.57	4.037060	Y 377.433
Zr (343.823 nm)	0.000472	ppm	0.000048	10.10	-145.828000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.063949	19892.644147	0.006144	0.58
Y 377.433	1.073223	596257.699498	0.006468	0.60
Y_R 377.433	1.075770	52374.400000	0.001970	0.18
Y_R 488.368	1.064970	45544.600000	0.000233	0.02
Y_R2 488.368	1.057946	88360.569144	0.008594	0.81
Y_R4	1.048800	40322.900000	0.002400	0.23

Sample Name: CCVL-5695588

Date: 5/11/2019 12:55:24 AM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009073	ppm	0.000449	4.95	146.834000	Y 377.433
Al (394.401 nm)	0.099964	ppm	0.000074	0.07	1287.220000	Y 377.433
Al H (396.152 nm)	0.209008 u	ppm	0.002213	1.06	255.710000	Y_R 377.433
As (188.980 nm)	0.015174	ppm	0.002031	13.38	22.309000	Y 242.219
B (249.678 nm)	0.094372	ppm	0.000920	0.97	734.781000	Y 242.219
Ba (493.408 nm)	0.008539	ppm	0.000420	4.91	2524.640000	Y_R 488.368
Be (234.861 nm)	0.000957	ppm	0.000077	8.08	99.852200	Y_R 488.368
Bi (223.061 nm)	0.086979	ppm	0.003114	3.58	180.411000	Y 377.433
Ca (315.887 nm)	0.205394	ppm	0.002439	1.19	96.665352	Y_R 377.433
Cd (214.439 nm)	0.004953	ppm	0.000037	0.75	183.029000	Y 377.433
Co (228.615 nm)	0.010280	ppm	0.000059	0.58	234.340000	Y 242.219
Cr (205.560 nm)	0.009762	ppm	0.000247	2.53	59.356500	Y 377.433
Cu (324.754 nm)	0.014313	ppm	0.000143	1.00	1213.970000	Y 377.433
Fe (238.204 nm)	0.098161	ppm	0.002514	2.56	249.570268	Y_R 377.433
Fe H (259.940 nm)	0.130009 u	ppm	0.000560	0.43	158.862000	Y_R 377.433
K (766.491 nm)	2.666090	ppm	0.185534	6.96	4985.730000	Y_R2 488.368
Li (670.783 nm)	0.027534 Q	ppm	0.001398	5.08	-2385.100000 Q	Y_R2 488.368
Mg (279.078 nm)	0.195286	ppm	0.000142	0.07	699.759000	Y 377.433
Mn (257.610 nm)	0.010180	ppm	0.000039	0.38	2910.560000	Y 377.433
Mo (202.032 nm)	0.018916	ppm	0.000196	1.03	261.842000	Y 377.433
Na (589.592 nm)	1.106890	ppm	0.009143	0.83	1135.610000	Y_R2 488.368
Na H (589.593 nm)	0.957194 u	ppm	0.043697	4.57	1032.707584	Y_R4
Ni (231.604 nm)	0.040652	ppm	0.000800	1.97	210.139000	Y 377.433
P (213.618 nm)	2.656800	ppm	0.017081	0.64	4103.690000	Y 242.219
Pb (220.353 nm)	0.009685	ppm	0.000008	0.09	40.650500	Y 242.219
S (181.972 nm)	0.081054	ppm	0.002488	3.07	47.124003	Y 377.433
Sb (206.834 nm)	0.018965	ppm	0.000979	5.16	37.456800	Y 377.433
Se (196.026 nm)	0.019866	ppm	0.005862	29.51	37.392500	Y 242.219
Si (288.158 nm)	0.490676	ppm	0.006014	1.23	3786.130000	Y 377.433
Sn (189.925 nm)	0.094463	ppm	0.001128	1.19	164.553000	Y 377.433
Sr (421.552 nm)	0.008642	ppm	0.000006	0.07	1490.897781	Y_R 488.368
Th (288.505 nm)	0.011849	ppm	0.000737	6.22	39.557400	Y 377.433
Ti (336.122 nm)	0.010085	ppm	0.000120	1.19	810.314000	Y 377.433
Tl (190.794 nm)	0.015319	ppm	0.000586	3.83	37.457300	Y 377.433
U (409.013 nm)	0.058923	ppm	0.001646	2.79	217.112000	Y 377.433
V (292.401 nm)	0.009138	ppm	0.000130	1.42	394.331000	Y 377.433
Zn (206.200 nm)	0.020071	ppm	0.000056	0.28	94.811000	Y 377.433
Zr (343.823 nm)	0.010300 Q	ppm	0.000206	2.00	430.800000 Q	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.064968	19911.706389	0.000214	0.02
Y 377.433	1.072568	595893.782531	0.000513	0.05
Y_R 377.433	1.082580	52706.300000	0.007679	0.71
Y_R 488.368	1.068330	45688.600000	0.007422	0.69
Y_R2 488.368	1.069457	89321.956404	0.004634	0.43
Y_R4	1.056880	40633.600000	0.009599	0.91

Sample Name: 280-123051-A-4-B

Date: 5/11/2019 12:58:52 AM

Rack:Tube: 2:48

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000761 u	ppm	0.000367	48.29	-212.169000	Y 377.433
Al (394.401 nm)	0.005742	ppm	0.000137	2.38	97.820100	Y 377.433
Al H (396.152 nm)	0.118006 u	ppm	0.003806	3.23	45.570600	Y_R 377.433
As (188.980 nm)	0.001214	ppm	0.000470	38.76	0.101886	Y 242.219
B (249.678 nm)	-0.000025 u	ppm	0.000674	> 100.00	11.574300	Y 242.219
Ba (493.408 nm)	-0.000641 u	ppm	0.000258	40.21	1561.390000	Y_R 488.368
Be (234.861 nm)	-0.000062 u	ppm	0.000027	42.98	-8.571050	Y_R 488.368
Bi (223.061 nm)	0.000756 u	ppm	0.002573	> 100.00	-9.198160	Y 377.433
Ca (315.887 nm)	0.004479	ppm	0.005859	> 100.00	-69.535690	Y_R 377.433
Cd (214.439 nm)	0.000060 u	ppm	0.000107	> 100.00	-4.439310	Y 377.433
Co (228.615 nm)	-0.000131 u	ppm	0.000039	29.97	-26.638300	Y 242.219
Cr (205.560 nm)	0.000158 u	ppm	0.000339	> 100.00	-7.029040	Y 377.433
Cu (324.754 nm)	-0.000405 u	ppm	0.000118	29.18	491.481000	Y 377.433
Fe (238.204 nm)	0.134137	ppm	0.000508	0.38	339.509521	Y_R 377.433
Fe H (259.940 nm)	0.170831 u	ppm	0.001957	1.15	217.533000	Y_R 377.433
K (766.491 nm)	-0.293821 u	ppm	0.036692	12.49	1872.550000	Y_R2 488.368
Li (670.783 nm)	0.002788 u	ppm	0.005215	> 100.00	-2835.300000	Y_R2 488.368
Mg (279.078 nm)	0.001006	ppm	0.000763	75.90	19.602300	Y 377.433
Mn (257.610 nm)	0.001148	ppm	0.000054	4.67	307.383000	Y 377.433
Mo (202.032 nm)	0.000047 u	ppm	0.000088	> 100.00	12.237100	Y 377.433
Na (589.592 nm)	0.023160	ppm	0.005254	22.69	191.303000	Y_R2 488.368
Na H (589.593 nm)	-0.087870 u	ppm	0.007788	8.86	427.002766	Y_R4
Ni (231.604 nm)	0.000195	ppm	0.000152	78.09	-9.401990	Y 377.433
P (213.618 nm)	-0.003822 u	ppm	0.003641	95.27	-2.233430	Y 242.219
Pb (220.353 nm)	0.000501 u	ppm	0.001170	> 100.00	9.690050	Y 242.219
S (181.972 nm)	0.010181	ppm	0.002333	22.91	12.453958	Y 377.433
Sb (206.834 nm)	0.000591	ppm	0.000204	34.52	3.383560	Y 377.433
Se (196.026 nm)	0.002898	ppm	0.000815	28.11	10.190000	Y 242.219
Si (288.158 nm)	-0.001389 u	ppm	0.000933	67.20	499.129000	Y 377.433
Sn (189.925 nm)	-0.003519 u	ppm	0.000061	1.74	3.305470	Y 377.433
Sr (421.552 nm)	-0.000056 u	ppm	0.000106	> 100.00	94.101354	Y_R 488.368
Th (288.505 nm)	-0.001245 u	ppm	0.000159	12.74	17.136300	Y 377.433
Ti (336.122 nm)	0.000404	ppm	0.000100	24.68	-467.645000	Y 377.433
Tl (190.794 nm)	-0.000039 u	ppm	0.001594	> 100.00	-0.001437	Y 377.433
U (409.013 nm)	0.002053 u	ppm	0.004073	> 100.00	36.647400	Y 377.433
V (292.401 nm)	-0.000289 u	ppm	0.000060	20.72	-110.193000	Y 377.433
Zn (206.200 nm)	0.001308	ppm	0.001036	79.20	9.082090	Y 377.433
Zr (343.823 nm)	0.000582	ppm	0.000098	16.89	-139.390000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.037840	19404.481046	0.000040	0.00
Y 377.433	1.048195	582352.602715	0.001465	0.14
Y_R 377.433	1.046560	50952.700000	0.005040	0.48
Y_R 488.368	1.035130	44268.600000	0.022468	2.17
Y_R2 488.368	1.028835	85929.169669	0.002669	0.26
Y_R4	1.020540	39236.700000	0.007196	0.71

Sample Name: MB 280-457029/1-A

Date: 5/11/2019 1:02:18 AM

Rack:Tube: 2:49

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000548 u	ppm	0.000024	4.42	-204.470000	Y 377.433
Al (394.401 nm)	0.004916	ppm	0.000647	13.16	88.347800	Y 377.433
Al H (396.152 nm)	0.112830 u	ppm	0.009486	8.41	33.900300	Y_R 377.433
As (188.980 nm)	0.001247 u	ppm	0.001908	> 100.00	0.159440	Y 242.219
B (249.678 nm)	-0.000222 u	ppm	0.000186	83.76	10.143300	Y 242.219
Ba (493.408 nm)	-0.001178 u	ppm	0.000111	9.45	1504.940000	Y_R 488.368
Be (234.861 nm)	-0.000017 u	ppm	0.000034	> 100.00	-2.726970	Y_R 488.368
Bi (223.061 nm)	0.001853	ppm	0.001615	87.13	-6.806540	Y 377.433
Ca (315.887 nm)	0.010875	ppm	0.001370	12.60	-64.247985	Y_R 377.433
Cd (214.439 nm)	0.000038 u	ppm	0.000059	> 100.00	-5.336760	Y 377.433
Co (228.615 nm)	0.000100	ppm	0.000098	98.11	-20.902600	Y 242.219
Cr (205.560 nm)	0.000230	ppm	0.000061	26.42	-6.529290	Y 377.433
Cu (324.754 nm)	-0.000275 u	ppm	0.000037	13.35	497.372000	Y 377.433
Fe (238.204 nm)	0.011492	ppm	0.000098	0.85	32.900176	Y_R 377.433
Fe H (259.940 nm)	0.041776 u	ppm	0.003934	9.42	32.049700	Y_R 377.433
K (766.491 nm)	-0.343433 u	ppm	0.025712	7.49	1820.370000	Y_R2 488.368
Li (670.783 nm)	0.004619	ppm	0.002415	52.30	-2801.990000	Y_R2 488.368
Mg (279.078 nm)	0.001325	ppm	0.000046	3.46	20.812200	Y 377.433
Mn (257.610 nm)	0.000376	ppm	0.000001	0.23	84.877000	Y 377.433
Mo (202.032 nm)	0.000178	ppm	0.000200	> 100.00	13.975000	Y 377.433
Na (589.592 nm)	-0.005429 u	ppm	0.025314	> 100.00	166.273000	Y_R2 488.368
Na H (589.593 nm)	-0.201192 u	ppm	0.006112	3.04	361.323269	Y_R4
Ni (231.604 nm)	0.000598	ppm	0.000547	91.47	-7.211040	Y 377.433
P (213.618 nm)	-0.002679 u	ppm	0.000928	34.65	-0.582724	Y 242.219
Pb (220.353 nm)	0.000909 u	ppm	0.001357	> 100.00	11.075400	Y 242.219
S (181.972 nm)	0.003201	ppm	0.000663	20.72	9.040838	Y 377.433
Sb (206.834 nm)	-0.000806 u	ppm	0.002249	> 100.00	0.777214	Y 377.433
Se (196.026 nm)	0.004058	ppm	0.000256	6.31	12.080000	Y 242.219
Si (288.158 nm)	-0.004324 u	ppm	0.000302	6.99	479.524000	Y 377.433
Sn (189.925 nm)	-0.003176 u	ppm	0.000013	0.40	3.869310	Y 377.433
Sr (421.552 nm)	-0.000094 u	ppm	0.000008	8.02	87.879447	Y_R 488.368
Th (288.505 nm)	-0.001286 u	ppm	0.000957	74.41	17.080700	Y 377.433
Ti (336.122 nm)	0.000479	ppm	0.000033	6.79	-457.712000	Y 377.433
Tl (190.794 nm)	0.001260 u	ppm	0.001786	> 100.00	3.192720	Y 377.433
U (409.013 nm)	-0.000988 u	ppm	0.001037	> 100.00	26.862500	Y 377.433
V (292.401 nm)	-0.000329 u	ppm	0.000056	16.99	-113.032000	Y 377.433
Zn (206.200 nm)	0.001335	ppm	0.000122	9.14	9.190430	Y 377.433
Zr (343.823 nm)	0.000649	ppm	0.000142	21.84	-135.426000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.053360	19694.662056	0.005256	0.50
Y 377.433	1.063591	590906.376580	0.005456	0.51
Y_R 377.433	1.068670	52028.800000	0.002100	0.20
Y_R 488.368	1.061590	45400.100000	0.005327	0.50
Y_R2 488.368	1.046960	87443.029103	0.004896	0.47
Y_R4	1.036640	39855.400000	0.003616	0.35

Sample Name: LCS 280-457029/2-A

Date: 5/11/2019 1:05:28 AM

Rack:Tube: 2:50

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000694	ppm	0.000207	29.85	-483.532000	Y 377.433
Al (394.401 nm)	9.940710 o	ppm	0.007791	0.08	125229.000000	Y 377.433
Al H (396.152 nm)	10.074500	ppm	0.016517	0.16	22950.500000	Y_R 377.433
As (188.980 nm)	1.979640	ppm	0.005366	0.27	3146.980000	Y 242.219
B (249.678 nm)	0.964192	ppm	0.001916	0.20	7392.610000	Y 242.219
Ba (493.408 nm)	1.976810	ppm	0.003618	0.18	209054.000000	Y_R 488.368
Be (234.861 nm)	0.966223	ppm	0.004056	0.42	102459.000000	Y_R 488.368
Bi (223.061 nm)	1.976810	ppm	0.005405	0.27	4338.040000	Y 377.433
Ca (315.887 nm)	49.549715	ppm	0.099391	0.20	40911.907121	Y_R 377.433
Cd (214.439 nm)	0.960917	ppm	0.002441	0.25	36811.500000	Y 377.433
Co (228.615 nm)	0.950480	ppm	0.002017	0.21	23811.300000	Y 242.219
Cr (205.560 nm)	0.960026	ppm	0.009732	1.01	6637.100000	Y 377.433
Cu (324.754 nm)	0.949419	ppm	0.001258	0.13	47146.900000	Y 377.433
Fe (238.204 nm)	9.870232 o	ppm	0.007352	0.07	24679.466734	Y_R 377.433
Fe H (259.940 nm)	9.886420	ppm	0.015337	0.16	14181.100000	Y_R 377.433
K (766.491 nm)	50.000900	ppm	0.156496	0.31	54771.600000	Y_R2 488.368
Li (670.783 nm)	1.009440	ppm	0.005071	0.50	15478.300000	Y_R2 488.368
Mg (279.078 nm)	47.818900	ppm	0.103494	0.22	167579.000000	Y 377.433
Mn (257.610 nm)	0.970481	ppm	0.000976	0.10	279685.000000	Y 377.433
Mo (202.032 nm)	0.983776	ppm	0.001519	0.15	13025.700000	Y 377.433
Na (589.592 nm)	50.953500	ppm	0.012283	0.02	44939.600000	Y_R2 488.368
Na H (589.593 nm)	47.909979 u	ppm	0.083057	0.17	28245.879369	Y_R4
Ni (231.604 nm)	0.938789	ppm	0.001645	0.18	5085.840000	Y 377.433
P (213.618 nm)	18.920400	ppm	0.068409	0.36	28957.500000	Y 242.219
Pb (220.353 nm)	0.976434	ppm	0.001095	0.11	3293.300000	Y 242.219
S (181.972 nm)	9.240561	ppm	0.038179	0.41	4528.870300	Y 377.433
Sb (206.834 nm)	-0.003412 u	ppm	0.001095	32.08	-9.436980	Y 377.433
Se (196.026 nm)	1.959640	ppm	0.009969	0.51	3143.160000	Y 242.219
Si (288.158 nm)	2.021960	ppm	0.005611	0.28	14015.100000	Y 377.433
Sn (189.925 nm)	1.938470	ppm	0.003502	0.18	3199.200000	Y 377.433
Sr (421.552 nm)	0.984898	ppm	0.002710	0.28	158273.449996	Y_R 488.368
Th (288.505 nm)	1.010180	ppm	0.001006	0.10	1698.770000	Y 377.433
Ti (336.122 nm)	0.992395	ppm	0.000772	0.08	130578.000000	Y 377.433
Tl (190.794 nm)	1.913740	ppm	0.001444	0.08	4670.490000	Y 377.433
U (409.013 nm)	2.024100	ppm	0.010004	0.49	6435.970000	Y 377.433
V (292.401 nm)	0.979350	ppm	0.000801	0.08	52512.200000	Y 377.433
Zn (206.200 nm)	0.478091	ppm	0.000905	0.19	2188.980000	Y 377.433
Zr (343.823 nm)	0.489363	ppm	0.000193	0.04	28539.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.021336	19095.914928	0.005288	0.52
Y 377.433	1.042889	579404.594205	0.005165	0.50
Y_R 377.433	1.059920	51602.900000	0.004394	0.41
Y_R 488.368	1.046860	44770.000000	0.000787	0.08
Y_R2 488.368	1.045489	87320.104946	0.004772	0.46
Y_R4	1.039110	39950.700000	0.005498	0.53

Sample Name: LCSD 280-457029/3-A

Date: 5/11/2019 1:09:03 AM

Rack:Tube: 2:51

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001067	ppm	0.000161	15.10	-472.060000	Y 377.433
Al (394.401 nm)	9.993180 o	ppm	0.000158	0.00	125885.000000	Y 377.433
Al H (396.152 nm)	10.143100	ppm	0.001017	0.01	23108.100000	Y_R 377.433
As (188.980 nm)	1.992890	ppm	0.002835	0.14	3168.060000	Y 242.219
B (249.678 nm)	0.975283	ppm	0.004236	0.43	7477.530000	Y 242.219
Ba (493.408 nm)	1.992470	ppm	0.000743	0.04	210698.000000	Y_R 488.368
Be (234.861 nm)	0.968184	ppm	0.010833	1.12	102667.000000	Y_R 488.368
Bi (223.061 nm)	1.997120	ppm	0.001725	0.09	4382.710000	Y 377.433
Ca (315.887 nm)	49.868225	ppm	0.035186	0.07	41175.363691	Y_R 377.433
Cd (214.439 nm)	0.969226	ppm	0.000501	0.05	37129.800000	Y 377.433
Co (228.615 nm)	0.957483	ppm	0.000323	0.03	23986.900000	Y 242.219
Cr (205.560 nm)	0.962503	ppm	0.003753	0.39	6654.210000	Y 377.433
Cu (324.754 nm)	0.963415	ppm	0.002705	0.28	47839.100000	Y 377.433
Fe (238.204 nm)	9.970557 o	ppm	0.007899	0.08	24930.275937	Y_R 377.433
Fe H (259.940 nm)	9.966190	ppm	0.011793	0.12	14295.800000	Y_R 377.433
K (766.491 nm)	50.439400	ppm	0.243501	0.48	55232.700000	Y_R2 488.368
Li (670.783 nm)	1.019720	ppm	0.005073	0.50	15665.400000	Y_R2 488.368
Mg (279.078 nm)	48.190900	ppm	0.019848	0.04	168882.000000	Y 377.433
Mn (257.610 nm)	0.978673	ppm	0.000228	0.02	282046.000000	Y 377.433
Mo (202.032 nm)	0.991957	ppm	0.000991	0.10	13133.900000	Y 377.433
Na (589.592 nm)	51.249800	ppm	0.150430	0.29	45200.900000	Y_R2 488.368
Na H (589.593 nm)	48.212230 u	ppm	0.002252	0.00	28421.059958	Y_R4
Ni (231.604 nm)	0.947101	ppm	0.002395	0.25	5130.960000	Y 377.433
P (213.618 nm)	19.094300	ppm	0.018235	0.10	29222.000000	Y 242.219
Pb (220.353 nm)	0.983025	ppm	0.001693	0.17	3315.510000	Y 242.219
S (181.972 nm)	9.335294	ppm	0.046139	0.49	4575.201997	Y 377.433
Sb (206.834 nm)	-0.001182 u	ppm	0.000442	37.37	-5.359970	Y 377.433
Se (196.026 nm)	1.972610	ppm	0.004452	0.23	3163.930000	Y 242.219
Si (288.158 nm)	2.047000	ppm	0.005140	0.25	14182.400000	Y 377.433
Sn (189.925 nm)	1.953880	ppm	0.000495	0.03	3224.570000	Y 377.433
Sr (421.552 nm)	0.991501	ppm	0.001329	0.13	159333.877632	Y_R 488.368
Th (288.505 nm)	1.016140	ppm	0.003556	0.35	1708.610000	Y 377.433
Ti (336.122 nm)	1.000640	ppm	0.000420	0.04	131666.000000	Y 377.433
Tl (190.794 nm)	1.932330	ppm	0.005792	0.30	4715.860000	Y 377.433
U (409.013 nm)	2.050210	ppm	0.000753	0.04	6518.690000	Y 377.433
V (292.401 nm)	0.987259	ppm	0.000453	0.05	52941.300000	Y 377.433
Zn (206.200 nm)	0.484401	ppm	0.000601	0.12	2217.830000	Y 377.433
Zr (343.823 nm)	0.495217	ppm	0.000181	0.04	28882.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.004630	18783.567301	0.003310	0.33
Y 377.433	1.024965	569446.668805	0.003949	0.39
Y_R 377.433	1.047170	50982.300000	0.005986	0.57
Y_R 488.368	1.033760	44210.200000	0.006192	0.60
Y_R2 488.368	1.044971	87276.902240	0.004492	0.43
Y_R4	1.040190	39992.200000	0.008231	0.79

Sample Name: 280-123051-B-1-D

Date: 5/11/2019 1:12:40 AM

Rack:Tube: 2:52

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001352	ppm	0.000097	7.16	-135.943000	Y 377.433
Al (394.401 nm)	-0.024277 u	ppm	0.000595	2.45	468.520000	Y 377.433
Al H (396.152 nm)	-0.425501 u	ppm	0.007260	1.71	-56.353800	Y_R 377.433
As (188.980 nm)	0.001663 u	ppm	0.003620	> 100.00	0.812312	Y 242.219
B (249.678 nm)	0.081303	ppm	0.000293	0.36	634.537000	Y 242.219
Ba (493.408 nm)	0.013771	ppm	0.000071	0.51	3073.740000	Y_R 488.368
Be (234.861 nm)	0.000009 u	ppm	0.000041	> 100.00	-2.535120	Y_R 488.368
Bi (223.061 nm)	0.000878 u	ppm	0.001250	> 100.00	-8.889680	Y 377.433
Ca (315.887 nm)	359.165257	ppm	0.052562	0.01	296991.973180	Y_R 377.433
Cd (214.439 nm)	0.000379	ppm	0.000152	40.07	7.853360	Y 377.433
Co (228.615 nm)	0.002784	ppm	0.000388	13.95	46.279700	Y 242.219
Cr (205.560 nm)	0.000472 u	ppm	0.000829	> 100.00	-4.882810	Y 377.433
Cu (324.754 nm)	-0.001957 u	ppm	0.000029	1.48	202.305000	Y 377.433
Fe (238.204 nm)	0.303227	ppm	0.001444	0.48	762.229161	Y_R 377.433
Fe H (259.940 nm)	0.303108 u	ppm	0.000887	0.29	407.645000	Y_R 377.433
K (766.491 nm)	4.739350	ppm	0.072458	1.53	7166.340000	Y_R2 488.368
Li (670.783 nm)	0.125492	ppm	0.007044	5.61	-602.992000	Y_R2 488.368
Mg (279.078 nm)	134.198000	ppm	0.016591	0.01	470391.000000	Y 377.433
Mn (257.610 nm)	0.708156	ppm	0.000151	0.02	204079.000000	Y 377.433
Mo (202.032 nm)	0.005721	ppm	0.000206	3.61	87.301400	Y 377.433
Na (589.592 nm)	27.286200	ppm	0.098984	0.36	23894.700000	Y_R2 488.368
Na H (589.593 nm)	27.040127 u	ppm	0.111814	0.41	16150.007420	Y_R4
Ni (231.604 nm)	0.003724	ppm	0.000773	20.76	9.753210	Y 377.433
P (213.618 nm)	0.001316	ppm	0.000054	4.07	5.030100	Y 242.219
Pb (220.353 nm)	0.000936	ppm	0.000488	52.13	11.269200	Y 242.219
S (181.972 nm)	322.688445 bo	ppm	0.770839	0.24	157719.422945	Y 377.433
Sb (206.834 nm)	-0.007196 u	ppm	0.000251	3.49	-11.145200	Y 377.433
Se (196.026 nm)	0.002901	ppm	0.001117	38.51	11.172100	Y 242.219
Si (288.158 nm)	9.462070	ppm	0.046080	0.49	63715.100000	Y 377.433
Sn (189.925 nm)	-0.003827 u	ppm	0.001384	36.16	2.799360	Y 377.433
Sr (421.552 nm)	2.857805	ppm	0.008333	0.29	459049.772183	Y_R 488.368
Th (288.505 nm)	0.002288 u	ppm	0.003295	> 100.00	28.349700	Y 377.433
Ti (336.122 nm)	-0.001703 u	ppm	0.000000	0.00	475.039000	Y 377.433
Tl (190.794 nm)	0.006868	ppm	0.001422	20.71	2.055660	Y 377.433
U (409.013 nm)	0.056230	ppm	0.008239	14.65	163.220000	Y 377.433
V (292.401 nm)	0.001031	ppm	0.000114	11.05	-42.312000	Y 377.433
Zn (206.200 nm)	0.007929	ppm	0.000349	4.40	39.359500	Y 377.433
Zr (343.823 nm)	0.000928	ppm	0.000159	17.16	-119.056000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.986778	18449.789884	0.000013	0.00
Y 377.433	1.012157	562330.364015	0.001022	0.10
Y_R 377.433	1.019950	49656.900000	0.004622	0.45
Y_R 488.368	1.007240	43076.000000	0.007846	0.78
Y_R2 488.368	1.045237	87299.115383	0.001733	0.17
Y_R4	1.048420	40308.500000	0.002534	0.24

Sample Name: 280-123051-B-2-B

Date: 5/11/2019 1:16:10 AM

Rack:Tube: 2:53

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001488	ppm	0.000274	18.45	-130.022000	Y 377.433
Al (394.401 nm)	-0.166195 u	ppm	0.001368	0.82	341.565000	Y 377.433
Al H (396.152 nm)	-1.626230 u	ppm	0.001687	0.10	-2.171020	Y_R 377.433
As (188.980 nm)	0.004388	ppm	0.003599	82.02	5.155340	Y 242.219
B (249.678 nm)	0.279832	ppm	0.000271	0.10	2155.660000	Y 242.219
Ba (493.408 nm)	0.022040	ppm	0.000176	0.80	3941.160000	Y_R 488.368
Be (234.861 nm)	-0.000034 u	ppm	0.000064	> 100.00	-4.500910	Y_R 488.368
Bi (223.061 nm)	-0.000059 u	ppm	0.003921	> 100.00	-10.999500	Y 377.433
Ca (315.887 nm)	146.157786	ppm	0.108636	0.07	120813.715938	Y_R 377.433
Cd (214.439 nm)	0.000327	ppm	0.000110	33.53	5.760910	Y 377.433
Co (228.615 nm)	-0.000061 u	ppm	0.000189	> 100.00	-24.928700	Y 242.219
Cr (205.560 nm)	0.000394 u	ppm	0.000558	> 100.00	-5.512800	Y 377.433
Cu (324.754 nm)	-0.000172 u	ppm	0.000006	3.24	418.185000	Y 377.433
Fe (238.204 nm)	0.011864	ppm	0.000724	6.10	33.829940	Y_R 377.433
Fe H (259.940 nm)	0.032355 u	ppm	0.001650	5.10	18.509200	Y_R 377.433
K (766.491 nm)	5.167580	ppm	0.002552	0.05	7616.750000	Y_R2 488.368
Li (670.783 nm)	0.065771	ppm	0.005746	8.74	-1689.480000	Y_R2 488.368
Mg (279.078 nm)	64.626200	ppm	0.056611	0.09	226536.000000	Y 377.433
Mn (257.610 nm)	0.125173	ppm	0.000212	0.17	36053.300000	Y 377.433
Mo (202.032 nm)	0.026435	ppm	0.000498	1.88	361.314000	Y 377.433
Na (589.592 nm)	32.185000	ppm	0.020669	0.06	28155.300000	Y_R2 488.368
Na H (589.593 nm)	31.889864 u	ppm	0.172891	0.54	18960.846616	Y_R4
Ni (231.604 nm)	-0.001565 u	ppm	0.000479	30.63	-18.951100	Y 377.433
P (213.618 nm)	-0.001779 u	ppm	0.007804	> 100.00	-0.612030	Y 242.219
Pb (220.353 nm)	-0.000637 u	ppm	0.001772	> 100.00	5.841610	Y 242.219
S (181.972 nm)	119.618051 bo	ppm	0.238455	0.20	58470.239976	Y 377.433
Sb (206.834 nm)	-0.004663 u	ppm	0.001802	38.64	-6.600020	Y 377.433
Se (196.026 nm)	0.004210	ppm	0.004052	96.24	12.507200	Y 242.219
Si (288.158 nm)	7.676150	ppm	0.069538	0.91	51785.100000	Y 377.433
Sn (189.925 nm)	-0.002923 u	ppm	0.000097	3.31	4.285790	Y 377.433
Sr (421.552 nm)	9.268514	ppm	0.012038	0.13	1488572.273768	Y_R 488.368
Th (288.505 nm)	-0.000322 u	ppm	0.000572	> 100.00	17.632000	Y 377.433
Ti (336.122 nm)	-0.000475 u	ppm	0.000002	0.39	-87.786000	Y 377.433
Tl (190.794 nm)	0.002361	ppm	0.002319	98.21	-0.269820	Y 377.433
U (409.013 nm)	0.024948	ppm	0.002529	10.14	90.750500	Y 377.433
V (292.401 nm)	0.000766	ppm	0.000200	26.09	-55.557800	Y 377.433
Zn (206.200 nm)	0.015036	ppm	0.000173	1.15	71.792500	Y 377.433
Zr (343.823 nm)	0.000673	ppm	0.000088	13.02	-134.033000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.027169	19204.982121	0.000732	0.07
Y 377.433	1.046947	581658.926816	0.000396	0.04
Y_R 377.433	1.072440	52212.400000	0.001855	0.17
Y_R 488.368	1.052410	45007.500000	0.004233	0.40
Y_R2 488.368	1.048463	87568.551724	0.001252	0.12
Y_R4	1.045060	40179.300000	0.005212	0.50

Sample Name: 280-123051-B-3-B

Date: 5/11/2019 1:19:40 AM

Rack:Tube: 2:54

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000879	ppm	0.000017	1.99	-152.017000	Y 377.433
Al (394.401 nm)	-0.171372 u	ppm	0.001629	0.95	333.287000	Y 377.433
Al H (396.152 nm)	-1.655650 u	ppm	0.007597	0.46	22.954000	Y_R 377.433
As (188.980 nm)	0.005507	ppm	0.001485	26.96	6.933460	Y 242.219
B (249.678 nm)	0.286511	ppm	0.000547	0.19	2206.820000	Y 242.219
Ba (493.408 nm)	0.022622	ppm	0.000177	0.78	4002.240000	Y_R 488.368
Be (234.861 nm)	-0.000087 u	ppm	0.000017	19.53	-10.311400	Y_R 488.368
Bi (223.061 nm)	0.000936 u	ppm	0.002443	> 100.00	-8.808200	Y 377.433
Ca (315.887 nm)	155.071102	ppm	0.032714	0.02	128185.916497	Y_R 377.433
Cd (214.439 nm)	0.000302	ppm	0.000047	15.66	4.781720	Y 377.433
Co (228.615 nm)	-0.000136 u	ppm	0.000119	87.35	-26.815500	Y 242.219
Cr (205.560 nm)	0.000170	ppm	0.000038	22.16	-7.068920	Y 377.433
Cu (324.754 nm)	-0.000500 u	ppm	0.000241	48.09	396.841000	Y 377.433
Fe (238.204 nm)	0.024661	ppm	0.000305	1.23	65.823397	Y_R 377.433
Fe H (259.940 nm)	0.037604 u	ppm	0.001614	4.29	26.053500	Y_R 377.433
K (766.491 nm)	5.366750	ppm	0.113147	2.11	7826.230000	Y_R2 488.368
Li (670.783 nm)	0.068340	ppm	0.001522	2.23	-1642.740000	Y_R2 488.368
Mg (279.078 nm)	67.961400	ppm	0.111222	0.16	238227.000000	Y 377.433
Mn (257.610 nm)	0.130181	ppm	0.000304	0.23	37496.700000	Y 377.433
Mo (202.032 nm)	0.027210	ppm	0.000107	0.39	371.566000	Y 377.433
Na (589.592 nm)	33.157600	ppm	0.051363	0.15	29000.900000	Y_R2 488.368
Na H (589.593 nm)	32.500277 u	ppm	0.151738	0.47	19314.633146	Y_R4
Ni (231.604 nm)	-0.000569 u	ppm	0.000129	22.69	-13.547700	Y 377.433
P (213.618 nm)	-0.002303 u	ppm	0.002209	95.93	-1.421480	Y 242.219
Pb (220.353 nm)	-0.001169 u	ppm	0.001853	> 100.00	4.017060	Y 242.219
S (181.972 nm)	125.055760 bo	ppm	0.576645	0.46	61128.003836	Y 377.433
Sb (206.834 nm)	-0.005508 u	ppm	0.002708	49.17	-8.178560	Y 377.433
Se (196.026 nm)	0.003118	ppm	0.000415	13.30	10.762700	Y 242.219
Si (288.158 nm)	7.961010	ppm	0.059289	0.74	53688.000000	Y 377.433
Sn (189.925 nm)	-0.002381 u	ppm	0.001706	71.64	5.178770	Y 377.433
Sr (421.552 nm)	9.496514	ppm	0.000803	0.01	1525187.629964	Y_R 488.368
Th (288.505 nm)	-0.003287 u	ppm	0.001669	50.77	12.306100	Y 377.433
Ti (336.122 nm)	-0.000610 u	ppm	0.000019	3.09	-75.590000	Y 377.433
Tl (190.794 nm)	0.001287	ppm	0.001555	> 100.00	-3.265620	Y 377.433
U (409.013 nm)	0.023535	ppm	0.005416	23.01	85.083400	Y 377.433
V (292.401 nm)	0.000822	ppm	0.000054	6.59	-52.541300	Y 377.433
Zn (206.200 nm)	0.010217	ppm	0.000102	1.00	49.775500	Y 377.433
Zr (343.823 nm)	0.000491	ppm	0.000131	26.79	-144.739000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.057410	19770.388559	0.004780	0.45
Y 377.433	1.069088	593960.164196	0.004941	0.46
Y_R 377.433	1.093730	53249.100000	0.006682	0.61
Y_R 488.368	1.079100	46148.900000	0.004688	0.43
Y_R2 488.368	1.051770	87844.732929	0.001026	0.10
Y_R4	1.063980	40906.800000	0.002681	0.25

Sample Name: 280-123051-B-3-Bsd@5

Date: 5/11/2019 1:23:08 AM

Rack:Tube: 2:55

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000189	ppm	0.000012	6.23	-177.572000	Y 377.433
Al (394.401 nm)	-0.030288 u	ppm	0.000331	1.09	139.990000	Y 377.433
Al H (396.152 nm)	-0.242261 u	ppm	0.006285	2.59	31.039200	Y_R 377.433
As (188.980 nm)	0.002110	ppm	0.000202	9.57	1.531910	Y 242.219
B (249.678 nm)	0.056637	ppm	0.000812	1.43	445.742000	Y 242.219
Ba (493.408 nm)	0.003259	ppm	0.000150	4.61	1970.540000	Y_R 488.368
Be (234.861 nm)	-0.000034 u	ppm	0.000048	> 100.00	-4.465510	Y_R 488.368
Bi (223.061 nm)	0.000469	ppm	0.000017	3.71	-9.848670	Y 377.433
Ca (315.887 nm)	30.267237	ppm	0.010718	0.04	24960.761711	Y_R 377.433
Cd (214.439 nm)	0.000141	ppm	0.000068	47.93	-1.383370	Y 377.433
Co (228.615 nm)	0.000386	ppm	0.000030	7.78	-13.756000	Y 242.219
Cr (205.560 nm)	0.000223 u	ppm	0.000392	> 100.00	-6.599980	Y 377.433
Cu (324.754 nm)	-0.000966 u	ppm	0.000286	29.58	445.911000	Y 377.433
Fe (238.204 nm)	0.006566	ppm	0.001688	25.71	20.586326	Y_R 377.433
Fe H (259.940 nm)	0.034168 u	ppm	0.004222	12.36	21.115000	Y_R 377.433
K (766.491 nm)	0.708012	ppm	0.076359	10.79	2926.260000	Y_R2 488.368
Li (670.783 nm)	0.021567	ppm	0.001677	7.77	-2493.650000	Y_R2 488.368
Mg (279.078 nm)	13.256400	ppm	0.002257	0.02	46481.000000	Y 377.433
Mn (257.610 nm)	0.026152	ppm	0.000035	0.13	7513.800000	Y 377.433
Mo (202.032 nm)	0.005149	ppm	0.000266	5.16	79.732400	Y 377.433
Na (589.592 nm)	6.542110	ppm	0.053195	0.81	5859.170000	Y_R2 488.368
Na H (589.593 nm)	6.203916 u	ppm	0.004713	0.08	4073.633468	Y_R4
Ni (231.604 nm)	-0.001440 u	ppm	0.001106	76.81	-18.269000	Y 377.433
P (213.618 nm)	-0.002477 u	ppm	0.002960	> 100.00	-0.343578	Y 242.219
Pb (220.353 nm)	-0.001266 u	ppm	0.001835	> 100.00	3.754080	Y 242.219
S (181.972 nm)	24.031289	ppm	0.065764	0.27	11752.693695	Y 377.433
Sb (206.834 nm)	-0.006248 u	ppm	0.000952	15.24	-9.402500	Y 377.433
Se (196.026 nm)	0.003429	ppm	0.002199	64.13	11.111400	Y 242.219
Si (288.158 nm)	1.530280	ppm	0.001831	0.12	10730.700000	Y 377.433
Sn (189.925 nm)	-0.003846 u	ppm	0.000498	12.95	2.767310	Y 377.433
Sr (421.552 nm)	1.905885	ppm	0.021058	1.10	306177.055651	Y_R 488.368
Th (288.505 nm)	-0.006570 u	ppm	0.002227	33.90	7.548200	Y 377.433
Ti (336.122 nm)	0.000261	ppm	0.000013	5.07	-384.472000	Y 377.433
Tl (190.794 nm)	0.002399	ppm	0.001768	73.70	4.719120	Y 377.433
U (409.013 nm)	0.019573	ppm	0.002239	11.44	88.605700	Y 377.433
V (292.401 nm)	0.000038	ppm	0.000033	87.17	-93.552100	Y 377.433
Zn (206.200 nm)	0.002185	ppm	0.000100	4.58	13.070100	Y 377.433
Zr (343.823 nm)	0.000724	ppm	0.000214	29.60	-131.027000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.055943	19742.957088	0.000748	0.07
Y 377.433	1.067804	593246.737705	0.001215	0.11
Y_R 377.433	1.077730	52470.100000	0.000294	0.03
Y_R 488.368	1.059310	45302.500000	0.010788	1.02
Y_R2 488.368	1.067227	89135.688210	0.005497	0.52
Y_R4	1.088860	41863.100000	0.003310	0.30

Sample Name: 280-123051-B-3-C MS

Date: 5/11/2019 1:26:35 AM

Rack:Tube: 2:56

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001476	ppm	0.000624	42.27	-459.370000	Y 377.433
Al (394.401 nm)	9.784170 o	ppm	0.007254	0.07	125664.000000	Y 377.433
Al H (396.152 nm)	8.289360	ppm	0.016557	0.20	22802.900000	Y_R 377.433
As (188.980 nm)	2.037300	ppm	0.013981	0.69	3238.720000	Y 242.219
B (249.678 nm)	1.283190	ppm	0.000555	0.04	9836.310000	Y 242.219
Ba (493.408 nm)	1.982960	ppm	0.003191	0.16	209700.000000	Y_R 488.368
Be (234.861 nm)	0.981047	ppm	0.001274	0.13	104031.000000	Y_R 488.368
Bi (223.061 nm)	1.998290	ppm	0.004207	0.21	4385.320000	Y 377.433
Ca (315.887 nm)	201.367083	ppm	0.251241	0.12	166479.892426	Y_R 377.433
Cd (214.439 nm)	0.958816	ppm	0.001747	0.18	36731.100000	Y 377.433
Co (228.615 nm)	0.940598	ppm	0.000385	0.04	23564.100000	Y 242.219
Cr (205.560 nm)	0.967285	ppm	0.001964	0.20	6687.250000	Y 377.433
Cu (324.754 nm)	0.963885	ppm	0.005634	0.58	47766.400000	Y 377.433
Fe (238.204 nm)	10.081919 o	ppm	0.007113	0.07	25208.678710	Y_R 377.433
Fe H (259.940 nm)	10.011200	ppm	0.030684	0.31	14360.400000	Y_R 377.433
K (766.491 nm)	56.371800	ppm	0.088486	0.16	61472.300000	Y_R2 488.368
Li (670.783 nm)	1.082340	ppm	0.001552	0.14	16804.500000	Y_R2 488.368
Mg (279.078 nm)	115.091000	ppm	0.155237	0.13	403372.000000	Y 377.433
Mn (257.610 nm)	1.094560	ppm	0.000448	0.04	315446.000000	Y 377.433
Mo (202.032 nm)	1.019480	ppm	0.000208	0.02	13498.000000	Y 377.433
Na (589.592 nm)	83.445000 o	ppm	0.005506	0.01	73186.400000	Y_R2 488.368
Na H (589.593 nm)	79.815872	ppm	0.143188	0.18	46738.084828	Y_R4
Ni (231.604 nm)	0.930235	ppm	0.001481	0.16	5039.400000	Y 377.433
P (213.618 nm)	19.409400	ppm	0.036905	0.19	29706.800000	Y 242.219
Pb (220.353 nm)	0.973424	ppm	0.001438	0.15	3283.070000	Y 242.219
S (181.972 nm)	133.047833 bo	ppm	0.559477	0.42	65039.112557	Y 377.433
Sb (206.834 nm)	-0.006842 u	ppm	0.000427	6.24	-16.019700	Y 377.433
Se (196.026 nm)	1.995550	ppm	0.006740	0.34	3200.800000	Y 242.219
Si (288.158 nm)	9.738430	ppm	0.030666	0.31	65561.200000	Y 377.433
Sn (189.925 nm)	1.964560	ppm	0.006687	0.34	3242.150000	Y 377.433
Sr (421.552 nm)	10.236257	ppm	0.016312	0.16	1643987.715399	Y_R 488.368
Th (288.505 nm)	1.017800	ppm	0.002712	0.27	1709.300000	Y 377.433
Ti (336.122 nm)	0.996693	ppm	0.000867	0.09	131660.000000	Y 377.433
Tl (190.794 nm)	1.891290	ppm	0.000250	0.01	4609.070000	Y 377.433
U (409.013 nm)	2.042960	ppm	0.000115	0.01	6476.440000	Y 377.433
V (292.401 nm)	0.989684	ppm	0.000496	0.05	53064.600000	Y 377.433
Zn (206.200 nm)	0.486153	ppm	0.000696	0.14	2225.850000	Y 377.433
Zr (343.823 nm)	0.492018	ppm	0.000017	0.00	28694.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.028559	19230.962584	0.001155	0.11
Y 377.433	1.050962	583889.947113	0.000588	0.06
Y_R 377.433	1.065900	51894.300000	0.007060	0.66
Y_R 488.368	1.051750	44979.500000	0.003436	0.33
Y_R2 488.368	1.034145	86372.708303	0.001665	0.16
Y_R4	1.052740	40474.600000	0.000905	0.09

Sample Name: 280-123051-B-3-D MSD

Date: 5/11/2019 1:30:12 AM

Rack:Tube: 2:57

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001940	ppm	0.000142	7.32	-440.599000	Y 377.433
Al (394.401 nm)	9.759890 o	ppm	0.028942	0.30	125313.000000	Y 377.433
Al H (396.152 nm)	8.260800	ppm	0.012399	0.15	22678.200000	Y_R 377.433
As (188.980 nm)	2.031670	ppm	0.002129	0.10	3229.780000	Y 242.219
B (249.678 nm)	1.276250	ppm	0.004044	0.32	9783.240000	Y 242.219
Ba (493.408 nm)	1.974660	ppm	0.006655	0.34	208829.000000	Y_R 488.368
Be (234.861 nm)	0.960349	ppm	0.006240	0.65	101835.000000	Y_R 488.368
Bi (223.061 nm)	1.989680	ppm	0.004911	0.25	4366.370000	Y 377.433
Ca (315.887 nm)	198.646849	ppm	0.105391	0.05	164229.972176	Y_R 377.433
Cd (214.439 nm)	0.948097	ppm	0.009238	0.97	36320.400000	Y 377.433
Co (228.615 nm)	0.936677	ppm	0.001023	0.11	23465.700000	Y 242.219
Cr (205.560 nm)	0.957637	ppm	0.001099	0.11	6620.460000	Y 377.433
Cu (324.754 nm)	0.962916	ppm	0.002191	0.23	47726.900000	Y 377.433
Fe (238.204 nm)	10.005378 o	ppm	0.018479	0.18	25017.328591	Y_R 377.433
Fe H (259.940 nm)	9.967670	ppm	0.010620	0.11	14297.900000	Y_R 377.433
K (766.491 nm)	56.174200	ppm	0.054182	0.10	61264.500000	Y_R2 488.368
Li (670.783 nm)	1.081470	ppm	0.001823	0.17	16788.700000	Y_R2 488.368
Mg (279.078 nm)	112.831000	ppm	1.225310	1.09	395453.000000	Y 377.433
Mn (257.610 nm)	1.086630	ppm	0.005240	0.48	313161.000000	Y 377.433
Mo (202.032 nm)	1.012530	ppm	0.005002	0.49	13406.100000	Y 377.433
Na (589.592 nm)	82.882100 o	ppm	0.169071	0.20	72695.000000	Y_R2 488.368
Na H (589.593 nm)	79.164166	ppm	0.084980	0.11	46360.365305	Y_R4
Ni (231.604 nm)	0.920754	ppm	0.005753	0.62	4987.930000	Y 377.433
P (213.618 nm)	19.353600	ppm	0.031907	0.16	29621.500000	Y 242.219
Pb (220.353 nm)	0.964596	ppm	0.001806	0.19	3253.400000	Y 242.219
S (181.972 nm)	130.592921 bo	ppm	0.295422	0.23	63839.279204	Y 377.433
Sb (206.834 nm)	-0.002403 u	ppm	0.000750	31.20	-7.751190	Y 377.433
Se (196.026 nm)	1.989650	ppm	0.001221	0.06	3191.370000	Y 242.219
Si (288.158 nm)	9.659930	ppm	0.062497	0.65	65036.800000	Y 377.433
Sn (189.925 nm)	1.937410	ppm	0.018397	0.95	3197.460000	Y 377.433
Sr (421.552 nm)	10.092967	ppm	0.019262	0.19	1620976.115038	Y_R 488.368
Th (288.505 nm)	1.009650	ppm	0.001094	0.11	1695.860000	Y 377.433
Ti (336.122 nm)	0.992055	ppm	0.002169	0.22	131039.000000	Y 377.433
Tl (190.794 nm)	1.875470	ppm	0.013712	0.73	4570.550000	Y 377.433
U (409.013 nm)	2.042690	ppm	0.012410	0.61	6476.430000	Y 377.433
V (292.401 nm)	0.983531	ppm	0.004316	0.44	52739.600000	Y 377.433
Zn (206.200 nm)	0.478586	ppm	0.006814	1.42	2191.260000	Y 377.433
Zr (343.823 nm)	0.487673	ppm	0.001157	0.24	28439.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.014426	18966.714381	0.009013	0.89
Y 377.433	1.040639	578154.324396	0.003732	0.36
Y_R 377.433	1.072510	52216.100000	0.002405	0.22
Y_R 488.368	1.058320	45260.300000	0.000408	0.04
Y_R2 488.368	1.043407	87146.259799	0.001768	0.17
Y_R4	1.057070	40641.000000	0.004937	0.47

Sample Name: CCVH-5690583

Date: 5/11/2019 1:33:50 AM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000211	ppm	0.000173	82.05	-313.758000	Y 377.433
Al (394.401 nm)	48.366300 o	ppm	0.016278	0.03	607817.000000	Y 377.433
Al H (396.152 nm)	48.300700	ppm	0.008226	0.02	108505.000000	Y_R 377.433
As (188.980 nm)	0.005986	ppm	0.001041	17.39	3.295980	Y 242.219
B (249.678 nm)	0.006781	ppm	0.000243	3.58	34.249700	Y 242.219
Ba (493.408 nm)	0.001292	ppm	0.000100	7.78	1804.130000	Y_R 488.368
Be (234.861 nm)	0.002577	ppm	0.000120	4.67	-159.420000	Y_R 488.368
Bi (223.061 nm)	0.955710	ppm	0.005737	0.60	2099.050000	Y 377.433
Ca (315.887 nm)	0.028336	ppm	0.002803	9.89	-37.404187	Y_R 377.433
Cd (214.439 nm)	0.000803	ppm	0.000030	3.67	44.037600	Y 377.433
Co (228.615 nm)	0.004201	ppm	0.000110	2.63	81.819600	Y 242.219
Cr (205.560 nm)	0.001572	ppm	0.000054	3.42	1.438310	Y 377.433
Cu (324.754 nm)	0.005999	ppm	0.000145	2.43	1204.950000	Y 377.433
Fe (238.204 nm)	48.494162 o	ppm	0.025977	0.05	121238.179168	Y_R 377.433
Fe H (259.940 nm)	48.254900	ppm	0.009766	0.02	69325.700000	Y_R 377.433
K (766.491 nm)	0.278147	ppm	0.080045	28.78	2474.140000	Y_R2 488.368
Li (670.783 nm)	0.005669	ppm	0.000312	5.50	-2782.890000	Y_R2 488.368
Mg (279.078 nm)	0.018771	ppm	0.001670	8.90	-146.948000	Y 377.433
Mn (257.610 nm)	0.001354	ppm	0.000022	1.61	366.745000	Y 377.433
Mo (202.032 nm)	0.000843	ppm	0.000326	38.62	22.768500	Y 377.433
Na (589.592 nm)	239.469000 o	ppm	0.328652	0.14	208344.000000	Y_R2 488.368
Na H (589.593 nm)	239.257177	ppm	0.113109	0.05	139148.016490	Y_R4
Ni (231.604 nm)	0.002440	ppm	0.000663	27.17	2.782650	Y 377.433
P (213.618 nm)	-0.013708 u	ppm	0.002044	14.92	-24.467700	Y 242.219
Pb (220.353 nm)	0.007628	ppm	0.000539	7.06	49.525900	Y 242.219
S (181.972 nm)	4.830263	ppm	0.017986	0.37	2367.935502	Y 377.433
Sb (206.834 nm)	0.003615	ppm	0.001864	51.58	12.375500	Y 377.433
Se (196.026 nm)	0.002538	ppm	0.000421	16.59	-3.391400	Y 242.219
Si (288.158 nm)	0.026170	ppm	0.002497	9.54	683.218000	Y 377.433
Sn (189.925 nm)	-0.002313 u	ppm	0.000980	42.39	5.290970	Y 377.433
Sr (421.552 nm)	0.000997	ppm	0.000044	4.42	270.815016	Y_R 488.368
Th (288.505 nm)	4.880900	ppm	0.008676	0.18	8623.040000	Y 377.433
Ti (336.122 nm)	0.002063	ppm	0.000088	4.27	-248.669000	Y 377.433
Tl (190.794 nm)	0.001069	ppm	0.001151	> 100.00	-2.130200	Y 377.433
U (409.013 nm)	9.706570	ppm	0.012089	0.12	31070.800000	Y 377.433
V (292.401 nm)	-0.001008 u	ppm	0.000120	11.89	-146.891000	Y 377.433
Zn (206.200 nm)	0.002456	ppm	0.000105	4.28	21.056300	Y 377.433
Zr (343.823 nm)	-0.002769 u	ppm	0.000104	3.76	-335.962000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.059243	19804.656440	0.001790	0.17
Y 377.433	1.065866	592169.887784	0.002176	0.20
Y_R 377.433	1.101380	53621.500000	0.009460	0.86
Y_R 488.368	1.087510	46508.500000	0.013797	1.27
Y_R2 488.368	1.058542	88410.335817	0.002785	0.26
Y_R4	1.093690	42048.900000	0.003317	0.30

Sample Name: CCV-5690581

Date: 5/11/2019 1:37:30 AM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.478625	ppm	0.000333	0.07	17307.700000	Y 377.433
Al (394.401 nm)	0.489354	ppm	0.000204	0.04	6299.020000	Y 377.433
Al H (396.152 nm)	0.540192 u	ppm	0.002905	0.54	1241.780000	Y_R 377.433
As (188.980 nm)	0.959015	ppm	0.002410	0.25	1523.930000	Y 242.219
B (249.678 nm)	0.473437	ppm	0.001563	0.33	3637.420000	Y 242.219
Ba (493.408 nm)	0.482223	ppm	0.001608	0.33	52227.900000	Y_R 488.368
Be (234.861 nm)	0.471192	ppm	0.000583	0.12	49986.500000	Y_R 488.368
Bi (223.061 nm)	0.007365	ppm	0.003597	48.84	5.830240	Y 377.433
Ca (315.887 nm)	4.885572	ppm	0.029406	0.60	3967.749690	Y_R 377.433
Cd (214.439 nm)	0.481316	ppm	0.000720	0.15	18434.200000	Y 377.433
Co (228.615 nm)	0.485099	ppm	0.000496	0.10	12140.000000	Y 242.219
Cr (205.560 nm)	0.476400	ppm	0.003095	0.65	3289.610000	Y 377.433
Cu (324.754 nm)	0.483358	ppm	0.000340	0.07	24234.400000	Y 377.433
Fe (238.204 nm)	2.410505	ppm	0.006167	0.26	6030.365151	Y_R 377.433
Fe H (259.940 nm)	2.432810 u	ppm	0.002389	0.10	3468.530000	Y_R 377.433
K (766.491 nm)	48.321600	ppm	0.066983	0.14	53005.300000	Y_R2 488.368
Li (670.783 nm)	0.991987	ppm	0.000884	0.09	15160.800000	Y_R2 488.368
Mg (279.078 nm)	18.833300	ppm	0.016529	0.09	66025.600000	Y 377.433
Mn (257.610 nm)	0.478245	ppm	0.000278	0.06	137815.000000	Y 377.433
Mo (202.032 nm)	0.481319	ppm	0.000018	0.00	6378.840000	Y 377.433
Na (589.592 nm)	24.868300	ppm	0.031330	0.13	21905.100000	Y_R2 488.368
Na H (589.593 nm)	24.374693 u	ppm	0.184455	0.76	14605.159760	Y_R4
Ni (231.604 nm)	0.479738	ppm	0.000951	0.20	2593.820000	Y 377.433
P (213.618 nm)	0.933696	ppm	0.001469	0.16	1306.770000	Y 242.219
Pb (220.353 nm)	0.967388	ppm	0.003103	0.32	3262.380000	Y 242.219
S (181.972 nm)	0.004976	ppm	0.000513	10.31	11.728792	Y 377.433
Sb (206.834 nm)	0.964900	ppm	0.001563	0.16	1797.290000	Y 377.433
Se (196.026 nm)	0.959919	ppm	0.000086	0.01	1543.160000	Y 242.219
Si (288.158 nm)	4.740580	ppm	0.019857	0.42	32175.500000	Y 377.433
Sn (189.925 nm)	0.967090	ppm	0.000652	0.07	1600.620000	Y 377.433
Sr (421.552 nm)	0.482504	ppm	0.001354	0.28	77590.789924	Y_R 488.368
Th (288.505 nm)	0.008146	ppm	0.002279	27.98	-15.467600	Y 377.433
Ti (336.122 nm)	0.481713	ppm	0.000066	0.01	63049.800000	Y 377.433
Tl (190.794 nm)	0.966186	ppm	0.001097	0.11	2359.260000	Y 377.433
U (409.013 nm)	0.010798	ppm	0.007318	67.77	5.829310	Y 377.433
V (292.401 nm)	0.478392	ppm	0.000406	0.08	25604.900000	Y 377.433
Zn (206.200 nm)	0.479947	ppm	0.001947	0.41	2196.430000	Y 377.433
Zr (343.823 nm)	0.483204	ppm	0.000087	0.02	28177.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.045874	19554.694403	0.002791	0.27
Y 377.433	1.060792	589351.213859	0.001530	0.14
Y_R 377.433	1.076120	52391.700000	0.000686	0.06
Y_R 488.368	1.062750	45449.600000	0.000636	0.06
Y_R2 488.368	1.051111	87789.669118	0.000087	0.01
Y_R4	1.071670	41202.300000	0.008451	0.79

Sample Name: CCB

Date: 5/11/2019 1:41:04 AM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000361 u	ppm	0.000735	> 100.00	-197.166000	Y 377.433
Al (394.401 nm)	0.001444	ppm	0.001676	> 100.00	42.304300	Y 377.433
Al H (396.152 nm)	0.106436 Zu	ppm	0.005452	5.12	19.469400 Z	Y_R 377.433
As (188.980 nm)	-0.000284 u	ppm	0.000601	> 100.00	-2.275580	Y 242.219
B (249.678 nm)	-0.000021 u	ppm	0.000354	> 100.00	11.690400	Y 242.219
Ba (493.408 nm)	-0.001532 u	ppm	0.000155	10.15	1467.830000	Y_R 488.368
Be (234.861 nm)	-0.000003 u	ppm	0.000034	> 100.00	-1.072950	Y_R 488.368
Bi (223.061 nm)	0.004253	ppm	0.000613	14.42	-1.531110	Y 377.433
Ca (315.887 nm)	0.003922	ppm	0.000714	18.19	-70.000434	Y_R 377.433
Cd (214.439 nm)	0.000029	ppm	0.000036	> 100.00	-5.678970	Y 377.433
Co (228.615 nm)	0.000311	ppm	0.000146	46.80	-15.621200	Y 242.219
Cr (205.560 nm)	0.000017 u	ppm	0.000509	> 100.00	-8.002350	Y 377.433
Cu (324.754 nm)	-0.000305 u	ppm	0.000215	70.31	496.952000	Y 377.433
Fe (238.204 nm)	-0.000008 u	ppm	0.000262	> 100.00	4.151569	Y_R 377.433
Fe H (259.940 nm)	0.027969 u	ppm	0.004155	14.85	12.205300	Y_R 377.433
K (766.491 nm)	-0.360044 u	ppm	0.068397	19.00	1802.900000	Y_R2 488.368
Li (670.783 nm)	0.006911	ppm	0.000396	5.72	-2760.290000	Y_R2 488.368
Mg (279.078 nm)	0.000622	ppm	0.000301	48.45	18.637300	Y 377.433
Mn (257.610 nm)	0.000087	ppm	0.000033	38.18	1.681550	Y 377.433
Mo (202.032 nm)	0.000173	ppm	0.000087	50.38	13.901900	Y 377.433
Na (589.592 nm)	0.073209	ppm	0.016171	22.09	234.486000	Y_R2 488.368
Na H (589.593 nm)	0.202730 u	ppm	0.023797	11.74	595.430892	Y_R4
Ni (231.604 nm)	0.000119 u	ppm	0.000726	> 100.00	-9.812030	Y 377.433
P (213.618 nm)	-0.004932 u	ppm	0.001209	24.52	-3.951970	Y 242.219
Pb (220.353 nm)	-0.000233 u	ppm	0.001346	> 100.00	7.194820	Y 242.219
S (181.972 nm)	0.002091 u	ppm	0.003608	> 100.00	8.497333	Y 377.433
Sb (206.834 nm)	0.000779	ppm	0.000269	34.61	3.728680	Y 377.433
Se (196.026 nm)	-0.000256 u	ppm	0.000562	> 100.00	5.172240	Y 242.219
Si (288.158 nm)	-0.007552 u	ppm	0.000499	6.60	457.959000	Y 377.433
Sn (189.925 nm)	-0.003861 u	ppm	0.000047	1.22	2.743170	Y 377.433
Sr (421.552 nm)	-0.000035 u	ppm	0.000046	> 100.00	97.306182	Y_R 488.368
Th (288.505 nm)	-0.005088 u	ppm	0.005152	> 100.00	10.381500	Y 377.433
Ti (336.122 nm)	0.000749	ppm	0.000005	0.67	-422.123000	Y 377.433
Tl (190.794 nm)	0.002198	ppm	0.000494	22.47	5.492400	Y 377.433
U (409.013 nm)	0.002370	ppm	0.000641	27.06	37.593500	Y 377.433
V (292.401 nm)	-0.000480 u	ppm	0.000081	16.88	-119.944000	Y 377.433
Zn (206.200 nm)	-0.000345 u	ppm	0.000041	11.82	1.509300	Y 377.433
Zr (343.823 nm)	0.000709	ppm	0.000014	1.91	-131.915000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.088293	20347.816049	0.001122	0.10
Y 377.433	1.099606	610915.351070	0.000557	0.05
Y_R 377.433	1.114650	54267.300000	0.007523	0.67
Y_R 488.368	1.102040	47130.200000	0.009717	0.88
Y_R2 488.368	1.096351	91568.157553	0.004369	0.40
Y_R4	1.087170	41798.300000	0.008336	0.77

Sample Name: CCVL-5695588

Date: 5/11/2019 1:44:21 AM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.008940	ppm	0.000317	3.55	141.934000	Y 377.433
Al (394.401 nm)	0.100687	ppm	0.000954	0.95	1296.460000	Y 377.433
Al H (396.152 nm)	0.216153 u	ppm	0.000314	0.15	271.821000	Y_R 377.433
As (188.980 nm)	0.013985	ppm	0.000270	1.93	20.416900	Y 242.219
B (249.678 nm)	0.094211	ppm	0.001482	1.57	733.551000	Y 242.219
Ba (493.408 nm)	0.008062	ppm	0.000218	2.71	2474.590000	Y_R 488.368
Be (234.861 nm)	0.000907	ppm	0.000036	3.94	94.611000	Y_R 488.368
Bi (223.061 nm)	0.089286	ppm	0.000748	0.84	185.484000	Y 377.433
Ca (315.887 nm)	0.212836	ppm	0.002664	1.25	102.823315	Y_R 377.433
Cd (214.439 nm)	0.005100	ppm	0.000033	0.65	188.636000	Y 377.433
Co (228.615 nm)	0.010373	ppm	0.000233	2.24	236.673000	Y 242.219
Cr (205.560 nm)	0.009916	ppm	0.000750	7.57	60.422200	Y 377.433
Cu (324.754 nm)	0.014265	ppm	0.000145	1.02	1211.350000	Y 377.433
Fe (238.204 nm)	0.099985	ppm	0.001261	1.26	254.129959	Y_R 377.433
Fe H (259.940 nm)	0.129151 u	ppm	0.000983	0.76	157.628000	Y_R 377.433
K (766.491 nm)	2.792410	ppm	0.074995	2.69	5118.590000	Y_R2 488.368
Li (670.783 nm)	0.031931 Q	ppm	0.000056	0.17	-2305.110000 Q	Y_R2 488.368
Mg (279.078 nm)	0.196458	ppm	0.001241	0.63	703.918000	Y 377.433
Mn (257.610 nm)	0.010246	ppm	0.000090	0.88	2929.490000	Y 377.433
Mo (202.032 nm)	0.018722	ppm	0.000224	1.20	259.288000	Y 377.433
Na (589.592 nm)	1.095980	ppm	0.051465	4.70	1126.030000	Y_R2 488.368
Na H (589.593 nm)	0.973732 u	ppm	0.010138	1.04	1042.292500	Y_R4
Ni (231.604 nm)	0.041075	ppm	0.000781	1.90	212.434000	Y 377.433
P (213.618 nm)	2.674360	ppm	0.007433	0.28	4130.900000	Y 242.219
Pb (220.353 nm)	0.009146	ppm	0.000462	5.05	38.826400	Y 242.219
S (181.972 nm)	0.086616	ppm	0.002717	3.14	49.842538	Y 377.433
Sb (206.834 nm)	0.015148	ppm	0.001128	7.45	30.344500	Y 377.433
Se (196.026 nm)	0.021150	ppm	0.000203	0.96	39.448800	Y 242.219
Si (288.158 nm)	0.485033	ppm	0.007049	1.45	3748.430000	Y 377.433
Sn (189.925 nm)	0.095694	ppm	0.000497	0.52	166.579000	Y 377.433
Sr (421.552 nm)	0.008812	ppm	0.000328	3.72	1518.213292	Y_R 488.368
Th (288.505 nm)	0.009070 Q	ppm	0.003325	36.65	34.644100 Q	Y 377.433
Ti (336.122 nm)	0.010215	ppm	0.000051	0.50	827.507000	Y 377.433
Tl (190.794 nm)	0.015277	ppm	0.001183	7.75	37.355400	Y 377.433
U (409.013 nm)	0.054298	ppm	0.003812	7.02	202.317000	Y 377.433
V (292.401 nm)	0.009511	ppm	0.000253	2.66	414.343000	Y 377.433
Zn (206.200 nm)	0.020721	ppm	0.000370	1.78	97.780800	Y 377.433
Zr (343.823 nm)	0.010326 Q	ppm	0.000062	0.60	432.328000 Q	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.113674	20822.362476	0.019343	1.74
Y 377.433	1.117268	620727.763017	0.013203	1.18
Y_R 377.433	1.139760	55489.900000	0.003043	0.27
Y_R 488.368	1.125620	48138.400000	0.003693	0.33
Y_R2 488.368	1.112139	92886.777589	0.002882	0.26
Y_R4	1.112910	42787.700000	0.010806	0.97

Sample Name: 280-123051-B-3-Bpds

Date: 5/11/2019 1:47:48 AM

Rack:Tube: 2:58

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.044540	ppm	0.000208	0.47	1436.150000	Y 377.433
Al (394.401 nm)	0.802056	ppm	0.001460	0.18	12532.500000	Y 377.433
Al H (396.152 nm)	-0.642163 u	ppm	0.001929	0.30	2220.350000	Y_R 377.433
As (188.980 nm)	0.203152	ppm	0.004587	2.26	321.310000	Y 242.219
B (249.678 nm)	0.384829	ppm	0.000382	0.10	2959.430000	Y 242.219
Ba (493.408 nm)	0.117984	ppm	0.000137	0.12	14008.900000	Y_R 488.368
Be (234.861 nm)	0.047205	ppm	0.000012	0.02	4999.930000	Y_R 488.368
Bi (223.061 nm)	0.004840	ppm	0.003442	71.11	-0.009737	Y 377.433
Ca (315.887 nm)	170.303020	ppm	0.504376	0.30	140784.476717	Y_R 377.433
Cd (214.439 nm)	0.047963	ppm	0.000255	0.53	1831.160000	Y 377.433
Co (228.615 nm)	0.046048	ppm	0.000279	0.61	1131.290000	Y 242.219
Cr (205.560 nm)	0.047735	ppm	0.000211	0.44	322.148000	Y 377.433
Cu (324.754 nm)	0.048019	ppm	0.000349	0.73	2777.540000	Y 377.433
Fe (238.204 nm)	1.035131	ppm	0.001103	0.11	2591.968862	Y_R 377.433
Fe H (259.940 nm)	1.041670 u	ppm	0.003726	0.36	1469.140000	Y_R 377.433
K (766.491 nm)	25.106700	ppm	0.106209	0.42	28588.300000	Y_R2 488.368
Li (670.783 nm)	0.167783	ppm	0.003299	1.97	166.388000	Y_R2 488.368
Mg (279.078 nm)	85.064600	ppm	0.099585	0.12	298166.000000	Y 377.433
Mn (257.610 nm)	0.174095	ppm	0.000002	0.00	50153.600000	Y 377.433
Mo (202.032 nm)	0.077766	ppm	0.000373	0.48	1040.360000	Y 377.433
Na (589.592 nm)	52.058200	ppm	0.072364	0.14	45454.300000	Y_R2 488.368
Na H (589.593 nm)	51.261875	ppm	0.038389	0.07	30188.590973	Y_R4
Ni (231.604 nm)	0.045683	ppm	0.000133	0.29	237.644000	Y 377.433
P (213.618 nm)	1.881700	ppm	0.008072	0.43	2894.830000	Y 242.219
Pb (220.353 nm)	0.095570	ppm	0.002102	2.20	330.504000	Y 242.219
S (181.972 nm)	122.486186 bo	ppm	0.400900	0.33	59873.214656	Y 377.433
Sb (206.834 nm)	0.096980	ppm	0.003478	3.59	182.528000	Y 377.433
Se (196.026 nm)	0.196110	ppm	0.000100	0.05	319.670000	Y 242.219
Si (288.158 nm)	12.638100	ppm	0.058471	0.46	84931.000000	Y 377.433
Sn (189.925 nm)	0.094778	ppm	0.000263	0.28	165.072000	Y 377.433
Sr (421.552 nm)	9.291165	ppm	0.011037	0.12	1492209.959966	Y_R 488.368
Th (288.505 nm)	0.203311	ppm	0.004841	2.38	371.548000	Y 377.433
Ti (336.122 nm)	0.049890	ppm	0.000031	0.06	6638.150000	Y 377.433
Tl (190.794 nm)	0.188512	ppm	0.001038	0.55	453.496000	Y 377.433
U (409.013 nm)	0.514882	ppm	0.005066	0.98	1647.090000	Y 377.433
V (292.401 nm)	0.049124	ppm	0.000118	0.24	2536.350000	Y 377.433
Zn (206.200 nm)	0.200095	ppm	0.000306	0.15	917.521000	Y 377.433
Zr (343.823 nm)	0.051294	ppm	0.000163	0.32	2836.050000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.046537	19567.104125	0.000664	0.06
Y 377.433	1.061449	589715.946124	0.000128	0.01
Y_R 377.433	1.095730	53346.300000	0.006143	0.56
Y_R 488.368	1.079170	46152.200000	0.002659	0.25
Y_R2 488.368	1.057437	88318.050928	0.007373	0.70
Y_R4	1.058490	40695.600000	0.007317	0.69

Sample Name: MB 280-457068/1-A

Date: 5/11/2019 1:51:20 AM

Rack:Tube: 2:59

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000674 u	ppm	0.000356	52.74	-208.924000	Y 377.433
Al (394.401 nm)	0.005689	ppm	0.000414	7.27	97.798700	Y 377.433
Al H (396.152 nm)	0.117405 u	ppm	0.003535	3.01	44.229600	Y_R 377.433
As (188.980 nm)	-0.001177 u	ppm	0.000743	63.12	-3.699490	Y 242.219
B (249.678 nm)	0.001272	ppm	0.000354	27.87	21.551900	Y 242.219
Ba (493.408 nm)	-0.001912 u	ppm	0.000288	15.07	1427.950000	Y_R 488.368
Be (234.861 nm)	-0.000001 u	ppm	0.000015	> 100.00	-1.471210	Y_R 488.368
Bi (223.061 nm)	0.002401	ppm	0.001311	54.60	-5.593410	Y 377.433
Ca (315.887 nm)	0.022475	ppm	0.002479	11.03	-54.651388	Y_R 377.433
Cd (214.439 nm)	0.000018 u	ppm	0.000028	> 100.00	-6.084660	Y 377.433
Co (228.615 nm)	0.000040 u	ppm	0.000230	> 100.00	-22.392700	Y 242.219
Cr (205.560 nm)	0.000684	ppm	0.000174	25.50	-3.382540	Y 377.433
Cu (324.754 nm)	-0.000699 u	ppm	0.000337	48.22	476.561000	Y 377.433
Fe (238.204 nm)	0.065076	ppm	0.000524	0.81	166.859974	Y_R 377.433
Fe H (259.940 nm)	0.094104 u	ppm	0.002543	2.70	107.257000	Y_R 377.433
K (766.491 nm)	-0.352759 u	ppm	0.064709	18.34	1810.560000	Y_R2 488.368
Li (670.783 nm)	0.007794	ppm	0.004274	54.84	-2744.220000	Y_R2 488.368
Mg (279.078 nm)	0.003556	ppm	0.000558	15.68	28.640600	Y 377.433
Mn (257.610 nm)	0.000750	ppm	0.000015	2.01	192.774000	Y 377.433
Mo (202.032 nm)	0.000222	ppm	0.000020	9.03	14.556400	Y 377.433
Na (589.592 nm)	0.040711	ppm	0.044627	> 100.00	206.216000	Y_R2 488.368
Na H (589.593 nm)	-0.166474 u	ppm	0.026750	16.07	381.445394	Y_R4
Ni (231.604 nm)	0.000807	ppm	0.000273	33.85	-6.078140	Y 377.433
P (213.618 nm)	-0.003037 u	ppm	0.001687	55.55	-1.003270	Y 242.219
Pb (220.353 nm)	-0.000341 u	ppm	0.000933	> 100.00	6.854210	Y 242.219
S (181.972 nm)	0.010191	ppm	0.004667	45.80	12.457956	Y 377.433
Sb (206.834 nm)	-0.001378 u	ppm	0.000405	29.36	-0.286444	Y 377.433
Se (196.026 nm)	0.002237	ppm	0.001242	55.51	9.148810	Y 242.219
Si (288.158 nm)	-0.001399 u	ppm	0.000079	5.68	499.061000	Y 377.433
Sn (189.925 nm)	-0.003242 u	ppm	0.000282	8.69	3.761470	Y 377.433
Sr (421.552 nm)	-0.000008 u	ppm	0.000037	> 100.00	101.803479	Y_R 488.368
Th (288.505 nm)	-0.003466 u	ppm	0.000701	20.21	13.262600	Y 377.433
Ti (336.122 nm)	0.000729	ppm	0.000132	18.08	-424.693000	Y 377.433
Tl (190.794 nm)	0.000015 u	ppm	0.000163	> 100.00	0.140371	Y 377.433
U (409.013 nm)	-0.007069 u	ppm	0.000872	12.33	7.478020	Y 377.433
V (292.401 nm)	-0.000409 u	ppm	0.000023	5.54	-117.099000	Y 377.433
Zn (206.200 nm)	0.001710	ppm	0.000433	25.31	10.909200	Y 377.433
Zr (343.823 nm)	0.000643	ppm	0.000013	2.00	-135.774000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.076879	20134.405836	0.003470	0.32
Y 377.433	1.089573	605340.902870	0.001642	0.15
Y_R 377.433	1.094940	53307.700000	0.002286	0.21
Y_R 488.368	1.089470	46592.600000	0.006034	0.55
Y_R2 488.368	1.075122	89795.109327	0.001404	0.13
Y_R4	1.053370	40498.900000	0.002649	0.25

Sample Name: LCS 280-457068/2-A

Date: 5/11/2019 1:54:44 AM

Rack:Tube: 2:60

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000830	ppm	0.000018	2.20	-474.881000	Y 377.433
Al (394.401 nm)	10.003900 o	ppm	0.008571	0.09	126012.000000	Y 377.433
Al H (396.152 nm)	10.206900	ppm	0.006156	0.06	23244.200000	Y_R 377.433
As (188.980 nm)	1.957940	ppm	0.012639	0.65	3112.450000	Y 242.219
B (249.678 nm)	0.968432	ppm	0.002092	0.22	7424.850000	Y 242.219
Ba (493.408 nm)	1.964550	ppm	0.000002	0.00	207768.000000	Y_R 488.368
Be (234.861 nm)	0.964015	ppm	0.000670	0.07	102221.000000	Y_R 488.368
Bi (223.061 nm)	2.001700	ppm	0.001801	0.09	4392.830000	Y 377.433
Ca (315.887 nm)	50.194322	ppm	0.016424	0.03	41445.091863	Y_R 377.433
Cd (214.439 nm)	0.954601	ppm	0.000674	0.07	36569.700000	Y 377.433
Co (228.615 nm)	0.945621	ppm	0.001599	0.17	23689.400000	Y 242.219
Cr (205.560 nm)	0.956397	ppm	0.001607	0.17	6611.990000	Y 377.433
Cu (324.754 nm)	0.946719	ppm	0.001743	0.18	47021.600000	Y 377.433
Fe (238.204 nm)	10.302157 o	ppm	0.004167	0.04	25759.265941	Y_R 377.433
Fe H (259.940 nm)	10.305900	ppm	0.012783	0.12	14784.000000	Y_R 377.433
K (766.491 nm)	50.615600	ppm	0.021492	0.04	55418.100000	Y_R2 488.368
Li (670.783 nm)	1.002830	ppm	0.001299	0.13	15358.100000	Y_R2 488.368
Mg (279.078 nm)	48.305900	ppm	0.051293	0.11	169285.000000	Y 377.433
Mn (257.610 nm)	0.965503	ppm	0.000076	0.01	278250.000000	Y 377.433
Mo (202.032 nm)	0.979291	ppm	0.000268	0.03	12966.400000	Y 377.433
Na (589.592 nm)	51.450500	ppm	0.034300	0.07	45368.700000	Y_R2 488.368
Na H (589.593 nm)	48.242224 u	ppm	0.351249	0.73	28438.443770	Y_R4
Ni (231.604 nm)	0.934310	ppm	0.002913	0.31	5061.520000	Y 377.433
P (213.618 nm)	19.051200	ppm	0.067842	0.36	29160.200000	Y 242.219
Pb (220.353 nm)	0.967599	ppm	0.002959	0.31	3263.580000	Y 242.219
S (181.972 nm)	9.298532	ppm	0.000476	0.01	4557.204936	Y 377.433
Sb (206.834 nm)	-0.000375 u	ppm	0.001882	> 100.00	-3.690540	Y 377.433
Se (196.026 nm)	1.932260	ppm	0.001558	0.08	3099.190000	Y 242.219
Si (288.158 nm)	1.985340	ppm	0.004365	0.22	13770.500000	Y 377.433
Sn (189.925 nm)	1.944900	ppm	0.001788	0.09	3209.790000	Y 377.433
Sr (421.552 nm)	0.978017	ppm	0.000698	0.07	157168.360803	Y_R 488.368
Th (288.505 nm)	1.022840	ppm	0.000264	0.03	1721.500000	Y 377.433
Ti (336.122 nm)	0.987112	ppm	0.000030	0.00	129883.000000	Y 377.433
Tl (190.794 nm)	1.899460	ppm	0.001241	0.07	4635.530000	Y 377.433
U (409.013 nm)	2.044400	ppm	0.000307	0.02	6500.250000	Y 377.433
V (292.401 nm)	0.974869	ppm	0.000210	0.02	52274.200000	Y 377.433
Zn (206.200 nm)	0.483827	ppm	0.000279	0.06	2215.250000	Y 377.433
Zr (343.823 nm)	0.496478	ppm	0.000007	0.00	28956.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.015111	18979.530536	0.003526	0.35
Y 377.433	1.037503	576412.026631	0.002197	0.21
Y_R 377.433	1.048090	51026.900000	0.000560	0.05
Y_R 488.368	1.034010	44220.500000	0.000142	0.01
Y_R2 488.368	1.046742	87424.827814	0.006968	0.67
Y_R4	1.051250	40417.400000	0.008649	0.82

Sample Name: LCSD 280-457068/3-A

Date: 5/11/2019 1:58:22 AM

Rack:Tube: 2:61

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000979	ppm	0.000128	13.11	-470.217000	Y 377.433
Al (394.401 nm)	9.988500 o	ppm	0.008973	0.09	125819.000000	Y 377.433
Al H (396.152 nm)	10.167600	ppm	0.028412	0.28	23156.700000	Y_R 377.433
As (188.980 nm)	1.962600	ppm	0.008934	0.46	3119.860000	Y 242.219
B (249.678 nm)	0.962026	ppm	0.001273	0.13	7375.950000	Y 242.219
Ba (493.408 nm)	1.967800	ppm	0.001999	0.10	208109.000000	Y_R 488.368
Be (234.861 nm)	0.959462	ppm	0.004376	0.46	101741.000000	Y_R 488.368
Bi (223.061 nm)	1.990470	ppm	0.009123	0.46	4368.090000	Y 377.433
Ca (315.887 nm)	50.072987	ppm	0.015458	0.03	41344.724143	Y_R 377.433
Cd (214.439 nm)	0.955426	ppm	0.001405	0.15	36601.100000	Y 377.433
Co (228.615 nm)	0.943990	ppm	0.000311	0.03	23648.600000	Y 242.219
Cr (205.560 nm)	0.956197	ppm	0.008054	0.84	6610.610000	Y 377.433
Cu (324.754 nm)	0.941360	ppm	0.005228	0.56	46757.500000	Y 377.433
Fe (238.204 nm)	9.986381 o	ppm	0.003563	0.04	24969.835107	Y_R 377.433
Fe H (259.940 nm)	10.004700	ppm	0.018823	0.19	14351.100000	Y_R 377.433
K (766.491 nm)	50.625400	ppm	0.034416	0.07	55428.400000	Y_R2 488.368
Li (670.783 nm)	1.006900	ppm	0.000397	0.04	15432.200000	Y_R2 488.368
Mg (279.078 nm)	48.281500	ppm	0.077396	0.16	169200.000000	Y 377.433
Mn (257.610 nm)	0.964882	ppm	0.001297	0.13	278071.000000	Y 377.433
Mo (202.032 nm)	0.979690	ppm	0.000864	0.09	12971.600000	Y 377.433
Na (589.592 nm)	51.744800	ppm	0.053737	0.10	45625.300000	Y_R2 488.368
Na H (589.593 nm)	48.207929 u	ppm	0.048761	0.10	28418.566891	Y_R4
Ni (231.604 nm)	0.935617	ppm	0.002964	0.32	5068.620000	Y 377.433
P (213.618 nm)	18.882800	ppm	0.024097	0.13	28901.300000	Y 242.219
Pb (220.353 nm)	0.967518	ppm	0.000214	0.02	3263.300000	Y 242.219
S (181.972 nm)	9.280697	ppm	0.028231	0.30	4548.477000	Y 377.433
Sb (206.834 nm)	-0.001543 u	ppm	0.001967	> 100.00	-5.909740	Y 377.433
Se (196.026 nm)	1.940300	ppm	0.012004	0.62	3112.140000	Y 242.219
Si (288.158 nm)	1.978790	ppm	0.001033	0.05	13726.700000	Y 377.433
Sn (189.925 nm)	1.947270	ppm	0.002893	0.15	3213.690000	Y 377.433
Sr (421.552 nm)	0.980281	ppm	0.000238	0.02	157532.012573	Y_R 488.368
Th (288.505 nm)	1.014440	ppm	0.003038	0.30	1706.730000	Y 377.433
Ti (336.122 nm)	0.986958	ppm	0.001025	0.10	129862.000000	Y 377.433
Tl (190.794 nm)	1.906970	ppm	0.001671	0.09	4653.930000	Y 377.433
U (409.013 nm)	2.026870	ppm	0.000410	0.02	6444.480000	Y 377.433
V (292.401 nm)	0.974834	ppm	0.001906	0.20	52272.800000	Y 377.433
Zn (206.200 nm)	0.480095	ppm	0.002725	0.57	2198.160000	Y 377.433
Zr (343.823 nm)	0.492807	ppm	0.000555	0.11	28741.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.018482	19042.557964	0.002093	0.21
Y 377.433	1.038922	577200.469013	0.000923	0.09
Y_R 377.433	1.057000	51460.900000	0.001450	0.14
Y_R 488.368	1.041390	44536.500000	0.002055	0.20
Y_R2 488.368	1.053393	87980.258698	0.006983	0.66
Y_R4	1.064810	40938.700000	0.005435	0.51

Sample Name: 280-123159-A-3-A

Date: 5/11/2019 2:02:01 AM

Rack:Tube: 2:62

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000144 u	ppm	0.000197	> 100.00	-189.459000	Y 377.433
Al (394.401 nm)	0.107942	ppm	0.000176	0.16	1428.180000	Y 377.433
Al H (396.152 nm)	0.190393 u	ppm	0.003090	1.62	278.652000	Y_R 377.433
As (188.980 nm)	-0.001197 u	ppm	0.002458	> 100.00	-3.745890	Y 242.219
B (249.678 nm)	0.031343	ppm	0.000285	0.91	251.755000	Y 242.219
Ba (493.408 nm)	0.054380	ppm	0.000144	0.26	7334.690000	Y_R 488.368
Be (234.861 nm)	0.000005 u	ppm	0.000071	> 100.00	-3.443890	Y_R 488.368
Bi (223.061 nm)	0.002827	ppm	0.000083	2.93	-4.601860	Y 377.433
Ca (315.887 nm)	19.376343	ppm	0.008511	0.04	15952.938816	Y_R 377.433
Cd (214.439 nm)	0.000323	ppm	0.000004	1.26	5.751920	Y 377.433
Co (228.615 nm)	0.000498	ppm	0.000066	13.31	-10.871200	Y 242.219
Cr (205.560 nm)	0.001811	ppm	0.000605	33.42	4.419190	Y 377.433
Cu (324.754 nm)	-0.000349 u	ppm	0.000264	75.76	482.692000	Y 377.433
Fe (238.204 nm)	0.353367	ppm	0.003822	1.08	887.577544	Y_R 377.433
Fe H (259.940 nm)	0.382614 u	ppm	0.000116	0.03	521.915000	Y_R 377.433
K (766.491 nm)	1.785760	ppm	0.017433	0.98	4059.810000	Y_R2 488.368
Li (670.783 nm)	0.071016	ppm	0.001972	2.78	-1594.050000	Y_R2 488.368
Mg (279.078 nm)	14.304900	ppm	0.022267	0.16	50155.700000	Y 377.433
Mn (257.610 nm)	0.026935	ppm	0.000062	0.23	7739.700000	Y 377.433
Mo (202.032 nm)	0.000506	ppm	0.000133	26.33	18.313500	Y 377.433
Na (589.592 nm)	30.676300	ppm	0.089522	0.29	26851.500000	Y_R2 488.368
Na H (589.593 nm)	30.339770 u	ppm	0.060026	0.20	18062.433970	Y_R4
Ni (231.604 nm)	0.001156	ppm	0.000696	60.18	-4.184420	Y 377.433
P (213.618 nm)	0.014077	ppm	0.000030	0.22	25.318100	Y 242.219
Pb (220.353 nm)	0.001099	ppm	0.000164	14.96	11.679000	Y 242.219
S (181.972 nm)	25.981575	ppm	0.089981	0.35	12705.209119	Y 377.433
Sb (206.834 nm)	-0.003240 u	ppm	0.001901	58.65	-3.726520	Y 377.433
Se (196.026 nm)	0.003175	ppm	0.002557	80.54	10.611300	Y 242.219
Si (288.158 nm)	16.780100	ppm	0.021174	0.13	112600.000000	Y 377.433
Sn (189.925 nm)	-0.003314 u	ppm	0.000398	12.00	3.643270	Y 377.433
Sr (421.552 nm)	0.176876	ppm	0.000130	0.07	28508.288870	Y_R 488.368
Th (288.505 nm)	-0.007467 u	ppm	0.001377	18.44	6.249690	Y 377.433
Ti (336.122 nm)	0.001925	ppm	0.000266	13.84	-201.948000	Y 377.433
Tl (190.794 nm)	0.002298	ppm	0.000152	6.63	4.895070	Y 377.433
U (409.013 nm)	0.011944	ppm	0.002262	18.94	65.928100	Y 377.433
V (292.401 nm)	0.000351	ppm	0.000108	30.82	-76.568400	Y 377.433
Zn (206.200 nm)	0.003277	ppm	0.000167	5.10	18.110900	Y 377.433
Zr (343.823 nm)	0.000781	ppm	0.000043	5.55	-127.695000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.053588	19698.931434	0.001743	0.17
Y 377.433	1.066812	592695.537711	0.001676	0.16
Y_R 377.433	1.081900	52673.000000	0.000295	0.03
Y_R 488.368	1.067360	45646.900000	0.001599	0.15
Y_R2 488.368	1.057994	88364.533612	0.003883	0.37
Y_R4	1.054470	40541.000000	0.002244	0.21

Sample Name: 280-123159-A-10-A

Date: 5/11/2019 2:05:28 AM

Rack:Tube: 2:63

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000464 u	ppm	0.000019	4.11	-201.352000	Y 377.433
Al (394.401 nm)	0.044307	ppm	0.001181	2.67	601.265000	Y 377.433
Al H (396.152 nm)	0.143252 u	ppm	0.012094	8.44	132.191000	Y_R 377.433
As (188.980 nm)	0.001532	ppm	0.001744	> 100.00	0.602554	Y 242.219
B (249.678 nm)	0.014845	ppm	0.000425	2.86	125.424000	Y 242.219
Ba (493.408 nm)	0.013683	ppm	0.000073	0.53	3064.470000	Y_R 488.368
Be (234.861 nm)	-0.000001 u	ppm	0.000023	> 100.00	-3.193080	Y_R 488.368
Bi (223.061 nm)	-0.001231 u	ppm	0.001097	89.16	-13.543300	Y 377.433
Ca (315.887 nm)	8.144979	ppm	0.003328	0.04	6663.473671	Y_R 377.433
Cd (214.439 nm)	0.000295	ppm	0.000034	11.56	4.617670	Y 377.433
Co (228.615 nm)	0.000180	ppm	0.000120	66.35	-18.832600	Y 242.219
Cr (205.560 nm)	0.015656	ppm	0.000462	2.95	100.352000	Y 377.433
Cu (324.754 nm)	-0.000326 u	ppm	0.000027	8.40	490.829000	Y 377.433
Fe (238.204 nm)	0.257905	ppm	0.000524	0.20	648.925235	Y_R 377.433
Fe H (259.940 nm)	0.292684 u	ppm	0.003930	1.34	392.664000	Y_R 377.433
K (766.491 nm)	1.014390	ppm	0.085691	8.45	3248.500000	Y_R2 488.368
Li (670.783 nm)	0.038659	ppm	0.003571	9.24	-2182.720000	Y_R2 488.368
Mg (279.078 nm)	6.904930	ppm	0.012578	0.18	24218.400000	Y 377.433
Mn (257.610 nm)	0.005569	ppm	0.000018	0.32	1581.690000	Y 377.433
Mo (202.032 nm)	0.000402	ppm	0.000107	26.64	16.938100	Y 377.433
Na (589.592 nm)	22.948700	ppm	0.007304	0.03	20124.200000	Y_R2 488.368
Na H (589.593 nm)	22.709623 u	ppm	0.049333	0.22	13640.108216	Y_R4
Ni (231.604 nm)	0.011694	ppm	0.000252	2.15	52.997700	Y 377.433
P (213.618 nm)	0.001713	ppm	0.000596	34.77	6.162290	Y 242.219
Pb (220.353 nm)	-0.000516 u	ppm	0.000324	62.76	6.217290	Y 242.219
S (181.972 nm)	2.188780	ppm	0.001180	0.05	1077.511125	Y 377.433
Sb (206.834 nm)	-0.002323 u	ppm	0.006112	> 100.00	-1.909430	Y 377.433
Se (196.026 nm)	0.006193	ppm	0.001466	23.67	15.439700	Y 242.219
Si (288.158 nm)	16.087000	ppm	0.030995	0.19	107970.000000	Y 377.433
Sn (189.925 nm)	-0.003920 u	ppm	0.000004	0.11	2.645200	Y 377.433
Sr (421.552 nm)	0.075471	ppm	0.000040	0.05	12223.243498	Y_R 488.368
Th (288.505 nm)	-0.007376 u	ppm	0.000467	6.33	6.187570	Y 377.433
Ti (336.122 nm)	0.000982	ppm	0.000159	16.16	-364.274000	Y 377.433
Tl (190.794 nm)	0.001457	ppm	0.001593	> 100.00	3.316030	Y 377.433
U (409.013 nm)	0.007908	ppm	0.001746	22.08	54.418000	Y 377.433
V (292.401 nm)	0.000074	ppm	0.000013	17.58	-96.164900	Y 377.433
Zn (206.200 nm)	0.003086	ppm	0.000072	2.34	17.225500	Y 377.433
Zr (343.823 nm)	0.000601	ppm	0.000110	18.29	-138.283000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.053203	19691.725841	0.011912	1.13
Y 377.433	1.064566	591447.758309	0.012822	1.20
Y_R 377.433	1.081180	52637.800000	0.001948	0.18
Y_R 488.368	1.075020	45974.300000	0.000375	0.03
Y_R2 488.368	1.072874	89607.328911	0.000927	0.09
Y_R4	1.058790	40707.200000	0.000017	0.00

Sample Name: 280-123159-A-20-A

Date: 5/11/2019 2:08:56 AM

Rack:Tube: 2:64

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000272	ppm	0.000015	5.34	-174.844000	Y 377.433
Al (394.401 nm)	0.063797	ppm	0.002606	4.08	872.681000	Y 377.433
Al H (396.152 nm)	0.138769 u	ppm	0.005465	3.94	151.006000	Y_R 377.433
As (188.980 nm)	0.003692	ppm	0.001067	28.90	4.038990	Y 242.219
B (249.678 nm)	0.018935	ppm	0.000767	4.05	156.778000	Y 242.219
Ba (493.408 nm)	0.080293	ppm	0.000041	0.05	10053.600000	Y_R 488.368
Be (234.861 nm)	-0.000037 u	ppm	0.000038	> 100.00	-6.609880	Y_R 488.368
Bi (223.061 nm)	-0.000299 u	ppm	0.000155	51.80	-11.502900	Y 377.433
Ca (315.887 nm)	42.248728	ppm	0.001811	0.00	34870.655449	Y_R 377.433
Cd (214.439 nm)	0.000237	ppm	0.000037	15.70	2.380200	Y 377.433
Co (228.615 nm)	0.000083	ppm	0.000100	> 100.00	-21.280600	Y 242.219
Cr (205.560 nm)	0.001444	ppm	0.000246	17.05	1.874600	Y 377.433
Cu (324.754 nm)	-0.001333 u	ppm	0.000289	21.66	419.723000	Y 377.433
Fe (238.204 nm)	0.216140	ppm	0.001730	0.80	544.515827	Y_R 377.433
Fe H (259.940 nm)	0.238680 u	ppm	0.005964	2.50	315.047000	Y_R 377.433
K (766.491 nm)	0.533718	ppm	0.143336	26.86	2742.940000	Y_R2 488.368
Li (670.783 nm)	0.032035	ppm	0.001723	5.38	-2303.220000	Y_R2 488.368
Mg (279.078 nm)	25.129000	ppm	0.024443	0.10	88095.200000	Y 377.433
Mn (257.610 nm)	0.012511	ppm	0.000037	0.30	3582.410000	Y 377.433
Mo (202.032 nm)	0.000043 u	ppm	0.000248	> 100.00	12.181600	Y 377.433
Na (589.592 nm)	41.568400	ppm	0.131112	0.32	36326.400000	Y_R2 488.368
Na H (589.593 nm)	40.912198 u	ppm	0.115868	0.28	24190.064387	Y_R4
Ni (231.604 nm)	0.003867	ppm	0.000393	10.15	10.523300	Y 377.433
P (213.618 nm)	-0.000634 u	ppm	0.002159	> 100.00	2.634710	Y 242.219
Pb (220.353 nm)	0.000016 u	ppm	0.001871	> 100.00	8.094780	Y 242.219
S (181.972 nm)	57.097926	ppm	0.012963	0.02	27912.260590	Y 377.433
Sb (206.834 nm)	-0.002042 u	ppm	0.000327	16.00	-1.509240	Y 377.433
Se (196.026 nm)	0.003829	ppm	0.001749	45.68	11.675500	Y 242.219
Si (288.158 nm)	14.915400	ppm	0.062211	0.42	100143.000000	Y 377.433
Sn (189.925 nm)	-0.003352 u	ppm	0.000681	20.31	3.580420	Y 377.433
Sr (421.552 nm)	0.162508	ppm	0.000321	0.20	26200.861571	Y_R 488.368
Th (288.505 nm)	-0.009664 u	ppm	0.001080	11.18	1.552790	Y 377.433
Ti (336.122 nm)	0.000940	ppm	0.000034	3.56	-254.003000	Y 377.433
Tl (190.794 nm)	0.001180	ppm	0.001062	90.01	1.238940	Y 377.433
U (409.013 nm)	0.018140	ppm	0.007675	42.31	82.658000	Y 377.433
V (292.401 nm)	0.000329	ppm	0.000152	46.34	-78.414000	Y 377.433
Zn (206.200 nm)	0.003428	ppm	0.000483	14.10	18.782500	Y 377.433
Zr (343.823 nm)	0.000889	ppm	0.000170	19.08	-121.341000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.044912	19536.712104	0.000123	0.01
Y 377.433	1.058828	588260.034024	0.002143	0.20
Y_R 377.433	1.068320	52011.800000	0.002131	0.20
Y_R 488.368	1.053330	45047.100000	0.001934	0.18
Y_R2 488.368	1.060823	88600.880536	0.001119	0.11
Y_R4	1.051990	40445.600000	0.006158	0.59

Sample Name: 280-123159-A-20-Asd@5

Date: 5/11/2019 2:12:24 AM

Rack:Tube: 2:65

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000379 u	ppm	0.000385	> 100.00	-198.326000	Y 377.433
Al (394.401 nm)	0.015298	ppm	0.000627	4.10	228.281000	Y 377.433
Al H (396.152 nm)	0.121740 u	ppm	0.000969	0.80	65.428400	Y_R 377.433
As (188.980 nm)	0.001496	ppm	0.000465	31.12	0.552925	Y 242.219
B (249.678 nm)	0.004243	ppm	0.000351	8.28	44.328900	Y 242.219
Ba (493.408 nm)	0.015492	ppm	0.000237	1.53	3254.130000	Y_R 488.368
Be (234.861 nm)	-0.000041 u	ppm	0.000029	69.57	-5.548860	Y_R 488.368
Bi (223.061 nm)	0.001398	ppm	0.000411	29.41	-7.802310	Y 377.433
Ca (315.887 nm)	8.475461	ppm	0.001022	0.01	6936.807949	Y_R 377.433
Cd (214.439 nm)	0.000033	ppm	0.000011	33.30	-5.508140	Y 377.433
Co (228.615 nm)	0.000244 u	ppm	0.000403	> 100.00	-17.278100	Y 242.219
Cr (205.560 nm)	0.000479	ppm	0.000130	27.19	-4.805230	Y 377.433
Cu (324.754 nm)	-0.000875 u	ppm	0.000046	5.22	462.529000	Y 377.433
Fe (238.204 nm)	0.043425	ppm	0.002984	6.87	112.732450	Y_R 377.433
Fe H (259.940 nm)	0.073034 u	ppm	0.000536	0.73	76.975100	Y_R 377.433
K (766.491 nm)	-0.200745 u	ppm	0.018596	9.26	1970.450000	Y_R2 488.368
Li (670.783 nm)	0.009869	ppm	0.003486	35.32	-2706.470000	Y_R2 488.368
Mg (279.078 nm)	5.086510	ppm	0.009576	0.19	17844.700000	Y 377.433
Mn (257.610 nm)	0.002612	ppm	0.000015	0.56	729.345000	Y 377.433
Mo (202.032 nm)	0.000046	ppm	0.000049	> 100.00	12.221600	Y 377.433
Na (589.592 nm)	8.384420	ppm	0.028644	0.34	7463.720000	Y_R2 488.368
Na H (589.593 nm)	7.966876 u	ppm	0.011338	0.14	5095.420398	Y_R4
Ni (231.604 nm)	0.000768	ppm	0.000719	93.68	-6.293240	Y 377.433
P (213.618 nm)	-0.003842 u	ppm	0.001311	34.12	-2.241200	Y 242.219
Pb (220.353 nm)	0.000825	ppm	0.000932	> 100.00	10.811400	Y 242.219
S (181.972 nm)	11.247036	ppm	0.057977	0.52	5504.105190	Y 377.433
Sb (206.834 nm)	-0.004286 u	ppm	0.004009	93.54	-5.702660	Y 377.433
Se (196.026 nm)	0.001057 u	ppm	0.002001	> 100.00	7.267900	Y 242.219
Si (288.158 nm)	2.977860	ppm	0.000573	0.02	20400.500000	Y 377.433
Sn (189.925 nm)	-0.003226 u	ppm	0.000608	18.84	3.788540	Y 377.433
Sr (421.552 nm)	0.031837	ppm	0.000243	0.76	5215.787895	Y_R 488.368
Th (288.505 nm)	-0.007218 u	ppm	0.003890	53.90	6.555170	Y 377.433
Ti (336.122 nm)	0.000456	ppm	0.000069	15.18	-432.592000	Y 377.433
Tl (190.794 nm)	-0.000446 u	ppm	0.000086	19.34	-1.321300	Y 377.433
U (409.013 nm)	0.014031	ppm	0.008336	59.41	73.779900	Y 377.433
V (292.401 nm)	-0.000314 u	ppm	0.000080	25.35	-112.602000	Y 377.433
Zn (206.200 nm)	0.000462	ppm	0.000101	21.79	5.202280	Y 377.433
Zr (343.823 nm)	0.000541	ppm	0.000043	7.93	-141.759000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.043940	19518.539013	0.002343	0.22
Y 377.433	1.053298	585187.550751	0.003417	0.32
Y_R 377.433	1.054800	51353.600000	0.000939	0.09
Y_R 488.368	1.034840	44256.300000	0.004494	0.43
Y_R2 488.368	1.039187	86793.828622	0.001370	0.13
Y_R4	1.035750	39821.200000	0.002557	0.25

Sample Name: 280-123159-A-20-B MS

Date: 5/11/2019 2:15:49 AM

Rack:Tube: 2:66

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001264	ppm	0.000569	45.03	-465.874000	Y 377.433
Al (394.401 nm)	9.955720 o	ppm	0.010179	0.10	125446.000000	Y 377.433
Al H (396.152 nm)	9.984250	ppm	0.011196	0.11	22799.100000	Y_R 377.433
As (188.980 nm)	1.994510	ppm	0.006347	0.32	3170.640000	Y 242.219
B (249.678 nm)	0.991277	ppm	0.000240	0.02	7599.880000	Y 242.219
Ba (493.408 nm)	2.019360	ppm	0.000653	0.03	213520.000000	Y_R 488.368
Be (234.861 nm)	0.961014	ppm	0.001710	0.18	101903.000000	Y_R 488.368
Bi (223.061 nm)	1.993500	ppm	0.004881	0.24	4374.800000	Y 377.433
Ca (315.887 nm)	92.379073	ppm	0.280686	0.30	76336.011925	Y_R 377.433
Cd (214.439 nm)	0.969072	ppm	0.002518	0.26	37124.100000	Y 377.433
Co (228.615 nm)	0.946026	ppm	0.001058	0.11	23699.900000	Y 242.219
Cr (205.560 nm)	0.964954	ppm	0.007958	0.82	6671.220000	Y 377.433
Cu (324.754 nm)	0.952411	ppm	0.009327	0.98	47276.100000	Y 377.433
Fe (238.204 nm)	10.277213 o	ppm	0.006019	0.06	25696.906719	Y_R 377.433
Fe H (259.940 nm)	10.207000	ppm	0.017242	0.17	14641.900000	Y_R 377.433
K (766.491 nm)	51.145500	ppm	0.013894	0.03	55975.400000	Y_R2 488.368
Li (670.783 nm)	1.027350	ppm	0.002243	0.22	15804.200000	Y_R2 488.368
Mg (279.078 nm)	73.544000	ppm	0.155820	0.21	257747.000000	Y 377.433
Mn (257.610 nm)	0.984149	ppm	0.001211	0.12	283624.000000	Y 377.433
Mo (202.032 nm)	0.990311	ppm	0.001524	0.15	13112.100000	Y 377.433
Na (589.592 nm)	89.204400 o	ppm	0.021879	0.02	78201.700000	Y_R2 488.368
Na H (589.593 nm)	86.098941	ppm	0.150574	0.17	50379.663060	Y_R4
Ni (231.604 nm)	0.947124	ppm	0.004433	0.47	5131.060000	Y 377.433
P (213.618 nm)	19.071200	ppm	0.027046	0.14	29188.700000	Y 242.219
Pb (220.353 nm)	0.975743	ppm	0.001266	0.13	3290.950000	Y 242.219
S (181.972 nm)	66.243375	ppm	0.190438	0.29	32387.198987	Y 377.433
Sb (206.834 nm)	-0.000379 u	ppm	0.000051	13.52	-3.774500	Y 377.433
Se (196.026 nm)	1.951760	ppm	0.012547	0.64	3130.460000	Y 242.219
Si (288.158 nm)	16.698700	ppm	0.116681	0.70	112056.000000	Y 377.433
Sn (189.925 nm)	1.995270	ppm	0.001734	0.09	3292.680000	Y 377.433
Sr (421.552 nm)	1.129775	ppm	0.000119	0.01	181539.834995	Y_R 488.368
Th (288.505 nm)	1.018310	ppm	0.003430	0.34	1711.190000	Y 377.433
Ti (336.122 nm)	0.994119	ppm	0.001365	0.14	130949.000000	Y 377.433
Tl (190.794 nm)	1.908460	ppm	0.000734	0.04	4655.720000	Y 377.433
U (409.013 nm)	2.026780	ppm	0.013467	0.66	6439.050000	Y 377.433
V (292.401 nm)	0.987854	ppm	0.000998	0.10	52973.800000	Y 377.433
Zn (206.200 nm)	0.488589	ppm	0.001864	0.38	2237.010000	Y 377.433
Zr (343.823 nm)	0.491269	ppm	0.000193	0.04	28650.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.021494	19098.876878	0.002010	0.20
Y 377.433	1.035690	575404.931720	0.002625	0.25
Y_R 377.433	1.062600	51733.500000	0.005879	0.55
Y_R 488.368	1.049530	44884.500000	0.002334	0.22
Y_R2 488.368	1.028380	85891.169432	0.005725	0.56
Y_R4	1.049880	40364.600000	0.002841	0.27

Sample Name: 280-123159-A-20-C MSD

Date: 5/11/2019 2:19:26 AM

Rack:Tube: 2:67

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000842	ppm	0.000218	25.90	-483.147000	Y 377.433
Al (394.401 nm)	10.175000 o	ppm	0.001971	0.02	128209.000000	Y 377.433
Al H (396.152 nm)	10.269900	ppm	0.003868	0.04	23455.600000	Y_R 377.433
As (188.980 nm)	2.022220	ppm	0.003406	0.17	3214.720000	Y 242.219
B (249.678 nm)	1.015640	ppm	0.000036	0.00	7786.530000	Y 242.219
Ba (493.408 nm)	2.081830	ppm	0.000532	0.03	220074.000000	Y_R 488.368
Be (234.861 nm)	0.979295	ppm	0.003872	0.40	103843.000000	Y_R 488.368
Bi (223.061 nm)	2.031580	ppm	0.007833	0.39	4458.540000	Y 377.433
Ca (315.887 nm)	92.161771	ppm	0.010886	0.01	76156.358731	Y_R 377.433
Cd (214.439 nm)	0.964950	ppm	0.001261	0.13	36966.100000	Y 377.433
Co (228.615 nm)	0.956032	ppm	0.001823	0.19	23950.800000	Y 242.219
Cr (205.560 nm)	0.974401	ppm	0.002823	0.29	6736.640000	Y 377.433
Cu (324.754 nm)	0.965876	ppm	0.002744	0.28	47938.400000	Y 377.433
Fe (238.204 nm)	10.268488 o	ppm	0.005108	0.05	25675.094896	Y_R 377.433
Fe H (259.940 nm)	10.273300	ppm	0.008556	0.08	14737.200000	Y_R 377.433
K (766.491 nm)	52.232200	ppm	0.099640	0.19	57118.400000	Y_R2 488.368
Li (670.783 nm)	1.046130	ppm	0.002082	0.20	16145.800000	Y_R2 488.368
Mg (279.078 nm)	73.677900	ppm	0.105241	0.14	258216.000000	Y 377.433
Mn (257.610 nm)	0.990514	ppm	0.000994	0.10	285459.000000	Y 377.433
Mo (202.032 nm)	0.996045	ppm	0.000590	0.06	13188.000000	Y 377.433
Na (589.592 nm)	91.991100 o	ppm	0.249292	0.27	80639.100000	Y_R2 488.368
Na H (589.593 nm)	90.207399	ppm	0.267384	0.30	52760.867510	Y_R4
Ni (231.604 nm)	0.945680	ppm	0.001441	0.15	5123.230000	Y 377.433
P (213.618 nm)	19.308300	ppm	0.028753	0.15	29551.800000	Y 242.219
Pb (220.353 nm)	0.978115	ppm	0.000666	0.07	3298.920000	Y 242.219
S (181.972 nm)	67.435697	ppm	0.050817	0.08	32969.866295	Y 377.433
Sb (206.834 nm)	-0.003782 u	ppm	0.000036	0.95	-10.196900	Y 377.433
Se (196.026 nm)	1.977450	ppm	0.004313	0.22	3171.620000	Y 242.219
Si (288.158 nm)	17.012100	ppm	0.024512	0.14	114150.000000	Y 377.433
Sn (189.925 nm)	1.988080	ppm	0.002228	0.11	3280.850000	Y 377.433
Sr (421.552 nm)	1.161909	ppm	0.000337	0.03	186700.473173	Y_R 488.368
Th (288.505 nm)	1.035020	ppm	0.005629	0.54	1739.750000	Y 377.433
Ti (336.122 nm)	1.006930	ppm	0.000453	0.04	132639.000000	Y 377.433
Tl (190.794 nm)	1.911530	ppm	0.004087	0.21	4663.200000	Y 377.433
U (409.013 nm)	2.063020	ppm	0.001353	0.07	6553.820000	Y 377.433
V (292.401 nm)	0.995810	ppm	0.000989	0.10	53402.500000	Y 377.433
Zn (206.200 nm)	0.487897	ppm	0.002938	0.60	2233.840000	Y 377.433
Zr (343.823 nm)	0.499950	ppm	0.000333	0.07	29160.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.008719	18860.012835	0.005145	0.51
Y 377.433	1.033228	574037.241955	0.005142	0.50
Y_R 377.433	1.049790	51109.800000	0.001209	0.12
Y_R 488.368	1.036780	44339.000000	0.000477	0.05
Y_R2 488.368	1.032387	86225.858054	0.001231	0.12
Y_R4	1.026890	39480.600000	0.006263	0.61

Sample Name: CCVH-5690583

Date: 5/11/2019 2:23:03 AM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000282	ppm	0.000311	> 100.00	-311.040000	Y 377.433
Al (394.401 nm)	48.372900 o	ppm	0.024335	0.05	607899.000000	Y 377.433
Al H (396.152 nm)	48.708100	ppm	0.079985	0.16	109422.000000	Y_R 377.433
As (188.980 nm)	0.005487	ppm	0.001292	23.55	2.503810	Y 242.219
B (249.678 nm)	0.007233	ppm	0.000227	3.13	38.369700	Y 242.219
Ba (493.408 nm)	0.001315	ppm	0.000461	35.03	1805.590000	Y_R 488.368
Be (234.861 nm)	0.002457	ppm	0.000097	3.95	-162.626000	Y_R 488.368
Bi (223.061 nm)	0.947014	ppm	0.004550	0.48	2079.750000	Y 377.433
Ca (315.887 nm)	0.017709	ppm	0.009896	55.88	-46.078188	Y_R 377.433
Cd (214.439 nm)	0.000801	ppm	0.000115	14.38	43.534200	Y 377.433
Co (228.615 nm)	0.004311	ppm	0.000068	1.57	84.555500	Y 242.219
Cr (205.560 nm)	0.001164	ppm	0.000663	56.96	-1.408760	Y 377.433
Cu (324.754 nm)	0.005631	ppm	0.000025	0.44	1187.700000	Y 377.433
Fe (238.204 nm)	47.550328 o	ppm	0.022970	0.05	118878.621984	Y_R 377.433
Fe H (259.940 nm)	47.400200	ppm	0.112430	0.24	68097.200000	Y_R 377.433
K (766.491 nm)	0.199628	ppm	0.056531	28.32	2391.550000	Y_R2 488.368
Li (670.783 nm)	0.003416	ppm	0.002444	71.52	-2823.870000	Y_R2 488.368
Mg (279.078 nm)	0.016817	ppm	0.001188	7.06	-152.285000	Y 377.433
Mn (257.610 nm)	0.001383	ppm	0.000012	0.85	375.056000	Y 377.433
Mo (202.032 nm)	0.001064	ppm	0.000238	22.37	25.694000	Y 377.433
Na (589.592 nm)	239.798000 o	ppm	0.142042	0.06	208630.000000	Y_R2 488.368
Na H (589.593 nm)	244.589614	ppm	0.101682	0.04	142238.621898	Y_R4
Ni (231.604 nm)	0.002801	ppm	0.000105	3.75	4.740690	Y 377.433
P (213.618 nm)	-0.014426 u	ppm	0.000087	0.61	-25.757800	Y 242.219
Pb (220.353 nm)	0.006506	ppm	0.001711	26.29	45.666000	Y 242.219
S (181.972 nm)	4.742289	ppm	0.012441	0.26	2324.944814	Y 377.433
Sb (206.834 nm)	0.004036	ppm	0.004790	> 100.00	13.044800	Y 377.433
Se (196.026 nm)	0.003813	ppm	0.000525	13.78	-1.060490	Y 242.219
Si (288.158 nm)	0.034954	ppm	0.003080	8.81	741.898000	Y 377.433
Sn (189.925 nm)	-0.002436 u	ppm	0.000222	9.11	5.088250	Y 377.433
Sr (421.552 nm)	0.000780	ppm	0.000155	19.91	235.804159	Y_R 488.368
Th (288.505 nm)	4.863680	ppm	0.002899	0.06	8592.910000	Y 377.433
Ti (336.122 nm)	0.002018	ppm	0.000086	4.25	-254.629000	Y 377.433
Tl (190.794 nm)	0.000416 u	ppm	0.001757	> 100.00	-3.581130	Y 377.433
U (409.013 nm)	9.726490	ppm	0.002717	0.03	31133.600000	Y 377.433
V (292.401 nm)	-0.001296 u	ppm	0.000428	33.02	-162.063000	Y 377.433
Zn (206.200 nm)	0.002194	ppm	0.000243	11.09	19.708300	Y 377.433
Zr (343.823 nm)	-0.002713 u	ppm	0.000221	8.14	-332.698000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.002890	18751.024276	0.000790	0.08
Y 377.433	1.017805	565468.679299	0.001125	0.11
Y_R 377.433	1.036330	50454.300000	0.001895	0.18
Y_R 488.368	1.030360	44064.500000	0.016478	1.60
Y_R2 488.368	1.023469	85480.977803	0.007002	0.68
Y_R4	1.043270	40110.500000	0.011097	1.06

Sample Name: CCV-5690581

Date: 5/11/2019 2:26:43 AM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.478452	ppm	0.000611	0.13	17301.400000	Y 377.433
Al (394.401 nm)	0.492900	ppm	0.001152	0.23	6342.630000	Y 377.433
Al H (396.152 nm)	0.533848 u	ppm	0.004825	0.90	1227.020000	Y_R 377.433
As (188.980 nm)	0.957790	ppm	0.003112	0.32	1521.980000	Y 242.219
B (249.678 nm)	0.469840	ppm	0.000105	0.02	3609.870000	Y 242.219
Ba (493.408 nm)	0.482609	ppm	0.000275	0.06	52268.500000	Y_R 488.368
Be (234.861 nm)	0.474373	ppm	0.000946	0.20	50324.300000	Y_R 488.368
Bi (223.061 nm)	0.004629	ppm	0.000160	3.47	-0.189508	Y 377.433
Ca (315.887 nm)	4.888095	ppm	0.013453	0.28	3969.834727	Y_R 377.433
Cd (214.439 nm)	0.482449	ppm	0.000050	0.01	18477.600000	Y 377.433
Co (228.615 nm)	0.484256	ppm	0.000569	0.12	12118.900000	Y 242.219
Cr (205.560 nm)	0.480453	ppm	0.000288	0.06	3317.680000	Y 377.433
Cu (324.754 nm)	0.483728	ppm	0.000725	0.15	24253.100000	Y 377.433
Fe (238.204 nm)	2.403231	ppm	0.001168	0.05	6012.179306	Y_R 377.433
Fe H (259.940 nm)	2.434780 u	ppm	0.003760	0.15	3471.360000	Y_R 377.433
K (766.491 nm)	48.289100	ppm	0.180701	0.37	52971.200000	Y_R2 488.368
Li (670.783 nm)	0.980581	ppm	0.002195	0.22	14953.300000	Y_R2 488.368
Mg (279.078 nm)	18.907300	ppm	0.004397	0.02	66284.800000	Y 377.433
Mn (257.610 nm)	0.479140	ppm	0.000024	0.01	138072.000000	Y 377.433
Mo (202.032 nm)	0.483699	ppm	0.000947	0.20	6410.310000	Y 377.433
Na (589.592 nm)	24.891800	ppm	0.075732	0.30	21925.600000	Y_R2 488.368
Na H (589.593 nm)	24.818553 u	ppm	0.133428	0.54	14862.414376	Y_R4
Ni (231.604 nm)	0.482579	ppm	0.000891	0.18	2609.250000	Y 377.433
P (213.618 nm)	0.937404	ppm	0.000808	0.09	1312.380000	Y 242.219
Pb (220.353 nm)	0.963033	ppm	0.001601	0.17	3247.710000	Y 242.219
S (181.972 nm)	0.003102	ppm	0.000755	24.35	10.814598	Y 377.433
Sb (206.834 nm)	0.966820	ppm	0.005051	0.52	1800.870000	Y 377.433
Se (196.026 nm)	0.953066	ppm	0.004410	0.46	1532.190000	Y 242.219
Si (288.158 nm)	4.774480	ppm	0.025535	0.53	32402.000000	Y 377.433
Sn (189.925 nm)	0.967469	ppm	0.004047	0.42	1601.250000	Y 377.433
Sr (421.552 nm)	0.481072	ppm	0.001281	0.27	77360.796816	Y_R 488.368
Th (288.505 nm)	0.008881	ppm	0.000559	6.29	-14.294800	Y 377.433
Ti (336.122 nm)	0.481505	ppm	0.000104	0.02	63022.400000	Y 377.433
Tl (190.794 nm)	0.975063	ppm	0.000702	0.07	2380.960000	Y 377.433
U (409.013 nm)	0.012583	ppm	0.000443	3.52	11.264600	Y 377.433
V (292.401 nm)	0.479386	ppm	0.000252	0.05	25657.900000	Y 377.433
Zn (206.200 nm)	0.481769	ppm	0.000520	0.11	2204.750000	Y 377.433
Zr (343.823 nm)	0.483683	ppm	0.000414	0.09	28205.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.016126	18998.507187	0.001439	0.14
Y 377.433	1.026756	570441.687322	0.001280	0.12
Y_R 377.433	1.035290	50404.000000	0.001539	0.15
Y_R 488.368	1.023120	43755.200000	0.001490	0.15
Y_R2 488.368	1.021220	85293.179480	0.004046	0.40
Y_R4	1.010580	38853.600000	0.005391	0.53

Sample Name: CCB

Date: 5/11/2019 2:30:16 AM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000019 u	ppm	0.000253	> 100.00	-185.163000	Y 377.433
Al (394.401 nm)	0.002625	ppm	0.001626	61.94	59.238200	Y 377.433
Al H (396.152 nm)	0.116608 Zu	ppm	0.002858	2.45	42.368100 Z	Y_R 377.433
As (188.980 nm)	0.001120 u	ppm	0.002520	> 100.00	-0.043857	Y 242.219
B (249.678 nm)	0.000508	ppm	0.000220	43.36	15.738800	Y 242.219
Ba (493.408 nm)	-0.001001 u	ppm	0.000123	12.29	1523.520000	Y_R 488.368
Be (234.861 nm)	0.000027	ppm	0.000015	55.57	2.098690	Y_R 488.368
Bi (223.061 nm)	0.002162	ppm	0.000369	17.07	-6.129790	Y 377.433
Ca (315.887 nm)	-0.006390 u	ppm	0.003466	54.24	-78.524515	Y_R 377.433
Cd (214.439 nm)	0.000156	ppm	0.000071	45.37	-0.827289	Y 377.433
Co (228.615 nm)	0.000217 u	ppm	0.000448	> 100.00	-17.979400	Y 242.219
Cr (205.560 nm)	-0.000306 u	ppm	0.000301	98.45	-10.241900	Y 377.433
Cu (324.754 nm)	-0.000718 u	ppm	0.000085	11.90	475.945000	Y 377.433
Fe (238.204 nm)	-0.001250 u	ppm	0.001459	> 100.00	1.045822	Y_R 377.433
Fe H (259.940 nm)	0.027935 u	ppm	0.005067	18.14	12.157800	Y_R 377.433
K (766.491 nm)	-0.278497 u	ppm	0.174720	62.74	1888.670000	Y_R2 488.368
Li (670.783 nm)	0.005707	ppm	0.000375	6.57	-2782.200000	Y_R2 488.368
Mg (279.078 nm)	-0.003205 u	ppm	0.000030	0.93	4.936330	Y 377.433
Mn (257.610 nm)	0.000061	ppm	0.000015	24.26	-5.885080	Y 377.433
Mo (202.032 nm)	0.000022 u	ppm	0.000405	> 100.00	11.907300	Y 377.433
Na (589.592 nm)	0.050066	ppm	0.010477	20.93	214.593000	Y_R2 488.368
Na H (589.593 nm)	0.098232 u	ppm	0.005900	6.01	534.864978	Y_R4
Ni (231.604 nm)	-0.000563 u	ppm	0.000544	96.71	-13.508000	Y 377.433
P (213.618 nm)	-0.004311 u	ppm	0.002633	61.07	-3.018360	Y 242.219
Pb (220.353 nm)	0.001809	ppm	0.000474	26.20	14.110600	Y 242.219
S (181.972 nm)	-0.002188 u	ppm	0.002454	> 100.00	6.406235	Y 377.433
Sb (206.834 nm)	-0.002494 u	ppm	0.000573	23.00	-2.366980	Y 377.433
Se (196.026 nm)	0.001699	ppm	0.001998	> 100.00	8.303770	Y 242.219
Si (288.158 nm)	-0.002479 u	ppm	0.000715	28.85	491.848000	Y 377.433
Sn (189.925 nm)	-0.003345 u	ppm	0.000296	8.85	3.591910	Y 377.433
Sr (421.552 nm)	-0.000067 u	ppm	0.000032	48.42	92.251480	Y_R 488.368
Th (288.505 nm)	-0.001983 u	ppm	0.005070	> 100.00	15.833500	Y 377.433
Ti (336.122 nm)	0.000508	ppm	0.000029	5.78	-453.837000	Y 377.433
Tl (190.794 nm)	0.001727	ppm	0.000397	23.00	4.341380	Y 377.433
U (409.013 nm)	0.003072	ppm	0.002090	68.04	39.846100	Y 377.433
V (292.401 nm)	-0.000124 u	ppm	0.000016	12.59	-101.502000	Y 377.433
Zn (206.200 nm)	-0.000481 u	ppm	0.000603	> 100.00	0.890237	Y 377.433
Zr (343.823 nm)	0.000457	ppm	0.000128	27.97	-146.732000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.053303	19693.593607	0.001679	0.16
Y 377.433	1.063041	590600.399645	0.001304	0.12
Y_R 377.433	1.061210	51665.700000	0.002299	0.22
Y_R 488.368	1.040270	44488.200000	0.001150	0.11
Y_R2 488.368	1.047858	87518.009654	0.001551	0.15
Y_R4	1.022740	39321.100000	0.002689	0.26

Sample Name: CCVL-5695588

Date: 5/11/2019 2:33:28 AM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.008879	ppm	0.000263	2.96	139.707000	Y 377.433
Al (394.401 nm)	0.100579	ppm	0.000768	0.76	1296.940000	Y 377.433
Al H (396.152 nm)	0.210647 u	ppm	0.000014	0.01	259.373000	Y_R 377.433
As (188.980 nm)	0.014205	ppm	0.000781	5.50	20.767700	Y 242.219
B (249.678 nm)	0.092766	ppm	0.000758	0.82	722.482000	Y 242.219
Ba (493.408 nm)	0.008623	ppm	0.000152	1.76	2533.390000	Y_R 488.368
Be (234.861 nm)	0.000918	ppm	0.000046	5.06	95.742700	Y_R 488.368
Bi (223.061 nm)	0.090356	ppm	0.003730	4.13	187.836000	Y 377.433
Ca (315.887 nm)	0.211819	ppm	0.006592	3.11	101.980031	Y_R 377.433
Cd (214.439 nm)	0.005069	ppm	0.000005	0.10	187.471000	Y 377.433
Co (228.615 nm)	0.010107	ppm	0.000194	1.91	230.012000	Y 242.219
Cr (205.560 nm)	0.009760	ppm	0.000012	0.12	59.335400	Y 377.433
Cu (324.754 nm)	0.014386	ppm	0.000087	0.60	1215.870000	Y 377.433
Fe (238.204 nm)	0.094862	ppm	0.001092	1.15	241.324100	Y_R 377.433
Fe H (259.940 nm)	0.129987 u	ppm	0.002179	1.68	158.830000	Y_R 377.433
K (766.491 nm)	2.657010	ppm	0.015753	0.59	4976.180000	Y_R2 488.368
Li (670.783 nm)	0.028352 Q	ppm	0.000611	2.15	-2370.230000 Q	Y_R2 488.368
Mg (279.078 nm)	0.195092	ppm	0.000595	0.31	699.124000	Y 377.433
Mn (257.610 nm)	0.010172	ppm	0.000002	0.02	2908.300000	Y 377.433
Mo (202.032 nm)	0.019109	ppm	0.000025	0.13	264.408000	Y 377.433
Na (589.592 nm)	1.082510	ppm	0.011977	1.11	1114.480000	Y_R2 488.368
Na H (589.593 nm)	0.877947 u	ppm	0.001556	0.18	986.776740	Y_R4
Ni (231.604 nm)	0.041201	ppm	0.000403	0.98	213.119000	Y 377.433
P (213.618 nm)	2.655430	ppm	0.013088	0.49	4101.630000	Y 242.219
Pb (220.353 nm)	0.008945	ppm	0.001719	19.22	38.149200	Y 242.219
S (181.972 nm)	0.088631	ppm	0.001993	2.25	50.826428	Y 377.433
Sb (206.834 nm)	0.019798	ppm	0.001064	5.38	39.011100	Y 377.433
Se (196.026 nm)	0.019116	ppm	0.001642	8.59	36.191600	Y 242.219
Si (288.158 nm)	0.495096	ppm	0.007886	1.59	3815.650000	Y 377.433
Sn (189.925 nm)	0.092100	ppm	0.002967	3.22	160.664000	Y 377.433
Sr (421.552 nm)	0.008552	ppm	0.000042	0.49	1476.484752	Y_R 488.368
Th (288.505 nm)	0.007327 Q	ppm	0.003062	41.79	31.604400 Q	Y 377.433
Ti (336.122 nm)	0.010047	ppm	0.000004	0.04	805.311000	Y 377.433
Tl (190.794 nm)	0.014225	ppm	0.000591	4.15	34.783000	Y 377.433
U (409.013 nm)	0.059237	ppm	0.006165	10.41	218.105000	Y 377.433
V (292.401 nm)	0.009143	ppm	0.000164	1.80	393.570000	Y 377.433
Zn (206.200 nm)	0.020626	ppm	0.000396	1.92	97.348000	Y 377.433
Zr (343.823 nm)	0.010369 Q	ppm	0.000181	1.75	434.872000 Q	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.061151	19840.335640	0.000346	0.03
Y 377.433	1.068675	593730.972020	0.001148	0.11
Y_R 377.433	1.068850	52037.800000	0.000918	0.09
Y_R 488.368	1.061970	45416.500000	0.004784	0.45
Y_R2 488.368	1.073289	89642.044511	0.002686	0.25
Y_R4	1.059280	40726.100000	0.009993	0.94

Sample Name: 280-123159-A-20-Apds

Date: 5/11/2019 2:36:56 AM

Rack:Tube: 2:68

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.042556	ppm	0.000092	0.22	1363.340000	Y 377.433
Al (394.401 nm)	1.027310	ppm	0.000189	0.02	13010.500000	Y 377.433
Al H (396.152 nm)	1.112580	ppm	0.005331	0.48	2362.280000	Y_R 377.433
As (188.980 nm)	0.197043	ppm	0.000496	0.25	311.582000	Y 242.219
B (249.678 nm)	0.118921	ppm	0.001941	1.63	922.173000	Y 242.219
Ba (493.408 nm)	0.174987	ppm	0.000106	0.06	19990.100000	Y_R 488.368
Be (234.861 nm)	0.047530	ppm	0.000076	0.16	5032.930000	Y_R 488.368
Bi (223.061 nm)	0.003613	ppm	0.002266	62.72	-2.687020	Y 377.433
Ca (315.887 nm)	60.514615	ppm	0.010926	0.02	49978.608344	Y_R 377.433
Cd (214.439 nm)	0.047727	ppm	0.000155	0.32	1822.210000	Y 377.433
Co (228.615 nm)	0.046050	ppm	0.000259	0.56	1131.420000	Y 242.219
Cr (205.560 nm)	0.048074	ppm	0.000788	1.64	324.615000	Y 377.433
Cu (324.754 nm)	0.046714	ppm	0.000289	0.62	2775.660000	Y 377.433
Fe (238.204 nm)	1.208902	ppm	0.000017	0.00	3026.390619	Y_R 377.433
Fe H (259.940 nm)	1.229910 u	ppm	0.000064	0.01	1739.680000	Y_R 377.433
K (766.491 nm)	20.071200	ppm	0.028143	0.14	23292.000000	Y_R2 488.368
Li (670.783 nm)	0.122649	ppm	0.000782	0.64	-654.722000	Y_R2 488.368
Mg (279.078 nm)	43.123000	ppm	0.006122	0.01	151156.000000	Y 377.433
Mn (257.610 nm)	0.059985	ppm	0.000023	0.04	17265.100000	Y 377.433
Mo (202.032 nm)	0.050544	ppm	0.000321	0.63	680.240000	Y 377.433
Na (589.592 nm)	59.802200 o	ppm	0.097894	0.16	52199.900000	Y_R2 488.368
Na H (589.593 nm)	59.550005	ppm	0.064155	0.11	34992.274424	Y_R4
Ni (231.604 nm)	0.049831	ppm	0.001883	3.78	260.158000	Y 377.433
P (213.618 nm)	1.831970	ppm	0.000338	0.02	2819.490000	Y 242.219
Pb (220.353 nm)	0.095363	ppm	0.000362	0.38	329.884000	Y 242.219
S (181.972 nm)	56.901982	ppm	0.108091	0.19	27817.590144	Y 377.433
Sb (206.834 nm)	0.095460	ppm	0.001513	1.58	179.893000	Y 377.433
Se (196.026 nm)	0.188803	ppm	0.000832	0.44	307.749000	Y 242.219
Si (288.158 nm)	19.682100	ppm	0.044748	0.23	131985.000000	Y 377.433
Sn (189.925 nm)	0.097620	ppm	0.000427	0.44	169.748000	Y 377.433
Sr (421.552 nm)	0.207443	ppm	0.000299	0.14	33417.370377	Y_R 488.368
Th (288.505 nm)	0.197595	ppm	0.000988	0.50	362.073000	Y 377.433
Ti (336.122 nm)	0.051262	ppm	0.000144	0.28	6447.140000	Y 377.433
Tl (190.794 nm)	0.189677	ppm	0.000909	0.48	460.979000	Y 377.433
U (409.013 nm)	0.504937	ppm	0.005356	1.06	1629.690000	Y 377.433
V (292.401 nm)	0.048696	ppm	0.000088	0.18	2514.350000	Y 377.433
Zn (206.200 nm)	0.194689	ppm	0.000643	0.33	892.842000	Y 377.433
Zr (343.823 nm)	0.051402	ppm	0.000253	0.49	2842.390000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.016403	19003.684901	0.000445	0.04
Y 377.433	1.032604	573690.762752	0.000991	0.10
Y_R 377.433	1.046350	50942.100000	0.000603	0.06
Y_R 488.368	1.033790	44211.400000	0.000795	0.08
Y_R2 488.368	1.028751	85922.213761	0.002603	0.25
Y_R4	1.031030	39639.800000	0.006868	0.67

Sample Name: 280-123183-A-1-A

Date: 5/11/2019 2:40:28 AM

Rack:Tube: 2:69

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000619	ppm	0.000073	11.81	-162.448000	Y 377.433
Al (394.401 nm)	0.020533	ppm	0.003389	16.51	379.620000	Y 377.433
Al H (396.152 nm)	0.059773 u	ppm	0.005786	9.68	36.132400	Y_R 377.433
As (188.980 nm)	0.003195	ppm	0.001551	48.55	3.232490	Y 242.219
B (249.678 nm)	0.086538	ppm	0.000682	0.79	674.314000	Y 242.219
Ba (493.408 nm)	0.019631	ppm	0.000180	0.92	3688.990000	Y_R 488.368
Be (234.861 nm)	-0.000022 u	ppm	0.000030	> 100.00	-10.679700	Y_R 488.368
Bi (223.061 nm)	0.000527 u	ppm	0.003449	> 100.00	-9.573610	Y 377.433
Ca (315.887 nm)	102.945324	ppm	0.182812	0.18	85072.737124	Y_R 377.433
Cd (214.439 nm)	0.000212	ppm	0.000099	46.49	1.681600	Y 377.433
Co (228.615 nm)	0.000082 u	ppm	0.000309	> 100.00	-21.356500	Y 242.219
Cr (205.560 nm)	0.000677	ppm	0.000216	31.96	-3.438900	Y 377.433
Cu (324.754 nm)	-0.001411 u	ppm	0.000101	7.13	379.084000	Y 377.433
Fe (238.204 nm)	0.838877	ppm	0.002819	0.34	2101.340378	Y_R 377.433
Fe H (259.940 nm)	0.858598 u	ppm	0.008015	0.93	1206.020000	Y_R 377.433
K (766.491 nm)	3.340950	ppm	0.087954	2.63	5695.530000	Y_R2 488.368
Li (670.783 nm)	0.036769	ppm	0.000750	2.04	-2217.090000	Y_R2 488.368
Mg (279.078 nm)	27.543000	ppm	0.001533	0.01	96555.100000	Y 377.433
Mn (257.610 nm)	0.095705	ppm	0.000013	0.01	27560.200000	Y 377.433
Mo (202.032 nm)	0.001654	ppm	0.000167	10.10	33.495300	Y 377.433
Na (589.592 nm)	12.310400	ppm	0.020064	0.16	10877.500000	Y_R2 488.368
Na H (589.593 nm)	12.074121 u	ppm	0.012527	0.10	7475.921578	Y_R4
Ni (231.604 nm)	-0.001125 u	ppm	0.000466	41.41	-16.562100	Y 377.433
P (213.618 nm)	0.018307	ppm	0.006709	36.65	31.806600	Y 242.219
Pb (220.353 nm)	-0.001160 u	ppm	0.002445	> 100.00	4.187400	Y 242.219
S (181.972 nm)	41.238675	ppm	0.086337	0.21	20165.513712	Y 377.433
Sb (206.834 nm)	-0.004946 u	ppm	0.000473	9.57	-6.876860	Y 377.433
Se (196.026 nm)	0.002992	ppm	0.004064	> 100.00	10.287200	Y 242.219
Si (288.158 nm)	7.014970	ppm	0.003930	0.06	47368.500000	Y 377.433
Sn (189.925 nm)	-0.004292 u	ppm	0.001301	30.31	2.033300	Y 377.433
Sr (421.552 nm)	0.344300	ppm	0.002296	0.67	55395.639989	Y_R 488.368
Th (288.505 nm)	-0.009266 u	ppm	0.002755	29.74	2.405080	Y 377.433
Ti (336.122 nm)	-0.000278 u	ppm	0.000047	16.97	-209.165000	Y 377.433
Tl (190.794 nm)	0.001677	ppm	0.001650	98.40	-0.124335	Y 377.433
U (409.013 nm)	0.016280	ppm	0.002325	14.28	69.314300	Y 377.433
V (292.401 nm)	0.000311	ppm	0.000167	53.77	-80.523900	Y 377.433
Zn (206.200 nm)	0.000961	ppm	0.000153	15.92	7.593710	Y 377.433
Zr (343.823 nm)	0.000485	ppm	0.000019	3.97	-145.058000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.028816	19235.770973	0.001592	0.15
Y 377.433	1.046118	581198.485300	0.001870	0.18
Y_R 377.433	1.062400	51723.500000	0.001744	0.16
Y_R 488.368	1.052630	45016.900000	0.003740	0.36
Y_R2 488.368	1.047621	87498.170556	0.000542	0.05
Y_R4	1.036680	39857.200000	0.003017	0.29

Sample Name: 280-123183-A-1-B MS

Date: 5/11/2019 2:44:01 AM

Rack:Tube: 2:70

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000963	ppm	0.000140	14.50	-471.408000	Y 377.433
Al (394.401 nm)	9.849060 o	ppm	0.004885	0.05	124161.000000	Y 377.433
Al H (396.152 nm)	9.920940	ppm	0.005065	0.05	22721.900000	Y_R 377.433
As (188.980 nm)	1.987380	ppm	0.001698	0.09	3159.290000	Y 242.219
B (249.678 nm)	1.067460	ppm	0.001570	0.15	8183.230000	Y 242.219
Ba (493.408 nm)	1.969950	ppm	0.003026	0.15	208336.000000	Y_R 488.368
Be (234.861 nm)	0.951516	ppm	0.003277	0.34	100891.000000	Y_R 488.368
Bi (223.061 nm)	1.990270	ppm	0.009050	0.45	4367.780000	Y 377.433
Ca (315.887 nm)	151.769625	ppm	0.221615	0.15	125457.874806	Y_R 377.433
Cd (214.439 nm)	0.941435	ppm	0.001780	0.19	36065.400000	Y 377.433
Co (228.615 nm)	0.926476	ppm	0.001415	0.15	23210.000000	Y 242.219
Cr (205.560 nm)	0.950595	ppm	0.000967	0.10	6571.850000	Y 377.433
Cu (324.754 nm)	0.944525	ppm	0.001020	0.11	46851.800000	Y 377.433
Fe (238.204 nm)	10.726503 o	ppm	0.002926	0.03	26820.119829	Y_R 377.433
Fe H (259.940 nm)	10.723200	ppm	0.002655	0.02	15383.800000	Y_R 377.433
K (766.491 nm)	54.176400	ppm	0.058441	0.11	59163.300000	Y_R2 488.368
Li (670.783 nm)	1.038720	ppm	0.001234	0.12	16011.000000	Y_R2 488.368
Mg (279.078 nm)	74.747600	ppm	0.092066	0.12	261964.000000	Y 377.433
Mn (257.610 nm)	1.045280	ppm	0.000594	0.06	301243.000000	Y 377.433
Mo (202.032 nm)	0.975502	ppm	0.000554	0.06	12916.200000	Y 377.433
Na (589.592 nm)	63.381100 o	ppm	0.138473	0.22	55741.400000	Y_R2 488.368
Na H (589.593 nm)	60.469444	ppm	0.088862	0.15	35525.168049	Y_R4
Ni (231.604 nm)	0.911612	ppm	0.000465	0.05	4938.330000	Y 377.433
P (213.618 nm)	19.084500	ppm	0.047373	0.25	29211.600000	Y 242.219
Pb (220.353 nm)	0.958777	ppm	0.001151	0.12	3234.000000	Y 242.219
S (181.972 nm)	51.672609	ppm	0.107721	0.21	25269.991252	Y 377.433
Sb (206.834 nm)	-0.004700 u	ppm	0.000285	6.06	-11.728100	Y 377.433
Se (196.026 nm)	1.945910	ppm	0.001819	0.09	3121.060000	Y 242.219
Si (288.158 nm)	8.935460	ppm	0.031332	0.35	60197.300000	Y 377.433
Sn (189.925 nm)	1.935350	ppm	0.000265	0.01	3194.080000	Y 377.433
Sr (421.552 nm)	1.321352	ppm	0.001530	0.12	212306.081879	Y_R 488.368
Th (288.505 nm)	1.013180	ppm	0.000519	0.05	1703.810000	Y 377.433
Ti (336.122 nm)	0.982109	ppm	0.000324	0.03	129567.000000	Y 377.433
Tl (190.794 nm)	1.874390	ppm	0.002552	0.14	4569.950000	Y 377.433
U (409.013 nm)	2.044330	ppm	0.009882	0.48	6487.610000	Y 377.433
V (292.401 nm)	0.972692	ppm	0.000193	0.02	52156.900000	Y 377.433
Zn (206.200 nm)	0.472583	ppm	0.001793	0.38	2163.930000	Y 377.433
Zr (343.823 nm)	0.490651	ppm	0.000305	0.06	28614.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.994957	18602.703960	0.002186	0.22
Y 377.433	1.020044	566712.661687	0.001781	0.17
Y_R 377.433	1.043350	50796.500000	0.006071	0.58
Y_R 488.368	1.031260	44102.900000	0.005286	0.51
Y_R2 488.368	1.027568	85823.353277	0.000383	0.04
Y_R4	1.031400	39654.000000	0.005872	0.57

Sample Name: 280-123183-A-1-C MSD

Date: 5/11/2019 2:47:37 AM

Rack:Tube: 2:71

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000998	ppm	0.000163	16.32	-466.378000	Y 377.433
Al (394.401 nm)	9.652500 o	ppm	0.009173	0.10	121682.000000	Y 377.433
Al H (396.152 nm)	9.804680	ppm	0.003360	0.03	22450.600000	Y_R 377.433
As (188.980 nm)	1.968240	ppm	0.004729	0.24	3128.850000	Y 242.219
B (249.678 nm)	1.054000	ppm	0.000228	0.02	8080.280000	Y 242.219
Ba (493.408 nm)	1.945460	ppm	0.000669	0.03	205766.000000	Y_R 488.368
Be (234.861 nm)	0.940878	ppm	0.011043	1.17	99764.600000	Y_R 488.368
Bi (223.061 nm)	1.982560	ppm	0.000190	0.01	4350.780000	Y 377.433
Ca (315.887 nm)	147.577470	ppm	0.072339	0.05	121990.510565	Y_R 377.433
Cd (214.439 nm)	0.933845	ppm	0.001452	0.16	35774.500000	Y 377.433
Co (228.615 nm)	0.913122	ppm	0.000545	0.06	22875.000000	Y 242.219
Cr (205.560 nm)	0.936429	ppm	0.005599	0.60	6473.780000	Y 377.433
Cu (324.754 nm)	0.932700	ppm	0.001653	0.18	46273.300000	Y 377.433
Fe (238.204 nm)	10.363816 o	ppm	0.011476	0.11	25913.411871	Y_R 377.433
Fe H (259.940 nm)	10.403000	ppm	0.016072	0.15	14923.500000	Y_R 377.433
K (766.491 nm)	53.223000	ppm	0.048811	0.09	58160.500000	Y_R2 488.368
Li (670.783 nm)	1.024690	ppm	0.004147	0.40	15755.800000	Y_R2 488.368
Mg (279.078 nm)	72.941100	ppm	0.101483	0.14	255634.000000	Y 377.433
Mn (257.610 nm)	1.027660	ppm	0.001381	0.13	296164.000000	Y 377.433
Mo (202.032 nm)	0.963341	ppm	0.001835	0.19	12755.400000	Y 377.433
Na (589.592 nm)	62.221700 o	ppm	0.077662	0.12	54727.700000	Y_R2 488.368
Na H (589.593 nm)	59.384088	ppm	0.228993	0.39	34896.110900	Y_R4
Ni (231.604 nm)	0.898358	ppm	0.003119	0.35	4866.410000	Y 377.433
P (213.618 nm)	18.774700	ppm	0.000315	0.00	28736.600000	Y 242.219
Pb (220.353 nm)	0.948821	ppm	0.004507	0.48	3200.450000	Y 242.219
S (181.972 nm)	50.720928	ppm	0.027759	0.05	24804.652014	Y 377.433
Sb (206.834 nm)	-0.004014 u	ppm	0.002055	51.20	-10.386500	Y 377.433
Se (196.026 nm)	1.929650	ppm	0.000152	0.01	3095.070000	Y 242.219
Si (288.158 nm)	8.777650	ppm	0.003274	0.04	59143.100000	Y 377.433
Sn (189.925 nm)	1.913940	ppm	0.003676	0.19	3158.830000	Y 377.433
Sr (421.552 nm)	1.299498	ppm	0.000260	0.02	208796.426599	Y_R 488.368
Th (288.505 nm)	0.991307	ppm	0.002834	0.29	1666.500000	Y 377.433
Ti (336.122 nm)	0.967029	ppm	0.000850	0.09	127563.000000	Y 377.433
Tl (190.794 nm)	1.870420	ppm	0.004468	0.24	4560.530000	Y 377.433
U (409.013 nm)	2.002060	ppm	0.000394	0.02	6354.260000	Y 377.433
V (292.401 nm)	0.959561	ppm	0.000990	0.10	51452.600000	Y 377.433
Zn (206.200 nm)	0.465336	ppm	0.000381	0.08	2130.780000	Y 377.433
Zr (343.823 nm)	0.481463	ppm	0.000478	0.10	28075.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.993630	18577.904445	0.006915	0.70
Y 377.433	1.019579	566454.374269	0.008795	0.86
Y_R 377.433	1.042430	50751.500000	0.004935	0.47
Y_R 488.368	1.027390	43937.600000	0.004175	0.41
Y_R2 488.368	1.016301	84882.338823	0.001362	0.13
Y_R4	1.031050	39640.700000	0.001985	0.19

Sample Name: 280-123183-A-2-A

Date: 5/11/2019 2:51:15 AM

Rack:Tube: 2:72

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000546	ppm	0.000037	6.86	-165.012000	Y 377.433
Al (394.401 nm)	0.014832	ppm	0.001885	12.71	309.080000	Y 377.433
Al H (396.152 nm)	0.051450 u	ppm	0.001602	3.11	17.745100	Y_R 377.433
As (188.980 nm)	0.004519	ppm	0.000730	16.15	5.340640	Y 242.219
B (249.678 nm)	0.087928	ppm	0.000754	0.86	684.973000	Y 242.219
Ba (493.408 nm)	0.019311	ppm	0.000330	1.71	3655.410000	Y_R 488.368
Be (234.861 nm)	0.000006 u	ppm	0.000017	> 100.00	-7.423440	Y_R 488.368
Bi (223.061 nm)	0.000732 u	ppm	0.002756	> 100.00	-9.126300	Y 377.433
Ca (315.887 nm)	102.736534	ppm	0.001493	0.00	84900.045962	Y_R 377.433
Cd (214.439 nm)	0.000210	ppm	0.000013	6.32	1.585260	Y 377.433
Co (228.615 nm)	-0.000100 u	ppm	0.000084	83.97	-25.898500	Y 242.219
Cr (205.560 nm)	0.000128 u	ppm	0.000558	> 100.00	-7.240370	Y 377.433
Cu (324.754 nm)	-0.001610 u	ppm	0.000071	4.40	369.261000	Y 377.433
Fe (238.204 nm)	0.815765	ppm	0.000536	0.07	2043.558938	Y_R 377.433
Fe H (259.940 nm)	0.842943 u	ppm	0.001141	0.14	1183.510000	Y_R 377.433
K (766.491 nm)	3.431110	ppm	0.096217	2.80	5790.360000	Y_R2 488.368
Li (670.783 nm)	0.039956	ppm	0.002552	6.39	-2159.120000	Y_R2 488.368
Mg (279.078 nm)	27.572400	ppm	0.056212	0.20	96658.100000	Y 377.433
Mn (257.610 nm)	0.095951	ppm	0.000205	0.21	27631.000000	Y 377.433
Mo (202.032 nm)	0.001863	ppm	0.000158	8.48	36.258900	Y 377.433
Na (589.592 nm)	12.436200	ppm	0.001017	0.01	10986.800000	Y_R2 488.368
Na H (589.593 nm)	12.370282 u	ppm	0.026945	0.22	7647.572458	Y_R4
Ni (231.604 nm)	-0.001685 u	ppm	0.001096	65.00	-19.601500	Y 377.433
P (213.618 nm)	0.017410	ppm	0.001937	11.12	30.421900	Y 242.219
Pb (220.353 nm)	-0.000941 u	ppm	0.001595	> 100.00	4.946710	Y 242.219
S (181.972 nm)	41.222456	ppm	0.166536	0.40	20157.568219	Y 377.433
Sb (206.834 nm)	-0.002625 u	ppm	0.001763	67.18	-2.559830	Y 377.433
Se (196.026 nm)	0.002106	ppm	0.001446	68.63	8.875930	Y 242.219
Si (288.158 nm)	7.012500	ppm	0.025321	0.36	47352.000000	Y 377.433
Sn (189.925 nm)	-0.002339 u	ppm	0.000182	7.77	5.247330	Y 377.433
Sr (421.552 nm)	0.344851	ppm	0.001606	0.47	55484.271397	Y_R 488.368
Th (288.505 nm)	-0.010397 u	ppm	0.004300	41.36	0.557278	Y 377.433
Ti (336.122 nm)	-0.000101 u	ppm	0.000057	55.83	-187.248000	Y 377.433
Tl (190.794 nm)	0.004302	ppm	0.000396	9.20	6.311330	Y 377.433
U (409.013 nm)	0.016781	ppm	0.003722	22.18	70.955700	Y 377.433
V (292.401 nm)	0.000620	ppm	0.000189	30.44	-63.965600	Y 377.433
Zn (206.200 nm)	0.000680	ppm	0.000340	50.05	6.307670	Y 377.433
Zr (343.823 nm)	0.000739	ppm	0.000076	10.35	-130.151000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.034844	19348.466093	0.004085	0.39
Y 377.433	1.051030	583927.590778	0.004565	0.43
Y_R 377.433	1.067290	51961.500000	0.001311	0.12
Y_R 488.368	1.058550	45270.300000	0.004285	0.40
Y_R2 488.368	1.043671	87168.315382	0.001232	0.12
Y_R4	1.041200	40030.900000	0.005384	0.52

Sample Name: MB 280-457243/1-A

Date: 5/11/2019 2:54:45 AM

Rack:Tube: 2:73

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000724 u	ppm	0.000271	37.42	-210.716000	Y 377.433
Al (394.401 nm)	0.006034	ppm	0.001219	20.21	103.574000	Y 377.433
Al H (396.152 nm)	0.112573 u	ppm	0.001769	1.57	33.288000	Y_R 377.433
As (188.980 nm)	0.002936	ppm	0.000581	19.79	2.844710	Y 242.219
B (249.678 nm)	0.000446 u	ppm	0.000987	> 100.00	15.228000	Y 242.219
Ba (493.408 nm)	-0.001332 u	ppm	0.000110	8.27	1488.900000	Y_R 488.368
Be (234.861 nm)	-0.000093 u	ppm	0.000010	11.07	-11.297200	Y_R 488.368
Bi (223.061 nm)	0.002208	ppm	0.000045	2.05	-6.018020	Y 377.433
Ca (315.887 nm)	0.022320	ppm	0.004658	20.87	-54.782200	Y_R 377.433
Cd (214.439 nm)	0.000035 u	ppm	0.000072	> 100.00	-5.403930	Y 377.433
Co (228.615 nm)	0.000156	ppm	0.000086	55.01	-19.483900	Y 242.219
Cr (205.560 nm)	-0.000061 u	ppm	0.000067	> 100.00	-8.545870	Y 377.433
Cu (324.754 nm)	-0.000753 u	ppm	0.000043	5.78	473.262000	Y 377.433
Fe (238.204 nm)	0.063620	ppm	0.001300	2.04	163.219433	Y_R 377.433
Fe H (259.940 nm)	0.096116 u	ppm	0.003113	3.24	110.149000	Y_R 377.433
K (766.491 nm)	-0.302038 u	ppm	0.052513	17.39	1863.910000	Y_R2 488.368
Li (670.783 nm)	0.003756	ppm	0.001209	32.19	-2817.680000	Y_R2 488.368
Mg (279.078 nm)	0.003442	ppm	0.002324	67.53	28.077000	Y 377.433
Mn (257.610 nm)	0.000562	ppm	0.000005	0.91	138.552000	Y 377.433
Mo (202.032 nm)	-0.000193 u	ppm	0.000082	42.59	9.063280	Y 377.433
Na (589.592 nm)	0.041267	ppm	0.025141	60.92	206.882000	Y_R2 488.368
Na H (589.593 nm)	-0.124703 u	ppm	0.016984	13.62	405.655125	Y_R4
Ni (231.604 nm)	-0.000320 u	ppm	0.001600	> 100.00	-12.197500	Y 377.433
P (213.618 nm)	-0.002930 u	ppm	0.000865	29.51	-0.822598	Y 242.219
Pb (220.353 nm)	0.000227 u	ppm	0.000798	> 100.00	8.796750	Y 242.219
S (181.972 nm)	0.005219	ppm	0.002950	56.51	10.027884	Y 377.433
Sb (206.834 nm)	-0.002199 u	ppm	0.000116	5.29	-1.818070	Y 377.433
Se (196.026 nm)	0.002325	ppm	0.001753	75.41	9.288950	Y 242.219
Si (288.158 nm)	0.000092 u	ppm	0.002056	> 100.00	509.023000	Y 377.433
Sn (189.925 nm)	-0.004109 u	ppm	0.000185	4.51	2.334960	Y 377.433
Sr (421.552 nm)	-0.000036 u	ppm	0.000047	> 100.00	97.282928	Y_R 488.368
Th (288.505 nm)	-0.005415 u	ppm	0.001858	34.31	9.928490	Y 377.433
Ti (336.122 nm)	0.000591	ppm	0.000035	5.92	-442.953000	Y 377.433
Tl (190.794 nm)	0.000267 u	ppm	0.000486	> 100.00	0.761622	Y 377.433
U (409.013 nm)	0.002106	ppm	0.002658	> 100.00	36.771600	Y 377.433
V (292.401 nm)	-0.000293 u	ppm	0.000066	22.44	-111.018000	Y 377.433
Zn (206.200 nm)	0.000364	ppm	0.000043	11.88	4.758180	Y 377.433
Zr (343.823 nm)	0.000615	ppm	0.000275	44.71	-137.457000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.056116	19746.191957	0.002915	0.28
Y 377.433	1.065204	591802.441292	0.002876	0.27
Y_R 377.433	1.059920	51603.000000	0.001711	0.16
Y_R 488.368	1.049930	44901.700000	0.006643	0.63
Y_R2 488.368	1.042393	87061.547778	0.009001	0.86
Y_R4	1.042570	40083.700000	0.003258	0.31

Sample Name: LCS 280-457243/2-A

Date: 5/11/2019 2:58:07 AM

Rack:Tube: 2:74

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.051301	ppm	0.000161	0.31	1390.390000	Y 377.433
Al (394.401 nm)	9.824180 o	ppm	0.009230	0.09	123745.000000	Y 377.433
Al H (396.152 nm)	10.049900	ppm	0.005882	0.06	22875.400000	Y_R 377.433
As (188.980 nm)	1.895910	ppm	0.002619	0.14	3013.770000	Y 242.219
B (249.678 nm)	0.955039	ppm	0.001862	0.19	7322.490000	Y 242.219
Ba (493.408 nm)	1.899870	ppm	0.001157	0.06	200981.000000	Y_R 488.368
Be (234.861 nm)	0.935309	ppm	0.003684	0.39	99178.300000	Y_R 488.368
Bi (223.061 nm)	1.970350	ppm	0.002752	0.14	4323.830000	Y 377.433
Ca (315.887 nm)	49.366492	ppm	0.024583	0.05	40760.355018	Y_R 377.433
Cd (214.439 nm)	0.924812	ppm	0.001393	0.15	35428.200000	Y 377.433
Co (228.615 nm)	0.912998	ppm	0.001370	0.15	22871.500000	Y 242.219
Cr (205.560 nm)	0.926564	ppm	0.001436	0.15	6405.470000	Y 377.433
Cu (324.754 nm)	0.908029	ppm	0.002846	0.31	45122.100000	Y 377.433
Fe (238.204 nm)	9.829528 o	ppm	0.008814	0.09	24577.706735	Y_R 377.433
Fe H (259.940 nm)	9.851480	ppm	0.011001	0.11	14130.900000	Y_R 377.433
K (766.491 nm)	49.843700	ppm	0.041768	0.08	54606.200000	Y_R2 488.368
Li (670.783 nm)	0.967295	ppm	0.001310	0.14	14711.600000	Y_R2 488.368
Mg (279.078 nm)	47.508100	ppm	0.070346	0.15	166489.000000	Y 377.433
Mn (257.610 nm)	0.935332	ppm	0.000546	0.06	269554.000000	Y 377.433
Mo (202.032 nm)	0.947381	ppm	0.000539	0.06	12544.200000	Y 377.433
Na (589.592 nm)	50.530900	ppm	0.120143	0.24	44553.600000	Y_R2 488.368
Na H (589.593 nm)	47.657724 u	ppm	0.091222	0.19	28099.675692	Y_R4
Ni (231.604 nm)	0.903029	ppm	0.002218	0.25	4891.720000	Y 377.433
P (213.618 nm)	18.694200	ppm	0.024997	0.13	28619.000000	Y 242.219
Pb (220.353 nm)	0.935151	ppm	0.002708	0.29	3154.490000	Y 242.219
S (181.972 nm)	9.130465	ppm	0.034105	0.37	4474.942304	Y 377.433
Sb (206.834 nm)	0.981532	ppm	0.000265	0.03	1826.310000	Y 377.433
Se (196.026 nm)	1.869840	ppm	0.002186	0.12	2999.270000	Y 242.219
Si (288.158 nm)	1.931200	ppm	0.005992	0.31	13408.800000	Y 377.433
Sn (189.925 nm)	1.877580	ppm	0.007541	0.40	3099.000000	Y 377.433
Sr (421.552 nm)	0.944824	ppm	0.000191	0.02	151837.842713	Y_R 488.368
Th (288.505 nm)	0.999702	ppm	0.001482	0.15	1683.790000	Y 377.433
Ti (336.122 nm)	0.955409	ppm	0.000510	0.05	125697.000000	Y 377.433
Tl (190.794 nm)	1.844050	ppm	0.001884	0.10	4500.280000	Y 377.433
U (409.013 nm)	2.015660	ppm	0.002584	0.13	6408.700000	Y 377.433
V (292.401 nm)	0.944176	ppm	0.000267	0.03	50625.600000	Y 377.433
Zn (206.200 nm)	0.477356	ppm	0.000247	0.05	2185.630000	Y 377.433
Zr (343.823 nm)	0.490304	ppm	0.000345	0.07	28594.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.999328	18684.436619	0.000742	0.07
Y 377.433	1.018772	566005.530852	0.000934	0.09
Y_R 377.433	1.020890	49702.700000	0.001714	0.17
Y_R 488.368	1.011290	43249.100000	0.002077	0.21
Y_R2 488.368	0.999266	83459.579167	0.004339	0.43
Y_R4	1.012120	38913.000000	0.003393	0.34

Sample Name: LCSD 280-457243/3-A

Date: 5/11/2019 3:01:45 AM

Rack:Tube: 2:75

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.050422	ppm	0.000524	1.04	1345.650000	Y 377.433
Al (394.401 nm)	9.823780 o	ppm	0.010840	0.11	123749.000000	Y 377.433
Al H (396.152 nm)	10.039600	ppm	0.010768	0.11	22867.000000	Y_R 377.433
As (188.980 nm)	1.958450	ppm	0.008164	0.42	3113.280000	Y 242.219
B (249.678 nm)	0.952970	ppm	0.002408	0.25	7306.660000	Y 242.219
Ba (493.408 nm)	1.958960	ppm	0.000588	0.03	207181.000000	Y_R 488.368
Be (234.861 nm)	0.958875	ppm	0.001064	0.11	101680.000000	Y_R 488.368
Bi (223.061 nm)	1.958950	ppm	0.003063	0.16	4298.750000	Y 377.433
Ca (315.887 nm)	49.405407	ppm	0.025672	0.05	40792.538291	Y_R 377.433
Cd (214.439 nm)	0.952282	ppm	0.001495	0.16	36480.600000	Y 377.433
Co (228.615 nm)	0.942426	ppm	0.002780	0.29	23609.400000	Y 242.219
Cr (205.560 nm)	0.954013	ppm	0.008959	0.94	6595.480000	Y 377.433
Cu (324.754 nm)	0.942060	ppm	0.004361	0.46	46791.100000	Y 377.433
Fe (238.204 nm)	9.861204 o	ppm	0.002149	0.02	24656.897430	Y_R 377.433
Fe H (259.940 nm)	9.880060	ppm	0.012917	0.13	14172.000000	Y_R 377.433
K (766.491 nm)	49.779400	ppm	0.054717	0.11	54538.600000	Y_R2 488.368
Li (670.783 nm)	0.997003	ppm	0.003799	0.38	15252.100000	Y_R2 488.368
Mg (279.078 nm)	47.569400	ppm	0.079128	0.17	166704.000000	Y 377.433
Mn (257.610 nm)	0.964018	ppm	0.001003	0.10	277822.000000	Y 377.433
Mo (202.032 nm)	0.978172	ppm	0.000666	0.07	12951.500000	Y 377.433
Na (589.592 nm)	50.648800	ppm	0.059252	0.12	44670.400000	Y_R2 488.368
Na H (589.593 nm)	47.828292 u	ppm	0.073154	0.15	28198.534949	Y_R4
Ni (231.604 nm)	0.931116	ppm	0.000191	0.02	5044.190000	Y 377.433
P (213.618 nm)	18.667800	ppm	0.048750	0.26	28568.800000	Y 242.219
Pb (220.353 nm)	0.968323	ppm	0.000678	0.07	3265.980000	Y 242.219
S (181.972 nm)	9.128162	ppm	0.030275	0.33	4473.915271	Y 377.433
Sb (206.834 nm)	0.983726	ppm	0.000652	0.07	1830.250000	Y 377.433
Se (196.026 nm)	1.925660	ppm	0.013376	0.69	3088.730000	Y 242.219
Si (288.158 nm)	2.007840	ppm	0.001538	0.08	13920.800000	Y 377.433
Sn (189.925 nm)	1.930420	ppm	0.001146	0.06	3185.950000	Y 377.433
Sr (421.552 nm)	0.974726	ppm	0.000294	0.03	156639.881370	Y_R 488.368
Th (288.505 nm)	1.000360	ppm	0.006089	0.61	1682.040000	Y 377.433
Ti (336.122 nm)	0.984936	ppm	0.000663	0.07	129593.000000	Y 377.433
Tl (190.794 nm)	1.899060	ppm	0.004239	0.22	4634.630000	Y 377.433
U (409.013 nm)	2.010590	ppm	0.004120	0.20	6392.960000	Y 377.433
V (292.401 nm)	0.972698	ppm	0.000935	0.10	52157.400000	Y 377.433
Zn (206.200 nm)	0.477850	ppm	0.000697	0.15	2187.880000	Y 377.433
Zr (343.823 nm)	0.487481	ppm	0.000779	0.16	28428.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.001881	18732.166253	0.001974	0.20
Y 377.433	1.022844	568267.825598	0.001674	0.16
Y_R 377.433	1.031230	50206.200000	0.000786	0.08
Y_R 488.368	1.019520	43600.900000	0.001460	0.14
Y_R2 488.368	1.013061	84611.770215	0.000438	0.04
Y_R4	1.017700	39127.300000	0.002452	0.24

Sample Name: 280-123390-A-1-A

Date: 5/11/2019 3:05:21 AM

Rack:Tube: 2:76

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001117	ppm	0.000132	11.83	-146.593000	Y 377.433
Al (394.401 nm)	2.437620	ppm	0.004346	0.18	31172.500000	Y 377.433
Al H (396.152 nm)	2.261670	ppm	0.013156	0.58	5644.420000	Y_R 377.433
As (188.980 nm)	0.003851	ppm	0.001269	32.96	4.070250	Y 242.219
B (249.678 nm)	0.189349	ppm	0.000062	0.03	1460.950000	Y 242.219
Ba (493.408 nm)	0.189734	ppm	0.000295	0.16	21538.500000	Y_R 488.368
Be (234.861 nm)	0.000221	ppm	0.000033	14.83	0.502565	Y_R 488.368
Bi (223.061 nm)	0.006574	ppm	0.001890	28.75	4.011830	Y 377.433
Ca (315.887 nm)	302.877422	ppm	0.556725	0.18	250437.028026	Y_R 377.433
Cd (214.439 nm)	0.000335	ppm	0.000050	15.00	7.066750	Y 377.433
Co (228.615 nm)	0.001167	ppm	0.000339	29.04	8.967900	Y 242.219
Cr (205.560 nm)	0.013781	ppm	0.000486	3.53	87.268100	Y 377.433
Cu (324.754 nm)	0.001624	ppm	0.000080	4.95	413.301000	Y 377.433
Fe (238.204 nm)	2.490540	ppm	0.011907	0.48	6230.448757	Y_R 377.433
Fe H (259.940 nm)	2.502100 u	ppm	0.001337	0.05	3568.120000	Y_R 377.433
K (766.491 nm)	7.135040	ppm	0.096938	1.36	9686.090000	Y_R2 488.368
Li (670.783 nm)	0.039131	ppm	0.002899	7.41	-2174.130000	Y_R2 488.368
Mg (279.078 nm)	57.282800	ppm	0.017195	0.03	200794.000000	Y 377.433
Mn (257.610 nm)	0.307689	ppm	0.000249	0.08	88657.500000	Y 377.433
Mo (202.032 nm)	0.000695	ppm	0.000027	3.83	20.807900	Y 377.433
Na (589.592 nm)	107.062000 o	ppm	0.017358	0.02	93287.100000	Y_R2 488.368
Na H (589.593 nm)	109.111695	ppm	0.677456	0.62	63717.530531	Y_R4
Ni (231.604 nm)	0.021233	ppm	0.000450	2.12	104.757000	Y 377.433
P (213.618 nm)	0.051773	ppm	0.002812	5.43	82.323000	Y 242.219
Pb (220.353 nm)	0.001276	ppm	0.000231	18.12	11.775500	Y 242.219
S (181.972 nm)	86.604432	ppm	0.200001	0.23	42345.738655	Y 377.433
Sb (206.834 nm)	-0.005039 u	ppm	0.001793	35.57	-7.165230	Y 377.433
Se (196.026 nm)	0.003173	ppm	0.001764	55.59	10.441300	Y 242.219
Si (288.158 nm)	20.889000	ppm	0.006894	0.03	140047.000000	Y 377.433
Sn (189.925 nm)	-0.004279 u	ppm	0.000103	2.41	2.055040	Y 377.433
Sr (421.552 nm)	1.999659	ppm	0.000905	0.05	321236.967695	Y_R 488.368
Th (288.505 nm)	-0.000127 u	ppm	0.001738	> 100.00	16.477600	Y 377.433
Ti (336.122 nm)	0.070157	ppm	0.000122	0.17	9764.480000	Y 377.433
Tl (190.794 nm)	0.008889	ppm	0.000893	10.05	8.782270	Y 377.433
U (409.013 nm)	0.025406	ppm	0.003849	15.15	73.364300	Y 377.433
V (292.401 nm)	0.008034	ppm	0.000108	1.34	336.861000	Y 377.433
Zn (206.200 nm)	0.029907	ppm	0.000444	1.48	140.085000	Y 377.433
Zr (343.823 nm)	0.002554	ppm	0.000115	4.52	-23.680200	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.980593	18334.143430	0.002194	0.22
Y 377.433	1.003465	557501.758718	0.000194	0.02
Y_R 377.433	1.023760	49842.300000	0.002907	0.28
Y_R 488.368	1.012080	43282.900000	0.001498	0.15
Y_R2 488.368	1.018141	85035.995206	0.003044	0.30
Y_R4	1.030700	39627.200000	0.008546	0.83

Sample Name: 280-123390-A-1-Asd@5

Date: 5/11/2019 3:08:55 AM

Rack:Tube: 2:77

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.001279 u	ppm	0.000052	4.10	-229.602000	Y 377.433
Al (394.401 nm)	0.088756	ppm	0.004809	5.42	1143.480000	Y 377.433
Al H (396.152 nm)	0.159962 u	ppm	0.073309	45.83	155.222000	Y_R 377.433
As (188.980 nm)	0.001881	ppm	0.000916	48.70	1.164470	Y 242.219
B (249.678 nm)	0.004851	ppm	0.000608	12.54	48.979700	Y 242.219
Ba (493.408 nm)	-0.006363 u	ppm	0.005113	80.35	960.959000	Y_R 488.368
Be (234.861 nm)	-0.000005 u	ppm	0.000024	> 100.00	-1.775380	Y_R 488.368
Bi (223.061 nm)	0.004497	ppm	0.000202	4.49	-0.988418	Y 377.433
Ca (315.887 nm)	6.077530	ppm	7.067850	> 100.00	4953.485580	Y_R 377.433
Cd (214.439 nm)	0.000149	ppm	0.000030	19.99	-1.064380	Y 377.433
Co (228.615 nm)	0.000749	ppm	0.000028	3.73	-4.514830	Y 242.219
Cr (205.560 nm)	0.001353	ppm	0.000020	1.48	1.255040	Y 377.433
Cu (324.754 nm)	-0.008674 u	ppm	0.000078	0.89	84.348000	Y 377.433
Fe (238.204 nm)	0.051859	ppm	0.064210	> 100.00	133.816124	Y_R 377.433
Fe H (259.940 nm)	0.075141 u	ppm	0.062560	83.26	80.002800	Y_R 377.433
K (766.491 nm)	-1.481790 u	ppm	0.027463	1.85	623.072000	Y_R2 488.368
Li (670.783 nm)	0.109889	ppm	0.002031	1.85	-886.851000	Y_R2 488.368
Mg (279.078 nm)	1.623310	ppm	0.191137	11.77	5707.250000	Y 377.433
Mn (257.610 nm)	0.010061	ppm	0.000503	4.99	2876.250000	Y 377.433
Mo (202.032 nm)	-0.000508 u	ppm	0.000258	50.83	4.891160	Y 377.433
Na (589.592 nm)	0.291618 u	ppm	0.535027	> 100.00	422.645000	Y_R2 488.368
Na H (589.593 nm)	0.130576 u	ppm	0.997400	> 100.00	553.610938	Y_R4
Ni (231.604 nm)	0.001537	ppm	0.000370	24.06	-2.121970	Y 377.433
P (213.618 nm)	-0.003994 u	ppm	0.000305	7.65	0.353096	Y 242.219
Pb (220.353 nm)	-0.001693 u	ppm	0.000121	7.17	2.113780	Y 242.219
S (181.972 nm)	2.030611	ppm	0.577001	28.42	1000.129963	Y 377.433
Sb (206.834 nm)	-0.001331 u	ppm	0.000175	13.17	-0.210083	Y 377.433
Se (196.026 nm)	-0.001162 u	ppm	0.000414	35.61	3.721970	Y 242.219
Si (288.158 nm)	0.366268	ppm	0.090985	24.84	2955.080000	Y 377.433
Sn (189.925 nm)	-0.005103 u	ppm	0.000108	2.12	0.699072	Y 377.433
Sr (421.552 nm)	0.039765	ppm	0.048232	> 100.00	6488.984763	Y_R 488.368
Th (288.505 nm)	-0.011864 u	ppm	0.000530	4.47	-1.659170	Y 377.433
Ti (336.122 nm)	0.007007	ppm	0.000078	1.11	423.812000	Y 377.433
Tl (190.794 nm)	0.000540	ppm	0.000339	62.82	1.171010	Y 377.433
U (409.013 nm)	-0.003538 u	ppm	0.002412	68.16	17.959400	Y 377.433
V (292.401 nm)	0.001380	ppm	0.000062	4.52	-17.051600	Y 377.433
Zn (206.200 nm)	0.000513	ppm	0.000187	36.36	5.440040	Y 377.433
Zr (343.823 nm)	0.002212	ppm	0.000058	2.61	-43.746500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	3.353733	62704.737830	0.070794	2.11
Y 377.433	3.400866	1889441.020076	0.067059	1.97
Y_R 377.433	3.286440	160003.000000	0.227565	6.92
Y_R 488.368	3.132190	133952.000000	0.308700	9.86
Y_R2 488.368	3.282221	274133.914516	0.147243	4.49
Y_R4	3.591100	138066.000000	0.601376	16.75

Sample Name: CCVH-5690583

Date: 5/11/2019 3:12:07 AM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000270	ppm	0.000255	94.58	-311.694000	Y 377.433
Al (394.401 nm)	48.137800 o	ppm	0.004143	0.01	604951.000000	Y 377.433
Al H (396.152 nm)	48.582500	ppm	0.044772	0.09	109139.000000	Y_R 377.433
As (188.980 nm)	0.005029	ppm	0.000639	12.70	1.780410	Y 242.219
B (249.678 nm)	0.006792	ppm	0.000160	2.36	34.987900	Y 242.219
Ba (493.408 nm)	0.001359	ppm	0.000313	23.03	1810.190000	Y_R 488.368
Be (234.861 nm)	0.002402	ppm	0.000021	0.88	-168.427000	Y_R 488.368
Bi (223.061 nm)	0.944373	ppm	0.002490	0.26	2073.940000	Y 377.433
Ca (315.887 nm)	0.025963	ppm	0.003719	14.33	-39.271360	Y_R 377.433
Cd (214.439 nm)	0.000764	ppm	0.000033	4.28	42.105700	Y 377.433
Co (228.615 nm)	0.003989	ppm	0.000118	2.95	76.512500	Y 242.219
Cr (205.560 nm)	0.001015	ppm	0.000025	2.45	-2.440110	Y 377.433
Cu (324.754 nm)	0.005845	ppm	0.000176	3.00	1193.350000	Y 377.433
Fe (238.204 nm)	47.453040 o	ppm	0.152741	0.32	118635.404355	Y_R 377.433
Fe H (259.940 nm)	47.359500	ppm	0.053117	0.11	68038.700000	Y_R 377.433
K (766.491 nm)	0.289717	ppm	0.006141	2.12	2486.310000	Y_R2 488.368
Li (670.783 nm)	0.008484	ppm	0.001716	20.23	-2731.670000	Y_R2 488.368
Mg (279.078 nm)	0.016777	ppm	0.001264	7.53	-152.276000	Y 377.433
Mn (257.610 nm)	0.001383	ppm	0.000064	4.66	375.233000	Y 377.433
Mo (202.032 nm)	0.001053	ppm	0.000139	13.19	25.539200	Y 377.433
Na (589.592 nm)	238.459000 o	ppm	0.128122	0.05	207466.000000	Y_R2 488.368
Na H (589.593 nm)	244.622381	ppm	0.138470	0.06	142257.612877	Y_R4
Ni (231.604 nm)	0.002594	ppm	0.000609	23.46	3.617790	Y 377.433
P (213.618 nm)	-0.016892 u	ppm	0.001799	10.65	-29.422600	Y 242.219
Pb (220.353 nm)	0.006781	ppm	0.002976	43.88	46.583400	Y 242.219
S (181.972 nm)	4.704669	ppm	0.007521	0.16	2306.560101	Y 377.433
Sb (206.834 nm)	0.000239	ppm	0.000154	64.58	5.972530	Y 377.433
Se (196.026 nm)	0.000534 u	ppm	0.001950	> 100.00	-6.311890	Y 242.219
Si (288.158 nm)	0.090874	ppm	0.001455	1.60	1115.440000	Y 377.433
Sn (189.925 nm)	0.000352	ppm	0.000059	16.86	9.675640	Y 377.433
Sr (421.552 nm)	0.000894	ppm	0.000213	23.83	253.991721	Y_R 488.368
Th (288.505 nm)	4.837460	ppm	0.000652	0.01	8546.880000	Y 377.433
Ti (336.122 nm)	0.002258	ppm	0.000150	6.66	-222.892000	Y 377.433
Tl (190.794 nm)	-0.002226 u	ppm	0.000250	11.24	-10.041700	Y 377.433
U (409.013 nm)	9.684840	ppm	0.022296	0.23	31000.700000	Y 377.433
V (292.401 nm)	-0.001073 u	ppm	0.000061	5.66	-152.400000	Y 377.433
Zn (206.200 nm)	0.002413	ppm	0.000051	2.11	20.706700	Y 377.433
Zr (343.823 nm)	-0.002745 u	ppm	0.000212	7.71	-334.591000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.021695	19102.627013	0.004067	0.40
Y 377.433	1.036524	575868.166223	0.002036	0.20
Y_R 377.433	1.056700	51446.100000	0.002994	0.28
Y_R 488.368	1.045540	44713.700000	0.000232	0.02
Y_R2 488.368	1.036096	86535.636160	0.003863	0.37
Y_R4	1.040450	40002.100000	0.000578	0.06

Sample Name: CCV-5690581

Date: 5/11/2019 3:15:47 AM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.477618	ppm	0.001109	0.23	17271.000000	Y 377.433
Al (394.401 nm)	0.487689	ppm	0.001234	0.25	6278.370000	Y 377.433
Al H (396.152 nm)	0.529292 u	ppm	0.013103	2.48	1216.370000	Y_R 377.433
As (188.980 nm)	0.953861	ppm	0.000795	0.08	1515.730000	Y 242.219
B (249.678 nm)	0.469584	ppm	0.002828	0.60	3607.920000	Y 242.219
Ba (493.408 nm)	0.481179	ppm	0.000555	0.12	52118.400000	Y_R 488.368
Be (234.861 nm)	0.472815	ppm	0.000604	0.13	50159.000000	Y_R 488.368
Bi (223.061 nm)	0.005229	ppm	0.001070	20.47	1.127710	Y 377.433
Ca (315.887 nm)	4.874472	ppm	0.004703	0.10	3958.566484	Y_R 377.433
Cd (214.439 nm)	0.481033	ppm	0.000013	0.00	18423.300000	Y 377.433
Co (228.615 nm)	0.482792	ppm	0.000686	0.14	12082.300000	Y 242.219
Cr (205.560 nm)	0.478359	ppm	0.000036	0.01	3303.180000	Y 377.433
Cu (324.754 nm)	0.480129	ppm	0.003095	0.64	24075.400000	Y 377.433
Fe (238.204 nm)	2.396074	ppm	0.006017	0.25	5994.287360	Y_R 377.433
Fe H (259.940 nm)	2.423880 u	ppm	0.000924	0.04	3455.700000	Y_R 377.433
K (766.491 nm)	48.156500	ppm	0.140732	0.29	52831.600000	Y_R2 488.368
Li (670.783 nm)	0.986430	ppm	0.001111	0.11	15059.700000	Y_R2 488.368
Mg (279.078 nm)	18.855700	ppm	0.004377	0.02	66104.200000	Y 377.433
Mn (257.610 nm)	0.477590	ppm	0.000164	0.03	137626.000000	Y 377.433
Mo (202.032 nm)	0.480881	ppm	0.000408	0.08	6373.040000	Y 377.433
Na (589.592 nm)	24.735600	ppm	0.046670	0.19	21789.500000	Y_R2 488.368
Na H (589.593 nm)	24.681352 u	ppm	0.034601	0.14	14782.894691	Y_R4
Ni (231.604 nm)	0.481601	ppm	0.000980	0.20	2603.930000	Y 377.433
P (213.618 nm)	0.932002	ppm	0.000798	0.09	1305.030000	Y 242.219
Pb (220.353 nm)	0.961708	ppm	0.003729	0.39	3243.260000	Y 242.219
S (181.972 nm)	0.001675 u	ppm	0.004429	> 100.00	10.111408	Y 377.433
Sb (206.834 nm)	0.959797	ppm	0.005533	0.58	1787.800000	Y 377.433
Se (196.026 nm)	0.954840	ppm	0.001665	0.17	1535.030000	Y 242.219
Si (288.158 nm)	4.745170	ppm	0.029335	0.62	32206.200000	Y 377.433
Sn (189.925 nm)	0.970656	ppm	0.002851	0.29	1606.490000	Y 377.433
Sr (421.552 nm)	0.480179	ppm	0.000416	0.09	77217.280616	Y_R 488.368
Th (288.505 nm)	0.008833	ppm	0.000168	1.91	-14.182800	Y 377.433
Ti (336.122 nm)	0.480827	ppm	0.000153	0.03	62932.700000	Y 377.433
Tl (190.794 nm)	0.967808	ppm	0.000449	0.05	2363.230000	Y 377.433
U (409.013 nm)	0.014934	ppm	0.004698	31.46	19.049800	Y 377.433
V (292.401 nm)	0.477682	ppm	0.000331	0.07	25565.400000	Y 377.433
Zn (206.200 nm)	0.480558	ppm	0.000519	0.11	2199.220000	Y 377.433
Zr (343.823 nm)	0.482285	ppm	0.000606	0.13	28123.800000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.037476	19397.679447	0.000657	0.06
Y 377.433	1.048325	582424.694985	0.001989	0.19
Y_R 377.433	1.057060	51463.900000	0.000669	0.06
Y_R 488.368	1.043810	44639.900000	0.003267	0.31
Y_R2 488.368	1.039706	86837.155274	0.001932	0.19
Y_R4	1.037570	39891.300000	0.005778	0.56

Sample Name: CCB

Date: 5/11/2019 3:19:21 AM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000178 u	ppm	0.000161	90.52	-190.509000	Y 377.433
Al (394.401 nm)	0.003743	ppm	0.001190	31.79	72.142400	Y 377.433
Al H (396.152 nm)	0.105272 Zu	ppm	0.009006	8.56	16.886300 Z	Y_R 377.433
As (188.980 nm)	0.002458	ppm	0.000156	6.35	2.085300	Y 242.219
B (249.678 nm)	-0.000183 u	ppm	0.001070	> 100.00	10.444000	Y 242.219
Ba (493.408 nm)	-0.001657 u	ppm	0.000116	6.99	1454.730000	Y_R 488.368
Be (234.861 nm)	0.000015 u	ppm	0.000023	> 100.00	0.802472	Y_R 488.368
Bi (223.061 nm)	0.003700	ppm	0.001027	27.76	-2.747540	Y 377.433
Ca (315.887 nm)	0.008235	ppm	0.003945	47.90	-66.430001	Y_R 377.433
Cd (214.439 nm)	-0.000008 u	ppm	0.000038	> 100.00	-7.105930	Y 377.433
Co (228.615 nm)	0.000317	ppm	0.000062	19.53	-15.470600	Y 242.219
Cr (205.560 nm)	-0.000043 u	ppm	0.000423	> 100.00	-8.421300	Y 377.433
Cu (324.754 nm)	-0.001139 u	ppm	0.000087	7.64	455.402000	Y 377.433
Fe (238.204 nm)	0.001966	ppm	0.000362	18.40	9.085233	Y_R 377.433
Fe H (259.940 nm)	0.028261 u	ppm	0.001578	5.58	12.626300	Y_R 377.433
K (766.491 nm)	-0.346380 u	ppm	0.012896	3.72	1817.270000	Y_R2 488.368
Li (670.783 nm)	0.009720	ppm	0.001361	14.01	-2709.180000	Y_R2 488.368
Mg (279.078 nm)	0.001422	ppm	0.001811	> 100.00	21.412200	Y 377.433
Mn (257.610 nm)	0.000075	ppm	0.000017	22.71	-1.783330	Y 377.433
Mo (202.032 nm)	-0.000300 u	ppm	0.000233	77.41	7.640520	Y 377.433
Na (589.592 nm)	0.032654	ppm	0.009334	28.58	199.314000	Y_R2 488.368
Na H (589.593 nm)	0.081226 u	ppm	0.033982	41.84	525.008844	Y_R4
Ni (231.604 nm)	0.000186 u	ppm	0.000565	> 100.00	-9.447700	Y 377.433
P (213.618 nm)	-0.001138 u	ppm	0.001392	> 100.00	2.027590	Y 242.219
Pb (220.353 nm)	0.000230 u	ppm	0.000770	> 100.00	8.755390	Y 242.219
S (181.972 nm)	0.001577	ppm	0.000341	21.61	8.245510	Y 377.433
Sb (206.834 nm)	0.000999 u	ppm	0.001938	> 100.00	4.138630	Y 377.433
Se (196.026 nm)	0.003137	ppm	0.002271	72.40	10.606500	Y 242.219
Si (288.158 nm)	0.001283	ppm	0.000085	6.64	516.979000	Y 377.433
Sn (189.925 nm)	-0.004284 u	ppm	0.000075	1.75	2.046770	Y 377.433
Sr (421.552 nm)	0.000009 u	ppm	0.000027	> 100.00	104.389227	Y_R 488.368
Th (288.505 nm)	-0.004995 u	ppm	0.001601	32.06	10.544500	Y 377.433
Ti (336.122 nm)	0.000752	ppm	0.000052	6.87	-421.773000	Y 377.433
Tl (190.794 nm)	0.002857	ppm	0.000198	6.95	7.102560	Y 377.433
U (409.013 nm)	-0.014537 u	ppm	0.002000	13.75	-16.408800	Y 377.433
V (292.401 nm)	-0.000338 u	ppm	0.000240	70.98	-112.604000	Y 377.433
Zn (206.200 nm)	-0.000216 u	ppm	0.000266	> 100.00	2.100300	Y 377.433
Zr (343.823 nm)	0.000443	ppm	0.000337	76.15	-147.554000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.067901	19966.538916	0.002913	0.27
Y 377.433	1.075191	597350.868887	0.001308	0.12
Y_R 377.433	1.080110	52585.700000	0.004026	0.37
Y_R 488.368	1.072520	45867.500000	0.006677	0.62
Y_R2 488.368	1.064585	88915.038208	0.000582	0.05
Y_R4	1.046980	40253.100000	0.004896	0.47

Sample Name: CCVL-5695588

Date: 5/11/2019 3:22:32 AM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009086	ppm	0.000213	2.34	147.443000	Y 377.433
Al (394.401 nm)	0.102270	ppm	0.000741	0.72	1315.670000	Y 377.433
Al H (396.152 nm)	0.210686 u	ppm	0.009154	4.34	259.505000	Y_R 377.433
As (188.980 nm)	0.015342	ppm	0.001098	7.16	22.575500	Y 242.219
B (249.678 nm)	0.092074	ppm	0.000434	0.47	717.175000	Y 242.219
Ba (493.408 nm)	0.008582	ppm	0.000526	6.13	2529.070000	Y_R 488.368
Be (234.861 nm)	0.000951	ppm	0.000008	0.85	99.322500	Y_R 488.368
Bi (223.061 nm)	0.092788	ppm	0.003525	3.80	193.186000	Y 377.433
Ca (315.887 nm)	0.201288	ppm	0.006352	3.16	93.269347	Y_R 377.433
Cd (214.439 nm)	0.004886	ppm	0.000010	0.21	180.441000	Y 377.433
Co (228.615 nm)	0.010297	ppm	0.000421	4.09	234.746000	Y 242.219
Cr (205.560 nm)	0.009981	ppm	0.000532	5.33	60.868500	Y 377.433
Cu (324.754 nm)	0.014155	ppm	0.000088	0.62	1206.020000	Y 377.433
Fe (238.204 nm)	0.095231	ppm	0.000244	0.26	242.246176	Y_R 377.433
Fe H (259.940 nm)	0.130318 u	ppm	0.003225	2.47	159.305000	Y_R 377.433
K (766.491 nm)	2.671690	ppm	0.035882	1.34	4991.610000	Y_R2 488.368
Li (670.783 nm)	0.029060 Q	ppm	0.004487	15.44	-2357.350000 Q	Y_R2 488.368
Mg (279.078 nm)	0.194105	ppm	0.003025	1.56	695.829000	Y 377.433
Mn (257.610 nm)	0.010200	ppm	0.000002	0.02	2916.410000	Y 377.433
Mo (202.032 nm)	0.019291	ppm	0.000542	2.81	266.803000	Y 377.433
Na (589.592 nm)	1.058450	ppm	0.024883	2.35	1093.560000	Y_R2 488.368
Na H (589.593 nm)	0.912189 u	ppm	0.010431	1.14	1006.623261	Y_R4
Ni (231.604 nm)	0.040686	ppm	0.000165	0.41	210.329000	Y 377.433
P (213.618 nm)	2.611370	ppm	0.018367	0.70	4033.530000	Y 242.219
Pb (220.353 nm)	0.008839	ppm	0.000290	3.28	37.767800	Y 242.219
S (181.972 nm)	0.087864	ppm	0.001370	1.56	50.451658	Y 377.433
Sb (206.834 nm)	0.016559	ppm	0.002178	13.15	32.971000	Y 377.433
Se (196.026 nm)	0.019188	ppm	0.000092	0.48	36.307100	Y 242.219
Si (288.158 nm)	0.494169	ppm	0.007326	1.48	3809.460000	Y 377.433
Sn (189.925 nm)	0.092568	ppm	0.001702	1.84	161.434000	Y 377.433
Sr (421.552 nm)	0.008614	ppm	0.000041	0.47	1486.445415	Y_R 488.368
Th (288.505 nm)	0.011379	ppm	0.002927	25.72	38.665200	Y 377.433
Ti (336.122 nm)	0.010240	ppm	0.000138	1.35	830.736000	Y 377.433
Tl (190.794 nm)	0.015558	ppm	0.000030	0.19	38.038500	Y 377.433
U (409.013 nm)	0.051375	ppm	0.004184	8.14	193.008000	Y 377.433
V (292.401 nm)	0.009135	ppm	0.000015	0.16	394.220000	Y 377.433
Zn (206.200 nm)	0.020580	ppm	0.000264	1.28	97.137800	Y 377.433
Zr (343.823 nm)	0.010231 Q	ppm	0.000121	1.18	426.779000 Q	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.068011	19968.588410	0.002698	0.25
Y 377.433	1.075691	597628.451832	0.002268	0.21
Y_R 377.433	1.079660	52563.800000	0.002579	0.24
Y_R 488.368	1.060920	45371.400000	0.001944	0.18
Y_R2 488.368	1.066638	89086.523921	0.000516	0.05
Y_R4	1.046180	40222.400000	0.005827	0.56

Sample Name: 280-123390-A-1-B MS

Date: 5/11/2019 3:25:59 AM

Rack:Tube: 2:78

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.052258	ppm	0.000727	1.39	1408.700000	Y 377.433
Al (394.401 nm)	14.553100 o	ppm	0.018847	0.13	183681.000000	Y 377.433
Al H (396.152 nm)	14.421700	ppm	0.010259	0.07	33477.200000	Y_R 377.433
As (188.980 nm)	1.993370	ppm	0.004898	0.25	3168.450000	Y 242.219
B (249.678 nm)	1.167770	ppm	0.001685	0.14	8950.380000	Y 242.219
Ba (493.408 nm)	2.116120	ppm	0.002146	0.10	223673.000000	Y_R 488.368
Be (234.861 nm)	0.950168	ppm	0.007464	0.79	100729.000000	Y_R 488.368
Bi (223.061 nm)	1.965890	ppm	0.003940	0.20	4314.550000	Y 377.433
Ca (315.887 nm)	352.030418	ppm	0.172631	0.05	291094.615934	Y_R 377.433
Cd (214.439 nm)	0.939613	ppm	0.000194	0.02	35996.500000	Y 377.433
Co (228.615 nm)	0.915915	ppm	0.000882	0.10	22949.300000	Y 242.219
Cr (205.560 nm)	0.963222	ppm	0.001369	0.14	6659.220000	Y 377.433
Cu (324.754 nm)	0.945946	ppm	0.001724	0.18	46796.300000	Y 377.433
Fe (238.204 nm)	12.860895 o	ppm	0.014159	0.11	32156.038116	Y_R 377.433
Fe H (259.940 nm)	12.861300	ppm	0.011746	0.09	18456.700000	Y_R 377.433
K (766.491 nm)	58.351800	ppm	0.018245	0.03	63554.900000	Y_R2 488.368
Li (670.783 nm)	1.044820	ppm	0.004155	0.40	16122.000000	Y_R2 488.368
Mg (279.078 nm)	104.952000	ppm	0.018562	0.02	367831.000000	Y 377.433
Mn (257.610 nm)	1.248350	ppm	0.000741	0.06	359770.000000	Y 377.433
Mo (202.032 nm)	0.970698	ppm	0.000146	0.01	12852.700000	Y 377.433
Na (589.592 nm)	154.241000 o	ppm	0.045237	0.03	134762.000000	Y_R2 488.368
Na H (589.593 nm)	151.310440	ppm	0.575199	0.38	88175.328172	Y_R4
Ni (231.604 nm)	0.930051	ppm	0.000017	0.00	5038.330000	Y 377.433
P (213.618 nm)	19.056800	ppm	0.013594	0.07	29167.200000	Y 242.219
Pb (220.353 nm)	0.950601	ppm	0.001780	0.19	3205.330000	Y 242.219
S (181.972 nm)	96.113637	ppm	0.016471	0.02	46998.264883	Y 377.433
Sb (206.834 nm)	0.978603	ppm	0.004716	0.48	1820.650000	Y 377.433
Se (196.026 nm)	1.965630	ppm	0.002999	0.15	3152.360000	Y 242.219
Si (288.158 nm)	28.314700	ppm	0.047384	0.17	189651.000000	Y 377.433
Sn (189.925 nm)	1.923760	ppm	0.000816	0.04	3175.000000	Y 377.433
Sr (421.552 nm)	2.913408	ppm	0.004823	0.17	467981.313836	Y_R 488.368
Th (288.505 nm)	0.995396	ppm	0.007798	0.78	1670.510000	Y 377.433
Ti (336.122 nm)	1.060240	ppm	0.000582	0.05	140554.000000	Y 377.433
Tl (190.794 nm)	1.839470	ppm	0.002300	0.13	4475.800000	Y 377.433
U (409.013 nm)	2.000450	ppm	0.016886	0.84	6324.870000	Y 377.433
V (292.401 nm)	0.976019	ppm	0.000596	0.06	52334.200000	Y 377.433
Zn (206.200 nm)	0.496201	ppm	0.000265	0.05	2272.150000	Y 377.433
Zr (343.823 nm)	0.477686	ppm	0.000798	0.17	27853.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.993315	18572.015494	0.003676	0.37
Y 377.433	1.014679	563731.546317	0.003252	0.32
Y_R 377.433	1.051200	51178.200000	0.001973	0.19
Y_R 488.368	1.038660	44419.400000	0.004155	0.40
Y_R2 488.368	1.018035	85027.159546	0.004492	0.44
Y_R4	1.039970	39983.700000	0.003061	0.29

Sample Name: 280-123390-A-1-C MSD

Date: 5/11/2019 3:29:35 AM

Rack:Tube: 2:79

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.053248	ppm	0.000138	0.26	1438.080000	Y 377.433
Al (394.401 nm)	15.030000 o	ppm	0.010127	0.07	189683.000000	Y 377.433
Al H (396.152 nm)	14.857600	ppm	0.017161	0.12	34478.200000	Y_R 377.433
As (188.980 nm)	2.039320	ppm	0.001570	0.08	3241.520000	Y 242.219
B (249.678 nm)	1.192460	ppm	0.001006	0.08	9139.410000	Y 242.219
Ba (493.408 nm)	2.166250	ppm	0.001349	0.06	228934.000000	Y_R 488.368
Be (234.861 nm)	0.968917	ppm	0.005300	0.55	102716.000000	Y_R 488.368
Bi (223.061 nm)	2.006030	ppm	0.005548	0.28	4402.860000	Y 377.433
Ca (315.887 nm)	354.781818	ppm	0.559386	0.16	293370.410280	Y_R 377.433
Cd (214.439 nm)	0.959430	ppm	0.001361	0.14	36755.800000	Y 377.433
Co (228.615 nm)	0.934914	ppm	0.000497	0.05	23425.900000	Y 242.219
Cr (205.560 nm)	0.981651	ppm	0.002142	0.22	6786.780000	Y 377.433
Cu (324.754 nm)	0.966140	ppm	0.007374	0.76	47788.000000	Y 377.433
Fe (238.204 nm)	13.165013 o	ppm	0.062625	0.48	32916.323158	Y_R 377.433
Fe H (259.940 nm)	13.134300	ppm	0.051293	0.39	18849.100000	Y_R 377.433
K (766.491 nm)	59.454500	ppm	0.070644	0.12	64714.600000	Y_R2 488.368
Li (670.783 nm)	1.071730	ppm	0.001986	0.19	16611.500000	Y_R2 488.368
Mg (279.078 nm)	106.455000	ppm	0.128973	0.12	373101.000000	Y 377.433
Mn (257.610 nm)	1.271630	ppm	0.001456	0.11	366480.000000	Y 377.433
Mo (202.032 nm)	0.989859	ppm	0.001509	0.15	13106.100000	Y 377.433
Na (589.592 nm)	155.665000 o	ppm	0.209450	0.13	136011.000000	Y_R2 488.368
Na H (589.593 nm)	152.974959	ppm	0.319523	0.21	89140.059933	Y_R4
Ni (231.604 nm)	0.947154	ppm	0.001247	0.13	5131.190000	Y 377.433
P (213.618 nm)	19.391000	ppm	0.029404	0.15	29678.000000	Y 242.219
Pb (220.353 nm)	0.970985	ppm	0.003945	0.41	3273.830000	Y 242.219
S (181.972 nm)	96.885298	ppm	0.311941	0.32	47375.588751	Y 377.433
Sb (206.834 nm)	1.000870	ppm	0.000577	0.06	1862.040000	Y 377.433
Se (196.026 nm)	1.998010	ppm	0.000611	0.03	3204.190000	Y 242.219
Si (288.158 nm)	29.464400	ppm	0.106943	0.36	197330.000000	Y 377.433
Sn (189.925 nm)	1.968010	ppm	0.002914	0.15	3247.820000	Y 377.433
Sr (421.552 nm)	2.957918	ppm	0.000606	0.02	475129.418922	Y_R 488.368
Th (288.505 nm)	1.018160	ppm	0.003394	0.33	1708.330000	Y 377.433
Ti (336.122 nm)	1.084980	ppm	0.000648	0.06	143828.000000	Y 377.433
Tl (190.794 nm)	1.880090	ppm	0.004415	0.23	4574.820000	Y 377.433
U (409.013 nm)	2.033260	ppm	0.002479	0.12	6428.150000	Y 377.433
V (292.401 nm)	0.996914	ppm	0.000904	0.09	53456.800000	Y 377.433
Zn (206.200 nm)	0.509540	ppm	0.000958	0.19	2333.140000	Y 377.433
Zr (343.823 nm)	0.488622	ppm	0.000105	0.02	28495.500000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.996776	18636.718262	0.001182	0.12
Y 377.433	1.018304	565745.855188	0.002069	0.20
Y_R 377.433	1.059690	51591.600000	0.003028	0.29
Y_R 488.368	1.042820	44597.400000	0.004569	0.44
Y_R2 488.368	1.025607	85659.596991	0.000984	0.10
Y_R4	1.054120	40527.600000	0.000660	0.06

Sample Name: 280-123390-A-1-Apds

Date: 5/11/2019 3:33:13 AM

Rack:Tube: 2:80

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.045140	ppm	0.000162	0.36	1455.670000	Y 377.433
Al (394.401 nm)	3.563720 o	ppm	0.005873	0.16	45337.300000	Y 377.433
Al H (396.152 nm)	3.417600	ppm	0.016948	0.50	8242.040000	Y_R 377.433
As (188.980 nm)	0.203570	ppm	0.000656	0.32	321.733000	Y 242.219
B (249.678 nm)	0.287779	ppm	0.002154	0.75	2214.400000	Y 242.219
Ba (493.408 nm)	0.279682	ppm	0.000065	0.02	30977.200000	Y_R 488.368
Be (234.861 nm)	0.047735	ppm	0.000104	0.22	5033.980000	Y_R 488.368
Bi (223.061 nm)	0.005423	ppm	0.001819	33.54	1.704910	Y 377.433
Ca (315.887 nm)	321.713226	ppm	0.299745	0.09	266016.403724	Y_R 377.433
Cd (214.439 nm)	0.048091	ppm	0.000013	0.03	1837.120000	Y 377.433
Co (228.615 nm)	0.046759	ppm	0.000395	0.84	1152.640000	Y 242.219
Cr (205.560 nm)	0.061351	ppm	0.000037	0.06	416.514000	Y 377.433
Cu (324.754 nm)	0.049567	ppm	0.000289	0.58	2764.790000	Y 377.433
Fe (238.204 nm)	3.532656	ppm	0.002144	0.06	8835.708527	Y_R 377.433
Fe H (259.940 nm)	3.519630 u	ppm	0.001381	0.04	5030.540000	Y_R 377.433
K (766.491 nm)	27.204900	ppm	0.015546	0.06	30795.100000	Y_R2 488.368
Li (670.783 nm)	0.140715	ppm	0.002932	2.08	-326.051000	Y_R2 488.368
Mg (279.078 nm)	75.887800	ppm	0.060592	0.08	265997.000000	Y 377.433
Mn (257.610 nm)	0.349539	ppm	0.000342	0.10	100719.000000	Y 377.433
Mo (202.032 nm)	0.051836	ppm	0.000050	0.10	697.335000	Y 377.433
Na (589.592 nm)	123.704000 o	ppm	0.369099	0.30	107775.000000	Y_R2 488.368
Na H (589.593 nm)	125.015654	ppm	1.072261	0.86	72935.241138	Y_R4
Ni (231.604 nm)	0.066837	ppm	0.000522	0.78	352.428000	Y 377.433
P (213.618 nm)	1.943200	ppm	0.004490	0.23	2990.190000	Y 242.219
Pb (220.353 nm)	0.097191	ppm	0.000848	0.87	335.418000	Y 242.219
S (181.972 nm)	86.071226	ppm	0.250845	0.29	42086.238374	Y 377.433
Sb (206.834 nm)	0.099992	ppm	0.001573	1.57	188.235000	Y 377.433
Se (196.026 nm)	0.205181	ppm	0.002516	1.23	333.775000	Y 242.219
Si (288.158 nm)	26.858100	ppm	0.018094	0.07	179921.000000	Y 377.433
Sn (189.925 nm)	0.095806	ppm	0.000600	0.63	166.764000	Y 377.433
Sr (421.552 nm)	1.990330	ppm	0.001203	0.06	319738.907369	Y_R 488.368
Th (288.505 nm)	0.205578	ppm	0.003413	1.66	374.126000	Y 377.433
Ti (336.122 nm)	0.125923	ppm	0.000218	0.17	17183.900000	Y 377.433
Tl (190.794 nm)	0.193179	ppm	0.002174	1.13	458.188000	Y 377.433
U (409.013 nm)	0.514149	ppm	0.003660	0.71	1626.590000	Y 377.433
V (292.401 nm)	0.056518	ppm	0.000180	0.32	2936.430000	Y 377.433
Zn (206.200 nm)	0.221452	ppm	0.000761	0.34	1015.450000	Y 377.433
Zr (343.823 nm)	0.053953	ppm	0.000186	0.34	2992.110000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.018329	19039.688555	0.000259	0.03
Y 377.433	1.035808	575470.480495	0.001353	0.13
Y_R 377.433	1.073210	52250.200000	0.001674	0.16
Y_R 488.368	1.057690	45233.300000	0.000798	0.08
Y_R2 488.368	1.044923	87272.866121	0.000844	0.08
Y_R4	1.049720	40358.400000	0.007565	0.72

Sample Name: 280-123390-A-2-A

Date: 5/11/2019 3:36:48 AM

Rack:Tube: 2:81

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001199	ppm	0.000336	27.99	-143.101000	Y 377.433
Al (394.401 nm)	1.802280	ppm	0.001146	0.06	23179.300000	Y 377.433
Al H (396.152 nm)	1.590970	ppm	0.015725	0.99	4115.430000	Y_R 377.433
As (188.980 nm)	0.002786	ppm	0.000309	11.09	2.436250	Y 242.219
B (249.678 nm)	0.184439	ppm	0.000906	0.49	1423.730000	Y 242.219
Ba (493.408 nm)	0.161078	ppm	0.000025	0.02	18531.300000	Y_R 488.368
Be (234.861 nm)	0.000174	ppm	0.000017	10.03	1.260220	Y_R 488.368
Bi (223.061 nm)	0.005588	ppm	0.003582	64.10	1.734420	Y 377.433
Ca (315.887 nm)	307.791846	ppm	0.403594	0.13	254501.568238	Y_R 377.433
Cd (214.439 nm)	0.000264	ppm	0.000069	26.11	4.077020	Y 377.433
Co (228.615 nm)	0.000666	ppm	0.000265	39.84	-4.530290	Y 242.219
Cr (205.560 nm)	0.012453	ppm	0.001448	11.63	78.091200	Y 377.433
Cu (324.754 nm)	0.000366 u	ppm	0.000613	> 100.00	348.925000	Y 377.433
Fe (238.204 nm)	1.842730	ppm	0.000707	0.04	4610.943860	Y_R 377.433
Fe H (259.940 nm)	1.843520 u	ppm	0.008705	0.47	2621.580000	Y_R 377.433
K (766.491 nm)	7.000030	ppm	0.009095	0.13	9544.080000	Y_R2 488.368
Li (670.783 nm)	0.044972	ppm	0.000593	1.32	-2067.860000	Y_R2 488.368
Mg (279.078 nm)	57.739800	ppm	0.004988	0.01	202396.000000	Y 377.433
Mn (257.610 nm)	0.225385	ppm	0.000178	0.08	64936.200000	Y 377.433
Mo (202.032 nm)	0.000650	ppm	0.000548	84.35	20.209100	Y 377.433
Na (589.592 nm)	105.975000 o	ppm	0.067984	0.06	92335.300000	Y_R2 488.368
Na H (589.593 nm)	106.876087	ppm	0.047128	0.04	62421.803613	Y_R4
Ni (231.604 nm)	0.016758	ppm	0.000127	0.76	80.473800	Y 377.433
P (213.618 nm)	0.039826	ppm	0.001107	2.78	64.212500	Y 242.219
Pb (220.353 nm)	0.002309	ppm	0.000522	22.60	15.406900	Y 242.219
S (181.972 nm)	87.716482	ppm	0.051847	0.06	42889.121018	Y 377.433
Sb (206.834 nm)	-0.005619 u	ppm	0.000790	14.06	-8.198930	Y 377.433
Se (196.026 nm)	0.003018	ppm	0.000010	0.33	10.246000	Y 242.219
Si (288.158 nm)	19.637300	ppm	0.013196	0.07	131686.000000	Y 377.433
Sn (189.925 nm)	-0.004632 u	ppm	0.000354	7.65	1.474140	Y 377.433
Sr (421.552 nm)	1.956239	ppm	0.001761	0.09	314263.838109	Y_R 488.368
Th (288.505 nm)	-0.001532 u	ppm	0.000058	3.75	12.533300	Y 377.433
Ti (336.122 nm)	0.049351	ppm	0.000033	0.07	7034.090000	Y 377.433
Tl (190.794 nm)	0.006639	ppm	0.000998	15.03	3.269540	Y 377.433
U (409.013 nm)	0.023014	ppm	0.003151	13.69	64.781000	Y 377.433
V (292.401 nm)	0.007095	ppm	0.000037	0.52	285.599000	Y 377.433
Zn (206.200 nm)	0.023888	ppm	0.000641	2.68	112.495000	Y 377.433
Zr (343.823 nm)	0.002126	ppm	0.000115	5.42	-48.771800	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.038638	19419.405829	0.004455	0.43
Y 377.433	1.053899	585521.505125	0.004406	0.42
Y_R 377.433	1.081200	52639.000000	0.004030	0.37
Y_R 488.368	1.070130	45765.200000	0.003299	0.31
Y_R2 488.368	1.048225	87548.697456	0.001197	0.11
Y_R4	1.055720	40589.000000	0.010493	0.99

Sample Name: 280-123390-A-3-A

Date: 5/11/2019 3:40:22 AM

Rack:Tube: 2:82

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000970	ppm	0.000512	52.74	-150.869000	Y 377.433
Al (394.401 nm)	1.720410	ppm	0.003298	0.19	22497.500000	Y 377.433
Al H (396.152 nm)	1.292180	ppm	0.007635	0.59	4009.380000	Y_R 377.433
As (188.980 nm)	0.001305 u	ppm	0.003350	> 100.00	0.073657	Y 242.219
B (249.678 nm)	0.091864	ppm	0.001117	1.22	714.335000	Y 242.219
Ba (493.408 nm)	0.140386	ppm	0.000431	0.31	16360.400000	Y_R 488.368
Be (234.861 nm)	0.000107	ppm	0.000057	53.56	-8.434980	Y_R 488.368
Bi (223.061 nm)	0.005936	ppm	0.001810	30.49	2.551780	Y 377.433
Ca (315.887 nm)	296.650956	ppm	0.042596	0.01	245286.938978	Y_R 377.433
Cd (214.439 nm)	0.000306	ppm	0.000030	9.95	5.804600	Y 377.433
Co (228.615 nm)	0.001131	ppm	0.000158	13.94	7.060050	Y 242.219
Cr (205.560 nm)	0.008093	ppm	0.000111	1.37	47.859600	Y 377.433
Cu (324.754 nm)	0.000179 u	ppm	0.000295	> 100.00	345.623000	Y 377.433
Fe (238.204 nm)	2.124602	ppm	0.001528	0.07	5315.615390	Y_R 377.433
Fe H (259.940 nm)	2.137280 u	ppm	0.008304	0.39	3043.780000	Y_R 377.433
K (766.491 nm)	8.707310	ppm	0.066514	0.76	11339.800000	Y_R2 488.368
Li (670.783 nm)	0.060234	ppm	0.001270	2.11	-1790.200000	Y_R2 488.368
Mg (279.078 nm)	50.501100	ppm	0.014020	0.03	177024.000000	Y 377.433
Mn (257.610 nm)	0.147610	ppm	0.000031	0.02	42520.200000	Y 377.433
Mo (202.032 nm)	0.006836	ppm	0.000232	3.39	102.039000	Y 377.433
Na (589.592 nm)	73.326600 o	ppm	0.175946	0.24	63948.400000	Y_R2 488.368
Na H (589.593 nm)	73.752670	ppm	0.078126	0.11	43223.938617	Y_R4
Ni (231.604 nm)	0.007973	ppm	0.001019	12.78	32.806700	Y 377.433
P (213.618 nm)	0.028212	ppm	0.001001	3.55	46.087800	Y 242.219
Pb (220.353 nm)	0.000624 u	ppm	0.001512	> 100.00	9.739470	Y 242.219
S (181.972 nm)	66.647442	ppm	0.043226	0.06	32592.319318	Y 377.433
Sb (206.834 nm)	-0.007392 u	ppm	0.003831	51.83	-11.557100	Y 377.433
Se (196.026 nm)	0.002787	ppm	0.000826	29.65	9.688130	Y 242.219
Si (288.158 nm)	17.120300	ppm	0.007496	0.04	114872.000000	Y 377.433
Sn (189.925 nm)	-0.003564 u	ppm	0.000010	0.28	3.232310	Y 377.433
Sr (421.552 nm)	3.291021	ppm	0.002613	0.08	528622.117484	Y_R 488.368
Th (288.505 nm)	-0.000375 u	ppm	0.005153	> 100.00	13.483400	Y 377.433
Ti (336.122 nm)	0.049321	ppm	0.000023	0.05	6994.840000	Y 377.433
Tl (190.794 nm)	0.007299	ppm	0.000059	0.81	5.240580	Y 377.433
U (409.013 nm)	0.024873	ppm	0.004855	19.52	72.295700	Y 377.433
V (292.401 nm)	0.005204	ppm	0.000235	4.52	184.118000	Y 377.433
Zn (206.200 nm)	0.026286	ppm	0.001161	4.42	123.490000	Y 377.433
Zr (343.823 nm)	0.001987	ppm	0.000068	3.41	-56.916500	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.985759	18430.738944	0.003622	0.37
Y 377.433	1.008916	560529.881121	0.003857	0.38
Y_R 377.433	1.043780	50817.000000	0.006960	0.67
Y_R 488.368	1.026910	43916.900000	0.007397	0.72
Y_R2 488.368	1.028471	85898.797432	0.007514	0.73
Y_R4	1.024530	39389.900000	0.005238	0.51

Sample Name: 280-123390-A-4-A

Date: 5/11/2019 3:43:56 AM

Rack:Tube: 2:83

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000586	ppm	0.000035	6.04	-164.813000	Y 377.433
Al (394.401 nm)	0.017348	ppm	0.001444	8.32	723.905000	Y 377.433
Al H (396.152 nm)	-0.210787 u	ppm	0.006380	3.03	21.123500	Y_R 377.433
As (188.980 nm)	0.002024	ppm	0.001158	57.18	1.387890	Y 242.219
B (249.678 nm)	0.124876	ppm	0.000653	0.52	968.445000	Y 242.219
Ba (493.408 nm)	0.044756	ppm	0.000522	1.17	6324.750000	Y_R 488.368
Be (234.861 nm)	-0.000010 u	ppm	0.000086	> 100.00	-3.142440	Y_R 488.368
Bi (223.061 nm)	0.001308	ppm	0.000967	73.89	-7.968970	Y 377.433
Ca (315.887 nm)	283.367173	ppm	0.596150	0.21	234299.473345	Y_R 377.433
Cd (214.439 nm)	0.000382	ppm	0.000018	4.82	7.925350	Y 377.433
Co (228.615 nm)	-0.000066 u	ppm	0.000203	> 100.00	-25.036900	Y 242.219
Cr (205.560 nm)	0.070205	ppm	0.001145	1.63	478.392000	Y 377.433
Cu (324.754 nm)	-0.002032 u	ppm	0.000391	19.24	246.188000	Y 377.433
Fe (238.204 nm)	0.142058	ppm	0.000140	0.10	359.312851	Y_R 377.433
Fe H (259.940 nm)	0.158283 u	ppm	0.003245	2.05	199.498000	Y_R 377.433
K (766.491 nm)	5.735700	ppm	0.096966	1.69	8214.280000	Y_R2 488.368
Li (670.783 nm)	0.040247	ppm	0.001563	3.88	-2153.820000	Y_R2 488.368
Mg (279.078 nm)	53.955300	ppm	0.038233	0.07	189134.000000	Y 377.433
Mn (257.610 nm)	0.019973	ppm	0.000046	0.23	5733.020000	Y 377.433
Mo (202.032 nm)	0.000739	ppm	0.000148	20.07	21.387000	Y 377.433
Na (589.592 nm)	105.083000 o	ppm	0.138559	0.13	91531.900000	Y_R2 488.368
Na H (589.593 nm)	107.470319	ppm	0.414917	0.39	62766.212328	Y_R4
Ni (231.604 nm)	-0.000626 u	ppm	0.000262	41.87	-13.853400	Y 377.433
P (213.618 nm)	0.000376 u	ppm	0.001247	> 100.00	3.833040	Y 242.219
Pb (220.353 nm)	-0.000809 u	ppm	0.001406	> 100.00	5.161030	Y 242.219
S (181.972 nm)	76.490912	ppm	0.032951	0.04	37401.539045	Y 377.433
Sb (206.834 nm)	-0.005593 u	ppm	0.000758	13.56	-7.568670	Y 377.433
Se (196.026 nm)	0.003170	ppm	0.001222	38.53	10.650900	Y 242.219
Si (288.158 nm)	16.359100	ppm	0.012745	0.08	109787.000000	Y 377.433
Sn (189.925 nm)	-0.003406 u	ppm	0.001590	46.68	3.491910	Y 377.433
Sr (421.552 nm)	1.850943	ppm	0.000103	0.01	297353.625584	Y_R 488.368
Th (288.505 nm)	-0.004702 u	ppm	0.003032	64.49	3.837000	Y 377.433
Ti (336.122 nm)	-0.000694 u	ppm	0.000136	19.57	352.028000	Y 377.433
Tl (190.794 nm)	0.006897	ppm	0.001370	19.87	5.269660	Y 377.433
U (409.013 nm)	0.022537	ppm	0.003986	17.68	65.223400	Y 377.433
V (292.401 nm)	0.004560	ppm	0.000388	8.51	125.365000	Y 377.433
Zn (206.200 nm)	0.004131	ppm	0.000198	4.78	21.983200	Y 377.433
Zr (343.823 nm)	0.000590	ppm	0.000045	7.61	-138.917000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.990599	18521.227209	0.007617	0.77
Y 377.433	1.011626	562035.593350	0.008181	0.81
Y_R 377.433	1.061890	51698.600000	0.003354	0.32
Y_R 488.368	1.047090	44780.100000	0.001448	0.14
Y_R2 488.368	1.039346	86807.117230	0.004434	0.43
Y_R4	1.042290	40072.900000	0.001530	0.15

Sample Name: 280-123390-A-5-A

Date: 5/11/2019 3:47:28 AM

Rack:Tube: 2:84

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000435	ppm	0.000068	15.69	-170.286000	Y 377.433
Al (394.401 nm)	0.065146	ppm	0.001417	2.18	1270.050000	Y 377.433
Al H (396.152 nm)	-0.120412 u	ppm	0.001427	1.18	144.286000	Y_R 377.433
As (188.980 nm)	0.003531	ppm	0.001512	42.84	3.782380	Y 242.219
B (249.678 nm)	0.194276	ppm	0.000411	0.21	1500.150000	Y 242.219
Ba (493.408 nm)	0.063359	ppm	0.000347	0.55	8276.630000	Y_R 488.368
Be (234.861 nm)	-0.000041 u	ppm	0.000002	4.81	-6.060450	Y_R 488.368
Bi (223.061 nm)	0.000126 u	ppm	0.000604	> 100.00	-10.575300	Y 377.433
Ca (315.887 nm)	239.378502	ppm	0.454478	0.19	197916.501209	Y_R 377.433
Cd (214.439 nm)	0.000296	ppm	0.000086	28.92	4.586010	Y 377.433
Co (228.615 nm)	-0.000167 u	ppm	0.000133	79.54	-27.501500	Y 242.219
Cr (205.560 nm)	0.131976	ppm	0.000283	0.21	906.451000	Y 377.433
Cu (324.754 nm)	-0.000201 u	ppm	0.000391	> 100.00	361.232000	Y 377.433
Fe (238.204 nm)	0.102671	ppm	0.000104	0.10	260.846389	Y_R 377.433
Fe H (259.940 nm)	0.120990 u	ppm	0.001304	1.08	145.899000	Y_R 377.433
K (766.491 nm)	6.174960	ppm	0.012095	0.20	8676.290000	Y_R2 488.368
Li (670.783 nm)	0.039406	ppm	0.000160	0.41	-2169.120000	Y_R2 488.368
Mg (279.078 nm)	44.878600	ppm	0.106631	0.24	157319.000000	Y 377.433
Mn (257.610 nm)	0.205205	ppm	0.000335	0.16	59119.900000	Y 377.433
Mo (202.032 nm)	0.000375	ppm	0.000054	14.43	16.569700	Y 377.433
Na (589.592 nm)	133.133000 o	ppm	0.325314	0.24	115920.000000	Y_R2 488.368
Na H (589.593 nm)	134.702936	ppm	0.714375	0.53	78549.853067	Y_R4
Ni (231.604 nm)	-0.000130 u	ppm	0.000765	> 100.00	-11.163500	Y 377.433
P (213.618 nm)	0.005267	ppm	0.001217	23.11	11.108300	Y 242.219
Pb (220.353 nm)	-0.000315 u	ppm	0.002044	> 100.00	6.713080	Y 242.219
S (181.972 nm)	68.620324	ppm	0.193507	0.28	33553.684865	Y 377.433
Sb (206.834 nm)	-0.004852 u	ppm	0.003600	74.19	-5.701450	Y 377.433
Se (196.026 nm)	0.002535	ppm	0.002717	> 100.00	9.912810	Y 242.219
Si (288.158 nm)	16.806700	ppm	0.049360	0.29	112777.000000	Y 377.433
Sn (189.925 nm)	-0.003213 u	ppm	0.000710	22.09	3.808440	Y 377.433
Sr (421.552 nm)	1.635398	ppm	0.002946	0.18	262738.396539	Y_R 488.368
Th (288.505 nm)	-0.007881 u	ppm	0.000119	1.51	3.073570	Y 377.433
Ti (336.122 nm)	0.001571	ppm	0.000027	1.74	499.103000	Y 377.433
Tl (190.794 nm)	0.002743	ppm	0.001054	38.44	-3.049940	Y 377.433
U (409.013 nm)	0.023271	ppm	0.012521	53.80	73.363700	Y 377.433
V (292.401 nm)	0.004542	ppm	0.000283	6.23	100.402000	Y 377.433
Zn (206.200 nm)	0.003881	ppm	0.000459	11.82	20.837000	Y 377.433
Zr (343.823 nm)	0.000680	ppm	0.000110	16.14	-133.597000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.052476	19678.131865	0.005120	0.49
Y 377.433	1.066849	592716.400934	0.005619	0.53
Y_R 377.433	1.105040	53799.600000	0.004038	0.37
Y_R 488.368	1.091210	46666.800000	0.004241	0.39
Y_R2 488.368	1.074338	89729.624049	0.002339	0.22
Y_R4	1.089160	41874.800000	0.001982	0.18

Sample Name: 280-123390-A-6-A

Date: 5/11/2019 3:50:59 AM

Rack:Tube: 2:85

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000461	ppm	0.000195	42.42	-169.606000	Y 377.433
Al (394.401 nm)	0.096222	ppm	0.002431	2.53	1701.430000	Y 377.433
Al H (396.152 nm)	-0.114613 u	ppm	0.016965	14.80	212.305000	Y_R 377.433
As (188.980 nm)	0.002781	ppm	0.001238	44.53	2.587710	Y 242.219
B (249.678 nm)	0.126139	ppm	0.001443	1.14	978.120000	Y 242.219
Ba (493.408 nm)	0.078467	ppm	0.000029	0.04	9861.910000	Y_R 488.368
Be (234.861 nm)	-0.000005 u	ppm	0.000025	> 100.00	-2.664520	Y_R 488.368
Bi (223.061 nm)	0.001918	ppm	0.000133	6.95	-6.626610	Y 377.433
Ca (315.887 nm)	269.127092	ppm	0.361909	0.13	222521.534010	Y_R 377.433
Cd (214.439 nm)	0.000332	ppm	0.000042	12.73	5.994510	Y 377.433
Co (228.615 nm)	-0.000046 u	ppm	0.000144	> 100.00	-24.421800	Y 242.219
Cr (205.560 nm)	0.085102	ppm	0.001480	1.74	581.622000	Y 377.433
Cu (324.754 nm)	-0.001755 u	ppm	0.000108	6.15	265.628000	Y 377.433
Fe (238.204 nm)	0.146606	ppm	0.001665	1.14	370.682352	Y_R 377.433
Fe H (259.940 nm)	0.166357 u	ppm	0.009217	5.54	211.102000	Y_R 377.433
K (766.491 nm)	5.942340	ppm	0.018635	0.31	8431.620000	Y_R2 488.368
Li (670.783 nm)	0.044215	ppm	0.000041	0.09	-2081.630000	Y_R2 488.368
Mg (279.078 nm)	50.547900	ppm	0.075832	0.15	177191.000000	Y 377.433
Mn (257.610 nm)	0.531293	ppm	0.000473	0.09	153104.000000	Y 377.433
Mo (202.032 nm)	0.000303	ppm	0.000090	29.55	15.628600	Y 377.433
Na (589.592 nm)	106.387000 o	ppm	0.310895	0.29	92673.300000	Y_R2 488.368
Na H (589.593 nm)	107.224677	ppm	0.454102	0.42	62623.841421	Y_R4
Ni (231.604 nm)	0.000939	ppm	0.000227	24.13	-5.360530	Y 377.433
P (213.618 nm)	0.004297	ppm	0.001430	33.28	10.028400	Y 242.219
Pb (220.353 nm)	-0.001161 u	ppm	0.000388	33.46	3.960870	Y 242.219
S (181.972 nm)	68.718568	ppm	0.208758	0.30	33604.296664	Y 377.433
Sb (206.834 nm)	-0.002590 u	ppm	0.000488	18.84	-1.867050	Y 377.433
Se (196.026 nm)	0.003898	ppm	0.004881	> 100.00	12.556300	Y 242.219
Si (288.158 nm)	16.017400	ppm	0.048106	0.30	107505.000000	Y 377.433
Sn (189.925 nm)	-0.004252 u	ppm	0.001175	27.64	2.099780	Y 377.433
Sr (421.552 nm)	1.781844	ppm	0.000035	0.00	286256.789344	Y_R 488.368
Th (288.505 nm)	-0.003205 u	ppm	0.009338	> 100.00	16.940500	Y 377.433
Ti (336.122 nm)	0.002908	ppm	0.000054	1.87	777.191000	Y 377.433
Tl (190.794 nm)	0.005084	ppm	0.000401	7.89	1.431230	Y 377.433
U (409.013 nm)	0.026689	ppm	0.009654	36.17	80.453300	Y 377.433
V (292.401 nm)	0.004876	ppm	0.000116	2.37	135.417000	Y 377.433
Zn (206.200 nm)	0.002599	ppm	0.000424	16.31	14.981500	Y 377.433
Zr (343.823 nm)	0.000707	ppm	0.000269	38.04	-132.061000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.052664	19681.651755	0.003908	0.37
Y 377.433	1.069225	594036.060013	0.003306	0.31
Y_R 377.433	1.097870	53450.800000	0.002523	0.23
Y_R 488.368	1.082600	46298.700000	0.003950	0.36
Y_R2 488.368	1.080316	90228.908370	0.000358	0.03
Y_R4	1.090430	41923.600000	0.006967	0.64

Sample Name: 280-123390-A-7-A

Date: 5/11/2019 3:54:32 AM

Rack:Tube: 2:86

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001042	ppm	0.000026	2.53	-148.448000	Y 377.433
Al (394.401 nm)	0.094671	ppm	0.000953	1.01	1677.010000	Y 377.433
Al H (396.152 nm)	-0.114152 u	ppm	0.004586	4.02	204.613000	Y_R 377.433
As (188.980 nm)	0.003238	ppm	0.000101	3.13	3.314890	Y 242.219
B (249.678 nm)	0.127974	ppm	0.000504	0.39	992.185000	Y 242.219
Ba (493.408 nm)	0.078438	ppm	0.000006	0.01	9858.820000	Y_R 488.368
Be (234.861 nm)	-0.000036 u	ppm	0.000000	0.09	-5.848890	Y_R 488.368
Bi (223.061 nm)	0.000584 u	ppm	0.002350	> 100.00	-9.562650	Y 377.433
Ca (315.887 nm)	266.800263	ppm	0.282192	0.11	220597.015834	Y_R 377.433
Cd (214.439 nm)	0.000439	ppm	0.000241	54.95	10.091800	Y 377.433
Co (228.615 nm)	-0.000077 u	ppm	0.000148	> 100.00	-25.236300	Y 242.219
Cr (205.560 nm)	0.086784	ppm	0.000396	0.46	593.282000	Y 377.433
Cu (324.754 nm)	-0.001532 u	ppm	0.000258	16.82	277.737000	Y 377.433
Fe (238.204 nm)	0.139875	ppm	0.000296	0.21	353.854270	Y_R 377.433
Fe H (259.940 nm)	0.156811 u	ppm	0.002164	1.38	197.382000	Y_R 377.433
K (766.491 nm)	5.995260	ppm	0.021642	0.36	8487.280000	Y_R2 488.368
Li (670.783 nm)	0.046073	ppm	0.001814	3.94	-2047.830000	Y_R2 488.368
Mg (279.078 nm)	50.125000	ppm	0.037866	0.08	175708.000000	Y 377.433
Mn (257.610 nm)	0.418680	ppm	0.000265	0.06	120647.000000	Y 377.433
Mo (202.032 nm)	0.000167	ppm	0.000145	87.13	13.819500	Y 377.433
Na (589.592 nm)	106.875000 o	ppm	0.041488	0.04	93097.400000	Y_R2 488.368
Na H (589.593 nm)	107.093365	ppm	0.733092	0.68	62547.735216	Y_R4
Ni (231.604 nm)	0.000952	ppm	0.000573	60.23	-5.290820	Y 377.433
P (213.618 nm)	0.005688	ppm	0.001520	26.72	11.979700	Y 242.219
Pb (220.353 nm)	-0.001214 u	ppm	0.002367	> 100.00	3.796950	Y 242.219
S (181.972 nm)	68.313513	ppm	0.108965	0.16	33405.852001	Y 377.433
Sb (206.834 nm)	-0.006163 u	ppm	0.002306	37.42	-8.507110	Y 377.433
Se (196.026 nm)	0.003619	ppm	0.002809	77.61	11.947200	Y 242.219
Si (288.158 nm)	15.995500	ppm	0.057871	0.36	107358.000000	Y 377.433
Sn (189.925 nm)	-0.004962 u	ppm	0.000158	3.18	0.930342	Y 377.433
Sr (421.552 nm)	1.760935	ppm	0.001103	0.06	282898.941645	Y_R 488.368
Th (288.505 nm)	-0.005694 u	ppm	0.004875	85.61	10.431400	Y 377.433
Ti (336.122 nm)	0.002442	ppm	0.000256	10.50	707.189000	Y 377.433
Tl (190.794 nm)	0.006363	ppm	0.001692	26.60	4.669200	Y 377.433
U (409.013 nm)	0.024382	ppm	0.003022	12.39	73.422400	Y 377.433
V (292.401 nm)	0.005015	ppm	0.000036	0.73	142.040000	Y 377.433
Zn (206.200 nm)	0.006493	ppm	0.000063	0.97	32.776000	Y 377.433
Zr (343.823 nm)	0.000680	ppm	0.000080	11.81	-133.602000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.039052	19427.159268	0.011643	1.12
Y 377.433	1.054334	585763.143405	0.011832	1.12
Y_R 377.433	1.114050	54238.300000	0.000636	0.06
Y_R 488.368	1.098350	46972.400000	0.000085	0.01
Y_R2 488.368	1.089019	90955.832224	0.003386	0.31
Y_R4	1.089140	41874.000000	0.003423	0.31

Sample Name: 280-123390-A-8-A

Date: 5/11/2019 3:58:01 AM

Rack:Tube: 2:87

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001122	ppm	0.000040	3.59	-145.437000	Y 377.433
Al (394.401 nm)	0.009400	ppm	0.001860	19.78	642.875000	Y 377.433
Al H (396.152 nm)	-0.234018 u	ppm	0.006605	2.82	-10.996600	Y_R 377.433
As (188.980 nm)	0.002873	ppm	0.001761	61.29	2.741210	Y 242.219
B (249.678 nm)	0.104642	ppm	0.000420	0.40	813.504000	Y 242.219
Ba (493.408 nm)	0.129339	ppm	0.000043	0.03	15199.600000	Y_R 488.368
Be (234.861 nm)	-0.000046 u	ppm	0.000057	> 100.00	-5.910900	Y_R 488.368
Bi (223.061 nm)	0.000095 u	ppm	0.001084	> 100.00	-10.654900	Y 377.433
Ca (315.887 nm)	319.222628	ppm	0.400200	0.13	263955.481839	Y_R 377.433
Cd (214.439 nm)	0.000264	ppm	0.000023	8.79	3.351880	Y 377.433
Co (228.615 nm)	0.000005 u	ppm	0.000086	> 100.00	-23.267000	Y 242.219
Cr (205.560 nm)	0.010685	ppm	0.000287	2.68	65.917300	Y 377.433
Cu (324.754 nm)	-0.001682 u	ppm	0.000664	39.48	241.751000	Y 377.433
Fe (238.204 nm)	0.025885	ppm	0.002046	7.90	68.881550	Y_R 377.433
Fe H (259.940 nm)	0.041691 u	ppm	0.001628	3.90	31.927600	Y_R 377.433
K (766.491 nm)	6.616150	ppm	0.019244	0.29	9140.320000	Y_R2 488.368
Li (670.783 nm)	0.044285	ppm	0.002766	6.25	-2080.360000	Y_R2 488.368
Mg (279.078 nm)	59.462000	ppm	0.014237	0.02	208436.000000	Y 377.433
Mn (257.610 nm)	0.088277	ppm	0.000076	0.09	25419.500000	Y 377.433
Mo (202.032 nm)	0.000706	ppm	0.000698	98.85	20.951000	Y 377.433
Na (589.592 nm)	107.248000 o	ppm	0.336229	0.31	93434.200000	Y_R2 488.368
Na H (589.593 nm)	107.187558	ppm	0.350391	0.33	62602.328017	Y_R4
Ni (231.604 nm)	-0.000250 u	ppm	0.000399	> 100.00	-11.816200	Y 377.433
P (213.618 nm)	0.004156	ppm	0.004500	> 100.00	9.670530	Y 242.219
Pb (220.353 nm)	-0.001042 u	ppm	0.000848	81.40	4.496120	Y 242.219
S (181.972 nm)	66.765074	ppm	0.154591	0.23	32650.767945	Y 377.433
Sb (206.834 nm)	-0.004802 u	ppm	0.000773	16.10	-6.593780	Y 377.433
Se (196.026 nm)	0.003143	ppm	0.001847	58.77	10.736800	Y 242.219
Si (288.158 nm)	15.549200	ppm	0.010729	0.07	104377.000000	Y 377.433
Sn (189.925 nm)	-0.004216 u	ppm	0.000489	11.61	2.158070	Y 377.433
Sr (421.552 nm)	1.917711	ppm	0.001105	0.06	308076.201397	Y_R 488.368
Th (288.505 nm)	-0.002862 u	ppm	0.006082	> 100.00	7.522070	Y 377.433
Ti (336.122 nm)	-0.000957 u	ppm	0.000060	6.25	439.242000	Y 377.433
Tl (190.794 nm)	0.006528	ppm	0.000473	7.25	2.902640	Y 377.433
U (409.013 nm)	0.020112	ppm	0.002787	13.86	52.772000	Y 377.433
V (292.401 nm)	0.005446	ppm	0.000038	0.71	195.653000	Y 377.433
Zn (206.200 nm)	0.002029	ppm	0.000543	26.76	12.363900	Y 377.433
Zr (343.823 nm)	0.000840	ppm	0.000106	12.67	-124.247000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.074222	20084.729253	0.002147	0.20
Y 377.433	1.093503	607524.718183	0.002459	0.22
Y_R 377.433	1.134390	55228.600000	0.004579	0.40
Y_R 488.368	1.118720	47843.400000	0.002804	0.25
Y_R2 488.368	1.097562	91669.335223	0.000793	0.07
Y_R4	1.106040	42523.900000	0.003255	0.29

Sample Name: CCVH-5690583

Date: 5/11/2019 4:01:34 AM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000151 u	ppm	0.000549	> 100.00	-315.270000	Y 377.433
Al (394.401 nm)	47.818900 o	ppm	0.011773	0.02	600933.000000	Y 377.433
Al H (396.152 nm)	48.130200	ppm	0.021837	0.05	108121.000000	Y_R 377.433
As (188.980 nm)	0.005495	ppm	0.003408	62.01	2.528000	Y 242.219
B (249.678 nm)	0.006019	ppm	0.000576	9.57	28.537800	Y 242.219
Ba (493.408 nm)	0.000874	ppm	0.000096	10.98	1760.070000	Y_R 488.368
Be (234.861 nm)	0.002527	ppm	0.000048	1.92	-162.894000	Y_R 488.368
Bi (223.061 nm)	0.950260	ppm	0.004066	0.43	2087.030000	Y 377.433
Ca (315.887 nm)	0.033171	ppm	0.011892	35.85	-33.431841	Y_R 377.433
Cd (214.439 nm)	0.000880	ppm	0.000155	17.60	46.905200	Y 377.433
Co (228.615 nm)	0.004067	ppm	0.000089	2.18	78.437800	Y 242.219
Cr (205.560 nm)	0.001473	ppm	0.000609	41.33	0.755699	Y 377.433
Cu (324.754 nm)	0.005531	ppm	0.000156	2.81	1185.100000	Y 377.433
Fe (238.204 nm)	48.315772 o	ppm	0.068610	0.14	120792.209862	Y_R 377.433
Fe H (259.940 nm)	48.013400	ppm	0.101025	0.21	68978.600000	Y_R 377.433
K (766.491 nm)	0.028396 u	ppm	0.230361	> 100.00	2211.450000	Y_R2 488.368
Li (670.783 nm)	0.008682	ppm	0.001849	21.29	-2728.070000	Y_R2 488.368
Mg (279.078 nm)	0.017483	ppm	0.001472	8.42	-150.499000	Y 377.433
Mn (257.610 nm)	0.001344	ppm	0.000034	2.56	364.007000	Y 377.433
Mo (202.032 nm)	0.000830	ppm	0.000009	1.04	22.596500	Y 377.433
Na (589.592 nm)	238.233000 o	ppm	0.698620	0.29	207269.000000	Y_R2 488.368
Na H (589.593 nm)	238.345460	ppm	0.386634	0.16	138619.597908	Y_R4
Ni (231.604 nm)	0.002698	ppm	0.000643	23.84	4.181240	Y 377.433
P (213.618 nm)	-0.013580 u	ppm	0.000054	0.40	-24.267500	Y 242.219
Pb (220.353 nm)	0.007310	ppm	0.000951	13.01	48.373300	Y 242.219
S (181.972 nm)	4.764849	ppm	0.001470	0.03	2335.969154	Y 377.433
Sb (206.834 nm)	0.000347 u	ppm	0.002282	> 100.00	6.268930	Y 377.433
Se (196.026 nm)	0.002614	ppm	0.001106	42.30	-3.213410	Y 242.219
Si (288.158 nm)	0.074211	ppm	0.004941	6.66	1004.140000	Y 377.433
Sn (189.925 nm)	-0.002659 u	ppm	0.000329	12.38	4.721160	Y 377.433
Sr (421.552 nm)	0.000942	ppm	0.000127	13.50	261.955455	Y_R 488.368
Th (288.505 nm)	4.856140	ppm	0.006603	0.14	8579.470000	Y 377.433
Ti (336.122 nm)	0.002115	ppm	0.000081	3.83	-241.792000	Y 377.433
Tl (190.794 nm)	-0.001503 u	ppm	0.002054	> 100.00	-8.394630	Y 377.433
U (409.013 nm)	9.666320	ppm	0.018542	0.19	30942.000000	Y 377.433
V (292.401 nm)	-0.001151 u	ppm	0.000276	23.95	-152.054000	Y 377.433
Zn (206.200 nm)	0.002259	ppm	0.000889	39.37	20.125700	Y 377.433
Zr (343.823 nm)	-0.002682 u	ppm	0.000197	7.33	-330.888000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.061863	19853.645561	0.004706	0.44
Y 377.433	1.068896	593853.267730	0.003011	0.28
Y_R 377.433	1.119980	54527.200000	0.001208	0.11
Y_R 488.368	1.114650	47669.200000	0.000155	0.01
Y_R2 488.368	1.087624	90839.325106	0.000684	0.06
Y_R4	1.123470	43193.900000	0.003278	0.29

Sample Name: CCV-5690581

Date: 5/11/2019 4:05:14 AM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.476846	ppm	0.000455	0.10	17241.700000	Y 377.433
Al (394.401 nm)	0.485752	ppm	0.000017	0.00	6250.940000	Y 377.433
Al H (396.152 nm)	0.532221 u	ppm	0.002805	0.53	1222.160000	Y_R 377.433
As (188.980 nm)	0.958959	ppm	0.000387	0.04	1523.840000	Y 242.219
B (249.678 nm)	0.466893	ppm	0.000088	0.02	3587.270000	Y 242.219
Ba (493.408 nm)	0.474982	ppm	0.000301	0.06	51468.300000	Y_R 488.368
Be (234.861 nm)	0.463914	ppm	0.000314	0.07	49213.800000	Y_R 488.368
Bi (223.061 nm)	0.004297	ppm	0.000337	7.84	-0.911028	Y 377.433
Ca (315.887 nm)	5.001955	ppm	0.002689	0.05	4064.008347	Y_R 377.433
Cd (214.439 nm)	0.489086	ppm	0.000174	0.04	18731.900000	Y 377.433
Co (228.615 nm)	0.485101	ppm	0.000389	0.08	12140.100000	Y 242.219
Cr (205.560 nm)	0.481469	ppm	0.000066	0.01	3324.710000	Y 377.433
Cu (324.754 nm)	0.479743	ppm	0.000299	0.06	24057.700000	Y 377.433
Fe (238.204 nm)	2.448596	ppm	0.010362	0.42	6125.591292	Y_R 377.433
Fe H (259.940 nm)	2.464530 u	ppm	0.002189	0.09	3514.110000	Y_R 377.433
K (766.491 nm)	47.914600	ppm	0.075103	0.16	52577.300000	Y_R2 488.368
Li (670.783 nm)	0.993305	ppm	0.001480	0.15	15184.800000	Y_R2 488.368
Mg (279.078 nm)	19.163100	ppm	0.002752	0.01	67181.600000	Y 377.433
Mn (257.610 nm)	0.480516	ppm	0.000230	0.05	138469.000000	Y 377.433
Mo (202.032 nm)	0.484162	ppm	0.001273	0.26	6416.440000	Y 377.433
Na (589.592 nm)	24.773600	ppm	0.043841	0.18	21821.000000	Y_R2 488.368
Na H (589.593 nm)	24.235078 u	ppm	0.114430	0.47	14524.240394	Y_R4
Ni (231.604 nm)	0.486155	ppm	0.000558	0.11	2628.650000	Y 377.433
P (213.618 nm)	0.936095	ppm	0.003843	0.41	1310.980000	Y 242.219
Pb (220.353 nm)	0.972384	ppm	0.000413	0.04	3279.160000	Y 242.219
S (181.972 nm)	0.007279	ppm	0.008010	> 100.00	12.870112	Y 377.433
Sb (206.834 nm)	0.965037	ppm	0.001789	0.19	1797.560000	Y 377.433
Se (196.026 nm)	0.961831	ppm	0.002649	0.28	1546.220000	Y 242.219
Si (288.158 nm)	4.768910	ppm	0.030717	0.64	32364.800000	Y 377.433
Sn (189.925 nm)	0.979674	ppm	0.001843	0.19	1621.330000	Y 377.433
Sr (421.552 nm)	0.477450	ppm	0.000180	0.04	76779.017302	Y_R 488.368
Th (288.505 nm)	0.008802	ppm	0.007842	89.09	-14.499200	Y 377.433
Ti (336.122 nm)	0.481988	ppm	0.000157	0.03	63086.500000	Y 377.433
Tl (190.794 nm)	0.974387	ppm	0.000360	0.04	2379.290000	Y 377.433
U (409.013 nm)	0.005138	ppm	0.000973	18.94	-12.327600	Y 377.433
V (292.401 nm)	0.479957	ppm	0.000427	0.09	25687.900000	Y 377.433
Zn (206.200 nm)	0.488565	ppm	0.000124	0.03	2235.810000	Y 377.433
Zr (343.823 nm)	0.483331	ppm	0.000047	0.01	28185.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.099368	20554.877885	0.000763	0.07
Y 377.433	1.105504	614192.232991	0.001230	0.11
Y_R 377.433	1.137700	55389.600000	0.000945	0.08
Y_R 488.368	1.123900	48064.800000	0.003011	0.27
Y_R2 488.368	1.111258	92813.233443	0.002355	0.21
Y_R4	1.130730	43473.000000	0.006194	0.55

Sample Name: CCB

Date: 5/11/2019 4:08:48 AM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000607 u	ppm	0.000291	47.97	-206.648000	Y 377.433
Al (394.401 nm)	0.003872	ppm	0.000175	4.52	75.776500	Y 377.433
Al H (396.152 nm)	0.115481 Zu	ppm	0.004426	3.83	39.812300 Z	Y_R 377.433
As (188.980 nm)	0.001664	ppm	0.000550	33.07	0.821844	Y 242.219
B (249.678 nm)	0.000927	ppm	0.000637	68.71	18.947900	Y 242.219
Ba (493.408 nm)	-0.001603 u	ppm	0.000215	13.43	1460.370000	Y_R 488.368
Be (234.861 nm)	0.000000 u	ppm	0.000020	> 100.00	-0.781565	Y_R 488.368
Bi (223.061 nm)	0.004374	ppm	0.002630	60.13	-1.266040	Y 377.433
Ca (315.887 nm)	-0.000299 u	ppm	0.001302	> 100.00	-73.486859	Y_R 377.433
Cd (214.439 nm)	-0.000004 u	ppm	0.000059	> 100.00	-6.927170	Y 377.433
Co (228.615 nm)	0.000223	ppm	0.000198	89.20	-17.846700	Y 242.219
Cr (205.560 nm)	0.000377	ppm	0.000180	47.68	-5.509090	Y 377.433
Cu (324.754 nm)	-0.000921 u	ppm	0.000019	2.10	465.384000	Y 377.433
Fe (238.204 nm)	-0.000411 u	ppm	0.000041	10.07	3.143125	Y_R 377.433
Fe H (259.940 nm)	0.027229 u	ppm	0.000275	1.01	11.141700	Y_R 377.433
K (766.491 nm)	-0.411625 u	ppm	0.003777	0.92	1748.650000	Y_R2 488.368
Li (670.783 nm)	0.009762	ppm	0.002060	21.10	-2708.410000	Y_R2 488.368
Mg (279.078 nm)	0.001908	ppm	0.000043	2.23	22.824900	Y 377.433
Mn (257.610 nm)	0.000084	ppm	0.000008	9.68	0.682491	Y 377.433
Mo (202.032 nm)	0.000214	ppm	0.000034	15.80	14.440700	Y 377.433
Na (589.592 nm)	0.075272	ppm	0.007931	10.54	236.352000	Y_R2 488.368
Na H (589.593 nm)	0.260821 u	ppm	0.004279	1.64	629.099628	Y_R4
Ni (231.604 nm)	0.000293	ppm	0.000379	> 100.00	-8.867740	Y 377.433
P (213.618 nm)	-0.006181 u	ppm	0.002564	41.49	-5.726670	Y 242.219
Pb (220.353 nm)	0.000692	ppm	0.000078	11.21	10.355100	Y 242.219
S (181.972 nm)	-0.001025 u	ppm	0.001525	> 100.00	6.974307	Y 377.433
Sb (206.834 nm)	-0.002114 u	ppm	0.002019	95.53	-1.659720	Y 377.433
Se (196.026 nm)	0.000524	ppm	0.000329	62.82	6.421100	Y 242.219
Si (288.158 nm)	-0.000622 u	ppm	0.001444	> 100.00	504.253000	Y 377.433
Sn (189.925 nm)	-0.003730 u	ppm	0.001018	27.30	2.958520	Y 377.433
Sr (421.552 nm)	-0.000116 u	ppm	0.000097	84.08	84.452083	Y_R 488.368
Th (288.505 nm)	-0.004147 u	ppm	0.001899	45.78	12.070600	Y 377.433
Ti (336.122 nm)	0.000634	ppm	0.000081	12.85	-437.316000	Y 377.433
Tl (190.794 nm)	0.001850	ppm	0.001965	> 100.00	4.641730	Y 377.433
U (409.013 nm)	0.005847	ppm	0.004496	76.90	48.682700	Y 377.433
V (292.401 nm)	-0.000295 u	ppm	0.000200	67.83	-111.152000	Y 377.433
Zn (206.200 nm)	-0.000591 u	ppm	0.000533	90.28	0.388273	Y 377.433
Zr (343.823 nm)	0.000717	ppm	0.000034	4.80	-131.427000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.127537	21081.562854	0.001559	0.14
Y 377.433	1.127003	626136.310538	0.000171	0.02
Y_R 377.433	1.145050	55747.700000	0.001311	0.11
Y_R 488.368	1.135030	48541.100000	0.000563	0.05
Y_R2 488.368	1.118920	93453.188143	0.012810	1.14
Y_R4	1.136850	43708.300000	0.006886	0.61

Sample Name: CCVL-5695588

Date: 5/11/2019 4:12:04 AM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.008787	ppm	0.000132	1.51	136.408000	Y 377.433
Al (394.401 nm)	0.100591	ppm	0.000968	0.96	1295.270000	Y 377.433
Al H (396.152 nm)	0.214110 u	ppm	0.000624	0.29	267.215000	Y_R 377.433
As (188.980 nm)	0.015571	ppm	0.000631	4.05	22.940200	Y 242.219
B (249.678 nm)	0.092054	ppm	0.000147	0.16	717.020000	Y 242.219
Ba (493.408 nm)	0.007642	ppm	0.000109	1.43	2430.480000	Y_R 488.368
Be (234.861 nm)	0.000923	ppm	0.000008	0.83	96.230200	Y_R 488.368
Bi (223.061 nm)	0.092166	ppm	0.001413	1.53	191.817000	Y 377.433
Ca (315.887 nm)	0.208900	ppm	0.001887	0.90	99.565846	Y_R 377.433
Cd (214.439 nm)	0.005168	ppm	0.000036	0.70	191.236000	Y 377.433
Co (228.615 nm)	0.010322	ppm	0.000036	0.35	235.383000	Y 242.219
Cr (205.560 nm)	0.010111	ppm	0.000188	1.86	61.771200	Y 377.433
Cu (324.754 nm)	0.013824	ppm	0.000309	2.23	1189.640000	Y 377.433
Fe (238.204 nm)	0.097469	ppm	0.000711	0.73	247.840800	Y_R 377.433
Fe H (259.940 nm)	0.132264 u	ppm	0.002445	1.85	162.102000	Y_R 377.433
K (766.491 nm)	2.573680	ppm	0.110198	4.28	4888.540000	Y_R2 488.368
Li (670.783 nm)	0.031099 Q	ppm	0.000701	2.26	-2320.240000 Q	Y_R2 488.368
Mg (279.078 nm)	0.196696	ppm	0.000776	0.39	704.761000	Y 377.433
Mn (257.610 nm)	0.010271	ppm	0.000021	0.21	2936.850000	Y 377.433
Mo (202.032 nm)	0.018884	ppm	0.000146	0.77	261.428000	Y 377.433
Na (589.592 nm)	1.113560	ppm	0.020455	1.84	1141.200000	Y_R2 488.368
Na H (589.593 nm)	1.057208 u	ppm	0.027211	2.57	1090.673906	Y_R4
Ni (231.604 nm)	0.041251	ppm	0.000549	1.33	213.397000	Y 377.433
P (213.618 nm)	2.681750	ppm	0.003606	0.13	4142.320000	Y 242.219
Pb (220.353 nm)	0.009830	ppm	0.000267	2.71	41.126300	Y 242.219
S (181.972 nm)	0.089410	ppm	0.001710	1.91	51.207067	Y 377.433
Sb (206.834 nm)	0.017253	ppm	0.002872	16.65	34.265900	Y 377.433
Se (196.026 nm)	0.021250	ppm	0.000926	4.36	39.608400	Y 242.219
Si (288.158 nm)	0.497602	ppm	0.009283	1.87	3832.390000	Y 377.433
Sn (189.925 nm)	0.096399	ppm	0.001896	1.97	167.739000	Y 377.433
Sr (421.552 nm)	0.008731	ppm	0.000014	0.16	1505.248772	Y_R 488.368
Th (288.505 nm)	0.012167	ppm	0.002344	19.27	40.114200	Y 377.433
Ti (336.122 nm)	0.010328	ppm	0.000151	1.46	842.335000	Y 377.433
Tl (190.794 nm)	0.017401	ppm	0.000845	4.86	42.547100	Y 377.433
U (409.013 nm)	0.056925	ppm	0.006934	12.18	210.739000	Y 377.433
V (292.401 nm)	0.009309	ppm	0.000160	1.72	403.332000	Y 377.433
Zn (206.200 nm)	0.021029	ppm	0.000238	1.13	99.187800	Y 377.433
Zr (343.823 nm)	0.010389 Q	ppm	0.000027	0.26	436.042000 Q	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.147923	21462.719298	0.000025	0.00
Y 377.433	1.147195	637354.700703	0.001333	0.12
Y_R 377.433	1.167870	56858.400000	0.001819	0.16
Y_R 488.368	1.153270	49320.900000	0.004023	0.35
Y_R2 488.368	1.129758	94358.364721	0.003634	0.32
Y_R4	1.130980	43482.800000	0.001190	0.11

Sample Name: 280-123390-A-9-A

Date: 5/11/2019 4:15:32 AM

Rack:Tube: 2:88

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000357	ppm	0.000209	58.45	-173.714000	Y 377.433
Al (394.401 nm)	0.045330	ppm	0.000974	2.15	1063.880000	Y 377.433
Al H (396.152 nm)	-0.176899 u	ppm	0.003849	2.18	80.745200	Y_R 377.433
As (188.980 nm)	0.003412	ppm	0.000712	20.87	3.595490	Y 242.219
B (249.678 nm)	0.079042	ppm	0.001080	1.37	617.357000	Y 242.219
Ba (493.408 nm)	0.126976	ppm	0.000292	0.23	14951.600000	Y_R 488.368
Be (234.861 nm)	-0.000090 u	ppm	0.000062	68.55	-10.967900	Y_R 488.368
Bi (223.061 nm)	0.000343 u	ppm	0.001607	> 100.00	-10.103200	Y 377.433
Ca (315.887 nm)	269.228505	ppm	0.055991	0.02	222605.402212	Y_R 377.433
Cd (214.439 nm)	0.000278	ppm	0.000036	12.98	3.875220	Y 377.433
Co (228.615 nm)	-0.000335 u	ppm	0.000171	50.90	-31.743900	Y 242.219
Cr (205.560 nm)	0.003615	ppm	0.000429	11.86	16.927600	Y 377.433
Cu (324.754 nm)	-0.001810 u	ppm	0.000515	28.46	265.255000	Y 377.433
Fe (238.204 nm)	0.069392	ppm	0.000205	0.30	177.648977	Y_R 377.433
Fe H (259.940 nm)	0.083784 u	ppm	0.001583	1.89	92.424600	Y_R 377.433
K (766.491 nm)	6.152240	ppm	0.037459	0.61	8652.390000	Y_R2 488.368
Li (670.783 nm)	0.035234	ppm	0.000216	0.61	-2245.020000	Y_R2 488.368
Mg (279.078 nm)	49.149300	ppm	0.042109	0.09	172289.000000	Y 377.433
Mn (257.610 nm)	0.014865	ppm	0.000010	0.07	4260.730000	Y 377.433
Mo (202.032 nm)	0.000377	ppm	0.000327	86.93	16.595400	Y 377.433
Na (589.592 nm)	96.947500 o	ppm	0.269139	0.28	84479.100000	Y_R2 488.368
Na H (589.593 nm)	96.663113	ppm	0.162586	0.17	56502.507885	Y_R4
Ni (231.604 nm)	-0.001976 u	ppm	0.000277	14.00	-21.182000	Y 377.433
P (213.618 nm)	0.005865	ppm	0.002061	35.14	12.311000	Y 242.219
Pb (220.353 nm)	-0.000797 u	ppm	0.001501	> 100.00	5.331030	Y 242.219
S (181.972 nm)	50.100670	ppm	0.102440	0.20	24504.422252	Y 377.433
Sb (206.834 nm)	-0.004278 u	ppm	0.001374	32.11	-5.670380	Y 377.433
Se (196.026 nm)	0.001888 u	ppm	0.002931	> 100.00	8.610160	Y 242.219
Si (288.158 nm)	14.591300	ppm	0.087003	0.60	97978.200000	Y 377.433
Sn (189.925 nm)	-0.004880 u	ppm	0.000924	18.92	1.065410	Y 377.433
Sr (421.552 nm)	1.800282	ppm	0.002735	0.15	289217.835254	Y_R 488.368
Th (288.505 nm)	-0.001229 u	ppm	0.003322	> 100.00	10.147500	Y 377.433
Ti (336.122 nm)	0.000647	ppm	0.000035	5.46	480.848000	Y 377.433
Tl (190.794 nm)	0.005671	ppm	0.000282	4.98	2.861390	Y 377.433
U (409.013 nm)	0.018523	ppm	0.004950	26.72	54.220700	Y 377.433
V (292.401 nm)	0.005647	ppm	0.000069	1.22	209.495000	Y 377.433
Zn (206.200 nm)	0.003987	ppm	0.000374	9.38	21.312800	Y 377.433
Zr (343.823 nm)	0.000620	ppm	0.000251	40.54	-137.169000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.051630	19662.324932	0.001242	0.12
Y 377.433	1.065638	592043.365156	0.000244	0.02
Y_R 377.433	1.100110	53559.500000	0.001076	0.10
Y_R 488.368	1.085890	46439.500000	0.000240	0.02
Y_R2 488.368	1.069977	89365.375072	0.000837	0.08
Y_R4	1.083590	41660.600000	0.000121	0.01

Sample Name: 280-123390-A-10-A

Date: 5/11/2019 4:19:04 AM

Rack:Tube: 2:89

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000419	ppm	0.000450	> 100.00	-171.224000	Y 377.433
Al (394.401 nm)	0.036396	ppm	0.002850	7.83	948.081000	Y 377.433
Al H (396.152 nm)	-0.173474 u	ppm	0.002621	1.51	76.734000	Y_R 377.433
As (188.980 nm)	0.001998	ppm	0.000040	1.98	1.347260	Y 242.219
B (249.678 nm)	0.109447	ppm	0.000235	0.21	850.292000	Y 242.219
Ba (493.408 nm)	0.130372	ppm	0.000094	0.07	15307.900000	Y_R 488.368
Be (234.861 nm)	-0.000040 u	ppm	0.000013	32.57	-5.692980	Y_R 488.368
Bi (223.061 nm)	-0.000099 u	ppm	0.000416	> 100.00	-11.075700	Y 377.433
Ca (315.887 nm)	279.469249	ppm	0.175284	0.06	231075.508070	Y_R 377.433
Cd (214.439 nm)	0.000294	ppm	0.000031	10.65	4.521800	Y 377.433
Co (228.615 nm)	-0.000179 u	ppm	0.000108	60.20	-27.855600	Y 242.219
Cr (205.560 nm)	0.021846	ppm	0.000165	0.75	143.267000	Y 377.433
Cu (324.754 nm)	-0.001696 u	ppm	0.000171	10.06	263.442000	Y 377.433
Fe (238.204 nm)	0.071016	ppm	0.000084	0.12	181.707814	Y_R 377.433
Fe H (259.940 nm)	0.088247 u	ppm	0.000046	0.05	98.839900	Y_R 377.433
K (766.491 nm)	6.295830	ppm	0.110589	1.76	8803.420000	Y_R2 488.368
Li (670.783 nm)	0.046815	ppm	0.002417	5.16	-2034.340000	Y_R2 488.368
Mg (279.078 nm)	51.957200	ppm	0.017371	0.03	182131.000000	Y 377.433
Mn (257.610 nm)	0.144954	ppm	0.000004	0.00	41754.700000	Y 377.433
Mo (202.032 nm)	0.000117 u	ppm	0.000514	> 100.00	13.164700	Y 377.433
Na (589.592 nm)	102.596000 o	ppm	0.029542	0.03	89390.300000	Y_R2 488.368
Na H (589.593 nm)	102.225508	ppm	0.658021	0.64	59726.393988	Y_R4
Ni (231.604 nm)	0.000245	ppm	0.000133	54.22	-9.129770	Y 377.433
P (213.618 nm)	-0.002551 u	ppm	0.001498	58.75	-0.662380	Y 242.219
Pb (220.353 nm)	-0.002186 u	ppm	0.000484	22.12	0.639174	Y 242.219
S (181.972 nm)	56.677341	ppm	0.182919	0.32	27719.262832	Y 377.433
Sb (206.834 nm)	-0.005888 u	ppm	0.002558	43.44	-8.523620	Y 377.433
Se (196.026 nm)	0.006252	ppm	0.004099	65.57	15.787300	Y 242.219
Si (288.158 nm)	17.284400	ppm	0.021055	0.12	115968.000000	Y 377.433
Sn (189.925 nm)	-0.003396 u	ppm	0.000609	17.95	3.508670	Y 377.433
Sr (421.552 nm)	1.783287	ppm	0.002540	0.14	286488.486138	Y_R 488.368
Th (288.505 nm)	-0.004060 u	ppm	0.002245	55.29	7.589900	Y 377.433
Ti (336.122 nm)	-0.000106 u	ppm	0.000046	43.03	416.335000	Y 377.433
Tl (190.794 nm)	0.006693	ppm	0.000425	6.35	4.939120	Y 377.433
U (409.013 nm)	0.026865	ppm	0.000509	1.89	79.527600	Y 377.433
V (292.401 nm)	0.005181	ppm	0.000062	1.20	176.526000	Y 377.433
Zn (206.200 nm)	0.003627	ppm	0.000645	17.79	19.672000	Y 377.433
Zr (343.823 nm)	0.000695	ppm	0.000039	5.64	-132.750000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.041230	19467.866157	0.007232	0.69
Y 377.433	1.055488	586404.336227	0.007846	0.74
Y_R 377.433	1.094390	53281.300000	0.002043	0.19
Y_R 488.368	1.080060	46190.200000	0.001388	0.13
Y_R2 488.368	1.075824	89853.769289	0.000438	0.04
Y_R4	1.091470	41963.800000	0.002741	0.25

Sample Name: 280-123390-A-11-A

Date: 5/11/2019 4:22:36 AM

Rack:Tube: 2:90

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000555	ppm	0.000210	37.90	-166.906000	Y 377.433
Al (394.401 nm)	0.078030	ppm	0.003125	4.00	1437.640000	Y 377.433
Al H (396.152 nm)	-0.097485 u	ppm	0.007445	7.64	198.543000	Y_R 377.433
As (188.980 nm)	0.002757	ppm	0.001735	62.91	2.549340	Y 242.219
B (249.678 nm)	0.112154	ppm	0.000872	0.78	870.979000	Y 242.219
Ba (493.408 nm)	0.120753	ppm	0.000311	0.26	14298.800000	Y_R 488.368
Be (234.861 nm)	-0.000077 u	ppm	0.000001	0.83	-10.393400	Y_R 488.368
Bi (223.061 nm)	0.001394	ppm	0.000564	40.42	-7.777440	Y 377.433
Ca (315.887 nm)	234.839568	ppm	0.147234	0.06	194162.356749	Y_R 377.433
Cd (214.439 nm)	0.000344	ppm	0.000024	6.99	6.465730	Y 377.433
Co (228.615 nm)	0.000071 u	ppm	0.000280	> 100.00	-21.562200	Y 242.219
Cr (205.560 nm)	0.025549	ppm	0.000843	3.30	168.929000	Y 377.433
Cu (324.754 nm)	-0.001751 u	ppm	0.000220	12.58	286.019000	Y 377.433
Fe (238.204 nm)	0.155626	ppm	0.004421	2.84	393.230923	Y_R 377.433
Fe H (259.940 nm)	0.173352 u	ppm	0.006617	3.82	221.155000	Y_R 377.433
K (766.491 nm)	6.110840	ppm	0.159166	2.60	8608.850000	Y_R2 488.368
Li (670.783 nm)	0.035353	ppm	0.001750	4.95	-2242.860000	Y_R2 488.368
Mg (279.078 nm)	44.364700	ppm	0.016072	0.04	155518.000000	Y 377.433
Mn (257.610 nm)	0.216388	ppm	0.000191	0.09	62343.000000	Y 377.433
Mo (202.032 nm)	-0.000157 u	ppm	0.000048	30.63	9.533520	Y 377.433
Na (589.592 nm)	99.920000 o	ppm	0.168662	0.17	87061.600000	Y_R2 488.368
Na H (589.593 nm)	99.324467	ppm	0.034254	0.03	58044.991245	Y_R4
Ni (231.604 nm)	0.000175 u	ppm	0.001277	> 100.00	-9.509130	Y 377.433
P (213.618 nm)	0.002234	ppm	0.001044	46.70	6.745720	Y 242.219
Pb (220.353 nm)	-0.000159 u	ppm	0.000784	> 100.00	7.504490	Y 242.219
S (181.972 nm)	48.193775	ppm	0.089211	0.19	23571.426477	Y 377.433
Sb (206.834 nm)	-0.004703 u	ppm	0.000479	10.18	-6.275090	Y 377.433
Se (196.026 nm)	0.005177	ppm	0.002874	55.50	14.146500	Y 242.219
Si (288.158 nm)	17.109300	ppm	0.049110	0.29	114798.000000	Y 377.433
Sn (189.925 nm)	-0.005945 u	ppm	0.000020	0.34	-0.686786	Y 377.433
Sr (421.552 nm)	1.639210	ppm	0.000496	0.03	263350.610432	Y_R 488.368
Th (288.505 nm)	-0.007679 u	ppm	0.008299	> 100.00	3.791110	Y 377.433
Ti (336.122 nm)	0.001520	ppm	0.000068	4.47	475.507000	Y 377.433
Tl (190.794 nm)	0.004663	ppm	0.000818	17.54	1.849400	Y 377.433
U (409.013 nm)	0.039673	ppm	0.000893	2.25	126.446000	Y 377.433
V (292.401 nm)	0.005981	ppm	0.000293	4.90	217.274000	Y 377.433
Zn (206.200 nm)	0.003640	ppm	0.000462	12.69	19.740100	Y 377.433
Zr (343.823 nm)	0.000763	ppm	0.000254	33.28	-128.736000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.030515	19267.533621	0.002595	0.25
Y 377.433	1.042211	579028.103095	0.001500	0.14
Y_R 377.433	1.074670	52321.200000	0.000692	0.06
Y_R 488.368	1.060690	45361.600000	0.000732	0.07
Y_R2 488.368	1.066832	89102.714389	0.007108	0.67
Y_R4	1.085750	41743.800000	0.001369	0.13

Sample Name: 280-123390-A-12-A

Date: 5/11/2019 4:26:07 AM

Rack:Tube: 4:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000460	ppm	0.000120	26.22	-169.977000	Y 377.433
Al (394.401 nm)	0.021066	ppm	0.000421	2.00	667.758000	Y 377.433
Al H (396.152 nm)	-0.120618 u	ppm	0.010718	8.89	83.979800	Y_R 377.433
As (188.980 nm)	0.003190	ppm	0.000390	12.24	3.246350	Y 242.219
B (249.678 nm)	0.052534	ppm	0.000388	0.74	414.289000	Y 242.219
Ba (493.408 nm)	0.054317	ppm	0.000456	0.84	7327.840000	Y_R 488.368
Be (234.861 nm)	-0.000034 u	ppm	0.000074	> 100.00	-4.783520	Y_R 488.368
Bi (223.061 nm)	0.001508 u	ppm	0.002203	> 100.00	-7.548310	Y 377.433
Ca (315.887 nm)	136.052495	ppm	0.025655	0.02	112455.651930	Y_R 377.433
Cd (214.439 nm)	0.000272	ppm	0.000107	39.50	3.657200	Y 377.433
Co (228.615 nm)	-0.000376 u	ppm	0.000020	5.42	-32.800200	Y 242.219
Cr (205.560 nm)	0.009439	ppm	0.000142	1.51	57.287200	Y 377.433
Cu (324.754 nm)	-0.001909 u	ppm	0.000446	23.36	335.898000	Y 377.433
Fe (238.204 nm)	0.046019	ppm	0.000092	0.20	119.216994	Y_R 377.433
Fe H (259.940 nm)	0.070442 u	ppm	0.000538	0.76	73.249700	Y_R 377.433
K (766.491 nm)	5.343510	ppm	0.114200	2.14	7801.790000	Y_R2 488.368
Li (670.783 nm)	0.051355	ppm	0.002644	5.15	-1951.750000	Y_R2 488.368
Mg (279.078 nm)	23.504000	ppm	0.032899	0.14	82399.400000	Y 377.433
Mn (257.610 nm)	0.020692	ppm	0.000047	0.23	5940.310000	Y 377.433
Mo (202.032 nm)	-0.000119 u	ppm	0.000075	63.47	10.043800	Y 377.433
Na (589.592 nm)	51.769400	ppm	0.107468	0.21	45187.900000	Y_R2 488.368
Na H (589.593 nm)	50.387572	ppm	0.224969	0.45	29681.857294	Y_R4
Ni (231.604 nm)	-0.000709 u	ppm	0.000081	11.39	-14.306200	Y 377.433
P (213.618 nm)	0.001225 u	ppm	0.003554	> 100.00	5.556500	Y 242.219
Pb (220.353 nm)	-0.001014 u	ppm	0.000105	10.40	4.613250	Y 242.219
S (181.972 nm)	19.837836	ppm	0.016198	0.08	9708.808683	Y 377.433
Sb (206.834 nm)	-0.001080 u	ppm	0.001244	> 100.00	0.335700	Y 377.433
Se (196.026 nm)	0.000647 u	ppm	0.002664	> 100.00	6.636770	Y 242.219
Si (288.158 nm)	18.746500	ppm	0.057733	0.31	125735.000000	Y 377.433
Sn (189.925 nm)	-0.004081 u	ppm	0.000338	8.27	2.381340	Y 377.433
Sr (421.552 nm)	1.437268	ppm	0.004779	0.33	230919.784488	Y_R 488.368
Th (288.505 nm)	-0.011091 u	ppm	0.004484	40.43	-3.660220	Y 377.433
Ti (336.122 nm)	0.000532	ppm	0.000028	5.34	11.496200	Y 377.433
Tl (190.794 nm)	0.002447	ppm	0.000174	7.09	0.489621	Y 377.433
U (409.013 nm)	0.022658	ppm	0.005727	25.28	84.764700	Y 377.433
V (292.401 nm)	0.005563	ppm	0.000137	2.45	201.481000	Y 377.433
Zn (206.200 nm)	0.006298	ppm	0.000232	3.69	31.871900	Y 377.433
Zr (343.823 nm)	0.000822	ppm	0.000419	51.00	-125.283000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.097928	20527.949485	0.006108	0.56
Y 377.433	1.107989	615572.713914	0.006923	0.62
Y_R 377.433	1.141490	55574.400000	0.001522	0.13
Y_R 488.368	1.126000	48154.900000	0.003867	0.34
Y_R2 488.368	1.107626	92509.903814	0.010162	0.92
Y_R4	1.103940	42442.900000	0.006469	0.59

Sample Name: 280-123390-A-13-A

Date: 5/11/2019 4:29:39 AM

Rack:Tube: 4:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000707	ppm	0.000541	76.58	-161.126000	Y 377.433
Al (394.401 nm)	0.164433	ppm	0.000137	0.08	2587.110000	Y 377.433
Al H (396.152 nm)	-0.066048 u	ppm	0.000268	0.41	363.765000	Y_R 377.433
As (188.980 nm)	0.004177	ppm	0.000133	3.18	4.798540	Y 242.219
B (249.678 nm)	0.148748	ppm	0.000225	0.15	1151.230000	Y 242.219
Ba (493.408 nm)	0.138352	ppm	0.000324	0.23	16145.400000	Y_R 488.368
Be (234.861 nm)	-0.000046 u	ppm	0.000010	21.02	-8.421970	Y_R 488.368
Bi (223.061 nm)	0.000666 u	ppm	0.002134	> 100.00	-9.351820	Y 377.433
Ca (315.887 nm)	291.234640	ppm	0.132288	0.05	240806.689133	Y_R 377.433
Cd (214.439 nm)	0.000247	ppm	0.000053	21.68	2.787330	Y 377.433
Co (228.615 nm)	0.000081	ppm	0.000065	79.60	-21.193500	Y 242.219
Cr (205.560 nm)	0.058962	ppm	0.000372	0.63	400.471000	Y 377.433
Cu (324.754 nm)	-0.000694 u	ppm	0.000200	28.87	305.394000	Y 377.433
Fe (238.204 nm)	0.303017	ppm	0.000979	0.32	761.705292	Y_R 377.433
Fe H (259.940 nm)	0.316053 u	ppm	0.001167	0.37	426.251000	Y_R 377.433
K (766.491 nm)	6.604580	ppm	0.000408	0.01	9128.150000	Y_R2 488.368
Li (670.783 nm)	0.042430	ppm	0.001331	3.14	-2114.100000	Y_R2 488.368
Mg (279.078 nm)	53.856700	ppm	0.087657	0.16	188788.000000	Y 377.433
Mn (257.610 nm)	0.224001	ppm	0.000110	0.05	64537.300000	Y 377.433
Mo (202.032 nm)	0.000470	ppm	0.000129	27.49	17.827400	Y 377.433
Na (589.592 nm)	109.367000 o	ppm	0.274532	0.25	95278.300000	Y_R2 488.368
Na H (589.593 nm)	108.904844	ppm	0.386641	0.36	63597.643070	Y_R4
Ni (231.604 nm)	0.001743	ppm	0.000079	4.52	-1.000270	Y 377.433
P (213.618 nm)	0.007584	ppm	0.002803	36.96	14.776900	Y 242.219
Pb (220.353 nm)	0.000312 u	ppm	0.000535	> 100.00	8.953360	Y 242.219
S (181.972 nm)	74.057819	ppm	0.107510	0.15	36213.565463	Y 377.433
Sb (206.834 nm)	-0.005939 u	ppm	0.002557	43.06	-8.308560	Y 377.433
Se (196.026 nm)	0.007418	ppm	0.000600	8.08	17.706400	Y 242.219
Si (288.158 nm)	17.048600	ppm	0.052351	0.31	114393.000000	Y 377.433
Sn (189.925 nm)	-0.004415 u	ppm	0.000795	18.01	1.830800	Y 377.433
Sr (421.552 nm)	1.895824	ppm	0.000884	0.05	304561.315684	Y_R 488.368
Th (288.505 nm)	-0.007783 u	ppm	0.003671	47.17	2.176190	Y 377.433
Ti (336.122 nm)	0.004400	ppm	0.000017	0.38	1047.800000	Y 377.433
Tl (190.794 nm)	0.006322	ppm	0.000173	2.74	3.543870	Y 377.433
U (409.013 nm)	0.035561	ppm	0.009087	25.55	106.061000	Y 377.433
V (292.401 nm)	0.006167	ppm	0.000043	0.69	215.244000	Y 377.433
Zn (206.200 nm)	0.004318	ppm	0.000564	13.05	22.861600	Y 377.433
Zr (343.823 nm)	0.000680	ppm	0.000058	8.54	-133.648000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.074128	20082.975242	0.004378	0.41
Y 377.433	1.092375	606898.093047	0.004670	0.43
Y_R 377.433	1.132480	55135.700000	0.001112	0.10
Y_R 488.368	1.115860	47721.100000	0.002581	0.23
Y_R2 488.368	1.078311	90061.443540	0.009268	0.86
Y_R4	1.099900	42287.900000	0.001372	0.12

Sample Name: 280-123390-A-14-A

Date: 5/11/2019 4:33:12 AM

Rack:Tube: 4:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001025	ppm	0.000667	65.02	-149.600000	Y 377.433
Al (394.401 nm)	0.094591	ppm	0.001310	1.38	1724.440000	Y 377.433
Al H (396.152 nm)	-0.138831 u	ppm	0.002505	1.80	227.991000	Y_R 377.433
As (188.980 nm)	0.002751	ppm	0.001548	56.30	2.535830	Y 242.219
B (249.678 nm)	0.126098	ppm	0.000257	0.20	977.732000	Y 242.219
Ba (493.408 nm)	0.141324	ppm	0.000334	0.24	16457.300000	Y_R 488.368
Be (234.861 nm)	-0.000063 u	ppm	0.000004	6.61	-9.891440	Y_R 488.368
Bi (223.061 nm)	0.000631 u	ppm	0.001378	> 100.00	-9.434470	Y 377.433
Ca (315.887 nm)	289.191533	ppm	0.223491	0.08	239116.811572	Y_R 377.433
Cd (214.439 nm)	0.000288	ppm	0.000000	0.13	4.367480	Y 377.433
Co (228.615 nm)	-0.000121 u	ppm	0.000074	61.03	-26.329600	Y 242.219
Cr (205.560 nm)	0.052911	ppm	0.000227	0.43	358.539000	Y 377.433
Cu (324.754 nm)	-0.001995 u	ppm	0.000175	8.78	245.013000	Y 377.433
Fe (238.204 nm)	0.267222	ppm	0.001881	0.70	672.218884	Y_R 377.433
Fe H (259.940 nm)	0.275483 u	ppm	0.007098	2.58	367.941000	Y_R 377.433
K (766.491 nm)	6.776060	ppm	0.034631	0.51	9308.520000	Y_R2 488.368
Li (670.783 nm)	0.042907	ppm	0.001502	3.50	-2105.430000	Y_R2 488.368
Mg (279.078 nm)	53.158100	ppm	0.054018	0.10	186339.000000	Y 377.433
Mn (257.610 nm)	0.102282	ppm	0.000070	0.07	29455.800000	Y 377.433
Mo (202.032 nm)	0.000100	ppm	0.000033	32.64	12.938900	Y 377.433
Na (589.592 nm)	109.000000 o	ppm	0.115726	0.11	94959.500000	Y_R2 488.368
Na H (589.593 nm)	108.653827	ppm	0.183778	0.17	63452.156866	Y_R4
Ni (231.604 nm)	0.001614	ppm	0.001173	72.70	-1.699170	Y 377.433
P (213.618 nm)	0.009449	ppm	0.002125	22.49	17.944000	Y 242.219
Pb (220.353 nm)	-0.000311 u	ppm	0.001335	> 100.00	6.906590	Y 242.219
S (181.972 nm)	69.358392	ppm	0.078703	0.11	33916.520403	Y 377.433
Sb (206.834 nm)	-0.006444 u	ppm	0.001146	17.79	-9.297490	Y 377.433
Se (196.026 nm)	0.005122	ppm	0.004261	83.18	13.863200	Y 242.219
Si (288.158 nm)	16.920300	ppm	0.074384	0.44	113536.000000	Y 377.433
Sn (189.925 nm)	-0.001481 u	ppm	0.001024	69.14	6.660000	Y 377.433
Sr (421.552 nm)	1.962334	ppm	0.002759	0.14	315242.426859	Y_R 488.368
Th (288.505 nm)	0.000891	ppm	0.001223	> 100.00	15.102700	Y 377.433
Ti (336.122 nm)	0.002509	ppm	0.000160	6.38	789.946000	Y 377.433
Tl (190.794 nm)	0.006432	ppm	0.001064	16.54	3.928070	Y 377.433
U (409.013 nm)	0.028755	ppm	0.005502	19.13	84.655500	Y 377.433
V (292.401 nm)	0.006003	ppm	0.000301	5.01	209.950000	Y 377.433
Zn (206.200 nm)	0.005123	ppm	0.000843	16.46	26.532600	Y 377.433
Zr (343.823 nm)	0.000604	ppm	0.000045	7.39	-138.091000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.054181	19710.013191	0.006770	0.64
Y 377.433	1.072015	595586.545680	0.007584	0.71
Y_R 377.433	1.110480	54064.500000	0.004400	0.40
Y_R 488.368	1.095840	46864.800000	0.002996	0.27
Y_R2 488.368	1.087651	90841.512608	0.000483	0.04
Y_R4	1.110970	42713.400000	0.000296	0.03

Sample Name: MB 280-457667/1-A

Date: 5/11/2019 4:36:47 AM

Rack:Tube: 4:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000865 u	ppm	0.000177	20.49	-215.681000	Y 377.433
Al (394.401 nm)	0.007686	ppm	0.001489	19.37	120.981000	Y 377.433
Al H (396.152 nm)	0.119126 u	ppm	0.006067	5.09	47.989500	Y_R 377.433
As (188.980 nm)	0.001935	ppm	0.001612	83.30	1.252730	Y 242.219
B (249.678 nm)	-0.000497 u	ppm	0.001162	> 100.00	8.024630	Y 242.219
Ba (493.408 nm)	-0.001640 u	ppm	0.000019	1.17	1456.480000	Y_R 488.368
Be (234.861 nm)	-0.000044 u	ppm	0.000002	4.84	-5.674930	Y_R 488.368
Bi (223.061 nm)	0.001353	ppm	0.001639	> 100.00	-7.905140	Y 377.433
Ca (315.887 nm)	0.083620	ppm	0.002111	2.52	-4.077178	Y_R 377.433
Cd (214.439 nm)	-0.000011 u	ppm	0.000086	> 100.00	-7.180590	Y 377.433
Co (228.615 nm)	0.000239	ppm	0.000061	25.62	-17.425700	Y 242.219
Cr (205.560 nm)	0.000760	ppm	0.000031	4.06	-2.856180	Y 377.433
Cu (324.754 nm)	0.000165	ppm	0.000017	10.25	519.976000	Y 377.433
Fe (238.204 nm)	0.021327	ppm	0.001503	7.05	57.487943	Y_R 377.433
Fe H (259.940 nm)	0.053199 u	ppm	0.001932	3.63	48.467600	Y_R 377.433
K (766.491 nm)	-0.467715 u	ppm	0.098012	20.96	1689.660000	Y_R2 488.368
Li (670.783 nm)	0.011952	ppm	0.003121	26.11	-2668.580000	Y_R2 488.368
Mg (279.078 nm)	0.007056	ppm	0.000291	4.13	41.102100	Y 377.433
Mn (257.610 nm)	0.000290	ppm	0.000029	9.89	60.026300	Y 377.433
Mo (202.032 nm)	0.000470	ppm	0.000310	65.94	17.833800	Y 377.433
Na (589.592 nm)	0.156443	ppm	0.004650	2.97	306.861000	Y_R2 488.368
Na H (589.593 nm)	0.215364 u	ppm	0.017328	8.05	602.753101	Y_R4
Ni (231.604 nm)	0.000892	ppm	0.000095	10.62	-5.616390	Y 377.433
P (213.618 nm)	0.003982	ppm	0.000847	21.28	9.728120	Y 242.219
Pb (220.353 nm)	0.000985	ppm	0.000783	79.50	11.301000	Y 242.219
S (181.972 nm)	0.012386	ppm	0.002589	20.90	13.529886	Y 377.433
Sb (206.834 nm)	-0.001497 u	ppm	0.002088	> 100.00	-0.512468	Y 377.433
Se (196.026 nm)	0.003948	ppm	0.000030	0.76	11.900600	Y 242.219
Si (288.158 nm)	0.027934	ppm	0.000810	2.90	695.005000	Y 377.433
Sn (189.925 nm)	0.005727	ppm	0.000356	6.21	18.521300	Y 377.433
Sr (421.552 nm)	-0.000084 u	ppm	0.000024	28.82	89.469659	Y_R 488.368
Th (288.505 nm)	-0.004396 u	ppm	0.001555	35.37	11.613900	Y 377.433
Ti (336.122 nm)	0.001019	ppm	0.000065	6.34	-386.436000	Y 377.433
Tl (190.794 nm)	0.000644	ppm	0.000043	6.61	1.686580	Y 377.433
U (409.013 nm)	-0.005088 u	ppm	0.002596	51.03	13.741600	Y 377.433
V (292.401 nm)	-0.000408 u	ppm	0.000018	4.32	-116.465000	Y 377.433
Zn (206.200 nm)	0.002410	ppm	0.000613	25.45	14.101000	Y 377.433
Zr (343.823 nm)	0.000750	ppm	0.000185	24.64	-129.511000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.146878	21443.180935	0.004683	0.41
Y 377.433	1.148947	638327.807329	0.003593	0.31
Y_R 377.433	1.174220	57168.000000	0.002678	0.23
Y_R 488.368	1.164370	49795.800000	0.010942	0.94
Y_R2 488.368	1.148402	95915.502232	0.001327	0.12
Y_R4	1.136950	43712.300000	0.005289	0.47

Sample Name: LCS 280-457667/2-A

Date: 5/11/2019 4:40:02 AM

Rack:Tube: 4:5

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.046617	ppm	0.000049	0.10	1226.760000	Y 377.433
Al (394.401 nm)	8.994070 o	ppm	0.009582	0.11	113301.000000	Y 377.433
Al H (396.152 nm)	9.171780	ppm	0.029086	0.32	20877.200000	Y_R 377.433
As (188.980 nm)	1.816830	ppm	0.000316	0.02	2888.030000	Y 242.219
B (249.678 nm)	0.863426	ppm	0.000235	0.03	6621.020000	Y 242.219
Ba (493.408 nm)	1.797910	ppm	0.003641	0.20	190283.000000	Y_R 488.368
Be (234.861 nm)	0.887069	ppm	0.006033	0.68	94064.100000	Y_R 488.368
Bi (223.061 nm)	1.815310	ppm	0.004564	0.25	3982.780000	Y 377.433
Ca (315.887 nm)	46.743826	ppm	0.070118	0.15	38590.917266	Y_R 377.433
Cd (214.439 nm)	0.899684	ppm	0.001580	0.18	34465.300000	Y 377.433
Co (228.615 nm)	0.880794	ppm	0.000697	0.08	22063.700000	Y 242.219
Cr (205.560 nm)	0.897231	ppm	0.002139	0.24	6202.510000	Y 377.433
Cu (324.754 nm)	0.872097	ppm	0.003270	0.37	43354.800000	Y 377.433
Fe (238.204 nm)	9.256671 o	ppm	0.016531	0.18	23145.582732	Y_R 377.433
Fe H (259.940 nm)	9.224160	ppm	0.031397	0.34	13229.300000	Y_R 377.433
K (766.491 nm)	46.065000	ppm	0.114712	0.25	50631.900000	Y_R2 488.368
Li (670.783 nm)	0.932379	ppm	0.001227	0.13	14076.400000	Y_R2 488.368
Mg (279.078 nm)	44.679600	ppm	0.001370	0.00	156579.000000	Y 377.433
Mn (257.610 nm)	0.901660	ppm	0.000345	0.04	259850.000000	Y 377.433
Mo (202.032 nm)	0.907880	ppm	0.000334	0.04	12021.700000	Y 377.433
Na (589.592 nm)	46.951500	ppm	0.049629	0.11	41417.800000	Y_R2 488.368
Na H (589.593 nm)	43.153194 u	ppm	0.127042	0.29	25488.913759	Y_R4
Ni (231.604 nm)	0.876966	ppm	0.000896	0.10	4750.220000	Y 377.433
P (213.618 nm)	17.397600	ppm	0.004343	0.02	26626.600000	Y 242.219
Pb (220.353 nm)	0.903672	ppm	0.000413	0.05	3048.470000	Y 242.219
S (181.972 nm)	8.610152	ppm	0.014355	0.17	4220.423166	Y 377.433
Sb (206.834 nm)	0.902275	ppm	0.000568	0.06	1678.910000	Y 377.433
Se (196.026 nm)	1.791710	ppm	0.003307	0.18	2874.260000	Y 242.219
Si (288.158 nm)	0.669405	ppm	0.006831	1.02	4980.030000	Y 377.433
Sn (189.925 nm)	1.823900	ppm	0.003149	0.17	3010.660000	Y 377.433
Sr (421.552 nm)	0.901833	ppm	0.001255	0.14	144933.526346	Y_R 488.368
Th (288.505 nm)	0.926068	ppm	0.000405	0.04	1558.020000	Y 377.433
Ti (336.122 nm)	0.917348	ppm	0.000299	0.03	120666.000000	Y 377.433
Tl (190.794 nm)	1.780470	ppm	0.001245	0.07	4345.280000	Y 377.433
U (409.013 nm)	1.859510	ppm	0.001739	0.09	5915.020000	Y 377.433
V (292.401 nm)	0.906229	ppm	0.000229	0.03	48585.100000	Y 377.433
Zn (206.200 nm)	0.451391	ppm	0.000008	0.00	2066.890000	Y 377.433
Zr (343.823 nm)	0.449774	ppm	0.000012	0.00	26216.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.072160	20046.168469	0.003464	0.32
Y 377.433	1.085595	603131.244330	0.002867	0.26
Y_R 377.433	1.107120	53900.900000	0.003422	0.31
Y_R 488.368	1.090880	46652.900000	0.003602	0.33
Y_R2 488.368	1.081836	90355.909992	0.003948	0.36
Y_R4	1.093110	42026.700000	0.004698	0.43

Sample Name: LCSD 280-457667/3-A

Date: 5/11/2019 4:43:40 AM

Rack:Tube: 4:6

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.049593	ppm	0.000041	0.08	1318.640000	Y 377.433
Al (394.401 nm)	9.555570 o	ppm	0.008508	0.09	120372.000000	Y 377.433
Al H (396.152 nm)	9.634320	ppm	0.025686	0.27	21944.900000	Y_R 377.433
As (188.980 nm)	1.932750	ppm	0.001031	0.05	3072.420000	Y 242.219
B (249.678 nm)	0.917857	ppm	0.001711	0.19	7037.680000	Y 242.219
Ba (493.408 nm)	1.903440	ppm	0.000356	0.02	201355.000000	Y_R 488.368
Be (234.861 nm)	0.932982	ppm	0.004367	0.47	98932.000000	Y_R 488.368
Bi (223.061 nm)	1.933710	ppm	0.010737	0.56	4243.240000	Y 377.433
Ca (315.887 nm)	49.518514	ppm	0.096768	0.20	40885.982628	Y_R 377.433
Cd (214.439 nm)	0.956735	ppm	0.000643	0.07	36651.200000	Y 377.433
Co (228.615 nm)	0.932602	ppm	0.001611	0.17	23362.800000	Y 242.219
Cr (205.560 nm)	0.944317	ppm	0.002517	0.27	6528.400000	Y 377.433
Cu (324.754 nm)	0.921829	ppm	0.004967	0.54	45797.600000	Y 377.433
Fe (238.204 nm)	9.792793 o	ppm	0.032337	0.33	24485.871317	Y_R 377.433
Fe H (259.940 nm)	9.767970	ppm	0.045086	0.46	14010.900000	Y_R 377.433
K (766.491 nm)	48.879000	ppm	0.006960	0.01	53591.600000	Y_R2 488.368
Li (670.783 nm)	0.986640	ppm	0.003152	0.32	15063.500000	Y_R2 488.368
Mg (279.078 nm)	47.511800	ppm	0.082474	0.17	166503.000000	Y 377.433
Mn (257.610 nm)	0.954938	ppm	0.001421	0.15	275205.000000	Y 377.433
Mo (202.032 nm)	0.962459	ppm	0.000037	0.00	12743.700000	Y 377.433
Na (589.592 nm)	49.630400	ppm	0.036139	0.07	43771.700000	Y_R2 488.368
Na H (589.593 nm)	45.706312 u	ppm	0.052936	0.12	26968.664739	Y_R4
Ni (231.604 nm)	0.929488	ppm	0.001932	0.21	5035.350000	Y 377.433
P (213.618 nm)	18.524800	ppm	0.054949	0.30	28353.400000	Y 242.219
Pb (220.353 nm)	0.959086	ppm	0.001122	0.12	3234.920000	Y 242.219
S (181.972 nm)	9.183723	ppm	0.010559	0.11	4501.039265	Y 377.433
Sb (206.834 nm)	0.961944	ppm	0.003335	0.35	1789.770000	Y 377.433
Se (196.026 nm)	1.908240	ppm	0.011965	0.63	3060.840000	Y 242.219
Si (288.158 nm)	0.530331	ppm	0.002352	0.44	4051.020000	Y 377.433
Sn (189.925 nm)	1.944590	ppm	0.003945	0.20	3209.280000	Y 377.433
Sr (421.552 nm)	0.953934	ppm	0.001604	0.17	153300.773530	Y_R 488.368
Th (288.505 nm)	0.979377	ppm	0.003898	0.40	1646.570000	Y 377.433
Ti (336.122 nm)	0.970592	ppm	0.000838	0.09	127701.000000	Y 377.433
Tl (190.794 nm)	1.893230	ppm	0.000422	0.02	4620.470000	Y 377.433
U (409.013 nm)	1.968530	ppm	0.006806	0.35	6260.000000	Y 377.433
V (292.401 nm)	0.958914	ppm	0.001499	0.16	51416.300000	Y 377.433
Zn (206.200 nm)	0.479381	ppm	0.001624	0.34	2194.870000	Y 377.433
Zr (343.823 nm)	0.476404	ppm	0.000643	0.13	27778.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.074058	20081.652344	0.006555	0.61
Y 377.433	1.086647	603715.747714	0.005713	0.53
Y_R 377.433	1.117980	54429.700000	0.000658	0.06
Y_R 488.368	1.101520	47108.000000	0.001022	0.09
Y_R2 488.368	1.076572	89916.239968	0.001457	0.14
Y_R4	1.101100	42333.900000	0.001668	0.15

Sample Name: 280-123259-A-1-K

Date: 5/11/2019 4:47:19 AM

Rack:Tube: 4:7

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001436	ppm	0.000632	44.05	-207.238000	Y 377.433
Al (394.401 nm)	70.438900 o	ppm	0.050636	0.07	885055.000000	Y 377.433
Al H (396.152 nm)	71.196300	ppm	0.049257	0.07	160106.000000	Y_R 377.433
As (188.980 nm)	0.034780	ppm	0.002606	7.49	45.909100	Y 242.219
B (249.678 nm)	0.034905	ppm	0.000040	0.11	211.920000	Y 242.219
Ba (493.408 nm)	0.430590	ppm	0.000496	0.12	46899.500000	Y_R 488.368
Be (234.861 nm)	0.006737	ppm	0.000230	3.41	-270.486000	Y_R 488.368
Bi (223.061 nm)	-0.010109 u	ppm	0.001328	13.13	-14.218800	Y 377.433
Ca (315.887 nm)	31.029833	ppm	0.022032	0.07	25609.848193	Y_R 377.433
Cd (214.439 nm)	0.001429	ppm	0.000113	7.89	93.694000	Y 377.433
Co (228.615 nm)	0.033469	ppm	0.000746	2.23	1036.610000	Y 242.219
Cr (205.560 nm)	0.098806	ppm	0.000108	0.11	674.511000	Y 377.433
Cu (324.754 nm)	0.060781	ppm	0.000283	0.47	3448.030000	Y 377.433
Fe (238.204 nm)	110.508433 o	ppm	0.068490	0.06	276272.070929	Y_R 377.433
Fe H (259.940 nm)	109.770000	ppm	0.061586	0.06	157737.000000	Y_R 377.433
K (766.491 nm)	19.503800	ppm	0.064108	0.33	22695.300000	Y_R2 488.368
Li (670.783 nm)	0.151733	ppm	0.000838	0.55	-125.600000	Y_R2 488.368
Mg (279.078 nm)	25.615600	ppm	0.010432	0.04	89648.900000	Y 377.433
Mn (257.610 nm)	2.087190	ppm	0.001073	0.05	601538.000000	Y 377.433
Mo (202.032 nm)	0.001581	ppm	0.000191	12.10	32.530400	Y 377.433
Na (589.592 nm)	1.234560	ppm	0.032057	2.60	1347.690000	Y_R2 488.368
Na H (589.593 nm)	0.486039 u	ppm	0.017501	3.60	759.632392	Y_R4
Ni (231.604 nm)	0.060271	ppm	0.000180	0.30	316.580000	Y 377.433
P (213.618 nm)	3.192370	ppm	0.011906	0.37	4921.320000	Y 242.219
Pb (220.353 nm)	0.057179	ppm	0.000176	0.31	181.186000	Y 242.219
S (181.972 nm)	1.134486	ppm	0.018071	1.59	570.356055	Y 377.433
Sb (206.834 nm)	-0.000736 u	ppm	0.001234	> 100.00	-12.769100	Y 377.433
Se (196.026 nm)	0.004127	ppm	0.002352	56.99	-14.509400	Y 242.219
Si (288.158 nm)	2.901340	ppm	0.000213	0.01	19889.400000	Y 377.433
Sn (189.925 nm)	0.008164	ppm	0.000796	9.75	22.532500	Y 377.433
Sr (421.552 nm)	0.172161	ppm	0.000499	0.29	27768.487123	Y_R 488.368
Th (288.505 nm)	0.038123	ppm	0.002352	6.17	96.174800	Y 377.433
Ti (336.122 nm)	4.756340	ppm	0.006201	0.13	627069.000000	Y 377.433
Tl (190.794 nm)	0.007151	ppm	0.000154	2.15	-20.092800	Y 377.433
U (409.013 nm)	-0.022510 u	ppm	0.007617	33.84	33.067200	Y 377.433
V (292.401 nm)	0.180295	ppm	0.000219	0.12	9812.910000	Y 377.433
Zn (206.200 nm)	0.508463	ppm	0.000983	0.19	2341.760000	Y 377.433
Zr (343.823 nm)	0.013443	ppm	0.000157	1.17	615.243000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.122722	20991.534080	0.001961	0.17
Y 377.433	1.128181	626791.074435	0.003323	0.29
Y_R 377.433	1.154850	56224.900000	0.003342	0.29
Y_R 488.368	1.139960	48752.000000	0.005040	0.44
Y_R2 488.368	1.121837	93696.830373	0.003016	0.27
Y_R4	1.152920	44326.300000	0.000598	0.05

Sample Name: CCVH-5690583

Date: 5/11/2019 4:51:04 AM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000169 u	ppm	0.000600	> 100.00	-314.409000	Y 377.433
Al (394.401 nm)	47.796800 o	ppm	0.026009	0.05	600654.000000	Y 377.433
Al H (396.152 nm)	48.067600	ppm	0.067111	0.14	107980.000000	Y_R 377.433
As (188.980 nm)	0.001961	ppm	0.002401	> 100.00	-3.091780	Y 242.219
B (249.678 nm)	0.005049	ppm	0.000235	4.66	21.099700	Y 242.219
Ba (493.408 nm)	0.001459	ppm	0.000421	28.86	1821.510000	Y_R 488.368
Be (234.861 nm)	0.002513	ppm	0.000011	0.43	-164.552000	Y_R 488.368
Bi (223.061 nm)	0.942274	ppm	0.003773	0.40	2069.470000	Y 377.433
Ca (315.887 nm)	0.018305	ppm	0.003863	21.11	-45.742616	Y_R 377.433
Cd (214.439 nm)	0.000749	ppm	0.000034	4.58	41.885800	Y 377.433
Co (228.615 nm)	0.004546	ppm	0.000019	0.42	90.447800	Y 242.219
Cr (205.560 nm)	0.001449	ppm	0.000213	14.67	0.589598	Y 377.433
Cu (324.754 nm)	0.005356	ppm	0.000029	0.55	1175.590000	Y 377.433
Fe (238.204 nm)	48.319773 o	ppm	0.021143	0.04	120802.210763	Y_R 377.433
Fe H (259.940 nm)	48.020400	ppm	0.032358	0.07	68988.600000	Y_R 377.433
K (766.491 nm)	0.212611	ppm	0.214338	> 100.00	2405.210000	Y_R2 488.368
Li (670.783 nm)	0.008217	ppm	0.003062	37.26	-2736.520000	Y_R2 488.368
Mg (279.078 nm)	0.015542	ppm	0.000959	6.17	-156.647000	Y 377.433
Mn (257.610 nm)	0.001388	ppm	0.000006	0.41	376.563000	Y 377.433
Mo (202.032 nm)	0.000691	ppm	0.000099	14.34	20.755100	Y 377.433
Na (589.592 nm)	237.993000 o	ppm	1.225320	0.51	207061.000000	Y_R2 488.368
Na H (589.593 nm)	237.105119	ppm	0.287599	0.12	137900.713780	Y_R4
Ni (231.604 nm)	0.001954	ppm	0.000335	17.17	0.142542	Y 377.433
P (213.618 nm)	-0.013056 u	ppm	0.001027	7.87	-23.490400	Y 242.219
Pb (220.353 nm)	0.007604	ppm	0.000166	2.19	49.273100	Y 242.219
S (181.972 nm)	4.769571	ppm	0.023153	0.49	2338.276620	Y 377.433
Sb (206.834 nm)	0.002903	ppm	0.003491	> 100.00	11.037200	Y 377.433
Se (196.026 nm)	0.003065	ppm	0.000345	11.25	-2.496540	Y 242.219
Si (288.158 nm)	0.031285	ppm	0.003142	10.04	717.388000	Y 377.433
Sn (189.925 nm)	-0.001366 u	ppm	0.001507	> 100.00	6.848480	Y 377.433
Sr (421.552 nm)	0.000780	ppm	0.000109	13.96	235.880485	Y_R 488.368
Th (288.505 nm)	4.834250	ppm	0.008043	0.17	8540.830000	Y 377.433
Ti (336.122 nm)	0.002395	ppm	0.000028	1.15	-204.874000	Y 377.433
Tl (190.794 nm)	0.000115 u	ppm	0.001936	> 100.00	-4.441530	Y 377.433
U (409.013 nm)	9.624950	ppm	0.004243	0.04	30810.000000	Y 377.433
V (292.401 nm)	-0.001113 u	ppm	0.000158	14.20	-149.722000	Y 377.433
Zn (206.200 nm)	0.002648	ppm	0.000023	0.88	21.904800	Y 377.433
Zr (343.823 nm)	-0.002803 u	ppm	0.000230	8.19	-337.973000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.060923	19836.070988	0.000535	0.05
Y 377.433	1.067806	593248.170555	0.001325	0.12
Y_R 377.433	1.097920	53453.200000	0.002709	0.25
Y_R 488.368	1.084880	46396.100000	0.004022	0.37
Y_R2 488.368	1.073514	89660.780244	0.000240	0.02
Y_R4	1.113030	42792.400000	0.000632	0.06

Sample Name: CCV-5690581

Date: 5/11/2019 4:54:44 AM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.475712	ppm	0.000592	0.12	17199.500000	Y 377.433
Al (394.401 nm)	0.485496	ppm	0.000342	0.07	6249.200000	Y 377.433
Al H (396.152 nm)	0.533472 u	ppm	0.006767	1.27	1224.790000	Y_R 377.433
As (188.980 nm)	0.951310	ppm	0.005582	0.59	1511.670000	Y 242.219
B (249.678 nm)	0.463120	ppm	0.002047	0.44	3558.360000	Y 242.219
Ba (493.408 nm)	0.473715	ppm	0.000122	0.03	51335.300000	Y_R 488.368
Be (234.861 nm)	0.465298	ppm	0.000389	0.08	49360.700000	Y_R 488.368
Bi (223.061 nm)	0.005010	ppm	0.000815	16.27	0.657944	Y 377.433
Ca (315.887 nm)	4.997994	ppm	0.006475	0.13	4060.732039	Y_R 377.433
Cd (214.439 nm)	0.490133	ppm	0.000805	0.16	18771.900000	Y 377.433
Co (228.615 nm)	0.484357	ppm	0.000342	0.07	12121.400000	Y 242.219
Cr (205.560 nm)	0.484852	ppm	0.000562	0.12	3348.160000	Y 377.433
Cu (324.754 nm)	0.475501	ppm	0.000285	0.06	23849.000000	Y 377.433
Fe (238.204 nm)	2.448120	ppm	0.004200	0.17	6124.400518	Y_R 377.433
Fe H (259.940 nm)	2.464420 u	ppm	0.004714	0.19	3513.960000	Y_R 377.433
K (766.491 nm)	48.208600	ppm	0.006667	0.01	52886.400000	Y_R2 488.368
Li (670.783 nm)	0.986659	ppm	0.001331	0.13	15063.900000	Y_R2 488.368
Mg (279.078 nm)	19.202200	ppm	0.012196	0.06	67318.400000	Y 377.433
Mn (257.610 nm)	0.480630	ppm	0.000229	0.05	138502.000000	Y 377.433
Mo (202.032 nm)	0.484194	ppm	0.000536	0.11	6416.870000	Y 377.433
Na (589.592 nm)	24.893100	ppm	0.100416	0.40	21924.600000	Y_R2 488.368
Na H (589.593 nm)	24.085632 u	ppm	0.060673	0.25	14437.623926	Y_R4
Ni (231.604 nm)	0.485278	ppm	0.000973	0.20	2623.900000	Y 377.433
P (213.618 nm)	0.933384	ppm	0.003495	0.37	1307.880000	Y 242.219
Pb (220.353 nm)	0.972225	ppm	0.002677	0.28	3278.660000	Y 242.219
S (181.972 nm)	0.003097 u	ppm	0.004892	> 100.00	10.827600	Y 377.433
Sb (206.834 nm)	0.965765	ppm	0.000552	0.06	1798.930000	Y 377.433
Se (196.026 nm)	0.962502	ppm	0.001289	0.13	1547.300000	Y 242.219
Si (288.158 nm)	4.732750	ppm	0.002789	0.06	32123.200000	Y 377.433
Sn (189.925 nm)	0.980695	ppm	0.011879	1.21	1623.010000	Y 377.433
Sr (421.552 nm)	0.476304	ppm	0.000326	0.07	76595.103997	Y_R 488.368
Th (288.505 nm)	0.010566	ppm	0.001745	16.51	-11.403000	Y 377.433
Ti (336.122 nm)	0.481104	ppm	0.000313	0.07	62969.900000	Y 377.433
Tl (190.794 nm)	0.978413	ppm	0.004805	0.49	2389.140000	Y 377.433
U (409.013 nm)	0.014813	ppm	0.001671	11.28	18.638000	Y 377.433
V (292.401 nm)	0.479956	ppm	0.000154	0.03	25686.600000	Y 377.433
Zn (206.200 nm)	0.489073	ppm	0.000740	0.15	2238.140000	Y 377.433
Zr (343.823 nm)	0.481244	ppm	0.000404	0.08	28062.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.091429	20406.446736	0.000986	0.09
Y 377.433	1.094996	608354.096346	0.000237	0.02
Y_R 377.433	1.118000	54430.800000	0.000891	0.08
Y_R 488.368	1.106670	47328.300000	0.001964	0.18
Y_R2 488.368	1.091271	91143.874987	0.002614	0.24
Y_R4	1.107700	42587.400000	0.006775	0.61

Sample Name: CCB

Date: 5/11/2019 4:58:18 AM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000518 u	ppm	0.000022	4.30	-202.835000	Y 377.433
Al (394.401 nm)	0.004665	ppm	0.000672	14.40	83.490600	Y 377.433
Al H (396.152 nm)	0.114225 Zu	ppm	0.001285	1.13	36.989500 Z	Y_R 377.433
As (188.980 nm)	0.001917	ppm	0.002097	> 100.00	1.225540	Y 242.219
B (249.678 nm)	-0.000148 u	ppm	0.000009	6.33	10.717300	Y 242.219
Ba (493.408 nm)	-0.001597 u	ppm	0.000600	37.58	1461.000000	Y_R 488.368
Be (234.861 nm)	-0.000039 u	ppm	0.000007	18.39	-4.909850	Y_R 488.368
Bi (223.061 nm)	0.001657	ppm	0.000436	26.33	-7.241610	Y 377.433
Ca (315.887 nm)	0.003639 u	ppm	0.005989	> 100.00	-70.231817	Y_R 377.433
Cd (214.439 nm)	0.000102	ppm	0.000005	5.13	-2.893040	Y 377.433
Co (228.615 nm)	-0.000032 u	ppm	0.000357	> 100.00	-24.224600	Y 242.219
Cr (205.560 nm)	0.000081	ppm	0.000047	57.74	-7.564860	Y 377.433
Cu (324.754 nm)	-0.001204 u	ppm	0.000052	4.36	452.281000	Y 377.433
Fe (238.204 nm)	-0.001070 u	ppm	0.000426	39.79	1.496032	Y_R 377.433
Fe H (259.940 nm)	0.026828 u	ppm	0.004371	16.29	10.566200	Y_R 377.433
K (766.491 nm)	-0.338172 u	ppm	0.043108	12.75	1825.910000	Y_R2 488.368
Li (670.783 nm)	0.007352	ppm	0.004370	59.45	-2752.270000	Y_R2 488.368
Mg (279.078 nm)	0.000637 u	ppm	0.000944	> 100.00	18.687800	Y 377.433
Mn (257.610 nm)	0.000096	ppm	0.000046	47.76	4.223880	Y 377.433
Mo (202.032 nm)	0.000144 u	ppm	0.000267	> 100.00	13.519200	Y 377.433
Na (589.592 nm)	0.088821	ppm	0.028247	31.80	248.123000	Y_R2 488.368
Na H (589.593 nm)	0.082755 u	ppm	0.003705	4.48	525.894996	Y_R4
Ni (231.604 nm)	0.000220 u	ppm	0.000575	> 100.00	-9.264610	Y 377.433
P (213.618 nm)	-0.003813 u	ppm	0.000723	18.96	-2.033970	Y 242.219
Pb (220.353 nm)	0.001552	ppm	0.000922	59.36	13.204800	Y 242.219
S (181.972 nm)	0.000539 u	ppm	0.007646	> 100.00	7.739005	Y 377.433
Sb (206.834 nm)	-0.001839 u	ppm	0.003469	> 100.00	-1.153420	Y 377.433
Se (196.026 nm)	0.001358 u	ppm	0.002557	> 100.00	7.758300	Y 242.219
Si (288.158 nm)	-0.005271 u	ppm	0.001467	27.83	473.195000	Y 377.433
Sn (189.925 nm)	-0.004534 u	ppm	0.001106	24.39	1.635240	Y 377.433
Sr (421.552 nm)	-0.000182 u	ppm	0.000004	2.31	73.831179	Y_R 488.368
Th (288.505 nm)	-0.003898 u	ppm	0.001021	26.20	12.498800	Y 377.433
Ti (336.122 nm)	0.000688	ppm	0.000123	17.84	-430.095000	Y 377.433
Tl (190.794 nm)	0.002105	ppm	0.000665	31.61	5.263360	Y 377.433
U (409.013 nm)	-0.005113 u	ppm	0.001407	27.52	13.689800	Y 377.433
V (292.401 nm)	-0.000368 u	ppm	0.000097	26.44	-114.283000	Y 377.433
Zn (206.200 nm)	0.000036 u	ppm	0.000191	> 100.00	3.250720	Y 377.433
Zr (343.823 nm)	0.000538	ppm	0.000025	4.66	-141.977000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.127927	21088.842610	0.004197	0.37
Y 377.433	1.129177	627344.052456	0.005456	0.48
Y_R 377.433	1.147940	55888.300000	0.001924	0.17
Y_R 488.368	1.137940	48665.300000	0.000104	0.01
Y_R2 488.368	1.119721	93520.077749	0.000761	0.07
Y_R4	1.132970	43559.300000	0.002679	0.24

Sample Name: CCVL-5695588

Date: 5/11/2019 5:01:33 AM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.008858	ppm	0.000178	2.01	139.005000	Y 377.433
Al (394.401 nm)	0.100976	ppm	0.001100	1.09	1299.950000	Y 377.433
Al H (396.152 nm)	0.212849 u	ppm	0.005334	2.51	264.365000	Y_R 377.433
As (188.980 nm)	0.014859	ppm	0.001642	11.05	21.807000	Y 242.219
B (249.678 nm)	0.091870	ppm	0.000248	0.27	715.615000	Y 242.219
Ba (493.408 nm)	0.008005	ppm	0.000637	7.95	2468.570000	Y_R 488.368
Be (234.861 nm)	0.000934	ppm	0.000058	6.23	97.455500	Y_R 488.368
Bi (223.061 nm)	0.089091	ppm	0.002318	2.60	185.056000	Y 377.433
Ca (315.887 nm)	0.215040	ppm	0.001717	0.80	104.645685	Y_R 377.433
Cd (214.439 nm)	0.005147	ppm	0.000060	1.17	190.462000	Y 377.433
Co (228.615 nm)	0.010493	ppm	0.000184	1.75	239.661000	Y 242.219
Cr (205.560 nm)	0.010246	ppm	0.000430	4.20	62.710800	Y 377.433
Cu (324.754 nm)	0.013443	ppm	0.000096	0.72	1170.910000	Y 377.433
Fe (238.204 nm)	0.099728	ppm	0.001874	1.88	253.487978	Y_R 377.433
Fe H (259.940 nm)	0.131979 u	ppm	0.000539	0.41	161.693000	Y_R 377.433
K (766.491 nm)	2.657410	ppm	0.028831	1.08	4976.600000	Y_R2 488.368
Li (670.783 nm)	0.029409 Q	ppm	0.000026	0.09	-2350.990000 Q	Y_R2 488.368
Mg (279.078 nm)	0.197764	ppm	0.000965	0.49	708.553000	Y 377.433
Mn (257.610 nm)	0.010257	ppm	0.000017	0.16	2932.610000	Y 377.433
Mo (202.032 nm)	0.018948	ppm	0.000046	0.24	262.267000	Y 377.433
Na (589.592 nm)	1.119780	ppm	0.019977	1.78	1146.670000	Y_R2 488.368
Na H (589.593 nm)	0.914157 u	ppm	0.027941	3.06	1007.763582	Y_R4
Ni (231.604 nm)	0.040168	ppm	0.000115	0.29	207.515000	Y 377.433
P (213.618 nm)	2.649210	ppm	0.009864	0.37	4092.240000	Y 242.219
Pb (220.353 nm)	0.010357	ppm	0.000624	6.03	42.894100	Y 242.219
S (181.972 nm)	0.089376	ppm	0.004678	5.23	51.191073	Y 377.433
Sb (206.834 nm)	0.014423	ppm	0.004439	30.78	28.993800	Y 377.433
Se (196.026 nm)	0.020542	ppm	0.003285	15.99	38.474100	Y 242.219
Si (288.158 nm)	0.491583	ppm	0.006489	1.32	3792.180000	Y 377.433
Sn (189.925 nm)	0.095439	ppm	0.000364	0.38	166.159000	Y 377.433
Sr (421.552 nm)	0.008660	ppm	0.000072	0.83	1493.736935	Y_R 488.368
Th (288.505 nm)	0.009274 Q	ppm	0.004522	48.75	34.976900 Q	Y 377.433
Ti (336.122 nm)	0.010369	ppm	0.000006	0.06	847.737000	Y 377.433
Tl (190.794 nm)	0.015314	ppm	0.000638	4.17	37.445100	Y 377.433
U (409.013 nm)	0.058657	ppm	0.005695	9.71	216.207000	Y 377.433
V (292.401 nm)	0.009282	ppm	0.000104	1.12	401.962000	Y 377.433
Zn (206.200 nm)	0.020783	ppm	0.000559	2.69	98.062000	Y 377.433
Zr (343.823 nm)	0.010517	ppm	0.000051	0.48	443.517000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.143716	21384.059309	0.001604	0.14
Y 377.433	1.143097	635077.684145	0.000775	0.07
Y_R 377.433	1.152820	56125.800000	0.003659	0.32
Y_R 488.368	1.137450	48644.500000	0.006637	0.58
Y_R2 488.368	1.128636	94264.633934	0.002906	0.26
Y_R4	1.134160	43605.100000	0.005952	0.52

Sample Name: 280-123259-A-1-Ksd@5

Date: 5/11/2019 5:05:02 AM

Rack:Tube: 4:8

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000475 u	ppm	0.000108	22.75	-216.361000	Y 377.433
Al (394.401 nm)	14.010900 o	ppm	0.042465	0.30	176067.000000	Y 377.433
Al H (396.152 nm)	14.520500	ppm	0.018425	0.13	32477.900000	Y_R 377.433
As (188.980 nm)	0.007649	ppm	0.002499	32.67	8.808960	Y 242.219
B (249.678 nm)	0.007017	ppm	0.000935	13.32	51.969400	Y 242.219
Ba (493.408 nm)	0.085856	ppm	0.000120	0.14	10655.500000	Y_R 488.368
Be (234.861 nm)	0.001223	ppm	0.000093	7.59	-70.394600	Y_R 488.368
Bi (223.061 nm)	0.004506	ppm	0.000813	18.04	2.850760	Y 377.433
Ca (315.887 nm)	6.348510	ppm	0.008581	0.14	5181.307445	Y_R 377.433
Cd (214.439 nm)	0.000334	ppm	0.000101	30.19	15.284800	Y 377.433
Co (228.615 nm)	0.007070	ppm	0.000012	0.17	198.184000	Y 242.219
Cr (205.560 nm)	0.020126	ppm	0.000133	0.66	130.928000	Y 377.433
Cu (324.754 nm)	0.011056	ppm	0.000151	1.36	1043.190000	Y 377.433
Fe (238.204 nm)	22.411064 o	ppm	0.000687	0.00	56031.185569	Y_R 377.433
Fe H (259.940 nm)	22.302900	ppm	0.004689	0.02	32026.500000	Y_R 377.433
K (766.491 nm)	3.582640	ppm	0.102840	2.87	5949.740000	Y_R2 488.368
Li (670.783 nm)	0.037285	ppm	0.001181	3.17	-2207.700000	Y_R2 488.368
Mg (279.078 nm)	5.231380	ppm	0.023983	0.46	18322.000000	Y 377.433
Mn (257.610 nm)	0.429702	ppm	0.001437	0.33	123823.000000	Y 377.433
Mo (202.032 nm)	0.000556	ppm	0.000237	42.65	18.968100	Y 377.433
Na (589.592 nm)	0.282957	ppm	0.057426	20.29	437.966000	Y_R2 488.368
Na H (589.593 nm)	0.027783 u	ppm	0.008614	31.00	494.033919	Y_R4
Ni (231.604 nm)	0.012160	ppm	0.000876	7.21	55.523400	Y 377.433
P (213.618 nm)	0.628033	ppm	0.000446	0.07	971.410000	Y 242.219
Pb (220.353 nm)	0.012588	ppm	0.001061	8.43	46.479300	Y 242.219
S (181.972 nm)	0.226626	ppm	0.007991	3.53	119.951933	Y 377.433
Sb (206.834 nm)	0.000340	ppm	0.000090	26.60	0.180943	Y 377.433
Se (196.026 nm)	0.002174	ppm	0.000738	33.97	3.664380	Y 242.219
Si (288.158 nm)	0.538697	ppm	0.002860	0.53	4106.900000	Y 377.433
Sn (189.925 nm)	-0.003145 u	ppm	0.000339	10.77	3.921040	Y 377.433
Sr (421.552 nm)	0.034138	ppm	0.000045	0.13	5588.942576	Y_R 488.368
Th (288.505 nm)	0.000443 u	ppm	0.002296	> 100.00	22.339000	Y 377.433
Ti (336.122 nm)	0.958619	ppm	0.003373	0.35	125967.000000	Y 377.433
Tl (190.794 nm)	-0.000286 u	ppm	0.001042	> 100.00	-8.176220	Y 377.433
U (409.013 nm)	-0.001868 u	ppm	0.002369	> 100.00	39.242800	Y 377.433
V (292.401 nm)	0.035680	ppm	0.000115	0.32	1865.870000	Y 377.433
Zn (206.200 nm)	0.101917	ppm	0.000349	0.34	471.884000	Y 377.433
Zr (343.823 nm)	0.003220	ppm	0.000086	2.66	15.382400	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.125500	21043.462856	0.002544	0.23
Y 377.433	1.130991	628351.984974	0.005042	0.45
Y_R 377.433	1.139300	55467.500000	0.003858	0.34
Y_R 488.368	1.124540	48092.100000	0.002385	0.21
Y_R2 488.368	1.103426	92159.089496	0.003617	0.33
Y_R4	1.134370	43612.800000	0.006117	0.54

Sample Name: 280-123259-A-1-L MS

Date: 5/11/2019 5:08:43 AM

Rack:Tube: 4:9

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.049658	ppm	0.000407	0.82	1216.470000	Y 377.433
Al (394.401 nm)	130.432000 o	ppm	0.170547	0.13	1639090.000000	Y 377.433
Al H (396.152 nm)	131.691000	ppm	0.033635	0.03	296752.000000	Y_R 377.433
As (188.980 nm)	1.854500	ppm	0.007670	0.41	2936.060000	Y 242.219
B (249.678 nm)	0.926467	ppm	0.002661	0.29	7013.810000	Y 242.219
Ba (493.408 nm)	2.401630	ppm	0.001452	0.06	253750.000000	Y_R 488.368
Be (234.861 nm)	0.886358	ppm	0.001026	0.12	92670.000000	Y_R 488.368
Bi (223.061 nm)	1.810160	ppm	0.002157	0.12	3996.750000	Y 377.433
Ca (315.887 nm)	84.803680	ppm	0.035213	0.04	70101.731561	Y_R 377.433
Cd (214.439 nm)	0.890407	ppm	0.001263	0.14	34171.100000	Y 377.433
Co (228.615 nm)	0.928357	ppm	0.002418	0.26	23558.900000	Y 242.219
Cr (205.560 nm)	1.042320	ppm	0.000797	0.08	7204.600000	Y 377.433
Cu (324.754 nm)	0.983561	ppm	0.000085	0.01	48766.900000	Y 377.433
Fe (238.204 nm)	157.249244 o	ppm	0.038796	0.02	393122.750403	Y_R 377.433
Fe H (259.940 nm)	156.697000	ppm	0.030495	0.02	225183.000000	Y_R 377.433
K (766.491 nm)	75.754300	ppm	0.169609	0.22	81858.400000	Y_R2 488.368
Li (670.783 nm)	1.150260	ppm	0.001860	0.16	18040.200000	Y_R2 488.368
Mg (279.078 nm)	81.037600	ppm	0.079576	0.10	283813.000000	Y 377.433
Mn (257.610 nm)	3.612790	ppm	0.005271	0.15	1041240.000000	Y 377.433
Mo (202.032 nm)	0.887061	ppm	0.000320	0.04	11746.300000	Y 377.433
Na (589.592 nm)	49.222400	ppm	0.241300	0.49	43536.600000	Y_R2 488.368
Na H (589.593 nm)	44.017684 u	ppm	0.050589	0.11	25989.959883	Y_R4
Ni (231.604 nm)	0.964257	ppm	0.000241	0.02	5223.810000	Y 377.433
P (213.618 nm)	21.338600	ppm	0.056609	0.27	32689.800000	Y 242.219
Pb (220.353 nm)	0.970172	ppm	0.003446	0.36	3241.520000	Y 242.219
S (181.972 nm)	10.246411	ppm	0.020784	0.20	5030.894965	Y 377.433
Sb (206.834 nm)	0.480244	ppm	0.004953	1.03	873.205000	Y 377.433
Se (196.026 nm)	1.807820	ppm	0.001948	0.11	2864.170000	Y 242.219
Si (288.158 nm)	6.411600	ppm	0.108015	1.68	43337.900000	Y 377.433
Sn (189.925 nm)	1.757370	ppm	0.004329	0.25	2901.180000	Y 377.433
Sr (421.552 nm)	1.134735	ppm	0.001246	0.11	182359.542241	Y_R 488.368
Th (288.505 nm)	0.975891	ppm	0.000360	0.04	1655.100000	Y 377.433
Ti (336.122 nm)	7.454310	ppm	0.010456	0.14	983189.000000	Y 377.433
Tl (190.794 nm)	1.754890	ppm	0.005717	0.33	4232.520000	Y 377.433
U (409.013 nm)	1.826580	ppm	0.004048	0.22	5917.800000	Y 377.433
V (292.401 nm)	1.167590	ppm	0.001613	0.14	62933.800000	Y 377.433
Zn (206.200 nm)	1.072080	ppm	0.005216	0.49	4923.590000	Y 377.433
Zr (343.823 nm)	0.407727	ppm	0.000153	0.04	23749.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.092509	20426.641001	0.003521	0.32
Y 377.433	1.107397	615243.905554	0.002886	0.26
Y_R 377.433	1.144000	55696.500000	0.000967	0.08
Y_R 488.368	1.128780	48273.700000	0.000549	0.05
Y_R2 488.368	1.107670	92513.557723	0.001700	0.15
Y_R4	1.147010	44099.100000	0.001257	0.11

Sample Name: 280-123259-A-1-M MSD

Date: 5/11/2019 5:12:29 AM

Rack:Tube: 4:10

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.047041	ppm	0.000561	1.19	1148.110000	Y 377.433
Al (394.401 nm)	119.531000 o	ppm	0.030538	0.03	1502120.000000	Y 377.433
Al H (396.152 nm)	120.464000	ppm	0.047935	0.04	271447.000000	Y_R 377.433
As (188.980 nm)	1.760280	ppm	0.009544	0.54	2787.290000	Y 242.219
B (249.678 nm)	0.874499	ppm	0.004180	0.48	6624.930000	Y 242.219
Ba (493.408 nm)	2.239480	ppm	0.001826	0.08	236724.000000	Y_R 488.368
Be (234.861 nm)	0.839655	ppm	0.002096	0.25	87848.600000	Y_R 488.368
Bi (223.061 nm)	1.714740	ppm	0.000894	0.05	3784.320000	Y 377.433
Ca (315.887 nm)	78.730284	ppm	0.055171	0.07	65075.557806	Y_R 377.433
Cd (214.439 nm)	0.847046	ppm	0.001579	0.19	32503.600000	Y 377.433
Co (228.615 nm)	0.879145	ppm	0.001226	0.14	22310.600000	Y 242.219
Cr (205.560 nm)	0.973962	ppm	0.001324	0.14	6731.540000	Y 377.433
Cu (324.754 nm)	0.927724	ppm	0.004196	0.45	46025.500000	Y 377.433
Fe (238.204 nm)	142.141075 o	ppm	0.158357	0.11	355352.763892	Y_R 377.433
Fe H (259.940 nm)	141.640000	ppm	0.143015	0.10	203543.000000	Y_R 377.433
K (766.491 nm)	70.770500	ppm	0.132285	0.19	76616.600000	Y_R2 488.368
Li (670.783 nm)	1.084230	ppm	0.000144	0.01	16838.900000	Y_R2 488.368
Mg (279.078 nm)	75.342300	ppm	0.122424	0.16	263873.000000	Y 377.433
Mn (257.610 nm)	3.237380	ppm	0.004788	0.15	933041.000000	Y 377.433
Mo (202.032 nm)	0.841817	ppm	0.000152	0.02	11147.700000	Y 377.433
Na (589.592 nm)	46.181700	ppm	0.047422	0.10	40854.300000	Y_R2 488.368
Na H (589.593 nm)	41.584505 u	ppm	0.073283	0.18	24579.723599	Y_R4
Ni (231.604 nm)	0.908916	ppm	0.000337	0.04	4923.420000	Y 377.433
P (213.618 nm)	20.184900	ppm	0.001953	0.01	30923.500000	Y 242.219
Pb (220.353 nm)	0.920370	ppm	0.000536	0.06	3076.260000	Y 242.219
S (181.972 nm)	9.564123	ppm	0.023575	0.25	4695.934150	Y 377.433
Sb (206.834 nm)	0.458757	ppm	0.003853	0.84	833.569000	Y 377.433
Se (196.026 nm)	1.718410	ppm	0.004933	0.29	2724.490000	Y 242.219
Si (288.158 nm)	5.569490	ppm	0.057432	1.03	37712.600000	Y 377.433
Sn (189.925 nm)	1.697070	ppm	0.006321	0.37	2801.940000	Y 377.433
Sr (421.552 nm)	1.061612	ppm	0.000888	0.08	170614.006001	Y_R 488.368
Th (288.505 nm)	0.915026	ppm	0.001046	0.11	1550.690000	Y 377.433
Ti (336.122 nm)	7.094760	ppm	0.003374	0.05	935734.000000	Y 377.433
Tl (190.794 nm)	1.670500	ppm	0.003329	0.20	4029.870000	Y 377.433
U (409.013 nm)	1.725550	ppm	0.001064	0.06	5587.340000	Y 377.433
V (292.401 nm)	1.093780	ppm	0.001186	0.11	58952.800000	Y 377.433
Zn (206.200 nm)	1.005990	ppm	0.004259	0.42	4619.480000	Y 377.433
Zr (343.823 nm)	0.386822	ppm	0.000661	0.17	22522.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.097825	20526.020369	0.002709	0.25
Y 377.433	1.111304	617414.206125	0.003849	0.35
Y_R 377.433	1.151230	56048.400000	0.004456	0.39
Y_R 488.368	1.135260	48550.700000	0.004428	0.39
Y_R2 488.368	1.123478	93833.864321	0.003892	0.35
Y_R4	1.146600	44083.000000	0.000657	0.06

Sample Name: MB 280-457369/1-A

Date: 5/11/2019 5:16:12 AM

Rack:Tube: 4:11

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000756 u	ppm	0.000092	12.23	-211.874000	Y 377.433
Al (394.401 nm)	0.007480	ppm	0.000739	9.88	118.381000	Y 377.433
Al H (396.152 nm)	0.117749 u	ppm	0.001644	1.40	44.964600	Y_R 377.433
As (188.980 nm)	-0.000037 u	ppm	0.002484	> 100.00	-1.884620	Y 242.219
B (249.678 nm)	0.000605 u	ppm	0.000897	> 100.00	16.466400	Y 242.219
Ba (493.408 nm)	-0.001501 u	ppm	0.000384	25.57	1471.140000	Y_R 488.368
Be (234.861 nm)	-0.000004 u	ppm	0.000024	> 100.00	-1.468400	Y_R 488.368
Bi (223.061 nm)	0.003256	ppm	0.002358	72.41	-3.719390	Y 377.433
Ca (315.887 nm)	0.019588	ppm	0.004470	22.82	-57.038234	Y_R 377.433
Cd (214.439 nm)	0.000028 u	ppm	0.000060	> 100.00	-5.713260	Y 377.433
Co (228.615 nm)	0.000154	ppm	0.000129	83.97	-19.521100	Y 242.219
Cr (205.560 nm)	0.000120 u	ppm	0.000384	> 100.00	-7.289040	Y 377.433
Cu (324.754 nm)	-0.001086 u	ppm	0.000076	7.00	458.607000	Y 377.433
Fe (238.204 nm)	0.026081	ppm	0.001105	4.24	69.372313	Y_R 377.433
Fe H (259.940 nm)	0.058289 u	ppm	0.001801	3.09	55.782800	Y_R 377.433
K (766.491 nm)	-0.356633 u	ppm	0.100122	28.07	1806.490000	Y_R2 488.368
Li (670.783 nm)	0.010389	ppm	0.000119	1.14	-2697.030000	Y_R2 488.368
Mg (279.078 nm)	0.001426	ppm	0.000294	20.59	21.371400	Y 377.433
Mn (257.610 nm)	0.000527	ppm	0.000004	0.73	128.419000	Y 377.433
Mo (202.032 nm)	0.000360	ppm	0.000228	63.25	16.382100	Y 377.433
Na (589.592 nm)	0.099294	ppm	0.006326	6.37	257.242000	Y_R2 488.368
Na H (589.593 nm)	0.032746 u	ppm	0.038130	> 100.00	496.910136	Y_R4
Ni (231.604 nm)	0.000467	ppm	0.000249	53.37	-7.924400	Y 377.433
P (213.618 nm)	-0.004352 u	ppm	0.000685	15.74	-2.917400	Y 242.219
Pb (220.353 nm)	-0.000614 u	ppm	0.001509	> 100.00	5.914470	Y 242.219
S (181.972 nm)	0.009670	ppm	0.000560	5.79	12.202541	Y 377.433
Sb (206.834 nm)	0.000919 u	ppm	0.001492	> 100.00	3.990360	Y 377.433
Se (196.026 nm)	0.002509	ppm	0.001662	66.24	9.594910	Y 242.219
Si (288.158 nm)	0.002924	ppm	0.000260	8.88	527.938000	Y 377.433
Sn (189.925 nm)	-0.002696 u	ppm	0.000331	12.27	4.660250	Y 377.433
Sr (421.552 nm)	-0.000041 u	ppm	0.000069	> 100.00	96.409219	Y_R 488.368
Th (288.505 nm)	-0.004760 u	ppm	0.001397	29.35	10.927500	Y 377.433
Ti (336.122 nm)	0.001124	ppm	0.000227	20.17	-372.687000	Y 377.433
Tl (190.794 nm)	0.000348	ppm	0.000180	51.55	0.962463	Y 377.433
U (409.013 nm)	-0.007313 u	ppm	0.000008	0.11	6.668180	Y 377.433
V (292.401 nm)	-0.000304 u	ppm	0.000249	81.94	-110.562000	Y 377.433
Zn (206.200 nm)	0.001912	ppm	0.000496	25.96	11.825600	Y 377.433
Zr (343.823 nm)	0.000805	ppm	0.000122	15.15	-126.281000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.133210	21187.619994	0.004663	0.41
Y 377.433	1.134495	630298.799893	0.004256	0.38
Y_R 377.433	1.151020	56038.300000	0.002360	0.21
Y_R 488.368	1.136790	48616.200000	0.001158	0.10
Y_R2 488.368	1.119524	93503.650743	0.002118	0.19
Y_R4	1.118390	42998.500000	0.000641	0.06

Sample Name: LCS 280-457369/2-A

Date: 5/11/2019 5:19:24 AM

Rack:Tube: 4:12

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.050865	ppm	0.000017	0.03	1325.880000	Y 377.433
Al (394.401 nm)	9.702560 o	ppm	0.015991	0.16	122285.000000	Y 377.433
Al H (396.152 nm)	9.806920	ppm	0.006460	0.07	22354.300000	Y_R 377.433
As (188.980 nm)	2.017570	ppm	0.004796	0.24	3207.360000	Y 242.219
B (249.678 nm)	0.747621	ppm	0.000904	0.12	5733.360000	Y 242.219
Ba (493.408 nm)	1.988740	ppm	0.002038	0.10	210306.000000	Y_R 488.368
Be (234.861 nm)	0.972782	ppm	0.000299	0.03	103154.000000	Y_R 488.368
Bi (223.061 nm)	1.548350	ppm	0.005150	0.33	3395.850000	Y 377.433
Ca (315.887 nm)	50.519060	ppm	0.043812	0.09	41713.578177	Y_R 377.433
Cd (214.439 nm)	0.996184	ppm	0.003565	0.36	38162.600000	Y 377.433
Co (228.615 nm)	0.971689	ppm	0.001326	0.14	24343.100000	Y 242.219
Cr (205.560 nm)	0.990405	ppm	0.010023	1.01	6847.460000	Y 377.433
Cu (324.754 nm)	0.961429	ppm	0.009447	0.98	47701.500000	Y 377.433
Fe (238.204 nm)	10.023578 o	ppm	0.003765	0.04	25062.828096	Y_R 377.433
Fe H (259.940 nm)	10.000100	ppm	0.011002	0.11	14344.500000	Y_R 377.433
K (766.491 nm)	50.050100	ppm	0.153244	0.31	54823.300000	Y_R2 488.368
Li (670.783 nm)	1.038860	ppm	0.005003	0.48	16013.500000	Y_R2 488.368
Mg (279.078 nm)	48.304500	ppm	0.146024	0.30	169280.000000	Y 377.433
Mn (257.610 nm)	0.997345	ppm	0.002611	0.26	287427.000000	Y 377.433
Mo (202.032 nm)	1.009400	ppm	0.001705	0.17	13364.700000	Y 377.433
Na (589.592 nm)	50.800300	ppm	0.103149	0.20	44809.200000	Y_R2 488.368
Na H (589.593 nm)	46.371007 u	ppm	0.069493	0.15	27353.912967	Y_R4
Ni (231.604 nm)	0.969202	ppm	0.004058	0.42	5250.930000	Y 377.433
P (213.618 nm)	19.240300	ppm	0.038497	0.20	29447.400000	Y 242.219
Pb (220.353 nm)	1.001480	ppm	0.000731	0.07	3377.600000	Y 242.219
S (181.972 nm)	9.552252	ppm	0.020274	0.21	4681.307516	Y 377.433
Sb (206.834 nm)	1.006180	ppm	0.006037	0.60	1872.230000	Y 377.433
Se (196.026 nm)	1.991800	ppm	0.004107	0.21	3194.680000	Y 242.219
Si (288.158 nm)	2.056200	ppm	0.002222	0.11	14243.800000	Y 377.433
Sn (189.925 nm)	2.019240	ppm	0.006723	0.33	3332.130000	Y 377.433
Sr (421.552 nm)	0.996261	ppm	0.001326	0.13	160098.330780	Y_R 488.368
Th (288.505 nm)	0.797452	ppm	0.002181	0.27	1323.400000	Y 377.433
Ti (336.122 nm)	1.014740	ppm	0.001938	0.19	133528.000000	Y 377.433
Tl (190.794 nm)	1.970680	ppm	0.012430	0.63	4809.500000	Y 377.433
U (409.013 nm)	2.050830	ppm	0.019667	0.96	6534.240000	Y 377.433
V (292.401 nm)	1.004420	ppm	0.002547	0.25	53838.400000	Y 377.433
Zn (206.200 nm)	0.385706	ppm	0.000854	0.22	1766.870000	Y 377.433
Zr (343.823 nm)	0.386659	ppm	0.000534	0.14	22513.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.080985	20211.174800	0.000808	0.07
Y 377.433	1.096007	608915.715684	0.001331	0.12
Y_R 377.433	1.120400	54547.400000	0.002439	0.22
Y_R 488.368	1.107840	47378.100000	0.001181	0.11
Y_R2 488.368	1.091452	91159.022796	0.008273	0.76
Y_R4	1.111060	42716.800000	0.004286	0.39

Sample Name: 280-123364-O-1-A

Date: 5/11/2019 5:23:04 AM

Rack:Tube: 4:13

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000189 u	ppm	0.000020	10.42	-191.570000	Y 377.433
Al (394.401 nm)	0.010450	ppm	0.001193	11.42	185.986000	Y 377.433
Al H (396.152 nm)	0.094561 u	ppm	0.010555	11.16	28.181900	Y_R 377.433
As (188.980 nm)	0.003039	ppm	0.002557	84.12	3.009880	Y 242.219
B (249.678 nm)	0.023223	ppm	0.000337	1.45	189.757000	Y 242.219
Ba (493.408 nm)	0.079693	ppm	0.000089	0.11	9990.410000	Y_R 488.368
Be (234.861 nm)	-0.000009 u	ppm	0.000084	> 100.00	-1.814030	Y_R 488.368
Bi (223.061 nm)	0.002789	ppm	0.000271	9.70	-4.742250	Y 377.433
Ca (315.887 nm)	29.313735	ppm	0.073850	0.25	24172.120466	Y_R 377.433
Cd (214.439 nm)	0.000131	ppm	0.000031	23.70	-1.783110	Y 377.433
Co (228.615 nm)	-0.000050 u	ppm	0.000069	> 100.00	-24.635900	Y 242.219
Cr (205.560 nm)	0.000883	ppm	0.000128	14.47	-2.004990	Y 377.433
Cu (324.754 nm)	-0.001485 u	ppm	0.000310	20.87	419.912000	Y 377.433
Fe (238.204 nm)	0.010226	ppm	0.000374	3.65	29.734700	Y_R 377.433
Fe H (259.940 nm)	0.040236 u	ppm	0.002658	6.61	29.836000	Y_R 377.433
K (766.491 nm)	2.726600	ppm	0.038834	1.42	5049.370000	Y_R2 488.368
Li (670.783 nm)	0.012126	ppm	0.004887	40.30	-2665.410000	Y_R2 488.368
Mg (279.078 nm)	10.532600	ppm	0.013742	0.13	36933.900000	Y 377.433
Mn (257.610 nm)	0.000467	ppm	0.000017	3.60	110.992000	Y 377.433
Mo (202.032 nm)	0.000344	ppm	0.000111	32.17	16.170800	Y 377.433
Na (589.592 nm)	27.412600	ppm	0.087188	0.32	24020.500000	Y_R2 488.368
Na H (589.593 nm)	26.482673 u	ppm	0.084782	0.32	15826.915008	Y_R4
Ni (231.604 nm)	-0.000311 u	ppm	0.000003	1.11	-12.144200	Y 377.433
P (213.618 nm)	0.071122	ppm	0.000079	0.11	113.603000	Y 242.219
Pb (220.353 nm)	-0.002038 u	ppm	0.002114	> 100.00	1.181910	Y 242.219
S (181.972 nm)	8.876669	ppm	0.013065	0.15	4346.797443	Y 377.433
Sb (206.834 nm)	-0.002301 u	ppm	0.002574	> 100.00	-2.012670	Y 377.433
Se (196.026 nm)	0.006320	ppm	0.004077	64.51	15.702400	Y 242.219
Si (288.158 nm)	5.082790	ppm	0.025061	0.49	34461.500000	Y 377.433
Sn (189.925 nm)	-0.003112 u	ppm	0.000618	19.85	3.975050	Y 377.433
Sr (421.552 nm)	0.100348	ppm	0.000298	0.30	16218.352103	Y_R 488.368
Th (288.505 nm)	-0.009138 u	ppm	0.000580	6.35	2.599130	Y 377.433
Ti (336.122 nm)	0.000589	ppm	0.000093	15.81	-344.862000	Y 377.433
Tl (190.794 nm)	0.002432	ppm	0.001973	81.11	4.865600	Y 377.433
U (409.013 nm)	0.015714	ppm	0.005267	33.52	76.440000	Y 377.433
V (292.401 nm)	0.000390	ppm	0.000025	6.47	-74.909200	Y 377.433
Zn (206.200 nm)	0.001678	ppm	0.000018	1.09	10.754400	Y 377.433
Zr (343.823 nm)	0.000860	ppm	0.000002	0.18	-123.049000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.112986	20809.503982	0.001794	0.16
Y 377.433	1.118375	621342.639389	0.001894	0.17
Y_R 377.433	1.138700	55438.500000	0.000888	0.08
Y_R 488.368	1.123520	48048.700000	0.001732	0.15
Y_R2 488.368	1.100193	91889.068259	0.000781	0.07
Y_R4	1.119950	43058.400000	0.001595	0.14

Sample Name: 280-123364-O-1-Asd@5

Date: 5/11/2019 5:26:32 AM

Rack:Tube: 4:14

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000768 u	ppm	0.000089	11.60	-212.393000	Y 377.433
Al (394.401 nm)	0.004472	ppm	0.000352	7.87	86.636700	Y 377.433
Al H (396.152 nm)	0.118929 u	ppm	0.000616	0.52	54.109400	Y_R 377.433
As (188.980 nm)	0.001066 u	ppm	0.003274	> 100.00	-0.130364	Y 242.219
B (249.678 nm)	0.003945	ppm	0.000177	4.48	42.068600	Y 242.219
Ba (493.408 nm)	0.014320	ppm	0.000024	0.17	3131.070000	Y_R 488.368
Be (234.861 nm)	-0.000037 u	ppm	0.000019	49.82	-4.813530	Y_R 488.368
Bi (223.061 nm)	0.003376	ppm	0.000975	28.88	-3.458910	Y 377.433
Ca (315.887 nm)	5.756788	ppm	0.001197	0.02	4688.197042	Y_R 377.433
Cd (214.439 nm)	0.000046	ppm	0.000058	> 100.00	-5.017230	Y 377.433
Co (228.615 nm)	0.000219	ppm	0.000165	75.13	-17.905200	Y 242.219
Cr (205.560 nm)	0.000195	ppm	0.000211	> 100.00	-6.769200	Y 377.433
Cu (324.754 nm)	-0.001423 u	ppm	0.000046	3.21	438.271000	Y 377.433
Fe (238.204 nm)	0.004882	ppm	0.001101	22.55	16.375490	Y_R 377.433
Fe H (259.940 nm)	0.035156 u	ppm	0.001645	4.68	22.535900	Y_R 377.433
K (766.491 nm)	0.212661	ppm	0.020802	9.78	2405.260000	Y_R2 488.368
Li (670.783 nm)	0.008941	ppm	0.003546	39.66	-2723.350000	Y_R2 488.368
Mg (279.078 nm)	2.102450	ppm	0.007317	0.35	7385.540000	Y 377.433
Mn (257.610 nm)	0.000176	ppm	0.000006	3.33	27.209000	Y 377.433
Mo (202.032 nm)	-0.000276 u	ppm	0.000144	52.12	7.967950	Y 377.433
Na (589.592 nm)	5.546980	ppm	0.003477	0.06	4996.880000	Y_R2 488.368
Na H (589.593 nm)	5.268929 u	ppm	0.007157	0.14	3531.727965	Y_R4
Ni (231.604 nm)	0.000056 u	ppm	0.001854	> 100.00	-10.153500	Y 377.433
P (213.618 nm)	0.010942	ppm	0.001641	14.99	20.815600	Y 242.219
Pb (220.353 nm)	-0.000732 u	ppm	0.000529	72.21	5.537990	Y 242.219
S (181.972 nm)	1.730921	ppm	0.019613	1.13	853.627974	Y 377.433
Sb (206.834 nm)	0.000997 u	ppm	0.003482	> 100.00	4.132190	Y 377.433
Se (196.026 nm)	0.003120	ppm	0.001728	55.40	10.578200	Y 242.219
Si (288.158 nm)	0.980167	ppm	0.002573	0.26	7055.930000	Y 377.433
Sn (189.925 nm)	-0.005127 u	ppm	0.000488	9.52	0.658763	Y 377.433
Sr (421.552 nm)	0.018705	ppm	0.000069	0.37	3106.991550	Y_R 488.368
Th (288.505 nm)	-0.005818 u	ppm	0.002316	39.81	8.988210	Y 377.433
Ti (336.122 nm)	0.000622	ppm	0.000078	12.51	-419.699000	Y 377.433
Tl (190.794 nm)	-0.000537 u	ppm	0.001306	> 100.00	-1.427740	Y 377.433
U (409.013 nm)	0.001497 u	ppm	0.005953	> 100.00	34.062700	Y 377.433
V (292.401 nm)	-0.000328 u	ppm	0.000056	16.94	-112.078000	Y 377.433
Zn (206.200 nm)	-0.000064 u	ppm	0.000378	> 100.00	2.794530	Y 377.433
Zr (343.823 nm)	0.000830	ppm	0.000017	2.02	-124.805000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.127522	21081.269222	0.003332	0.30
Y 377.433	1.129133	627319.571732	0.003764	0.33
Y_R 377.433	1.140680	55534.900000	0.004588	0.40
Y_R 488.368	1.129150	48289.600000	0.003331	0.29
Y_R2 488.368	1.108995	92624.199772	0.001665	0.15
Y_R4	1.117980	42983.000000	0.000928	0.08

Sample Name: 280-123364-O-1-B MS

Date: 5/11/2019 5:29:57 AM

Rack:Tube: 4:15

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.051623	ppm	0.000050	0.10	1386.270000	Y 377.433
Al (394.401 nm)	9.690990 o	ppm	0.015835	0.16	122107.000000	Y 377.433
Al H (396.152 nm)	9.793970	ppm	0.015787	0.16	22349.500000	Y_R 377.433
As (188.980 nm)	1.980300	ppm	0.011261	0.57	3148.050000	Y 242.219
B (249.678 nm)	0.991071	ppm	0.000684	0.07	7598.470000	Y 242.219
Ba (493.408 nm)	2.023280	ppm	0.001610	0.08	213930.000000	Y_R 488.368
Be (234.861 nm)	0.951065	ppm	0.004984	0.52	100850.000000	Y_R 488.368
Bi (223.061 nm)	1.988650	ppm	0.011629	0.58	4364.090000	Y 377.433
Ca (315.887 nm)	79.267917	ppm	0.218474	0.28	65491.733034	Y_R 377.433
Cd (214.439 nm)	0.969639	ppm	0.000551	0.06	37145.600000	Y 377.433
Co (228.615 nm)	0.943756	ppm	0.001376	0.15	23642.900000	Y 242.219
Cr (205.560 nm)	0.961611	ppm	0.004704	0.49	6648.100000	Y 377.433
Cu (324.754 nm)	0.946300	ppm	0.007889	0.83	46982.500000	Y 377.433
Fe (238.204 nm)	9.977285 o	ppm	0.029964	0.30	24947.095440	Y_R 377.433
Fe H (259.940 nm)	9.943270	ppm	0.040145	0.40	14262.800000	Y_R 377.433
K (766.491 nm)	53.277000	ppm	0.158868	0.30	58217.300000	Y_R2 488.368
Li (670.783 nm)	1.014090	ppm	0.003206	0.32	15563.000000	Y_R2 488.368
Mg (279.078 nm)	58.645200	ppm	0.008955	0.02	205525.000000	Y 377.433
Mn (257.610 nm)	0.969356	ppm	0.000978	0.10	279361.000000	Y 377.433
Mo (202.032 nm)	0.987302	ppm	0.002304	0.23	13072.300000	Y 377.433
Na (589.592 nm)	78.128500 o	ppm	0.134447	0.17	68574.100000	Y_R2 488.368
Na H (589.593 nm)	73.116763	ppm	0.378497	0.52	42855.375831	Y_R4
Ni (231.604 nm)	0.939519	ppm	0.001321	0.14	5089.800000	Y 377.433
P (213.618 nm)	19.274100	ppm	0.029254	0.15	29503.400000	Y 242.219
Pb (220.353 nm)	0.974910	ppm	0.003035	0.31	3288.230000	Y 242.219
S (181.972 nm)	18.531856	ppm	0.062983	0.34	9070.835829	Y 377.433
Sb (206.834 nm)	0.938682	ppm	0.001578	0.17	1746.280000	Y 377.433
Se (196.026 nm)	1.951330	ppm	0.003559	0.18	3129.830000	Y 242.219
Si (288.158 nm)	7.191420	ppm	0.064124	0.89	48547.100000	Y 377.433
Sn (189.925 nm)	1.973030	ppm	0.000420	0.02	3256.080000	Y 377.433
Sr (421.552 nm)	1.074536	ppm	0.001831	0.17	172668.847120	Y_R 488.368
Th (288.505 nm)	1.012810	ppm	0.003576	0.35	1702.350000	Y 377.433
Ti (336.122 nm)	0.991051	ppm	0.001262	0.13	130501.000000	Y 377.433
Tl (190.794 nm)	1.910950	ppm	0.004457	0.23	4662.390000	Y 377.433
U (409.013 nm)	2.046810	ppm	0.000698	0.03	6504.320000	Y 377.433
V (292.401 nm)	0.981815	ppm	0.001106	0.11	52646.900000	Y 377.433
Zn (206.200 nm)	0.488988	ppm	0.000603	0.12	2238.790000	Y 377.433
Zr (343.823 nm)	0.494036	ppm	0.001051	0.21	28813.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.066590	19942.032349	0.001088	0.10
Y 377.433	1.082048	601160.701436	0.000261	0.02
Y_R 377.433	1.110850	54082.500000	0.000759	0.07
Y_R 488.368	1.097810	46949.400000	0.005012	0.46
Y_R2 488.368	1.080366	90233.138155	0.003900	0.36
Y_R4	1.101090	42333.300000	0.005204	0.47

Sample Name: 280-123364-O-1-C MSD

Date: 5/11/2019 5:33:35 AM

Rack:Tube: 4:16

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.051606	ppm	0.000114	0.22	1377.900000	Y 377.433
Al (394.401 nm)	9.871540 o	ppm	0.009683	0.10	124392.000000	Y 377.433
Al H (396.152 nm)	9.962910	ppm	0.018942	0.19	22733.500000	Y_R 377.433
As (188.980 nm)	1.988750	ppm	0.002958	0.15	3161.480000	Y 242.219
B (249.678 nm)	0.943516	ppm	0.002606	0.28	7234.050000	Y 242.219
Ba (493.408 nm)	2.035760	ppm	0.000984	0.05	215239.000000	Y_R 488.368
Be (234.861 nm)	0.958075	ppm	0.003744	0.39	101592.000000	Y_R 488.368
Bi (223.061 nm)	1.883820	ppm	0.005706	0.30	4133.600000	Y 377.433
Ca (315.887 nm)	80.895971	ppm	0.114818	0.14	66838.338562	Y_R 377.433
Cd (214.439 nm)	0.973865	ppm	0.001199	0.12	37307.700000	Y 377.433
Co (228.615 nm)	0.949649	ppm	0.001535	0.16	23790.600000	Y 242.219
Cr (205.560 nm)	0.967493	ppm	0.001798	0.19	6688.820000	Y 377.433
Cu (324.754 nm)	0.948602	ppm	0.002967	0.31	47084.000000	Y 377.433
Fe (238.204 nm)	10.148485 o	ppm	0.010394	0.10	25375.092360	Y_R 377.433
Fe H (259.940 nm)	10.137600	ppm	0.001167	0.01	14542.100000	Y_R 377.433
K (766.491 nm)	54.267400	ppm	0.062382	0.11	59259.000000	Y_R2 488.368
Li (670.783 nm)	1.021000	ppm	0.002169	0.21	15688.600000	Y_R2 488.368
Mg (279.078 nm)	59.870700	ppm	0.094570	0.16	209820.000000	Y 377.433
Mn (257.610 nm)	0.974561	ppm	0.000625	0.06	280861.000000	Y 377.433
Mo (202.032 nm)	0.992767	ppm	0.000025	0.00	13144.600000	Y 377.433
Na (589.592 nm)	79.634200 o	ppm	0.032050	0.04	69886.000000	Y_R2 488.368
Na H (589.593 nm)	75.022796	ppm	0.238079	0.32	43960.085439	Y_R4
Ni (231.604 nm)	0.943030	ppm	0.001113	0.12	5108.860000	Y 377.433
P (213.618 nm)	19.286500	ppm	0.033143	0.17	29522.100000	Y 242.219
Pb (220.353 nm)	0.979298	ppm	0.000875	0.09	3302.970000	Y 242.219
S (181.972 nm)	18.823807	ppm	0.035912	0.19	9213.604439	Y 377.433
Sb (206.834 nm)	0.982179	ppm	0.002518	0.26	1827.370000	Y 377.433
Se (196.026 nm)	1.967550	ppm	0.005203	0.26	3155.760000	Y 242.219
Si (288.158 nm)	7.351120	ppm	0.011690	0.16	49613.900000	Y 377.433
Sn (189.925 nm)	1.978850	ppm	0.002759	0.14	3265.660000	Y 377.433
Sr (421.552 nm)	1.082758	ppm	0.001554	0.14	173989.202068	Y_R 488.368
Th (288.505 nm)	0.961017	ppm	0.006028	0.63	1610.980000	Y 377.433
Ti (336.122 nm)	0.995977	ppm	0.000692	0.07	131156.000000	Y 377.433
Tl (190.794 nm)	1.919450	ppm	0.002984	0.16	4683.080000	Y 377.433
U (409.013 nm)	2.056490	ppm	0.003086	0.15	6538.360000	Y 377.433
V (292.401 nm)	0.986987	ppm	0.000674	0.07	52920.100000	Y 377.433
Zn (206.200 nm)	0.464396	ppm	0.001209	0.26	2126.440000	Y 377.433
Zr (343.823 nm)	0.468575	ppm	0.000118	0.03	27319.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.064847	19909.447473	0.003727	0.35
Y 377.433	1.080824	600480.485210	0.003927	0.36
Y_R 377.433	1.110510	54066.100000	0.000513	0.05
Y_R 488.368	1.094850	46822.700000	0.001175	0.11
Y_R2 488.368	1.079135	90130.308918	0.001270	0.12
Y_R4	1.101190	42337.300000	0.004826	0.44

Sample Name: 280-123364-O-1-Apds

Date: 5/11/2019 5:37:13 AM

Rack:Tube: 4:17

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.041648	ppm	0.000649	1.56	1329.900000	Y 377.433
Al (394.401 nm)	0.967231	ppm	0.001466	0.15	12240.400000	Y 377.433
Al H (396.152 nm)	1.074790	ppm	0.000339	0.03	2253.680000	Y_R 377.433
As (188.980 nm)	0.197642	ppm	0.000949	0.48	312.544000	Y 242.219
B (249.678 nm)	0.122745	ppm	0.000900	0.73	951.588000	Y 242.219
Ba (493.408 nm)	0.172978	ppm	0.000327	0.19	19779.200000	Y_R 488.368
Be (234.861 nm)	0.047617	ppm	0.000043	0.09	5043.810000	Y_R 488.368
Bi (223.061 nm)	0.003665	ppm	0.000500	13.66	-2.600510	Y 377.433
Ca (315.887 nm)	48.193154	ppm	0.010751	0.02	39787.524068	Y_R 377.433
Cd (214.439 nm)	0.049069	ppm	0.000122	0.25	1873.560000	Y 377.433
Co (228.615 nm)	0.046107	ppm	0.000593	1.29	1132.820000	Y 242.219
Cr (205.560 nm)	0.048606	ppm	0.000189	0.39	328.315000	Y 377.433
Cu (324.754 nm)	0.046454	ppm	0.000653	1.41	2769.420000	Y 377.433
Fe (238.204 nm)	1.023569	ppm	0.002241	0.22	2563.064450	Y_R 377.433
Fe H (259.940 nm)	1.043600 u	ppm	0.000636	0.06	1471.910000	Y_R 377.433
K (766.491 nm)	22.456400	ppm	0.102959	0.46	25800.800000	Y_R2 488.368
Li (670.783 nm)	0.107781	ppm	0.002050	1.90	-925.207000	Y_R2 488.368
Mg (279.078 nm)	29.202200	ppm	0.061961	0.21	102363.000000	Y 377.433
Mn (257.610 nm)	0.048817	ppm	0.000128	0.26	14046.200000	Y 377.433
Mo (202.032 nm)	0.051357	ppm	0.000149	0.29	690.996000	Y 377.433
Na (589.592 nm)	46.538700	ppm	0.008044	0.02	40669.300000	Y_R2 488.368
Na H (589.593 nm)	45.091423 u	ppm	0.091140	0.20	26612.283861	Y_R4
Ni (231.604 nm)	0.046483	ppm	0.000733	1.58	241.994000	Y 377.433
P (213.618 nm)	1.912690	ppm	0.010784	0.56	2944.420000	Y 242.219
Pb (220.353 nm)	0.097204	ppm	0.000154	0.16	336.093000	Y 242.219
S (181.972 nm)	8.761572	ppm	0.052603	0.60	4291.667931	Y 377.433
Sb (206.834 nm)	0.096160	ppm	0.000118	0.12	181.182000	Y 377.433
Se (196.026 nm)	0.192996	ppm	0.001011	0.52	314.499000	Y 242.219
Si (288.158 nm)	9.924740	ppm	0.034043	0.34	66805.700000	Y 377.433
Sn (189.925 nm)	0.097930	ppm	0.000091	0.09	170.259000	Y 377.433
Sr (421.552 nm)	0.144953	ppm	0.000056	0.04	23381.729958	Y_R 488.368
Th (288.505 nm)	0.197779	ppm	0.001790	0.90	362.489000	Y 377.433
Ti (336.122 nm)	0.051147	ppm	0.000046	0.09	6389.360000	Y 377.433
Tl (190.794 nm)	0.194983	ppm	0.000348	0.18	474.489000	Y 377.433
U (409.013 nm)	0.516146	ppm	0.000728	0.14	1667.020000	Y 377.433
V (292.401 nm)	0.048941	ppm	0.000013	0.03	2527.090000	Y 377.433
Zn (206.200 nm)	0.197820	ppm	0.001451	0.73	907.124000	Y 377.433
Zr (343.823 nm)	0.051270	ppm	0.000042	0.08	2834.670000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.088455	20350.847861	0.004085	0.38
Y 377.433	1.096020	608922.702528	0.005064	0.46
Y_R 377.433	1.111190	54099.200000	0.000229	0.02
Y_R 488.368	1.099060	47002.500000	0.001828	0.17
Y_R2 488.368	1.095728	91516.170220	0.000581	0.05
Y_R4	1.106590	42544.900000	0.001165	0.11

Sample Name: CCVH-5690583

Date: 5/11/2019 5:40:47 AM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000560 u	ppm	0.000724	> 100.00	-341.018000	Y 377.433
Al (394.401 nm)	47.846100 o	ppm	0.028735	0.06	601279.000000	Y 377.433
Al H (396.152 nm)	48.083600	ppm	0.053828	0.11	108016.000000	Y_R 377.433
As (188.980 nm)	0.002920	ppm	0.000925	31.69	-1.556120	Y 242.219
B (249.678 nm)	0.007045	ppm	0.000191	2.71	36.473100	Y 242.219
Ba (493.408 nm)	0.001384	ppm	0.000145	10.51	1813.450000	Y_R 488.368
Be (234.861 nm)	0.002497	ppm	0.000130	5.23	-164.986000	Y_R 488.368
Bi (223.061 nm)	0.948254	ppm	0.001975	0.21	2082.600000	Y 377.433
Ca (315.887 nm)	0.014108	ppm	0.003679	26.08	-49.239744	Y_R 377.433
Cd (214.439 nm)	0.000858	ppm	0.000019	2.18	46.002200	Y 377.433
Co (228.615 nm)	0.004173	ppm	0.000291	6.97	81.099600	Y 242.219
Cr (205.560 nm)	0.001321	ppm	0.000401	30.36	-0.294863	Y 377.433
Cu (324.754 nm)	0.005228	ppm	0.000418	7.99	1165.850000	Y 377.433
Fe (238.204 nm)	48.339635 o	ppm	0.068146	0.14	120851.866825	Y_R 377.433
Fe H (259.940 nm)	48.056800	ppm	0.046337	0.10	69041.000000	Y_R 377.433
K (766.491 nm)	0.444772	ppm	0.006982	1.57	2649.390000	Y_R2 488.368
Li (670.783 nm)	0.009214	ppm	0.001764	19.15	-2718.390000	Y_R2 488.368
Mg (279.078 nm)	0.015393	ppm	0.001421	9.23	-157.169000	Y 377.433
Mn (257.610 nm)	0.001324	ppm	0.000023	1.75	358.150000	Y 377.433
Mo (202.032 nm)	0.000641	ppm	0.000357	55.77	20.089500	Y 377.433
Na (589.592 nm)	238.490000 o	ppm	0.273387	0.11	207493.000000	Y_R2 488.368
Na H (589.593 nm)	238.511717	ppm	0.463505	0.19	138715.958196	Y_R4
Ni (231.604 nm)	0.002671	ppm	0.000265	9.92	4.035670	Y 377.433
P (213.618 nm)	-0.015857 u	ppm	0.001120	7.06	-27.358600	Y 242.219
Pb (220.353 nm)	0.006583	ppm	0.000910	13.83	45.882800	Y 242.219
S (181.972 nm)	4.784908	ppm	0.032789	0.69	2345.769087	Y 377.433
Sb (206.834 nm)	0.001840	ppm	0.001182	64.28	9.043540	Y 377.433
Se (196.026 nm)	0.002313	ppm	0.000826	35.72	-3.663680	Y 242.219
Si (288.158 nm)	0.027209	ppm	0.001619	5.95	690.163000	Y 377.433
Sn (189.925 nm)	-0.003511 u	ppm	0.000776	22.10	3.318750	Y 377.433
Sr (421.552 nm)	0.000852	ppm	0.000046	5.44	247.472649	Y_R 488.368
Th (288.505 nm)	4.852000	ppm	0.006901	0.14	8572.060000	Y 377.433
Ti (336.122 nm)	0.002046	ppm	0.000056	2.72	-251.089000	Y 377.433
Tl (190.794 nm)	0.000373 u	ppm	0.000914	> 100.00	-3.793020	Y 377.433
U (409.013 nm)	9.661770	ppm	0.013308	0.14	30927.400000	Y 377.433
V (292.401 nm)	-0.001222 u	ppm	0.000350	28.64	-157.614000	Y 377.433
Zn (206.200 nm)	0.002268	ppm	0.000387	17.08	20.147900	Y 377.433
Zr (343.823 nm)	-0.003033 u	ppm	0.000033	1.08	-351.473000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.071498	20033.788624	0.000022	0.00
Y 377.433	1.078661	599278.420714	0.000614	0.06
Y_R 377.433	1.108910	53988.300000	0.006162	0.56
Y_R 488.368	1.096180	46879.400000	0.004601	0.42
Y_R2 488.368	1.083428	90488.825411	0.007039	0.65
Y_R4	1.119330	43034.900000	0.002651	0.24

Sample Name: CCV-5690581

Date: 5/11/2019 5:44:28 AM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.475468	ppm	0.000268	0.06	17191.000000	Y 377.433
Al (394.401 nm)	0.483729	ppm	0.000120	0.02	6224.140000	Y 377.433
Al H (396.152 nm)	0.528296 u	ppm	0.008628	1.63	1212.590000	Y_R 377.433
As (188.980 nm)	0.955988	ppm	0.006819	0.71	1519.110000	Y 242.219
B (249.678 nm)	0.466631	ppm	0.001399	0.30	3585.260000	Y 242.219
Ba (493.408 nm)	0.474255	ppm	0.000355	0.07	51392.000000	Y_R 488.368
Be (234.861 nm)	0.470441	ppm	0.002518	0.54	49906.500000	Y_R 488.368
Bi (223.061 nm)	0.005413	ppm	0.000546	10.08	1.541760	Y 377.433
Ca (315.887 nm)	5.011823	ppm	0.006589	0.13	4072.169916	Y_R 377.433
Cd (214.439 nm)	0.489328	ppm	0.000347	0.07	18741.100000	Y 377.433
Co (228.615 nm)	0.484077	ppm	0.000563	0.12	12114.400000	Y 242.219
Cr (205.560 nm)	0.483743	ppm	0.000148	0.03	3340.480000	Y 377.433
Cu (324.754 nm)	0.474111	ppm	0.001642	0.35	23782.100000	Y 377.433
Fe (238.204 nm)	2.458243	ppm	0.009254	0.38	6149.708245	Y_R 377.433
Fe H (259.940 nm)	2.474090 u	ppm	0.003209	0.13	3527.860000	Y_R 377.433
K (766.491 nm)	48.372600	ppm	0.027808	0.06	53058.900000	Y_R2 488.368
Li (670.783 nm)	0.990348	ppm	0.002092	0.21	15131.000000	Y_R2 488.368
Mg (279.078 nm)	19.169200	ppm	0.009225	0.05	67203.000000	Y 377.433
Mn (257.610 nm)	0.479486	ppm	0.000281	0.06	138172.000000	Y 377.433
Mo (202.032 nm)	0.483182	ppm	0.000550	0.11	6403.480000	Y 377.433
Na (589.592 nm)	24.870500	ppm	0.084936	0.34	21905.100000	Y_R2 488.368
Na H (589.593 nm)	23.984046 u	ppm	0.026032	0.11	14378.746166	Y_R4
Ni (231.604 nm)	0.485967	ppm	0.000727	0.15	2627.630000	Y 377.433
P (213.618 nm)	0.933709	ppm	0.003699	0.40	1308.720000	Y 242.219
Pb (220.353 nm)	0.974295	ppm	0.002015	0.21	3285.600000	Y 242.219
S (181.972 nm)	0.005409	ppm	0.002397	44.32	11.942814	Y 377.433
Sb (206.834 nm)	0.962903	ppm	0.000120	0.01	1793.620000	Y 377.433
Se (196.026 nm)	0.961714	ppm	0.000896	0.09	1546.030000	Y 242.219
Si (288.158 nm)	4.733890	ppm	0.001826	0.04	32130.800000	Y 377.433
Sn (189.925 nm)	0.979727	ppm	0.000595	0.06	1621.420000	Y 377.433
Sr (421.552 nm)	0.476959	ppm	0.000408	0.09	76700.233933	Y_R 488.368
Th (288.505 nm)	0.008600	ppm	0.001415	16.45	-14.765400	Y 377.433
Ti (336.122 nm)	0.480729	ppm	0.000092	0.02	62920.000000	Y 377.433
Tl (190.794 nm)	0.974973	ppm	0.002721	0.28	2380.750000	Y 377.433
U (409.013 nm)	0.012190	ppm	0.001514	12.42	10.684200	Y 377.433
V (292.401 nm)	0.478762	ppm	0.000003	0.00	25623.900000	Y 377.433
Zn (206.200 nm)	0.487414	ppm	0.000654	0.13	2230.560000	Y 377.433
Zr (343.823 nm)	0.480948	ppm	0.000370	0.08	28045.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.101806	20600.456916	0.002499	0.23
Y 377.433	1.108250	615717.763343	0.001860	0.17
Y_R 377.433	1.119950	54525.600000	0.004811	0.43
Y_R 488.368	1.107690	47371.800000	0.002590	0.23
Y_R2 488.368	1.094284	91395.560569	0.007561	0.69
Y_R4	1.109120	42642.100000	0.004458	0.40

Sample Name: CCB

Date: 5/11/2019 5:48:01 AM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000535 u	ppm	0.000166	31.06	-203.522000	Y 377.433
Al (394.401 nm)	0.003375	ppm	0.000426	12.62	66.701800	Y 377.433
Al H (396.152 nm)	0.103967 Zu	ppm	0.006928	6.66	13.917500 Z	Y_R 377.433
As (188.980 nm)	0.000883 u	ppm	0.001483	> 100.00	-0.420096	Y 242.219
B (249.678 nm)	0.000092 u	ppm	0.000806	> 100.00	12.551200	Y 242.219
Ba (493.408 nm)	-0.001323 u	ppm	0.000180	13.60	1489.760000	Y_R 488.368
Be (234.861 nm)	0.000028	ppm	0.000011	38.82	2.221450	Y_R 488.368
Bi (223.061 nm)	0.002221	ppm	0.000812	36.55	-5.999700	Y 377.433
Ca (315.887 nm)	-0.002305 u	ppm	0.006321	> 100.00	-75.150321	Y_R 377.433
Cd (214.439 nm)	0.000092	ppm	0.000083	89.90	-3.268470	Y 377.433
Co (228.615 nm)	0.000140	ppm	0.000006	4.12	-19.913800	Y 242.219
Cr (205.560 nm)	-0.000010 u	ppm	0.000266	> 100.00	-8.189480	Y 377.433
Cu (324.754 nm)	-0.001282 u	ppm	0.000206	16.05	449.248000	Y 377.433
Fe (238.204 nm)	0.000208 u	ppm	0.000960	> 100.00	4.690819	Y_R 377.433
Fe H (259.940 nm)	0.029047 u	ppm	0.000865	2.98	13.755000	Y_R 377.433
K (766.491 nm)	-0.331892 u	ppm	0.081878	24.67	1832.510000	Y_R2 488.368
Li (670.783 nm)	0.010627 Z	ppm	0.001354	12.75	-2692.680000 Z	Y_R2 488.368
Mg (279.078 nm)	0.000481 u	ppm	0.002707	> 100.00	18.026700	Y 377.433
Mn (257.610 nm)	0.000088	ppm	0.000006	6.59	1.729720	Y 377.433
Mo (202.032 nm)	0.000183 u	ppm	0.000392	> 100.00	14.032600	Y 377.433
Na (589.592 nm)	0.067303	ppm	0.091300	> 100.00	229.489000	Y_R2 488.368
Na H (589.593 nm)	0.037126 u	ppm	0.018860	50.80	499.449037	Y_R4
Ni (231.604 nm)	0.000281 u	ppm	0.001238	> 100.00	-8.930510	Y 377.433
P (213.618 nm)	-0.003816 u	ppm	0.000771	20.20	-1.973110	Y 242.219
Pb (220.353 nm)	0.000455	ppm	0.000513	> 100.00	9.527420	Y 242.219
S (181.972 nm)	-0.003237 u	ppm	0.006269	> 100.00	5.893521	Y 377.433
Sb (206.834 nm)	-0.001734 u	ppm	0.004537	> 100.00	-0.955498	Y 377.433
Se (196.026 nm)	0.001926	ppm	0.001106	57.39	8.667940	Y 242.219
Si (288.158 nm)	-0.006213 u	ppm	0.000118	1.90	466.905000	Y 377.433
Sn (189.925 nm)	-0.003447 u	ppm	0.000352	10.21	3.424070	Y 377.433
Sr (421.552 nm)	-0.000063 u	ppm	0.000058	92.75	92.913577	Y_R 488.368
Th (288.505 nm)	-0.007067 u	ppm	0.002845	40.26	6.962780	Y 377.433
Ti (336.122 nm)	0.000700	ppm	0.000090	12.83	-428.628000	Y 377.433
Tl (190.794 nm)	0.000997	ppm	0.000273	27.38	2.555280	Y 377.433
U (409.013 nm)	-0.003857 u	ppm	0.005152	> 100.00	17.662400	Y 377.433
V (292.401 nm)	-0.000430 u	ppm	0.000354	82.25	-117.299000	Y 377.433
Zn (206.200 nm)	0.000043 u	ppm	0.000366	> 100.00	3.284060	Y 377.433
Zr (343.823 nm)	0.000723	ppm	0.000105	14.54	-131.101000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.132254	21169.751084	0.000794	0.07
Y 377.433	1.132641	629268.597706	0.000166	0.01
Y_R 377.433	1.143950	55693.900000	0.001073	0.09
Y_R 488.368	1.132820	48446.500000	0.005677	0.50
Y_R2 488.368	1.115262	93147.663112	0.003532	0.32
Y_R4	1.128730	43396.200000	0.003342	0.30

Sample Name: CCVL-5695588

Date: 5/11/2019 5:51:15 AM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.008789	ppm	0.000372	4.23	136.392000	Y 377.433
Al (394.401 nm)	0.100119	ppm	0.001068	1.07	1289.140000	Y 377.433
Al H (396.152 nm)	0.215630 u	ppm	0.000206	0.10	270.559000	Y_R 377.433
As (188.980 nm)	0.014721	ppm	0.000688	4.67	21.588600	Y 242.219
B (249.678 nm)	0.091775	ppm	0.000200	0.22	714.883000	Y 242.219
Ba (493.408 nm)	0.008222	ppm	0.000136	1.65	2491.380000	Y_R 488.368
Be (234.861 nm)	0.000927	ppm	0.000027	2.92	96.709000	Y_R 488.368
Bi (223.061 nm)	0.092737	ppm	0.000603	0.65	193.074000	Y 377.433
Ca (315.887 nm)	0.207530	ppm	0.002311	1.11	98.432366	Y_R 377.433
Cd (214.439 nm)	0.005090	ppm	0.000091	1.79	188.276000	Y 377.433
Co (228.615 nm)	0.010277	ppm	0.000022	0.22	234.251000	Y 242.219
Cr (205.560 nm)	0.009903	ppm	0.000069	0.70	60.332000	Y 377.433
Cu (324.754 nm)	0.013481	ppm	0.000224	1.66	1173.060000	Y 377.433
Fe (238.204 nm)	0.099856	ppm	0.002653	2.66	253.807466	Y_R 377.433
Fe H (259.940 nm)	0.131799 u	ppm	0.002710	2.06	161.435000	Y_R 377.433
K (766.491 nm)	2.730480	ppm	0.056666	2.08	5053.450000	Y_R2 488.368
Li (670.783 nm)	0.029060 Q	ppm	0.002385	8.21	-2357.350000 Q	Y_R2 488.368
Mg (279.078 nm)	0.200436	ppm	0.001097	0.55	717.831000	Y 377.433
Mn (257.610 nm)	0.010230	ppm	0.000031	0.30	2925.020000	Y 377.433
Mo (202.032 nm)	0.018980	ppm	0.000475	2.50	262.689000	Y 377.433
Na (589.592 nm)	1.095930	ppm	0.032448	2.96	1125.980000	Y_R2 488.368
Na H (589.593 nm)	0.841027 u	ppm	0.016135	1.92	965.378330	Y_R4
Ni (231.604 nm)	0.041402	ppm	0.000570	1.38	214.213000	Y 377.433
P (213.618 nm)	2.669310	ppm	0.025561	0.96	4123.200000	Y 242.219
Pb (220.353 nm)	0.009631	ppm	0.000885	9.18	40.464600	Y 242.219
S (181.972 nm)	0.091978	ppm	0.003781	4.11	52.462369	Y 377.433
Sb (206.834 nm)	0.015264	ppm	0.000911	5.97	30.562600	Y 377.433
Se (196.026 nm)	0.022892	ppm	0.002921	12.76	42.238400	Y 242.219
Si (288.158 nm)	0.491141	ppm	0.005949	1.21	3789.230000	Y 377.433
Sn (189.925 nm)	0.098263	ppm	0.002059	2.10	170.807000	Y 377.433
Sr (421.552 nm)	0.008571	ppm	0.000133	1.55	1479.546796	Y_R 488.368
Th (288.505 nm)	0.008259 Q	ppm	0.000472	5.72	33.248800 Q	Y 377.433
Ti (336.122 nm)	0.010270	ppm	0.000217	2.12	834.722000	Y 377.433
Tl (190.794 nm)	0.015019	ppm	0.001030	6.86	36.725700	Y 377.433
U (409.013 nm)	0.051760	ppm	0.002251	4.35	194.221000	Y 377.433
V (292.401 nm)	0.009214	ppm	0.000235	2.55	398.156000	Y 377.433
Zn (206.200 nm)	0.020922	ppm	0.000065	0.31	98.697600	Y 377.433
Zr (343.823 nm)	0.010314 Q	ppm	0.000209	2.03	431.606000 Q	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.142365	21358.793853	0.000833	0.07
Y 377.433	1.143952	635553.109027	0.001015	0.09
Y_R 377.433	1.156390	56299.600000	0.002656	0.23
Y_R 488.368	1.142290	48851.300000	0.004808	0.42
Y_R2 488.368	1.133707	94688.195318	0.003042	0.27
Y_R4	1.129800	43437.400000	0.000184	0.02

Sample Name: 280-123364-O-2-A

Date: 5/11/2019 5:54:44 AM

Rack:Tube: 4:18

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000229 u	ppm	0.000149	64.96	-192.648000	Y 377.433
Al (394.401 nm)	0.012567	ppm	0.000673	5.35	211.702000	Y 377.433
Al H (396.152 nm)	0.104158 u	ppm	0.001984	1.91	49.953500	Y_R 377.433
As (188.980 nm)	-0.001862 u	ppm	0.000524	28.12	-4.789600	Y 242.219
B (249.678 nm)	0.023951	ppm	0.000604	2.52	195.319000	Y 242.219
Ba (493.408 nm)	0.080411	ppm	0.000207	0.26	10065.700000	Y_R 488.368
Be (234.861 nm)	-0.000045 u	ppm	0.000073	> 100.00	-5.960560	Y_R 488.368
Bi (223.061 nm)	-0.000583 u	ppm	0.001403	> 100.00	-12.153100	Y 377.433
Ca (315.887 nm)	29.692345	ppm	0.097007	0.33	24485.270252	Y_R 377.433
Cd (214.439 nm)	0.000129	ppm	0.000077	59.46	-1.840460	Y 377.433
Co (228.615 nm)	-0.000015 u	ppm	0.000123	> 100.00	-23.773900	Y 242.219
Cr (205.560 nm)	0.001100	ppm	0.000180	16.40	-0.494918	Y 377.433
Cu (324.754 nm)	-0.001505 u	ppm	0.000474	31.51	419.691000	Y 377.433
Fe (238.204 nm)	0.037318	ppm	0.002190	5.87	97.463754	Y_R 377.433
Fe H (259.940 nm)	0.067106 u	ppm	0.000046	0.07	68.455000	Y_R 377.433
K (766.491 nm)	2.740870	ppm	0.139932	5.11	5064.380000	Y_R2 488.368
Li (670.783 nm)	0.008633	ppm	0.001396	16.17	-2728.970000	Y_R2 488.368
Mg (279.078 nm)	10.631800	ppm	0.015014	0.14	37281.200000	Y 377.433
Mn (257.610 nm)	0.001030	ppm	0.000028	2.69	273.225000	Y 377.433
Mo (202.032 nm)	-0.000060 u	ppm	0.000036	59.84	10.821000	Y 377.433
Na (589.592 nm)	27.792300	ppm	0.136697	0.49	24350.700000	Y_R2 488.368
Na H (589.593 nm)	26.673162 u	ppm	0.036351	0.14	15937.319533	Y_R4
Ni (231.604 nm)	-0.000365 u	ppm	0.000100	27.48	-12.441300	Y 377.433
P (213.618 nm)	0.072929	ppm	0.000593	0.81	116.511000	Y 242.219
Pb (220.353 nm)	0.001948	ppm	0.001685	86.46	14.601300	Y 242.219
S (181.972 nm)	9.010282	ppm	0.020872	0.23	4412.094439	Y 377.433
Sb (206.834 nm)	-0.003641 u	ppm	0.000857	23.54	-4.497070	Y 377.433
Se (196.026 nm)	0.001622	ppm	0.000666	41.05	8.171020	Y 242.219
Si (288.158 nm)	5.174200	ppm	0.024138	0.47	35072.100000	Y 377.433
Sn (189.925 nm)	-0.002701 u	ppm	0.000906	33.53	4.651020	Y 377.433
Sr (421.552 nm)	0.100802	ppm	0.000001	0.00	16291.192895	Y_R 488.368
Th (288.505 nm)	-0.006950 u	ppm	0.005141	73.97	6.544330	Y 377.433
Ti (336.122 nm)	0.000357	ppm	0.000102	28.70	-375.442000	Y 377.433
Tl (190.794 nm)	0.000873 u	ppm	0.001578	> 100.00	1.052720	Y 377.433
U (409.013 nm)	0.010015	ppm	0.000407	4.07	58.257600	Y 377.433
V (292.401 nm)	0.000004 u	ppm	0.000066	> 100.00	-95.384900	Y 377.433
Zn (206.200 nm)	0.001320	ppm	0.000937	70.95	9.125240	Y 377.433
Zr (343.823 nm)	0.000650	ppm	0.000158	24.26	-135.411000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.107726	20711.139699	0.001241	0.11
Y 377.433	1.112493	618075.083739	0.001366	0.12
Y_R 377.433	1.124430	54743.700000	0.002725	0.24
Y_R 488.368	1.112870	47593.300000	0.000069	0.01
Y_R2 488.368	1.097694	91680.384445	0.000841	0.08
Y_R4	1.113750	42820.200000	0.005536	0.50

Sample Name: 280-123364-O-3-A

Date: 5/11/2019 5:58:13 AM

Rack:Tube: 4:19

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000308 u	ppm	0.000005	1.54	-195.873000	Y 377.433
Al (394.401 nm)	0.010120	ppm	0.001138	11.24	180.881000	Y 377.433
Al H (396.152 nm)	0.100018 u	ppm	0.008746	8.74	39.088500	Y_R 377.433
As (188.980 nm)	0.001567	ppm	0.001773	> 100.00	0.666184	Y 242.219
B (249.678 nm)	0.022489	ppm	0.000149	0.66	184.133000	Y 242.219
Ba (493.408 nm)	0.077451	ppm	0.000489	0.63	9755.140000	Y_R 488.368
Be (234.861 nm)	-0.000009 u	ppm	0.000018	> 100.00	-1.795730	Y_R 488.368
Bi (223.061 nm)	0.003087	ppm	0.000822	26.63	-4.088250	Y 377.433
Ca (315.887 nm)	28.493099	ppm	0.057344	0.20	23493.376510	Y_R 377.433
Cd (214.439 nm)	0.000074 u	ppm	0.000117	> 100.00	-3.958280	Y 377.433
Co (228.615 nm)	-0.000009 u	ppm	0.000004	41.99	-23.629500	Y 242.219
Cr (205.560 nm)	0.000881	ppm	0.000063	7.15	-2.012100	Y 377.433
Cu (324.754 nm)	-0.001291 u	ppm	0.000067	5.22	429.801000	Y 377.433
Fe (238.204 nm)	0.010010	ppm	0.000439	4.39	29.196772	Y_R 377.433
Fe H (259.940 nm)	0.033234 u	ppm	0.002112	6.36	19.773600	Y_R 377.433
K (766.491 nm)	2.590540	ppm	0.109331	4.22	4906.260000	Y_R2 488.368
Li (670.783 nm)	0.011388	ppm	0.001530	13.44	-2678.840000	Y_R2 488.368
Mg (279.078 nm)	10.209200	ppm	0.001595	0.02	35800.100000	Y 377.433
Mn (257.610 nm)	0.000673	ppm	0.000007	1.03	170.435000	Y 377.433
Mo (202.032 nm)	-0.000405 u	ppm	0.000262	64.80	6.260570	Y 377.433
Na (589.592 nm)	26.781900	ppm	0.013473	0.05	23471.600000	Y_R2 488.368
Na H (589.593 nm)	25.604984 u	ppm	0.102379	0.40	15318.218897	Y_R4
Ni (231.604 nm)	-0.000137 u	ppm	0.000688	> 100.00	-11.201400	Y 377.433
P (213.618 nm)	0.072044	ppm	0.000891	1.24	115.078000	Y 242.219
Pb (220.353 nm)	0.001393	ppm	0.000365	26.19	12.728400	Y 242.219
S (181.972 nm)	8.645955	ppm	0.015426	0.18	4234.019449	Y 377.433
Sb (206.834 nm)	-0.001876 u	ppm	0.000697	37.18	-1.212010	Y 377.433
Se (196.026 nm)	0.003104	ppm	0.002978	95.94	10.552100	Y 242.219
Si (288.158 nm)	4.985250	ppm	0.019597	0.39	33809.900000	Y 377.433
Sn (189.925 nm)	-0.002486 u	ppm	0.000828	33.29	5.005030	Y 377.433
Sr (421.552 nm)	0.096620	ppm	0.000135	0.14	15619.580572	Y_R 488.368
Th (288.505 nm)	-0.010515 u	ppm	0.000150	1.43	0.213442	Y 377.433
Ti (336.122 nm)	0.000480	ppm	0.000044	9.17	-361.532000	Y 377.433
Tl (190.794 nm)	0.001419	ppm	0.001233	86.88	2.419760	Y 377.433
U (409.013 nm)	0.015179	ppm	0.009174	60.44	74.831600	Y 377.433
V (292.401 nm)	0.000426	ppm	0.000003	0.77	-72.943000	Y 377.433
Zn (206.200 nm)	0.001438	ppm	0.000228	15.88	9.659430	Y 377.433
Zr (343.823 nm)	0.000648	ppm	0.000047	7.25	-135.481000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.110833	20769.233297	0.001216	0.11
Y 377.433	1.117186	620682.332373	0.000057	0.01
Y_R 377.433	1.134570	55237.400000	0.001145	0.10
Y_R 488.368	1.120220	47907.600000	0.001221	0.11
Y_R2 488.368	1.094263	91393.803605	0.001801	0.16
Y_R4	1.121470	43117.100000	0.007408	0.66

Sample Name: MB 280-456840/1-B

Date: 5/11/2019 6:01:44 AM

Rack:Tube: 4:20

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000462 u	ppm	0.000142	30.70	-200.945000	Y 377.433
Al (394.401 nm)	0.006901	ppm	0.000595	8.62	111.120000	Y 377.433
Al H (396.152 nm)	0.108303 u	ppm	0.003960	3.66	23.620500	Y_R 377.433
As (188.980 nm)	0.000234 u	ppm	0.002387	> 100.00	-1.454010	Y 242.219
B (249.678 nm)	-0.000760 u	ppm	0.001081	> 100.00	5.985610	Y 242.219
Ba (493.408 nm)	-0.001736 u	ppm	0.000146	8.43	1446.470000	Y_R 488.368
Be (234.861 nm)	-0.000054 u	ppm	0.000028	51.71	-7.169570	Y_R 488.368
Bi (223.061 nm)	0.001143	ppm	0.000683	59.74	-8.358230	Y 377.433
Ca (315.887 nm)	0.023521	ppm	0.003337	14.19	-53.789775	Y_R 377.433
Cd (214.439 nm)	0.000063	ppm	0.000073	> 100.00	-4.357450	Y 377.433
Co (228.615 nm)	0.000112	ppm	0.000064	57.46	-20.597600	Y 242.219
Cr (205.560 nm)	0.000383	ppm	0.000244	63.63	-5.462890	Y 377.433
Cu (324.754 nm)	-0.001449 u	ppm	0.000280	19.35	440.964000	Y 377.433
Fe (238.204 nm)	0.073880	ppm	0.001905	2.58	188.867705	Y_R 377.433
Fe H (259.940 nm)	0.109847 u	ppm	0.000524	0.48	129.884000	Y_R 377.433
K (766.491 nm)	-0.419327 u	ppm	0.035170	8.39	1740.550000	Y_R2 488.368
Li (670.783 nm)	0.011927	ppm	0.000866	7.26	-2669.040000	Y_R2 488.368
Mg (279.078 nm)	-0.000026 u	ppm	0.001760	> 100.00	16.136500	Y 377.433
Mn (257.610 nm)	0.000733	ppm	0.000021	2.87	187.662000	Y 377.433
Mo (202.032 nm)	-0.000047 u	ppm	0.000061	> 100.00	10.987000	Y 377.433
Na (589.592 nm)	0.053696	ppm	0.010503	19.56	217.553000	Y_R2 488.368
Na H (589.593 nm)	-0.188267 u	ppm	0.007691	4.09	368.814558	Y_R4
Ni (231.604 nm)	-0.000140 u	ppm	0.000026	18.52	-11.218500	Y 377.433
P (213.618 nm)	-0.003592 u	ppm	0.001162	32.35	-1.646440	Y 242.219
Pb (220.353 nm)	-0.000713 u	ppm	0.000311	43.54	5.595890	Y 242.219
S (181.972 nm)	0.009989	ppm	0.001031	10.32	12.359333	Y 377.433
Sb (206.834 nm)	-0.000975 u	ppm	0.001684	> 100.00	0.470936	Y 377.433
Se (196.026 nm)	0.001862 u	ppm	0.003675	> 100.00	8.546080	Y 242.219
Si (288.158 nm)	-0.003193 u	ppm	0.000214	6.70	487.079000	Y 377.433
Sn (189.925 nm)	-0.003636 u	ppm	0.000932	25.64	3.113130	Y 377.433
Sr (421.552 nm)	-0.000108 u	ppm	0.000065	59.80	85.617105	Y_R 488.368
Th (288.505 nm)	-0.003402 u	ppm	0.002613	76.81	13.384900	Y 377.433
Ti (336.122 nm)	0.000814	ppm	0.000055	6.79	-413.486000	Y 377.433
Tl (190.794 nm)	0.001495	ppm	0.000410	27.43	3.764740	Y 377.433
U (409.013 nm)	-0.001477 u	ppm	0.001258	85.21	25.328300	Y 377.433
V (292.401 nm)	-0.000474 u	ppm	0.000106	22.34	-119.824000	Y 377.433
Zn (206.200 nm)	0.001973	ppm	0.000046	2.31	12.114500	Y 377.433
Zr (343.823 nm)	0.000646	ppm	0.000170	26.28	-135.593000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.136058	21240.881059	0.000390	0.03
Y 377.433	1.137222	631813.594794	0.001085	0.10
Y_R 377.433	1.149630	55970.400000	0.000412	0.04
Y_R 488.368	1.138460	48687.600000	0.000220	0.02
Y_R2 488.368	1.117470	93332.074379	0.008749	0.78
Y_R4	1.127390	43344.700000	0.004671	0.41

Sample Name: LCS 280-456840/2-B

Date: 5/11/2019 6:05:14 AM

Rack:Tube: 4:21

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.051012	ppm	0.000143	0.28	1360.770000	Y 377.433
Al (394.401 nm)	9.532590 o	ppm	0.000303	0.00	120092.000000	Y 377.433
Al H (396.152 nm)	9.618500	ppm	0.008169	0.08	21922.400000	Y_R 377.433
As (188.980 nm)	1.986320	ppm	0.001377	0.07	3157.650000	Y 242.219
B (249.678 nm)	0.946826	ppm	0.000836	0.09	7259.590000	Y 242.219
Ba (493.408 nm)	1.956470	ppm	0.002644	0.14	206920.000000	Y_R 488.368
Be (234.861 nm)	0.962286	ppm	0.000657	0.07	102042.000000	Y_R 488.368
Bi (223.061 nm)	1.971270	ppm	0.000196	0.01	4325.840000	Y 377.433
Ca (315.887 nm)	49.501858	ppm	0.031282	0.06	40872.202436	Y_R 377.433
Cd (214.439 nm)	0.982426	ppm	0.001993	0.20	37635.500000	Y 377.433
Co (228.615 nm)	0.956500	ppm	0.001817	0.19	23962.100000	Y 242.219
Cr (205.560 nm)	0.970805	ppm	0.003323	0.34	6711.750000	Y 377.433
Cu (324.754 nm)	0.946446	ppm	0.001740	0.18	47006.400000	Y 377.433
Fe (238.204 nm)	9.832374 o	ppm	0.010465	0.11	24584.822058	Y_R 377.433
Fe H (259.940 nm)	9.794880	ppm	0.015184	0.16	14049.600000	Y_R 377.433
K (766.491 nm)	48.762200	ppm	0.029681	0.06	53468.700000	Y_R2 488.368
Li (670.783 nm)	1.015580	ppm	0.004952	0.49	15590.000000	Y_R2 488.368
Mg (279.078 nm)	47.439100	ppm	0.042522	0.09	166248.000000	Y 377.433
Mn (257.610 nm)	0.979996	ppm	0.000187	0.02	282427.000000	Y 377.433
Mo (202.032 nm)	0.992093	ppm	0.000597	0.06	13135.700000	Y 377.433
Na (589.592 nm)	49.522600	ppm	0.113169	0.23	43691.200000	Y_R2 488.368
Na H (589.593 nm)	44.934554 u	ppm	0.205111	0.46	26521.365240	Y_R4
Ni (231.604 nm)	0.953599	ppm	0.002494	0.26	5166.240000	Y 377.433
P (213.618 nm)	19.095100	ppm	0.031855	0.17	29227.300000	Y 242.219
Pb (220.353 nm)	0.988235	ppm	0.002994	0.30	3333.060000	Y 242.219
S (181.972 nm)	9.494942	ppm	0.019727	0.21	4653.198414	Y 377.433
Sb (206.834 nm)	0.996248	ppm	0.003577	0.36	1853.550000	Y 377.433
Se (196.026 nm)	1.973000	ppm	0.008580	0.43	3164.600000	Y 242.219
Si (288.158 nm)	2.036450	ppm	0.007977	0.39	14111.900000	Y 377.433
Sn (189.925 nm)	1.982630	ppm	0.004018	0.20	3271.880000	Y 377.433
Sr (421.552 nm)	0.979687	ppm	0.001413	0.14	157436.503749	Y_R 488.368
Th (288.505 nm)	0.999062	ppm	0.002818	0.28	1678.550000	Y 377.433
Ti (336.122 nm)	0.997352	ppm	0.000242	0.02	131231.000000	Y 377.433
Tl (190.794 nm)	1.945310	ppm	0.000796	0.04	4747.650000	Y 377.433
U (409.013 nm)	2.023000	ppm	0.001221	0.06	6432.960000	Y 377.433
V (292.401 nm)	0.985702	ppm	0.000076	0.01	52854.600000	Y 377.433
Zn (206.200 nm)	0.485122	ppm	0.002039	0.42	2221.100000	Y 377.433
Zr (343.823 nm)	0.486408	ppm	0.000266	0.05	28365.600000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.087780	20338.221126	0.001689	0.16
Y 377.433	1.101480	611956.392595	0.002056	0.19
Y_R 377.433	1.120670	54560.600000	0.001290	0.12
Y_R 488.368	1.109500	47449.100000	0.002522	0.23
Y_R2 488.368	1.088723	90931.082063	0.003045	0.28
Y_R4	1.117530	42965.400000	0.006131	0.55

Sample Name: 280-123143-D-1-B

Date: 5/11/2019 6:08:52 AM

Rack:Tube: 4:22

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000227 u	ppm	0.000306	> 100.00	-192.728000	Y 377.433
Al (394.401 nm)	0.008570	ppm	0.000231	2.69	166.880000	Y 377.433
Al H (396.152 nm)	0.086569 u	ppm	0.000224	0.26	20.128300	Y_R 377.433
As (188.980 nm)	0.002204	ppm	0.000982	44.56	1.681200	Y 242.219
B (249.678 nm)	0.009768	ppm	0.000899	9.20	86.672800	Y 242.219
Ba (493.408 nm)	0.029678	ppm	0.000020	0.07	4742.520000	Y_R 488.368
Be (234.861 nm)	-0.000033 u	ppm	0.000015	45.84	-4.497110	Y_R 488.368
Bi (223.061 nm)	0.000189 u	ppm	0.001012	> 100.00	-10.465100	Y 377.433
Ca (315.887 nm)	29.260896	ppm	0.007201	0.02	24128.418551	Y_R 377.433
Cd (214.439 nm)	0.000127	ppm	0.000038	29.64	-1.915760	Y 377.433
Co (228.615 nm)	0.000158	ppm	0.000012	7.75	-19.437500	Y 242.219
Cr (205.560 nm)	0.001575	ppm	0.000316	20.04	2.789450	Y 377.433
Cu (324.754 nm)	-0.000976 u	ppm	0.000471	48.24	445.788000	Y 377.433
Fe (238.204 nm)	0.017185	ppm	0.001901	11.06	47.132151	Y_R 377.433
Fe H (259.940 nm)	0.044107 u	ppm	0.004373	9.92	35.400000	Y_R 377.433
K (766.491 nm)	-0.294302 u	ppm	0.075511	25.66	1872.050000	Y_R2 488.368
Li (670.783 nm)	0.012413	ppm	0.000395	3.18	-2660.190000	Y_R2 488.368
Mg (279.078 nm)	11.606600	ppm	0.004066	0.04	40698.400000	Y 377.433
Mn (257.610 nm)	0.000790	ppm	0.000006	0.71	204.194000	Y 377.433
Mo (202.032 nm)	0.000100	ppm	0.000115	> 100.00	12.940500	Y 377.433
Na (589.592 nm)	10.829700	ppm	0.046481	0.43	9592.710000	Y_R2 488.368
Na H (589.593 nm)	10.197249 u	ppm	0.011250	0.11	6388.113139	Y_R4
Ni (231.604 nm)	0.000167 u	ppm	0.000651	> 100.00	-9.553410	Y 377.433
P (213.618 nm)	0.009024	ppm	0.005071	56.20	17.681100	Y 242.219
Pb (220.353 nm)	-0.000833 u	ppm	0.002048	> 100.00	5.208730	Y 242.219
S (181.972 nm)	3.504694	ppm	0.006880	0.20	1721.601802	Y 377.433
Sb (206.834 nm)	-0.000285 u	ppm	0.000238	83.41	1.754850	Y 377.433
Se (196.026 nm)	0.003355	ppm	0.003205	95.53	10.952300	Y 242.219
Si (288.158 nm)	13.734800	ppm	0.087737	0.64	92256.900000	Y 377.433
Sn (189.925 nm)	-0.004268 u	ppm	0.000035	0.82	2.072810	Y 377.433
Sr (421.552 nm)	0.123842	ppm	0.000320	0.26	19991.291638	Y_R 488.368
Th (288.505 nm)	-0.010648 u	ppm	0.002507	23.54	-0.074431	Y 377.433
Ti (336.122 nm)	0.000499	ppm	0.000026	5.16	-358.124000	Y 377.433
Tl (190.794 nm)	0.001245	ppm	0.000675	54.21	1.980280	Y 377.433
U (409.013 nm)	0.014740	ppm	0.007873	53.41	73.365500	Y 377.433
V (292.401 nm)	0.000210	ppm	0.000133	63.17	-84.443400	Y 377.433
Zn (206.200 nm)	0.008094	ppm	0.000510	6.30	40.071900	Y 377.433
Zr (343.823 nm)	0.000811	ppm	0.000278	34.27	-125.935000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.125157	21037.061287	0.001036	0.09
Y 377.433	1.128771	627118.469407	0.001112	0.10
Y_R 377.433	1.142560	55626.500000	0.003838	0.34
Y_R 488.368	1.131530	48391.300000	0.003009	0.27
Y_R2 488.368	1.115807	93193.129125	0.008262	0.74
Y_R4	1.121550	43120.000000	0.001030	0.09

Sample Name: 280-123143-D-3-B

Date: 5/11/2019 6:12:22 AM

Rack:Tube: 4:23

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000136 u	ppm	0.000156	> 100.00	-189.340000	Y 377.433
Al (394.401 nm)	0.010165	ppm	0.000628	6.18	187.246000	Y 377.433
Al H (396.152 nm)	0.096600 u	ppm	0.003566	3.69	42.652600	Y_R 377.433
As (188.980 nm)	0.001250 u	ppm	0.002706	> 100.00	0.161607	Y 242.219
B (249.678 nm)	0.009691	ppm	0.000246	2.54	86.082700	Y 242.219
Ba (493.408 nm)	0.029380	ppm	0.000450	1.53	4711.310000	Y_R 488.368
Be (234.861 nm)	-0.000039 u	ppm	0.000031	80.47	-5.066480	Y_R 488.368
Bi (223.061 nm)	0.000041 u	ppm	0.000564	> 100.00	-10.790400	Y 377.433
Ca (315.887 nm)	29.177876	ppm	0.013855	0.05	24059.754649	Y_R 377.433
Cd (214.439 nm)	0.000217	ppm	0.000085	39.12	1.548970	Y 377.433
Co (228.615 nm)	0.000053 u	ppm	0.000409	> 100.00	-22.065700	Y 242.219
Cr (205.560 nm)	0.001930	ppm	0.000442	22.88	5.252960	Y 377.433
Cu (324.754 nm)	-0.001046 u	ppm	0.000275	26.31	442.146000	Y 377.433
Fe (238.204 nm)	0.017860	ppm	0.000687	3.85	48.820833	Y_R 377.433
Fe H (259.940 nm)	0.045510 u	ppm	0.002928	6.43	37.416600	Y_R 377.433
K (766.491 nm)	-0.331600 u	ppm	0.036657	11.05	1832.820000	Y_R2 488.368
Li (670.783 nm)	0.010643	ppm	0.000091	0.86	-2692.400000	Y_R2 488.368
Mg (279.078 nm)	11.590900	ppm	0.002762	0.02	40643.100000	Y 377.433
Mn (257.610 nm)	0.000629	ppm	0.000015	2.43	157.803000	Y 377.433
Mo (202.032 nm)	0.000048 u	ppm	0.000133	> 100.00	12.251200	Y 377.433
Na (589.592 nm)	10.846100	ppm	0.005708	0.05	9606.960000	Y_R2 488.368
Na H (589.593 nm)	10.066253 u	ppm	0.039233	0.39	6312.189315	Y_R4
Ni (231.604 nm)	0.000285 u	ppm	0.000481	> 100.00	-8.913460	Y 377.433
P (213.618 nm)	0.011432	ppm	0.003453	30.20	21.385900	Y 242.219
Pb (220.353 nm)	-0.000389 u	ppm	0.000021	5.30	6.714250	Y 242.219
S (181.972 nm)	3.514593	ppm	0.011374	0.32	1726.461488	Y 377.433
Sb (206.834 nm)	-0.001668 u	ppm	0.002774	> 100.00	-0.818414	Y 377.433
Se (196.026 nm)	-0.000706 u	ppm	0.001319	> 100.00	4.448260	Y 242.219
Si (288.158 nm)	13.686800	ppm	0.036229	0.26	91936.200000	Y 377.433
Sn (189.925 nm)	-0.004926 u	ppm	0.000593	12.05	0.990172	Y 377.433
Sr (421.552 nm)	0.123705	ppm	0.000321	0.26	19969.305173	Y_R 488.368
Th (288.505 nm)	-0.007201 u	ppm	0.002917	40.51	6.029000	Y 377.433
Ti (336.122 nm)	0.000543	ppm	0.000005	0.83	-350.779000	Y 377.433
Tl (190.794 nm)	0.001822	ppm	0.000877	48.15	3.372290	Y 377.433
U (409.013 nm)	0.011280	ppm	0.001040	9.22	62.295400	Y 377.433
V (292.401 nm)	-0.000121 u	ppm	0.000066	54.64	-102.595000	Y 377.433
Zn (206.200 nm)	0.007610	ppm	0.000483	6.35	37.860900	Y 377.433
Zr (343.823 nm)	0.000709	ppm	0.000077	10.85	-131.949000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.125943	21051.750862	0.003602	0.32
Y 377.433	1.129216	627365.938632	0.004057	0.36
Y_R 377.433	1.145840	55786.100000	0.002323	0.20
Y_R 488.368	1.133700	48484.000000	0.001730	0.15
Y_R2 488.368	1.120149	93555.792464	0.002196	0.20
Y_R4	1.128880	43401.900000	0.001237	0.11

Sample Name: 280-123143-D-3-Bsd@5

Date: 5/11/2019 6:15:52 AM

Rack:Tube: 4:24

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000410 u	ppm	0.000000	0.11	-199.259000	Y 377.433
Al (394.401 nm)	0.004170	ppm	0.000818	19.63	83.431400	Y 377.433
Al H (396.152 nm)	0.111828 u	ppm	0.005035	4.50	40.364800	Y_R 377.433
As (188.980 nm)	0.001424	ppm	0.000877	61.59	0.438935	Y 242.219
B (249.678 nm)	0.001800	ppm	0.000394	21.87	25.628800	Y 242.219
Ba (493.408 nm)	0.004609	ppm	0.000372	8.08	2112.150000	Y_R 488.368
Be (234.861 nm)	-0.000030 u	ppm	0.000038	> 100.00	-4.108240	Y_R 488.368
Bi (223.061 nm)	0.002481	ppm	0.002107	84.93	-5.425640	Y 377.433
Ca (315.887 nm)	5.864328	ppm	0.016542	0.28	4777.141239	Y_R 377.433
Cd (214.439 nm)	0.000022 u	ppm	0.000032	> 100.00	-5.937510	Y 377.433
Co (228.615 nm)	-0.000199 u	ppm	0.000006	3.27	-28.371500	Y 242.219
Cr (205.560 nm)	0.000922	ppm	0.000408	44.24	-1.731770	Y 377.433
Cu (324.754 nm)	-0.001624 u	ppm	0.000101	6.24	428.770000	Y 377.433
Fe (238.204 nm)	0.015040	ppm	0.000372	2.47	41.769921	Y_R 377.433
Fe H (259.940 nm)	0.046003 u	ppm	0.000722	1.57	38.125600	Y_R 377.433
K (766.491 nm)	-0.472417 u	ppm	0.104376	22.09	1684.710000	Y_R2 488.368
Li (670.783 nm)	0.007067	ppm	0.001439	20.37	-2757.450000	Y_R2 488.368
Mg (279.078 nm)	2.359520	ppm	0.003591	0.15	8286.620000	Y 377.433
Mn (257.610 nm)	0.000223	ppm	0.000015	6.61	40.748400	Y 377.433
Mo (202.032 nm)	-0.000008 u	ppm	0.000484	> 100.00	11.508900	Y 377.433
Na (589.592 nm)	2.246020	ppm	0.012867	0.57	2124.930000	Y_R2 488.368
Na H (589.593 nm)	1.838037 u	ppm	0.031288	1.70	1543.231489	Y_R4
Ni (231.604 nm)	0.000294	ppm	0.000399	> 100.00	-8.861360	Y 377.433
P (213.618 nm)	-0.001067 u	ppm	0.002477	> 100.00	2.305020	Y 242.219
Pb (220.353 nm)	0.000713 u	ppm	0.001305	> 100.00	10.396400	Y 242.219
S (181.972 nm)	0.688977	ppm	0.010182	1.48	344.457071	Y 377.433
Sb (206.834 nm)	-0.001543 u	ppm	0.003135	> 100.00	-0.592252	Y 377.433
Se (196.026 nm)	0.003158	ppm	0.000359	11.36	10.637000	Y 242.219
Si (288.158 nm)	2.712570	ppm	0.003914	0.14	18628.400000	Y 377.433
Sn (189.925 nm)	-0.002166 u	ppm	0.000134	6.21	5.532210	Y 377.433
Sr (421.552 nm)	0.023893	ppm	0.000102	0.43	3940.111703	Y_R 488.368
Th (288.505 nm)	-0.003980 u	ppm	0.004188	> 100.00	12.176200	Y 377.433
Ti (336.122 nm)	0.000642	ppm	0.000032	4.99	-416.741000	Y 377.433
Tl (190.794 nm)	0.000839 u	ppm	0.001309	> 100.00	1.927410	Y 377.433
U (409.013 nm)	-0.005398 u	ppm	0.004597	85.15	12.027000	Y 377.433
V (292.401 nm)	-0.000372 u	ppm	0.000118	31.87	-114.747000	Y 377.433
Zn (206.200 nm)	0.001781	ppm	0.000040	2.23	11.226300	Y 377.433
Zr (343.823 nm)	0.000686	ppm	0.000158	23.03	-133.253000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.130445	21135.928125	0.002033	0.18
Y 377.433	1.132684	629292.503413	0.000812	0.07
Y_R 377.433	1.150070	55991.900000	0.000390	0.03
Y_R 488.368	1.139490	48731.800000	0.003388	0.30
Y_R2 488.368	1.119234	93479.406991	0.005611	0.50
Y_R4	1.127500	43348.700000	0.002858	0.25

Sample Name: 280-123143-D-3-C MS

Date: 5/11/2019 6:19:06 AM

Rack:Tube: 4:25

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.050825	ppm	0.000316	0.62	1351.630000	Y 377.433
Al (394.401 nm)	9.672260 o	ppm	0.008709	0.09	121888.000000	Y 377.433
Al H (396.152 nm)	9.757660	ppm	0.006011	0.06	22277.900000	Y_R 377.433
As (188.980 nm)	1.973170	ppm	0.004769	0.24	3136.710000	Y 242.219
B (249.678 nm)	0.926035	ppm	0.000902	0.10	7100.260000	Y 242.219
Ba (493.408 nm)	1.973730	ppm	0.001877	0.10	208731.000000	Y_R 488.368
Be (234.861 nm)	0.954412	ppm	0.002324	0.24	101205.000000	Y_R 488.368
Bi (223.061 nm)	1.870810	ppm	0.005768	0.31	4104.940000	Y 377.433
Ca (315.887 nm)	78.718647	ppm	0.008692	0.01	65037.427587	Y_R 377.433
Cd (214.439 nm)	0.968433	ppm	0.000995	0.10	37099.400000	Y 377.433
Co (228.615 nm)	0.940804	ppm	0.002197	0.23	23568.900000	Y 242.219
Cr (205.560 nm)	0.965479	ppm	0.003728	0.39	6674.920000	Y 377.433
Cu (324.754 nm)	0.940186	ppm	0.006524	0.69	46673.100000	Y 377.433
Fe (238.204 nm)	9.934439 o	ppm	0.001269	0.01	24839.983552	Y_R 377.433
Fe H (259.940 nm)	9.907850	ppm	0.015105	0.15	14211.900000	Y_R 377.433
K (766.491 nm)	50.016900	ppm	0.098297	0.20	54788.400000	Y_R2 488.368
Li (670.783 nm)	1.016000	ppm	0.000232	0.02	15597.600000	Y_R2 488.368
Mg (279.078 nm)	59.560000	ppm	0.118820	0.20	208733.000000	Y 377.433
Mn (257.610 nm)	0.965403	ppm	0.000673	0.07	278221.000000	Y 377.433
Mo (202.032 nm)	0.981347	ppm	0.002593	0.26	12993.500000	Y 377.433
Na (589.592 nm)	61.059600 o	ppm	0.032954	0.05	53724.300000	Y_R2 488.368
Na H (589.593 nm)	56.332826	ppm	0.238626	0.42	33127.642430	Y_R4
Ni (231.604 nm)	0.936122	ppm	0.000663	0.07	5071.380000	Y 377.433
P (213.618 nm)	18.788600	ppm	0.050325	0.27	28755.200000	Y 242.219
Pb (220.353 nm)	0.974259	ppm	0.001766	0.18	3285.940000	Y 242.219
S (181.972 nm)	12.890353	ppm	0.053616	0.42	6313.918731	Y 377.433
Sb (206.834 nm)	0.983939	ppm	0.001078	0.11	1830.750000	Y 377.433
Se (196.026 nm)	1.954260	ppm	0.000184	0.01	3134.520000	Y 242.219
Si (288.158 nm)	15.777300	ppm	0.115318	0.73	105901.000000	Y 377.433
Sn (189.925 nm)	1.971000	ppm	0.009607	0.49	3252.750000	Y 377.433
Sr (421.552 nm)	1.095936	ppm	0.000506	0.05	176105.494475	Y_R 488.368
Th (288.505 nm)	0.949516	ppm	0.005010	0.53	1591.270000	Y 377.433
Ti (336.122 nm)	0.987304	ppm	0.001246	0.13	130005.000000	Y 377.433
Tl (190.794 nm)	1.920070	ppm	0.003009	0.16	4684.750000	Y 377.433
U (409.013 nm)	1.992520	ppm	0.009468	0.48	6334.760000	Y 377.433
V (292.401 nm)	0.978731	ppm	0.001443	0.15	52475.100000	Y 377.433
Zn (206.200 nm)	0.462862	ppm	0.001513	0.33	2119.410000	Y 377.433
Zr (343.823 nm)	0.461593	ppm	0.000805	0.17	26909.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.078434	20163.468418	0.002239	0.21
Y 377.433	1.094142	607879.724803	0.002470	0.23
Y_R 377.433	1.121620	54606.600000	0.002806	0.25
Y_R 488.368	1.105980	47298.400000	0.001287	0.12
Y_R2 488.368	1.086645	90757.490572	0.002860	0.26
Y_R4	1.118630	43007.800000	0.008941	0.80

Sample Name: 280-123143-D-3-D MSD

Date: 5/11/2019 6:22:43 AM

Rack:Tube: 4:26

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.050330	ppm	0.000043	0.09	1343.220000	Y 377.433
Al (394.401 nm)	9.626480 o	ppm	0.002886	0.03	121292.000000	Y 377.433
Al H (396.152 nm)	9.711110	ppm	0.022847	0.24	22167.600000	Y_R 377.433
As (188.980 nm)	1.959920	ppm	0.007387	0.38	3115.640000	Y 242.219
B (249.678 nm)	0.972405	ppm	0.001638	0.17	7455.510000	Y 242.219
Ba (493.408 nm)	1.950880	ppm	0.001715	0.09	206333.000000	Y_R 488.368
Be (234.861 nm)	0.946567	ppm	0.001319	0.14	100373.000000	Y_R 488.368
Bi (223.061 nm)	1.971900	ppm	0.004167	0.21	4327.230000	Y 377.433
Ca (315.887 nm)	78.160416	ppm	0.073075	0.09	64575.705459	Y_R 377.433
Cd (214.439 nm)	0.960792	ppm	0.001002	0.10	36806.700000	Y 377.433
Co (228.615 nm)	0.931597	ppm	0.002011	0.22	23338.000000	Y 242.219
Cr (205.560 nm)	0.956196	ppm	0.006958	0.73	6610.640000	Y 377.433
Cu (324.754 nm)	0.934791	ppm	0.002565	0.27	46420.100000	Y 377.433
Fe (238.204 nm)	9.904619 o	ppm	0.009356	0.09	24765.433912	Y_R 377.433
Fe H (259.940 nm)	9.886050	ppm	0.002506	0.03	14180.600000	Y_R 377.433
K (766.491 nm)	49.698900	ppm	0.113852	0.23	54453.900000	Y_R2 488.368
Li (670.783 nm)	1.006550	ppm	0.004127	0.41	15425.800000	Y_R2 488.368
Mg (279.078 nm)	59.278000	ppm	0.019707	0.03	207745.000000	Y 377.433
Mn (257.610 nm)	0.956758	ppm	0.000167	0.02	275730.000000	Y 377.433
Mo (202.032 nm)	0.972899	ppm	0.000827	0.08	12881.800000	Y 377.433
Na (589.592 nm)	60.662300 o	ppm	0.093978	0.15	53373.400000	Y_R2 488.368
Na H (589.593 nm)	56.133759	ppm	0.142147	0.25	33012.265988	Y_R4
Ni (231.604 nm)	0.929089	ppm	0.000797	0.09	5033.200000	Y 377.433
P (213.618 nm)	18.408000	ppm	0.012456	0.07	28168.400000	Y 242.219
Pb (220.353 nm)	0.961805	ppm	0.000105	0.01	3243.970000	Y 242.219
S (181.972 nm)	12.718494	ppm	0.047907	0.38	6229.878896	Y 377.433
Sb (206.834 nm)	0.945866	ppm	0.000517	0.05	1759.790000	Y 377.433
Se (196.026 nm)	1.942450	ppm	0.001980	0.10	3115.610000	Y 242.219
Si (288.158 nm)	15.764600	ppm	0.012502	0.08	105816.000000	Y 377.433
Sn (189.925 nm)	1.952810	ppm	0.003061	0.16	3222.810000	Y 377.433
Sr (421.552 nm)	1.084588	ppm	0.000313	0.03	174283.044224	Y_R 488.368
Th (288.505 nm)	0.992876	ppm	0.003649	0.37	1668.080000	Y 377.433
Ti (336.122 nm)	0.977391	ppm	0.000675	0.07	128695.000000	Y 377.433
Tl (190.794 nm)	1.905020	ppm	0.008033	0.42	4648.040000	Y 377.433
U (409.013 nm)	1.950190	ppm	0.001933	0.10	6196.590000	Y 377.433
V (292.401 nm)	0.968901	ppm	0.000023	0.00	51953.200000	Y 377.433
Zn (206.200 nm)	0.487729	ppm	0.002083	0.43	2233.030000	Y 377.433
Zr (343.823 nm)	0.485158	ppm	0.000048	0.01	28292.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.079375	20181.061994	0.001115	0.10
Y 377.433	1.093167	607337.846713	0.000902	0.08
Y_R 377.433	1.118880	54473.600000	0.000279	0.02
Y_R 488.368	1.104210	47223.000000	0.000612	0.06
Y_R2 488.368	1.083904	90528.625137	0.002835	0.26
Y_R4	1.105000	42483.700000	0.001311	0.12

Sample Name: 280-123135-D-1-D

Date: 5/11/2019 6:26:21 AM

Rack:Tube: 4:27

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000906	ppm	0.000262	28.95	-170.021000	Y 377.433
Al (394.401 nm)	0.052596	ppm	0.000302	0.57	1049.590000	Y 377.433
Al H (396.152 nm)	-0.089324 u	ppm	0.005629	6.30	158.042000	Y_R 377.433
As (188.980 nm)	0.091747	ppm	0.003087	3.37	144.026000	Y 242.219
B (249.678 nm)	7.928850	ppm	0.016562	0.21	60752.900000	Y 242.219
Ba (493.408 nm)	0.517612	ppm	0.000659	0.13	55942.700000	Y_R 488.368
Be (234.861 nm)	0.000168	ppm	0.000025	14.69	-20.221200	Y_R 488.368
Bi (223.061 nm)	0.005001	ppm	0.001204	24.09	1.636610	Y 377.433
Ca (315.887 nm)	99.895846	ppm	0.100074	0.10	82550.533713	Y_R 377.433
Cd (214.439 nm)	0.000319	ppm	0.000013	3.99	7.168470	Y 377.433
Co (228.615 nm)	0.026618	ppm	0.000149	0.56	658.154000	Y 242.219
Cr (205.560 nm)	0.094213	ppm	0.000760	0.81	644.581000	Y 377.433
Cu (324.754 nm)	-0.000352 u	ppm	0.000115	32.67	435.646000	Y 377.433
Fe (238.204 nm)	4.172027	ppm	0.002533	0.06	10434.118803	Y_R 377.433
Fe H (259.940 nm)	4.160060 u	ppm	0.002364	0.06	5950.990000	Y_R 377.433
K (766.491 nm)	366.688000	ppm	1.319310	0.36	387857.000000	Y_R2 488.368
Li (670.783 nm)	0.027801	ppm	0.001602	5.76	-2380.250000	Y_R2 488.368
Mg (279.078 nm)	110.463000	ppm	0.191061	0.17	387194.000000	Y 377.433
Mn (257.610 nm)	1.524740	ppm	0.002370	0.16	439432.000000	Y 377.433
Mo (202.032 nm)	0.003518	ppm	0.000222	6.31	58.149400	Y 377.433
Na (589.592 nm)	1081.460000 o	ppm	2.612490	0.24	940418.000000	Y_R2 488.368
Na H (589.593 nm)	1240.241662	ppm	2.805819	0.23	719304.505908	Y_R4
Ni (231.604 nm)	0.086136	ppm	0.000077	0.09	456.931000	Y 377.433
P (213.618 nm)	4.992140	ppm	0.001477	0.03	7715.300000	Y 242.219
Pb (220.353 nm)	-0.001277 u	ppm	0.000856	67.03	2.962240	Y 242.219
S (181.972 nm)	16.239505	ppm	0.059665	0.37	7953.550838	Y 377.433
Sb (206.834 nm)	-0.001924 u	ppm	0.002878	> 100.00	-2.031040	Y 377.433
Se (196.026 nm)	0.004235	ppm	0.000283	6.68	13.459000	Y 242.219
Si (288.158 nm)	25.934600	ppm	0.076601	0.30	173752.000000	Y 377.433
Sn (189.925 nm)	0.002556	ppm	0.002367	92.58	13.303700	Y 377.433
Sr (421.552 nm)	1.424637	ppm	0.001380	0.10	228892.054859	Y_R 488.368
Th (288.505 nm)	-0.001959 u	ppm	0.009756	> 100.00	30.254000	Y 377.433
Ti (336.122 nm)	0.330374	ppm	0.000437	0.13	43404.400000	Y 377.433
Tl (190.794 nm)	0.003906	ppm	0.001593	40.77	3.449900	Y 377.433
U (409.013 nm)	-0.002113 u	ppm	0.003283	> 100.00	-2.075380	Y 377.433
V (292.401 nm)	0.110686	ppm	0.000086	0.08	5876.700000	Y 377.433
Zn (206.200 nm)	0.012965	ppm	0.000352	2.72	62.908600	Y 377.433
Zr (343.823 nm)	0.124338	ppm	0.000194	0.16	7121.810000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.001534	18725.674989	0.002689	0.27
Y 377.433	1.023935	568874.359893	0.002705	0.26
Y_R 377.433	1.110310	54056.300000	0.002102	0.19
Y_R 488.368	1.095280	46840.800000	0.003873	0.35
Y_R2 488.368	1.071780	89515.985750	0.006472	0.60
Y_R4	1.080560	41544.100000	0.000261	0.02

Sample Name: CCVH-5690583

Date: 5/11/2019 6:30:30 AM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000242	ppm	0.000038	15.52	-312.811000	Y 377.433
Al (394.401 nm)	47.843800 o	ppm	0.003808	0.01	601250.000000	Y 377.433
Al H (396.152 nm)	48.244600	ppm	0.076506	0.16	108378.000000	Y_R 377.433
As (188.980 nm)	0.004026	ppm	0.000313	7.78	0.173284	Y 242.219
B (249.678 nm)	0.010077	ppm	0.000774	7.68	59.473400	Y 242.219
Ba (493.408 nm)	0.001037	ppm	0.000197	19.01	1777.350000	Y_R 488.368
Be (234.861 nm)	0.002543	ppm	0.000040	1.58	-163.475000	Y_R 488.368
Bi (223.061 nm)	0.955395	ppm	0.001927	0.20	2098.370000	Y 377.433
Ca (315.887 nm)	0.024633	ppm	0.007709	31.30	-40.454659	Y_R 377.433
Cd (214.439 nm)	0.000883	ppm	0.000104	11.81	47.136900	Y 377.433
Co (228.615 nm)	0.004043	ppm	0.000136	3.37	77.846900	Y 242.219
Cr (205.560 nm)	0.001226	ppm	0.000046	3.75	-0.959445	Y 377.433
Cu (324.754 nm)	0.004954	ppm	0.000165	3.32	1155.520000	Y 377.433
Fe (238.204 nm)	48.551017 o	ppm	0.113837	0.23	121380.315760	Y_R 377.433
Fe H (259.940 nm)	48.308500	ppm	0.101785	0.21	69402.600000	Y_R 377.433
K (766.491 nm)	0.866024	ppm	0.055781	6.44	3092.460000	Y_R2 488.368
Li (670.783 nm)	0.010677	ppm	0.000616	5.77	-2691.770000	Y_R2 488.368
Mg (279.078 nm)	0.017419	ppm	0.000388	2.23	-151.847000	Y 377.433
Mn (257.610 nm)	0.001373	ppm	0.000033	2.40	372.094000	Y 377.433
Mo (202.032 nm)	0.000504	ppm	0.000399	79.05	18.283500	Y 377.433
Na (589.592 nm)	239.810000 o	ppm	0.887531	0.37	208640.000000	Y_R2 488.368
Na H (589.593 nm)	239.819567	ppm	0.084341	0.04	139473.969817	Y_R4
Ni (231.604 nm)	0.001907	ppm	0.001249	65.51	-0.111629	Y 377.433
P (213.618 nm)	-0.017778 u	ppm	0.000409	2.30	-30.609900	Y 242.219
Pb (220.353 nm)	0.007099	ppm	0.000743	10.46	47.754100	Y 242.219
S (181.972 nm)	4.832349	ppm	0.006648	0.14	2368.954439	Y 377.433
Sb (206.834 nm)	-0.000709 u	ppm	0.000834	> 100.00	4.324810	Y 377.433
Se (196.026 nm)	0.002185	ppm	0.002706	> 100.00	-3.970270	Y 242.219
Si (288.158 nm)	0.129673	ppm	0.011446	8.83	1374.620000	Y 377.433
Sn (189.925 nm)	-0.002158 u	ppm	0.001558	72.21	5.545370	Y 377.433
Sr (421.552 nm)	0.000839	ppm	0.000139	16.59	245.400187	Y_R 488.368
Th (288.505 nm)	4.855440	ppm	0.006003	0.12	8578.440000	Y 377.433
Ti (336.122 nm)	0.002237	ppm	0.000160	7.15	-225.724000	Y 377.433
Tl (190.794 nm)	-0.000810 u	ppm	0.000876	> 100.00	-6.727070	Y 377.433
U (409.013 nm)	9.700090	ppm	0.005646	0.06	31050.200000	Y 377.433
V (292.401 nm)	-0.001369 u	ppm	0.000177	12.89	-165.551000	Y 377.433
Zn (206.200 nm)	0.002078	ppm	0.000746	35.89	19.334400	Y 377.433
Zr (343.823 nm)	-0.002753 u	ppm	0.000049	1.77	-335.036000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.082194	20233.774786	0.006747	0.62
Y 377.433	1.090721	605978.861952	0.007205	0.66
Y_R 377.433	1.136430	55328.000000	0.003069	0.27
Y_R 488.368	1.121530	47963.500000	0.009034	0.81
Y_R2 488.368	1.109996	92707.830766	0.003195	0.29
Y_R4	1.140500	43848.700000	0.001088	0.10

Sample Name: CCV-5690581

Date: 5/11/2019 6:34:12 AM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.478924	ppm	0.001107	0.23	17317.800000	Y 377.433
Al (394.401 nm)	0.487370	ppm	0.000412	0.08	6271.790000	Y 377.433
Al H (396.152 nm)	0.527353 u	ppm	0.005843	1.11	1212.000000	Y_R 377.433
As (188.980 nm)	0.959028	ppm	0.004564	0.48	1523.950000	Y 242.219
B (249.678 nm)	0.468468	ppm	0.000268	0.06	3599.330000	Y 242.219
Ba (493.408 nm)	0.475799	ppm	0.000197	0.04	51553.900000	Y_R 488.368
Be (234.861 nm)	0.465855	ppm	0.002341	0.50	49419.700000	Y_R 488.368
Bi (223.061 nm)	0.005156	ppm	0.000992	19.25	0.980867	Y 377.433
Ca (315.887 nm)	5.010499	ppm	0.005987	0.12	4071.073014	Y_R 377.433
Cd (214.439 nm)	0.491366	ppm	0.000562	0.11	18819.200000	Y 377.433
Co (228.615 nm)	0.485006	ppm	0.000940	0.19	12137.800000	Y 242.219
Cr (205.560 nm)	0.483888	ppm	0.000111	0.02	3341.470000	Y 377.433
Cu (324.754 nm)	0.479312	ppm	0.001421	0.30	24036.800000	Y 377.433
Fe (238.204 nm)	2.456318	ppm	0.003150	0.13	6144.895230	Y_R 377.433
Fe H (259.940 nm)	2.474550 u	ppm	0.000443	0.02	3528.510000	Y_R 377.433
K (766.491 nm)	48.593900	ppm	0.111826	0.23	53291.600000	Y_R2 488.368
Li (670.783 nm)	0.999679	ppm	0.001617	0.16	15300.700000	Y_R2 488.368
Mg (279.078 nm)	19.233700	ppm	0.007955	0.04	67428.800000	Y 377.433
Mn (257.610 nm)	0.481924	ppm	0.000089	0.02	138875.000000	Y 377.433
Mo (202.032 nm)	0.486402	ppm	0.000255	0.05	6446.080000	Y 377.433
Na (589.592 nm)	25.058800	ppm	0.006944	0.03	22069.100000	Y_R2 488.368
Na H (589.593 nm)	25.347245 u	ppm	0.036755	0.15	15168.836808	Y_R4
Ni (231.604 nm)	0.486825	ppm	0.000371	0.08	2632.290000	Y 377.433
P (213.618 nm)	0.941571	ppm	0.001876	0.20	1319.460000	Y 242.219
Pb (220.353 nm)	0.973869	ppm	0.000694	0.07	3284.170000	Y 242.219
S (181.972 nm)	0.005065	ppm	0.003660	72.27	11.792808	Y 377.433
Sb (206.834 nm)	0.965394	ppm	0.002490	0.26	1798.230000	Y 377.433
Se (196.026 nm)	0.965452	ppm	0.001698	0.18	1552.020000	Y 242.219
Si (288.158 nm)	4.949010	ppm	0.001160	0.02	33567.800000	Y 377.433
Sn (189.925 nm)	0.981313	ppm	0.001502	0.15	1624.030000	Y 377.433
Sr (421.552 nm)	0.478578	ppm	0.000200	0.04	76960.244902	Y_R 488.368
Th (288.505 nm)	0.009972	ppm	0.000848	8.50	-12.502400	Y 377.433
Ti (336.122 nm)	0.483052	ppm	0.000002	0.00	63227.000000	Y 377.433
Tl (190.794 nm)	0.976323	ppm	0.002464	0.25	2384.010000	Y 377.433
U (409.013 nm)	0.014185	ppm	0.003760	26.51	16.488100	Y 377.433
V (292.401 nm)	0.480415	ppm	0.000681	0.14	25711.600000	Y 377.433
Zn (206.200 nm)	0.488777	ppm	0.000763	0.16	2236.780000	Y 377.433
Zr (343.823 nm)	0.483332	ppm	0.000065	0.01	28185.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.119285	20927.274369	0.004499	0.40
Y 377.433	1.123756	624332.646905	0.003061	0.27
Y_R 377.433	1.150830	56028.900000	0.002753	0.24
Y_R 488.368	1.139230	48720.500000	0.003338	0.29
Y_R2 488.368	1.120375	93574.692618	0.000360	0.03
Y_R4	1.140330	43842.100000	0.004287	0.38

Sample Name: CCB

Date: 5/11/2019 6:37:46 AM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000561 u	ppm	0.000159	28.38	-204.738000	Y 377.433
Al (394.401 nm)	0.002502	ppm	0.000446	17.83	58.662100	Y 377.433
Al H (396.152 nm)	0.113503 Zu	ppm	0.007345	6.47	35.323000 Z	Y_R 377.433
As (188.980 nm)	0.001443	ppm	0.000058	4.02	0.470535	Y 242.219
B (249.678 nm)	0.000326	ppm	0.000215	65.74	14.350400	Y 242.219
Ba (493.408 nm)	-0.002032 Zu	ppm	0.000162	7.99	1415.360000 Z	Y_R 488.368
Be (234.861 nm)	0.000008	ppm	0.000006	73.46	0.059575	Y_R 488.368
Bi (223.061 nm)	0.002645	ppm	0.000831	31.42	-5.068690	Y 377.433
Ca (315.887 nm)	0.006180 u	ppm	0.008788	> 100.00	-68.128751	Y_R 377.433
Cd (214.439 nm)	0.000004 u	ppm	0.000019	> 100.00	-6.644040	Y 377.433
Co (228.615 nm)	0.000402	ppm	0.000312	77.51	-13.343800	Y 242.219
Cr (205.560 nm)	0.000326 u	ppm	0.000667	> 100.00	-5.862890	Y 377.433
Cu (324.754 nm)	-0.001221 u	ppm	0.000034	2.81	450.376000	Y 377.433
Fe (238.204 nm)	-0.000761 u	ppm	0.001115	> 100.00	2.268566	Y_R 377.433
Fe H (259.940 nm)	0.028851 u	ppm	0.000920	3.19	13.472900	Y_R 377.433
K (766.491 nm)	-0.280298 u	ppm	0.081790	29.18	1886.780000	Y_R2 488.368
Li (670.783 nm)	0.012293 Z	ppm	0.001627	13.24	-2662.380000 Z	Y_R2 488.368
Mg (279.078 nm)	-0.000031 u	ppm	0.000288	> 100.00	16.098400	Y 377.433
Mn (257.610 nm)	0.000075	ppm	0.000003	3.88	-1.760720	Y 377.433
Mo (202.032 nm)	-0.000189 u	ppm	0.000175	92.60	9.120470	Y 377.433
Na (589.592 nm)	0.185033	ppm	0.009463	5.11	331.623000	Y_R2 488.368
Na H (589.593 nm)	0.774072 u	ppm	0.017074	2.21	926.572338	Y_R4
Ni (231.604 nm)	0.001127	ppm	0.001210	> 100.00	-4.342900	Y 377.433
P (213.618 nm)	-0.003013 u	ppm	0.002266	75.20	-0.701008	Y 242.219
Pb (220.353 nm)	0.000223 u	ppm	0.000814	> 100.00	8.767140	Y 242.219
S (181.972 nm)	0.003647	ppm	0.001255	34.42	9.257451	Y 377.433
Sb (206.834 nm)	0.000976 u	ppm	0.001401	> 100.00	4.098600	Y 377.433
Se (196.026 nm)	0.001123	ppm	0.000662	58.91	7.381240	Y 242.219
Si (288.158 nm)	0.030629	ppm	0.003046	9.94	713.006000	Y 377.433
Sn (189.925 nm)	-0.003592 u	ppm	0.000565	15.73	3.185880	Y 377.433
Sr (421.552 nm)	-0.000132 u	ppm	0.000000	0.35	81.886846	Y_R 488.368
Th (288.505 nm)	-0.006092 u	ppm	0.000759	12.46	8.690590	Y 377.433
Ti (336.122 nm)	0.000835	ppm	0.000039	4.64	-410.809000	Y 377.433
Tl (190.794 nm)	0.001837	ppm	0.000390	21.23	4.611550	Y 377.433
U (409.013 nm)	0.000450 u	ppm	0.001662	> 100.00	31.456700	Y 377.433
V (292.401 nm)	-0.000532 u	ppm	0.000207	38.89	-123.980000	Y 377.433
Zn (206.200 nm)	-0.000483 u	ppm	0.000157	32.60	0.882712	Y 377.433
Zr (343.823 nm)	0.000732	ppm	0.000024	3.22	-130.587000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.158130	21653.556799	0.002191	0.19
Y 377.433	1.160759	644890.691771	0.001287	0.11
Y_R 377.433	1.174260	57169.600000	0.000971	0.08
Y_R 488.368	1.162670	49723.200000	0.001493	0.13
Y_R2 488.368	1.150008	96049.699676	0.001286	0.11
Y_R4	1.138610	43776.100000	0.009932	0.87

Sample Name: CCVL-5695588

Date: 5/11/2019 6:41:02 AM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.008752	ppm	0.000098	1.12	135.447000	Y 377.433
Al (394.401 nm)	0.100101	ppm	0.000433	0.43	1288.050000	Y 377.433
Al H (396.152 nm)	0.216947 u	ppm	0.001472	0.68	273.593000	Y_R 377.433
As (188.980 nm)	0.015495	ppm	0.002464	15.90	22.819500	Y 242.219
B (249.678 nm)	0.092689	ppm	0.000436	0.47	721.884000	Y 242.219
Ba (493.408 nm)	0.007334	ppm	0.000170	2.32	2398.130000	Y_R 488.368
Be (234.861 nm)	0.000886	ppm	0.000010	1.14	92.301800	Y_R 488.368
Bi (223.061 nm)	0.088650	ppm	0.002137	2.41	184.086000	Y 377.433
Ca (315.887 nm)	0.219801	ppm	0.009570	4.35	108.582012	Y_R 377.433
Cd (214.439 nm)	0.005112	ppm	0.000056	1.09	189.110000	Y 377.433
Co (228.615 nm)	0.010473	ppm	0.000275	2.62	239.153000	Y 242.219
Cr (205.560 nm)	0.010333	ppm	0.000095	0.92	63.313200	Y 377.433
Cu (324.754 nm)	0.013189	ppm	0.000369	2.80	1159.070000	Y 377.433
Fe (238.204 nm)	0.099217	ppm	0.002064	2.08	252.210262	Y_R 377.433
Fe H (259.940 nm)	0.134637 u	ppm	0.003013	2.24	165.513000	Y_R 377.433
K (766.491 nm)	2.615810	ppm	0.120291	4.60	4932.850000	Y_R2 488.368
Li (670.783 nm)	0.036957 Q	ppm	0.003328	9.00	-2213.670000 Q	Y_R2 488.368
Mg (279.078 nm)	0.198392	ppm	0.002149	1.08	710.781000	Y 377.433
Mn (257.610 nm)	0.010287	ppm	0.000018	0.18	2941.310000	Y 377.433
Mo (202.032 nm)	0.018875	ppm	0.000190	1.00	261.300000	Y 377.433
Na (589.592 nm)	1.183370	ppm	0.049476	4.18	1201.790000	Y_R2 488.368
Na H (589.593 nm)	1.431265 u	ppm	0.037977	2.65	1307.471970	Y_R4
Ni (231.604 nm)	0.041088	ppm	0.000878	2.14	212.507000	Y 377.433
P (213.618 nm)	2.672720	ppm	0.014792	0.55	4128.610000	Y 242.219
Pb (220.353 nm)	0.008775	ppm	0.001801	20.52	37.563700	Y 242.219
S (181.972 nm)	0.090586	ppm	0.006698	7.39	51.782418	Y 377.433
Sb (206.834 nm)	0.016284	ppm	0.002927	17.98	32.462900	Y 377.433
Se (196.026 nm)	0.018217	ppm	0.001740	9.55	34.750600	Y 242.219
Si (288.158 nm)	0.536973	ppm	0.007555	1.41	4095.390000	Y 377.433
Sn (189.925 nm)	0.097448	ppm	0.000621	0.64	169.466000	Y 377.433
Sr (421.552 nm)	0.008705	ppm	0.000077	0.88	1500.927322	Y_R 488.368
Th (288.505 nm)	0.011417	ppm	0.002565	22.46	38.813900	Y 377.433
Ti (336.122 nm)	0.010417	ppm	0.000025	0.24	854.078000	Y 377.433
Tl (190.794 nm)	0.016049	ppm	0.000512	3.19	39.241300	Y 377.433
U (409.013 nm)	0.059767	ppm	0.002652	4.44	219.756000	Y 377.433
V (292.401 nm)	0.009112	ppm	0.000058	0.64	392.932000	Y 377.433
Zn (206.200 nm)	0.021044	ppm	0.000864	4.10	99.258100	Y 377.433
Zr (343.823 nm)	0.010346 Q	ppm	0.000036	0.35	433.505000 Q	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.164348	21769.813486	0.001564	0.13
Y 377.433	1.165298	647412.139495	0.001495	0.13
Y_R 377.433	1.195830	58219.700000	0.002566	0.21
Y_R 488.368	1.182980	50591.400000	0.000883	0.07
Y_R2 488.368	1.167360	97498.885744	0.001615	0.14
Y_R4	1.153260	44339.300000	0.004402	0.38

Sample Name: 280-123135-D-2-B

Date: 5/11/2019 6:44:29 AM

Rack:Tube: 4:28

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001557	ppm	0.000162	10.42	-127.781000	Y 377.433
Al (394.401 nm)	0.008539	ppm	0.000114	1.34	351.806000	Y 377.433
Al H (396.152 nm)	-0.048801 u	ppm	0.004406	9.03	-1.906000	Y_R 377.433
As (188.980 nm)	0.020608	ppm	0.002765	13.42	30.711000	Y 242.219
B (249.678 nm)	0.188154	ppm	0.000404	0.21	1447.870000	Y 242.219
Ba (493.408 nm)	0.181563	ppm	0.000621	0.34	20686.500000	Y_R 488.368
Be (234.861 nm)	0.000275	ppm	0.000143	51.95	-51.236900	Y_R 488.368
Bi (223.061 nm)	0.002341	ppm	0.000601	25.65	-4.204650	Y 377.433
Ca (315.887 nm)	155.835620	ppm	0.058775	0.04	128818.246563	Y_R 377.433
Cd (214.439 nm)	0.000350	ppm	0.000106	30.29	10.318800	Y 377.433
Co (228.615 nm)	0.000966	ppm	0.000179	18.53	0.774312	Y 242.219
Cr (205.560 nm)	0.001017	ppm	0.000055	5.44	-1.088390	Y 377.433
Cu (324.754 nm)	-0.002069 u	ppm	0.000040	1.94	322.460000	Y 377.433
Fe (238.204 nm)	8.948676 o	ppm	0.007229	0.08	22375.602337	Y_R 377.433
Fe H (259.940 nm)	8.869430	ppm	0.005553	0.06	12719.500000	Y_R 377.433
K (766.491 nm)	2.598780	ppm	0.066345	2.55	4914.940000	Y_R2 488.368
Li (670.783 nm)	0.011820	ppm	0.000271	2.29	-2670.980000	Y_R2 488.368
Mg (279.078 nm)	63.848800	ppm	0.045260	0.07	223800.000000	Y 377.433
Mn (257.610 nm)	8.710210	ppm	0.004991	0.06	2510400.000000	Y 377.433
Mo (202.032 nm)	0.001256	ppm	0.000344	27.42	28.235500	Y 377.433
Na (589.592 nm)	97.092800 o	ppm	0.026846	0.03	84618.500000	Y_R2 488.368
Na H (589.593 nm)	96.907468	ppm	0.382604	0.39	56644.133139	Y_R4
Ni (231.604 nm)	0.004940	ppm	0.000106	2.14	16.366700	Y 377.433
P (213.618 nm)	0.458524	ppm	0.002193	0.48	712.142000	Y 242.219
Pb (220.353 nm)	0.000466 u	ppm	0.001389	> 100.00	9.542710	Y 242.219
S (181.972 nm)	1.048878	ppm	0.009391	0.90	556.872914	Y 377.433
Sb (206.834 nm)	-0.007760 u	ppm	0.004760	61.34	-11.375100	Y 377.433
Se (196.026 nm)	0.002353	ppm	0.001632	69.38	19.586200	Y 242.219
Si (288.158 nm)	30.116800	ppm	0.032960	0.11	201689.000000	Y 377.433
Sn (189.925 nm)	-0.004115 u	ppm	0.000062	1.51	2.325040	Y 377.433
Sr (421.552 nm)	0.861711	ppm	0.000323	0.04	138490.090248	Y_R 488.368
Th (288.505 nm)	-0.029278 u	ppm	0.001323	4.52	134.625000	Y 377.433
Ti (336.122 nm)	-0.000214 u	ppm	0.000019	9.11	-20.082800	Y 377.433
Tl (190.794 nm)	0.007164	ppm	0.000752	10.50	10.079900	Y 377.433
U (409.013 nm)	0.016749	ppm	0.000353	2.11	69.804100	Y 377.433
V (292.401 nm)	0.000780	ppm	0.000256	32.81	-50.572700	Y 377.433
Zn (206.200 nm)	0.003864	ppm	0.000737	19.08	21.985400	Y 377.433
Zr (343.823 nm)	0.000919	ppm	0.000072	7.79	-119.597000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.094764	20468.805181	0.000169	0.02
Y 377.433	1.110534	616986.573939	0.002043	0.18
Y_R 377.433	1.144390	55715.500000	0.000476	0.04
Y_R 488.368	1.132570	48435.800000	0.001625	0.14
Y_R2 488.368	1.111027	92793.925876	0.000084	0.01
Y_R4	1.115670	42893.800000	0.010756	0.96

Sample Name: 280-123135-D-3-B

Date: 5/11/2019 6:48:08 AM

Rack:Tube: 4:29

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001497	ppm	0.000149	9.92	-134.759000	Y 377.433
Al (394.401 nm)	-0.011078 u	ppm	0.004383	39.56	464.893000	Y 377.433
Al H (396.152 nm)	-0.292256 u	ppm	0.003469	1.19	18.159400	Y_R 377.433
As (188.980 nm)	0.077946	ppm	0.001933	2.48	122.145000	Y 242.219
B (249.678 nm)	5.115850	ppm	0.000373	0.01	39203.800000	Y 242.219
Ba (493.408 nm)	0.574092	ppm	0.000065	0.01	61866.800000	Y_R 488.368
Be (234.861 nm)	-0.000005 u	ppm	0.000062	> 100.00	-16.442000	Y_R 488.368
Bi (223.061 nm)	0.002387	ppm	0.000019	0.81	-5.033590	Y 377.433
Ca (315.887 nm)	189.729304	ppm	0.063825	0.03	156851.669980	Y_R 377.433
Cd (214.439 nm)	0.000402	ppm	0.000109	27.15	9.310200	Y 377.433
Co (228.615 nm)	0.015120	ppm	0.000360	2.38	355.851000	Y 242.219
Cr (205.560 nm)	0.022699	ppm	0.000317	1.39	149.058000	Y 377.433
Cu (324.754 nm)	-0.002278 u	ppm	0.000155	6.80	286.830000	Y 377.433
Fe (238.204 nm)	1.690619	ppm	0.001160	0.07	4230.669476	Y_R 377.433
Fe H (259.940 nm)	1.691410 u	ppm	0.002482	0.15	2402.970000	Y_R 377.433
K (766.491 nm)	142.071000	ppm	0.145825	0.10	151609.000000	Y_R2 488.368
Li (670.783 nm)	0.016705	ppm	0.002982	17.85	-2582.120000	Y_R2 488.368
Mg (279.078 nm)	136.445000	ppm	0.046448	0.03	478268.000000	Y 377.433
Mn (257.610 nm)	4.600730	ppm	0.002193	0.05	1325980.000000	Y 377.433
Mo (202.032 nm)	0.001424	ppm	0.000181	12.73	30.446700	Y 377.433
Na (589.592 nm)	858.276000 o	ppm	1.552790	0.18	746416.000000	Y_R2 488.368
Na H (589.593 nm)	960.631335	ppm	4.116271	0.43	557246.304066	Y_R4
Ni (231.604 nm)	0.061329	ppm	0.001325	2.16	322.333000	Y 377.433
P (213.618 nm)	0.347692	ppm	0.005861	1.69	540.580000	Y 242.219
Pb (220.353 nm)	-0.001734 u	ppm	0.000513	29.58	2.040630	Y 242.219
S (181.972 nm)	11.029737	ppm	0.018399	0.17	5422.442663	Y 377.433
Sb (206.834 nm)	0.005333	ppm	0.001467	27.51	12.426700	Y 377.433
Se (196.026 nm)	0.006036	ppm	0.001097	18.18	21.484800	Y 242.219
Si (288.158 nm)	24.334200	ppm	0.150854	0.62	163061.000000	Y 377.433
Sn (189.925 nm)	-0.003782 u	ppm	0.000361	9.55	2.873550	Y 377.433
Sr (421.552 nm)	2.225185	ppm	0.001092	0.05	357455.064137	Y_R 488.368
Th (288.505 nm)	-0.012168 u	ppm	0.004564	37.51	81.152300	Y 377.433
Ti (336.122 nm)	0.018924	ppm	0.000048	0.25	2621.220000	Y 377.433
Tl (190.794 nm)	0.003991	ppm	0.002014	50.47	1.819000	Y 377.433
U (409.013 nm)	-0.002618 u	ppm	0.018780	> 100.00	-3.930180	Y 377.433
V (292.401 nm)	0.022274	ppm	0.000034	0.15	1102.750000	Y 377.433
Zn (206.200 nm)	0.003789	ppm	0.000167	4.41	20.635000	Y 377.433
Zr (343.823 nm)	0.017992	ppm	0.000158	0.88	882.144000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.029413	19246.935183	0.002515	0.24
Y 377.433	1.053670	585394.179334	0.001541	0.15
Y_R 377.433	1.123800	54713.100000	0.005985	0.53
Y_R 488.368	1.107660	47370.500000	0.005125	0.46
Y_R2 488.368	1.084328	90564.030500	0.006012	0.55
Y_R4	1.092120	41988.600000	0.002242	0.21

Sample Name: 280-123135-D-4-B

Date: 5/11/2019 6:51:50 AM

Rack:Tube: 4:30

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001703	ppm	0.000413	24.25	-124.772000	Y 377.433
Al (394.401 nm)	-0.007215 u	ppm	0.000754	10.45	461.365000	Y 377.433
Al H (396.152 nm)	-0.259533 u	ppm	0.007542	2.91	3.384560	Y_R 377.433
As (188.980 nm)	0.040810	ppm	0.001393	3.41	62.908000	Y 242.219
B (249.678 nm)	2.545240	ppm	0.000042	0.00	19506.900000	Y 242.219
Ba (493.408 nm)	0.593893	ppm	0.000043	0.01	63948.800000	Y_R 488.368
Be (234.861 nm)	0.000223	ppm	0.000072	32.26	-39.316900	Y_R 488.368
Bi (223.061 nm)	0.001370 u	ppm	0.002183	> 100.00	-6.561010	Y 377.433
Ca (315.887 nm)	236.961912	ppm	0.379488	0.16	195917.723600	Y_R 377.433
Cd (214.439 nm)	0.000349	ppm	0.000088	25.31	9.485440	Y 377.433
Co (228.615 nm)	0.007408	ppm	0.000153	2.06	162.177000	Y 242.219
Cr (205.560 nm)	0.011119	ppm	0.000109	0.98	68.849600	Y 377.433
Cu (324.754 nm)	-0.002257 u	ppm	0.000137	6.06	264.287000	Y 377.433
Fe (238.204 nm)	6.968999 o	ppm	0.003665	0.05	17426.468793	Y_R 377.433
Fe H (259.940 nm)	6.961430	ppm	0.002839	0.04	9977.230000	Y_R 377.433
K (766.491 nm)	54.383200	ppm	0.227934	0.42	59380.800000	Y_R2 488.368
Li (670.783 nm)	0.015787	ppm	0.004540	28.76	-2598.810000	Y_R2 488.368
Mg (279.078 nm)	138.528000	ppm	0.087090	0.06	485560.000000	Y 377.433
Mn (257.610 nm)	7.615990	ppm	0.009036	0.12	2195030.000000	Y 377.433
Mo (202.032 nm)	0.001509	ppm	0.000175	11.58	31.573200	Y 377.433
Na (589.592 nm)	544.406000 o	ppm	0.427496	0.08	473570.000000	Y_R2 488.368
Na H (589.593 nm)	576.624503	ppm	3.220893	0.56	334681.360528	Y_R4
Ni (231.604 nm)	0.038351	ppm	0.000400	1.04	197.656000	Y 377.433
P (213.618 nm)	0.200263	ppm	0.000537	0.27	312.880000	Y 242.219
Pb (220.353 nm)	0.000224	ppm	0.000168	74.99	8.692350	Y 242.219
S (181.972 nm)	5.217404	ppm	0.001738	0.03	2594.515189	Y 377.433
Sb (206.834 nm)	-0.004591 u	ppm	0.000404	8.80	-5.586280	Y 377.433
Se (196.026 nm)	0.001495	ppm	0.001160	77.64	17.167600	Y 242.219
Si (288.158 nm)	24.642100	ppm	0.059183	0.24	165118.000000	Y 377.433
Sn (189.925 nm)	-0.003501 u	ppm	0.001504	42.96	3.334500	Y 377.433
Sr (421.552 nm)	2.041912	ppm	0.002005	0.10	328023.220566	Y_R 488.368
Th (288.505 nm)	-0.025414 u	ppm	0.002883	11.34	117.178000	Y 377.433
Ti (336.122 nm)	0.002641	ppm	0.000056	2.12	635.214000	Y 377.433
Tl (190.794 nm)	0.006193	ppm	0.001254	20.25	4.597690	Y 377.433
U (409.013 nm)	0.009061	ppm	0.009839	> 100.00	32.516200	Y 377.433
V (292.401 nm)	0.009153	ppm	0.000318	3.47	398.276000	Y 377.433
Zn (206.200 nm)	0.003413	ppm	0.000361	10.58	19.652600	Y 377.433
Zr (343.823 nm)	0.006332	ppm	0.000020	0.31	197.971000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.045787	19553.083350	0.000611	0.06
Y 377.433	1.071049	595049.381528	0.000512	0.05
Y_R 377.433	1.123050	54676.500000	0.001630	0.15
Y_R 488.368	1.108950	47425.500000	0.000732	0.07
Y_R2 488.368	1.096886	91612.838341	0.000517	0.05
Y_R4	1.108040	42600.500000	0.004191	0.38

Sample Name: 280-123135-D-5-B

Date: 5/11/2019 6:55:27 AM

Rack:Tube: 4:31

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000424	ppm	0.000380	89.47	-122.673000	Y 377.433
Al (394.401 nm)	0.111261	ppm	0.002260	2.03	1761.120000	Y 377.433
Al H (396.152 nm)	-0.005409 u	ppm	0.000064	1.18	318.805000	Y_R 377.433
As (188.980 nm)	0.454598	ppm	0.000817	0.18	721.280000	Y 242.219
B (249.678 nm)	18.623100	ppm	0.003036	0.02	142681.000000	Y 242.219
Ba (493.408 nm)	0.516078	ppm	0.000535	0.10	55783.600000	Y_R 488.368
Be (234.861 nm)	0.000187	ppm	0.000110	59.06	-38.060700	Y_R 488.368
Bi (223.061 nm)	0.004418 b	ppm	0.003408	77.14	1.771100	Y 377.433
Ca (315.887 nm)	64.463162	ppm	0.050961	0.08	53244.209758	Y_R 377.433
Cd (214.439 nm)	0.000315	ppm	0.000208	65.90	7.936040	Y 377.433
Co (228.615 nm)	0.035495	ppm	0.000531	1.50	870.608000	Y 242.219
Cr (205.560 nm)	0.225861	ppm	0.001120	0.50	1556.870000	Y 377.433
Cu (324.754 nm)	-0.001303 u	ppm	0.000256	19.66	414.489000	Y 377.433
Fe (238.204 nm)	6.409160 o	ppm	0.004597	0.07	16026.885487	Y_R 377.433
Fe H (259.940 nm)	6.395520	ppm	0.000524	0.01	9163.870000	Y_R 377.433
K (766.491 nm)	832.945000 bo	ppm	2.451160	0.29	878256.000000	Y_R2 488.368
Li (670.783 nm)	0.125761	ppm	0.002712	2.16	-598.092000	Y_R2 488.368
Mg (279.078 nm)	200.921000	ppm	0.350177	0.17	704254.000000	Y 377.433
Mn (257.610 nm)	0.647940	ppm	0.000091	0.01	186723.000000	Y 377.433
Mo (202.032 nm)	0.004889	ppm	0.000303	6.20	76.283300	Y 377.433
Na (589.592 nm)	1756.090000 o	ppm	13.860600	0.79	1526880.000000	Y_R2 488.368
Na H (589.593 nm)	2366.579791	ppm	13.467971	0.57	1372114.199667	Y_R4
Ni (231.604 nm)	0.089961	ppm	0.000777	0.86	477.682000	Y 377.433
P (213.618 nm)	5.094040	ppm	0.055623	1.09	7872.990000	Y 242.219
Pb (220.353 nm)	0.000898	ppm	0.000232	25.82	10.338700	Y 242.219
S (181.972 nm)	49.700033	ppm	0.113764	0.23	24300.308293	Y 377.433
Sb (206.834 nm)	0.071645	ppm	0.002486	3.47	136.745000	Y 377.433
Se (196.026 nm)	0.004987	ppm	0.002180	43.71	12.790900	Y 242.219
Si (288.158 nm)	38.436700	ppm	0.068283	0.18	257266.000000	Y 377.433
Sn (189.925 nm)	0.007734	ppm	0.001185	15.32	21.825200	Y 377.433
Sr (421.552 nm)	1.337742	ppm	0.000926	0.07	214937.507329	Y_R 488.368
Th (288.505 nm)	0.010417	ppm	0.000511	4.90	36.019400	Y 377.433
Ti (336.122 nm)	0.121995	ppm	0.000094	0.08	15792.700000	Y 377.433
Tl (190.794 nm)	-0.000257 u	ppm	0.001101	> 100.00	-4.437770	Y 377.433
U (409.013 nm)	-0.022904 u	ppm	0.003519	15.36	-97.490600	Y 377.433
V (292.401 nm)	0.104654	ppm	0.000075	0.07	5492.930000	Y 377.433
Zn (206.200 nm)	0.008949	ppm	0.000100	1.11	44.871200	Y 377.433
Zr (343.823 nm)	0.411680	ppm	0.000062	0.02	23981.100000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.938085	17539.370963	0.000297	0.03
Y 377.433	0.979066	543945.800247	0.000024	0.00
Y_R 377.433	1.103500	53724.900000	0.003843	0.35
Y_R 488.368	1.088510	46551.200000	0.004890	0.45
Y_R2 488.368	1.070052	89371.669967	0.003909	0.37
Y_R4	1.068340	41074.200000	0.002600	0.24

Sample Name: 280-123135-D-6-B

Date: 5/11/2019 6:59:36 AM

Rack:Tube: 4:32

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001118	ppm	0.000135	12.03	-149.331000	Y 377.433
Al (394.401 nm)	0.010563	ppm	0.000263	2.49	374.894000	Y 377.433
Al H (396.152 nm)	-0.035935 u	ppm	0.006614	18.41	12.194300	Y_R 377.433
As (188.980 nm)	0.004259	ppm	0.003294	77.35	4.938890	Y 242.219
B (249.678 nm)	0.278432	ppm	0.000511	0.18	2144.700000	Y 242.219
Ba (493.408 nm)	0.047951	ppm	0.000116	0.24	6660.180000	Y_R 488.368
Be (234.861 nm)	-0.000025 u	ppm	0.000002	6.32	-6.888170	Y_R 488.368
Bi (223.061 nm)	0.000843	ppm	0.000540	64.09	-8.948880	Y 377.433
Ca (315.887 nm)	133.389037	ppm	0.069358	0.05	110252.701816	Y_R 377.433
Cd (214.439 nm)	0.000350	ppm	0.000036	10.40	6.780170	Y 377.433
Co (228.615 nm)	0.002422	ppm	0.000274	11.33	37.265500	Y 242.219
Cr (205.560 nm)	0.000931	ppm	0.000181	19.47	-1.751440	Y 377.433
Cu (324.754 nm)	0.006008	ppm	0.000180	2.99	723.980000	Y 377.433
Fe (238.204 nm)	0.389190	ppm	0.001245	0.32	977.135041	Y_R 377.433
Fe H (259.940 nm)	0.401141 u	ppm	0.000759	0.19	548.542000	Y_R 377.433
K (766.491 nm)	6.166460	ppm	0.105311	1.71	8667.350000	Y_R2 488.368
Li (670.783 nm)	0.012006	ppm	0.004844	40.35	-2667.600000	Y_R2 488.368
Mg (279.078 nm)	63.435700	ppm	0.021805	0.03	222364.000000	Y 377.433
Mn (257.610 nm)	2.606880	ppm	0.002639	0.10	751322.000000	Y 377.433
Mo (202.032 nm)	0.008317	ppm	0.000055	0.66	121.636000	Y 377.433
Na (589.592 nm)	584.235000 o	ppm	1.417350	0.24	508063.000000	Y_R2 488.368
Na H (589.593 nm)	619.916057	ppm	1.550570	0.25	359772.534489	Y_R4
Ni (231.604 nm)	0.020506	ppm	0.000161	0.78	100.816000	Y 377.433
P (213.618 nm)	0.350697	ppm	0.001759	0.50	542.927000	Y 242.219
Pb (220.353 nm)	-0.000865 u	ppm	0.002253	> 100.00	5.046770	Y 242.219
S (181.972 nm)	189.345765 bo	ppm	0.298316	0.16	92552.377121	Y 377.433
Sb (206.834 nm)	-0.003473 u	ppm	0.003328	95.83	-4.215120	Y 377.433
Se (196.026 nm)	0.000898 u	ppm	0.004407	> 100.00	10.704700	Y 242.219
Si (288.158 nm)	19.859200	ppm	0.068364	0.34	133168.000000	Y 377.433
Sn (189.925 nm)	-0.003393 u	ppm	0.001859	54.78	3.512280	Y 377.433
Sr (421.552 nm)	0.811983	ppm	0.000872	0.11	130502.727722	Y_R 488.368
Th (288.505 nm)	-0.014839 u	ppm	0.004750	32.01	39.561500	Y 377.433
Ti (336.122 nm)	-0.000032 u	ppm	0.000107	> 100.00	-72.246000	Y 377.433
Tl (190.794 nm)	0.004158	ppm	0.000826	19.87	4.708770	Y 377.433
U (409.013 nm)	0.006604	ppm	0.001279	19.37	33.976500	Y 377.433
V (292.401 nm)	0.015138	ppm	0.000029	0.19	721.644000	Y 377.433
Zn (206.200 nm)	0.003278	ppm	0.000415	12.67	18.120000	Y 377.433
Zr (343.823 nm)	0.001822	ppm	0.000004	0.22	-66.646300	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.050295	19637.360936	0.000414	0.04
Y 377.433	1.064668	591504.647680	0.001989	0.19
Y_R 377.433	1.108640	53974.700000	0.006960	0.63
Y_R 488.368	1.093600	46769.300000	0.005616	0.51
Y_R2 488.368	1.063718	88842.659885	0.002171	0.20
Y_R4	1.086840	41785.800000	0.002035	0.19

Sample Name: 280-123135-D-7-B

Date: 5/11/2019 7:03:12 AM

Rack:Tube: 4:33

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.001341	ppm	0.000092	6.85	-171.921000	Y 377.433
Al (394.401 nm)	0.107651	ppm	0.000630	0.58	1946.620000	Y 377.433
Al H (396.152 nm)	-0.172039 u	ppm	0.001730	1.01	279.192000	Y_R 377.433
As (188.980 nm)	0.041848	ppm	0.000289	0.69	64.636100	Y 242.219
B (249.678 nm)	5.798100	ppm	0.001426	0.02	44429.200000	Y 242.219
Ba (493.408 nm)	0.469605	ppm	0.000600	0.13	50905.300000	Y_R 488.368
Be (234.861 nm)	0.000106	ppm	0.000018	16.70	-24.527600	Y_R 488.368
Bi (223.061 nm)	0.003324	ppm	0.000637	19.16	-2.299750	Y 377.433
Ca (315.887 nm)	219.509248	ppm	0.143599	0.07	181482.677183	Y_R 377.433
Cd (214.439 nm)	0.000302	ppm	0.000149	49.14	6.416190	Y 377.433
Co (228.615 nm)	0.034797	ppm	0.000519	1.49	856.291000	Y 242.219
Cr (205.560 nm)	0.070139	ppm	0.000245	0.35	477.645000	Y 377.433
Cu (324.754 nm)	-0.001651 u	ppm	0.000292	17.65	304.973000	Y 377.433
Fe (238.204 nm)	3.925467	ppm	0.005443	0.14	9817.724283	Y_R 377.433
Fe H (259.940 nm)	3.906820 u	ppm	0.002844	0.07	5587.020000	Y_R 377.433
K (766.491 nm)	274.392000	ppm	0.203473	0.07	290782.000000	Y_R2 488.368
Li (670.783 nm)	0.028544	ppm	0.002647	9.27	-2366.720000	Y_R2 488.368
Mg (279.078 nm)	126.385000	ppm	0.030126	0.02	443001.000000	Y 377.433
Mn (257.610 nm)	4.177990	ppm	0.001577	0.04	1204140.000000	Y 377.433
Mo (202.032 nm)	0.003812	ppm	0.000511	13.40	62.044900	Y 377.433
Na (589.592 nm)	873.426000 o	ppm	0.453096	0.05	759561.000000	Y_R2 488.368
Na H (589.593 nm)	974.235805	ppm	2.701157	0.28	565131.263005	Y_R4
Ni (231.604 nm)	0.138380	ppm	0.000963	0.70	740.422000	Y 377.433
P (213.618 nm)	1.665600	ppm	0.003893	0.23	2576.230000	Y 242.219
Pb (220.353 nm)	-0.000555 u	ppm	0.002994	> 100.00	5.662790	Y 242.219
S (181.972 nm)	53.801071	ppm	0.036115	0.07	26324.034794	Y 377.433
Sb (206.834 nm)	-0.006336 u	ppm	0.001032	16.29	-9.645060	Y 377.433
Se (196.026 nm)	0.000710 u	ppm	0.002121	> 100.00	11.739700	Y 242.219
Si (288.158 nm)	23.378400	ppm	0.082801	0.35	156677.000000	Y 377.433
Sn (189.925 nm)	-0.001442 u	ppm	0.000878	60.87	6.723010	Y 377.433
Sr (421.552 nm)	2.218518	ppm	0.000825	0.04	356384.652621	Y_R 488.368
Th (288.505 nm)	-0.007018 u	ppm	0.002139	30.47	69.836100	Y 377.433
Ti (336.122 nm)	0.187433	ppm	0.000014	0.01	24953.800000	Y 377.433
Tl (190.794 nm)	0.003723	ppm	0.000515	13.82	-1.113540	Y 377.433
U (409.013 nm)	0.000207 u	ppm	0.006480	> 100.00	-2.525720	Y 377.433
V (292.401 nm)	0.119974	ppm	0.000008	0.01	6383.310000	Y 377.433
Zn (206.200 nm)	0.015385	ppm	0.000491	3.19	73.930400	Y 377.433
Zr (343.823 nm)	0.061524	ppm	0.000135	0.22	3436.320000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.990887	18526.602556	0.002244	0.23
Y 377.433	1.016088	564514.640206	0.001634	0.16
Y_R 377.433	1.073520	52265.100000	0.002090	0.19
Y_R 488.368	1.058960	45287.900000	0.002380	0.22
Y_R2 488.368	1.041454	86983.143005	0.003829	0.37
Y_R4	1.059750	40744.000000	0.000370	0.03

Sample Name: 280-123135-D-8-B

Date: 5/11/2019 7:06:51 AM

Rack:Tube: 4:34

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000800	ppm	0.000675	84.27	-158.273000	Y 377.433
Al (394.401 nm)	0.000517 u	ppm	0.001291	> 100.00	398.166000	Y 377.433
Al H (396.152 nm)	-0.136142 u	ppm	0.003336	2.45	41.807700	Y_R 377.433
As (188.980 nm)	0.014858	ppm	0.002584	17.39	21.772100	Y 242.219
B (249.678 nm)	1.700670	ppm	0.002356	0.14	13040.000000	Y 242.219
Ba (493.408 nm)	0.276355	ppm	0.000390	0.14	30626.400000	Y_R 488.368
Be (234.861 nm)	0.000014 u	ppm	0.000053	> 100.00	-12.135800	Y_R 488.368
Bi (223.061 nm)	0.000457 u	ppm	0.001396	> 100.00	-9.531270	Y 377.433
Ca (315.887 nm)	124.686978	ppm	0.093133	0.07	103055.238547	Y_R 377.433
Cd (214.439 nm)	0.000352	ppm	0.000002	0.45	7.285510	Y 377.433
Co (228.615 nm)	0.007619	ppm	0.000165	2.16	167.493000	Y 242.219
Cr (205.560 nm)	0.006674	ppm	0.000085	1.28	38.054900	Y 377.433
Cu (324.754 nm)	-0.001933 u	ppm	0.000213	11.02	343.680000	Y 377.433
Fe (238.204 nm)	1.431119	ppm	0.003796	0.27	3581.926811	Y_R 377.433
Fe H (259.940 nm)	1.452870 u	ppm	0.003954	0.27	2060.120000	Y_R 377.433
K (766.491 nm)	46.537000	ppm	0.131462	0.28	51128.300000	Y_R2 488.368
Li (670.783 nm)	0.010652	ppm	0.005181	48.64	-2692.230000	Y_R2 488.368
Mg (279.078 nm)	63.887800	ppm	0.061173	0.10	223947.000000	Y 377.433
Mn (257.610 nm)	1.882940	ppm	0.002364	0.13	542671.000000	Y 377.433
Mo (202.032 nm)	0.000683	ppm	0.000261	38.17	20.644900	Y 377.433
Na (589.592 nm)	489.008000 o	ppm	0.426684	0.09	425337.000000	Y_R2 488.368
Na H (589.593 nm)	514.995631	ppm	2.449728	0.48	298962.135272	Y_R4
Ni (231.604 nm)	0.036344	ppm	0.000409	1.13	186.751000	Y 377.433
P (213.618 nm)	0.392660	ppm	0.003136	0.80	610.118000	Y 242.219
Pb (220.353 nm)	-0.000913 u	ppm	0.001016	> 100.00	4.868200	Y 242.219
S (181.972 nm)	3.850412	ppm	0.008182	0.21	1901.690660	Y 377.433
Sb (206.834 nm)	-0.005117 u	ppm	0.000021	0.41	-7.106310	Y 377.433
Se (196.026 nm)	0.005291	ppm	0.003398	64.21	16.403400	Y 242.219
Si (288.158 nm)	29.565400	ppm	0.298934	1.01	198005.000000	Y 377.433
Sn (189.925 nm)	-0.002789 u	ppm	0.000658	23.59	4.507200	Y 377.433
Sr (421.552 nm)	1.413309	ppm	0.001719	0.12	227072.455650	Y_R 488.368
Th (288.505 nm)	-0.009813 u	ppm	0.005767	58.78	34.735200	Y 377.433
Ti (336.122 nm)	0.004524	ppm	0.000022	0.49	500.151000	Y 377.433
Tl (190.794 nm)	0.002457	ppm	0.001167	47.47	0.814344	Y 377.433
U (409.013 nm)	0.009716	ppm	0.008956	92.18	45.526900	Y 377.433
V (292.401 nm)	0.009685	ppm	0.000024	0.25	427.668000	Y 377.433
Zn (206.200 nm)	0.004278	ppm	0.000502	11.73	22.834300	Y 377.433
Zr (343.823 nm)	0.003463	ppm	0.000065	1.89	29.638600	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.043103	19502.884395	0.001380	0.13
Y 377.433	1.056623	587034.766133	0.000834	0.08
Y_R 377.433	1.103090	53704.500000	0.005654	0.51
Y_R 488.368	1.088320	46543.300000	0.003834	0.35
Y_R2 488.368	1.075847	89855.679069	0.006826	0.63
Y_R4	1.104870	42478.700000	0.011040	1.00

Sample Name: 280-123137-F-1-D

Date: 5/11/2019 7:10:28 AM

Rack:Tube: 4:35

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000210	ppm	0.000246	> 100.00	-190.935000	Y 377.433
Al (394.401 nm)	0.158203	ppm	0.002033	1.29	2273.270000	Y 377.433
Al H (396.152 nm)	0.085002 u	ppm	0.009469	11.14	383.730000	Y_R 377.433
As (188.980 nm)	0.140107	ppm	0.000581	0.41	221.052000	Y 242.219
B (249.678 nm)	9.491700	ppm	0.001587	0.02	72728.000000	Y 242.219
Ba (493.408 nm)	0.332478	ppm	0.000316	0.10	36514.800000	Y_R 488.368
Be (234.861 nm)	0.000033 u	ppm	0.000049	> 100.00	-6.822550	Y_R 488.368
Bi (223.061 nm)	0.003442	ppm	0.000084	2.44	-2.184230	Y 377.433
Ca (315.887 nm)	88.946971	ppm	0.138470	0.16	73494.752435	Y_R 377.433
Cd (214.439 nm)	0.000244	ppm	0.000102	41.99	2.992110	Y 377.433
Co (228.615 nm)	0.022534	ppm	0.000167	0.74	545.062000	Y 242.219
Cr (205.560 nm)	0.122955	ppm	0.000140	0.11	843.768000	Y 377.433
Cu (324.754 nm)	-0.001536 u	ppm	0.000017	1.08	386.734000	Y 377.433
Fe (238.204 nm)	1.072749	ppm	0.000805	0.08	2686.013769	Y_R 377.433
Fe H (259.940 nm)	1.089300 u	ppm	0.003510	0.32	1537.600000	Y_R 377.433
K (766.491 nm)	428.604000	ppm	0.429070	0.10	452979.000000	Y_R2 488.368
Li (670.783 nm)	0.060423	ppm	0.000398	0.66	-1786.760000	Y_R2 488.368
Mg (279.078 nm)	97.446300	ppm	0.010261	0.01	341573.000000	Y 377.433
Mn (257.610 nm)	0.863616	ppm	0.000356	0.04	248885.000000	Y 377.433
Mo (202.032 nm)	0.002402	ppm	0.000037	1.56	43.389100	Y 377.433
Na (589.592 nm)	1128.880000 o	ppm	0.313679	0.03	981592.000000	Y_R2 488.368
Na H (589.593 nm)	1329.819975	ppm	5.870823	0.44	771222.832593	Y_R4
Ni (231.604 nm)	0.081729	ppm	0.000474	0.58	433.016000	Y 377.433
P (213.618 nm)	2.601300	ppm	0.011519	0.44	4022.000000	Y 242.219
Pb (220.353 nm)	-0.000616 u	ppm	0.001923	> 100.00	5.468580	Y 242.219
S (181.972 nm)	21.546028	ppm	0.056428	0.26	10543.912453	Y 377.433
Sb (206.834 nm)	0.005390	ppm	0.000388	7.20	12.688400	Y 377.433
Se (196.026 nm)	0.001967	ppm	0.001471	74.81	9.699770	Y 242.219
Si (288.158 nm)	21.619400	ppm	0.007771	0.04	144926.000000	Y 377.433
Sn (189.925 nm)	-0.001773 u	ppm	0.000478	26.94	6.178650	Y 377.433
Sr (421.552 nm)	1.024240	ppm	0.000573	0.06	164590.149175	Y_R 488.368
Th (288.505 nm)	0.000150 u	ppm	0.000531	> 100.00	22.956600	Y 377.433
Ti (336.122 nm)	0.096403	ppm	0.000223	0.23	12495.700000	Y 377.433
Tl (190.794 nm)	0.001781	ppm	0.001821	> 100.00	0.340874	Y 377.433
U (409.013 nm)	-0.013162 u	ppm	0.004671	35.49	-37.583800	Y 377.433
V (292.401 nm)	0.098165	ppm	0.000133	0.14	5178.620000	Y 377.433
Zn (206.200 nm)	0.022068	ppm	0.000720	3.26	104.072000	Y 377.433
Zr (343.823 nm)	0.121302	ppm	0.000230	0.19	6943.680000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.995191	18607.089220	0.002505	0.25
Y 377.433	1.018297	565741.890210	0.001617	0.16
Y_R 377.433	1.092630	53195.600000	0.003868	0.35
Y_R 488.368	1.078530	46124.500000	0.001790	0.17
Y_R2 488.368	1.059538	88493.534065	0.008130	0.77
Y_R4	1.077670	41433.100000	0.000574	0.05

Sample Name: 280-123219-C-1-B

Date: 5/11/2019 7:14:09 AM

Rack:Tube: 4:36

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000151 u	ppm	0.000108	71.43	-189.957000	Y 377.433
Al (394.401 nm)	0.012288	ppm	0.000087	0.71	200.542000	Y 377.433
Al H (396.152 nm)	0.106038 u	ppm	0.006554	6.18	41.050300	Y_R 377.433
As (188.980 nm)	0.017579	ppm	0.005079	28.89	26.141600	Y 242.219
B (249.678 nm)	0.017537	ppm	0.000121	0.69	146.169000	Y 242.219
Ba (493.408 nm)	0.036986	ppm	0.000276	0.75	5509.360000	Y_R 488.368
Be (234.861 nm)	-0.000054 u	ppm	0.000026	47.67	-7.050120	Y_R 488.368
Bi (223.061 nm)	0.002557	ppm	0.003418	> 100.00	-5.248140	Y 377.433
Ca (315.887 nm)	35.423632	ppm	0.040278	0.11	29225.613129	Y_R 377.433
Cd (214.439 nm)	0.000176	ppm	0.000054	30.42	-0.023794	Y 377.433
Co (228.615 nm)	0.000165 u	ppm	0.000390	> 100.00	-19.280100	Y 242.219
Cr (205.560 nm)	0.000823	ppm	0.000187	22.73	-2.419640	Y 377.433
Cu (324.754 nm)	-0.001947 u	ppm	0.000182	9.35	394.019000	Y 377.433
Fe (238.204 nm)	0.055749	ppm	0.000185	0.33	143.540867	Y_R 377.433
Fe H (259.940 nm)	0.084824 u	ppm	0.001971	2.32	93.919300	Y_R 377.433
K (766.491 nm)	1.533770	ppm	0.077011	5.02	3794.780000	Y_R2 488.368
Li (670.783 nm)	0.004167	ppm	0.000053	1.26	-2810.210000	Y_R2 488.368
Mg (279.078 nm)	11.572900	ppm	0.004924	0.04	40580.200000	Y 377.433
Mn (257.610 nm)	0.034274	ppm	0.000010	0.03	9854.830000	Y 377.433
Mo (202.032 nm)	0.000225 u	ppm	0.000340	> 100.00	14.587500	Y 377.433
Na (589.592 nm)	12.878200	ppm	0.015269	0.12	11375.300000	Y_R2 488.368
Na H (589.593 nm)	19.305056 u	ppm	0.069169	0.36	11666.869190	Y_R4
Ni (231.604 nm)	-0.000532 u	ppm	0.000229	43.15	-13.344800	Y 377.433
P (213.618 nm)	0.275624	ppm	0.002387	0.87	429.600000	Y 242.219
Pb (220.353 nm)	0.000110	ppm	0.000007	6.12	8.371080	Y 242.219
S (181.972 nm)	2.140021	ppm	0.008884	0.42	1055.156347	Y 377.433
Sb (206.834 nm)	-0.006588 u	ppm	0.004225	64.13	-9.987530	Y 377.433
Se (196.026 nm)	0.001289	ppm	0.000191	14.84	7.681090	Y 242.219
Si (288.158 nm)	16.289500	ppm	0.084618	0.52	109322.000000	Y 377.433
Sn (189.925 nm)	-0.003648 u	ppm	0.000424	11.62	3.092870	Y 377.433
Sr (421.552 nm)	0.072966	ppm	0.000152	0.21	11820.953628	Y_R 488.368
Th (288.505 nm)	-0.010756 u	ppm	0.006311	58.67	0.179710	Y 377.433
Ti (336.122 nm)	0.000331	ppm	0.000022	6.60	-358.049000	Y 377.433
Tl (190.794 nm)	0.000898 u	ppm	0.001285	> 100.00	0.861366	Y 377.433
U (409.013 nm)	0.012872	ppm	0.009282	72.11	66.591400	Y 377.433
V (292.401 nm)	0.000388	ppm	0.000410	> 100.00	-74.660400	Y 377.433
Zn (206.200 nm)	0.003733	ppm	0.000543	14.54	20.153000	Y 377.433
Zr (343.823 nm)	0.000686	ppm	0.000157	22.92	-133.241000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.090631	20391.514352	0.003003	0.28
Y 377.433	1.094986	608348.494701	0.003484	0.32
Y_R 377.433	1.102090	53656.100000	0.001163	0.11
Y_R 488.368	1.089040	46574.100000	0.000718	0.07
Y_R2 488.368	1.072538	89579.287330	0.006448	0.60
Y_R4	1.104850	42478.000000	0.000880	0.08

Sample Name: 280-123219-C-2-B

Date: 5/11/2019 7:17:39 AM

Rack:Tube: 4:37

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000644 u	ppm	0.000408	63.27	-207.658000	Y 377.433
Al (394.401 nm)	0.008584	ppm	0.000862	10.04	133.246000	Y 377.433
Al H (396.152 nm)	0.113644 u	ppm	0.001992	1.75	35.671500	Y_R 377.433
As (188.980 nm)	0.001723	ppm	0.001536	89.13	0.915699	Y 242.219
B (249.678 nm)	0.005950	ppm	0.000394	6.62	57.422500	Y 242.219
Ba (493.408 nm)	-0.001328 u	ppm	0.000019	1.41	1489.280000	Y_R 488.368
Be (234.861 nm)	-0.000065 u	ppm	0.000010	15.20	-7.845540	Y_R 488.368
Bi (223.061 nm)	0.002701	ppm	0.000778	28.82	-4.939760	Y 377.433
Ca (315.887 nm)	0.057541	ppm	0.003937	6.84	-25.647407	Y_R 377.433
Cd (214.439 nm)	-0.000036 u	ppm	0.000006	17.28	-8.155080	Y 377.433
Co (228.615 nm)	0.000559	ppm	0.000031	5.57	-9.420720	Y 242.219
Cr (205.560 nm)	0.000403	ppm	0.000245	60.77	-5.327010	Y 377.433
Cu (324.754 nm)	-0.001380 u	ppm	0.000156	11.30	443.812000	Y 377.433
Fe (238.204 nm)	0.020956	ppm	0.000528	2.52	56.559819	Y_R 377.433
Fe H (259.940 nm)	0.054044 u	ppm	0.000019	0.03	49.681900	Y_R 377.433
K (766.491 nm)	-0.116011 u	ppm	0.089114	76.82	2059.570000	Y_R2 488.368
Li (670.783 nm)	0.004715	ppm	0.005634	> 100.00	-2800.240000	Y_R2 488.368
Mg (279.078 nm)	0.022931	ppm	0.000176	0.77	96.604300	Y 377.433
Mn (257.610 nm)	0.000701	ppm	0.000022	3.21	178.588000	Y 377.433
Mo (202.032 nm)	-0.000006 u	ppm	0.000205	> 100.00	11.534100	Y 377.433
Na (589.592 nm)	0.649856	ppm	0.045055	6.93	735.943000	Y_R2 488.368
Na H (589.593 nm)	4.341623 u	ppm	0.087528	2.02	2994.274956	Y_R4
Ni (231.604 nm)	-0.000320 u	ppm	0.000388	> 100.00	-12.192600	Y 377.433
P (213.618 nm)	-0.005239 u	ppm	0.000521	9.94	-4.235760	Y 242.219
Pb (220.353 nm)	-0.001321 u	ppm	0.001806	> 100.00	3.558690	Y 242.219
S (181.972 nm)	0.018403	ppm	0.001689	9.18	16.471243	Y 377.433
Sb (206.834 nm)	0.000845	ppm	0.000221	26.15	3.858050	Y 377.433
Se (196.026 nm)	0.001908 u	ppm	0.002805	> 100.00	8.633640	Y 242.219
Si (288.158 nm)	0.043859	ppm	0.002299	5.24	801.381000	Y 377.433
Sn (189.925 nm)	-0.002840 u	ppm	0.001646	57.96	4.423140	Y 377.433
Sr (421.552 nm)	-0.000044 u	ppm	0.000003	7.01	96.016552	Y_R 488.368
Th (288.505 nm)	-0.003585 u	ppm	0.001833	51.13	13.106300	Y 377.433
Ti (336.122 nm)	0.000729	ppm	0.000073	10.07	-424.630000	Y 377.433
Tl (190.794 nm)	-0.000045 u	ppm	0.000511	> 100.00	0.005558	Y 377.433
U (409.013 nm)	-0.000322 u	ppm	0.000986	> 100.00	28.992100	Y 377.433
V (292.401 nm)	-0.000491 u	ppm	0.000101	20.51	-121.198000	Y 377.433
Zn (206.200 nm)	0.001229	ppm	0.000096	7.83	8.704190	Y 377.433
Zr (343.823 nm)	0.000578	ppm	0.000140	24.21	-139.596000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.075665	20111.706833	0.003868	0.36
Y 377.433	1.085949	603327.766936	0.003231	0.30
Y_R 377.433	1.084380	52793.600000	0.001103	0.10
Y_R 488.368	1.070060	45762.200000	0.002993	0.28
Y_R2 488.368	1.066838	89103.231559	0.007511	0.70
Y_R4	1.082910	41634.400000	0.011843	1.09

Sample Name: CCVH-5690583

Date: 5/11/2019 7:20:52 AM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000246	ppm	0.000175	71.12	-311.697000	Y 377.433
Al (394.401 nm)	47.837200 o	ppm	0.172196	0.36	601168.000000	Y 377.433
Al H (396.152 nm)	47.916300	ppm	0.010772	0.02	107639.000000	Y_R 377.433
As (188.980 nm)	0.002520	ppm	0.000719	28.55	-2.183660	Y 242.219
B (249.678 nm)	0.010712	ppm	0.000238	2.22	64.659000	Y 242.219
Ba (493.408 nm)	0.001646	ppm	0.000361	21.96	1840.860000	Y_R 488.368
Be (234.861 nm)	0.002441	ppm	0.000046	1.87	-169.540000	Y_R 488.368
Bi (223.061 nm)	0.939393	ppm	0.002900	0.31	2063.090000	Y 377.433
Ca (315.887 nm)	0.025083	ppm	0.006689	26.67	-40.182154	Y_R 377.433
Cd (214.439 nm)	0.000743	ppm	0.000024	3.18	41.557000	Y 377.433
Co (228.615 nm)	0.004177	ppm	0.000157	3.77	81.206900	Y 242.219
Cr (205.560 nm)	0.001083	ppm	0.000108	9.96	-1.941900	Y 377.433
Cu (324.754 nm)	0.005143	ppm	0.000291	5.66	1160.320000	Y 377.433
Fe (238.204 nm)	48.079834 o	ppm	0.020195	0.04	120202.370503	Y_R 377.433
Fe H (259.940 nm)	47.852200	ppm	0.035608	0.07	68746.900000	Y_R 377.433
K (766.491 nm)	0.544444	ppm	0.046856	8.61	2754.220000	Y_R2 488.368
Li (670.783 nm)	0.003361	ppm	0.002210	65.76	-2824.870000	Y_R2 488.368
Mg (279.078 nm)	0.022843	ppm	0.002756	12.06	-130.836000	Y 377.433
Mn (257.610 nm)	0.001434	ppm	0.000047	3.28	389.704000	Y 377.433
Mo (202.032 nm)	0.000883	ppm	0.000449	50.86	23.294800	Y 377.433
Na (589.592 nm)	236.156000 o	ppm	0.208611	0.09	205464.000000	Y_R2 488.368
Na H (589.593 nm)	238.029574	ppm	0.987728	0.41	138436.514898	Y_R4
Ni (231.604 nm)	0.002150	ppm	0.000677	31.51	1.207690	Y 377.433
P (213.618 nm)	-0.015818 u	ppm	0.001040	6.58	-27.673300	Y 242.219
Pb (220.353 nm)	0.005816	ppm	0.001134	19.50	43.308200	Y 242.219
S (181.972 nm)	4.707229	ppm	0.013126	0.28	2307.811203	Y 377.433
Sb (206.834 nm)	0.004108	ppm	0.003743	91.11	13.256100	Y 377.433
Se (196.026 nm)	0.003491	ppm	0.003296	94.41	-1.736070	Y 242.219
Si (288.158 nm)	0.057684	ppm	0.000194	0.34	893.736000	Y 377.433
Sn (189.925 nm)	-0.001779 u	ppm	0.001125	63.26	6.169270	Y 377.433
Sr (421.552 nm)	0.000818	ppm	0.000038	4.70	241.890120	Y_R 488.368
Th (288.505 nm)	4.824240	ppm	0.011724	0.24	8523.360000	Y 377.433
Ti (336.122 nm)	0.002142	ppm	0.000117	5.46	-238.290000	Y 377.433
Tl (190.794 nm)	-0.000928 u	ppm	0.001633	> 100.00	-6.960940	Y 377.433
U (409.013 nm)	9.637110	ppm	0.040824	0.42	30848.700000	Y 377.433
V (292.401 nm)	-0.001036 u	ppm	0.000024	2.32	-148.282000	Y 377.433
Zn (206.200 nm)	0.002467	ppm	0.000246	9.97	21.037600	Y 377.433
Zr (343.823 nm)	-0.002635 u	ppm	0.000198	7.50	-328.095000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.037210	19392.720201	0.012063	1.16
Y 377.433	1.049912	583306.447548	0.007681	0.73
Y_R 377.433	1.085900	52867.900000	0.000085	0.01
Y_R 488.368	1.073380	45904.500000	0.000201	0.02
Y_R2 488.368	1.061327	88642.977474	0.000784	0.07
Y_R4	1.105820	42515.500000	0.003930	0.36

Sample Name: CCV-5690581

Date: 5/11/2019 7:24:41 AM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.474307	ppm	0.000163	0.03	17148.400000	Y 377.433
Al (394.401 nm)	0.498340	ppm	0.000998	0.20	6410.320000	Y 377.433
Al H (396.152 nm)	0.537588 u	ppm	0.005202	0.97	1233.240000	Y_R 377.433
As (188.980 nm)	0.950113	ppm	0.005021	0.53	1509.760000	Y 242.219
B (249.678 nm)	0.464742	ppm	0.000511	0.11	3570.790000	Y 242.219
Ba (493.408 nm)	0.472431	ppm	0.000110	0.02	51200.500000	Y_R 488.368
Be (234.861 nm)	0.466487	ppm	0.001448	0.31	49486.900000	Y_R 488.368
Bi (223.061 nm)	0.007293	ppm	0.002317	31.77	5.677920	Y 377.433
Ca (315.887 nm)	4.986314	ppm	0.005490	0.11	4051.070607	Y_R 377.433
Cd (214.439 nm)	0.487688	ppm	0.000151	0.03	18678.300000	Y 377.433
Co (228.615 nm)	0.482823	ppm	0.000356	0.07	12083.000000	Y 242.219
Cr (205.560 nm)	0.484192	ppm	0.002099	0.43	3343.590000	Y 377.433
Cu (324.754 nm)	0.475033	ppm	0.002172	0.46	23825.500000	Y 377.433
Fe (238.204 nm)	2.451017	ppm	0.008340	0.34	6131.643211	Y_R 377.433
Fe H (259.940 nm)	2.466460 u	ppm	0.001735	0.07	3516.890000	Y_R 377.433
K (766.491 nm)	48.338200	ppm	0.034422	0.07	53022.800000	Y_R2 488.368
Li (670.783 nm)	0.987117	ppm	0.003273	0.33	15072.200000	Y_R2 488.368
Mg (279.078 nm)	19.144300	ppm	0.018595	0.10	67115.600000	Y 377.433
Mn (257.610 nm)	0.479429	ppm	0.000186	0.04	138156.000000	Y 377.433
Mo (202.032 nm)	0.483710	ppm	0.000061	0.01	6410.460000	Y 377.433
Na (589.592 nm)	25.112300	ppm	0.031728	0.13	22114.900000	Y_R2 488.368
Na H (589.593 nm)	27.151617 u	ppm	0.086800	0.32	16214.625424	Y_R4
Ni (231.604 nm)	0.483238	ppm	0.000793	0.16	2612.830000	Y 377.433
P (213.618 nm)	0.930767	ppm	0.006369	0.68	1303.770000	Y 242.219
Pb (220.353 nm)	0.969106	ppm	0.000906	0.09	3268.140000	Y 242.219
S (181.972 nm)	0.002437	ppm	0.002673	> 100.00	10.500865	Y 377.433
Sb (206.834 nm)	0.957011	ppm	0.000770	0.08	1782.640000	Y 377.433
Se (196.026 nm)	0.950626	ppm	0.003853	0.41	1528.270000	Y 242.219
Si (288.158 nm)	4.991250	ppm	0.036185	0.72	33850.000000	Y 377.433
Sn (189.925 nm)	0.977964	ppm	0.003092	0.32	1618.520000	Y 377.433
Sr (421.552 nm)	0.474434	ppm	0.000456	0.10	76294.652978	Y_R 488.368
Th (288.505 nm)	0.004501	ppm	0.002057	45.71	-21.825800	Y 377.433
Ti (336.122 nm)	0.478941	ppm	0.000090	0.02	62684.600000	Y 377.433
Tl (190.794 nm)	0.973637	ppm	0.001520	0.16	2377.460000	Y 377.433
U (409.013 nm)	0.014580	ppm	0.012036	82.55	18.306300	Y 377.433
V (292.401 nm)	0.477830	ppm	0.000139	0.03	25571.400000	Y 377.433
Zn (206.200 nm)	0.486865	ppm	0.001257	0.26	2228.050000	Y 377.433
Zr (343.823 nm)	0.479374	ppm	0.000492	0.10	27952.900000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.084655	20279.788517	0.001049	0.10
Y 377.433	1.088461	604723.537036	0.000897	0.08
Y_R 377.433	1.104380	53767.400000	0.004785	0.43
Y_R 488.368	1.092740	46732.200000	0.004178	0.38
Y_R2 488.368	1.078615	90086.842959	0.007586	0.70
Y_R4	1.120950	43097.000000	0.005465	0.49

Sample Name: CCB

Date: 5/11/2019 7:28:18 AM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000440 u	ppm	0.000009	1.98	-200.104000	Y 377.433
Al (394.401 nm)	0.008025	ppm	0.000131	1.63	124.753000	Y 377.433
Al H (396.152 nm)	0.119200 Zu	ppm	0.000841	0.71	48.243000 Z	Y_R 377.433
As (188.980 nm)	0.002396	ppm	0.001101	45.96	1.986490	Y 242.219
B (249.678 nm)	0.002593	ppm	0.000301	11.63	31.714000	Y 242.219
Ba (493.408 nm)	-0.001333 u	ppm	0.000262	19.65	1488.690000	Y_R 488.368
Be (234.861 nm)	0.000165	ppm	0.000034	20.64	16.644800	Y_R 488.368
Bi (223.061 nm)	0.003554	ppm	0.000870	24.48	-3.067390	Y 377.433
Ca (315.887 nm)	0.005354 u	ppm	0.008999	> 100.00	-68.809844	Y_R 377.433
Cd (214.439 nm)	0.000237	ppm	0.000145	60.96	2.300360	Y 377.433
Co (228.615 nm)	0.000513	ppm	0.000071	13.77	-10.560600	Y 242.219
Cr (205.560 nm)	0.000159	ppm	0.000085	53.36	-7.024460	Y 377.433
Cu (324.754 nm)	-0.001125 u	ppm	0.000046	4.11	456.799000	Y 377.433
Fe (238.204 nm)	0.004606	ppm	0.001844	40.02	15.686710	Y_R 377.433
Fe H (259.940 nm)	0.033985 u	ppm	0.005016	14.76	20.852500	Y_R 377.433
K (766.491 nm)	-0.235534 u	ppm	0.110168	46.77	1933.860000	Y_R2 488.368
Li (670.783 nm)	0.008258	ppm	0.003455	41.84	-2735.790000	Y_R2 488.368
Mg (279.078 nm)	0.008285	ppm	0.000708	8.55	45.533300	Y 377.433
Mn (257.610 nm)	0.000271	ppm	0.000031	11.37	54.603200	Y 377.433
Mo (202.032 nm)	0.000214	ppm	0.000038	17.55	14.451700	Y 377.433
Na (589.592 nm)	0.458323 Z	ppm	0.026521	5.79	569.390000 Z	Y_R2 488.368
Na H (589.593 nm)	2.632945 u	ppm	0.055626	2.11	2003.948870	Y_R4
Ni (231.604 nm)	0.000161	ppm	0.000024	15.22	-9.584720	Y 377.433
P (213.618 nm)	-0.004377 u	ppm	0.000518	11.83	-2.966660	Y 242.219
Pb (220.353 nm)	0.001149	ppm	0.000833	72.51	11.837400	Y 242.219
S (181.972 nm)	0.000998 u	ppm	0.005343	> 100.00	7.963346	Y 377.433
Sb (206.834 nm)	-0.002273 u	ppm	0.001794	78.94	-1.957740	Y 377.433
Se (196.026 nm)	0.004048	ppm	0.000575	14.19	12.064900	Y 242.219
Si (288.158 nm)	0.079438	ppm	0.006734	8.48	1039.050000	Y 377.433
Sn (189.925 nm)	-0.004206 u	ppm	0.000165	3.93	2.175830	Y 377.433
Sr (421.552 nm)	0.000008 u	ppm	0.000032	> 100.00	104.293731	Y_R 488.368
Th (288.505 nm)	-0.005592 u	ppm	0.001389	24.85	9.443170	Y 377.433
Ti (336.122 nm)	0.000900	ppm	0.000018	1.95	-402.182000	Y 377.433
Tl (190.794 nm)	0.002545	ppm	0.000740	29.06	6.341300	Y 377.433
U (409.013 nm)	-0.002723 u	ppm	0.000308	11.29	21.271900	Y 377.433
V (292.401 nm)	-0.000426 u	ppm	0.000102	23.96	-117.089000	Y 377.433
Zn (206.200 nm)	-0.000050 u	ppm	0.000295	> 100.00	2.860800	Y 377.433
Zr (343.823 nm)	0.000929	ppm	0.000149	16.06	-119.007000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.123714	21010.070995	0.002288	0.20
Y 377.433	1.121880	623289.923201	0.001188	0.11
Y_R 377.433	1.127200	54878.300000	0.007049	0.63
Y_R 488.368	1.115300	47697.300000	0.003930	0.35
Y_R2 488.368	1.102478	92079.878795	0.002873	0.26
Y_R4	1.119670	43047.600000	0.002912	0.26

Sample Name: CCVL-5695588

Date: 5/11/2019 7:31:34 AM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.009103	ppm	0.000206	2.26	147.959000	Y 377.433
Al (394.401 nm)	0.101584	ppm	0.000859	0.85	1308.040000	Y 377.433
Al H (396.152 nm)	0.216654 u	ppm	0.000509	0.24	273.001000	Y_R 377.433
As (188.980 nm)	0.014788	ppm	0.000782	5.28	21.694100	Y 242.219
B (249.678 nm)	0.094104	ppm	0.000242	0.26	732.726000	Y 242.219
Ba (493.408 nm)	0.008248	ppm	0.000162	1.96	2494.040000	Y_R 488.368
Be (234.861 nm)	0.001015	ppm	0.000012	1.22	106.064000	Y_R 488.368
Bi (223.061 nm)	0.091198	ppm	0.002845	3.12	189.689000	Y 377.433
Ca (315.887 nm)	0.209368	ppm	0.006769	3.23	99.952337	Y_R 377.433
Cd (214.439 nm)	0.005161	ppm	0.000041	0.79	190.987000	Y 377.433
Co (228.615 nm)	0.010357	ppm	0.000097	0.93	236.263000	Y 242.219
Cr (205.560 nm)	0.010080	ppm	0.000214	2.12	61.558700	Y 377.433
Cu (324.754 nm)	0.013588	ppm	0.000042	0.31	1177.950000	Y 377.433
Fe (238.204 nm)	0.101121	ppm	0.000551	0.54	256.970812	Y_R 377.433
Fe H (259.940 nm)	0.134119 u	ppm	0.001210	0.90	164.768000	Y_R 377.433
K (766.491 nm)	2.709910	ppm	0.047219	1.74	5031.820000	Y_R2 488.368
Li (670.783 nm)	0.027856 Q	ppm	0.002964	10.64	-2379.250000 Q	Y_R2 488.368
Mg (279.078 nm)	0.202103	ppm	0.000666	0.33	723.686000	Y 377.433
Mn (257.610 nm)	0.010347	ppm	0.000048	0.47	2958.560000	Y 377.433
Mo (202.032 nm)	0.018750	ppm	0.000264	1.41	259.657000	Y 377.433
Na (589.592 nm)	1.397480 Q	ppm	0.033698	2.41	1388.160000 Q	Y_R2 488.368
Na H (589.593 nm)	3.048895 u	ppm	0.073603	2.41	2245.027595	Y_R4
Ni (231.604 nm)	0.040941	ppm	0.000490	1.20	211.711000	Y 377.433
P (213.618 nm)	2.636020	ppm	0.018524	0.70	4071.730000	Y 242.219
Pb (220.353 nm)	0.009137	ppm	0.000344	3.77	38.798500	Y 242.219
S (181.972 nm)	0.084365	ppm	0.008976	10.64	48.742551	Y 377.433
Sb (206.834 nm)	0.017185	ppm	0.000143	0.83	34.141100	Y 377.433
Se (196.026 nm)	0.019388	ppm	0.004800	24.76	36.626300	Y 242.219
Si (288.158 nm)	0.678798 Q	ppm	0.005183	0.76	5042.780000 Q	Y 377.433
Sn (189.925 nm)	0.094968	ppm	0.000057	0.06	165.385000	Y 377.433
Sr (421.552 nm)	0.008907	ppm	0.000231	2.60	1533.360798	Y_R 488.368
Th (288.505 nm)	0.008827 Q	ppm	0.000021	0.23	34.225800 Q	Y 377.433
Ti (336.122 nm)	0.010357	ppm	0.000065	0.63	846.145000	Y 377.433
Tl (190.794 nm)	0.017095	ppm	0.000900	5.27	41.801600	Y 377.433
U (409.013 nm)	0.045329	ppm	0.004650	10.26	173.645000	Y 377.433
V (292.401 nm)	0.009109	ppm	0.000212	2.33	392.541000	Y 377.433
Zn (206.200 nm)	0.020569	ppm	0.000535	2.60	97.085500	Y 377.433
Zr (343.823 nm)	0.010306 Q	ppm	0.000211	2.05	431.183000 Q	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.122336	20984.320881	0.000942	0.08
Y 377.433	1.120569	622562.037378	0.002781	0.25
Y_R 377.433	1.130030	55016.400000	0.000472	0.04
Y_R 488.368	1.118720	47843.200000	0.000855	0.08
Y_R2 488.368	1.105763	92354.240679	0.000768	0.07
Y_R4	1.142670	43932.000000	0.000418	0.04

Sample Name: 280-123220-B-1-B

Date: 5/11/2019 7:35:04 AM

Rack:Tube: 4:38

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000166 u	ppm	0.000164	98.61	-190.675000	Y 377.433
Al (394.401 nm)	0.008434	ppm	0.001135	13.45	170.330000	Y 377.433
Al H (396.152 nm)	0.090229 u	ppm	0.015084	16.72	34.277400	Y_R 377.433
As (188.980 nm)	0.001206 u	ppm	0.002172	> 100.00	0.091619	Y 242.219
B (249.678 nm)	0.015392	ppm	0.000113	0.74	129.759000	Y 242.219
Ba (493.408 nm)	0.030145	ppm	0.000294	0.98	4791.540000	Y_R 488.368
Be (234.861 nm)	-0.000036 u	ppm	0.000003	9.10	-4.830180	Y_R 488.368
Bi (223.061 nm)	-0.000915 u	ppm	0.000700	76.51	-12.892100	Y 377.433
Ca (315.887 nm)	27.965303	ppm	0.017433	0.06	23056.837355	Y_R 377.433
Cd (214.439 nm)	0.000235	ppm	0.000038	16.08	2.206790	Y 377.433
Co (228.615 nm)	0.000182	ppm	0.000018	10.13	-18.855200	Y 242.219
Cr (205.560 nm)	0.000615	ppm	0.000118	19.14	-3.859010	Y 377.433
Cu (324.754 nm)	-0.000401 u	ppm	0.000133	33.13	473.804000	Y 377.433
Fe (238.204 nm)	0.019261	ppm	0.001214	6.30	52.323508	Y_R 377.433
Fe H (259.940 nm)	0.048589 u	ppm	0.002227	4.58	41.841500	Y_R 377.433
K (766.491 nm)	-0.090747 u	ppm	0.009829	10.83	2086.140000	Y_R2 488.368
Li (670.783 nm)	0.011406	ppm	0.003304	28.96	-2678.510000	Y_R2 488.368
Mg (279.078 nm)	10.311300	ppm	0.009942	0.10	36158.200000	Y 377.433
Mn (257.610 nm)	0.000546	ppm	0.000006	1.12	133.957000	Y 377.433
Mo (202.032 nm)	0.000231 u	ppm	0.000365	> 100.00	14.671600	Y 377.433
Na (589.592 nm)	16.194600	ppm	0.059991	0.37	14256.700000	Y_R2 488.368
Na H (589.593 nm)	17.083280 u	ppm	0.108224	0.63	10379.159519	Y_R4
Ni (231.604 nm)	0.000962	ppm	0.000682	70.90	-5.238950	Y 377.433
P (213.618 nm)	0.013728	ppm	0.000713	5.19	24.756500	Y 242.219
Pb (220.353 nm)	-0.001085 u	ppm	0.000736	67.82	4.378870	Y 242.219
S (181.972 nm)	3.713033	ppm	0.005918	0.16	1823.347342	Y 377.433
Sb (206.834 nm)	-0.001287 u	ppm	0.000963	74.86	-0.117627	Y 377.433
Se (196.026 nm)	0.005570	ppm	0.004349	78.07	14.499800	Y 242.219
Si (288.158 nm)	15.171000	ppm	0.012138	0.08	101851.000000	Y 377.433
Sn (189.925 nm)	-0.003417 u	ppm	0.000047	1.38	3.474080	Y 377.433
Sr (421.552 nm)	0.136294	ppm	0.000234	0.17	21991.032344	Y_R 488.368
Th (288.505 nm)	-0.008483 u	ppm	0.000016	0.19	3.794410	Y 377.433
Ti (336.122 nm)	0.000638	ppm	0.000026	4.07	-344.139000	Y 377.433
Tl (190.794 nm)	0.000386	ppm	0.000128	33.26	-0.066201	Y 377.433
U (409.013 nm)	0.014968	ppm	0.007857	52.49	74.316600	Y 377.433
V (292.401 nm)	0.000119 u	ppm	0.000210	> 100.00	-89.756400	Y 377.433
Zn (206.200 nm)	0.002453	ppm	0.000312	12.71	14.297100	Y 377.433
Zr (343.823 nm)	0.000738	ppm	0.000181	24.48	-130.194000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.118425	20911.192337	0.000740	0.07
Y 377.433	1.122357	623555.131936	0.000810	0.07
Y_R 377.433	1.140510	55526.800000	0.001034	0.09
Y_R 488.368	1.127690	48227.200000	0.000726	0.06
Y_R2 488.368	1.112367	92905.886358	0.001307	0.12
Y_R4	1.121910	43133.900000	0.005816	0.52

Sample Name: 280-123220-B-2-B

Date: 5/11/2019 7:38:33 AM

Rack:Tube: 4:39

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000370 u	ppm	0.000001	0.27	-198.148000	Y 377.433
Al (394.401 nm)	0.007979	ppm	0.000311	3.90	161.854000	Y 377.433
Al H (396.152 nm)	0.094141 u	ppm	0.000901	0.96	40.129100	Y_R 377.433
As (188.980 nm)	-0.000233 u	ppm	0.001461	> 100.00	-2.196650	Y 242.219
B (249.678 nm)	0.013479	ppm	0.000398	2.95	115.103000	Y 242.219
Ba (493.408 nm)	0.028013	ppm	0.000151	0.54	4567.810000	Y_R 488.368
Be (234.861 nm)	-0.000031 u	ppm	0.000052	> 100.00	-4.217060	Y_R 488.368
Bi (223.061 nm)	0.003317	ppm	0.000310	9.35	-3.586540	Y 377.433
Ca (315.887 nm)	26.101943	ppm	0.003092	0.01	21515.652659	Y_R 377.433
Cd (214.439 nm)	0.000124	ppm	0.000013	10.74	-2.049700	Y 377.433
Co (228.615 nm)	-0.000131 u	ppm	0.000083	63.29	-26.688100	Y 242.219
Cr (205.560 nm)	0.000848	ppm	0.000739	87.19	-2.253160	Y 377.433
Cu (324.754 nm)	0.000154	ppm	0.000070	45.35	502.416000	Y 377.433
Fe (238.204 nm)	0.014438	ppm	0.001081	7.49	40.265536	Y_R 377.433
Fe H (259.940 nm)	0.041162 u	ppm	0.002628	6.39	31.167800	Y_R 377.433
K (766.491 nm)	-0.017889 u	ppm	0.064166	> 100.00	2162.770000	Y_R2 488.368
Li (670.783 nm)	0.007514	ppm	0.002653	35.31	-2749.320000	Y_R2 488.368
Mg (279.078 nm)	9.634550	ppm	0.004720	0.05	33786.000000	Y 377.433
Mn (257.610 nm)	0.000458	ppm	0.000026	5.68	108.463000	Y 377.433
Mo (202.032 nm)	0.000488	ppm	0.000263	53.95	18.072700	Y 377.433
Na (589.592 nm)	15.043100	ppm	0.007870	0.05	13255.200000	Y_R2 488.368
Na H (589.593 nm)	15.704328 u	ppm	0.014205	0.09	9579.938137	Y_R4
Ni (231.604 nm)	0.000617	ppm	0.000655	> 100.00	-7.109850	Y 377.433
P (213.618 nm)	0.007287	ppm	0.001603	22.00	14.630500	Y 242.219
Pb (220.353 nm)	-0.000430 u	ppm	0.001196	> 100.00	6.582750	Y 242.219
S (181.972 nm)	3.472027	ppm	0.011493	0.33	1705.502122	Y 377.433
Sb (206.834 nm)	-0.002501 u	ppm	0.000399	15.94	-2.381280	Y 377.433
Se (196.026 nm)	0.003554	ppm	0.000330	9.29	11.272000	Y 242.219
Si (288.158 nm)	14.175600	ppm	0.090205	0.64	95201.500000	Y 377.433
Sn (189.925 nm)	-0.002851 u	ppm	0.000537	18.83	4.404470	Y 377.433
Sr (421.552 nm)	0.128952	ppm	0.000304	0.24	20811.997553	Y_R 488.368
Th (288.505 nm)	-0.007727 u	ppm	0.005456	70.61	5.138320	Y 377.433
Ti (336.122 nm)	0.000552	ppm	0.000006	1.02	-360.154000	Y 377.433
Tl (190.794 nm)	0.001429	ppm	0.000552	38.62	2.536660	Y 377.433
U (409.013 nm)	0.009259	ppm	0.006111	66.01	56.224500	Y 377.433
V (292.401 nm)	0.000315	ppm	0.000168	53.16	-78.962500	Y 377.433
Zn (206.200 nm)	0.002480	ppm	0.000086	3.46	14.420200	Y 377.433
Zr (343.823 nm)	0.000677	ppm	0.000248	36.71	-133.816000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.120119	20942.863562	0.003009	0.27
Y 377.433	1.123484	624181.437219	0.003396	0.30
Y_R 377.433	1.137280	55369.400000	0.004040	0.36
Y_R 488.368	1.124840	48105.200000	0.005962	0.53
Y_R2 488.368	1.108521	92584.628137	0.003418	0.31
Y_R4	1.111660	42739.700000	0.001825	0.16

Sample Name: 280-123220-B-3-B

Date: 5/11/2019 7:42:02 AM

Rack:Tube: 4:40

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000267	ppm	0.000104	38.74	-175.076000	Y 377.433
Al (394.401 nm)	0.011634	ppm	0.001584	13.61	229.878000	Y 377.433
Al H (396.152 nm)	0.082996 u	ppm	0.010625	12.80	42.676100	Y_R 377.433
As (188.980 nm)	0.001866	ppm	0.000850	45.55	1.038480	Y 242.219
B (249.678 nm)	0.029579	ppm	0.000852	2.88	236.196000	Y 242.219
Ba (493.408 nm)	0.024351	ppm	0.000142	0.58	4186.620000	Y_R 488.368
Be (234.861 nm)	0.000081	ppm	0.000025	31.22	-25.175500	Y_R 488.368
Bi (223.061 nm)	0.004036	ppm	0.000251	6.22	-1.375670	Y 377.433
Ca (315.887 nm)	51.639452	ppm	0.036624	0.07	42637.701049	Y_R 377.433
Cd (214.439 nm)	0.000184	ppm	0.000067	36.61	1.786710	Y 377.433
Co (228.615 nm)	0.000900	ppm	0.000108	11.98	-0.878683	Y 242.219
Cr (205.560 nm)	-0.000130 u	ppm	0.000102	78.83	-9.030390	Y 377.433
Cu (324.754 nm)	-0.001506 u	ppm	0.000040	2.66	405.407000	Y 377.433
Fe (238.204 nm)	3.708616	ppm	0.002056	0.06	9275.603694	Y_R 377.433
Fe H (259.940 nm)	3.708840 u	ppm	0.006792	0.18	5302.490000	Y_R 377.433
K (766.491 nm)	0.218738	ppm	0.008612	3.94	2411.650000	Y_R2 488.368
Li (670.783 nm)	0.009606	ppm	0.002561	26.65	-2711.250000	Y_R2 488.368
Mg (279.078 nm)	20.678400	ppm	0.060292	0.29	72490.500000	Y 377.433
Mn (257.610 nm)	2.113660	ppm	0.002736	0.13	609167.000000	Y 377.433
Mo (202.032 nm)	0.001903	ppm	0.000282	14.82	36.792600	Y 377.433
Na (589.592 nm)	31.552700	ppm	0.092675	0.29	27606.200000	Y_R2 488.368
Na H (589.593 nm)	31.855634 u	ppm	0.140269	0.44	18941.007378	Y_R4
Ni (231.604 nm)	-0.001513 u	ppm	0.001315	86.95	-18.662900	Y 377.433
P (213.618 nm)	0.501009	ppm	0.001484	0.30	777.779000	Y 242.219
Pb (220.353 nm)	-0.000700 u	ppm	0.000147	21.00	5.692970	Y 242.219
S (181.972 nm)	0.146572	ppm	0.005000	3.41	88.716762	Y 377.433
Sb (206.834 nm)	-0.005338 u	ppm	0.000420	7.86	-7.351650	Y 377.433
Se (196.026 nm)	0.005012	ppm	0.003577	71.37	15.673300	Y 242.219
Si (288.158 nm)	18.194300	ppm	0.172813	0.95	122047.000000	Y 377.433
Sn (189.925 nm)	-0.003624 u	ppm	0.000675	18.63	3.132260	Y 377.433
Sr (421.552 nm)	0.207915	ppm	0.000093	0.04	33493.588245	Y_R 488.368
Th (288.505 nm)	-0.012919 u	ppm	0.003032	23.47	36.612300	Y 377.433
Ti (336.122 nm)	0.000359	ppm	0.000168	46.80	-298.819000	Y 377.433
Tl (190.794 nm)	0.001130 u	ppm	0.002045	> 100.00	0.280404	Y 377.433
U (409.013 nm)	0.017631	ppm	0.007475	42.40	82.341800	Y 377.433
V (292.401 nm)	0.000281	ppm	0.000315	> 100.00	-80.942700	Y 377.433
Zn (206.200 nm)	0.001787	ppm	0.000737	41.24	11.769300	Y 377.433
Zr (343.823 nm)	0.000723	ppm	0.000067	9.27	-131.089000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.095314	20479.072692	0.002597	0.24
Y 377.433	1.101865	612170.222868	0.004538	0.41
Y_R 377.433	1.113060	54190.300000	0.001499	0.13
Y_R 488.368	1.100410	47060.400000	0.002992	0.27
Y_R2 488.368	1.091103	91129.880735	0.000648	0.06
Y_R4	1.091870	41978.800000	0.005529	0.51

Sample Name: MB 280-457262/1-A

Date: 5/11/2019 7:45:40 AM

Rack:Tube: 4:41

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000625 u	ppm	0.000058	9.22	-206.974000	Y 377.433
Al (394.401 nm)	0.006381	ppm	0.000611	9.58	103.856000	Y 377.433
Al H (396.152 nm)	0.108563 u	ppm	0.000678	0.62	24.309500	Y_R 377.433
As (188.980 nm)	0.001865 u	ppm	0.002861	> 100.00	1.141110	Y 242.219
B (249.678 nm)	0.000967	ppm	0.000721	74.56	19.239700	Y 242.219
Ba (493.408 nm)	-0.000870 u	ppm	0.000296	34.08	1537.320000	Y_R 488.368
Be (234.861 nm)	-0.000035 u	ppm	0.000050	> 100.00	-4.740280	Y_R 488.368
Bi (223.061 nm)	0.001471	ppm	0.000057	3.88	-7.646280	Y 377.433
Ca (315.887 nm)	0.055279	ppm	0.007957	14.39	-27.518544	Y_R 377.433
Cd (214.439 nm)	-0.000031 u	ppm	0.000149	> 100.00	-7.961560	Y 377.433
Co (228.615 nm)	0.000406	ppm	0.000062	15.14	-13.236900	Y 242.219
Cr (205.560 nm)	0.000071 u	ppm	0.000169	> 100.00	-7.631220	Y 377.433
Cu (324.754 nm)	-0.001269 u	ppm	0.000087	6.88	449.864000	Y 377.433
Fe (238.204 nm)	0.023411	ppm	0.000173	0.74	62.698596	Y_R 377.433
Fe H (259.940 nm)	0.054924 u	ppm	0.001041	1.89	50.947100	Y_R 377.433
K (766.491 nm)	-0.383074 u	ppm	0.007614	1.99	1778.680000	Y_R2 488.368
Li (670.783 nm)	0.003857	ppm	0.000129	3.33	-2815.840000	Y_R2 488.368
Mg (279.078 nm)	0.020771	ppm	0.000613	2.95	89.289200	Y 377.433
Mn (257.610 nm)	0.001600	ppm	0.000077	4.78	437.720000	Y 377.433
Mo (202.032 nm)	0.000159	ppm	0.000107	67.49	13.714600	Y 377.433
Na (589.592 nm)	0.258611	ppm	0.008365	3.23	395.954000	Y_R2 488.368
Na H (589.593 nm)	1.137219 u	ppm	0.027577	2.42	1137.047172	Y_R4
Ni (231.604 nm)	-0.000435 u	ppm	0.000072	16.52	-12.821800	Y 377.433
P (213.618 nm)	-0.003719 u	ppm	0.000989	26.58	-1.953030	Y 242.219
Pb (220.353 nm)	0.001806	ppm	0.000624	34.55	14.049300	Y 242.219
S (181.972 nm)	0.016865	ppm	0.002549	15.12	15.722849	Y 377.433
Sb (206.834 nm)	-0.001073 u	ppm	0.000971	90.57	0.272549	Y 377.433
Se (196.026 nm)	0.000587 u	ppm	0.001595	> 100.00	6.519160	Y 242.219
Si (288.158 nm)	0.023812	ppm	0.001569	6.59	667.471000	Y 377.433
Sn (189.925 nm)	-0.003007 u	ppm	0.000421	14.00	4.147470	Y 377.433
Sr (421.552 nm)	-0.000021 u	ppm	0.000042	> 100.00	99.568041	Y_R 488.368
Th (288.505 nm)	-0.002177 u	ppm	0.003148	> 100.00	15.431200	Y 377.433
Ti (336.122 nm)	0.000686	ppm	0.000154	22.41	-430.400000	Y 377.433
Tl (190.794 nm)	0.000193 u	ppm	0.001317	> 100.00	0.583039	Y 377.433
U (409.013 nm)	-0.007338 u	ppm	0.001154	15.72	6.559050	Y 377.433
V (292.401 nm)	-0.000594 u	ppm	0.000017	2.92	-125.887000	Y 377.433
Zn (206.200 nm)	0.000989	ppm	0.000386	39.06	7.611770	Y 377.433
Zr (343.823 nm)	0.000771	ppm	0.000059	7.68	-128.255000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.111978	20790.647251	0.000999	0.09
Y 377.433	1.110900	617190.001085	0.000729	0.07
Y_R 377.433	1.119700	54513.600000	0.003917	0.35
Y_R 488.368	1.105800	47290.800000	0.000014	0.00
Y_R2 488.368	1.092561	91251.631159	0.004836	0.44
Y_R4	1.092300	41995.600000	0.006740	0.62

Sample Name: LCS 280-457262/2-A

Date: 5/11/2019 7:48:55 AM

Rack:Tube: 4:42

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.050360	ppm	0.000753	1.49	1339.370000	Y 377.433
Al (394.401 nm)	9.704650 o	ppm	0.013912	0.14	122249.000000	Y 377.433
Al H (396.152 nm)	9.835720	ppm	0.046079	0.47	22407.600000	Y_R 377.433
As (188.980 nm)	1.978180	ppm	0.002344	0.12	3144.680000	Y 242.219
B (249.678 nm)	0.948530	ppm	0.000850	0.09	7272.570000	Y 242.219
Ba (493.408 nm)	1.942310	ppm	0.001317	0.07	205434.000000	Y_R 488.368
Be (234.861 nm)	0.955673	ppm	0.002141	0.22	101339.000000	Y_R 488.368
Bi (223.061 nm)	1.965690	ppm	0.006591	0.34	4313.590000	Y 377.433
Ca (315.887 nm)	50.339919	ppm	0.070967	0.14	41565.415137	Y_R 377.433
Cd (214.439 nm)	0.977225	ppm	0.002333	0.24	37436.300000	Y 377.433
Co (228.615 nm)	0.950768	ppm	0.000058	0.01	23818.400000	Y 242.219
Cr (205.560 nm)	0.963255	ppm	0.001604	0.17	6659.470000	Y 377.433
Cu (324.754 nm)	0.939818	ppm	0.002915	0.31	46681.800000	Y 377.433
Fe (238.204 nm)	9.972026 o	ppm	0.011930	0.12	24933.948577	Y_R 377.433
Fe H (259.940 nm)	9.936780	ppm	0.003113	0.03	14253.500000	Y_R 377.433
K (766.491 nm)	49.595700	ppm	0.006236	0.01	54345.400000	Y_R2 488.368
Li (670.783 nm)	1.011170	ppm	0.000915	0.09	15509.800000	Y_R2 488.368
Mg (279.078 nm)	48.308900	ppm	0.116844	0.24	169297.000000	Y 377.433
Mn (257.610 nm)	0.975601	ppm	0.002259	0.23	281161.000000	Y 377.433
Mo (202.032 nm)	0.988830	ppm	0.001708	0.17	13092.500000	Y 377.433
Na (589.592 nm)	50.587100	ppm	0.105945	0.21	44612.800000	Y_R2 488.368
Na H (589.593 nm)	46.931099 u	ppm	0.080833	0.17	27678.534273	Y_R4
Ni (231.604 nm)	0.947867	ppm	0.004878	0.51	5135.120000	Y 377.433
P (213.618 nm)	18.897500	ppm	0.041409	0.22	28924.200000	Y 242.219
Pb (220.353 nm)	0.983435	ppm	0.002962	0.30	3316.810000	Y 242.219
S (181.972 nm)	9.368402	ppm	0.024142	0.26	4591.381220	Y 377.433
Sb (206.834 nm)	0.989669	ppm	0.004763	0.48	1841.320000	Y 377.433
Se (196.026 nm)	1.963060	ppm	0.001899	0.10	3148.630000	Y 242.219
Si (288.158 nm)	2.085550	ppm	0.007091	0.34	14439.900000	Y 377.433
Sn (189.925 nm)	1.967430	ppm	0.010642	0.54	3246.870000	Y 377.433
Sr (421.552 nm)	0.973762	ppm	0.000591	0.06	156485.054217	Y_R 488.368
Th (288.505 nm)	0.997612	ppm	0.004511	0.45	1676.470000	Y 377.433
Ti (336.122 nm)	0.991041	ppm	0.002028	0.20	130401.000000	Y 377.433
Tl (190.794 nm)	1.935720	ppm	0.005274	0.27	4724.170000	Y 377.433
U (409.013 nm)	1.997460	ppm	0.002792	0.14	6351.660000	Y 377.433
V (292.401 nm)	0.980639	ppm	0.001679	0.17	52584.300000	Y 377.433
Zn (206.200 nm)	0.484687	ppm	0.002827	0.58	2219.130000	Y 377.433
Zr (343.823 nm)	0.484403	ppm	0.000494	0.10	28248.000000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.066303	19936.661445	0.000675	0.06
Y 377.433	1.079335	599653.316167	0.002759	0.26
Y_R 377.433	1.101730	53638.500000	0.004272	0.39
Y_R 488.368	1.089950	46613.000000	0.002767	0.25
Y_R2 488.368	1.073253	89639.018265	0.007903	0.74
Y_R4	1.085280	41725.500000	0.001855	0.17

Sample Name: 280-123342-B-2-B

Date: 5/11/2019 7:52:35 AM

Rack:Tube: 4:43

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.000171	ppm	0.000002	1.26	-178.434000	Y 377.433
Al (394.401 nm)	0.386096	ppm	0.001529	0.40	6651.260000	Y 377.433
Al H (396.152 nm)	-0.639523 u	ppm	0.002031	0.32	1231.410000	Y_R 377.433
As (188.980 nm)	0.005949	ppm	0.000157	2.64	7.570240	Y 242.219
B (249.678 nm)	0.486402	ppm	0.000753	0.15	3737.440000	Y 242.219
Ba (493.408 nm)	0.766160	ppm	0.000395	0.05	82019.300000	Y_R 488.368
Be (234.861 nm)	0.000545	ppm	0.000020	3.64	45.607100	Y_R 488.368
Bi (223.061 nm)	0.003688	ppm	0.000809	21.95	-2.520380	Y 377.433
Ca (315.887 nm)	46.801593	ppm	0.106749	0.23	38636.447522	Y_R 377.433
Cd (214.439 nm)	0.000806	ppm	0.000008	1.01	24.615100	Y 377.433
Co (228.615 nm)	0.000901	ppm	0.000189	20.95	-0.603242	Y 242.219
Cr (205.560 nm)	0.004774	ppm	0.000450	9.43	24.934900	Y 377.433
Cu (324.754 nm)	0.009510	ppm	0.000436	4.59	954.652000	Y 377.433
Fe (238.204 nm)	1.279707	ppm	0.002341	0.18	3203.402123	Y_R 377.433
Fe H (259.940 nm)	1.309860 u	ppm	0.012792	0.98	1854.580000	Y_R 377.433
K (766.491 nm)	16.221800	ppm	0.398186	2.45	19243.300000	Y_R2 488.368
Li (670.783 nm)	1.063110	ppm	0.001268	0.12	16454.700000	Y_R2 488.368
Mg (279.078 nm)	17.400900	ppm	0.011272	0.06	61007.200000	Y 377.433
Mn (257.610 nm)	0.231256	ppm	0.000037	0.02	66628.200000	Y 377.433
Mo (202.032 nm)	0.001366	ppm	0.000334	24.41	29.690900	Y 377.433
Na (589.592 nm)	1845.900000 o	ppm	11.690200	0.63	1605010.000000	Y_R2 488.368
Na H (589.593 nm)	2363.619043	ppm	7.345065	0.31	1370398.191909	Y_R4
Ni (231.604 nm)	0.001230	ppm	0.000113	9.20	-3.782940	Y 377.433
P (213.618 nm)	0.284250	ppm	0.000048	0.02	439.782000	Y 242.219
Pb (220.353 nm)	0.001878	ppm	0.000198	10.57	14.066700	Y 242.219
S (181.972 nm)	252.668116 bo	ppm	0.017895	0.01	123484.423588	Y 377.433
Sb (206.834 nm)	-0.001710 u	ppm	0.001724	> 100.00	-0.816220	Y 377.433
Se (196.026 nm)	0.004910	ppm	0.002226	45.34	13.438200	Y 242.219
Si (288.158 nm)	6.687640	ppm	0.019038	0.28	45181.900000	Y 377.433
Sn (189.925 nm)	0.010736	ppm	0.001372	12.78	26.765400	Y 377.433
Sr (421.552 nm)	6.893190	ppm	0.002986	0.04	1107109.213399	Y_R 488.368
Th (288.505 nm)	-0.008159 u	ppm	0.005513	67.57	7.541680	Y 377.433
Ti (336.122 nm)	0.008081	ppm	0.000008	0.10	703.014000	Y 377.433
Tl (190.794 nm)	0.002638	ppm	0.001157	43.86	4.468480	Y 377.433
U (409.013 nm)	-0.045135 u	ppm	0.000455	1.01	-119.440000	Y 377.433
V (292.401 nm)	0.003234	ppm	0.000121	3.75	81.923500	Y 377.433
Zn (206.200 nm)	0.017244	ppm	0.000542	3.14	82.056700	Y 377.433
Zr (343.823 nm)	0.002312	ppm	0.000083	3.59	-37.874700	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.969442	18125.656486	0.008042	0.83
Y 377.433	0.988487	549180.194687	0.008454	0.86
Y_R 377.433	1.109290	54006.400000	0.001349	0.12
Y_R 488.368	1.092330	46714.700000	0.002003	0.18
Y_R2 488.368	1.084268	90559.024631	0.000041	0.00
Y_R4	1.095900	42134.100000	0.005654	0.52

Sample Name: 280-123342-B-2-Bsd@5

Date: 5/11/2019 7:56:23 AM

Rack:Tube: 4:44

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000686 u	ppm	0.000003	0.43	-208.943000	Y 377.433
Al (394.401 nm)	0.091837	ppm	0.000391	0.43	1532.480000	Y 377.433
Al H (396.152 nm)	-0.027816 u	ppm	0.004588	16.49	300.037000	Y_R 377.433
As (188.980 nm)	0.001400	ppm	0.001295	92.54	0.387328	Y 242.219
B (249.678 nm)	0.098297	ppm	0.000140	0.14	764.752000	Y 242.219
Ba (493.408 nm)	0.152190	ppm	0.000388	0.26	17597.300000	Y_R 488.368
Be (234.861 nm)	0.000097	ppm	0.000049	50.70	7.156890	Y_R 488.368
Bi (223.061 nm)	0.001796	ppm	0.001158	64.47	-6.884810	Y 377.433
Ca (315.887 nm)	9.635904	ppm	0.038429	0.40	7896.635527	Y_R 377.433
Cd (214.439 nm)	0.000210	ppm	0.000015	6.95	1.364900	Y 377.433
Co (228.615 nm)	0.000307	ppm	0.000143	46.72	-15.657500	Y 242.219
Cr (205.560 nm)	0.001464	ppm	0.000339	23.14	2.013850	Y 377.433
Cu (324.754 nm)	0.001371	ppm	0.000115	8.39	575.804000	Y 377.433
Fe (238.204 nm)	0.262149	ppm	0.000256	0.10	659.536048	Y_R 377.433
Fe H (259.940 nm)	0.292862 u	ppm	0.003706	1.27	392.920000	Y_R 377.433
K (766.491 nm)	1.750970	ppm	0.145216	8.29	4023.220000	Y_R2 488.368
Li (670.783 nm)	0.208703	ppm	0.002383	1.14	910.834000	Y_R2 488.368
Mg (279.078 nm)	3.671900	ppm	0.002580	0.07	12887.000000	Y 377.433
Mn (257.610 nm)	0.048052	ppm	0.000155	0.32	13825.900000	Y 377.433
Mo (202.032 nm)	0.000421	ppm	0.000105	25.01	17.189800	Y 377.433
Na (589.592 nm)	525.130000 o	ppm	1.658930	0.32	456708.000000	Y_R2 488.368
Na H (589.593 nm)	547.415142	ppm	2.520094	0.46	317752.026737	Y_R4
Ni (231.604 nm)	0.001252	ppm	0.000813	64.93	-3.665750	Y 377.433
P (213.618 nm)	0.052544	ppm	0.004121	7.84	84.302000	Y 242.219
Pb (220.353 nm)	-0.000186 u	ppm	0.000639	> 100.00	7.233040	Y 242.219
S (181.972 nm)	50.635886	ppm	0.125774	0.25	24752.848137	Y 377.433
Sb (206.834 nm)	0.000261 u	ppm	0.002996	> 100.00	2.784790	Y 377.433
Se (196.026 nm)	0.003329	ppm	0.002606	78.27	10.913900	Y 242.219
Si (288.158 nm)	1.348640	ppm	0.000471	0.03	9517.360000	Y 377.433
Sn (189.925 nm)	-0.002752 u	ppm	0.000594	21.60	4.567780	Y 377.433
Sr (421.552 nm)	1.388487	ppm	0.002302	0.17	223085.927313	Y_R 488.368
Th (288.505 nm)	-0.008220 u	ppm	0.001010	12.28	5.284870	Y 377.433
Ti (336.122 nm)	0.002553	ppm	0.000015	0.59	-152.320000	Y 377.433
Tl (190.794 nm)	0.000938 u	ppm	0.001973	> 100.00	1.982980	Y 377.433
U (409.013 nm)	-0.021613 u	ppm	0.004615	21.36	-40.085600	Y 377.433
V (292.401 nm)	0.000098	ppm	0.000014	13.87	-87.481100	Y 377.433
Zn (206.200 nm)	0.003637	ppm	0.000263	7.22	19.740100	Y 377.433
Zr (343.823 nm)	0.001006	ppm	0.000028	2.82	-114.478000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.070912	20022.830283	0.001572	0.15
Y 377.433	1.079784	599902.837688	0.003046	0.28
Y_R 377.433	1.125230	54782.800000	0.003184	0.28
Y_R 488.368	1.113180	47606.300000	0.004376	0.39
Y_R2 488.368	1.082358	90399.516524	0.005359	0.50
Y_R4	1.111970	42751.700000	0.005930	0.53

Sample Name: 280-123342-B-2-C MS

Date: 5/11/2019 7:59:57 AM

Rack:Tube: 4:45

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.055820	ppm	0.000364	0.65	1545.200000	Y 377.433
Al (394.401 nm)	10.466400 o	ppm	0.010337	0.10	133636.000000	Y 377.433
Al H (396.152 nm)	9.854010	ppm	0.011444	0.12	25410.600000	Y_R 377.433
As (188.980 nm)	2.012840	ppm	0.016674	0.83	3199.700000	Y 242.219
B (249.678 nm)	1.473410	ppm	0.000068	0.00	11292.800000	Y 242.219
Ba (493.408 nm)	2.690810	ppm	0.000849	0.03	283972.000000	Y_R 488.368
Be (234.861 nm)	0.900250	ppm	0.009560	1.06	95444.000000	Y_R 488.368
Bi (223.061 nm)	2.035460	ppm	0.003855	0.19	4467.320000	Y 377.433
Ca (315.887 nm)	97.431960	ppm	0.026632	0.03	80515.546304	Y_R 377.433
Cd (214.439 nm)	0.926326	ppm	0.001225	0.13	35486.900000	Y 377.433
Co (228.615 nm)	0.923271	ppm	0.000676	0.07	23129.000000	Y 242.219
Cr (205.560 nm)	0.913510	ppm	0.000933	0.10	6315.090000	Y 377.433
Cu (324.754 nm)	0.971923	ppm	0.000207	0.02	48237.000000	Y 377.433
Fe (238.204 nm)	11.366827 o	ppm	0.008853	0.08	28420.911728	Y_R 377.433
Fe H (259.940 nm)	11.399700	ppm	0.000906	0.01	16356.000000	Y_R 377.433
K (766.491 nm)	71.460000	ppm	0.476468	0.67	77341.800000	Y_R2 488.368
Li (670.783 nm)	2.164830	ppm	0.002367	0.11	36497.900000	Y_R2 488.368
Mg (279.078 nm)	63.669500	ppm	0.113590	0.18	223136.000000	Y 377.433
Mn (257.610 nm)	1.153820	ppm	0.001662	0.14	332526.000000	Y 377.433
Mo (202.032 nm)	0.933170	ppm	0.002373	0.25	12356.200000	Y 377.433
Na (589.592 nm)	1880.940000 o	ppm	4.721480	0.25	1635930.000000	Y_R2 488.368
Na H (589.593 nm)	2427.187433	ppm	0.123689	0.01	1407241.533916	Y_R4
Ni (231.604 nm)	0.915969	ppm	0.001404	0.15	4961.740000	Y 377.433
P (213.618 nm)	20.292600	ppm	0.018419	0.09	31069.700000	Y 242.219
Pb (220.353 nm)	0.924026	ppm	0.000891	0.10	3116.650000	Y 242.219
S (181.972 nm)	265.540788 bo	ppm	0.235892	0.09	129780.647899	Y 377.433
Sb (206.834 nm)	1.004670	ppm	0.001474	0.15	1869.590000	Y 377.433
Se (196.026 nm)	1.957990	ppm	0.001519	0.08	3140.390000	Y 242.219
Si (288.158 nm)	10.165000	ppm	0.003772	0.04	68411.000000	Y 377.433
Sn (189.925 nm)	1.873990	ppm	0.009888	0.53	3093.100000	Y 377.433
Sr (421.552 nm)	8.051912	ppm	0.013054	0.16	1293194.752690	Y_R 488.368
Th (288.505 nm)	1.005540	ppm	0.007009	0.70	1696.170000	Y 377.433
Ti (336.122 nm)	0.973282	ppm	0.001757	0.18	128216.000000	Y 377.433
Tl (190.794 nm)	1.681560	ppm	0.000498	0.03	4101.030000	Y 377.433
U (409.013 nm)	1.993520	ppm	0.006699	0.34	6338.280000	Y 377.433
V (292.401 nm)	0.942808	ppm	0.001735	0.18	50565.100000	Y 377.433
Zn (206.200 nm)	0.508095	ppm	0.002141	0.42	2326.290000	Y 377.433
Zr (343.823 nm)	0.451549	ppm	0.000592	0.13	26320.400000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.955075	17857.040986	0.003152	0.33
Y 377.433	0.986107	547857.817925	0.004797	0.49
Y_R 377.433	1.072580	52219.400000	0.006088	0.57
Y_R 488.368	1.057990	45246.000000	0.007323	0.69
Y_R2 488.368	1.056902	88273.398855	0.000879	0.08
Y_R4	1.064380	40921.900000	0.002547	0.24

Sample Name: 280-123342-B-2-D MSD

Date: 5/11/2019 8:04:05 AM

Rack:Tube: 4:46

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.055384	ppm	0.000004	0.01	1518.120000	Y 377.433
Al (394.401 nm)	10.583600 o	ppm	0.019582	0.19	135112.000000	Y 377.433
Al H (396.152 nm)	9.950340	ppm	0.033568	0.34	25640.900000	Y_R 377.433
As (188.980 nm)	2.061040	ppm	0.006500	0.32	3276.390000	Y 242.219
B (249.678 nm)	1.471080	ppm	0.000011	0.00	11275.000000	Y 242.219
Ba (493.408 nm)	2.745660	ppm	0.004876	0.18	289727.000000	Y_R 488.368
Be (234.861 nm)	0.904822	ppm	0.004633	0.51	95929.200000	Y_R 488.368
Bi (223.061 nm)	2.021710	ppm	0.002069	0.10	4437.080000	Y 377.433
Ca (315.887 nm)	97.533159	ppm	0.181391	0.19	80599.273918	Y_R 377.433
Cd (214.439 nm)	0.954350	ppm	0.001201	0.13	36560.500000	Y 377.433
Co (228.615 nm)	0.951438	ppm	0.001522	0.16	23835.400000	Y 242.219
Cr (205.560 nm)	0.936508	ppm	0.004075	0.44	6474.270000	Y 377.433
Cu (324.754 nm)	1.001300	ppm	0.006396	0.64	49679.900000	Y 377.433
Fe (238.204 nm)	11.389779 o	ppm	0.040989	0.36	28478.290915	Y_R 377.433
Fe H (259.940 nm)	11.408000	ppm	0.045694	0.40	16368.000000	Y_R 377.433
K (766.491 nm)	70.688600	ppm	0.034143	0.05	76530.400000	Y_R2 488.368
Li (670.783 nm)	2.193400	ppm	0.001939	0.09	37017.600000	Y_R2 488.368
Mg (279.078 nm)	64.150100	ppm	0.069656	0.11	224821.000000	Y 377.433
Mn (257.610 nm)	1.181200	ppm	0.001968	0.17	340419.000000	Y 377.433
Mo (202.032 nm)	0.961746	ppm	0.001222	0.13	12734.300000	Y 377.433
Na (589.592 nm)	1843.910000 o	ppm	20.101400	1.09	1603760.000000	Y_R2 488.368
Na H (589.593 nm)	2385.410225	ppm	18.681800	0.78	1383028.053696	Y_R4
Ni (231.604 nm)	0.945297	ppm	0.001439	0.15	5120.940000	Y 377.433
P (213.618 nm)	20.000200	ppm	0.026530	0.13	30609.700000	Y 242.219
Pb (220.353 nm)	0.951475	ppm	0.002866	0.30	3208.800000	Y 242.219
S (181.972 nm)	265.233516 bo	ppm	0.380215	0.14	129630.584681	Y 377.433
Sb (206.834 nm)	0.977267	ppm	0.003570	0.37	1818.350000	Y 377.433
Se (196.026 nm)	2.013570	ppm	0.005836	0.29	3229.440000	Y 242.219
Si (288.158 nm)	10.288300	ppm	0.074951	0.73	69234.100000	Y 377.433
Sn (189.925 nm)	1.919850	ppm	0.006790	0.35	3168.560000	Y 377.433
Sr (421.552 nm)	8.077103	ppm	0.016873	0.21	1297240.288935	Y_R 488.368
Th (288.505 nm)	1.008460	ppm	0.001624	0.16	1698.390000	Y 377.433
Ti (336.122 nm)	1.004140	ppm	0.001578	0.16	132288.000000	Y 377.433
Tl (190.794 nm)	1.730110	ppm	0.003816	0.22	4219.540000	Y 377.433
U (409.013 nm)	1.954550	ppm	0.011971	0.61	6213.650000	Y 377.433
V (292.401 nm)	0.971330	ppm	0.001099	0.11	52099.900000	Y 377.433
Zn (206.200 nm)	0.505729	ppm	0.000398	0.08	2315.480000	Y 377.433
Zr (343.823 nm)	0.452809	ppm	0.000703	0.16	26394.300000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	0.949303	17749.113778	0.001208	0.13
Y 377.433	0.979885	544400.852985	0.001170	0.12
Y_R 377.433	1.093160	53221.200000	0.006202	0.57
Y_R 488.368	1.078390	46118.400000	0.005683	0.53
Y_R2 488.368	1.057410	88315.827068	0.003778	0.36
Y_R4	1.076880	41402.700000	0.004336	0.40

Sample Name: 280-123422-C-1-A

Date: 5/11/2019 8:08:13 AM

Rack:Tube: 4:47

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000328 u	ppm	0.000006	1.95	-196.635000	Y 377.433
Al (394.401 nm)	0.050532	ppm	0.001295	2.56	678.658000	Y 377.433
Al H (396.152 nm)	0.138404 u	ppm	0.002120	1.53	108.342000	Y_R 377.433
As (188.980 nm)	0.002350	ppm	0.001527	64.99	1.907580	Y 242.219
B (249.678 nm)	0.044415	ppm	0.001118	2.52	352.041000	Y 242.219
Ba (493.408 nm)	0.026033	ppm	0.000268	1.03	4360.180000	Y_R 488.368
Be (234.861 nm)	0.000273	ppm	0.000012	4.29	27.077600	Y_R 488.368
Bi (223.061 nm)	0.002345	ppm	0.000506	21.59	-5.703090	Y 377.433
Ca (315.887 nm)	28.360007	ppm	0.010685	0.04	23383.303647	Y_R 377.433
Cd (214.439 nm)	0.000546	ppm	0.000109	19.98	14.193400	Y 377.433
Co (228.615 nm)	0.000771	ppm	0.000127	16.45	-4.076780	Y 242.219
Cr (205.560 nm)	0.000923	ppm	0.000014	1.46	-1.728750	Y 377.433
Cu (324.754 nm)	0.006637	ppm	0.000400	6.02	818.391000	Y 377.433
Fe (238.204 nm)	0.124759	ppm	0.009803	7.86	316.064537	Y_R 377.433
Fe H (259.940 nm)	0.159893 u	ppm	0.008505	5.32	201.811000	Y_R 377.433
K (766.491 nm)	1.134890	ppm	0.103460	9.12	3375.250000	Y_R2 488.368
Li (670.783 nm)	0.014471	ppm	0.001477	10.21	-2622.750000	Y_R2 488.368
Mg (279.078 nm)	2.950090	ppm	0.003170	0.11	10356.200000	Y 377.433
Mn (257.610 nm)	0.075132	ppm	0.000123	0.16	21630.700000	Y 377.433
Mo (202.032 nm)	0.000836	ppm	0.000019	2.24	22.672600	Y 377.433
Na (589.592 nm)	6.126860	ppm	0.041709	0.68	5503.710000	Y_R2 488.368
Na H (589.593 nm)	16.876136 u	ppm	0.171100	1.01	10259.101379	Y_R4
Ni (231.604 nm)	0.001152	ppm	0.000192	16.64	-4.208660	Y 377.433
P (213.618 nm)	0.082491	ppm	0.000461	0.56	129.208000	Y 242.219
Pb (220.353 nm)	0.019190	ppm	0.000140	0.73	72.635600	Y 242.219
S (181.972 nm)	3.850436	ppm	0.009499	0.25	1890.781611	Y 377.433
Sb (206.834 nm)	0.000368 u	ppm	0.004390	> 100.00	2.971350	Y 377.433
Se (196.026 nm)	0.001120	ppm	0.000271	24.18	7.450920	Y 242.219
Si (288.158 nm)	1.021180	ppm	0.000759	0.07	7329.890000	Y 377.433
Sn (189.925 nm)	-0.003588 u	ppm	0.000540	15.04	3.191930	Y 377.433
Sr (421.552 nm)	0.055544	ppm	0.000095	0.17	9023.026971	Y_R 488.368
Th (288.505 nm)	-0.012109 u	ppm	0.001374	11.34	-1.180300	Y 377.433
Ti (336.122 nm)	0.001550	ppm	0.000122	7.84	-220.997000	Y 377.433
Tl (190.794 nm)	0.001311	ppm	0.000143	10.93	2.143940	Y 377.433
U (409.013 nm)	0.006203 u	ppm	0.010564	> 100.00	46.214000	Y 377.433
V (292.401 nm)	0.000303	ppm	0.000166	54.67	-80.012900	Y 377.433
Zn (206.200 nm)	0.102671	ppm	0.000707	0.69	472.238000	Y 377.433
Zr (343.823 nm)	0.001077	ppm	0.000071	6.57	-110.345000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.131085	21147.893558	0.003158	0.28
Y 377.433	1.133483	629736.573422	0.004273	0.38
Y_R 377.433	1.163030	56622.700000	0.003200	0.28
Y_R 488.368	1.149170	49145.700000	0.002726	0.24
Y_R2 488.368	1.136082	94886.552715	0.000571	0.05
Y_R4	1.139210	43799.200000	0.002091	0.18

Sample Name: CCVH-5690583

Date: 5/11/2019 8:11:43 AM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000164 u	ppm	0.000612	> 100.00	-326.980000	Y 377.433
Al (394.401 nm)	47.832900 o	ppm	0.004249	0.01	601111.000000	Y 377.433
Al H (396.152 nm)	48.249500	ppm	0.067267	0.14	108390.000000	Y_R 377.433
As (188.980 nm)	0.005545	ppm	0.002921	52.68	2.595360	Y 242.219
B (249.678 nm)	0.007310	ppm	0.000591	8.08	38.287400	Y 242.219
Ba (493.408 nm)	0.001569	ppm	0.000091	5.81	1833.220000	Y_R 488.368
Be (234.861 nm)	0.002660	ppm	0.000062	2.32	-150.798000	Y_R 488.368
Bi (223.061 nm)	0.947680	ppm	0.005134	0.54	2081.400000	Y 377.433
Ca (315.887 nm)	0.044244	ppm	0.006761	15.28	-24.247828	Y_R 377.433
Cd (214.439 nm)	0.000940	ppm	0.000012	1.25	49.310300	Y 377.433
Co (228.615 nm)	0.004376	ppm	0.000125	2.86	86.181600	Y 242.219
Cr (205.560 nm)	0.001438	ppm	0.000062	4.28	0.509980	Y 377.433
Cu (324.754 nm)	0.005491	ppm	0.000175	3.18	1181.580000	Y 377.433
Fe (238.204 nm)	48.599854 o	ppm	0.033281	0.07	121502.406649	Y_R 377.433
Fe H (259.940 nm)	48.173400	ppm	0.058126	0.12	69208.600000	Y_R 377.433
K (766.491 nm)	-0.025667 u	ppm	0.089055	> 100.00	2154.590000	Y_R2 488.368
Li (670.783 nm)	0.008674	ppm	0.003059	35.26	-2728.220000	Y_R2 488.368
Mg (279.078 nm)	0.022989	ppm	0.000831	3.62	-131.394000	Y 377.433
Mn (257.610 nm)	0.001503	ppm	0.000023	1.50	409.608000	Y 377.433
Mo (202.032 nm)	0.000702	ppm	0.000736	> 100.00	20.903400	Y 377.433
Na (589.592 nm)	236.558000 o	ppm	0.765458	0.32	205813.000000	Y_R2 488.368
Na H (589.593 nm)	242.709374	ppm	0.858521	0.35	141148.860893	Y_R4
Ni (231.604 nm)	0.002199	ppm	0.000120	5.47	1.472140	Y 377.433
P (213.618 nm)	-0.009486 u	ppm	0.001272	13.40	-17.838900	Y 242.219
Pb (220.353 nm)	0.007199	ppm	0.000328	4.56	47.965000	Y 242.219
S (181.972 nm)	4.868904	ppm	0.006509	0.13	2386.819451	Y 377.433
Sb (206.834 nm)	0.001231	ppm	0.000743	60.36	7.936410	Y 377.433
Se (196.026 nm)	0.003503	ppm	0.002482	70.84	-1.849770	Y 242.219
Si (288.158 nm)	0.025769	ppm	0.000907	3.52	680.543000	Y 377.433
Sn (189.925 nm)	-0.002931 u	ppm	0.000317	10.83	4.273480	Y 377.433
Sr (421.552 nm)	0.001847	ppm	0.000143	7.77	407.345053	Y_R 488.368
Th (288.505 nm)	4.841900	ppm	0.001840	0.04	8554.420000	Y 377.433
Ti (336.122 nm)	0.002471	ppm	0.000110	4.45	-194.832000	Y 377.433
Tl (190.794 nm)	-0.000673 u	ppm	0.000342	50.84	-6.393200	Y 377.433
U (409.013 nm)	9.663860	ppm	0.012418	0.13	30934.500000	Y 377.433
V (292.401 nm)	-0.000977 u	ppm	0.000024	2.41	-143.547000	Y 377.433
Zn (206.200 nm)	0.002633	ppm	0.000303	11.51	21.864600	Y 377.433
Zr (343.823 nm)	-0.002973 u	ppm	0.000081	2.73	-347.929000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.079425	20182.006029	0.000413	0.04
Y 377.433	1.086195	603464.194052	0.001044	0.10
Y_R 377.433	1.115900	54328.200000	0.000612	0.05
Y_R 488.368	1.104710	47244.200000	0.000490	0.04
Y_R2 488.368	1.094507	91414.148304	0.006515	0.60
Y_R4	1.111060	42716.900000	0.000841	0.08

Sample Name: CCV-5690581

Date: 5/11/2019 8:15:34 AM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.477259	ppm	0.000332	0.07	17256.400000	Y 377.433
Al (394.401 nm)	0.498077	ppm	0.001971	0.40	6406.350000	Y 377.433
Al H (396.152 nm)	0.544560 u	ppm	0.003258	0.60	1250.820000	Y_R 377.433
As (188.980 nm)	0.957408	ppm	0.000091	0.01	1521.370000	Y 242.219
B (249.678 nm)	0.464454	ppm	0.001178	0.25	3568.570000	Y 242.219
Ba (493.408 nm)	0.476920	ppm	0.000010	0.00	51671.600000	Y_R 488.368
Be (234.861 nm)	0.468325	ppm	0.001357	0.29	49681.700000	Y_R 488.368
Bi (223.061 nm)	0.006636	ppm	0.002146	32.34	4.238580	Y 377.433
Ca (315.887 nm)	5.037877	ppm	0.004076	0.08	4093.721280	Y_R 377.433
Cd (214.439 nm)	0.492241	ppm	0.000165	0.03	18852.700000	Y 377.433
Co (228.615 nm)	0.484909	ppm	0.000351	0.07	12135.300000	Y 242.219
Cr (205.560 nm)	0.485706	ppm	0.000766	0.16	3354.070000	Y 377.433
Cu (324.754 nm)	0.478601	ppm	0.001112	0.23	24001.700000	Y 377.433
Fe (238.204 nm)	2.474268	ppm	0.007825	0.32	6189.768810	Y_R 377.433
Fe H (259.940 nm)	2.491120 u	ppm	0.000411	0.02	3552.330000	Y_R 377.433
K (766.491 nm)	48.579900	ppm	0.022866	0.05	53276.900000	Y_R2 488.368
Li (670.783 nm)	1.000160	ppm	0.002912	0.29	15309.500000	Y_R2 488.368
Mg (279.078 nm)	19.292400	ppm	0.009674	0.05	67634.600000	Y 377.433
Mn (257.610 nm)	0.482016	ppm	0.000379	0.08	138901.000000	Y 377.433
Mo (202.032 nm)	0.485804	ppm	0.001364	0.28	6438.160000	Y 377.433
Na (589.592 nm)	25.636000	ppm	0.012258	0.05	22571.300000	Y_R2 488.368
Na H (589.593 nm)	30.389411 u	ppm	0.140580	0.46	18091.205215	Y_R4
Ni (231.604 nm)	0.487744	ppm	0.001020	0.21	2637.280000	Y 377.433
P (213.618 nm)	0.940617	ppm	0.008673	0.92	1318.280000	Y 242.219
Pb (220.353 nm)	0.973299	ppm	0.000409	0.04	3282.230000	Y 242.219
S (181.972 nm)	0.011634	ppm	0.001757	15.11	15.004881	Y 377.433
Sb (206.834 nm)	0.967647	ppm	0.003832	0.40	1802.440000	Y 377.433
Se (196.026 nm)	0.966686	ppm	0.000097	0.01	1553.990000	Y 242.219
Si (288.158 nm)	4.764080	ppm	0.000383	0.01	32332.500000	Y 377.433
Sn (189.925 nm)	0.984950	ppm	0.001287	0.13	1630.010000	Y 377.433
Sr (421.552 nm)	0.479224	ppm	0.000232	0.05	77063.934137	Y_R 488.368
Th (288.505 nm)	0.013261	ppm	0.000666	5.02	-6.818030	Y 377.433
Ti (336.122 nm)	0.482197	ppm	0.000394	0.08	63114.200000	Y 377.433
Tl (190.794 nm)	0.979754	ppm	0.001288	0.13	2392.400000	Y 377.433
U (409.013 nm)	0.011654	ppm	0.004294	36.84	8.512780	Y 377.433
V (292.401 nm)	0.480882	ppm	0.000035	0.01	25736.600000	Y 377.433
Zn (206.200 nm)	0.490389	ppm	0.001985	0.40	2244.150000	Y 377.433
Zr (343.823 nm)	0.482174	ppm	0.000731	0.15	28117.200000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.096890	20508.550173	0.003455	0.31
Y 377.433	1.098976	610565.392449	0.002915	0.27
Y_R 377.433	1.119460	54501.500000	0.000881	0.08
Y_R 488.368	1.107520	47364.600000	0.000326	0.03
Y_R2 488.368	1.091247	91141.902037	0.005000	0.46
Y_R4	1.110570	42698.100000	0.000571	0.05

Sample Name: CCB

Date: 5/11/2019 8:19:15 AM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000492 u	ppm	0.000000	0.02	-202.100000	Y 377.433
Al (394.401 nm)	0.007898	ppm	0.000001	0.01	124.442000	Y 377.433
Al H (396.152 nm)	0.110111 Zu	ppm	0.009257	8.41	27.814600 Z	Y_R 377.433
As (188.980 nm)	0.001827	ppm	0.000704	38.54	1.081650	Y 242.219
B (249.678 nm)	0.000917	ppm	0.001028	> 100.00	18.874300	Y 242.219
Ba (493.408 nm)	-0.001596 u	ppm	0.000385	24.12	1461.120000	Y_R 488.368
Be (234.861 nm)	0.000151	ppm	0.000033	21.80	15.140500	Y_R 488.368
Bi (223.061 nm)	0.003459	ppm	0.000981	28.36	-3.276840	Y 377.433
Ca (315.887 nm)	0.008137	ppm	0.007495	92.11	-66.509267	Y_R 377.433
Cd (214.439 nm)	0.000184	ppm	0.000049	26.72	0.280614	Y 377.433
Co (228.615 nm)	0.000524	ppm	0.000104	19.76	-10.299100	Y 242.219
Cr (205.560 nm)	0.000343	ppm	0.000373	> 100.00	-5.746160	Y 377.433
Cu (324.754 nm)	-0.001219 u	ppm	0.000296	24.31	451.533000	Y 377.433
Fe (238.204 nm)	0.004903	ppm	0.002172	44.30	16.428488	Y_R 377.433
Fe H (259.940 nm)	0.034201 u	ppm	0.000106	0.31	21.162500	Y_R 377.433
K (766.491 nm)	-0.393226 u	ppm	0.071974	18.30	1768.000000	Y_R2 488.368
Li (670.783 nm)	0.011651 Z	ppm	0.004074	34.97	-2674.050000 Z	Y_R2 488.368
Mg (279.078 nm)	0.009645	ppm	0.000894	9.27	50.186500	Y 377.433
Mn (257.610 nm)	0.000306	ppm	0.000002	0.69	64.819800	Y 377.433
Mo (202.032 nm)	0.000519	ppm	0.000099	19.05	18.476400	Y 377.433
Na (589.592 nm)	0.768610 Z	ppm	0.008078	1.05	839.148000 Z	Y_R2 488.368
Na H (589.593 nm)	4.811193 u	ppm	0.081002	1.68	3266.430862	Y_R4
Ni (231.604 nm)	-0.000291 u	ppm	0.000303	> 100.00	-12.033000	Y 377.433
P (213.618 nm)	0.000030 u	ppm	0.000327	> 100.00	3.839810	Y 242.219
Pb (220.353 nm)	0.001150	ppm	0.000185	16.05	11.855300	Y 242.219
S (181.972 nm)	0.013279	ppm	0.003306	24.89	13.965372	Y 377.433
Sb (206.834 nm)	-0.002129 u	ppm	0.000843	39.58	-1.693430	Y 377.433
Se (196.026 nm)	0.000677 u	ppm	0.003447	> 100.00	6.665140	Y 242.219
Si (288.158 nm)	-0.004713 u	ppm	0.001162	24.66	476.925000	Y 377.433
Sn (189.925 nm)	-0.004659 u	ppm	0.000500	10.74	1.428860	Y 377.433
Sr (421.552 nm)	-0.000036 u	ppm	0.000079	> 100.00	97.258160	Y_R 488.368
Th (288.505 nm)	-0.004162 u	ppm	0.003719	89.36	11.985800	Y 377.433
Ti (336.122 nm)	0.001010	ppm	0.000057	5.60	-387.678000	Y 377.433
Tl (190.794 nm)	0.003446	ppm	0.002792	81.03	8.538730	Y 377.433
U (409.013 nm)	-0.003017 u	ppm	0.001100	36.45	20.341300	Y 377.433
V (292.401 nm)	-0.000408 u	ppm	0.000038	9.25	-116.699000	Y 377.433
Zn (206.200 nm)	0.000288	ppm	0.000183	63.52	4.405020	Y 377.433
Zr (343.823 nm)	0.001014	ppm	0.000099	9.74	-114.048000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.142440	21360.196271	0.001034	0.09
Y 377.433	1.141668	634284.137367	0.000439	0.04
Y_R 377.433	1.156820	56320.700000	0.001560	0.13
Y_R 488.368	1.139990	48753.000000	0.008339	0.73
Y_R2 488.368	1.128444	94248.601963	0.001427	0.13
Y_R4	1.140460	43847.100000	0.006498	0.57

Sample Name: CCVL-5695588

Date: 5/11/2019 8:22:36 AM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.008877	ppm	0.000067	0.76	139.678000	Y 377.433
Al (394.401 nm)	0.102371	ppm	0.001249	1.22	1318.270000	Y 377.433
Al H (396.152 nm)	0.213353 u	ppm	0.001054	0.49	265.665000	Y_R 377.433
As (188.980 nm)	0.015550	ppm	0.001745	11.22	22.906800	Y 242.219
B (249.678 nm)	0.093279	ppm	0.000347	0.37	726.407000	Y 242.219
Ba (493.408 nm)	0.007335	ppm	0.000147	2.00	2398.270000	Y_R 488.368
Be (234.861 nm)	0.001010	ppm	0.000022	2.20	105.459000	Y_R 488.368
Bi (223.061 nm)	0.091914	ppm	0.000388	0.42	191.264000	Y 377.433
Ca (315.887 nm)	0.219583	ppm	0.000841	0.38	108.402692	Y_R 377.433
Cd (214.439 nm)	0.005297	ppm	0.000019	0.35	196.182000	Y 377.433
Co (228.615 nm)	0.010576	ppm	0.000010	0.09	241.744000	Y 242.219
Cr (205.560 nm)	0.010065	ppm	0.000753	7.49	61.448000	Y 377.433
Cu (324.754 nm)	0.013545	ppm	0.000428	3.16	1175.650000	Y 377.433
Fe (238.204 nm)	0.101400	ppm	0.000607	0.60	257.667208	Y_R 377.433
Fe H (259.940 nm)	0.132264 u	ppm	0.000166	0.13	162.103000	Y_R 377.433
K (766.491 nm)	2.610260	ppm	0.096021	3.68	4927.010000	Y_R2 488.368
Li (670.783 nm)	0.033524 Q	ppm	0.000823	2.45	-2276.130000 Q	Y_R2 488.368
Mg (279.078 nm)	0.202465	ppm	0.001169	0.58	724.938000	Y 377.433
Mn (257.610 nm)	0.010388	ppm	0.000026	0.25	2970.380000	Y 377.433
Mo (202.032 nm)	0.019240	ppm	0.000094	0.49	266.134000	Y 377.433
Na (589.592 nm)	1.645790 Q	ppm	0.077770	4.73	1603.790000 Q	Y_R2 488.368
Na H (589.593 nm)	4.575448 u	ppm	0.060341	1.32	3129.796113	Y_R4
Ni (231.604 nm)	0.042212	ppm	0.000680	1.61	218.611000	Y 377.433
P (213.618 nm)	2.690880	ppm	0.007076	0.26	4156.570000	Y 242.219
Pb (220.353 nm)	0.009600	ppm	0.000267	2.78	40.356000	Y 242.219
S (181.972 nm)	0.094239	ppm	0.001171	1.24	53.567622	Y 377.433
Sb (206.834 nm)	0.016936	ppm	0.006238	36.83	33.675500	Y 377.433
Se (196.026 nm)	0.020685	ppm	0.000172	0.83	38.703000	Y 242.219
Si (288.158 nm)	0.492177	ppm	0.006393	1.30	3796.150000	Y 377.433
Sn (189.925 nm)	0.096224	ppm	0.000065	0.07	167.451000	Y 377.433
Sr (421.552 nm)	0.008961	ppm	0.000175	1.96	1542.085331	Y_R 488.368
Th (288.505 nm)	0.010484 Q	ppm	0.001017	9.70	37.180500 Q	Y 377.433
Ti (336.122 nm)	0.010552	ppm	0.000078	0.74	871.891000	Y 377.433
Tl (190.794 nm)	0.016864	ppm	0.000653	3.87	41.231100	Y 377.433
U (409.013 nm)	0.053668	ppm	0.004740	8.83	200.347000	Y 377.433
V (292.401 nm)	0.008983	ppm	0.000041	0.45	385.315000	Y 377.433
Zn (206.200 nm)	0.021064	ppm	0.000247	1.17	99.349500	Y 377.433
Zr (343.823 nm)	0.010456 Q	ppm	0.000103	0.98	439.985000 Q	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.158143	21653.802450	0.002391	0.21
Y 377.433	1.159868	644395.290430	0.003441	0.30
Y_R 377.433	1.180300	57464.000000	0.000012	0.00
Y_R 488.368	1.166570	49889.900000	0.001716	0.15
Y_R2 488.368	1.143719	95524.438330	0.003994	0.35
Y_R4	1.155830	44438.100000	0.005498	0.48

Sample Name: 280-123422-C-2-A

Date: 5/11/2019 8:26:05 AM

Rack:Tube: 4:48

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000471 u	ppm	0.000401	85.01	-201.744000	Y 377.433
Al (394.401 nm)	0.873949	ppm	0.000196	0.02	11020.700000	Y 377.433
Al H (396.152 nm)	1.019000	ppm	0.005571	0.55	2083.590000	Y_R 377.433
As (188.980 nm)	0.000740 u	ppm	0.002471	> 100.00	-0.706593	Y 242.219
B (249.678 nm)	0.006196	ppm	0.000279	4.50	59.299100	Y 242.219
Ba (493.408 nm)	0.010406	ppm	0.000013	0.12	2720.470000	Y_R 488.368
Be (234.861 nm)	0.000044 u	ppm	0.000074	> 100.00	3.526970	Y_R 488.368
Bi (223.061 nm)	0.003220	ppm	0.002025	62.88	-3.797010	Y 377.433
Ca (315.887 nm)	35.908560	ppm	0.045419	0.13	29626.928459	Y_R 377.433
Cd (214.439 nm)	0.000223	ppm	0.000002	0.91	1.753200	Y 377.433
Co (228.615 nm)	0.000451	ppm	0.000372	82.41	-12.084900	Y 242.219
Cr (205.560 nm)	0.000780	ppm	0.000155	19.93	-2.750220	Y 377.433
Cu (324.754 nm)	-0.000736 u	ppm	0.000073	9.92	452.457000	Y 377.433
Fe (238.204 nm)	0.033806	ppm	0.001503	4.44	88.686307	Y_R 377.433
Fe H (259.940 nm)	0.061816 u	ppm	0.000325	0.53	60.852100	Y_R 377.433
K (766.491 nm)	0.390010	ppm	0.024603	6.31	2591.790000	Y_R2 488.368
Li (670.783 nm)	0.012242	ppm	0.002698	22.04	-2663.300000	Y_R2 488.368
Mg (279.078 nm)	6.809850	ppm	0.001885	0.03	23885.100000	Y 377.433
Mn (257.610 nm)	0.107049	ppm	0.000037	0.03	30829.700000	Y 377.433
Mo (202.032 nm)	0.000615	ppm	0.000127	20.71	19.755400	Y 377.433
Na (589.592 nm)	1.758710	ppm	0.001203	0.07	1702.690000	Y_R2 488.368
Na H (589.593 nm)	4.352916 u	ppm	0.077531	1.78	3000.819856	Y_R4
Ni (231.604 nm)	0.002126	ppm	0.000103	4.83	1.075930	Y 377.433
P (213.618 nm)	0.042910	ppm	0.001574	3.67	69.842200	Y 242.219
Pb (220.353 nm)	0.000324 u	ppm	0.000757	> 100.00	8.963650	Y 242.219
S (181.972 nm)	1.322909	ppm	0.000832	0.06	656.124255	Y 377.433
Sb (206.834 nm)	-0.000236 u	ppm	0.000280	> 100.00	1.813730	Y 377.433
Se (196.026 nm)	0.000959 u	ppm	0.001702	> 100.00	7.263970	Y 242.219
Si (288.158 nm)	1.570870	ppm	0.000269	0.02	11001.900000	Y 377.433
Sn (189.925 nm)	-0.004592 u	ppm	0.000501	10.92	1.540380	Y 377.433
Sr (421.552 nm)	0.043079	ppm	0.000038	0.09	7021.258698	Y_R 488.368
Th (288.505 nm)	-0.011921 u	ppm	0.002531	21.23	-0.346886	Y 377.433
Ti (336.122 nm)	0.001001	ppm	0.000085	8.46	-267.487000	Y 377.433
Tl (190.794 nm)	-0.000253 u	ppm	0.000145	57.30	-1.959580	Y 377.433
U (409.013 nm)	0.011381	ppm	0.009111	80.05	61.709700	Y 377.433
V (292.401 nm)	0.000173	ppm	0.000075	43.25	-86.809100	Y 377.433
Zn (206.200 nm)	0.013526	ppm	0.000644	4.76	64.894800	Y 377.433
Zr (343.823 nm)	0.001033	ppm	0.000040	3.91	-112.904000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.137931	21275.888445	0.000408	0.04
Y 377.433	1.142334	634653.732620	0.001116	0.10
Y_R 377.433	1.164770	56707.700000	0.005084	0.44
Y_R 488.368	1.149410	49155.800000	0.000664	0.06
Y_R2 488.368	1.137584	95011.987190	0.002499	0.22
Y_R4	1.148160	44143.200000	0.003082	0.27

Sample Name: CCVH-5690583

Date: 5/11/2019 8:29:40 AM

Rack:Tube: S1:1

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000163 u	ppm	0.000211	> 100.00	-327.193000	Y 377.433
Al (394.401 nm)	47.798800 o	ppm	0.019469	0.04	600691.000000	Y 377.433
Al H (396.152 nm)	48.258700	ppm	0.073546	0.15	108410.000000	Y_R 377.433
As (188.980 nm)	0.006094	ppm	0.000613	10.06	3.464290	Y 242.219
B (249.678 nm)	0.006385	ppm	0.000086	1.35	31.161300	Y 242.219
Ba (493.408 nm)	0.001248	ppm	0.000228	18.24	1799.520000	Y_R 488.368
Be (234.861 nm)	0.002518	ppm	0.000033	1.30	-166.483000	Y_R 488.368
Bi (223.061 nm)	0.956151	ppm	0.000745	0.08	2100.040000	Y 377.433
Ca (315.887 nm)	0.033912	ppm	0.004039	11.91	-32.787588	Y_R 377.433
Cd (214.439 nm)	0.000735	ppm	0.000088	11.96	41.497000	Y 377.433
Co (228.615 nm)	0.004051	ppm	0.000045	1.10	78.050500	Y 242.219
Cr (205.560 nm)	0.001880	ppm	0.000028	1.51	3.573430	Y 377.433
Cu (324.754 nm)	0.005212	ppm	0.000233	4.46	1163.380000	Y 377.433
Fe (238.204 nm)	48.638227 o	ppm	0.001013	0.00	121598.337680	Y_R 377.433
Fe H (259.940 nm)	48.311100	ppm	0.034467	0.07	69406.400000	Y_R 377.433
K (766.491 nm)	-0.154728 u	ppm	0.017232	11.14	2018.850000	Y_R2 488.368
Li (670.783 nm)	0.011502	ppm	0.001582	13.75	-2676.760000	Y_R2 488.368
Mg (279.078 nm)	0.017917	ppm	0.000320	1.78	-149.935000	Y 377.433
Mn (257.610 nm)	0.001400	ppm	0.000018	1.25	380.029000	Y 377.433
Mo (202.032 nm)	0.000564	ppm	0.000143	25.33	19.077300	Y 377.433
Na (589.592 nm)	239.962000 o	ppm	0.577331	0.24	208772.000000	Y_R2 488.368
Na H (589.593 nm)	237.486181	ppm	0.810487	0.34	138121.571943	Y_R4
Ni (231.604 nm)	0.001733	ppm	0.000179	10.34	-1.053750	Y 377.433
P (213.618 nm)	-0.014970 u	ppm	0.001635	10.92	-26.290500	Y 242.219
Pb (220.353 nm)	0.006970	ppm	0.000828	11.87	47.289500	Y 242.219
S (181.972 nm)	4.849491	ppm	0.021872	0.45	2377.331690	Y 377.433
Sb (206.834 nm)	0.002537 u	ppm	0.004271	> 100.00	10.384300	Y 377.433
Se (196.026 nm)	0.003564	ppm	0.000980	27.49	-1.774270	Y 242.219
Si (288.158 nm)	0.024931	ppm	0.001589	6.38	674.942000	Y 377.433
Sn (189.925 nm)	-0.001988 u	ppm	0.000882	44.35	5.825560	Y 377.433
Sr (421.552 nm)	0.000853	ppm	0.000140	16.39	247.661350	Y_R 488.368
Th (288.505 nm)	4.837510	ppm	0.005130	0.11	8546.940000	Y 377.433
Ti (336.122 nm)	0.002330	ppm	0.000178	7.63	-213.421000	Y 377.433
Tl (190.794 nm)	-0.000643 u	ppm	0.000330	51.29	-6.323300	Y 377.433
U (409.013 nm)	9.683340	ppm	0.004889	0.05	30996.600000	Y 377.433
V (292.401 nm)	-0.001303 u	ppm	0.000147	11.32	-164.546000	Y 377.433
Zn (206.200 nm)	0.002520	ppm	0.000017	0.66	21.361800	Y 377.433
Zr (343.823 nm)	-0.002701 u	ppm	0.000193	7.16	-332.001000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.092752	20431.183099	0.000748	0.07
Y 377.433	1.102904	612747.494189	0.001189	0.11
Y_R 377.433	1.137190	55364.900000	0.000741	0.07
Y_R 488.368	1.122220	47993.100000	0.001624	0.14
Y_R2 488.368	1.107631	92510.272599	0.001186	0.11
Y_R4	1.137510	43733.800000	0.006938	0.61

Sample Name: CCV-5690581

Date: 5/11/2019 8:33:24 AM

Rack:Tube: S1:2

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.478313	ppm	0.000230	0.05	17294.700000	Y 377.433
Al (394.401 nm)	0.498516	ppm	0.003279	0.66	6412.990000	Y 377.433
Al H (396.152 nm)	0.537445 u	ppm	0.009109	1.69	1234.810000	Y_R 377.433
As (188.980 nm)	0.957983	ppm	0.005135	0.54	1522.290000	Y 242.219
B (249.678 nm)	0.467516	ppm	0.000483	0.10	3592.030000	Y 242.219
Ba (493.408 nm)	0.476860	ppm	0.000857	0.18	51665.300000	Y_R 488.368
Be (234.861 nm)	0.470147	ppm	0.001306	0.28	49875.200000	Y_R 488.368
Bi (223.061 nm)	0.003933	ppm	0.003068	78.00	-1.709040	Y 377.433
Ca (315.887 nm)	5.022693	ppm	0.005881	0.12	4081.161596	Y_R 377.433
Cd (214.439 nm)	0.491704	ppm	0.000902	0.18	18832.100000	Y 377.433
Co (228.615 nm)	0.486658	ppm	0.001176	0.24	12179.100000	Y 242.219
Cr (205.560 nm)	0.480891	ppm	0.002518	0.52	3320.700000	Y 377.433
Cu (324.754 nm)	0.478709	ppm	0.003655	0.76	24006.500000	Y 377.433
Fe (238.204 nm)	2.465021	ppm	0.002500	0.10	6166.652979	Y_R 377.433
Fe H (259.940 nm)	2.492590 u	ppm	0.007650	0.31	3554.450000	Y_R 377.433
K (766.491 nm)	48.301300	ppm	0.023895	0.05	52984.000000	Y_R2 488.368
Li (670.783 nm)	0.997263	ppm	0.003289	0.33	15256.800000	Y_R2 488.368
Mg (279.078 nm)	19.259000	ppm	0.004543	0.02	67517.700000	Y 377.433
Mn (257.610 nm)	0.481729	ppm	0.000117	0.02	138819.000000	Y 377.433
Mo (202.032 nm)	0.485547	ppm	0.000092	0.02	6434.760000	Y 377.433
Na (589.592 nm)	25.174800	ppm	0.025795	0.10	22170.300000	Y_R2 488.368
Na H (589.593 nm)	26.153557 u	ppm	0.103547	0.40	15636.164051	Y_R4
Ni (231.604 nm)	0.487421	ppm	0.000679	0.14	2635.530000	Y 377.433
P (213.618 nm)	0.942088	ppm	0.002896	0.31	1320.310000	Y 242.219
Pb (220.353 nm)	0.979011	ppm	0.001132	0.12	3301.490000	Y 242.219
S (181.972 nm)	0.009100	ppm	0.002934	32.25	13.763701	Y 377.433
Sb (206.834 nm)	0.971590	ppm	0.006083	0.63	1809.760000	Y 377.433
Se (196.026 nm)	0.966841	ppm	0.003521	0.36	1554.240000	Y 242.219
Si (288.158 nm)	4.755790	ppm	0.001638	0.03	32277.100000	Y 377.433
Sn (189.925 nm)	0.984737	ppm	0.002679	0.27	1629.660000	Y 377.433
Sr (421.552 nm)	0.479720	ppm	0.000316	0.07	77143.612319	Y_R 488.368
Th (288.505 nm)	0.009739	ppm	0.003060	31.42	-12.960100	Y 377.433
Ti (336.122 nm)	0.482815	ppm	0.000037	0.01	63195.700000	Y 377.433
Tl (190.794 nm)	0.977784	ppm	0.001460	0.15	2387.600000	Y 377.433
U (409.013 nm)	0.009913	ppm	0.001775	17.90	3.174180	Y 377.433
V (292.401 nm)	0.480925	ppm	0.000258	0.05	25740.200000	Y 377.433
Zn (206.200 nm)	0.489940	ppm	0.001464	0.30	2242.100000	Y 377.433
Zr (343.823 nm)	0.482250	ppm	0.000048	0.01	28121.700000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.115020	20847.523058	0.001539	0.14
Y 377.433	1.120175	622342.868920	0.000197	0.02
Y_R 377.433	1.139050	55455.600000	0.004054	0.36
Y_R 488.368	1.124590	48094.500000	0.004700	0.42
Y_R2 488.368	1.100472	91912.353938	0.007564	0.69
Y_R4	1.123720	43203.400000	0.009097	0.81

Sample Name: CCB

Date: 5/11/2019 8:36:57 AM

Rack:Tube: S1:4

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	-0.000022 u	ppm	0.000352	> 100.00	-184.574000	Y 377.433
Al (394.401 nm)	0.008366	ppm	0.000519	6.20	127.347000	Y 377.433
Al H (396.152 nm)	0.105603 Zu	ppm	0.008713	8.25	17.620800 Z	Y_R 377.433
As (188.980 nm)	0.002864	ppm	0.000981	34.26	2.731100	Y 242.219
B (249.678 nm)	0.000049 u	ppm	0.000756	> 100.00	12.219600	Y 242.219
Ba (493.408 nm)	-0.001423 u	ppm	0.000393	27.63	1479.250000	Y_R 488.368
Be (234.861 nm)	0.000147	ppm	0.000011	7.20	14.738800	Y_R 488.368
Bi (223.061 nm)	0.002241	ppm	0.000578	25.80	-5.955030	Y 377.433
Ca (315.887 nm)	0.007909	ppm	0.005701	72.08	-66.700125	Y_R 377.433
Cd (214.439 nm)	0.000168	ppm	0.000038	22.78	-0.334806	Y 377.433
Co (228.615 nm)	0.000455	ppm	0.000232	50.95	-12.031000	Y 242.219
Cr (205.560 nm)	0.000405 u	ppm	0.000631	> 100.00	-5.319920	Y 377.433
Cu (324.754 nm)	-0.001252 u	ppm	0.000229	18.31	451.400000	Y 377.433
Fe (238.204 nm)	0.002241	ppm	0.001017	45.39	9.772599	Y_R 377.433
Fe H (259.940 nm)	0.034047 u	ppm	0.004865	14.29	20.941300	Y_R 377.433
K (766.491 nm)	-0.427120 u	ppm	0.042253	9.89	1732.350000	Y_R2 488.368
Li (670.783 nm)	0.010092 Z	ppm	0.000391	3.87	-2702.410000 Z	Y_R2 488.368
Mg (279.078 nm)	0.008669	ppm	0.000922	10.64	47.034200	Y 377.433
Mn (257.610 nm)	0.000210	ppm	0.000032	15.20	37.148100	Y 377.433
Mo (202.032 nm)	0.000221	ppm	0.000060	27.29	14.544000	Y 377.433
Na (589.592 nm)	0.371111 Z	ppm	0.029054	7.83	493.546000 Z	Y_R2 488.368
Na H (589.593 nm)	2.054785 u	ppm	0.026164	1.27	1668.855577	Y_R4
Ni (231.604 nm)	0.000569	ppm	0.000566	99.51	-7.371700	Y 377.433
P (213.618 nm)	-0.001242 u	ppm	0.000640	51.52	1.936160	Y 242.219
Pb (220.353 nm)	0.000582	ppm	0.000000	0.05	9.907470	Y 242.219
S (181.972 nm)	0.001213 u	ppm	0.003264	> 100.00	8.066494	Y 377.433
Sb (206.834 nm)	-0.000116 u	ppm	0.002390	> 100.00	2.055680	Y 377.433
Se (196.026 nm)	0.000998	ppm	0.000369	36.98	7.179600	Y 242.219
Si (288.158 nm)	-0.005787 u	ppm	0.001123	19.41	469.751000	Y 377.433
Sn (189.925 nm)	-0.001760 u	ppm	0.000703	39.93	6.199910	Y 377.433
Sr (421.552 nm)	-0.000089 u	ppm	0.000081	91.13	88.777851	Y_R 488.368
Th (288.505 nm)	-0.002700 u	ppm	0.000658	24.36	14.489400	Y 377.433
Ti (336.122 nm)	0.001094	ppm	0.000047	4.29	-376.705000	Y 377.433
Tl (190.794 nm)	0.000920	ppm	0.000826	89.76	2.363990	Y 377.433
U (409.013 nm)	-0.002232 u	ppm	0.003209	> 100.00	22.865800	Y 377.433
V (292.401 nm)	-0.000504 u	ppm	0.000047	9.31	-120.644000	Y 377.433
Zn (206.200 nm)	0.000082 u	ppm	0.000119	> 100.00	3.462970	Y 377.433
Zr (343.823 nm)	0.000796	ppm	0.000236	29.70	-126.844000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.148603	21475.425487	0.001767	0.15
Y 377.433	1.150856	639388.383441	0.001950	0.17
Y_R 377.433	1.163450	56643.500000	0.000451	0.04
Y_R 488.368	1.152580	49291.300000	0.002977	0.26
Y_R2 488.368	1.135719	94856.193114	0.003575	0.31
Y_R4	1.149840	44207.700000	0.007001	0.61

Sample Name: CCVL-5695588

Date: 5/11/2019 8:40:16 AM

Rack:Tube: S1:3

Weight (g): 1

Volume (mL): 1

Dilution: 1

Analyte Results

Label	Solution Concentration	Unit	SD	%RSD	Intensity	Internal Standard
Ag (328.068 nm)	0.008992	ppm	0.000142	1.58	144.011000	Y 377.433
Al (394.401 nm)	0.103859	ppm	0.000409	0.39	1336.340000	Y 377.433
Al H (396.152 nm)	0.216347 u	ppm	0.002519	1.16	272.367000	Y_R 377.433
As (188.980 nm)	0.013667	ppm	0.000975	7.13	19.911500	Y 242.219
B (249.678 nm)	0.092925	ppm	0.001517	1.63	723.690000	Y 242.219
Ba (493.408 nm)	0.007822	ppm	0.000075	0.96	2449.400000	Y_R 488.368
Be (234.861 nm)	0.001029	ppm	0.000063	6.10	107.515000	Y_R 488.368
Bi (223.061 nm)	0.092170	ppm	0.001058	1.15	191.827000	Y 377.433
Ca (315.887 nm)	0.213203	ppm	0.004141	1.94	103.123788	Y_R 377.433
Cd (214.439 nm)	0.005236	ppm	0.000062	1.18	193.841000	Y 377.433
Co (228.615 nm)	0.010633	ppm	0.000142	1.34	243.173000	Y 242.219
Cr (205.560 nm)	0.010115	ppm	0.000113	1.12	61.795900	Y 377.433
Cu (324.754 nm)	0.013435	ppm	0.000177	1.32	1170.300000	Y 377.433
Fe (238.204 nm)	0.102135	ppm	0.000651	0.64	259.505544	Y_R 377.433
Fe H (259.940 nm)	0.134066 u	ppm	0.002519	1.88	164.692000	Y_R 377.433
K (766.491 nm)	2.558290	ppm	0.021944	0.86	4872.350000	Y_R2 488.368
Li (670.783 nm)	0.033422 Q	ppm	0.000805	2.41	-2277.990000 Q	Y_R2 488.368
Mg (279.078 nm)	0.201881	ppm	0.000851	0.42	723.036000	Y 377.433
Mn (257.610 nm)	0.010380	ppm	0.000006	0.06	2968.060000	Y 377.433
Mo (202.032 nm)	0.019236	ppm	0.000374	1.95	266.083000	Y 377.433
Na (589.592 nm)	1.398200 Q	ppm	0.021793	1.56	1388.630000 Q	Y_R2 488.368
Na H (589.593 nm)	2.729222 u	ppm	0.053628	1.96	2059.749553	Y_R4
Ni (231.604 nm)	0.041597	ppm	0.000546	1.31	215.273000	Y 377.433
P (213.618 nm)	2.684020	ppm	0.002603	0.10	4145.890000	Y 242.219
Pb (220.353 nm)	0.010464	ppm	0.000501	4.79	43.244700	Y 242.219
S (181.972 nm)	0.092882	ppm	0.001133	1.22	52.904253	Y 377.433
Sb (206.834 nm)	0.015645	ppm	0.002491	15.92	31.268700	Y 377.433
Se (196.026 nm)	0.020121	ppm	0.002021	10.04	37.800500	Y 242.219
Si (288.158 nm)	0.489139	ppm	0.007457	1.52	3775.860000	Y 377.433
Sn (189.925 nm)	0.096996	ppm	0.001369	1.41	168.721000	Y 377.433
Sr (421.552 nm)	0.008935	ppm	0.000089	1.00	1537.889588	Y_R 488.368
Th (288.505 nm)	0.010147 Q	ppm	0.001463	14.42	36.528400 Q	Y 377.433
Ti (336.122 nm)	0.010527	ppm	0.000012	0.12	868.523000	Y 377.433
Tl (190.794 nm)	0.016073	ppm	0.000811	5.04	39.297300	Y 377.433
U (409.013 nm)	0.051272	ppm	0.002294	4.47	192.675000	Y 377.433
V (292.401 nm)	0.009057	ppm	0.000080	0.88	389.559000	Y 377.433
Zn (206.200 nm)	0.021124	ppm	0.000167	0.79	99.625000	Y 377.433
Zr (343.823 nm)	0.010517	ppm	0.000225	2.14	443.526000	Y 377.433

Internal Standards Results

Label	Ratio	Intensity	SD	%RSD
Y 242.219	1.146095	21428.525932	0.002853	0.25
Y 377.433	1.145215	636254.614891	0.003481	0.30
Y_R 377.433	1.162150	56580.300000	0.003234	0.28
Y_R 488.368	1.149650	49166.200000	0.004442	0.39
Y_R2 488.368	1.135842	94866.490097	0.003521	0.31
Y_R4	1.142250	43915.900000	0.002129	0.19

Current Signal

Operator Name Denver Metals
Acq. Date-Time 2019-05-13 9:37:24 AM
Instrument Name G3281A JP12422099
Batch Folder D:\Agilent\ICPMH1\DATA\051319.b

[No Gas]

Sensitivity



Ch	Mass	Range	Count	Avg Count	RSD%
1	7	50000	30411	29904	1.558
2	59	100000	47339	47388	0.928
3	63	10000	32792	33475	1.533
4	70	5000	2129	2103	1.827
5	80	5000000	2057892	2053370	0.328
6	89	100000	80921	80613	1.235
7	115	100000	77362	75545	2.334
8	118	1000	650	593	9.794
9	137	10000	8539	8743	2.197
10	140	100000	74545	74912	1.027
11	205	50000	39570	40276	1.778
12	6	5000	4103	4167	2.285
13	70/140	5	2.856 %	2.808 %	2.347
14	156/140	2	1.374 %	1.506 %	5.557

Integration Time [sec] 0.1

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	1.03 L/min	Dilution Gas	0.00 L/min
RF Power	1550 W	Option Gas	0.0 %	Auxiliary Gas	0.90 L/min
RF Matching	1.20 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Q1 Entrance	---	Cell Exit	-50 V
Extract 2	-195.0 V	Q1 Exit	---	Deflect	14.3 V
Omega Bias	-80 V	Cell Focus	---	Plate Bias	-40 V
Omega Lens	9.3 V	Cell Entrance	-30 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Axial Acceleration	---
He Flow	0.0 mL/min	4th Gas Flow	---	OctP RF	180 V
H2 Flow	0.0 mL/min	OctP Bias	-8.0 V	Energy Discrimination	3.0 V

QP Parameters

Mass Gain	140	Axis Gain	1.0017	QP Bias	-5.0 V
Mass Offset	135	Axis Offset	-0.06		

Torch

Current Signal

Torch H -0.4 mm

Torch V 1.0 mm

EM

Discriminator 4.5 mV

Analog HV 1758 V

Pulse HV 1292 V

Meter

Name	Value	Unit
IF/BK Press	1.68E+2	Pa
Water RF/WC/IF	1.36	L/min
Water Temp	22.1	°C
Reflected Power	5	W
Forward Power	1550	W

Current Signal

Operator Name Denver Metals
Acq. Date-Time 2019-05-13 9:37:41 AM
Instrument Name G3281A JP12422099
Batch Folder D:\Agilent\ICPMH1\DATA\051319.b

[HMI He]

Sensitivity



Ch	Mass	Range	Count	Avg Count	RSD%
1	7	50	18	19	29.356
2	9	200	141	148	11.966
3	25	500	944	942	5.192
4	51	1000	690	678	6.442
5	70	1000	392	432	11.651
6	75	20	17	15	22.682
7	78	20	4	4	50.305
8	59	20000	12707	12537	2.083
9	118	200	139	131	9.788
10	137	5000	1762	1799	5.128
11	140	50000	28185	28690	3.556
12	205	20000	16353	16345	1.536
13	238	50000	24104	24290	1.234
14	70/140	5	1.391 %	1.510 %	13.929
15	156/140	1	0.319 %	0.355 %	9.296

Integration Time [sec] 0.1

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.75 L/min	Dilution Gas	0.28 L/min
RF Power	1550 W	Option Gas	0.0 %	Auxiliary Gas	0.90 L/min
RF Matching	1.20 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Q1 Entrance	---	Cell Exit	-60 V
Extract 2	-195.0 V	Q1 Exit	---	Deflect	-0.5 V
Omega Bias	-80 V	Cell Focus	---	Plate Bias	-60 V
Omega Lens	9.3 V	Cell Entrance	-40 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Axial Acceleration	---
He Flow	5.0 mL/min	4th Gas Flow	---	OctP RF	200 V
H2 Flow	0.0 mL/min	OctP Bias	-18.0 V	Energy Discrimination	3.0 V

QP Parameters

Mass Gain	140	Axis Gain	1.0017	QP Bias	-15.0 V
Mass Offset	135	Axis Offset	-0.06		

Current Signal

Torch

Torch H -0.4 mm

Torch V 1.0 mm

EM

Discriminator 4.5 mV

Analog HV 1758 V

Pulse HV 1292 V

Meter

Name	Value	Unit
IF/BK Press	1.68E+2	Pa
Water RF/WC/IF	1.36	L/min
Water Temp	22.1	°C
Reflected Power	5	W
Forward Power	1550	W

Current Signal

Operator Name Denver Metals
Acq. Date-Time 2019-05-13 9:38:08 AM
Instrument Name G3281A JP12422099
Batch Folder D:\Agilent\ICPMH1\DATA\051319.b

[HMI H2]

Sensitivity



Ch	Mass	Range	Count	Avg Count	RSD%
1	7	1000	623	450	32.668
2	9	5000	2474	2028	26.723
3	59	20000	13718	12113	12.549
4	63	2000	5490	4862	15.574
5	70	2000	1209	1151	13.089
6	78	20	10	7	44.238
7	89	100000	63359	60970	2.820
8	115	100000	59423	57779	1.980
9	118	500	371	397	5.176
10	137	10000	6679	6760	3.572
11	140	100000	62550	58820	5.323
12	205	50000	22550	22008	5.466
13	238	50000	23359	25181	11.640
14	70/140	5	1.934 %	1.954 %	10.366
15	156/140	2	1.652 %	1.578 %	5.885

Integration Time [sec] 0.1

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.75 L/min	Dilution Gas	0.28 L/min
RF Power	1550 W	Option Gas	0.0 %	Auxiliary Gas	0.90 L/min
RF Matching	1.20 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Q1 Entrance	---	Cell Exit	-60 V
Extract 2	-195.0 V	Q1 Exit	---	Deflect	-0.5 V
Omega Bias	-80 V	Cell Focus	---	Plate Bias	-60 V
Omega Lens	9.3 V	Cell Entrance	-40 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Axial Acceleration	---
He Flow	0.0 mL/min	4th Gas Flow	---	OctP RF	200 V
H2 Flow	4.0 mL/min	OctP Bias	-18.0 V	Energy Discrimination	3.0 V

QP Parameters

Mass Gain	140	Axis Gain	1.0017	QP Bias	-15.0 V
Mass Offset	135	Axis Offset	-0.06		

Current Signal

Torch

Torch H -0.4 mm

Torch V 1.0 mm

EM

Discriminator 4.5 mV

Analog HV 1758 V

Pulse HV 1292 V

Meter

Name	Value	Unit
IF/BK Press	1.77E+2	Pa
Water RF/WC/IF	1.37	L/min
Water Temp	22.1	°C
Reflected Power	5	W
Forward Power	1551	W

US EPA Tune Check Report

Operator Name Denver Metals
Acq/Data Batch D:\Agilent\ICPMH1\DATA\051319.b
Acq. Date-Time 2019-05-13 9:46:03 AM
Report Comment ---
Instrument Name G3281A JP12422099

[HMI H2]

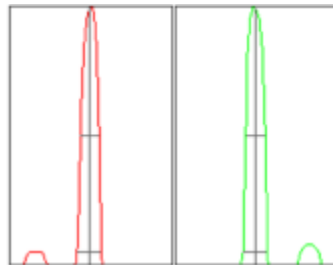
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	RSD%	RSD% (Required)	RSD% (Flag)
7		223	2228.98	2.457	5.000	
9		997	9966.36	1.115	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	228	216	220	221	229
9	982	1004	994	1011	992

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	684.63	7.00	6.90 - 7.10	
9	2822.90	9.00	8.90 - 9.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
7	0.33	0.441	0.750	
9	0.36	0.444	0.750	

Integration Time [sec] 0.1
 Acquisition Time [sec] 51.09
 Y Axis Linear

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas		Dilution Gas	0.28 L/min
RF Power	1550 W	Option Gas	0.0 %	Auxiliary Gas	0.90 L/min
RF Matching		Nebulizer Pump		Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp			

Lens Parameters

Extract 1	0.0 V	Omega Lens	9.3 V	Deflect	-0.5 V
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US EPA Tune Check Report

Extract 2	-195.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-80 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	0.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	4.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	140	Axis Gain	1.0017	QP Bias	-15.0 V
Mass Offset	135	Axis Offset	-0.06		

Hardware Settings

EM

Discriminator	4.5 mV	Analog HV	1758 V	Pulse HV	1292 V
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Torch

Torch H	-0.4 mm	Torch V	1.0 mm
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[HMI He]

Sensitivity

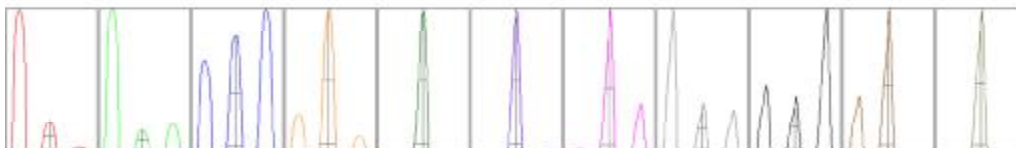
Mass	Conc. [ug/l]	Count	CPS	RSD%	RSD% (Required)	RSD% (Flag)
24		1847	18472.41	1.866	5.000	
25		270	2701.89	3.558	5.000	
26		351	3514.42	1.590	5.000	
59		4272	42720.57	1.001	5.000	
103		9402	94019.48	1.198	5.000	
115		3354	33538.25	1.359	5.000	
205		4346	43462.80	2.162	5.000	
206		1522	15215.67	1.232	5.000	
207		1243	12427.75	1.569	5.000	
208		3174	31737.64	1.738	5.000	
238		6341	63407.84	2.117	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
24	1856	1844	1888	1854	1793
25	261	267	266	286	271
26	346	352	357	356	346
59	4215	4324	4304	4261	4256
103	9547	9402	9404	9426	9231
115	3360	3333	3420	3295	3361
205	4492	4343	4367	4254	4275
206	1537	1518	1537	1524	1491
207	1274	1234	1230	1249	1227
208	3259	3187	3115	3172	3137
238	6534	6428	6264	6257	6221

US EPA Tune Check Report

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
24	4944.56	23.95	23.90 - 24.10	
25	728.80	24.95	24.90 - 25.10	
26	935.80	25.95	25.90 - 26.10	
59	12012.59	58.95	58.90 - 59.10	
103	31982.65	103.00	102.90 - 103.10	
115	12057.58	115.00	114.90 - 115.10	
205	14671.16	205.00	204.90 - 205.10	
206	5013.78	206.00	205.90 - 206.10	
207	4214.24	207.00	206.90 - 207.10	
208	11179.81	208.00	207.90 - 208.10	
238	21424.57	238.00	237.90 - 238.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
24	0.38	0.492	0.750	
25	0.38	0.491	0.750	
26	0.38	0.525	0.750	
59	0.36	0.516	0.750	
103	0.29	0.471	0.750	
115	0.27	0.435	0.750	
205	0.29	0.469	0.750	
206	0.30	0.447	0.750	
207	0.30	0.464	0.750	
208	0.29	0.473	0.750	
238	0.30	0.485	0.750	

Integration Time [sec] 0.1
 Acquisition Time [sec] 235.339999999997
 Y Axis Linear

Tune Parameters

Plasma Parameters

Plasma Mode --- Nebulizer Gas Dilution Gas 0.28 L/min

US EPA Tune Check Report

RF Power	1550 W	Option Gas	0.0 %	Auxiliary Gas	0.90 L/min
RF Matching		Nebulizer Pump		Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp			

Lens Parameters

Extract 1	0.0 V	Omega Lens	9.3 V	Deflect	-0.5 V
Extract 2	-195.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-80 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	0.0 V
He Flow	5.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	140	Axis Gain	1.0017	QP Bias	-15.0 V
Mass Offset	135	Axis Offset	-0.06		

Hardware Settings

EM

Discriminator	4.5 mV	Analog HV	1758 V	Pulse HV	1292 V
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Torch

Torch H	-0.4 mm	Torch V	1.0 mm
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[No Gas]

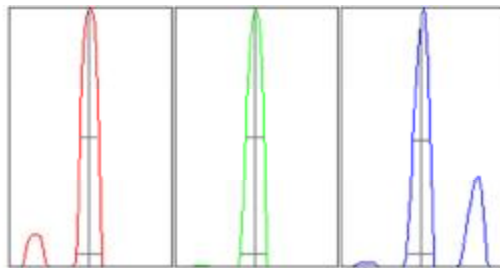
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	RSD%	RSD% (Required)	RSD% (Flag)
7	10.00	9547	95472.75	0.672	5.000	
89		25634	256337.21	0.639	5.000	
205		10631	106307.92	0.479	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	9624	9591	9553	9503	9466
89	25821	25769	25519	25432	25628
205	10677	10640	10555	10675	10607

Integration Time [sec] 0.1

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	28953.39	7.00	6.90 - 7.10	
89	77391.21	89.00	88.90 - 89.10	
205	34412.12	205.00	204.90 - 205.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
7	0.33	0.483	0.750	
89	0.34	0.485	0.750	
205	0.31	0.522	0.750	

Integration Time [sec] 0.1
 Acquisition Time [sec] 92.3700000000001
 Y Axis Linear

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas		Dilution Gas	0.00 L/min
RF Power	1550 W	Option Gas	0.0 %	Auxiliary Gas	0.90 L/min
RF Matching		Nebulizer Pump		Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp			

Lens Parameters

Extract 1	0.0 V	Omega Lens	9.3 V	Deflect	14.3 V
Extract 2	-195.0 V	Cell Entrance	-30 V	Plate Bias	-40 V
Omega Bias	-80 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	0.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	140	Axis Gain	1.0017	QP Bias	-5.0 V
Mass Offset	135	Axis Offset	-0.06		

Hardware Settings

EM

Discriminator	4.5 mV	Analog HV	1758 V	Pulse HV	1292 V
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Torch

Torch H	-0.4 mm	Torch V	1.0 mm
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	Mass (Custom Setting)	Element Name	Current Value	Retain Mass for Startup
	6		0.090590	<input checked="" type="checkbox"/>
	9		0.105043	<input checked="" type="checkbox"/>
	23		0.117461	<input checked="" type="checkbox"/>
	24		0.123145	<input checked="" type="checkbox"/>
	27		0.127176	<input checked="" type="checkbox"/>
	39		0.128671	<input checked="" type="checkbox"/>
	45		0.129071	<input checked="" type="checkbox"/>
	48		0.128862	<input checked="" type="checkbox"/>
	51		0.130926	<input checked="" type="checkbox"/>
	52		0.135799	<input checked="" type="checkbox"/>
	55		0.137748	<input checked="" type="checkbox"/>
	59		0.142073	<input checked="" type="checkbox"/>
	60		0.142701	<input checked="" type="checkbox"/>
	63		0.145352	<input checked="" type="checkbox"/>
	66		0.145091	<input checked="" type="checkbox"/>
	72		0.138610	<input checked="" type="checkbox"/>
	75		0.143066	<input checked="" type="checkbox"/>
	88		0.145922	<input checked="" type="checkbox"/>
	98		0.144895	<input checked="" type="checkbox"/>
	102		0.147347	<input checked="" type="checkbox"/>
	106		0.151073	<input checked="" type="checkbox"/>
	114		0.152753	<input checked="" type="checkbox"/>
	115		0.152317	<input checked="" type="checkbox"/>
	118		0.151813	<input checked="" type="checkbox"/>
	121		0.152074	<input checked="" type="checkbox"/>

	Mass (Custom Setting)	Element Name	Current Value	Retain Mass for Startup
	138		0.153322	<input checked="" type="checkbox"/>
	175		0.158826	<input checked="" type="checkbox"/>
	193		0.158537	<input checked="" type="checkbox"/>
	205		0.157280	<input checked="" type="checkbox"/>
	208		0.160961	<input checked="" type="checkbox"/>
	209		0.160218	<input checked="" type="checkbox"/>
	232		0.157799	<input checked="" type="checkbox"/>
	238		0.158254	<input checked="" type="checkbox"/>

Sample Report

Sample Table

Sample Name	rinse-5699932
Data File Name	001SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\051319.b
Acq Date Time	2019-05-13T10:59:12-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	IS
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-5699932
Data File Name	002SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\051319.b
Acq Date Time	2019-05-13T11:02:45-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	IS
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-5626316
Data File Name	003SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\051319.b
Acq Date Time	2019-05-13T11:06:18-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	PA
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-5626316
Data File Name	004SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\051319.b
Acq Date Time	2019-05-13T11:09:51-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	PA
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-5620980
Data File Name	005SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\051319.b
Acq Date Time	2019-05-13T11:13:24-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	TUNE
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample Report

Sample Table

Sample Name	rinse-5620980
Data File Name	006SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\051319.b
Acq Date Time	2019-05-13T11:16:56-06:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	TUNE
ISTD Ref FileName	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Calibration Blank Report

Sample Table

Sample Name2 ICIS-5699924
 Data File Name 007CALB.d
 Data Path Name D:\Agilent\ICPMH1\DATA\051319.b
 Method
 Acq Date Time 2019-05-13T11:20:27-06:00
 Sample Type CalBlk
 Level 1
 Dilution 1
 Comment

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Li	7	45	1	HMI H2	130769	0.00
Li	7	45	3	No Gas	8163367	0.00
B	11	6	1	HMI H2	537	3.71
Na	23	45	2	HMI He	51508	0.00
Mg	24	45	2	HMI He	427	8.25
Al	27	45	2	HMI He	353	2.57
K	39	45	2	HMI He	112796	0.00
Ca	44	45	2	HMI He	293	2.42
V	51	72	2	HMI He	16181	0.02
Cr	52	72	2	HMI He	1793	0.27
Mn	55	72	2	HMI He	300	5.88
Fe	57	72	2	HMI He	1207	0.80
Co	59	72	2	HMI He	6145	0.04
Ni	60	72	2	HMI He	937	1.21
Cu	63	72	2	HMI He	4377	0.14
Zn	66	72	2	HMI He	693	4.01
As	75	72	2	HMI He	195	2.98
Se	78	72	1	HMI H2	29	268.40
Sr	88	45	2	HMI He	160	23.76
Zr	90	72	2	HMI He	293	1.78
Zr	90	72	1	HMI H2	1625	0.11
Nb	93	72	2	HMI He	473	7.17
Mo	95	115	2	HMI He	153	31.92
Pd	105	115	2	HMI He	130	25.79
Ag	107	115	2	HMI He	17	415.69
Cd	111	115	2	HMI He	23	424.18
Sn	120	115	2	HMI He	617	2.90
Sb	121	115	2	HMI He	87	20.34
Ba	137	115	2	HMI He	153	17.19
W	182	165	2	HMI He	3127	0.17
Tl	205	165	2	HMI He	227	12.51
Pb	208	165	2	HMI He	640	1.84
Th	232	165	2	HMI He	350	4.08
U	238	165	2	HMI He	70	61.22

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li-6 Internal Standard	6	1	HMI H2	1051415	1.48
Sc (IS)	45	2	HMI He	4493818	1.74
Sc IS)	45	3	No Gas	128947567	1.04
Ge Internal Standard	72	1	HMI H2	25453947	1.82
Ge Internal Standard	72	2	HMI He	5129673	1.40
In Internal standard	115	2	HMI He	16025016	2.79
Ho-165	165	2	HMI He	34875115	4.21

Calibration Standard Report

Sample Table

Sample Name IC-5699925
 Data File Name 008CAL.S.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 method
 Acq Date Time 2019-05-13T11:23:59-06:00
 Sample Type CalStd
 Level 2
 Dilution 1
 Comment
 ISTD Ref File Name 007CALB.d
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Li	7	45	1	HMI H2	211114	0.00
Li	7	45	3	No Gas	13434789	0.00
Be	9	6	1	HMI H2	43173	0.00
B	11	6	1	HMI H2	1827	0.77
Na	23	45	2	HMI He	1696666	0.00
Mg	24	45	2	HMI He	653334	0.00
Al	27	45	2	HMI He	188674	0.00
K	39	45	2	HMI He	725689	0.00
Ca	44	45	2	HMI He	45853	0.00
V	51	72	2	HMI He	511996	0.00
Cr	52	72	2	HMI He	663476	0.00
Mn	55	72	2	HMI He	292662	0.00
Fe	57	72	2	HMI He	248548	0.00
Co	59	72	2	HMI He	1043819	0.00
Ni	60	72	2	HMI He	282331	0.00
Cu	63	72	2	HMI He	777021	0.00
Zn	66	72	2	HMI He	112029	0.00
As	75	72	2	HMI He	82879	0.00
Se	78	72	1	HMI H2	65158	0.00
Sr	88	45	2	HMI He	682804	0.00
Zr	90	72	2	HMI He	6161	0.07
Zr	90	72	1	HMI H2	13619	0.01
Nb	93	72	2	HMI He	1289228	0.00
Mo	95	115	2	HMI He	373005	0.00
Pd	105	115	2	HMI He	551313	0.00
Ag	107	115	2	HMI He	1119823	0.00
Cd	111	115	2	HMI He	164120	0.00
Sn	120	115	2	HMI He	468773	0.00
Sb	121	115	2	HMI He	395157	0.00
Ba	137	115	2	HMI He	122899	0.00
W	182	165	2	HMI He	742899	0.00
Pt	195	165	2	HMI He	511438	0.00
Tl	205	165	2	HMI He	1213811	0.00
Pb	208	165	2	HMI He	1661395	0.00
Th	232	165	2	HMI He	1726565	0.00
U	238	165	2	HMI He	1795801	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1076154	4.49	1051415	102.35	60	125	
Sc (IS)	45	2	HMI He	4456353	1.40	4493818	99.17	60	125	
Sc IS)	45	3	No Gas	129946222	0.72	128947567	100.77	60	120	
Ge Internal Standard	72	1	HMI H2	25811836	2.32	25453947	101.41	60	125	
Ge Internal Standard	72	2	HMI He	5074448	1.42	5129673	98.92	60	125	
In Internal standard	115	2	HMI He	16016141	3.69	16025016	99.94	60	125	
Ho-165	165	2	HMI He	36422769	1.14	34875115	104.44	60	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name ICV-5699927
 Data File Name 009_ICV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T11:27:28-06:00
 Sample Type ICV
 Dilution 1
 Comment
 ISTD Ref File Name 007CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	60.700	ppb	12.506	163762	80	75.9	90	110	>+\-10%
Li	7	3	45	75.928	ppb	16.029	10197551	80	94.9	90	110	
Be	9	1	6	40.243	ppb	6.303	17452	40	100.6	90	110	
B	11	1	6	29.626	ppb	7.551	933	40	74.1	90	110	>+\-10%
Na	23	2	45	770.525	ppb	0.706	693009	800	96.3	90	110	
Mg	24	2	45	814.778	ppb	1.140	269496	800	101.8	90	110	
Al	27	2	45	802.157	ppb	1.570	76762	800	100.3	90	110	
K	39	2	45	820.748	ppb	0.478	367972	800	102.6	90	110	
Ca	44	2	45	803.112	ppb	1.532	18804	800	100.4	90	110	
V	51	2	72	39.980	ppb	3.530	214637	40	100.0	90	110	
Cr	52	2	72	39.102	ppb	1.391	260993	40	97.8	90	110	
Mn	55	2	72	41.659	ppb	1.158	122337	40	104.1	90	110	
Fe	57	2	72	785.889	ppb	1.856	98578	800	98.2	90	110	
Co	59	2	72	39.646	ppb	1.531	418422	40	99.1	90	110	
Ni	60	2	72	40.070	ppb	1.603	113902	40	100.2	90	110	
Cu	63	2	72	41.874	ppb	3.374	328401	40	104.7	90	110	
Zn	66	2	72	39.765	ppb	1.066	45039	40	99.4	90	110	
As	75	2	72	40.328	ppb	0.848	33598	40	100.8	90	110	
Se	78	1	72	40.217	ppb	1.979	27055	40	100.5	90	110	
Sr	88	2	45	77.010	ppb	0.805	266052	80	96.3	90	110	
Zr	90	2	72	15.169	ppb	5.374	1183	40	37.9	90	110	>+\-10%
Zr	90	1	72	19.411	ppb	11.532	4098	40	48.5	90	110	>+\-10%
Nb	93	2	72	90.759	ppb	1.746	586351	80	113.4	90	110	>+\-10%
Mo	95	2	115	41.243	ppb	2.731	151640	40	103.1	90	110	
Pd	105	2	115	39.942	ppb	4.261	216782	40	99.9	90	110	
Ag	107	2	115	39.828	ppb	3.283	439159	40	99.6	90	110	
Cd	111	2	115	40.771	ppb	3.723	65948	40	101.9	90	110	
Sn	120	2	115	40.314	ppb	2.735	186558	40	100.8	90	110	
Sb	121	2	115	41.842	ppb	0.840	162901	40	104.6	90	110	
Ba	137	2	115	42.753	ppb	2.725	51813	40	106.9	90	110	
W	182	2	165	39.689	ppb	1.403	292398	40	99.2	90	110	
Pt	195	2	165	38.799	ppb	0.984	195428	40	97.0	90	110	
Tl	205	2	165	38.954	ppb	2.286	465680	40	97.4	90	110	
Pb	208	2	165	39.117	ppb	1.819	640528	40	97.8	90	110	
Th	232	2	165	37.384	ppb	2.585	635950	40	93.5	90	110	
U	238	2	165	38.659	ppb	2.824	683891	40	96.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1081616	5.19	1051415	102.87	60	125	
Sc (IS)	45	2	HMI He	4507171	0.15	4493818	100.30	60	125	
Sc (IS)	45	3	No Gas	129937983	2.84	128947567	100.77	60	120	
Ge Internal Standard	72	1	HMI H2	26616158	1.18	25453947	104.57	60	125	
Ge Internal Standard	72	2	HMI He	5082953	1.28	5129673	99.09	60	125	
In Internal standard	115	2	HMI He	15766086	2.72	16025016	98.38	60	125	
Ho-165	165	2	HMI He	35872091	0.46	34875115	102.86	60	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name ICB-5699924
 Data File Name 010_ICB.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T11:31:38-06:00
 Sample Type ICB
 Dilution 1
 Comment
 ISTD Ref File Name 007CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	1	7.892	ppb	200.9	135127	0.1	>RL
Li	7	3	5.578	ppb	112.0	8198541	0.05	>RL
Be	9	1	0.015	ppb	114.2	7	0.5	
B	11	1	-5.538	ppb	-99.8	500	0.1	
Na	23	2	0.288	ppb	782.3	50451	25	
Mg	24	2	0.288	ppb	134.5	513	25	
Al	27	2	1.823	ppb	13.0	513	15	
K	39	2	7.882	ppb	200.7	112337	50	
Ca	44	2	-2.843	ppb	-43.1	223	25	
V	51	2	-0.141	ppb	-45.5	15570	1	
Cr	52	2	-0.020	ppb	-23.5	1667	1	
Mn	55	2	0.047	ppb	61.6	440	0.5	
Fe	57	2	1.281	ppb	69.9	1373	25	
Co	59	2	-0.001	ppb	-591.0	6171	0.5	
Ni	60	2	0.040	ppb	57.7	1057	1	
Cu	63	2	-0.044	ppb	-66.2	4057	1	
Zn	66	2	0.078	ppb	92.6	787	5	
As	75	2	-0.009	ppb	-192.9	189	1	
Se	78	1	0.027	ppb	119.5	47	1	
Sr	88	2	0.001	ppb	1075.0	160	1	
Zr	90	2	-0.540	ppb	-143.5	263	1	
Zr	90	1	0.154	ppb	729.7	1665	1	
Nb	93	2	5.435	ppb	5.4	36086	2	>RL
Mo	95	2	0.057	ppb	78.7	357	0.5	
Pd	105	2	0.084	ppb	19.4	577	1	
Ag	107	2	0.016	ppb	46.5	187	1	
Cd	111	2	0.001	ppb	1983.0	23	0.5	
Sn	120	2	0.098	ppb	56.8	1047	1	
Sb	121	2	0.551	ppb	11.9	2220	1	
Ba	137	2	0.022	ppb	187.9	177	0.5	
W	182	2	0.038	ppb	38.6	3601	1	
Pt	195	2	0.009	ppb	115.5	43	1	
Tl	205	2	0.005	ppb	92.6	303	0.1	
Pb	208	2	0.028	ppb	19.4	1153	0.5	
Th	232	2	0.240	ppb	8.3	4557	1	
U	238	2	0.015	ppb	30.8	343	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1120635	1.08	1051415	106.58	60	125	
Sc (IS)	45	2	HMI He	4384031	3.56	4493818	97.56	60	125	
Sc (IS)	45	3	No Gas	127259640	0.80	128947567	98.69	60	120	
Ge Internal Standard	72	1	HMI H2	25807805	4.09	25453947	101.39	60	125	
Ge Internal Standard	72	2	HMI He	5160707	1.88	5129673	100.60	60	125	
In Internal standard	115	2	HMI He	15670024	2.46	16025016	97.78	60	125	
Ho-165	165	2	HMI He	36882782	2.64	34875115	105.76	60	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name ICVL-5699928
 Data File Name 011LICV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T11:35:23-06:00
 Sample Type LLICV
 Dilution 1
 Comment
 ISTD Ref File Name 007CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	6	1.181	ppb	17.674	500	1	118.1	70	130	
Na	23	2	45	51.173	ppb	2.414	93118	50	102.3	70	130	
Mg	24	2	45	55.964	ppb	3.111	18680	50	111.9	70	130	
Al	27	2	45	56.458	ppb	5.943	5661	50	112.9	70	130	
K	39	2	45	117.324	ppb	18.969	147721	100	117.3	70	130	
Ca	44	2	45	39.626	ppb	6.120	1193	50	79.3	70	130	
V	51	2	72	5.095	ppb	7.836	41546	5	101.9	70	130	
Cr	52	2	72	2.335	ppb	5.988	17345	2	116.7	70	130	
Mn	55	2	72	1.396	ppb	7.773	4411	1	139.6	70	130	> +/-30%
Fe	57	2	72	55.399	ppb	9.020	8095	50	110.8	70	130	
Co	59	2	72	1.333	ppb	7.271	20058	1	133.3	70	130	> +/-30%
Ni	60	2	72	1.872	ppb	9.629	6231	1.5	124.8	70	130	
Cu	63	2	72	2.319	ppb	2.509	22405	2	115.9	70	130	
Zn	66	2	72	9.682	ppb	5.074	11564	10	96.8	70	130	
As	75	2	72	5.053	ppb	2.563	4401	5	101.1	70	130	
Se	78	1	72	4.939	ppb	4.804	3240	5	98.8	70	130	
Sr	88	2	45	1.667	ppb	8.592	5841	1	166.7	70	130	> +/-30%
Zr	90	2	72	-0.123	ppb	-1105.542	283	0.5	-24.7	70	130	> +/-30%
Zr	90	1	72	0.405	ppb	600.927	1695	0.5	81.0	70	130	
Nb	93	2	72	4.186	ppb	2.937	27660	2	209.3	70	130	> +/-30%
Mo	95	2	115	2.589	ppb	2.281	9449	2	129.4	70	130	
Pd	105	2	115	0.493	ppb	15.629	2740	1	49.3	70	130	> +/-30%
Ag	107	2	115	5.369	ppb	1.082	57917	5	107.4	70	130	
Cd	111	2	115	1.419	ppb	1.039	2267	1	141.9	70	130	> +/-30%
Sn	120	2	115	10.165	ppb	3.274	46413	10	101.7	70	130	
Sb	121	2	115	2.562	ppb	2.558	9826	2	128.1	70	130	
Ba	137	2	115	1.410	ppb	10.624	1813	1	141.0	70	130	> +/-30%
W	182	2	165	5.005	ppb	5.284	40398	1	500.5	70	130	> +/-30%
Pt	195	2	165	0.371	ppb	1.687	1907	1	37.1	70	130	> +/-30%
Tl	205	2	165	1.336	ppb	1.027	16520	1	133.6	70	130	> +/-30%
Pb	208	2	165	1.290	ppb	10.660	22120	1	129.0	70	130	
Th	232	2	165	2.075	ppb	4.430	36295	2	103.8	70	130	
U	238	2	165	1.296	ppb	5.058	23406	1	129.6	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1050481	3.56	1051415	99.91	60	125	
Sc (IS)	45	2	HMI He	4452614	1.08	4493818	99.08	60	125	
Sc (IS)	45	3	No Gas	131119491	1.41	128947567	101.68	60	120	
Ge Internal Standard	72	1	HMI H2	25762109	2.23	25453947	101.21	60	125	
Ge Internal Standard	72	2	HMI He	5111552	3.18	5129673	99.65	60	125	
In Internal standard	115	2	HMI He	15412084	2.04	16025016	96.18	60	125	
Ho-165	165	2	HMI He	36562661	3.99	34875115	104.84	60	125	

Sample Report

Sample Table

Sample Name rinse-5626316
 Data File Name 012SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T11:40:18-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment PA
 ISTD Ref FileName 007CALB.d
 Sample QC Pass/Fail Pass
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-0.512	ppb	-0.512	-1910.20	8283136	40000	
Be	9	1	6	0.019	ppb	0.019	35.02	8	2000	
B	11	1	6	4.627	ppb	4.627	381.72	610	100	
Na	23	2	45	2.511	ppb	2.511	150.06	53517	400000	
Mg	24	2	45	1.114	ppb	1.114	34.23	797	400000	
Al	27	2	45	3.562	ppb	3.562	33.14	693	400000	
K	39	2	45	9.452	ppb	9.452	183.83	115616	400000	
Ca	44	2	45	-0.784	ppb	-0.784	-188.64	277	400000	
V	51	2	72	0.055	ppb	0.055	84.75	16461	2000	
Cr	52	2	72	-0.017	ppb	-0.017	-127.73	1680	5000	
Mn	55	2	72	0.202	ppb	0.202	23.81	897	10000	
Fe	57	2	72	14.138	ppb	14.138	16.72	2974	400000	
Co	59	2	72	-0.008	ppb	-0.008	-259.11	6058	2000	
Ni	60	2	72	0.030	ppb	0.030	139.56	1023	5000	
Cu	63	2	72	0.233	ppb	0.233	20.94	6201	5000	
Zn	66	2	72	0.612	ppb	0.612	24.32	1383	5000	
As	75	2	72	0.027	ppb	0.027	87.14	218	2000	
Se	78	1	72	-0.003	ppb	-0.003	-234.83	28	2000	
Sr	88	2	45	0.029	ppb	0.029	68.85	257	2000	
Zr	90	2	72	1.901	ppb	1.901	75.71	407	1000	
Zr	90	1	72	0.033	ppb	0.033	3256.98	1675	1000	
Nb	93	2	72	2.345	ppb	2.345	9.54	15744	200	
Mo	95	2	115	0.026	ppb	0.026	25.89	250	2000	
Pd	105	2	115	0.032	ppb	0.032	5.50	307	100	
Ag	107	2	115	0.018	ppb	0.018	15.90	220	100	
Cd	111	2	115	-0.002	ppb	-0.002	-854.14	20	2000	
Sn	120	2	115	0.035	ppb	0.035	72.73	773	2000	
Sb	121	2	115	0.073	ppb	0.073	26.16	373	1000	
Ba	137	2	115	0.072	ppb	0.072	7.47	240	5000	
W	182	2	165	-0.029	ppb	-0.029	-110.01	3064	100	
Pt	195	2	165	0.003	ppb	0.003	91.97	17	100	
Tl	205	2	165	0.008	ppb	0.008	79.00	337	2000	
Pb	208	2	165	0.024	ppb	0.024	28.79	1073	5000	
Th	232	2	165	0.091	ppb	0.091	18.43	1947	2000	
U	238	2	165	0.007	ppb	0.007	48.52	200	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1084687	2.99	1051415	103.16	60	125	
Sc (IS)	45	2	HMI He	4495480	5.11	4493818	100.04	60	125	
Sc (IS)	45	3	No Gas	131116875	2.55	128947567	101.68	60	120	
Ge Internal Standard	72	1	HMI H2	26178540	2.14	25453947	102.85	60	125	
Ge Internal Standard	72	2	HMI He	5129720	0.92	5129673	100.00	60	125	
In Internal standard	115	2	HMI He	15932582	1.94	16025016	99.42	60	125	
Ho-165	165	2	HMI He	36520698	1.01	34875115	104.72	60	125	

Sample Report

Sample Table

Sample Name rinse-5626316
 Data File Name 013SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T11:43:51-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment PA
 ISTD Ref FileName 007CALB.d
 Sample QC Pass/Fail Pass
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-0.420	ppb	-0.420	-663.50	8268003	40000	
Be	9	1	6	0.037	ppb	0.037	124.82	17	2000	
B	11	1	6	-8.392	ppb	-8.392	-70.08	457	100	
Na	23	2	45	4.980	ppb	4.980	29.56	53299	400000	
Mg	24	2	45	0.774	ppb	0.774	43.72	653	400000	
Al	27	2	45	4.933	ppb	4.933	38.56	787	400000	
K	39	2	45	30.643	ppb	30.643	60.69	117056	400000	
Ca	44	2	45	0.365	ppb	0.365	604.24	290	400000	
V	51	2	72	-0.278	ppb	-0.278	-81.20	14716	2000	
Cr	52	2	72	-0.012	ppb	-0.012	-52.32	1707	5000	
Mn	55	2	72	0.206	ppb	0.206	34.32	907	10000	
Fe	57	2	72	13.714	ppb	13.714	28.16	2904	400000	
Co	59	2	72	-0.002	ppb	-0.002	-2516.73	6095	2000	
Ni	60	2	72	0.025	ppb	0.025	16.63	1003	5000	
Cu	63	2	72	0.220	ppb	0.220	10.37	6068	5000	
Zn	66	2	72	0.554	ppb	0.554	10.26	1313	5000	
As	75	2	72	0.020	ppb	0.020	206.31	210	2000	
Se	78	1	72	-0.009	ppb	-0.009	-64.24	24	2000	
Sr	88	2	45	0.016	ppb	0.016	118.37	203	2000	
Zr	90	2	72	0.654	ppb	0.654	175.46	330	1000	
Zr	90	1	72	0.446	ppb	0.446	243.18	1705	1000	
Nb	93	2	72	1.778	ppb	1.778	6.21	12001	200	
Mo	95	2	115	0.024	ppb	0.024	22.98	243	2000	
Pd	105	2	115	0.021	ppb	0.021	25.69	247	100	
Ag	107	2	115	0.010	ppb	0.010	38.59	130	100	
Cd	111	2	115	0.000	ppb	0.000	3619.02	23	2000	
Sn	120	2	115	0.060	ppb	0.060	6.72	897	2000	
Sb	121	2	115	0.054	ppb	0.054	12.19	300	1000	
Ba	137	2	115	0.054	ppb	0.054	123.06	220	5000	
W	182	2	165	-0.046	ppb	-0.046	-106.36	2947	100	
Pt	195	2	165	0.002	ppb	0.002	98.69	10	100	
Tl	205	2	165	0.008	ppb	0.008	149.01	337	2000	
Pb	208	2	165	0.022	ppb	0.022	41.28	1033	5000	
Th	232	2	165	0.054	ppb	0.054	5.56	1300	2000	
U	238	2	165	0.004	ppb	0.004	24.73	140	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1107018	1.35	1051415	105.29	60	125	
Sc (IS)	45	2	HMI He	4305219	3.17	4493818	95.80	60	125	
Sc (IS)	45	3	No Gas	130783660	1.58	128947567	101.42	60	120	
Ge Internal Standard	72	1	HMI H2	25859564	2.60	25453947	101.59	60	125	
Ge Internal Standard	72	2	HMI He	5108347	2.17	5129673	99.58	60	125	
In Internal standard	115	2	HMI He	16003759	0.21	16025016	99.87	60	125	
Ho-165	165	2	HMI He	36606411	2.76	34875115	104.96	60	125	

Sample Report

Sample Table

Sample Name rinse-5620980
 Data File Name 014SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T11:47:23-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment TUNE
 ISTD Ref FileName 007CALB.d
 Sample QC Pass/Fail Pass
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-1.608	ppb	-1.608	-523.52	8113743	40000	
Be	9	1	6	0.016	ppb	0.016	173.21	7	2000	
B	11	1	6	-7.316	ppb	-7.316	-100.78	453	100	
Na	23	2	45	1.199	ppb	1.199	79.78	52814	400000	
Mg	24	2	45	0.915	ppb	0.915	39.48	733	400000	
Al	27	2	45	3.856	ppb	3.856	31.17	723	400000	
K	39	2	45	11.521	ppb	11.521	109.13	117056	400000	
Ca	44	2	45	-1.387	ppb	-1.387	-68.62	263	400000	
V	51	2	72	-0.287	ppb	-0.287	-57.05	14963	2000	
Cr	52	2	72	-0.027	ppb	-0.027	-42.44	1640	5000	
Mn	55	2	72	0.171	ppb	0.171	19.16	817	10000	
Fe	57	2	72	13.519	ppb	13.519	3.22	2944	400000	
Co	59	2	72	-0.010	ppb	-0.010	-139.58	6131	2000	
Ni	60	2	72	-0.006	ppb	-0.006	-285.13	937	5000	
Cu	63	2	72	0.201	ppb	0.201	17.47	6041	5000	
Zn	66	2	72	0.547	ppb	0.547	5.88	1330	5000	
As	75	2	72	-0.036	ppb	-0.036	-44.13	167	2000	
Se	78	1	72	-0.011	ppb	-0.011	-166.58	23	2000	
Sr	88	2	45	0.037	ppb	0.037	8.63	287	2000	
Zr	90	2	72	0.164	ppb	0.164	745.38	307	1000	
Zr	90	1	72	2.115	ppb	2.115	105.37	1915	1000	
Nb	93	2	72	1.287	ppb	1.287	9.82	8983	200	
Mo	95	2	115	0.021	ppb	0.021	160.71	230	2000	
Pd	105	2	115	0.014	ppb	0.014	130.34	207	100	
Ag	107	2	115	0.011	ppb	0.011	14.87	140	100	
Cd	111	2	115	-0.006	ppb	-0.006	-241.41	13	2000	
Sn	120	2	115	0.024	ppb	0.024	36.70	723	2000	
Sb	121	2	115	0.034	ppb	0.034	39.15	220	1000	
Ba	137	2	115	0.033	ppb	0.033	218.51	193	5000	
W	182	2	165	-0.033	ppb	-0.033	-84.17	3027	100	
Pt	195	2	165	0.003	ppb	0.003	37.24	17	100	
Tl	205	2	165	0.005	ppb	0.005	139.92	300	2000	
Pb	208	2	165	0.009	ppb	0.009	28.47	820	5000	
Th	232	2	165	0.041	ppb	0.041	19.24	1073	2000	
U	238	2	165	0.002	ppb	0.002	124.06	113	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1072111	3.64	1051415	101.97	60	125	
Sc (IS)	45	2	HMI He	4520223	1.61	4493818	100.59	60	125	
Sc (IS)	45	3	No Gas	128896534	3.36	128947567	99.96	60	120	
Ge Internal Standard	72	1	HMI H2	26000157	0.91	25453947	102.15	60	125	
Ge Internal Standard	72	2	HMI He	5210878	3.12	5129673	101.58	60	125	
In Internal standard	115	2	HMI He	15909570	0.70	16025016	99.28	60	125	
Ho-165	165	2	HMI He	36450258	3.99	34875115	104.52	60	125	

Sample Report

Sample Table

Sample Name rinse-5620980
 Data File Name 015SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T11:50:56-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment TUNE
 ISTD Ref FileName 007CALB.d
 Sample QC Pass/Fail Pass
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	5.088	ppb	5.088	84.53	8259513	40000	
Be	9	1	6	0.028	ppb	0.028	102.25	12	2000	
B	11	1	6	-0.626	ppb	-0.626	-1170.59	547	100	
Na	23	2	45	1.663	ppb	1.663	51.55	51618	400000	
Mg	24	2	45	0.360	ppb	0.360	106.01	533	400000	
Al	27	2	45	3.936	ppb	3.936	12.49	710	400000	
K	39	2	45	11.918	ppb	11.918	12.99	113691	400000	
Ca	44	2	45	-0.145	ppb	-0.145	-1682.12	283	400000	
V	51	2	72	-0.196	ppb	-0.196	-40.18	14666	2000	
Cr	52	2	72	0.000	ppb	0.000	-7495.70	1727	5000	
Mn	55	2	72	0.210	ppb	0.210	20.25	887	10000	
Fe	57	2	72	15.529	ppb	15.529	11.68	3037	400000	
Co	59	2	72	-0.002	ppb	-0.002	-1268.17	5908	2000	
Ni	60	2	72	0.009	ppb	0.009	227.11	930	5000	
Cu	63	2	72	0.231	ppb	0.231	19.61	5961	5000	
Zn	66	2	72	0.574	ppb	0.574	14.74	1293	5000	
As	75	2	72	0.007	ppb	0.007	940.03	194	2000	
Se	78	1	72	0.020	ppb	0.020	188.30	43	2000	
Sr	88	2	45	0.024	ppb	0.024	73.32	237	2000	
Zr	90	2	72	0.994	ppb	0.994	72.76	340	1000	
Zr	90	1	72	-0.494	ppb	-0.494	-58.70	1602	1000	
Nb	93	2	72	1.065	ppb	1.065	5.43	7148	200	
Mo	95	2	115	0.004	ppb	0.004	602.87	167	2000	
Pd	105	2	115	0.030	ppb	0.030	34.67	293	100	
Ag	107	2	115	0.009	ppb	0.009	39.76	113	100	
Cd	111	2	115	-0.010	ppb	-0.010	-35.11	7	2000	
Sn	120	2	115	0.038	ppb	0.038	11.00	783	2000	
Sb	121	2	115	0.028	ppb	0.028	68.51	193	1000	
Ba	137	2	115	0.017	ppb	0.017	378.01	173	5000	
W	182	2	165	-0.077	ppb	-0.077	-50.14	2607	100	
Pt	195	2	165	0.001	ppb	0.001	86.60	7	100	
Tl	205	2	165	-0.003	ppb	-0.003	-142.94	190	2000	
Pb	208	2	165	0.008	ppb	0.008	84.55	773	5000	
Th	232	2	165	0.030	ppb	0.030	27.82	850	2000	
U	238	2	165	0.002	ppb	0.002	160.42	110	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1080671	4.62	1051415	102.78	60	125	
Sc (IS)	45	2	HMI He	4385120	0.63	4493818	97.58	60	125	
Sc (IS)	45	3	No Gas	128392053	0.51	128947567	99.57	60	120	
Ge Internal Standard	72	1	HMI H2	26017437	2.09	25453947	102.21	60	125	
Ge Internal Standard	72	2	HMI He	4947617	1.03	5129673	96.45	60	125	
In Internal standard	115	2	HMI He	15803426	3.61	16025016	98.62	60	125	
Ho-165	165	2	HMI He	35131950	1.20	34875115	100.74	60	125	

Calibration Blank Report

Sample Table

Sample Name2 ICIS-5699924
 Data File Name 016CALB.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Method
 Acq Date Time 2019-05-13T11:54:27-06:00
 Sample Type CalBlk
 Level 1
 Dilution 1
 Comment

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Li	7	45	1	HMI H2	129198	0.00
Li	7	45	3	No Gas	8141525	0.00
Be	9	6	1	HMI H2	3	5196.15
B	11	6	1	HMI H2	480	2.30
Na	23	45	2	HMI He	49686	0.00
Mg	24	45	2	HMI He	377	5.70
Al	27	45	2	HMI He	313	7.91
K	39	45	2	HMI He	115087	0.00
Ca	44	45	2	HMI He	227	4.50
V	51	72	2	HMI He	16051	0.01
Cr	52	72	2	HMI He	1630	0.62
Mn	55	72	2	HMI He	350	2.94
Fe	57	72	2	HMI He	1383	0.39
Co	59	72	2	HMI He	5691	0.10
Ni	60	72	2	HMI He	927	1.47
Cu	63	72	2	HMI He	4224	0.08
Zn	66	72	2	HMI He	1067	1.80
As	75	72	2	HMI He	192	5.41
Se	78	72	1	HMI H2	21	282.53
Sr	88	45	2	HMI He	170	15.08
Zr	90	72	2	HMI He	263	7.26
Zr	90	72	1	HMI H2	1812	0.46
Nb	93	72	2	HMI He	5238	0.24
Mo	95	115	2	HMI He	150	23.52
Pd	105	115	2	HMI He	193	16.35
Ag	107	115	2	HMI He	63	100.76
Cd	111	115	2	HMI He	20	661.44
Sn	120	115	2	HMI He	610	3.69
Sb	121	115	2	HMI He	170	24.22
Ba	137	115	2	HMI He	80	15.63
W	182	165	2	HMI He	2770	0.12
Pt	195	165	2	HMI He	7	2598.08
Tl	205	165	2	HMI He	293	7.74
Pb	208	165	2	HMI He	860	0.36
Th	232	165	2	HMI He	887	2.23
U	238	165	2	HMI He	70	70.70

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li-6 Internal Standard	6	1	HMI H2	1064431	1.81
Sc (IS)	45	2	HMI He	4396295	1.45
Sc IS)	45	3	No Gas	127813551	1.85
Ge Internal Standard	72	1	HMI H2	25714075	1.25
Ge Internal Standard	72	2	HMI He	5123248	0.79
In Internal standard	115	2	HMI He	16027027	1.30
Ho-165	165	2	HMI He	37248956	2.11

Calibration Standard Report

Sample Table

Sample Name IC-5699925
 Data File Name 017CAL.S.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 method
 Acq Date Time 2019-05-13T11:57:58-06:00
 Sample Type CalStd
 Level 2
 Dilution 1
 Comment
 ISTD Ref File Name 016CALB.d
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Li	7	45	1	HMI H2	209364	0.00
Li	7	45	3	No Gas	13042399	0.00
Be	9	6	1	HMI H2	43031	0.00
B	11	6	1	HMI H2	1603	0.38
Na	23	45	2	HMI He	1595936	0.00
Mg	24	45	2	HMI He	644603	0.00
Al	27	45	2	HMI He	183288	0.00
K	39	45	2	HMI He	722999	0.00
Ca	44	45	2	HMI He	46315	0.01
V	51	72	2	HMI He	506947	0.00
Cr	52	72	2	HMI He	649982	0.00
Mn	55	72	2	HMI He	286411	0.00
Fe	57	72	2	HMI He	239987	0.00
Co	59	72	2	HMI He	1026218	0.00
Ni	60	72	2	HMI He	274720	0.00
Cu	63	72	2	HMI He	745961	0.00
Zn	66	72	2	HMI He	109921	0.00
As	75	72	2	HMI He	81520	0.00
Se	78	72	1	HMI H2	65587	0.00
Sr	88	45	2	HMI He	669021	0.00
Zr	90	72	2	HMI He	3150	0.15
Zr	90	72	1	HMI H2	8387	0.07
Nb	93	72	2	HMI He	1259342	0.00
Mo	95	115	2	HMI He	362972	0.00
Pd	105	115	2	HMI He	529722	0.00
Ag	107	115	2	HMI He	1087721	0.00
Cd	111	115	2	HMI He	158391	0.00
Sn	120	115	2	HMI He	466666	0.00
Sb	121	115	2	HMI He	387555	0.00
Ba	137	115	2	HMI He	121475	0.00
W	182	165	2	HMI He	711469	0.00
Pt	195	165	2	HMI He	489943	0.00
Tl	205	165	2	HMI He	1167969	0.00
Pb	208	165	2	HMI He	1581000	0.00
Th	232	165	2	HMI He	1617898	0.00
U	238	165	2	HMI He	1713479	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1043007	1.76	1064431	97.99	60	125	
Sc (IS)	45	2	HMI He	4357598	3.08	4396295	99.12	60	125	
Sc IS)	45	3	No Gas	129305968	0.75	127813551	101.17	60	120	
Ge Internal Standard	72	1	HMI H2	25988618	0.75	25714075	101.07	60	125	
Ge Internal Standard	72	2	HMI He	5046635	3.05	5123248	98.50	60	125	
In Internal standard	115	2	HMI He	15501361	1.04	16027027	96.72	60	125	
Ho-165	165	2	HMI He	35362318	2.78	37248956	94.94	60	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name ICV-5699927
 Data File Name 018_ICV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T12:01:28-06:00
 Sample Type ICV
 Dilution 1
 Comment
 ISTD Ref File Name 016CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	83.399	ppb	16.678	162208	80	104.2	90	110	
Li	7	3	45	75.940	ppb	8.048	10072514	80	94.9	90	110	
Be	9	1	6	38.151	ppb	0.629	17529	40	95.4	90	110	
B	11	1	6	34.456	ppb	20.589	917	40	86.1	90	110	>+\-10%
Na	23	2	45	804.572	ppb	5.204	673276	800	100.6	90	110	
Mg	24	2	45	821.394	ppb	3.995	265739	800	102.7	90	110	
Al	27	2	45	818.264	ppb	5.545	75396	800	102.3	90	110	
K	39	2	45	840.414	ppb	6.320	371005	800	105.1	90	110	
Ca	44	2	45	795.458	ppb	6.180	18593	800	99.4	90	110	
V	51	2	72	39.451	ppb	0.676	212034	40	98.6	90	110	
Cr	52	2	72	39.454	ppb	1.168	260512	40	98.6	90	110	
Mn	55	2	72	41.738	ppb	1.098	121167	40	104.3	90	110	
Fe	57	2	72	820.131	ppb	2.626	100395	800	102.5	90	110	
Co	59	2	72	40.448	ppb	1.334	423186	40	101.1	90	110	
Ni	60	2	72	40.077	ppb	0.859	111939	40	100.2	90	110	
Cu	63	2	72	41.709	ppb	2.644	317179	40	104.3	90	110	
Zn	66	2	72	40.371	ppb	1.084	45523	40	100.9	90	110	
As	75	2	72	40.203	ppb	1.545	33270	40	100.5	90	110	
Se	78	1	72	41.309	ppb	3.002	26979	40	103.3	90	110	
Sr	88	2	45	79.676	ppb	3.725	267470	80	99.6	90	110	
Zr	90	2	72	27.299	ppb	8.858	1060	40	68.2	90	110	>+\-10%
Zr	90	1	72	22.746	ppb	18.759	3307	40	56.9	90	110	>+\-10%
Nb	93	2	72	92.056	ppb	0.898	589286	80	115.1	90	110	>+\-10%
Mo	95	2	115	41.942	ppb	5.981	152216	40	104.9	90	110	
Pd	105	2	115	40.917	ppb	4.936	216748	40	102.3	90	110	
Ag	107	2	115	40.226	ppb	5.800	437303	40	100.6	90	110	
Cd	111	2	115	40.919	ppb	4.787	64807	40	102.3	90	110	
Sn	120	2	115	40.662	ppb	4.606	190060	40	101.7	90	110	
Sb	121	2	115	41.916	ppb	6.204	162385	40	104.8	90	110	
Ba	137	2	115	41.783	ppb	3.294	50806	40	104.5	90	110	
W	182	2	165	39.612	ppb	3.513	288735	40	99.0	90	110	
Pt	195	2	165	39.269	ppb	1.743	196040	40	98.2	90	110	
Tl	205	2	165	38.751	ppb	3.007	461058	40	96.9	90	110	
Pb	208	2	165	39.124	ppb	5.132	630321	40	97.8	90	110	
Th	232	2	165	38.775	ppb	0.626	639419	40	96.9	90	110	
U	238	2	165	39.265	ppb	3.316	684483	40	98.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1113451	3.54	1064431	104.61	60	125	
Sc (IS)	45	2	HMI He	4372498	3.92	4396295	99.46	60	125	
Sc (IS)	45	3	No Gas	129439276	1.70	127813551	101.27	60	120	
Ge Internal Standard	72	1	HMI H2	25863856	0.32	25714075	100.58	60	125	
Ge Internal Standard	72	2	HMI He	5102292	1.86	5123248	99.59	60	125	
In Internal standard	115	2	HMI He	15516840	4.87	16027027	96.82	60	125	
Ho-165	165	2	HMI He	36025716	2.69	37248956	96.72	60	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name ICB-5699924
 Data File Name 019_ICB.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T12:05:46-06:00
 Sample Type ICB
 Dilution 1
 Comment
 ISTD Ref File Name 016CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	1	-2.910	ppb	-227.0	128248	0.1	
Li	7	3	-3.140	ppb	-151.3	8103120	0.05	
Be	9	1	0.004	ppb	284.8	5	0.5	
B	11	1	5.814	ppb	73.5	537	0.1	>RL
Na	23	2	-1.897	ppb	-55.5	48609	25	
Mg	24	2	0.488	ppb	16.1	540	25	
Al	27	2	4.639	ppb	35.3	747	15	
K	39	2	-16.817	ppb	-22.8	110886	50	
Ca	44	2	1.208	ppb	179.2	257	25	
V	51	2	-0.156	ppb	-66.7	15474	1	
Cr	52	2	0.015	ppb	99.2	1753	1	
Mn	55	2	0.052	ppb	53.0	507	0.5	
Fe	57	2	0.282	ppb	497.5	1437	25	
Co	59	2	0.044	ppb	22.8	6231	0.5	
Ni	60	2	-0.033	ppb	-68.1	847	1	
Cu	63	2	-0.041	ppb	-87.9	3967	1	
Zn	66	2	-0.126	ppb	-83.7	940	5	
As	75	2	0.024	ppb	112.2	214	1	
Se	78	1	0.057	ppb	35.7	59	1	
Sr	88	2	0.030	ppb	29.1	273	1	
Zr	90	2	1.340	ppb	287.6	307	1	>RL
Zr	90	1	-0.376	ppb	-557.4	1789	1	
Nb	93	2	5.148	ppb	7.4	38548	2	>RL
Mo	95	2	0.099	ppb	11.7	517	0.5	
Pd	105	2	0.069	ppb	52.1	570	1	
Ag	107	2	0.021	ppb	8.8	297	1	
Cd	111	2	0.000	ppb	-4792.0	20	0.5	
Sn	120	2	0.121	ppb	35.4	1180	1	
Sb	121	2	0.463	ppb	7.9	2007	1	
Ba	137	2	0.057	ppb	65.4	150	0.5	
W	182	2	0.086	ppb	40.5	3284	1	
Pt	195	2	0.011	ppb	35.1	60	1	
Tl	205	2	0.015	ppb	60.6	463	0.1	
Pb	208	2	0.021	ppb	45.5	1170	0.5	
Th	232	2	0.199	ppb	4.4	4127	1	
U	238	2	0.025	ppb	16.8	500	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1043047	4.94	1064431	97.99	60	125	
Sc (IS)	45	2	HMI He	4434290	1.78	4396295	100.86	60	125	
Sc (IS)	45	3	No Gas	128373789	2.97	127813551	100.44	60	120	
Ge Internal Standard	72	1	HMI H2	25731400	0.94	25714075	100.07	60	125	
Ge Internal Standard	72	2	HMI He	5190600	0.55	5123248	101.31	60	125	
In Internal standard	115	2	HMI He	15902906	3.50	16027027	99.23	60	125	
Ho-165	165	2	HMI He	35865129	2.66	37248956	96.28	60	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name ICVL-5699928
 Data File Name 020LICV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T12:15:10-06:00
 Sample Type LLICV
 Dilution 1
 Comment
 ISTD Ref File Name 016CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	6	1.328	ppb	10.008	587	1	132.8	70	130	> +/-30%
Na	23	2	45	49.555	ppb	2.518	90384	50	99.1	70	130	
Mg	24	2	45	54.337	ppb	2.006	18456	50	108.7	70	130	
Al	27	2	45	57.736	ppb	4.915	5774	50	115.5	70	130	
K	39	2	45	91.700	ppb	7.045	146583	100	91.7	70	130	
Ca	44	2	45	36.490	ppb	11.672	1100	50	73.0	70	130	
V	51	2	72	5.083	ppb	10.694	41058	5	101.7	70	130	
Cr	52	2	72	2.402	ppb	5.627	17309	2	120.1	70	130	
Mn	55	2	72	1.339	ppb	4.139	4217	1	133.9	70	130	> +/-30%
Fe	57	2	72	59.602	ppb	0.688	8552	50	119.2	70	130	
Co	59	2	72	1.461	ppb	3.652	20683	1	146.1	70	130	> +/-30%
Ni	60	2	72	1.874	ppb	5.493	6091	1.5	125.0	70	130	
Cu	63	2	72	2.500	ppb	2.685	22912	2	125.0	70	130	
Zn	66	2	72	9.851	ppb	2.836	11871	10	98.5	70	130	
As	75	2	72	5.134	ppb	5.131	4399	5	102.7	70	130	
Se	78	1	72	4.907	ppb	6.142	3244	5	98.1	70	130	
Sr	88	2	45	1.799	ppb	5.795	6388	1	179.9	70	130	> +/-30%
Zr	90	2	72	1.891	ppb	165.345	317	0.5	378.1	70	130	> +/-30%
Zr	90	1	72	-5.166	ppb	-89.958	1495	0.5	-1033.2	70	130	> +/-30%
Nb	93	2	72	2.632	ppb	13.556	21831	2	131.6	70	130	> +/-30%
Mo	95	2	115	2.380	ppb	3.205	8942	2	119.0	70	130	
Pd	105	2	115	0.441	ppb	3.568	2567	1	44.1	70	130	> +/-30%
Ag	107	2	115	5.369	ppb	1.221	59523	5	107.4	70	130	
Cd	111	2	115	1.370	ppb	6.874	2230	1	137.0	70	130	> +/-30%
Sn	120	2	115	9.630	ppb	2.027	46306	10	96.3	70	130	
Sb	121	2	115	2.336	ppb	4.345	9379	2	116.8	70	130	
Ba	137	2	115	1.657	ppb	9.216	2127	1	165.7	70	130	> +/-30%
W	182	2	165	5.206	ppb	3.298	40525	1	520.6	70	130	> +/-30%
Pt	195	2	165	0.423	ppb	11.429	2127	1	42.3	70	130	> +/-30%
Tl	205	2	165	1.350	ppb	2.816	16439	1	135.0	70	130	> +/-30%
Pb	208	2	165	1.320	ppb	4.310	22207	1	132.0	70	130	> +/-30%
Th	232	2	165	2.081	ppb	3.584	35330	2	104.0	70	130	
U	238	2	165	1.380	ppb	2.623	24270	1	138.0	70	130	> +/-30%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1068033	5.18	1064431	100.34	60	125	
Sc (IS)	45	2	HMI He	4497113	1.08	4396295	102.29	60	125	
Sc (IS)	45	3	No Gas	130380350	1.55	127813551	102.01	60	120	
Ge Internal Standard	72	1	HMI H2	26028097	1.06	25714075	101.22	60	125	
Ge Internal Standard	72	2	HMI He	5088686	4.41	5123248	99.33	60	125	
In Internal standard	115	2	HMI He	15783000	0.43	16027027	98.48	60	125	
Ho-165	165	2	HMI He	36250405	2.69	37248956	97.32	60	125	

Sample Report

Sample Table

Sample Name rinse-5626316
 Data File Name 021SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T12:19:51-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment PA
 ISTD Ref FileName 016CALB.d
 Sample QC Pass/Fail Pass
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	4.099	ppb	4.099	31.48	8327994	40000	
Be	9	1	6	0.018	ppb	0.018	33.67	12	2000	
B	11	1	6	-10.863	ppb	-10.863	-38.16	360	100	
Na	23	2	45	-2.204	ppb	-2.204	-20.16	49746	400000	
Mg	24	2	45	0.719	ppb	0.719	26.97	633	400000	
Al	27	2	45	4.436	ppb	4.436	22.90	750	400000	
K	39	2	45	-12.432	ppb	-12.432	-89.37	115439	400000	
Ca	44	2	45	2.122	ppb	2.122	212.76	287	400000	
V	51	2	72	-0.291	ppb	-0.291	-62.78	14813	2000	
Cr	52	2	72	0.004	ppb	0.004	295.68	1680	5000	
Mn	55	2	72	0.197	ppb	0.197	9.36	937	10000	
Fe	57	2	72	11.732	ppb	11.732	12.58	2847	400000	
Co	59	2	72	0.038	ppb	0.038	108.75	6185	2000	
Ni	60	2	72	0.039	ppb	0.039	95.07	1050	5000	
Cu	63	2	72	0.240	ppb	0.240	32.45	6118	5000	
Zn	66	2	72	0.107	ppb	0.107	46.67	1207	5000	
As	75	2	72	0.011	ppb	0.011	644.01	202	2000	
Se	78	1	72	0.002	ppb	0.002	235.12	23	2000	
Sr	88	2	45	0.028	ppb	0.028	52.17	273	2000	
Zr	90	2	72	1.730	ppb	1.730	64.73	320	1000	
Zr	90	1	72	-2.194	ppb	-2.194	-49.41	1682	1000	
Nb	93	2	72	1.152	ppb	1.152	13.53	12768	200	
Mo	95	2	115	-0.006	ppb	-0.006	-310.59	127	2000	
Pd	105	2	115	-0.004	ppb	-0.004	-291.14	170	100	
Ag	107	2	115	0.006	ppb	0.006	42.88	133	100	
Cd	111	2	115	0.002	ppb	0.002	211.85	23	2000	
Sn	120	2	115	0.042	ppb	0.042	27.30	817	2000	
Sb	121	2	115	0.033	ppb	0.033	54.55	300	1000	
Ba	137	2	115	0.079	ppb	0.079	21.51	180	5000	
W	182	2	165	0.038	ppb	0.038	99.68	3064	100	
Pt	195	2	165	0.005	ppb	0.005	116.72	30	100	
Tl	205	2	165	0.000	ppb	0.000	663.25	300	2000	
Pb	208	2	165	0.010	ppb	0.010	89.20	1030	5000	
Th	232	2	165	0.049	ppb	0.049	39.84	1720	2000	
U	238	2	165	0.004	ppb	0.004	103.27	147	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1081984	0.95	1064431	101.65	60	125	
Sc (IS)	45	2	HMI He	4559765	0.52	4396295	103.72	60	125	
Sc (IS)	45	3	No Gas	129150990	0.28	127813551	101.05	60	120	
Ge Internal Standard	72	1	HMI H2	25905597	2.15	25714075	100.74	60	125	
Ge Internal Standard	72	2	HMI He	5207118	4.05	5123248	101.64	60	125	
In Internal standard	115	2	HMI He	16089495	3.77	16027027	100.39	60	125	
Ho-165	165	2	HMI He	37408229	3.62	37248956	100.43	60	125	

Sample Report

Sample Table

Sample Name rinse-5626316
 Data File Name 022SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T12:23-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment PA
 ISTD Ref FileName 016CALB.d
 Sample QC Pass/Fail Pass
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	7.426	ppb	7.426	78.20	8470223	40000	
Be	9	1	6	0.003	ppb	0.003	336.74	5	2000	
B	11	1	6	0.177	ppb	0.177	4860.27	490	100	
Na	23	2	45	-0.079	ppb	-0.079	-3150.43	50852	400000	
Mg	24	2	45	1.042	ppb	1.042	13.03	733	400000	
Al	27	2	45	5.727	ppb	5.727	9.91	863	400000	
K	39	2	45	-15.866	ppb	-15.866	-85.64	112973	400000	
Ca	44	2	45	6.350	ppb	6.350	66.82	383	400000	
V	51	2	72	-0.171	ppb	-0.171	-63.44	15477	2000	
Cr	52	2	72	-0.020	ppb	-0.020	-71.29	1523	5000	
Mn	55	2	72	0.153	ppb	0.153	44.59	810	10000	
Fe	57	2	72	13.101	ppb	13.101	20.18	3024	400000	
Co	59	2	72	0.066	ppb	0.066	39.20	6495	2000	
Ni	60	2	72	0.019	ppb	0.019	264.88	997	5000	
Cu	63	2	72	0.239	ppb	0.239	12.09	6131	5000	
Zn	66	2	72	0.271	ppb	0.271	53.40	1393	5000	
As	75	2	72	-0.031	ppb	-0.031	-23.91	169	2000	
Se	78	1	72	0.020	ppb	0.020	245.29	36	2000	
Sr	88	2	45	0.039	ppb	0.039	117.01	307	2000	
Zr	90	2	72	2.625	ppb	2.625	84.32	347	1000	
Zr	90	1	72	-1.623	ppb	-1.623	-95.18	1745	1000	
Nb	93	2	72	0.734	ppb	0.734	19.26	10103	200	
Mo	95	2	115	0.024	ppb	0.024	28.88	243	2000	
Pd	105	2	115	0.003	ppb	0.003	439.05	210	100	
Ag	107	2	115	0.003	ppb	0.003	51.44	103	100	
Cd	111	2	115	-0.010	ppb	-0.010	-34.14	3	2000	
Sn	120	2	115	0.019	ppb	0.019	154.19	707	2000	
Sb	121	2	115	0.017	ppb	0.017	84.09	240	1000	
Ba	137	2	115	0.073	ppb	0.073	58.69	173	5000	
W	182	2	165	-0.001	ppb	-0.001	-1047.63	2770	100	
Pt	195	2	165	0.003	ppb	0.003	72.42	20	100	
Tl	205	2	165	-0.001	ppb	-0.001	-855.95	287	2000	
Pb	208	2	165	0.002	ppb	0.002	482.94	897	5000	
Th	232	2	165	0.012	ppb	0.012	94.80	1097	2000	
U	238	2	165	0.002	ppb	0.002	63.46	100	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1085264	2.92	1064431	101.96	60	125	
Sc (IS)	45	2	HMI He	4506454	1.17	4396295	102.51	60	125	
Sc (IS)	45	3	No Gas	130109142	1.24	127813551	101.80	60	120	
Ge Internal Standard	72	1	HMI H2	26258808	4.50	25714075	102.12	60	125	
Ge Internal Standard	72	2	HMI He	5219060	1.74	5123248	101.87	60	125	
In Internal standard	115	2	HMI He	16250740	3.13	16027027	101.40	60	125	
Ho-165	165	2	HMI He	37397318	2.29	37248956	100.40	60	125	

Sample Report

Sample Table

Sample Name rinse-5620980
 Data File Name 023SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T12:26:54-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment TUNE
 ISTD Ref FileName 016CALB.d
 Sample QC Pass/Fail Pass
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-2.825	ppb	-2.825	-216.23	8374003	40000	
Be	9	1	6	0.007	ppb	0.007	360.26	7	2000	
B	11	1	6	2.582	ppb	2.582	132.76	523	100	
Na	23	2	45	-2.119	ppb	-2.119	-146.30	49876	400000	
Mg	24	2	45	0.906	ppb	0.906	32.22	700	400000	
Al	27	2	45	3.223	ppb	3.223	24.79	637	400000	
K	39	2	45	-16.179	ppb	-16.179	-48.53	114426	400000	
Ca	44	2	45	4.027	ppb	4.027	42.56	333	400000	
V	51	2	72	-0.284	ppb	-0.284	-28.11	15070	2000	
Cr	52	2	72	0.011	ppb	0.011	231.24	1750	5000	
Mn	55	2	72	0.221	ppb	0.221	30.88	1020	10000	
Fe	57	2	72	12.893	ppb	12.893	23.82	3024	400000	
Co	59	2	72	0.064	ppb	0.064	56.57	6538	2000	
Ni	60	2	72	0.034	ppb	0.034	105.45	1050	5000	
Cu	63	2	72	0.200	ppb	0.200	15.45	5898	5000	
Zn	66	2	72	0.138	ppb	0.138	89.89	1253	5000	
As	75	2	72	-0.001	ppb	-0.001	-5020.80	197	2000	
Se	78	1	72	0.006	ppb	0.006	382.87	25	2000	
Sr	88	2	45	0.023	ppb	0.023	68.53	257	2000	
Zr	90	2	72	0.614	ppb	0.614	208.31	290	1000	
Zr	90	1	72	-0.445	ppb	-0.445	-435.17	1805	1000	
Nb	93	2	72	0.491	ppb	0.491	18.37	8616	200	
Mo	95	2	115	0.009	ppb	0.009	158.46	183	2000	
Pd	105	2	115	-0.009	ppb	-0.009	-84.48	147	100	
Ag	107	2	115	0.007	ppb	0.007	38.01	143	100	
Cd	111	2	115	-0.004	ppb	-0.004	-78.65	13	2000	
Sn	120	2	115	0.040	ppb	0.040	45.65	810	2000	
Sb	121	2	115	0.025	ppb	0.025	86.65	270	1000	
Ba	137	2	115	0.078	ppb	0.078	33.89	180	5000	
W	182	2	165	0.032	ppb	0.032	72.85	3040	100	
Pt	195	2	165	0.002	ppb	0.002	153.19	17	100	
Tl	205	2	165	0.001	ppb	0.001	1688.74	303	2000	
Pb	208	2	165	0.002	ppb	0.002	327.45	903	5000	
Th	232	2	165	0.006	ppb	0.006	63.07	1003	2000	
U	238	2	165	0.001	ppb	0.001	108.63	93	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1092263	0.92	1064431	102.61	60	125	
Sc (IS)	45	2	HMI He	4569328	2.91	4396295	103.94	60	125	
Sc (IS)	45	3	No Gas	132512055	0.36	127813551	103.68	60	120	
Ge Internal Standard	72	1	HMI H2	26067686	2.29	25714075	101.38	60	125	
Ge Internal Standard	72	2	HMI He	5272344	3.32	5123248	102.91	60	125	
In Internal standard	115	2	HMI He	16130158	1.28	16027027	100.64	60	125	
Ho-165	165	2	HMI He	37613501	0.43	37248956	100.98	60	125	

Sample Report

Sample Table

Sample Name rinse-5620980
 Data File Name 024SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T12:30:27-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment TUNE
 ISTD Ref FileName 016CALB.d
 Sample QC Pass/Fail Pass
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	4.559	ppb	4.559	135.49	8504597	40000	
Be	9	1	6	0.000	ppb	0.000	-2528.26	3	2000	
B	11	1	6	3.169	ppb	3.169	377.93	547	100	
Na	23	2	45	-2.442	ppb	-2.442	-62.83	49960	400000	
Mg	24	2	45	0.851	ppb	0.851	38.08	683	400000	
Al	27	2	45	4.124	ppb	4.124	27.57	727	400000	
K	39	2	45	-28.294	ppb	-28.294	-37.40	111272	400000	
Ca	44	2	45	1.901	ppb	1.901	158.63	283	400000	
V	51	2	72	-0.159	ppb	-0.159	-78.45	15320	2000	
Cr	52	2	72	0.014	ppb	0.014	440.11	1730	5000	
Mn	55	2	72	0.154	ppb	0.154	16.87	800	10000	
Fe	57	2	72	14.646	ppb	14.646	8.28	3170	400000	
Co	59	2	72	0.009	ppb	0.009	431.04	5801	2000	
Ni	60	2	72	0.028	ppb	0.028	141.03	1010	5000	
Cu	63	2	72	0.257	ppb	0.257	5.59	6181	5000	
Zn	66	2	72	0.098	ppb	0.098	224.95	1180	5000	
As	75	2	72	-0.013	ppb	-0.013	-195.89	181	2000	
Se	78	1	72	0.030	ppb	0.030	42.14	43	2000	
Sr	88	2	45	0.024	ppb	0.024	106.94	263	2000	
Zr	90	2	72	2.352	ppb	2.352	148.53	333	1000	
Zr	90	1	72	-0.521	ppb	-0.521	-129.77	1845	1000	
Nb	93	2	72	0.297	ppb	0.297	29.07	7162	200	
Mo	95	2	115	0.010	ppb	0.010	114.27	193	2000	
Pd	105	2	115	-0.006	ppb	-0.006	-51.36	167	100	
Ag	107	2	115	0.006	ppb	0.006	65.10	140	100	
Cd	111	2	115	-0.001	ppb	-0.001	-1082.04	20	2000	
Sn	120	2	115	0.029	ppb	0.029	23.74	777	2000	
Sb	121	2	115	0.011	ppb	0.011	75.72	220	1000	
Ba	137	2	115	0.056	ppb	0.056	67.61	157	5000	
W	182	2	165	0.004	ppb	0.004	1582.34	2894	100	
Pt	195	2	165	0.005	ppb	0.005	157.23	30	100	
Tl	205	2	165	-0.001	ppb	-0.001	-605.10	290	2000	
Pb	208	2	165	0.006	ppb	0.006	97.74	983	5000	
Th	232	2	165	-0.005	ppb	-0.005	-233.49	837	2000	
U	238	2	165	0.002	ppb	0.002	131.50	117	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1128257	2.30	1064431	106.00	60	125	
Sc (IS)	45	2	HMI He	4597545	0.67	4396295	104.58	60	125	
Sc (IS)	45	3	No Gas	131703741	0.81	127813551	103.04	60	120	
Ge Internal Standard	72	1	HMI H2	26683009	2.79	25714075	103.77	60	125	
Ge Internal Standard	72	2	HMI He	5142493	0.48	5123248	100.38	60	125	
In Internal standard	115	2	HMI He	16612980	1.88	16027027	103.66	60	125	
Ho-165	165	2	HMI He	38571456	3.67	37248956	103.55	60	125	

Calibration Blank Report

Sample Table

Sample Name2 ICIS-5699924
 Data File Name 025CALB.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Method
 Acq Date Time 2019-05-13T12:33:58-06:00
 Sample Type CalBlk
 Level 1
 Dilution 1
 Comment

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Li	7	45	1	HMI H2	133076	0.00
Li	7	45	3	No Gas	8409006	0.00
Be	9	6	1	HMI H2	5	2000.00
B	11	6	1	HMI H2	463	6.36
Na	23	45	2	HMI He	48182	0.00
Mg	24	45	2	HMI He	397	1.47
Al	27	45	2	HMI He	403	6.77
K	39	45	2	HMI He	112329	0.00
Ca	44	45	2	HMI He	307	4.03
V	51	72	2	HMI He	14863	0.01
Cr	52	72	2	HMI He	1570	0.85
Mn	55	72	2	HMI He	243	3.90
Fe	57	72	2	HMI He	1270	0.69
Co	59	72	2	HMI He	6181	0.04
Ni	60	72	2	HMI He	953	0.32
Cu	63	72	2	HMI He	4184	0.23
Zn	66	72	2	HMI He	727	0.79
As	75	72	2	HMI He	175	5.11
Se	78	72	1	HMI H2	24	69.44
Sr	88	45	2	HMI He	197	16.82
Zr	90	72	2	HMI He	510	8.35
Zr	90	72	1	HMI H2	2015	0.42
Nb	93	72	2	HMI He	4894	0.19
Mo	95	115	2	HMI He	167	16.23
Pd	105	115	2	HMI He	340	10.80
Ag	107	115	2	HMI He	123	43.77
Cd	111	115	2	HMI He	3	5196.15
Sn	120	115	2	HMI He	637	2.37
Sb	121	115	2	HMI He	237	11.62
Ba	137	115	2	HMI He	137	30.91
W	182	165	2	HMI He	2837	0.21
Pt	195	165	2	HMI He	13	1299.04
Tl	205	165	2	HMI He	243	7.03
Pb	208	165	2	HMI He	907	1.45
Th	232	165	2	HMI He	893	1.74
U	238	165	2	HMI He	60	27.78

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li-6 Internal Standard	6	1	HMI H2	1092921	0.67
Sc (IS)	45	2	HMI He	4591929	2.36
Sc IS)	45	3	No Gas	129634638	3.02
Ge Internal Standard	72	1	HMI H2	26305534	0.85
Ge Internal Standard	72	2	HMI He	5205670	1.34
In Internal standard	115	2	HMI He	16441998	2.11
Ho-165	165	2	HMI He	37362695	3.55

Calibration Standard Report

Sample Table

Sample Name IC-5699925
 Data File Name 026CAL.S.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 method
 Acq Date Time 2019-05-13T12:37:29-06:00
 Sample Type CalStd
 Level 2
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Li	7	45	1	HMI H2	212027	0.00
Li	7	45	3	No Gas	13107329	0.00
Be	9	6	1	HMI H2	44112	0.00
B	11	6	1	HMI H2	1747	0.59
Na	23	45	2	HMI He	1677394	0.00
Mg	24	45	2	HMI He	673438	0.00
Al	27	45	2	HMI He	192067	0.00
K	39	45	2	HMI He	739235	0.00
Ca	44	45	2	HMI He	48574	0.00
V	51	72	2	HMI He	512335	0.00
Cr	52	72	2	HMI He	662739	0.00
Mn	55	72	2	HMI He	295635	0.00
Fe	57	72	2	HMI He	250930	0.00
Co	59	72	2	HMI He	1050281	0.00
Ni	60	72	2	HMI He	281224	0.00
Cu	63	72	2	HMI He	786669	0.00
Zn	66	72	2	HMI He	116132	0.00
As	75	72	2	HMI He	84217	0.00
Se	78	72	1	HMI H2	67221	0.00
Sr	88	45	2	HMI He	687567	0.00
Zr	90	72	2	HMI He	2397	0.24
Zr	90	72	1	HMI H2	6918	0.05
Nb	93	72	2	HMI He	1353605	0.00
Mo	95	115	2	HMI He	383320	0.00
Pd	105	115	2	HMI He	553794	0.00
Ag	107	115	2	HMI He	1117969	0.00
Cd	111	115	2	HMI He	160038	0.00
Sn	120	115	2	HMI He	475243	0.00
Sb	121	115	2	HMI He	401772	0.00
Ba	137	115	2	HMI He	128871	0.00
W	182	165	2	HMI He	745522	0.00
Pt	195	165	2	HMI He	516245	0.00
Tl	205	165	2	HMI He	1266574	0.00
Pb	208	165	2	HMI He	1657771	0.00
Th	232	165	2	HMI He	1644672	0.00
U	238	165	2	HMI He	1793710	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1069735	1.22	1092921	97.88	60	125	
Sc (IS)	45	2	HMI He	4483345	2.70	4591929	97.64	60	125	
Sc IS)	45	3	No Gas	130370056	1.03	129634638	100.57	60	120	
Ge Internal Standard	72	1	HMI H2	27153012	1.80	26305534	103.22	60	125	
Ge Internal Standard	72	2	HMI He	5189152	1.92	5205670	99.68	60	125	
In Internal standard	115	2	HMI He	15920199	1.44	16441998	96.83	60	125	
Ho-165	165	2	HMI He	36195606	3.90	37362695	96.88	60	125	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name ICV-5699927
 Data File Name 027_ICV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T12:40:59-06:00
 Sample Type ICV
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	86.775	ppb	22.256	167129	80	108.5	90	110	
Li	7	3	45	80.374	ppb	12.637	10366124	80	100.5	90	110	
Be	9	1	6	40.496	ppb	3.498	18301	40	101.2	90	110	
B	11	1	6	35.468	ppb	24.783	933	40	88.7	90	110	>+\-10%
Na	23	2	45	777.910	ppb	2.394	694413	800	97.2	90	110	
Mg	24	2	45	786.195	ppb	3.301	270153	800	98.3	90	110	
Al	27	2	45	785.957	ppb	2.238	77224	800	98.2	90	110	
K	39	2	45	804.368	ppb	2.228	370162	800	100.5	90	110	
Ca	44	2	45	757.489	ppb	1.848	18954	800	94.7	90	110	
V	51	2	72	41.326	ppb	3.317	215885	40	103.3	90	110	
Cr	52	2	72	40.662	ppb	3.244	264831	40	101.7	90	110	
Mn	55	2	72	41.732	ppb	2.965	121005	40	104.3	90	110	
Fe	57	2	72	804.121	ppb	3.477	99567	800	100.5	90	110	
Co	59	2	72	40.718	ppb	4.455	422343	40	101.8	90	110	
Ni	60	2	72	40.320	ppb	1.929	111671	40	100.8	90	110	
Cu	63	2	72	40.923	ppb	4.346	317576	40	102.3	90	110	
Zn	66	2	72	39.985	ppb	0.198	45945	40	100.0	90	110	
As	75	2	72	41.406	ppb	3.274	34259	40	103.5	90	110	
Se	78	1	72	41.384	ppb	0.594	27291	40	103.5	90	110	
Sr	88	2	45	77.964	ppb	3.305	273462	80	97.5	90	110	
Zr	90	2	72	20.741	ppb	13.372	880	40	51.9	90	110	>+\-10%
Zr	90	1	72	23.031	ppb	22.515	3133	40	57.6	90	110	>+\-10%
Nb	93	2	72	90.044	ppb	4.140	599274	80	112.6	90	110	>+\-10%
Mo	95	2	115	39.762	ppb	1.717	155173	40	99.4	90	110	
Pd	105	2	115	38.737	ppb	3.912	218310	40	96.8	90	110	
Ag	107	2	115	39.520	ppb	3.503	449289	40	98.8	90	110	
Cd	111	2	115	40.105	ppb	1.499	65286	40	100.3	90	110	
Sn	120	2	115	39.434	ppb	4.941	190847	40	98.6	90	110	
Sb	121	2	115	40.610	ppb	2.349	166067	40	101.5	90	110	
Ba	137	2	115	40.389	ppb	2.984	53013	40	101.0	90	110	
W	182	2	165	37.763	ppb	6.646	295349	40	94.4	90	110	
Pt	195	2	165	36.939	ppb	6.865	198709	40	92.3	90	110	
Tl	205	2	165	37.422	ppb	5.814	494237	40	93.6	90	110	
Pb	208	2	165	37.992	ppb	3.609	658174	40	95.0	90	110	
Th	232	2	165	38.493	ppb	3.785	661555	40	96.2	90	110	
U	238	2	165	37.574	ppb	2.653	704117	40	93.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1095840	1.66	1092921	100.27	60	125	
Sc (IS)	45	2	HMI He	4571255	1.97	4591929	99.55	60	125	
Sc (IS)	45	3	No Gas	130859238	0.83	129634638	100.94	60	120	
Ge Internal Standard	72	1	HMI H2	26624897	0.65	26305534	101.21	60	125	
Ge Internal Standard	72	2	HMI He	5085403	3.42	5205670	97.69	60	125	
In Internal standard	115	2	HMI He	16201143	4.10	16441998	98.54	60	125	
Ho-165	165	2	HMI He	37808488	5.98	37362695	101.19	60	125	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name ICB-5699924
 Data File Name 028_ICB.d
 Data Path Name D:\Agilent\ICPMH1\DATA\051319.b
 Acq Date Time 2019-05-13T12:46:26-06:00
 Sample Type ICB
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	1	-4.874	ppb	-65.3	133042	0.1	
Li	7	3	0.817	ppb	1123.7	8342146	0.05	>RL
Be	9	1	-0.004	ppb	-319.5	3	0.5	
B	11	1	-0.283	ppb	-2923.3	450	0.1	
Na	23	2	0.642	ppb	180.1	47971	25	
Mg	24	2	0.077	ppb	202.4	417	25	
Al	27	2	0.914	ppb	122.9	487	15	
K	39	2	15.134	ppb	52.1	115429	50	
Ca	44	2	-1.166	ppb	-193.7	273	25	
V	51	2	0.216	ppb	53.9	15681	1	
Cr	52	2	0.029	ppb	124.2	1730	1	
Mn	55	2	0.073	ppb	62.6	453	0.5	
Fe	57	2	9.566	ppb	16.3	2427	25	
Co	59	2	-0.020	ppb	-356.5	5871	0.5	
Ni	60	2	0.014	ppb	39.4	977	1	
Cu	63	2	-0.031	ppb	-85.6	3874	1	
Zn	66	2	0.005	ppb	3994.3	723	5	
As	75	2	0.083	ppb	55.7	241	1	
Se	78	1	0.019	ppb	52.4	36	1	
Sr	88	2	0.000	ppb	14418.2	193	1	
Zr	90	2	-14.313	ppb	-21.3	233	1	
Zr	90	1	-2.016	ppb	-243.9	1902	1	
Nb	93	2	5.471	ppb	10.9	41174	2	>RL
Mo	95	2	0.107	ppb	24.3	583	0.5	
Pd	105	2	0.026	ppb	54.0	480	1	
Ag	107	2	0.013	ppb	37.3	267	1	
Cd	111	2	0.016	ppb	73.3	30	0.5	
Sn	120	2	0.157	ppb	9.8	1387	1	
Sb	121	2	0.748	ppb	6.0	3287	1	
Ba	137	2	0.006	ppb	302.8	143	0.5	
W	182	2	0.123	ppb	10.8	3917	1	
Pt	195	2	0.004	ppb	92.1	37	1	
Tl	205	2	0.022	ppb	41.2	550	0.1	
Pb	208	2	0.025	ppb	67.9	1387	0.5	
Th	232	2	0.302	ppb	9.1	6228	1	
U	238	2	0.027	ppb	18.5	577	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1078659	4.53	1092921	98.70	60	125	
Sc (IS)	45	2	HMI He	4521283	2.16	4591929	98.46	60	125	
Sc (IS)	45	3	No Gas	128294349	0.60	129634638	98.97	60	120	
Ge Internal Standard	72	1	HMI H2	26069193	1.43	26305534	99.10	60	125	
Ge Internal Standard	72	2	HMI He	5122678	2.36	5205670	98.41	60	125	
In Internal standard	115	2	HMI He	16189243	1.87	16441998	98.46	60	125	
Ho-165	165	2	HMI He	38648598	2.43	37362695	103.44	60	125	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name ICVL-5699928
 Data File Name 029LICV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T12:49:57-06:00
 Sample Type LLICV
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	6	0.910	ppb	11.343	418	1	91.0	70	130	
Na	23	2	45	43.579	ppb	5.138	84234	50	87.2	70	130	
Mg	24	2	45	49.109	ppb	2.160	17258	50	98.2	70	130	
Al	27	2	45	47.436	ppb	8.557	5041	50	94.9	70	130	
K	39	2	45	105.327	ppb	6.929	145736	100	105.3	70	130	
Ca	44	2	45	39.825	ppb	6.801	1287	50	79.7	70	130	
V	51	2	72	5.345	ppb	6.875	40704	5	106.9	70	130	
Cr	52	2	72	2.000	ppb	1.668	14546	2	100.0	70	130	
Mn	55	2	72	0.996	ppb	6.865	3130	1	99.6	70	130	
Fe	57	2	72	50.583	ppb	3.981	7455	50	101.2	70	130	
Co	59	2	72	1.102	ppb	4.929	17386	1	110.2	70	130	
Ni	60	2	72	1.472	ppb	2.906	4994	1.5	98.1	70	130	
Cu	63	2	72	1.939	ppb	2.115	19024	2	97.0	70	130	
Zn	66	2	72	9.720	ppb	4.955	11747	10	97.2	70	130	
As	75	2	72	4.708	ppb	6.173	4061	5	94.2	70	130	
Se	78	1	72	5.193	ppb	8.604	3374	5	103.9	70	130	
Sr	88	2	45	0.988	ppb	8.752	3660	1	98.8	70	130	
Zr	90	2	72	-9.973	ppb	-43.425	313	0.5	-1994.6	70	130	>+/-30%
Zr	90	1	72	-5.565	ppb	-84.559	1739	0.5	-1113.1	70	130	>+/-30%
Nb	93	2	72	3.445	ppb	10.787	27647	2	172.3	70	130	>+/-30%
Mo	95	2	115	1.983	ppb	6.088	7902	2	99.1	70	130	
Pd	105	2	115	0.012	ppb	172.276	407	1	1.2	70	130	>+/-30%
Ag	107	2	115	4.998	ppb	5.906	57018	5	100.0	70	130	
Cd	111	2	115	1.043	ppb	6.089	1703	1	104.3	70	130	
Sn	120	2	115	9.386	ppb	4.620	46011	10	93.9	70	130	
Sb	121	2	115	2.061	ppb	6.870	8659	2	103.1	70	130	
Ba	137	2	115	0.962	ppb	16.702	1393	1	96.2	70	130	
W	182	2	165	4.652	ppb	4.927	39192	1	465.2	70	130	>+/-30%
Pt	195	2	165	0.007	ppb	103.741	50	1	0.7	70	130	>+/-30%
Tl	205	2	165	0.900	ppb	8.798	12212	1	90.0	70	130	
Pb	208	2	165	0.953	ppb	4.002	17521	1	95.3	70	130	
Th	232	2	165	1.920	ppb	1.923	34090	2	96.0	70	130	
U	238	2	165	0.962	ppb	6.563	18191	1	96.2	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1102622	5.01	1092921	100.89	60	125	
Sc (IS)	45	2	HMI He	4573046	0.46	4591929	99.59	60	125	
Sc IS)	45	3	No Gas	130084865	2.57	129634638	100.35	60	120	
Ge Internal Standard	72	1	HMI H2	26070440	2.84	26305534	99.11	60	125	
Ge Internal Standard	72	2	HMI He	5103755	2.18	5205670	98.04	60	125	
In Internal standard	115	2	HMI He	16236942	4.02	16441998	98.75	60	125	
Ho-165	165	2	HMI He	38037785	3.16	37362695	101.81	60	125	

CRI Report

Sample Table

Sample Name CRI-5699929
 Data File Name 030RLST.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T12:58:02-06:00
 Sample Type CRI
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	3	45	-0.001	ppb	-625363.834	8505109	10	0.0	50	150	>+\-20%
Be	9	1	6	1.135	ppb	15.768	515	1	113.5	80	120	
Na	23	2	45	46.969	ppb	10.626	87091	100	47.0	80	120	>+\-20%
Mg	24	2	45	21.670	ppb	6.529	7838	100	21.7	80	120	>+\-20%
Al	27	2	45	25.386	ppb	10.163	2890	20	126.9	80	120	>+\-20%
K	39	2	45	31.353	ppb	37.498	122047	20	156.8	80	120	>+\-20%
Ca	44	2	45	159.434	ppb	7.136	4234	20	797.2	80	120	>+\-20%
V	51	2	72	1.014	ppb	10.552	19511	1	101.4	80	120	
Cr	52	2	72	1.058	ppb	5.449	8402	1	105.8	80	120	
Mn	55	2	72	2.041	ppb	8.427	6161	1	204.1	80	120	>+\-20%
Fe	57	2	72	34.335	ppb	9.471	5464	20	171.7	80	120	>+\-20%
Co	59	2	72	1.045	ppb	11.659	16742	1	104.5	80	120	
Ni	60	2	72	1.256	ppb	20.660	4381	1	125.6	80	120	>+\-20%
Cu	63	2	72	3.594	ppb	2.613	31709	1	359.4	80	120	>+\-20%
Zn	66	2	72	4.153	ppb	2.939	5418	1	415.3	80	120	>+\-20%
As	75	2	72	1.061	ppb	8.899	1046	1	106.1	80	120	
Se	78	1	72	1.008	ppb	6.258	684	1	100.8	80	120	
Sr	88	2	45	2.070	ppb	5.018	7462	2	103.5	80	120	
Nb	93	2	72	3.610	ppb	6.038	28695	2	180.5	80	120	>+\-20%
Mo	95	2	115	0.976	ppb	6.092	4011	1	97.6	80	120	
Pd	105	2	115	0.913	ppb	4.343	5528	1	91.3	80	120	
Ag	107	2	115	1.025	ppb	7.318	11888	1	102.5	80	120	
Cd	111	2	115	0.958	ppb	9.300	1580	1	95.8	80	120	
Sn	120	2	115	1.351	ppb	6.742	7215	1	135.1	80	120	>+\-20%
Sb	121	2	115	1.054	ppb	0.918	4584	1	105.4	80	120	
Ba	137	2	115	1.260	ppb	2.158	1803	1	126.0	80	120	>+\-20%
W	182	2	165	0.942	ppb	3.761	10007	1	94.2	80	120	
Pt	195	2	165	0.957	ppb	9.535	5081	1	95.7	80	120	
Tl	205	2	165	0.928	ppb	2.658	12299	1	92.8	80	120	
Pb	208	2	165	1.069	ppb	1.857	19094	1	106.9	80	120	
Th	232	2	165	0.843	ppb	2.661	15118	1	84.3	80	120	
U	238	2	165	0.965	ppb	2.082	17831	1	96.5	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1091903	3.03	1092921	99.91	60	125	
Sc (IS)	45	2	HMI He	4577759	2.09	4591929	99.69	60	125	
Sc (IS)	45	3	No Gas	131100128	1.05	129634638	101.13	60	120	
Ge Internal Standard	72	1	HMI H2	26446114	1.70	26305534	100.53	60	125	
Ge Internal Standard	72	2	HMI He	5097607	3.88	5205670	97.92	60	125	
In Internal standard	115	2	HMI He	16362376	2.86	16441998	99.52	60	125	
Ho-165	165	2	HMI He	37138439	1.85	37362695	99.40	60	125	

CRI Report

Sample Table

Sample Name CRI-
 Data File Name 031RLST.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T13:06:00-06:00
 Sample Type CRI
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	3	45	-5.840	ppb	-110.808	8383825	10	-58.4	50	150	>+ -20%
Be	9	1	6	-0.007	ppb	-84.064	2	1	-0.7	80	120	>+ -20%
Na	23	2	45	-1.426	ppb	-88.181	46591	100	-1.4	80	120	>+ -20%
Mg	24	2	45	-0.078	ppb	-292.751	367	100	-0.1	80	120	>+ -20%
Al	27	2	45	-0.998	ppb	-56.189	303	20	-5.0	80	120	>+ -20%
K	39	2	45	7.838	ppb	76.592	113892	20	39.2	80	120	>+ -20%
Ca	44	2	45	1.863	ppb	119.529	350	20	9.3	80	120	>+ -20%
V	51	2	72	0.157	ppb	51.283	15754	1	15.7	80	120	>+ -20%
Cr	52	2	72	0.031	ppb	99.538	1790	1	3.1	80	120	>+ -20%
Mn	55	2	72	1.202	ppb	7.392	3837	1	120.2	80	120	>+ -20%
Fe	57	2	72	0.161	ppb	621.342	1300	20	0.8	80	120	>+ -20%
Co	59	2	72	-0.035	ppb	-33.903	5858	1	-3.5	80	120	>+ -20%
Ni	60	2	72	2.085	ppb	11.217	6858	1	208.5	80	120	>+ -20%
Cu	63	2	72	2.097	ppb	2.581	20789	1	209.7	80	120	>+ -20%
Zn	66	2	72	8.917	ppb	1.971	11134	1	891.7	80	120	>+ -20%
As	75	2	72	-0.007	ppb	-239.837	170	1	-0.7	80	120	>+ -20%
Se	78	1	72	0.003	ppb	743.512	25	1	0.3	80	120	>+ -20%
Sr	88	2	45	0.036	ppb	8.667	320	2	1.8	80	120	>+ -20%
Nb	93	2	72	0.803	ppb	17.216	10393	2	40.1	80	120	>+ -20%
Mo	95	2	115	0.023	ppb	26.917	250	1	2.3	80	120	>+ -20%
Pd	105	2	115	-0.019	ppb	-69.087	227	1	-1.9	80	120	>+ -20%
Ag	107	2	115	0.001	ppb	131.689	130	1	0.1	80	120	>+ -20%
Cd	111	2	115	0.012	ppb	124.454	23	1	1.2	80	120	>+ -20%
Sn	120	2	115	9.641	ppb	3.583	46517	1	964.1	80	120	>+ -20%
Sb	121	2	115	0.013	ppb	99.613	280	1	1.3	80	120	>+ -20%
Ba	137	2	115	0.979	ppb	5.303	1400	1	97.9	80	120	>+ -20%
W	182	2	165	0.015	ppb	85.988	3090	1	1.5	80	120	>+ -20%
Pt	195	2	165	0.000	ppb	693.963	17	1	0.0	80	120	>+ -20%
Tl	205	2	165	0.006	ppb	66.738	337	1	0.6	80	120	>+ -20%
Pb	208	2	165	-0.008	ppb	-61.131	797	1	-0.8	80	120	>+ -20%
Th	232	2	165	0.079	ppb	16.319	2344	1	7.9	80	120	>+ -20%
U	238	2	165	0.002	ppb	73.109	100	1	0.2	80	120	>+ -20%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1102624	1.69	1092921	100.89	60	125	
Sc (IS)	45	2	HMI He	4551742	0.85	4591929	99.12	60	125	
Sc IS)	45	3	No Gas	131356475	2.34	129634638	101.33	60	120	
Ge Internal Standard	72	1	HMI H2	25895826	3.64	26305534	98.44	60	125	
Ge Internal Standard	72	2	HMI He	5243421	1.91	5205670	100.73	60	125	
In Internal standard	115	2	HMI He	15978089	3.50	16441998	97.18	60	125	
Ho-165	165	2	HMI He	39083842	1.75	37362695	104.61	60	125	

CRI Report

Sample Table

Sample Name CRI5699930
 Data File Name 032_CRI.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T13:10:40-06:00
 Sample Type AFCRI
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	6	0.218	ppb	28.168	103	0.2	109.2	80	120	
Na	23	2	45	6.861	ppb	4.803	53256	20	34.3	80	120	AFCRI Main CR1 Failed
Mg	24	1	45	3.898	ppb	5.987	19347	20	19.5	80	120	AFCRI Main CR1 Failed
Mg	24	2	45	4.533	ppb	11.198	1933	20	22.7	80	120	AFCRI Main CR1 Failed
Al	27	2	45	3.468	ppb	32.504	737	20	17.3	80	120	AFCRI Main CR1 Failed
K	39	2	45	16.853	ppb	64.271	116282	20	84.3	80	120	
Ca	44	2	45	8.177	ppb	59.953	503	20	40.9	80	120	AFCRI Main CR1 Failed
V	51	2	72	0.047	ppb	369.756	15404	0.2	23.5	80	120	AFCRI Main CR1 Failed
Cr	52	2	72	0.216	ppb	17.200	3067	0.2	108.1	80	120	
(Cr)	53	2	72	-0.623	ppb	-83.697	5661	0.2	-311.5	80	120	AFCRI Main CR1 Failed
Mn	55	2	72	0.268	ppb	3.550	1060	0.2	134.2	80	120	AFCRI Main CR1 Failed
Fe	57	2	72	3.962	ppb	32.565	1803	20	19.8	80	120	AFCRI Main CR1 Failed
Co	59	2	72	0.167	ppb	29.045	8089	0.2	83.3	80	120	
Ni	60	2	72	0.176	ppb	6.766	1477	0.2	87.8	80	120	
Cu	63	2	72	0.702	ppb	12.697	9896	0.2	351.2	80	120	AFCRI Main CR1 Failed
Zn	66	2	72	0.308	ppb	65.946	1103	0.2	153.8	80	120	AFCRI Main CR1 Failed
As	75	2	72	0.187	ppb	11.128	339	0.2	93.3	80	120	
Se	78	1	72	0.206	ppb	23.396	160	0.2	102.8	80	120	
(Se)	82	1	72	-1.038	ppb	-32.968	1990	0.2	-519.1	80	120	AFCRI Main CR1 Failed
Sr	88	2	45	0.398	ppb	9.736	1577	0.2	198.9	80	120	AFCRI Main CR1 Failed
Nb	93	2	72	0.739	ppb	9.474	10100	0.4	184.8	80	120	AFCRI Main CR1 Failed
Mo	95	2	115	0.234	ppb	9.791	1107	0.2	116.9	80	120	
Pd	105	2	115	0.134	ppb	9.370	1120	0.2	67.1	80	120	AFCRI Main CR1 Failed
Ag	107	2	115	0.206	ppb	10.688	2527	0.2	103.0	80	120	
Cd	111	2	115	0.179	ppb	13.847	303	0.2	89.6	80	120	
(Cd)	114	2	115	0.180	ppb	12.193	823	0.2	90.0	80	120	
Sn	120	2	115	0.167	ppb	27.547	1467	0.2	83.4	80	120	
Sb	121	2	115	0.184	ppb	2.180	1010	0.2	91.9	80	120	
Ba	137	2	115	0.199	ppb	8.442	407	0.2	99.5	80	120	
W	182	2	165	0.171	ppb	33.985	4187	0.2	85.6	80	120	
Pt	195	2	165	0.156	ppb	9.850	853	0.2	78.2	80	120	AFCRI Main CR1 Failed
Tl	205	2	165	0.168	ppb	11.172	2467	0.2	84.2	80	120	
(Pb)	206	2	165	0.168	ppb	11.392	913	0.2	84.0	80	120	
(Pb)	207	2	165	0.177	ppb	22.109	853	0.2	88.5	80	120	
Pb	208	2	165	0.178	ppb	7.246	3997	0.2	89.2	80	120	
Th	232	2	165	0.127	ppb	5.018	3074	0.2	63.4	80	120	AFCRI Main CR1 Failed
U	238	2	165	0.194	ppb	5.220	3687	0.2	96.8	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1096040	3.29	1092921	100.29	60	125	
Sc (IS)	45	2	HMI He	4534836	2.19	4591929	98.76	60	125	
Sc IS)	45	3	No Gas	130611603	2.46	129634638	100.75	60	120	
Ge Internal Standard	72	1	HMI H2	26687209	2.26	26305534	101.45	60	125	
Ge Internal Standard	72	2	HMI He	5310728	0.79	5205670	102.02	60	125	
In Internal standard	115	2	HMI He	16639378	3.02	16441998	101.20	60	125	
Ho-165	165	2	HMI He	37714458	2.59	37362695	100.94	60	125	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name ICSA-5695552
 Data File Name 033ICSA.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T13:14:12-06:00
 Sample Type ICSA
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	1	45	3.183	ppb	300.6	125271	10	
Li	7	3	45	-13.013	ppb	-64.5	7802727	10	
Be	9	1	6	-0.003	ppb	-438.0	3	1	
B	11	1	6	15.231	ppb	38.5	630	10	>RL or LOD
Na	23	2	45	95303.047	ppb	1.7	74497647	100000	
Mg	24	2	45	98228.422	ppb	0.8	31693104	100000	
Al	27	2	45	100349.864	ppb	3.8	9219976	100000	>RL or LOD
K	39	2	45	98557.368	ppb	0.5	29861283	100000	
V	51	2	72	0.405	ppb	45.8	15864	1	
Cr	52	2	72	1.402	ppb	5.8	10220	1	>RL or LOD
Mn	55	2	72	0.628	ppb	9.7	1977	1	
Co	59	2	72	0.220	ppb	16.3	7972	1	
Ni	60	2	72	0.222	ppb	26.6	1483	1	
Cu	63	2	72	0.240	ppb	4.8	5704	1	
Zn	66	2	72	0.865	ppb	20.8	1623	1	
As	75	2	72	0.097	ppb	9.3	241	1	
Se	78	1	72	0.066	ppb	35.2	63	1	
Sr	88	2	45	1.769	ppb	6.2	6014	1	>RL or LOD
Nb	93	2	72	19.263	ppb	6.2	127043	1	>RL or LOD
Mo	95	2	115	2067.466	ppb	3.2	7553856	2000	>RL or LOD
Pd	105	2	115	-0.033	ppb	-10.4	140	1	
Ag	107	2	115	0.040	ppb	24.6	540	1	
Cd	111	2	115	0.715	ppb	11.4	1093	1	
Sn	120	2	115	0.073	ppb	38.2	920	1	
Sb	121	2	115	0.188	ppb	3.2	940	1	
Ba	137	2	115	0.723	ppb	23.9	1013	1	
W	182	2	165	0.370	ppb	4.6	5681	1	
Pt	195	2	165	0.016	ppb	40.0	100	1	
Tl	205	2	165	0.004	ppb	117.2	297	1	
Pb	208	2	165	0.255	ppb	4.7	5264	1	
Th	232	2	165	0.567	ppb	2.4	10527	1	
U	238	2	165	0.024	ppb	12.5	497	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1037251	1.45	1092921	94.91	60	125	
Sc (IS)	45	2	HMI He	4296623	0.89	4591929	93.57	60	125	
Sc IS)	45	3	No Gas	124762577	2.74	129634638	96.24	60	120	
Ge Internal Standard	72	1	HMI H2	24647056	1.46	26305534	93.70	60	125	
Ge Internal Standard	72	2	HMI He	4892870	0.96	5205670	93.99	60	125	
In Internal standard	115	2	HMI He	15183909	1.41	16441998	92.35	60	125	
Ho-165	165	2	HMI He	37381955	2.43	37362695	100.05	60	125	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name ICSAB-5695553
 Data File Name 034ICSB.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T13:17:42-06:00
 Sample Type ICSB
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	186.151	ppb	2.873	191150	100	186.2	80	120	>+ \-20%
Li	7	3	45	167.959	ppb	3.036	12165015	100	168.0	80	120	>+ \-20%
Be	9	1	6	94.681	ppb	2.574	38718	100	94.7	80	120	
B	11	1	6	19.279	ppb	42.309	650	100	19.3	80	120	>+ \-20%
V	51	2	72	100.982	ppb	1.565	494803	100	101.0	80	120	
Cr	52	2	72	96.543	ppb	0.191	612148	100	96.5	80	120	
Mn	55	2	72	101.474	ppb	2.796	287006	100	101.5	80	120	
Co	59	2	72	95.010	ppb	2.463	954946	100	95.0	80	120	
Ni	60	2	72	95.890	ppb	1.971	258039	100	95.9	80	120	
Cu	63	2	72	94.245	ppb	2.302	709348	100	94.2	80	120	
Zn	66	2	72	95.617	ppb	1.789	106269	100	95.6	80	120	
As	75	2	72	103.040	ppb	1.758	83023	100	103.0	80	120	
Se	78	1	72	106.027	ppb	1.929	63950	100	106.0	80	120	
Sr	88	2	45	197.122	ppb	2.091	668436	100	197.1	80	120	>+ \-20%
Zr	90	2	72	120.915	ppb	4.504	2670	100	120.9	80	120	>+ \-20%
Zr	90	1	72	118.002	ppb	7.370	6989	100	118.0	80	120	>+ \-20%
Nb	93	2	72	269.058	ppb	5.637	1739379	100	269.1	80	120	>+ \-20%
Mo	95	2	115	2144.527	ppb	2.248	7850267	100	2144.5	80	120	>+ \-20%
Pd	105	2	115	95.841	ppb	1.611	506920	100	95.8	80	120	
Ag	107	2	115	100.245	ppb	2.503	1070116	100	100.2	80	120	
Cd	111	2	115	102.063	ppb	2.412	155993	100	102.1	80	120	
Sn	120	2	115	101.912	ppb	3.215	462446	100	101.9	80	120	
Sb	121	2	115	109.242	ppb	2.170	419232	100	109.2	80	120	
Ba	137	2	115	103.135	ppb	1.391	126936	100	103.1	80	120	
W	182	2	165	99.924	ppb	4.419	761410	100	99.9	80	120	
Pt	195	2	165	94.334	ppb	5.972	497275	100	94.3	80	120	
Tl	205	2	165	91.736	ppb	6.453	1187068	100	91.7	80	120	
Pb	208	2	165	92.104	ppb	2.870	1561990	100	92.1	80	120	
Th	232	2	165	102.953	ppb	7.573	1729932	100	103.0	80	120	
U	238	2	165	97.509	ppb	7.901	1787351	100	97.5	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	992253	4.79	1092921	90.79	60	125	
Sc (IS)	45	2	HMI He	4421224	2.48	4591929	96.28	60	125	
Sc (IS)	45	3	No Gas	128272008	0.89	129634638	98.95	60	120	
Ge Internal Standard	72	1	HMI H2	24370974	2.18	26305534	92.65	60	125	
Ge Internal Standard	72	2	HMI He	4963905	1.26	5205670	95.36	60	125	
In Internal standard	115	2	HMI He	15205069	1.74	16441998	92.48	60	125	
Ho-165	165	2	HMI He	37007416	3.53	37362695	99.05	60	125	

Sample Report

Sample Table

Sample Name RINSE
 Data File Name 035SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T13:21:10-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Pass
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-14.555	ppb	-14.555	-52.94	7874759	40000	
Be	9	1	6	0.024	ppb	0.024	84.67	15	2000	
B	11	1	6	0.110	ppb	0.110	7086.23	437	100	
Na	23	2	45	83.396	ppb	83.396	4.90	112740	400000	
Mg	24	2	45	11.188	ppb	11.188	3.48	4071	400000	
Al	27	2	45	8.905	ppb	8.905	33.87	1223	400000	
K	39	2	45	18.469	ppb	18.469	20.52	113204	400000	
Ca	44	2	45	2.767	ppb	2.767	141.03	360	400000	
V	51	2	72	0.218	ppb	0.218	39.14	15634	2000	
Cr	52	2	72	0.038	ppb	0.038	69.73	1783	5000	
Mn	55	2	72	0.051	ppb	0.051	45.49	387	10000	
Fe	57	2	72	16.550	ppb	16.550	17.39	3274	400000	
Co	59	2	72	-0.035	ppb	-0.035	-56.45	5691	2000	
Ni	60	2	72	1.089	ppb	1.089	8.88	3931	5000	
Cu	63	2	72	0.080	ppb	0.080	101.95	4711	5000	
Zn	66	2	72	0.036	ppb	0.036	81.29	753	5000	
As	75	2	72	0.030	ppb	0.030	66.69	195	2000	
Se	78	1	72	0.045	ppb	0.045	44.14	52	2000	
Sr	88	2	45	0.006	ppb	0.006	169.84	210	2000	
Zr	90	2	72	-9.777	ppb	-9.777	-15.57	317	1000	
Zr	90	1	72	-7.918	ppb	-7.918	-9.79	1608	1000	
Nb	93	2	72	-0.182	ppb	-0.182	-23.15	3587	200	
Mo	95	2	115	2.094	ppb	2.094	4.43	8192	2000	
Pd	105	2	115	0.035	ppb	0.035	11.49	523	100	
Ag	107	2	115	0.029	ppb	0.029	18.04	440	100	
Cd	111	2	115	0.021	ppb	0.021	48.67	37	2000	
Sn	120	2	115	0.065	ppb	0.065	13.85	927	2000	
Sb	121	2	115	0.039	ppb	0.039	47.13	383	1000	
Ba	137	2	115	0.053	ppb	0.053	184.14	200	5000	
W	182	2	165	0.032	ppb	0.032	56.88	3117	100	
Pt	195	2	165	0.008	ppb	0.008	106.23	57	100	
Tl	205	2	165	0.032	ppb	0.032	10.02	667	2000	
Pb	208	2	165	0.020	ppb	0.020	52.69	1260	5000	
Th	232	2	165	-0.001	ppb	-0.001	-519.02	877	2000	
U	238	2	165	0.032	ppb	0.032	12.36	667	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1030035	1.55	1092921	94.25	60	125	
Sc (IS)	45	2	HMI He	4393831	1.12	4591929	95.69	60	125	
Sc (IS)	45	3	No Gas	126439698	1.02	129634638	97.54	60	120	
Ge Internal Standard	72	1	HMI H2	25733692	2.43	26305534	97.83	60	125	
Ge Internal Standard	72	2	HMI He	5101598	2.91	5205670	98.00	60	125	
In Internal standard	115	2	HMI He	15944347	3.83	16441998	96.97	60	125	
Ho-165	165	2	HMI He	37668492	1.72	37362695	100.82	60	125	

Linear Range Sample (LRS) Report

Sample Table

Sample Name LRA-5680342
 Data File Name 036_LR.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T13:24:43-06:00
 Sample Type LR
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	6	1968.470	ppb	5.315	819498	2000	98.4	90	110	
V	51	2	72	2030.703	ppb	2.635	9531626	2000	101.5	90	110	
Cr	52	2	72	4991.274	ppb	3.311	31079231	5000	99.8	90	110	
(Cr)	53	2	72	5276.289	ppb	5.498	3866666	5000	105.5	90	110	
Mn	55	2	72	10184.833	ppb	4.236	28329172	10000	101.8	90	110	
Co	59	2	72	2003.322	ppb	3.942	19701559	2000	100.2	90	110	
Ni	60	2	72	5066.214	ppb	4.164	13377454	5000	101.3	90	110	
Cu	63	2	72	5035.485	ppb	2.126	37127891	5000	100.7	90	110	
Zn	66	2	72	5026.520	ppb	0.749	5469745	5000	100.5	90	110	
As	75	2	72	1987.608	ppb	2.355	1574042	2000	99.4	90	110	
Se	78	1	72	2061.913	ppb	2.251	1296030	2000	103.1	90	110	
(Se)	82	1	72	1837.027	ppb	2.742	541186	2000	91.9	90	110	
Mo	95	2	115	2014.455	ppb	1.321	7530279	2000	100.7	90	110	
Cd	111	2	115	2134.940	ppb	2.176	3332245	2000	106.7	90	110	
(Cd)	114	2	115	2073.886	ppb	0.626	8178765	2000	103.7	90	110	
Sn	120	2	115	2018.278	ppb	3.452	9346285	2000	100.9	90	110	
Sb	121	2	115	1066.327	ppb	3.489	4176559	1000	106.6	90	110	
Ba	137	2	115	4833.174	ppb	1.316	6069986	5000	96.7	90	110	
Tl	205	2	165	950.321	ppb	5.957	12369642	1000	95.0	90	110	
(Pb)	206	2	165	4838.471	ppb	4.185	19968062	5000	96.8	90	110	
(Pb)	207	2	165	5091.591	ppb	5.388	18593470	5000	101.8	90	110	
Pb	208	2	165	5056.601	ppb	4.511	86177394	5000	101.1	90	110	
Th	232	2	165	968.019	ppb	2.128	16372747	1000	96.8	90	110	
U	238	2	165	1948.460	ppb	2.524	35960251	2000	97.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1011065	4.54	1092921	92.51	60	125	
Sc (IS)	45	2	HMI He	4087307	0.60	4591929	89.01	60	125	
Sc IS)	45	3	No Gas	123372034	1.00	129634638	95.17	60	120	
Ge Internal Standard	72	1	HMI H2	25405082	1.69	26305534	96.58	60	125	
Ge Internal Standard	72	2	HMI He	4891791	5.07	5205670	93.97	60	125	
In Internal standard	115	2	HMI He	15529671	0.97	16441998	94.45	60	125	
Ho-165	165	2	HMI He	37210317	1.72	37362695	99.59	60	125	

Sample Report

Sample Table

Sample Name RINSE
 Data File Name 037SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T13:28:08-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Pass
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-14.992	ppb	-14.992	-27.67	7541956	40000	
Be	9	1	6	0.494	ppb	0.494	8.25	208	2000	
B	11	1	6	-11.320	ppb	-11.320	-28.22	287	100	
Na	23	2	45	28.543	ppb	28.543	7.86	65061	400000	
Mg	24	2	45	3.311	ppb	3.311	10.98	1390	400000	
Al	27	2	45	3.091	ppb	3.091	65.10	640	400000	
K	39	2	45	8.398	ppb	8.398	111.05	103935	400000	
Ca	44	2	45	-0.477	ppb	-0.477	-434.59	267	400000	
V	51	2	72	-0.081	ppb	-0.081	-130.99	13569	2000	
Cr	52	2	72	0.444	ppb	0.444	10.58	4241	5000	
Mn	55	2	72	0.902	ppb	0.902	4.21	2737	10000	
Fe	57	2	72	6.166	ppb	6.166	22.07	1920	400000	
Co	59	2	72	0.187	ppb	0.187	26.28	7642	2000	
Ni	60	2	72	0.430	ppb	0.430	3.99	2030	5000	
Cu	63	2	72	0.586	ppb	0.586	8.23	8252	5000	
Zn	66	2	72	0.924	ppb	0.924	20.83	1683	5000	
As	75	2	72	0.363	ppb	0.363	16.77	452	2000	
Se	78	1	72	0.836	ppb	0.836	7.43	533	2000	
Sr	88	2	45	0.008	ppb	0.008	65.63	203	2000	
Zr	90	2	72	-10.910	ppb	-10.910	-8.35	283	1000	
Zr	90	1	72	-8.272	ppb	-8.272	-64.76	1528	1000	
Nb	93	2	72	-0.493	ppb	-0.493	-2.63	1470	200	
Mo	95	2	115	2.378	ppb	2.378	3.24	9273	2000	
Pd	105	2	115	-0.013	ppb	-0.013	-68.47	257	100	
Ag	107	2	115	0.006	ppb	0.006	108.01	183	100	
Cd	111	2	115	0.211	ppb	0.211	15.83	340	2000	
Sn	120	2	115	3.873	ppb	3.873	1.53	18991	2000	
Sb	121	2	115	8.138	ppb	8.138	5.42	32900	1000	
Ba	137	2	115	0.482	ppb	0.482	17.56	753	5000	
W	182	2	165	-0.018	ppb	-0.018	-66.92	2710	100	
Pt	195	2	165	0.002	ppb	0.002	216.74	23	100	
Tl	205	2	165	0.189	ppb	0.189	5.31	2717	2000	
Pb	208	2	165	1.117	ppb	1.117	4.84	20056	5000	
Th	232	2	165	1.924	ppb	1.924	4.65	33602	2000	
U	238	2	165	0.631	ppb	0.631	6.59	11772	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1000155	1.23	1092921	91.51	60	125	
Sc (IS)	45	2	HMI He	4148153	0.94	4591929	90.34	60	125	
Sc (IS)	45	3	No Gas	121218330	1.58	129634638	93.51	60	120	
Ge Internal Standard	72	1	HMI H2	24667873	1.16	26305534	93.77	60	125	
Ge Internal Standard	72	2	HMI He	4888417	2.69	5205670	93.91	60	125	
In Internal standard	115	2	HMI He	15915408	0.78	16441998	96.80	60	125	
Ho-165	165	2	HMI He	37403361	0.16	37362695	100.11	60	125	

Sample Report

Sample Table

Sample Name RINSE
 Data File Name 038SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T13:31:41-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Pass
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-8.356	ppb	-8.356	-90.16	7672944	40000	
Be	9	1	6	0.092	ppb	0.092	43.34	42	2000	
B	11	1	6	2.498	ppb	2.498	152.65	447	100	
Na	23	2	45	24.405	ppb	24.405	9.95	62315	400000	
Mg	24	2	45	2.833	ppb	2.833	28.00	1247	400000	
Al	27	2	45	2.452	ppb	2.452	28.70	587	400000	
K	39	2	45	3.098	ppb	3.098	278.71	103026	400000	
Ca	44	2	45	-1.286	ppb	-1.286	-128.37	250	400000	
V	51	2	72	-0.178	ppb	-0.178	-49.74	13309	2000	
Cr	52	2	72	0.151	ppb	0.151	14.35	2454	5000	
Mn	55	2	72	0.281	ppb	0.281	20.38	1023	10000	
Fe	57	2	72	93.886	ppb	93.886	166.31	12485	400000	
Co	59	2	72	0.066	ppb	0.066	35.31	6548	2000	
Ni	60	2	72	0.095	ppb	0.095	69.80	1163	5000	
Cu	63	2	72	0.139	ppb	0.139	30.50	5021	5000	
Zn	66	2	72	0.164	ppb	0.164	40.93	873	5000	
As	75	2	72	0.150	ppb	0.150	15.59	287	2000	
Se	78	1	72	0.195	ppb	0.195	27.31	141	2000	
Sr	88	2	45	-0.007	ppb	-0.007	-123.01	157	2000	
Zr	90	2	72	-12.976	ppb	-12.976	-14.15	250	1000	
Zr	90	1	72	-12.796	ppb	-12.796	-33.84	1328	1000	
Nb	93	2	72	-0.539	ppb	-0.539	-4.77	1193	200	
Mo	95	2	115	0.668	ppb	0.668	7.85	2657	2000	
Pd	105	2	115	-0.025	ppb	-0.025	-26.94	187	100	
Ag	107	2	115	0.002	ppb	0.002	176.94	137	100	
Cd	111	2	115	0.066	ppb	0.066	51.71	107	2000	
Sn	120	2	115	1.093	ppb	1.093	11.00	5668	2000	
Sb	121	2	115	2.374	ppb	2.374	5.12	9533	1000	
Ba	137	2	115	0.130	ppb	0.130	40.91	293	5000	
W	182	2	165	-0.022	ppb	-0.022	-11.72	2664	100	
Pt	195	2	165	-0.001	ppb	-0.001	-165.90	7	100	
Tl	205	2	165	0.048	ppb	0.048	0.50	863	2000	
Pb	208	2	165	0.375	ppb	0.375	8.82	7291	5000	
Th	232	2	165	0.632	ppb	0.632	2.61	11578	2000	
U	238	2	165	0.142	ppb	0.142	7.72	2674	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	985066	2.90	1092921	90.13	60	125	
Sc (IS)	45	2	HMI He	4173741	1.67	4591929	90.89	60	125	
Sc (IS)	45	3	No Gas	121045962	0.89	129634638	93.37	60	120	
Ge Internal Standard	72	1	HMI H2	24667642	0.48	26305534	93.77	60	125	
Ge Internal Standard	72	2	HMI He	4957341	1.45	5205670	95.23	60	125	
In Internal standard	115	2	HMI He	15556508	1.43	16441998	94.61	60	125	
Ho-165	165	2	HMI He	37223236	2.08	37362695	99.63	60	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name CCV-5699926
 Data File Name 039_CCV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T13:35:12-06:00
 Sample Type CCV
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	99.866	ppb	15.361	161975	100	99.9	90	110	
Li	7	3	45	96.507	ppb	10.210	10121883	100	96.5	90	110	
Be	9	1	6	50.166	ppb	6.755	20819	50	100.3	90	110	
B	11	1	6	39.220	ppb	15.233	907	50	78.4	90	110	>+ \-10%
Na	23	2	45	1006.491	ppb	0.306	795871	1000	100.6	90	110	
Mg	24	2	45	1027.458	ppb	1.436	317648	1000	102.7	90	110	
Al	27	2	45	1026.315	ppb	1.249	90633	1000	102.6	90	110	
K	39	2	45	1041.380	ppb	1.165	401577	1000	104.1	90	110	
Ca	44	2	45	1001.929	ppb	3.746	22468	1000	100.2	90	110	
V	51	2	72	49.164	ppb	1.260	249496	50	98.3	90	110	
Cr	52	2	72	49.291	ppb	1.448	314946	50	98.6	90	110	
Mn	55	2	72	51.220	ppb	2.763	145767	50	102.4	90	110	
Fe	57	2	72	1020.396	ppb	2.114	123748	1000	102.0	90	110	
Co	59	2	72	49.803	ppb	1.062	506095	50	99.6	90	110	
Ni	60	2	72	51.059	ppb	2.554	138550	50	102.1	90	110	
Cu	63	2	72	50.748	ppb	1.611	385892	50	101.5	90	110	
Zn	66	2	72	50.269	ppb	2.901	56509	50	100.5	90	110	
As	75	2	72	50.624	ppb	3.111	41089	50	101.2	90	110	
Se	78	1	72	50.395	ppb	2.223	31980	50	100.8	90	110	
Sr	88	2	45	102.986	ppb	2.258	325056	100	103.0	90	110	
Zr	90	2	72	1.641	ppb	319.373	517	50	3.3	90	110	>+ \-10%
Zr	90	1	72	11.878	ppb	2.264	2506	50	23.8	90	110	>+ \-10%
Nb	93	2	72	92.236	ppb	2.453	602768	100	92.2	90	110	
Mo	95	2	115	50.883	ppb	5.634	188855	50	101.8	90	110	
Pd	105	2	115	50.854	ppb	2.971	272853	50	101.7	90	110	
Ag	107	2	115	51.261	ppb	2.911	555056	50	102.5	90	110	
Cd	111	2	115	50.683	ppb	2.787	78556	50	101.4	90	110	
Sn	120	2	115	51.419	ppb	3.690	236881	50	102.8	90	110	
Sb	121	2	115	52.958	ppb	3.449	206108	50	105.9	90	110	
Ba	137	2	115	51.024	ppb	6.962	63730	50	102.0	90	110	
W	182	2	165	48.793	ppb	2.636	372008	50	97.6	90	110	
Pt	195	2	165	49.086	ppb	2.213	258091	50	98.2	90	110	
Tl	205	2	165	48.722	ppb	3.904	628744	50	97.4	90	110	
Pb	208	2	165	50.175	ppb	4.666	847967	50	100.4	90	110	
Th	232	2	165	51.408	ppb	2.732	862189	50	102.8	90	110	
U	238	2	165	49.793	ppb	3.711	910370	50	99.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1008090	4.53	1092921	92.24	60	125	
Sc (IS)	45	2	HMI He	4112637	0.58	4591929	89.56	60	125	
Sc IS)	45	3	No Gas	123300619	0.81	129634638	95.11	60	120	
Ge Internal Standard	72	1	HMI H2	25631377	3.05	26305534	97.44	60	125	
Ge Internal Standard	72	2	HMI He	4990670	0.97	5205670	95.87	60	125	
In Internal standard	115	2	HMI He	15423787	2.86	16441998	93.81	60	125	
Ho-165	165	2	HMI He	36875248	3.22	37362695	98.70	60	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name CCB-5699924
 Data File Name 040_CCB.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T13:38:44-06:00
 Sample Type CCB
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	1	45	-3.609	ppb	-161.4	127508	0.1	
Li	7	3	45	-8.770	ppb	-12.2	7869363	0.05	
Be	9	1	6	0.091	ppb	52.6	43	0.5	
B	11	1	6	1.022	ppb	82.6	450	0.1	>RL
Na	23	2	45	18.217	ppb	11.4	59010	25	
Mg	24	2	45	2.198	ppb	31.9	1073	25	
Al	27	2	45	0.838	ppb	77.9	453	15	
K	39	2	45	21.753	ppb	36.8	111107	50	
Ca	44	2	45	-1.993	ppb	-24.5	240	25	
V	51	2	72	-0.112	ppb	-141.1	13656	1	
Cr	52	2	72	0.128	ppb	14.1	2310	1	
Mn	55	2	72	0.356	ppb	8.8	1240	0.5	
Fe	57	2	72	2.280	ppb	8.1	1487	25	
Co	59	2	72	0.048	ppb	67.7	6378	0.5	
Ni	60	2	72	0.187	ppb	18.8	1413	1	
Cu	63	2	72	0.768	ppb	10.7	9743	1	
Zn	66	2	72	0.375	ppb	31.9	1107	5	
As	75	2	72	0.092	ppb	16.0	241	1	
Se	78	1	72	0.135	ppb	37.7	108	1	
Sr	88	2	45	-0.009	ppb	-41.9	153	1	
Zr	90	2	72	-15.405	ppb	-13.5	207	1	
Zr	90	1	72	-6.121	ppb	-51.9	1665	1	
Nb	93	2	72	3.411	ppb	3.9	26735	2	>RL
Mo	95	2	115	0.340	ppb	14.7	1427	0.5	
Pd	105	2	115	-0.005	ppb	-256.0	293	1	
Ag	107	2	115	0.010	ppb	20.5	227	1	
Cd	111	2	115	0.060	ppb	33.7	97	0.5	
Sn	120	2	115	0.482	ppb	19.9	2830	1	
Sb	121	2	115	0.694	ppb	13.3	2934	1	
Ba	137	2	115	0.162	ppb	47.2	333	0.5	
W	182	2	165	0.056	ppb	87.5	3330	1	
Pt	195	2	165	0.007	ppb	99.2	50	1	
Tl	205	2	165	0.044	ppb	29.9	830	0.1	
Pb	208	2	165	0.230	ppb	5.9	4930	0.5	
Th	232	2	165	0.187	ppb	12.3	4131	1	
U	238	2	165	0.079	ppb	6.6	1557	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1032680	0.41	1092921	94.49	60	125	
Sc (IS)	45	2	HMI He	4274731	1.81	4591929	93.09	60	125	
Sc (IS)	45	3	No Gas	124281192	1.16	129634638	95.87	60	120	
Ge Internal Standard	72	1	HMI H2	25333370	0.19	26305534	96.30	60	125	
Ge Internal Standard	72	2	HMI He	4972641	2.89	5205670	95.52	60	125	
In Internal standard	115	2	HMI He	15503199	1.32	16441998	94.29	60	125	
Ho-165	165	2	HMI He	38013206	1.18	37362695	101.74	60	125	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name CCVL-5699928
 Data File Name 041LLCCV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T13:44:16-06:00
 Sample Type LLCCV
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	1.301	ppb	184.628	7991169	50	2.6	70	130	> +/-30%
Be	9	1	6	1.050	ppb	8.931	445	1	105.0	70	130	
Na	23	2	45	57.093	ppb	5.991	88173	50	114.2	70	130	
Mg	24	2	45	50.951	ppb	3.875	16525	50	101.9	70	130	
Al	27	2	45	51.235	ppb	5.453	5001	50	102.5	70	130	
K	39	2	45	107.305	ppb	4.402	135214	100	107.3	70	130	
Ca	44	2	45	37.420	ppb	29.835	1137	50	74.8	70	130	
V	51	2	72	4.962	ppb	6.473	37594	5	99.2	70	130	
Cr	52	2	72	2.135	ppb	12.136	14897	2	106.8	70	130	
Mn	55	2	72	1.178	ppb	14.005	3557	1	117.8	70	130	
Fe	57	2	72	52.068	ppb	7.720	7388	50	104.1	70	130	
Co	59	2	72	1.099	ppb	8.870	16782	1	109.9	70	130	
Ni	60	2	72	1.501	ppb	0.780	4914	1.5	100.1	70	130	
Cu	63	2	72	2.024	ppb	6.773	19037	2	101.2	70	130	
Zn	66	2	72	9.509	ppb	7.050	11127	10	95.1	70	130	
As	75	2	72	4.777	ppb	1.038	3991	5	95.5	70	130	
Se	78	1	72	5.132	ppb	1.664	3231	5	102.6	70	130	
Sr	88	2	45	0.987	ppb	2.398	3380	1	98.7	70	130	
Zr	90	2	72	-10.003	ppb	-27.884	303	0.5	-2000.6	70	130	> +/-30%
Zr	90	1	72	-8.599	ppb	-7.355	1548	0.5	-1719.9	70	130	> +/-30%
Nb	93	2	72	1.410	ppb	15.265	13672	2	70.5	70	130	
Mo	95	2	115	2.135	ppb	4.230	8375	2	106.7	70	130	
Pd	105	2	115	-0.022	ppb	-33.535	207	1	-2.2	70	130	> +/-30%
Ag	107	2	115	4.967	ppb	1.014	55874	5	99.3	70	130	
Cd	111	2	115	1.009	ppb	6.609	1623	1	100.9	70	130	
Sn	120	2	115	10.077	ppb	3.680	48639	10	100.8	70	130	
Sb	121	2	115	2.574	ppb	4.964	10607	2	128.7	70	130	
Ba	137	2	115	1.021	ppb	7.865	1453	1	102.1	70	130	
W	182	2	165	4.630	ppb	3.921	39178	1	463.0	70	130	> +/-30%
Pt	195	2	165	0.006	ppb	80.989	50	1	0.6	70	130	> +/-30%
Tl	205	2	165	0.931	ppb	3.468	12696	1	93.1	70	130	
Pb	208	2	165	1.156	ppb	2.143	21146	1	115.6	70	130	
Th	232	2	165	2.009	ppb	2.976	35814	2	100.5	70	130	
U	238	2	165	1.003	ppb	4.252	19046	1	100.3	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1016987	1.73	1092921	93.05	60	125	
Sc (IS)	45	2	HMI He	4224845	2.02	4591929	92.01	60	125	
Sc IS)	45	3	No Gas	122730095	1.66	129634638	94.67	60	120	
Ge Internal Standard	72	1	HMI H2	25260688	1.95	26305534	96.03	60	125	
Ge Internal Standard	72	2	HMI He	4943580	4.24	5205670	94.97	60	125	
In Internal standard	115	2	HMI He	15986026	0.72	16441998	97.23	60	125	
Ho-165	165	2	HMI He	38185347	3.34	37362695	102.20	60	125	

Sample Report

Sample Table

Sample Name LCSD 280-457010/3-A
 Data File Name 042SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T13:47:06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457010 200.8
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	72.920	ppb	72.920	1.96	9564312	40000	
Be	9	1	6	41.327	ppb	41.327	4.02	17487	2000	
B	11	1	6	1263.972	ppb	1263.972	9.60	16107	100	>LDR
Na	23	2	45	13.754	ppb	13.754	13.78	54373	400000	
Mg	24	2	45	1.638	ppb	1.638	44.32	873	400000	
Al	27	2	45	425.265	ppb	425.265	6.82	38392	400000	
K	39	2	45	21.070	ppb	21.070	59.56	108542	400000	
Ca	44	2	45	157.602	ppb	157.602	10.02	3827	400000	
V	51	2	72	43.823	ppb	43.823	0.79	219059	2000	
Cr	52	2	72	42.882	ppb	42.882	0.99	268219	5000	
Mn	55	2	72	43.444	ppb	43.444	3.82	120967	10000	
Fe	57	2	72	419.057	ppb	419.057	2.86	50417	400000	
Co	59	2	72	42.743	ppb	42.743	2.75	425648	2000	
Ni	60	2	72	43.316	ppb	43.316	1.18	115113	5000	
Cu	63	2	72	43.324	ppb	43.324	2.72	322841	5000	
Zn	66	2	72	42.436	ppb	42.436	0.53	46767	5000	
As	75	2	72	40.603	ppb	40.603	1.18	32272	2000	
Se	78	1	72	43.101	ppb	43.101	0.53	27298	2000	
Sr	88	2	45	43.706	ppb	43.706	1.48	140463	2000	
Zr	90	2	72	438.371	ppb	438.371	3.84	8272	1000	
Zr	90	1	72	412.792	ppb	412.792	2.32	20764	1000	
Nb	93	2	72	1.122	ppb	1.122	0.65	11707	200	
Mo	95	2	115	41.489	ppb	41.489	3.06	158294	2000	
Pd	105	2	115	-0.020	ppb	-0.020	-62.56	217	100	
Ag	107	2	115	42.905	ppb	42.905	2.99	477341	100	
Cd	111	2	115	42.826	ppb	42.826	2.23	68184	2000	
Sn	120	2	115	42.259	ppb	42.259	2.15	200172	2000	
Sb	121	2	115	45.327	ppb	45.327	2.78	181284	1000	
Ba	137	2	115	43.154	ppb	43.154	1.15	55414	5000	
W	182	2	165	33.389	ppb	33.389	2.56	264078	100	
Pt	195	2	165	0.002	ppb	0.002	124.95	23	100	
Tl	205	2	165	39.535	ppb	39.535	3.03	527337	2000	
Pb	208	2	165	42.300	ppb	42.300	2.08	739425	5000	
Th	232	2	165	39.757	ppb	39.757	2.80	689463	2000	
U	238	2	165	41.310	ppb	41.310	1.66	780967	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1026338	2.26	1092921	93.91	60	125	
Sc (IS)	45	2	HMI He	4185002	2.38	4591929	91.14	60	125	
Sc (IS)	45	3	No Gas	122796140	1.27	129634638	94.72	60	120	
Ge Internal Standard	72	1	HMI H2	25571048	1.93	26305534	97.21	60	125	
Ge Internal Standard	72	2	HMI He	4881483	0.75	5205670	93.77	60	125	
In Internal standard	115	2	HMI He	15838919	1.22	16441998	96.33	60	125	
Ho-165	165	2	HMI He	38112207	2.38	37362695	102.01	60	125	

Sample Report

Sample Table

Sample Name 280-123337-D-1-B MS
 Data File Name 043SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T13:51:18-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457259 200.8
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	49.622	ppb	49.622	2.55	9131245	40000	
Be	9	1	6	30.071	ppb	30.071	2.10	12649	2000	
B	11	1	6	1688.825	ppb	1688.825	1.66	21276	100	>LDR
Na	23	2	45	155664.213	ppb	155664.213	1.66	123971289	400000	
Mg	24	2	45	1142.802	ppb	1142.802	1.67	376107	400000	
Al	27	2	45	331.462	ppb	331.462	2.58	31418	400000	
K	39	2	45	4590.045	ppb	4590.045	3.32	1518881	400000	
Ca	44	2	45	1624.628	ppb	1624.628	0.62	38613	400000	
V	51	2	72	31.989	ppb	31.989	1.63	163962	2000	
Cr	52	2	72	31.925	ppb	31.925	4.77	200334	5000	
Mn	55	2	72	33.924	ppb	33.924	2.31	94680	10000	
Fe	57	2	72	328.449	ppb	328.449	6.68	39829	400000	
Co	59	2	72	31.103	ppb	31.103	2.27	311867	2000	
Ni	60	2	72	30.882	ppb	30.882	2.08	82469	5000	
Cu	63	2	72	32.183	ppb	32.183	2.59	241216	5000	
Zn	66	2	72	31.544	ppb	31.544	6.23	34986	5000	
As	75	2	72	30.774	ppb	30.774	1.46	24544	2000	
Se	78	1	72	31.326	ppb	31.326	1.73	19350	2000	
Sr	88	2	45	47.221	ppb	47.221	1.71	158747	2000	
Zr	90	2	72	401.689	ppb	401.689	2.45	7635	1000	
Zr	90	1	72	415.768	ppb	415.768	4.45	20373	1000	
Nb	93	2	72	0.482	ppb	0.482	21.25	7662	200	
Mo	95	2	115	33.792	ppb	33.792	2.42	125758	2000	
Pd	105	2	115	-0.025	ppb	-0.025	-37.62	183	100	
Ag	107	2	115	31.321	ppb	31.321	0.78	339852	100	
Cd	111	2	115	31.743	ppb	31.743	2.73	49277	2000	
Sn	120	2	115	31.838	ppb	31.838	3.18	147165	2000	
Sb	121	2	115	34.795	ppb	34.795	2.38	135745	1000	
Ba	137	2	115	38.246	ppb	38.246	4.71	47880	5000	
W	182	2	165	25.374	ppb	25.374	3.43	201506	100	
Pt	195	2	165	-0.003	ppb	-0.003	0.00	0	100	
Tl	205	2	165	28.692	ppb	28.692	3.21	383048	2000	
Pb	208	2	165	29.890	ppb	29.890	2.76	523112	5000	
Th	232	2	165	29.173	ppb	29.173	3.99	506559	2000	
U	238	2	165	30.133	ppb	30.133	2.93	570059	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1019985	2.95	1092921	93.33	60	125	
Sc (IS)	45	2	HMI He	4379146	2.37	4591929	95.37	60	125	
Sc (IS)	45	3	No Gas	123839526	1.12	129634638	95.53	60	120	
Ge Internal Standard	72	1	HMI H2	24928969	0.62	26305534	94.77	60	125	
Ge Internal Standard	72	2	HMI He	4890836	1.65	5205670	93.95	60	125	
In Internal standard	115	2	HMI He	15447056	2.00	16441998	93.95	60	125	
Ho-165	165	2	HMI He	38140835	2.02	37362695	102.08	60	125	

Sample Report

Sample Table

Sample Name 280-123337-D-1-C MSD
 Data File Name 044SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T13:54:49-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457259 200.8
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	51.583	ppb	51.583	9.95	9185488	40000	
Be	9	1	6	31.289	ppb	31.289	1.42	13051	2000	
B	11	1	6	1746.498	ppb	1746.498	4.14	21783	100	>LDR
Na	23	2	45	160397.602	ppb	160397.602	3.05	125149923	400000	
Mg	24	2	45	1163.794	ppb	1163.794	1.38	375286	400000	
Al	27	2	45	358.824	ppb	358.824	2.39	33298	400000	
K	39	2	45	4948.028	ppb	4948.028	1.60	1597016	400000	
Ca	44	2	45	1679.928	ppb	1679.928	1.85	39107	400000	
V	51	2	72	30.742	ppb	30.742	4.99	167032	2000	
Cr	52	2	72	30.486	ppb	30.486	4.96	202227	5000	
Mn	55	2	72	32.471	ppb	32.471	4.20	95776	10000	
Fe	57	2	72	308.180	ppb	308.180	5.34	39565	400000	
Co	59	2	72	29.897	ppb	29.897	5.06	316933	2000	
Ni	60	2	72	29.950	ppb	29.950	6.74	84472	5000	
Cu	63	2	72	30.354	ppb	30.354	4.13	240638	5000	
Zn	66	2	72	30.252	ppb	30.252	4.16	35497	5000	
As	75	2	72	29.989	ppb	29.989	6.04	25260	2000	
Se	78	1	72	31.158	ppb	31.158	2.62	19258	2000	
Sr	88	2	45	49.139	ppb	49.139	2.41	161856	2000	
Zr	90	2	72	380.513	ppb	380.513	7.62	7659	1000	
Zr	90	1	72	399.977	ppb	399.977	2.38	19691	1000	
Nb	93	2	72	0.242	ppb	0.242	9.80	6488	200	
Mo	95	2	115	34.449	ppb	34.449	2.20	128784	2000	
Pd	105	2	115	-0.031	ppb	-0.031	-20.02	153	100	
Ag	107	2	115	31.719	ppb	31.719	1.15	345654	100	
Cd	111	2	115	32.681	ppb	32.681	2.22	50959	2000	
Sn	120	2	115	32.779	ppb	32.779	1.95	152208	2000	
Sb	121	2	115	34.931	ppb	34.931	3.75	136876	1000	
Ba	137	2	115	38.456	ppb	38.456	2.22	48388	5000	
W	182	2	165	25.446	ppb	25.446	1.57	203054	100	
Pt	195	2	165	0.001	ppb	0.001	751.37	17	100	
Tl	205	2	165	30.094	ppb	30.094	2.40	403659	2000	
Pb	208	2	165	30.063	ppb	30.063	1.49	528659	5000	
Th	232	2	165	29.833	ppb	29.833	3.28	520399	2000	
U	238	2	165	30.381	ppb	30.381	2.61	577449	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1011227	2.20	1092921	92.53	60	125	
Sc (IS)	45	2	HMI He	4290720	1.63	4591929	93.44	60	125	
Sc (IS)	45	3	No Gas	123983764	0.72	129634638	95.64	60	120	
Ge Internal Standard	72	1	HMI H2	24951695	1.38	26305534	94.85	60	125	
Ge Internal Standard	72	2	HMI He	5173034	4.46	5205670	99.37	60	125	
In Internal standard	115	2	HMI He	15514941	1.05	16441998	94.36	60	125	
Ho-165	165	2	HMI He	38315054	1.57	37362695	102.55	60	125	

Sample Report

Sample Table

Sample Name 280-123328-B-5-Asd@5
 Data File Name 045SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T13:58:20-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457254 6020a dod4
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Pass
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-3.935	ppb	-3.935	-163.59	8147178	40000	
Be	9	1	6	0.069	ppb	0.069	86.20	33	2000	
B	11	1	6	218.960	ppb	218.960	9.49	3100	100	
Na	23	2	45	64546.849	ppb	64546.849	1.66	51005564	400000	
Mg	24	2	45	4091.608	ppb	4091.608	3.47	1333971	400000	
Al	27	2	45	11.966	ppb	11.966	6.39	1493	400000	
K	39	2	45	848.956	ppb	848.956	3.49	365250	400000	
Ca	44	2	45	19545.289	ppb	19545.289	0.65	457464	400000	
V	51	2	72	0.195	ppb	0.195	36.39	15684	2000	
Cr	52	2	72	1.600	ppb	1.600	4.42	12068	5000	
Mn	55	2	72	7.875	ppb	7.875	0.10	23359	10000	
Fe	57	2	72	35.483	ppb	35.483	7.59	5661	400000	
Co	59	2	72	0.160	ppb	0.160	17.45	7778	2000	
Ni	60	2	72	7.009	ppb	7.009	4.00	20462	5000	
Cu	63	2	72	0.822	ppb	0.822	7.34	10540	5000	
Zn	66	2	72	24.918	ppb	24.918	1.53	29299	5000	
As	75	2	72	0.190	ppb	0.190	7.15	332	2000	
Se	78	1	72	0.129	ppb	0.129	47.53	103	2000	
Sr	88	2	45	80.536	ppb	80.536	1.59	268373	2000	
Zr	90	2	72	18.637	ppb	18.637	23.60	853	1000	
Zr	90	1	72	22.849	ppb	22.849	15.87	2947	1000	
Nb	93	2	72	0.037	ppb	0.037	291.84	5098	200	
Mo	95	2	115	1.179	ppb	1.179	5.68	4704	2000	
Pd	105	2	115	-0.033	ppb	-0.033	-19.37	150	100	
Ag	107	2	115	0.018	ppb	0.018	18.09	320	100	
Cd	111	2	115	0.046	ppb	0.046	34.30	77	2000	
Sn	120	2	115	0.279	ppb	0.279	5.38	1950	2000	
Sb	121	2	115	0.301	ppb	0.301	18.17	1447	1000	
Ba	137	2	115	157.044	ppb	157.044	0.58	203456	5000	
W	182	2	165	0.097	ppb	0.097	38.18	3774	100	
Pt	195	2	165	0.000	ppb	0.000	259.40	17	100	
Tl	205	2	165	0.031	ppb	0.031	56.90	670	2000	
Pb	208	2	165	0.326	ppb	0.326	10.80	6791	5000	
Th	232	2	165	0.866	ppb	0.866	3.49	16376	2000	
U	238	2	165	0.231	ppb	0.231	10.89	4554	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1009543	1.42	1092921	92.37	60	125	
Sc (IS)	45	2	HMI He	4342770	2.31	4591929	94.57	60	125	
Sc (IS)	45	3	No Gas	126943148	0.41	129634638	97.92	60	120	
Ge Internal Standard	72	1	HMI H2	25096491	2.11	26305534	95.40	60	125	
Ge Internal Standard	72	2	HMI He	5155591	0.45	5205670	99.04	60	125	
In Internal standard	115	2	HMI He	16008095	0.48	16441998	97.36	60	125	
Ho-165	165	2	HMI He	39270272	4.98	37362695	105.11	60	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name CCV-5699926
 Data File Name 046_CCV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T14:01:50-06:00
 Sample Type CCV
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	92.018	ppb	4.787	165497	100	92.0	90	110	
Li	7	3	45	106.779	ppb	9.228	10382409	100	106.8	90	110	
Be	9	1	6	48.006	ppb	0.449	20807	50	96.0	90	110	
B	11	1	6	69.877	ppb	23.163	1333	50	139.8	90	110	>+ \-10%
Na	23	2	45	1092.825	ppb	4.403	902257	1000	109.3	90	110	
Mg	24	2	45	1019.725	ppb	1.935	330818	1000	102.0	90	110	
Al	27	2	45	1030.720	ppb	3.748	95458	1000	103.1	90	110	
K	39	2	45	1017.846	ppb	4.125	414068	1000	101.8	90	110	
Ca	44	2	45	987.929	ppb	4.849	23236	1000	98.8	90	110	
V	51	2	72	51.108	ppb	4.301	260444	50	102.2	90	110	
Cr	52	2	72	50.451	ppb	3.783	324420	50	100.9	90	110	
Mn	55	2	72	51.374	ppb	5.338	147114	50	102.7	90	110	
Fe	57	2	72	1019.766	ppb	3.382	124480	1000	102.0	90	110	
Co	59	2	72	51.313	ppb	4.626	524526	50	102.6	90	110	
Ni	60	2	72	51.128	ppb	4.272	139659	50	102.3	90	110	
Cu	63	2	72	49.982	ppb	3.542	382588	50	100.0	90	110	
Zn	66	2	72	50.272	ppb	2.192	56887	50	100.5	90	110	
As	75	2	72	51.061	ppb	2.915	41720	50	102.1	90	110	
Se	78	1	72	51.773	ppb	4.560	33395	50	103.5	90	110	
Sr	88	2	45	102.757	ppb	3.785	340097	100	102.8	90	110	
Zr	90	2	72	89.905	ppb	2.229	2137	50	179.8	90	110	>+ \-10%
Zr	90	1	72	130.817	ppb	9.727	8067	50	261.6	90	110	>+ \-10%
Nb	93	2	72	92.852	ppb	3.375	610766	100	92.9	90	110	
Mo	95	2	115	48.738	ppb	1.634	185713	50	97.5	90	110	
Pd	105	2	115	50.839	ppb	3.044	279817	50	101.7	90	110	
Ag	107	2	115	50.902	ppb	4.323	565217	50	101.8	90	110	
Cd	111	2	115	51.891	ppb	4.706	82479	50	103.8	90	110	
Sn	120	2	115	51.445	ppb	3.853	243140	50	102.9	90	110	
Sb	121	2	115	51.649	ppb	5.436	206156	50	103.3	90	110	
Ba	137	2	115	52.016	ppb	2.390	66664	50	104.0	90	110	
W	182	2	165	48.342	ppb	1.781	389653	50	96.7	90	110	
Pt	195	2	165	46.723	ppb	1.331	259654	50	93.4	90	110	
Tl	205	2	165	45.684	ppb	4.670	623096	50	91.4	90	110	
Pb	208	2	165	48.454	ppb	1.498	865948	50	96.9	90	110	
Th	232	2	165	47.428	ppb	1.543	840963	50	94.9	90	110	
U	238	2	165	46.641	ppb	2.895	901572	50	93.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1050706	0.33	1092921	96.14	60	125	
Sc (IS)	45	2	HMI He	4316666	3.53	4591929	94.01	60	125	
Sc IS)	45	3	No Gas	123740741	2.06	129634638	95.45	60	120	
Ge Internal Standard	72	1	HMI H2	26055562	1.11	26305534	99.05	60	125	
Ge Internal Standard	72	2	HMI He	5025586	2.57	5205670	96.54	60	125	
In Internal standard	115	2	HMI He	15821559	2.51	16441998	96.23	60	125	
Ho-165	165	2	HMI He	38959176	0.26	37362695	104.27	60	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name CCB-5699924
 Data File Name 047_CCB.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T14:08:04-06:00
 Sample Type CCB
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	1	45	-7.634	ppb	-112.2	128053	0.1	
Li	7	3	45	-2.344	ppb	-437.7	8136556	0.05	
Be	9	1	6	0.019	ppb	121.1	13	0.5	
B	11	1	6	0.206	ppb	3048.3	457	0.1	>RL
Na	23	2	45	64.567	ppb	1.4	96730	25	>RL
Mg	24	2	45	0.888	ppb	15.1	667	25	
Al	27	2	45	-0.316	ppb	-148.4	353	15	
K	39	2	45	12.757	ppb	59.5	110326	50	
Ca	44	2	45	0.823	ppb	240.1	310	25	
V	51	2	72	0.261	ppb	43.0	15884	1	
Cr	52	2	72	0.003	ppb	644.2	1563	1	
Mn	55	2	72	0.127	ppb	44.8	607	0.5	
Fe	57	2	72	1.955	ppb	79.1	1487	25	
Co	59	2	72	0.002	ppb	4141.6	6081	0.5	
Ni	60	2	72	0.148	ppb	16.3	1347	1	
Cu	63	2	72	0.662	ppb	11.4	9216	1	
Zn	66	2	72	0.093	ppb	162.0	817	5	
As	75	2	72	0.016	ppb	221.9	184	1	
Se	78	1	72	0.054	ppb	41.1	59	1	
Sr	88	2	45	-0.007	ppb	-159.2	163	1	
Zr	90	2	72	-10.734	ppb	-36.2	300	1	
Zr	90	1	72	-6.522	ppb	-46.3	1692	1	
Nb	93	2	72	2.111	ppb	4.2	18847	2	>RL
Mo	95	2	115	0.067	ppb	21.6	417	0.5	
Pd	105	2	115	-0.019	ppb	-92.2	223	1	
Ag	107	2	115	-0.001	ppb	-189.3	110	1	
Cd	111	2	115	0.034	ppb	42.5	57	0.5	
Sn	120	2	115	0.122	ppb	34.8	1190	1	
Sb	121	2	115	0.117	ppb	8.5	693	1	
Ba	137	2	115	0.016	ppb	464.4	153	0.5	
W	182	2	165	0.011	ppb	440.0	2974	1	
Pt	195	2	165	-0.001	ppb	-241.1	10	1	
Tl	205	2	165	0.005	ppb	102.3	320	0.1	
Pb	208	2	165	0.043	ppb	27.7	1663	0.5	
Th	232	2	165	0.093	ppb	3.1	2520	1	
U	238	2	165	0.018	ppb	9.9	410	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1074582	3.83	1092921	98.32	60	125	
Sc (IS)	45	2	HMI He	4350148	1.15	4591929	94.73	60	125	
Sc (IS)	45	3	No Gas	126259068	2.17	129634638	97.40	60	120	
Ge Internal Standard	72	1	HMI H2	26046500	1.66	26305534	99.02	60	125	
Ge Internal Standard	72	2	HMI He	5116221	2.49	5205670	98.28	60	125	
In Internal standard	115	2	HMI He	15843511	1.33	16441998	96.36	60	125	
Ho-165	165	2	HMI He	38072353	2.20	37362695	101.90	60	125	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name CCVL-5699928
 Data File Name 048LLCCV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T14:11:35-06:00
 Sample Type LLCCV
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	6.763	ppb	121.822	8149247	50	13.5	70	130	> +/-30%
Be	9	1	6	1.038	ppb	22.916	448	1	103.8	70	130	
Na	23	2	45	93.347	ppb	1.425	117023	50	186.7	70	130	> +/-30%
Mg	24	2	45	50.686	ppb	3.385	16588	50	101.4	70	130	
Al	27	2	45	46.179	ppb	7.603	4584	50	92.4	70	130	
K	39	2	45	108.776	ppb	5.379	136800	100	108.8	70	130	
Ca	44	2	45	32.618	ppb	5.336	1033	50	65.2	70	130	> +/-30%
V	51	2	72	5.659	ppb	2.733	40798	5	113.2	70	130	
Cr	52	2	72	1.977	ppb	4.014	13899	2	98.9	70	130	
Mn	55	2	72	0.986	ppb	6.956	2994	1	98.6	70	130	
Fe	57	2	72	50.224	ppb	8.089	7152	50	100.4	70	130	
Co	59	2	72	0.956	ppb	6.945	15327	1	95.6	70	130	
Ni	60	2	72	1.522	ppb	2.438	4954	1.5	101.5	70	130	
Cu	63	2	72	2.024	ppb	3.922	18994	2	101.2	70	130	
Zn	66	2	72	10.318	ppb	3.912	11994	10	103.2	70	130	
As	75	2	72	4.800	ppb	3.743	3994	5	96.0	70	130	
Se	78	1	72	4.677	ppb	10.148	3011	5	93.5	70	130	
Sr	88	2	45	0.997	ppb	9.559	3444	1	99.7	70	130	
Zr	90	2	72	-13.819	ppb	-27.203	233	0.5	-2763.8	70	130	> +/-30%
Zr	90	1	72	-7.604	ppb	-19.413	1628	0.5	-1520.8	70	130	> +/-30%
Nb	93	2	72	1.422	ppb	6.188	13742	2	71.1	70	130	
Mo	95	2	115	1.957	ppb	4.572	7565	2	97.8	70	130	
Pd	105	2	115	-0.022	ppb	-39.508	203	1	-2.2	70	130	> +/-30%
Ag	107	2	115	4.973	ppb	5.233	54924	5	99.5	70	130	
Cd	111	2	115	1.105	ppb	3.979	1750	1	110.5	70	130	
Sn	120	2	115	9.966	ppb	3.936	47259	10	99.7	70	130	
Sb	121	2	115	1.977	ppb	2.110	8059	2	98.9	70	130	
Ba	137	2	115	0.992	ppb	29.152	1383	1	99.2	70	130	
W	182	2	165	4.699	ppb	1.195	38758	1	469.9	70	130	> +/-30%
Pt	195	2	165	0.003	ppb	122.823	30	1	0.3	70	130	> +/-30%
Tl	205	2	165	0.973	ppb	5.204	12922	1	97.3	70	130	
Pb	208	2	165	1.029	ppb	2.795	18452	1	102.9	70	130	
Th	232	2	165	1.924	ppb	3.506	33451	2	96.2	70	130	
U	238	2	165	0.981	ppb	0.966	18176	1	98.1	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1042624	4.20	1092921	95.40	60	125	
Sc (IS)	45	2	HMI He	4260347	1.85	4591929	92.78	60	125	
Sc IS)	45	3	No Gas	123329142	1.52	129634638	95.14	60	120	
Ge Internal Standard	72	1	HMI H2	25816160	0.49	26305534	98.14	60	125	
Ge Internal Standard	72	2	HMI He	4925814	1.36	5205670	94.62	60	125	
In Internal standard	115	2	HMI He	15711285	3.35	16441998	95.56	60	125	
Ho-165	165	2	HMI He	37240053	1.44	37362695	99.67	60	125	

Blank Report

Sample Table

Sample Name MB 280-457083/1-A
 Data File Name 049_BLK.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T14:15:06-06:00
 Sample Type Blank
 Dilution 1
 Comment 457083 6020a
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-18.794	ppb	-53.00298805	124787	0.1
Li	7	3	45	-3.803	ppb	-154.2225261	8241127	0.05
Be	9	1	6	0.001	ppb	2199.061316	5	0.5
Na	23	2	45	53.095	ppb	1.798212012	89921	25
Mg	24	2	45	2.431	ppb	28.1131456	1203	25
Al	27	2	45	2.628	ppb	13.21972231	643	15
K	39	2	45	5.783	ppb	198.0639608	110977	50
Ca	44	2	45	14.438	ppb	23.97324998	647	25
V	51	2	72	-1.145	ppb	-10.81999635	9122	1
Cr	52	2	72	0.167	ppb	3.951119455	2670	1
Mn	55	2	72	0.354	ppb	11.73419142	1290	0.5
Fe	57	2	72	23.320	ppb	14.91882183	4184	25
Co	59	2	72	0.046	ppb	56.38677885	6651	0.5
Ni	60	2	72	0.048	ppb	176.3148977	1087	1
Cu	63	2	72	-0.036	ppb	-48.51887426	3894	1
Zn	66	2	72	0.841	ppb	27.09346545	1697	5
As	75	2	72	0.191	ppb	15.7372492	335	1
Se	78	1	72	0.012	ppb	164.9748668	31	1
Sr	88	2	45	0.078	ppb	10.10683989	460	1
Zr	90	2	72	-3.720	ppb	-73.60034598	437	1
Zr	90	1	72	2.668	ppb	199.5418937	2079	1
Nb	93	2	72	1.821	ppb	7.853859494	17172	2
Mo	95	2	115	0.068	ppb	19.90161703	447	0.5
Pd	105	2	115	-0.031	ppb	-35.07412041	167	1
Ag	107	2	115	0.007	ppb	48.45830074	203	1
Cd	111	2	115	0.040	ppb	1.402171054	70	0.5
Sn	120	2	115	0.250	ppb	9.314254314	1900	1
Sb	121	2	115	0.147	ppb	8.346247228	863	1
Ba	137	2	115	0.150	ppb	33.54601236	343	0.5
W	182	2	165	0.046	ppb	77.92539842	3327	1
Pt	195	2	165	0.011	ppb	77.7291887	73	1
Tl	205	2	165	0.013	ppb	46.95886821	427	0.1
Pb	208	2	165	0.190	ppb	9.667730607	4307	0.5
Th	232	2	165	1.075	ppb	5.035296091	19857	1
U	238	2	165	0.025	ppb	17.18271016	543	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1025751	3.27	1092921	93.85	60	125	
Sc (IS)	45	2	HMI He	4462671	1.95	4591929	97.19	60	125	
Sc IS)	45	3	No Gas	128364730	2.61	129634638	99.02	60	120	
Ge Internal Standard	72	1	HMI H2	25551632	1.09	26305534	97.13	60	125	
Ge Internal Standard	72	2	HMI He	5192665	0.85	5205670	99.75	60	125	
In Internal standard	115	2	HMI He	16786720	1.34	16441998	102.10	60	125	
Ho-165	165	2	HMI He	38824808	5.63	37362695	103.91	60	125	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name LCS 280-457083/2-A
 Data File Name 050_LCS.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T14:18:39-06:00
 Sample Type LCS
 Dilution 1
 Analyst Denver Metals
 Comment 457083 6020a
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	72.063	72.063	ppb	17.333	10237364	400	18.0	80	120	> +/-20%
Be	9	1	6	38.524	38.524	ppb	2.009	16813	40	96.3	80	120	
Na	23	2	45	34.537	34.537	ppb	1.588	76590	40	86.3	80	120	
Mg	24	2	45	2.195	2.195	ppb	26.286	1147	40	5.5	80	120	> +/-20%
Al	27	2	45	409.188	409.188	ppb	1.388	40356	40	1023.0	80	120	> +/-20%
K	39	2	45	8.358	8.358	ppb	55.902	114386	40	20.9	80	120	> +/-20%
Ca	44	2	45	147.233	147.233	ppb	11.601	3927	40	368.1	80	120	> +/-20%
V	51	2	72	37.978	37.978	ppb	2.256	208367	40	94.9	80	120	
Cr	52	2	72	40.269	40.269	ppb	2.547	273853	40	100.7	80	120	
Mn	55	2	72	40.748	40.748	ppb	2.598	123358	40	101.9	80	120	
Fe	57	2	72	412.370	412.370	ppb	1.903	53950	40	1030.9	80	120	> +/-20%
Co	59	2	72	39.096	39.096	ppb	4.504	423560	40	97.7	80	120	
Ni	60	2	72	39.778	39.778	ppb	6.098	114892	40	99.4	80	120	
Cu	63	2	72	38.370	38.370	ppb	4.039	311123	40	95.9	80	120	
Zn	66	2	72	38.123	38.123	ppb	5.788	45707	40	95.3	80	120	
As	75	2	72	37.048	37.048	ppb	4.350	32010	40	92.6	80	120	
Se	78	1	72	38.394	38.394	ppb	1.414	24379	40	96.0	80	120	
Sr	88	2	45	41.277	41.277	ppb	1.730	144724	40	103.2	80	120	
Nb	93	2	72	1.241	1.241	ppb	4.867	13559	40	3.1	80	120	> +/-20%
Mo	95	2	115	39.470	39.470	ppb	3.793	156269	40	98.7	80	120	
Pd	105	2	115	-0.034	-0.034	ppb	-22.809	147	40	-0.1	80	120	> +/-20%
Ag	107	2	115	40.711	40.711	ppb	3.624	469884	40	101.8	80	120	
Cd	111	2	115	38.642	38.642	ppb	4.528	63813	40	96.6	80	120	
Sn	120	2	115	40.284	40.284	ppb	4.602	197940	40	100.7	80	120	
Sb	121	2	115	41.172	41.172	ppb	5.219	170798	40	102.9	80	120	
Ba	137	2	115	39.912	39.912	ppb	4.599	53163	40	99.8	80	120	
W	182	2	165	31.454	31.454	ppb	3.423	264073	40	78.6	80	120	> +/-20%
Pt	195	2	165	0.001	0.001	ppb	336.253	20	40	0.0	80	120	> +/-20%
Tl	205	2	165	35.674	35.674	ppb	0.649	504929	40	89.2	80	120	
Pb	208	2	165	38.243	38.243	ppb	0.639	709428	40	95.6	80	120	
Th	232	2	165	35.821	35.821	ppb	0.102	659290	40	89.6	80	120	
U	238	2	165	36.388	36.388	ppb	2.191	729720	40	91.0	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1057981	3.98	1092921	96.80	60	125	
Sc (IS)	45	2	HMI He	4565281	0.55	4591929	99.42	60	125	
Sc IS)	45	3	No Gas	131744563	2.12	129634638	101.63	60	120	
Ge Internal Standard	72	1	HMI H2	25640531	2.90	26305534	97.47	60	125	
Ge Internal Standard	72	2	HMI He	5308201	3.08	5205670	101.97	60	125	
In Internal standard	115	2	HMI He	16447079	3.91	16441998	100.03	60	125	
Ho-165	165	2	HMI He	40425255	1.33	37362695	108.20	60	125	

Sample Report

Sample Table

Sample Name 280-123279-A-1-B
 Data File Name 051SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T14:22:11-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457083 6020a
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	291.891	ppb	291.891	5.16	14802917	40000	
Be	9	1	6	0.049	ppb	0.049	104.86	23	2000	
B	11	1	6	4780.688	ppb	4780.688	3.24	55432	100	>LDR
Na	23	2	45	790412.955	ppb	790412.955	4.80	648651913	400000	
Mg	24	2	45	117332.572	ppb	117332.572	4.52	39759636	400000	
Al	27	2	45	38.676	ppb	38.676	3.23	4137	400000	
K	39	2	45	20777.922	ppb	20777.922	1.08	6709300	400000	
Ca	44	2	45	72542.230	ppb	72542.230	1.21	1766884	400000	
V	51	2	72	-1.164	ppb	-1.164	-3.18	8759	2000	
Cr	52	2	72	0.403	ppb	0.403	13.95	4104	5000	
Mn	55	2	72	81.319	ppb	81.319	3.82	233315	10000	
Fe	57	2	72	85.195	ppb	85.195	3.22	11557	400000	
Co	59	2	72	1.469	ppb	1.469	3.50	20873	2000	
Ni	60	2	72	6.802	ppb	6.802	3.08	19431	5000	
Cu	63	2	72	0.226	ppb	0.226	20.47	5761	5000	
Zn	66	2	72	1.649	ppb	1.649	11.03	2547	5000	
As	75	2	72	1.253	ppb	1.253	2.99	1191	2000	
Se	78	1	72	0.222	ppb	0.222	26.05	151	2000	
Sr	88	2	45	2393.284	ppb	2393.284	6.58	8278511	2000	
Zr	90	2	72	267.517	ppb	267.517	3.07	5398	1000	
Zr	90	1	72	284.473	ppb	284.473	2.57	13693	1000	
Nb	93	2	72	1.002	ppb	1.002	23.44	11276	200	
Mo	95	2	115	0.922	ppb	0.922	6.60	3614	2000	
Pd	105	2	115	0.033	ppb	0.033	60.88	500	100	
Ag	107	2	115	0.017	ppb	0.017	22.54	303	100	
Cd	111	2	115	0.026	ppb	0.026	12.67	43	2000	
Sn	120	2	115	0.387	ppb	0.387	18.35	2400	2000	
Sb	121	2	115	0.632	ppb	0.632	7.03	2707	1000	
Ba	137	2	115	11.956	ppb	11.956	2.66	15188	5000	
W	182	2	165	0.052	ppb	0.052	83.24	3150	100	
Pt	195	2	165	0.002	ppb	0.002	187.76	27	100	
Tl	205	2	165	0.077	ppb	0.077	10.22	1217	2000	
Pb	208	2	165	0.151	ppb	0.151	13.68	3394	5000	
Th	232	2	165	0.879	ppb	0.879	6.49	15358	2000	
U	238	2	165	3.183	ppb	3.183	2.72	57421	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	951690	3.07	1092921	87.08	60	125	
Sc (IS)	45	2	HMI He	4519234	4.86	4591929	98.42	60	125	
Sc (IS)	45	3	No Gas	126616864	1.94	129634638	97.67	60	120	
Ge Internal Standard	72	1	HMI H2	23470415	1.51	26305534	89.22	60	125	
Ge Internal Standard	72	2	HMI He	5036018	2.37	5205670	96.74	60	125	
In Internal standard	115	2	HMI He	15574838	1.59	16441998	94.73	60	125	
Ho-165	165	2	HMI He	36333489	4.08	37362695	97.25	60	125	

Sample Report

Sample Table

Sample Name 280-123323-A-2-A
 Data File Name 052SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T14:25:40-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457083 6020a
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	538.475	ppb	538.475	4.11	20901844	40000	
Be	9	1	6	0.005	ppb	0.005	526.82	7	2000	
B	11	1	6	47063.452	ppb	47063.452	4.78	547724	100	>LDR
Na	23	2	45	656096.341	ppb	656096.341	1.30	563170857	400000	
Mg	24	2	45	162657.067	ppb	162657.067	0.55	57655701	400000	
Al	27	2	45	2.061	ppb	2.061	18.60	623	400000	
K	39	2	45	4292.688	ppb	4292.688	0.59	1539381	400000	
Ca	44	2	45	282323.270	ppb	282323.270	1.18	7178368	400000	
V	51	2	72	77.127	ppb	77.127	1.60	392321	2000	
Cr	52	2	72	21.458	ppb	21.458	1.53	141204	5000	
Mn	55	2	72	38.630	ppb	38.630	3.81	112536	10000	
Fe	57	2	72	351.959	ppb	351.959	4.04	44480	400000	
Co	59	2	72	0.959	ppb	0.959	2.05	15924	2000	
Ni	60	2	72	14.365	ppb	14.365	3.45	40551	5000	
Cu	63	2	72	0.834	ppb	0.834	8.51	10530	5000	
Zn	66	2	72	2.085	ppb	2.085	6.90	3080	5000	
As	75	2	72	6.944	ppb	6.944	3.23	5915	2000	
Se	78	1	72	15.164	ppb	15.164	1.93	8905	2000	
Sr	88	2	45	14594.092	ppb	14594.092	0.59	52838145	2000	>LDR
Zr	90	2	72	47.206	ppb	47.206	14.82	1380	1000	
Zr	90	1	72	64.620	ppb	64.620	7.81	4539	1000	
Nb	93	2	72	1.137	ppb	1.137	19.43	12318	200	
Mo	95	2	115	40.481	ppb	40.481	2.61	153700	2000	
Pd	105	2	115	0.475	ppb	0.475	10.45	2930	100	
Ag	107	2	115	0.024	ppb	0.024	45.17	383	100	
Cd	111	2	115	0.019	ppb	0.019	162.89	33	2000	
Sn	120	2	115	0.253	ppb	0.253	12.90	1797	2000	
Sb	121	2	115	0.295	ppb	0.295	10.77	1397	1000	
Ba	137	2	115	9.844	ppb	9.844	6.90	12669	5000	
W	182	2	165	0.256	ppb	0.256	16.23	4834	100	
Pt	195	2	165	-0.002	ppb	-0.002	-55.12	3	100	
Tl	205	2	165	0.020	ppb	0.020	33.18	513	2000	
Pb	208	2	165	0.072	ppb	0.072	9.27	2147	5000	
Th	232	2	165	0.275	ppb	0.275	8.08	5584	2000	
U	238	2	165	30.167	ppb	30.167	4.81	561978	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	962301	3.64	1092921	88.05	60	125	
Sc (IS)	45	2	HMI He	4720327	0.75	4591929	102.80	60	125	
Sc (IS)	45	3	No Gas	129935862	3.30	129634638	100.23	60	120	
Ge Internal Standard	72	1	HMI H2	23678907	1.99	26305534	90.01	60	125	
Ge Internal Standard	72	2	HMI He	5109626	3.65	5205670	98.16	60	125	
In Internal standard	115	2	HMI He	15763429	2.26	16441998	95.87	60	125	
Ho-165	165	2	HMI He	37577355	2.75	37362695	100.57	60	125	

Sample Report

Sample Table

Sample Name 280-123323-A-2-Asd@5
 Data File Name 053SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T14:29:10-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457083 6020a
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	115.581	ppb	115.581	6.47	11140836	40000	
Be	9	1	6	-0.004	ppb	-0.004	-347.28	3	2000	
B	11	1	6	10456.020	ppb	10456.020	3.70	134071	100	>LDR
Na	23	2	45	146838.708	ppb	146838.708	2.98	118407956	400000	
Mg	24	2	45	36681.535	ppb	36681.535	3.39	12208618	400000	
Al	27	2	45	0.331	ppb	0.331	412.50	420	400000	
K	39	2	45	916.485	ppb	916.485	3.90	393919	400000	
Ca	44	2	45	61606.826	ppb	61606.826	1.51	1471701	400000	
V	51	2	72	15.271	ppb	15.271	2.01	91251	2000	
Cr	52	2	72	4.585	ppb	4.585	0.72	32050	5000	
Mn	55	2	72	7.659	ppb	7.659	0.15	22992	10000	
Fe	57	2	72	69.265	ppb	69.265	5.96	9963	400000	
Co	59	2	72	0.208	ppb	0.208	9.16	8379	2000	
Ni	60	2	72	3.188	ppb	3.188	7.13	9933	5000	
Cu	63	2	72	0.747	ppb	0.747	14.67	10060	5000	
Zn	66	2	72	0.500	ppb	0.500	44.09	1310	5000	
As	75	2	72	1.431	ppb	1.431	1.62	1384	2000	
Se	78	1	72	3.052	ppb	3.052	10.96	2000	2000	
Sr	88	2	45	3322.043	ppb	3322.043	4.04	11291729	2000	
Zr	90	2	72	-9.788	ppb	-9.788	-6.86	323	1000	
Zr	90	1	72	-1.967	ppb	-1.967	-139.15	1912	1000	
Nb	93	2	72	-0.084	ppb	-0.084	-21.70	4337	200	
Mo	95	2	115	8.475	ppb	8.475	1.15	33270	2000	
Pd	105	2	115	0.054	ppb	0.054	44.03	640	100	
Ag	107	2	115	0.023	ppb	0.023	10.54	383	100	
Cd	111	2	115	0.006	ppb	0.006	59.61	13	2000	
Sn	120	2	115	0.094	ppb	0.094	27.22	1080	2000	
Sb	121	2	115	0.129	ppb	0.129	36.35	763	1000	
Ba	137	2	115	1.932	ppb	1.932	2.17	2670	5000	
W	182	2	165	0.000	ppb	0.000	4060.11	2994	100	
Pt	195	2	165	0.000	ppb	0.000	-1160.65	13	100	
Tl	205	2	165	0.009	ppb	0.009	60.25	387	2000	
Pb	208	2	165	0.045	ppb	0.045	20.98	1763	5000	
Th	232	2	165	0.000	ppb	0.000	-883.90	930	2000	
U	238	2	165	6.402	ppb	6.402	3.22	124937	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1057176	3.25	1092921	96.73	60	125	
Sc (IS)	45	2	HMI He	4434748	2.63	4591929	96.58	60	125	
Sc (IS)	45	3	No Gas	130302930	0.62	129634638	100.52	60	120	
Ge Internal Standard	72	1	HMI H2	26117366	2.73	26305534	99.28	60	125	
Ge Internal Standard	72	2	HMI He	5216302	2.20	5205670	100.20	60	125	
In Internal standard	115	2	HMI He	16229791	1.89	16441998	98.71	60	125	
Ho-165	165	2	HMI He	39346322	3.79	37362695	105.31	60	125	

Sample Report

Sample Table

Sample Name 280-123323-A-2-B MS
 Data File Name 054SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T14:32:40-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457083 6020a
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	610.148	ppb	610.148	1.06	22326145	40000	
Be	9	1	6	40.498	ppb	40.498	5.24	15365	2000	
B	11	1	6	49260.240	ppb	49260.240	2.94	548678	100	>LDR
Na	23	2	45	664736.930	ppb	664736.930	3.91	546439532	400000	
Mg	24	2	45	165401.288	ppb	165401.288	1.48	56154776	400000	
Al	27	2	45	416.084	ppb	416.084	2.16	40630	400000	
K	39	2	45	4265.691	ppb	4265.691	3.33	1465693	400000	
Ca	44	2	45	280838.212	ppb	280838.212	1.17	6839903	400000	
V	51	2	72	118.381	ppb	118.381	4.44	580559	2000	
Cr	52	2	72	61.075	ppb	61.075	1.54	389848	5000	
Mn	55	2	72	78.465	ppb	78.465	2.02	223168	10000	
Fe	57	2	72	739.222	ppb	739.222	1.28	89985	400000	
Co	59	2	72	39.183	ppb	39.183	1.23	399396	2000	
Ni	60	2	72	51.003	ppb	51.003	1.78	138405	5000	
Cu	63	2	72	37.940	ppb	37.940	1.47	289468	5000	
Zn	66	2	72	39.265	ppb	39.265	3.01	44281	5000	
As	75	2	72	46.608	ppb	46.608	1.37	37843	2000	
Se	78	1	72	54.863	ppb	54.863	2.22	33052	2000	
Sr	88	2	45	15355.640	ppb	15355.640	1.85	53247499	2000	>LDR
Zr	90	2	72	602.659	ppb	602.659	8.73	11441	1000	
Zr	90	1	72	601.891	ppb	601.891	3.99	27941	1000	
Nb	93	2	72	0.533	ppb	0.533	11.04	8149	200	
Mo	95	2	115	80.675	ppb	80.675	0.92	305725	2000	
Pd	105	2	115	0.521	ppb	0.521	7.60	3174	100	
Ag	107	2	115	36.366	ppb	36.366	3.23	401710	100	
Cd	111	2	115	37.718	ppb	37.718	4.10	59611	2000	
Sn	120	2	115	40.577	ppb	40.577	3.10	190872	2000	
Sb	121	2	115	43.771	ppb	43.771	4.42	173791	1000	
Ba	137	2	115	51.374	ppb	51.374	3.92	65483	5000	
W	182	2	165	31.609	ppb	31.609	3.91	254589	100	
Pt	195	2	165	0.002	ppb	0.002	278.14	23	100	
Tl	205	2	165	33.829	ppb	33.829	2.35	459368	2000	
Pb	208	2	165	34.734	ppb	34.734	2.46	618111	5000	
Th	232	2	165	36.148	ppb	36.148	1.84	638214	2000	
U	238	2	165	64.780	ppb	64.780	1.30	1246598	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	920544	2.98	1092921	84.23	60	125	
Sc (IS)	45	2	HMI He	4521770	1.31	4591929	98.47	60	125	
Sc (IS)	45	3	No Gas	128536573	1.64	129634638	99.15	60	120	
Ge Internal Standard	72	1	HMI H2	24334494	1.91	26305534	92.51	60	125	
Ge Internal Standard	72	2	HMI He	4990100	0.71	5205670	95.86	60	125	
In Internal standard	115	2	HMI He	15737732	3.60	16441998	95.72	60	125	
Ho-165	165	2	HMI He	38782463	0.94	37362695	103.80	60	125	

Sample Report

Sample Table

Sample Name 280-123323-A-2-C MSD
 Data File Name 055SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T14:36:09-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457083 6020a
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	613.596	ppb	613.596	2.91	22246978	40000	
Be	9	1	6	41.393	ppb	41.393	2.37	15929	2000	
B	11	1	6	50766.022	ppb	50766.022	1.43	573403	100	>LDR
Na	23	2	45	653990.798	ppb	653990.798	4.27	542345318	400000	
Mg	24	2	45	159523.106	ppb	159523.106	3.20	54625761	400000	
Al	27	2	45	414.063	ppb	414.063	1.97	40804	400000	
K	39	2	45	4305.824	ppb	4305.824	4.06	1491267	400000	
Ca	44	2	45	271852.849	ppb	271852.849	1.43	6680589	400000	
V	51	2	72	113.710	ppb	113.710	3.54	572580	2000	
Cr	52	2	72	59.045	ppb	59.045	1.69	386637	5000	
Mn	55	2	72	78.041	ppb	78.041	0.29	227706	10000	
Fe	57	2	72	733.393	ppb	733.393	1.05	91580	400000	
Co	59	2	72	38.554	ppb	38.554	4.14	403095	2000	
Ni	60	2	72	51.049	ppb	51.049	2.46	142079	5000	
Cu	63	2	72	36.234	ppb	36.234	0.93	283784	5000	
Zn	66	2	72	37.381	ppb	37.381	1.11	43281	5000	
As	75	2	72	45.097	ppb	45.097	2.03	37561	2000	
Se	78	1	72	55.583	ppb	55.583	2.53	33124	2000	
Sr	88	2	45	14915.470	ppb	14915.470	2.50	52175578	2000	>LDR
Zr	90	2	72	608.681	ppb	608.681	3.59	11844	1000	
Zr	90	1	72	601.028	ppb	601.028	2.46	27607	1000	
Nb	93	2	72	0.250	ppb	0.250	29.72	6481	200	
Mo	95	2	115	80.593	ppb	80.593	2.02	300904	2000	
Pd	105	2	115	0.526	ppb	0.526	7.88	3157	100	
Ag	107	2	115	37.929	ppb	37.929	2.49	413066	100	
Cd	111	2	115	38.150	ppb	38.150	1.77	59457	2000	
Sn	120	2	115	40.085	ppb	40.085	1.35	185902	2000	
Sb	121	2	115	43.361	ppb	43.361	0.49	169791	1000	
Ba	137	2	115	51.629	ppb	51.629	1.17	64867	5000	
W	182	2	165	33.095	ppb	33.095	3.68	253001	100	
Pt	195	2	165	0.003	ppb	0.003	161.55	27	100	
Tl	205	2	165	37.325	ppb	37.325	4.80	481099	2000	
Pb	208	2	165	37.287	ppb	37.287	3.15	629994	5000	
Th	232	2	165	38.133	ppb	38.133	3.98	639040	2000	
U	238	2	165	68.415	ppb	68.415	0.54	1250471	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	933075	1.81	1092921	85.37	60	125	
Sc (IS)	45	2	HMI He	4563418	3.43	4591929	99.38	60	125	
Sc (IS)	45	3	No Gas	127624387	0.18	129634638	98.45	60	120	
Ge Internal Standard	72	1	HMI H2	24067182	1.17	26305534	91.49	60	125	
Ge Internal Standard	72	2	HMI He	5118918	1.55	5205670	98.33	60	125	
In Internal standard	115	2	HMI He	15504564	0.47	16441998	94.30	60	125	
Ho-165	165	2	HMI He	36843364	3.27	37362695	98.61	60	125	

Sample Report

Sample Table

Sample Name 280-123323-A-2-A pds
 Data File Name 056SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T14:39:40-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457083 6020a
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	527.596	ppb	527.596	1.65	20701362	40000	
Be	9	1	6	214.618	ppb	214.618	0.85	80702	2000	
B	11	1	6	49075.159	ppb	49075.159	0.37	541653	100	>LDR
Na	23	2	45	627769.563	ppb	627769.563	0.85	548101638	400000	
Mg	24	2	45	156516.788	ppb	156516.788	3.11	56407233	400000	
Al	27	2	45	2017.642	ppb	2017.642	1.38	207580	400000	
K	39	2	45	4206.237	ppb	4206.237	2.76	1536065	400000	
Ca	44	2	45	269927.156	ppb	269927.156	0.74	6982143	400000	
V	51	2	72	301.967	ppb	301.967	5.81	1514765	2000	
Cr	52	2	72	237.816	ppb	237.816	2.96	1571999	5000	
Mn	55	2	72	245.612	ppb	245.612	2.95	725058	10000	
Fe	57	2	72	2332.858	ppb	2332.858	1.30	292281	400000	
Co	59	2	72	207.534	ppb	207.534	1.65	2170932	2000	
Ni	60	2	72	206.516	ppb	206.516	1.81	579158	5000	
Cu	63	2	72	194.762	ppb	194.762	1.38	1526362	5000	
Zn	66	2	72	194.466	ppb	194.466	1.30	224982	5000	
As	75	2	72	207.194	ppb	207.194	2.71	174125	2000	
Se	78	1	72	232.114	ppb	232.114	1.07	137356	2000	
Sr	88	2	45	14869.174	ppb	14869.174	3.13	54760199	2000	>LDR
Zr	90	2	72	93181.244	ppb	93181.244	4.04	1759314	1000	>LDR
Zr	90	1	72	90917.594	ppb	90917.594	0.55	3873455	1000	>LDR
Nb	93	2	72	5.811	ppb	5.811	8.63	44001	200	
Mo	95	2	115	239.918	ppb	239.918	3.80	937023	2000	
Pd	105	2	115	0.608	ppb	0.608	7.67	3767	100	
Ag	107	2	115	37.712	ppb	37.712	4.70	429746	100	
Cd	111	2	115	197.050	ppb	197.050	4.81	321255	2000	
Sn	120	2	115	206.296	ppb	206.296	2.65	998896	2000	
Sb	121	2	115	217.790	ppb	217.790	3.17	891531	1000	
Ba	137	2	115	224.771	ppb	224.771	5.37	294964	5000	
W	182	2	165	205.156	ppb	205.156	3.87	1634433	100	
Pt	195	2	165	0.100	ppb	0.100	22.18	570	100	
Tl	205	2	165	190.031	ppb	190.031	3.89	2575447	2000	
Pb	208	2	165	193.745	ppb	193.745	2.25	3437192	5000	
Th	232	2	165	0.996	ppb	0.996	3.90	18452	2000	
U	238	2	165	223.001	ppb	223.001	3.54	4281596	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	911695	1.08	1092921	83.42	60	125	
Sc (IS)	45	2	HMI He	4801703	2.59	4591929	104.57	60	125	
Sc (IS)	45	3	No Gas	130227157	1.85	129634638	100.46	60	120	
Ge Internal Standard	72	1	HMI H2	23907263	1.19	26305534	90.88	60	125	
Ge Internal Standard	72	2	HMI He	5184221	1.85	5205670	99.59	60	125	
In Internal standard	115	2	HMI He	16238356	3.65	16441998	98.76	60	125	
Ho-165	165	2	HMI He	38721808	2.74	37362695	103.64	60	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name CCV-5699926
 Data File Name 057_CCV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T14:43:09-06:00
 Sample Type CCV
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	83.983	ppb	3.907	168407	100	84.0	90	110	>+ \-10%
Li	7	3	45	108.518	ppb	11.965	10964776	100	108.5	90	110	
Be	9	1	6	50.418	ppb	0.650	22053	50	100.8	90	110	
B	11	1	6	1129.752	ppb	8.329	14930	50	2259.5	90	110	>+ \-10%
Na	23	2	45	1763.919	ppb	1.902	1531156	1000	176.4	90	110	>+ \-10%
Mg	24	2	45	1047.685	ppb	1.600	364072	1000	104.8	90	110	
Al	27	2	45	1009.291	ppb	4.233	100141	1000	100.9	90	110	
K	39	2	45	1013.002	ppb	4.258	442053	1000	101.3	90	110	
Ca	44	2	45	1059.853	ppb	4.605	26684	1000	106.0	90	110	
V	51	2	72	48.720	ppb	2.493	273573	50	97.4	90	110	
Cr	52	2	72	48.448	ppb	1.937	342388	50	96.9	90	110	
Mn	55	2	72	50.557	ppb	2.128	159132	50	101.1	90	110	
Fe	57	2	72	998.965	ppb	2.485	134013	1000	99.9	90	110	
Co	59	2	72	48.998	ppb	0.942	550822	50	98.0	90	110	
Ni	60	2	72	49.263	ppb	1.343	147884	50	98.5	90	110	
Cu	63	2	72	49.287	ppb	2.101	414656	50	98.6	90	110	
Zn	66	2	72	49.190	ppb	2.973	61172	50	98.4	90	110	
As	75	2	72	49.439	ppb	2.086	44388	50	98.9	90	110	
Se	78	1	72	51.285	ppb	1.002	34157	50	102.6	90	110	
Sr	88	2	45	106.619	ppb	1.868	378204	100	106.6	90	110	
Zr	90	2	72	115.978	ppb	10.730	2870	50	232.0	90	110	>+ \-10%
Zr	90	1	72	226.262	ppb	7.693	12888	50	452.5	90	110	>+ \-10%
Nb	93	2	72	91.630	ppb	1.501	662360	100	91.6	90	110	
Mo	95	2	115	49.545	ppb	3.249	202570	50	99.1	90	110	
Pd	105	2	115	50.677	ppb	1.001	299447	50	101.4	90	110	
Ag	107	2	115	51.252	ppb	1.493	611018	50	102.5	90	110	
Cd	111	2	115	50.728	ppb	1.256	86553	50	101.5	90	110	
Sn	120	2	115	51.519	ppb	0.852	261406	50	103.0	90	110	
Sb	121	2	115	51.647	ppb	3.062	221347	50	103.3	90	110	
Ba	137	2	115	50.620	ppb	0.999	69637	50	101.2	90	110	
W	182	2	165	50.900	ppb	4.392	414401	50	101.8	90	110	
Pt	195	2	165	49.101	ppb	4.243	275737	50	98.2	90	110	
Tl	205	2	165	49.127	ppb	3.571	677207	50	98.3	90	110	
Pb	208	2	165	50.378	ppb	6.247	909311	50	100.8	90	110	
Th	232	2	165	49.484	ppb	4.055	886689	50	99.0	90	110	
U	238	2	165	49.531	ppb	1.619	968141	50	99.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1060414	1.66	1092921	97.03	60	125	
Sc (IS)	45	2	HMI He	4624093	2.99	4591929	100.70	60	125	
Sc IS)	45	3	No Gas	130202145	1.91	129634638	100.44	60	120	
Ge Internal Standard	72	1	HMI H2	26890716	1.86	26305534	102.22	60	125	
Ge Internal Standard	72	2	HMI He	5520196	1.80	5205670	106.04	60	125	
In Internal standard	115	2	HMI He	16976376	1.15	16441998	103.25	60	125	
Ho-165	165	2	HMI He	39410996	3.81	37362695	105.48	60	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name CCB-5699924
 Data File Name 058_CCB.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T14:46:40-06:00
 Sample Type CCB
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	1	45	-8.634	ppb	-130.7	127553	0.1	
Li	7	3	45	-5.839	ppb	-77.0	8273165	0.05	
Be	9	1	6	0.016	ppb	185.6	12	0.5	
B	11	1	6	538.831	ppb	5.0	7338	0.1	>RL
Na	23	2	45	631.092	ppb	1.9	565743	25	>RL
Mg	24	2	45	14.215	ppb	4.2	5211	25	
Al	27	2	45	-0.697	ppb	-44.1	330	15	
K	39	2	45	8.792	ppb	122.8	113329	50	
Ca	44	2	45	17.935	ppb	44.3	740	25	
V	51	2	72	-0.332	ppb	-51.0	13299	1	
Cr	52	2	72	0.027	ppb	27.3	1767	1	
Mn	55	2	72	0.138	ppb	7.3	657	0.5	
Fe	57	2	72	3.122	ppb	46.5	1673	25	
Co	59	2	72	0.002	ppb	2453.5	6241	0.5	
Ni	60	2	72	0.059	ppb	29.2	1127	1	
Cu	63	2	72	0.884	ppb	1.4	11207	1	
Zn	66	2	72	0.144	ppb	22.3	900	5	
As	75	2	72	0.040	ppb	30.9	210	1	
Se	78	1	72	0.129	ppb	17.7	107	1	
Sr	88	2	45	1.131	ppb	5.4	4111	1	>RL
Zr	90	2	72	0.770	ppb	244.1	527	1	
Zr	90	1	72	5.720	ppb	60.9	2252	1	>RL
Nb	93	2	72	3.241	ppb	3.8	27028	2	>RL
Mo	95	2	115	0.122	ppb	10.2	667	0.5	
Pd	105	2	115	0.002	ppb	300.3	360	1	
Ag	107	2	115	0.030	ppb	18.5	483	1	
Cd	111	2	115	0.018	ppb	77.4	33	0.5	
Sn	120	2	115	0.189	ppb	11.1	1607	1	
Sb	121	2	115	0.136	ppb	24.8	823	1	
Ba	137	2	115	0.043	ppb	51.7	200	0.5	
W	182	2	165	0.089	ppb	68.0	3754	1	
Pt	195	2	165	0.017	ppb	86.5	113	1	
Tl	205	2	165	0.029	ppb	18.9	660	0.1	
Pb	208	2	165	0.051	ppb	15.9	1890	0.5	
Th	232	2	165	0.142	ppb	12.8	3527	1	
U	238	2	165	0.046	ppb	13.8	977	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1057130	1.94	1092921	96.73	60	125	
Sc (IS)	45	2	HMI He	4517429	1.29	4591929	98.38	60	125	
Sc (IS)	45	3	No Gas	129577819	1.40	129634638	99.96	60	120	
Ge Internal Standard	72	1	HMI H2	25979172	3.17	26305534	98.76	60	125	
Ge Internal Standard	72	2	HMI He	5244300	1.25	5205670	100.74	60	125	
In Internal standard	115	2	HMI He	16918063	0.33	16441998	102.90	60	125	
Ho-165	165	2	HMI He	39830719	1.61	37362695	106.61	60	125	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name CCVL-5699928
 Data File Name 059LLCCV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T14:50:10-06:00
 Sample Type LLCCV
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-1.878	ppb	-158.897	8440052	50	-3.8	70	130	> +/-30%
Be	9	1	6	1.040	ppb	22.871	450	1	104.0	70	130	
Na	23	2	45	722.381	ppb	3.169	621591	50	1444.8	70	130	> +/-30%
Mg	24	2	45	62.049	ppb	8.318	20776	50	124.1	70	130	
Al	27	2	45	52.859	ppb	2.024	5344	50	105.7	70	130	
K	39	2	45	118.629	ppb	13.380	143751	100	118.6	70	130	
Ca	44	2	45	43.833	ppb	17.624	1330	50	87.7	70	130	
V	51	2	72	4.672	ppb	9.632	38185	5	93.4	70	130	
Cr	52	2	72	2.022	ppb	2.155	14997	2	101.1	70	130	
Mn	55	2	72	0.942	ppb	3.779	3037	1	94.2	70	130	
Fe	57	2	72	50.140	ppb	1.377	7558	50	100.3	70	130	
Co	59	2	72	0.961	ppb	2.181	16261	1	96.1	70	130	
Ni	60	2	72	1.384	ppb	12.042	4844	1.5	92.3	70	130	
Cu	63	2	72	2.047	ppb	3.195	20262	2	102.3	70	130	
Zn	66	2	72	9.025	ppb	3.392	11190	10	90.3	70	130	
As	75	2	72	4.875	ppb	2.836	4288	5	97.5	70	130	
Se	78	1	72	5.080	ppb	8.803	3244	5	101.6	70	130	
Sr	88	2	45	1.781	ppb	0.524	6178	1	178.1	70	130	> +/-30%
Zr	90	2	72	-7.332	ppb	-21.928	370	0.5	-1466.4	70	130	> +/-30%
Zr	90	1	72	-3.159	ppb	-160.806	1819	0.5	-631.8	70	130	> +/-30%
Nb	93	2	72	1.621	ppb	12.121	15884	2	81.0	70	130	
Mo	95	2	115	1.959	ppb	1.306	8252	2	97.9	70	130	
Pd	105	2	115	-0.017	ppb	-71.257	253	1	-1.7	70	130	> +/-30%
Ag	107	2	115	4.720	ppb	1.421	56921	5	94.4	70	130	
Cd	111	2	115	1.053	ppb	3.725	1817	1	105.3	70	130	
Sn	120	2	115	9.693	ppb	0.586	50180	10	96.9	70	130	
Sb	121	2	115	1.857	ppb	5.650	8269	2	92.8	70	130	
Ba	137	2	115	0.931	ppb	9.321	1433	1	93.1	70	130	
W	182	2	165	4.661	ppb	1.453	40999	1	466.1	70	130	> +/-30%
Pt	195	2	165	0.002	ppb	263.730	23	1	0.2	70	130	> +/-30%
Tl	205	2	165	0.897	ppb	6.256	12716	1	89.7	70	130	
Pb	208	2	165	0.968	ppb	1.710	18568	1	96.8	70	130	
Th	232	2	165	1.872	ppb	2.771	34734	2	93.6	70	130	
U	238	2	165	0.920	ppb	4.432	18191	1	92.0	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1036925	0.66	1092921	94.88	60	125	
Sc (IS)	45	2	HMI He	4384318	2.83	4591929	95.48	60	125	
Sc IS)	45	3	No Gas	130772295	2.74	129634638	100.88	60	120	
Ge Internal Standard	72	1	HMI H2	25661378	2.80	26305534	97.55	60	125	
Ge Internal Standard	72	2	HMI He	5209784	1.94	5205670	100.08	60	125	
In Internal standard	115	2	HMI He	17135418	0.93	16441998	104.22	60	125	
Ho-165	165	2	HMI He	39693773	1.09	37362695	106.24	60	125	

Blank Report

Sample Table

Sample Name MB 280-457028/1-A
 Data File Name 060_BLK.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T14:53:42-06:00
 Sample Type Blank
 Dilution 1
 Comment 457028 6020a dod5
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-15.390	ppb	-27.92346083	125079	0.1
Li	7	3	45	-2.886	ppb	-190.5738755	8324826	0.05
Be	9	1	6	-0.007	ppb	-99.4589399	2	0.5
Na	23	2	45	782.002	ppb	1.783595385	683716	25
Mg	24	2	45	6.851	ppb	12.52684827	2690	25
Al	27	2	45	0.099	ppb	915.8588993	403	15
K	39	2	45	3.036	ppb	275.4707736	110515	50
Ca	44	2	45	8.175	ppb	15.85855204	497	25
V	51	2	72	-1.344	ppb	-0.395808199	8065	1
Cr	52	2	72	0.116	ppb	25.07225664	2314	1
Mn	55	2	72	0.094	ppb	45.87813915	517	0.5
Fe	57	2	72	2.442	ppb	20.16769002	1560	25
Co	59	2	72	0.014	ppb	65.84861493	6258	0.5
Ni	60	2	72	0.020	ppb	117.0408208	1000	1
Cu	63	2	72	0.096	ppb	31.64670286	4881	1
Zn	66	2	72	0.053	ppb	156.0970396	780	5
As	75	2	72	0.028	ppb	138.742213	195	1
Se	78	1	72	0.038	ppb	65.2721234	49	1
Sr	88	2	45	0.489	ppb	18.26908797	1873	1
Zr	90	2	72	-8.132	ppb	-15.98940264	350	1
Zr	90	1	72	-3.829	ppb	-37.37902239	1849	1
Nb	93	2	72	1.088	ppb	7.275865011	12128	2
Mo	95	2	115	0.066	ppb	29.98262008	433	0.5
Pd	105	2	115	-0.036	ppb	-23.45373352	133	1
Ag	107	2	115	0.027	ppb	21.60904029	437	1
Cd	111	2	115	0.010	ppb	59.78807441	20	0.5
Sn	120	2	115	0.084	ppb	47.00289488	1063	1
Sb	121	2	115	0.025	ppb	22.97599078	343	1
Ba	137	2	115	-0.019	ppb	-172.2105688	113	0.5
W	182	2	165	0.023	ppb	146.2712918	3170	1
Pt	195	2	165	0.000	ppb	-1782.259616	13	1
Tl	205	2	165	0.014	ppb	49.92141732	447	0.1
Pb	208	2	165	0.020	ppb	48.96741326	1310	0.5
Th	232	2	165	0.263	ppb	2.783602101	5641	1
U	238	2	165	0.014	ppb	10.47772591	337	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1048606	3.79	1092921	95.95	60	125	
Sc (IS)	45	2	HMI He	4477758	0.34	4591929	97.51	60	125	
Sc IS)	45	3	No Gas	129350854	1.69	129634638	99.78	60	120	
Ge Internal Standard	72	1	HMI H2	26466854	2.64	26305534	100.61	60	125	
Ge Internal Standard	72	2	HMI He	5147810	2.00	5205670	98.89	60	125	
In Internal standard	115	2	HMI He	16691121	0.24	16441998	101.52	60	125	
Ho-165	165	2	HMI He	39312983	2.59	37362695	105.22	60	125	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name LCS 280-457028/2-A
 Data File Name 061_LCS.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T14:57:14-06:00
 Sample Type LCS
 Dilution 1
 Analyst Denver Metals
 Comment 457028 6020a dod5
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	88.317	88.317	ppb	13.748	10340762	400	22.1	80	120	> +/-20%
Be	9	1	6	38.313	38.313	ppb	3.287	17016	40	95.8	80	120	
Na	23	2	45	591.304	591.304	ppb	1.682	521361	40	1478.3	80	120	> +/-20%
Mg	24	2	45	6.879	6.879	ppb	4.049	2664	40	17.2	80	120	> +/-20%
Al	27	2	45	427.097	427.097	ppb	3.629	40730	40	1067.7	80	120	> +/-20%
K	39	2	45	5.127	5.127	ppb	206.498	109703	40	12.8	80	120	> +/-20%
Ca	44	2	45	151.388	151.388	ppb	5.646	3900	40	378.5	80	120	> +/-20%
V	51	2	72	39.113	39.113	ppb	3.989	210077	40	97.8	80	120	
Cr	52	2	72	39.914	39.914	ppb	3.458	266349	40	99.8	80	120	
Mn	55	2	72	41.531	41.531	ppb	2.905	123354	40	103.8	80	120	
Fe	57	2	72	411.107	411.107	ppb	2.467	52780	40	1027.8	80	120	> +/-20%
Co	59	2	72	40.389	40.389	ppb	4.829	429165	40	101.0	80	120	
Ni	60	2	72	39.723	39.723	ppb	3.045	112678	40	99.3	80	120	
Cu	63	2	72	39.834	39.834	ppb	1.887	316942	40	99.6	80	120	
Zn	66	2	72	39.280	39.280	ppb	2.719	46239	40	98.2	80	120	
As	75	2	72	38.041	38.041	ppb	3.184	32254	40	95.1	80	120	
Se	78	1	72	39.846	39.846	ppb	4.217	25116	40	99.6	80	120	
Sr	88	2	45	44.186	44.186	ppb	2.689	149876	40	110.5	80	120	
Nb	93	2	72	0.723	0.723	ppb	16.004	9790	40	1.8	80	120	> +/-20%
Mo	95	2	115	39.297	39.297	ppb	3.988	157820	40	98.2	80	120	
Pd	105	2	115	-0.042	-0.042	ppb	-12.366	103	40	-0.1	80	120	> +/-20%
Ag	107	2	115	40.517	40.517	ppb	2.861	474474	40	101.3	80	120	
Cd	111	2	115	40.233	40.233	ppb	2.017	67438	40	100.6	80	120	
Sn	120	2	115	40.164	40.164	ppb	4.704	200207	40	100.4	80	120	
Sb	121	2	115	40.553	40.553	ppb	3.585	170741	40	101.4	80	120	
Ba	137	2	115	41.163	41.163	ppb	3.979	55624	40	102.9	80	120	
W	182	2	165	32.229	32.229	ppb	1.477	264849	40	80.6	80	120	
Pt	195	2	165	0.004	0.004	ppb	69.067	37	40	0.0	80	120	> +/-20%
Tl	205	2	165	38.331	38.331	ppb	2.639	531021	40	95.8	80	120	
Pb	208	2	165	38.903	38.903	ppb	1.681	706338	40	97.3	80	120	
Th	232	2	165	36.807	36.807	ppb	3.721	663055	40	92.0	80	120	
U	238	2	165	38.938	38.938	ppb	1.531	764483	40	97.3	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1076913	1.77	1092921	98.54	60	125	
Sc (IS)	45	2	HMI He	4418330	1.88	4591929	96.22	60	125	
Sc IS)	45	3	No Gas	128293914	2.49	129634638	98.97	60	120	
Ge Internal Standard	72	1	HMI H2	25460718	2.09	26305534	96.79	60	125	
Ge Internal Standard	72	2	HMI He	5208582	2.84	5205670	100.06	60	125	
In Internal standard	115	2	HMI He	16684508	4.05	16441998	101.47	60	125	
Ho-165	165	2	HMI He	39571323	0.39	37362695	105.91	60	125	

Sample Report

Sample Table

Sample Name LCSD 280-457028/3-A
 Data File Name 062SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T15:00:46-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457028 6020a dod5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	79.513	ppb	79.513	20.26	10351140	40000	
Be	9	1	6	40.317	ppb	40.317	4.60	17250	2000	
B	11	1	6	1474.889	ppb	1474.889	1.74	18960	100	>LDR
Na	23	2	45	452.627	ppb	452.627	1.68	411567	400000	
Mg	24	2	45	2.738	ppb	2.738	21.51	1297	400000	
Al	27	2	45	430.815	ppb	430.815	1.37	41255	400000	
K	39	2	45	-0.943	ppb	-0.943	-385.81	108227	400000	
Ca	44	2	45	155.518	ppb	155.518	4.80	4014	400000	
V	51	2	72	39.263	ppb	39.263	2.82	213514	2000	
Cr	52	2	72	40.819	ppb	40.819	0.78	275796	5000	
Mn	55	2	72	42.084	ppb	42.084	2.62	126572	10000	
Fe	57	2	72	408.594	ppb	408.594	1.10	53121	400000	
Co	59	2	72	40.839	ppb	40.839	1.87	439562	2000	
Ni	60	2	72	41.570	ppb	41.570	2.70	119350	5000	
Cu	63	2	72	40.435	ppb	40.435	2.38	325677	5000	
Zn	66	2	72	41.122	ppb	41.122	2.17	48967	5000	
As	75	2	72	38.679	ppb	38.679	2.03	33211	2000	
Se	78	1	72	40.904	ppb	40.904	1.39	25065	2000	
Sr	88	2	45	43.034	ppb	43.034	0.94	146586	2000	
Zr	90	2	72	492.929	ppb	492.929	2.17	9980	1000	
Zr	90	1	72	514.387	ppb	514.387	3.10	24566	1000	
Nb	93	2	72	0.386	ppb	0.386	18.79	7605	200	
Mo	95	2	115	39.702	ppb	39.702	8.04	160001	2000	
Pd	105	2	115	-0.033	ppb	-0.033	-24.02	157	100	
Ag	107	2	115	41.057	ppb	41.057	1.69	482829	100	
Cd	111	2	115	40.680	ppb	40.680	1.14	68472	2000	
Sn	120	2	115	41.223	ppb	41.223	0.87	206463	2000	
Sb	121	2	115	41.798	ppb	41.798	4.27	176697	1000	
Ba	137	2	115	42.641	ppb	42.641	3.28	57870	5000	
W	182	2	165	32.423	ppb	32.423	0.76	268001	100	
Pt	195	2	165	0.000	ppb	0.000	-1123.54	13	100	
Tl	205	2	165	37.881	ppb	37.881	3.38	527811	2000	
Pb	208	2	165	39.350	ppb	39.350	2.19	718598	5000	
Th	232	2	165	38.831	ppb	38.831	2.66	703555	2000	
U	238	2	165	39.537	ppb	39.537	1.13	780846	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1037728	2.31	1092921	94.95	60	125	
Sc (IS)	45	2	HMI He	4435594	1.58	4591929	96.60	60	125	
Sc (IS)	45	3	No Gas	131005582	3.26	129634638	101.06	60	120	
Ge Internal Standard	72	1	HMI H2	24740464	0.63	26305534	94.05	60	125	
Ge Internal Standard	72	2	HMI He	5271882	0.37	5205670	101.27	60	125	
In Internal standard	115	2	HMI He	16747917	2.55	16441998	101.86	60	125	
Ho-165	165	2	HMI He	39805607	1.07	37362695	106.54	60	125	

Sample Report

Sample Table

Sample Name 280-123051-B-1-A
 Data File Name 063SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T15:04:17-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457028 6020a dod5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	107.091	ppb	107.091	4.35	10657846	40000	
Be	9	1	6	0.032	ppb	0.032	83.73	17	2000	
B	11	1	6	2687.846	ppb	2687.846	1.30	31317	100	>LDR
Na	23	2	45	25610.843	ppb	25610.843	2.12	21084457	400000	
Mg	24	2	45	139939.020	ppb	139939.020	2.31	47468583	400000	
Al	27	2	45	0.298	ppb	0.298	281.31	427	400000	
K	39	2	45	5000.664	ppb	5000.664	3.29	1697303	400000	
Ca	44	2	45	252552.166	ppb	252552.166	2.73	6143388	400000	
V	51	2	72	-1.714	ppb	-1.714	-2.76	6315	2000	
Cr	52	2	72	0.155	ppb	0.155	27.24	2597	5000	
Mn	55	2	72	798.043	ppb	798.043	6.37	2365340	10000	
Fe	57	2	72	146.313	ppb	146.313	0.64	19618	400000	
Co	59	2	72	2.980	ppb	2.980	3.69	37410	2000	
Ni	60	2	72	6.946	ppb	6.946	3.54	20492	5000	
Cu	63	2	72	0.550	ppb	0.550	0.59	8512	5000	
Zn	66	2	72	7.809	ppb	7.809	1.57	9776	5000	
As	75	2	72	0.309	ppb	0.309	6.10	435	2000	
Se	78	1	72	0.117	ppb	0.117	43.46	92	2000	
Sr	88	2	45	3123.300	ppb	3123.300	2.49	10817456	2000	
Zr	90	2	72	116.506	ppb	116.506	1.07	2720	1000	
Zr	90	1	72	139.604	ppb	139.604	3.14	7846	1000	
Nb	93	2	72	0.272	ppb	0.272	37.07	6735	200	
Mo	95	2	115	5.384	ppb	5.384	0.55	21557	2000	
Pd	105	2	115	0.048	ppb	0.048	66.57	613	100	
Ag	107	2	115	0.031	ppb	0.031	26.78	483	100	
Cd	111	2	115	0.083	ppb	0.083	41.07	140	2000	
Sn	120	2	115	0.302	ppb	0.302	8.21	2127	2000	
Sb	121	2	115	0.766	ppb	0.766	13.25	3424	1000	
Ba	137	2	115	15.144	ppb	15.144	4.94	20347	5000	
W	182	2	165	0.237	ppb	0.237	18.07	4821	100	
Pt	195	2	165	0.000	ppb	0.000	231.98	17	100	
Tl	205	2	165	0.076	ppb	0.076	3.85	1277	2000	
Pb	208	2	165	0.085	ppb	0.085	11.18	2450	5000	
Th	232	2	165	0.989	ppb	0.989	4.32	18302	2000	
U	238	2	165	26.347	ppb	26.347	1.45	505552	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	950578	3.04	1092921	86.98	60	125	
Sc (IS)	45	2	HMI He	4516627	1.45	4591929	98.36	60	125	
Sc (IS)	45	3	No Gas	126908873	0.82	129634638	97.90	60	120	
Ge Internal Standard	72	1	HMI H2	24124479	0.90	26305534	91.71	60	125	
Ge Internal Standard	72	2	HMI He	5210292	2.53	5205670	100.09	60	125	
In Internal standard	115	2	HMI He	16506735	1.35	16441998	100.39	60	125	
Ho-165	165	2	HMI He	38668724	0.64	37362695	103.50	60	125	

Sample Report

Sample Table

Sample Name 280-123051-B-1-Asd@5
 Data File Name 064SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T15:07:47-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457028 6020a dod5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	11.639	ppb	11.639	48.53	8581706	40000	
Be	9	1	6	0.005	ppb	0.005	385.41	7	2000	
B	11	1	6	729.220	ppb	729.220	6.08	9389	100	>LDR
Na	23	2	45	5815.167	ppb	5815.167	3.30	4559789	400000	
Mg	24	2	45	31162.081	ppb	31162.081	2.11	9991664	400000	
Al	27	2	45	-1.226	ppb	-1.226	-48.01	263	400000	
K	39	2	45	1048.660	ppb	1048.660	0.76	419128	400000	
Ca	44	2	45	53569.093	ppb	53569.093	1.55	1232420	400000	
V	51	2	72	-0.891	ppb	-0.891	-12.38	10505	2000	
Cr	52	2	72	0.070	ppb	0.070	26.46	2053	5000	
Mn	55	2	72	152.783	ppb	152.783	0.87	456970	10000	
Fe	57	2	72	29.843	ppb	29.843	9.00	5051	400000	
Co	59	2	72	0.573	ppb	0.573	9.77	12288	2000	
Ni	60	2	72	1.520	ppb	1.520	4.16	5271	5000	
Cu	63	2	72	0.469	ppb	0.469	1.23	7932	5000	
Zn	66	2	72	1.481	ppb	1.481	11.00	2464	5000	
As	75	2	72	0.044	ppb	0.044	108.62	214	2000	
Se	78	1	72	0.054	ppb	0.054	67.01	57	2000	
Sr	88	2	45	698.943	ppb	698.943	5.22	2288485	2000	
Zr	90	2	72	3.187	ppb	3.187	185.26	573	1000	
Zr	90	1	72	4.138	ppb	4.138	131.70	2159	1000	
Nb	93	2	72	-0.210	ppb	-0.210	-20.70	3510	200	
Mo	95	2	115	1.156	ppb	1.156	9.74	4681	2000	
Pd	105	2	115	-0.024	ppb	-0.024	-39.28	203	100	
Ag	107	2	115	0.017	ppb	0.017	13.21	317	100	
Cd	111	2	115	0.027	ppb	0.027	59.02	47	2000	
Sn	120	2	115	0.183	ppb	0.183	9.87	1513	2000	
Sb	121	2	115	0.295	ppb	0.295	14.64	1440	1000	
Ba	137	2	115	3.228	ppb	3.228	8.43	4377	5000	
W	182	2	165	0.053	ppb	0.053	68.28	3320	100	
Pt	195	2	165	-0.003	ppb	-0.003	0.00	0	100	
Tl	205	2	165	0.018	ppb	0.018	49.23	490	2000	
Pb	208	2	165	0.032	ppb	0.032	22.76	1480	5000	
Th	232	2	165	0.115	ppb	0.115	16.08	2907	2000	
U	238	2	165	5.534	ppb	5.534	3.43	104934	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1017319	4.75	1092921	93.08	60	125	
Sc (IS)	45	2	HMI He	4269975	0.95	4591929	92.99	60	125	
Sc (IS)	45	3	No Gas	128167867	1.38	129634638	98.87	60	120	
Ge Internal Standard	72	1	HMI H2	25718952	1.37	26305534	97.77	60	125	
Ge Internal Standard	72	2	HMI He	5249647	1.00	5205670	100.84	60	125	
In Internal standard	115	2	HMI He	16256026	2.87	16441998	98.87	60	125	
Ho-165	165	2	HMI He	38227643	4.00	37362695	102.32	60	125	

Sample Report

Sample Table

Sample Name 280-123051-B-1-B MS
 Data File Name 065SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T15:11:18-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457028 6020a dod5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	176.112	ppb	176.112	3.98	12374712	40000	
Be	9	1	6	40.760	ppb	40.760	0.92	15794	2000	
B	11	1	6	3773.110	ppb	3773.110	1.61	43272	100	>LDR
Na	23	2	45	25657.156	ppb	25657.156	4.30	21365586	400000	
Mg	24	2	45	138817.406	ppb	138817.406	3.36	47641209	400000	
Al	27	2	45	415.489	ppb	415.489	3.84	41067	400000	
K	39	2	45	4942.910	ppb	4942.910	3.33	1699256	400000	
Ca	44	2	45	248579.719	ppb	248579.719	3.08	6120368	400000	
V	51	2	72	39.597	ppb	39.597	2.73	211316	2000	
Cr	52	2	72	39.412	ppb	39.412	2.59	261502	5000	
Mn	55	2	72	858.238	ppb	858.238	2.00	2529983	10000	
Fe	57	2	72	543.011	ppb	543.011	0.69	68910	400000	
Co	59	2	72	40.366	ppb	40.366	2.26	426646	2000	
Ni	60	2	72	44.358	ppb	44.358	1.89	124976	5000	
Cu	63	2	72	37.027	ppb	37.027	2.24	293147	5000	
Zn	66	2	72	43.122	ppb	43.122	2.10	50384	5000	
As	75	2	72	39.110	ppb	39.110	3.01	32966	2000	
Se	78	1	72	40.712	ppb	40.712	3.43	25353	2000	
Sr	88	2	45	3091.985	ppb	3091.985	5.90	10832584	2000	
Zr	90	2	72	583.357	ppb	583.357	3.98	11504	1000	
Zr	90	1	72	563.863	ppb	563.863	5.69	27173	1000	
Nb	93	2	72	-0.064	ppb	-0.064	-86.31	4441	200	
Mo	95	2	115	44.910	ppb	44.910	1.26	177525	2000	
Pd	105	2	115	0.066	ppb	0.066	35.96	717	100	
Ag	107	2	115	38.243	ppb	38.243	2.88	440618	100	
Cd	111	2	115	38.297	ppb	38.297	2.11	63154	2000	
Sn	120	2	115	40.483	ppb	40.483	3.68	198611	2000	
Sb	121	2	115	42.237	ppb	42.237	1.08	175013	1000	
Ba	137	2	115	58.050	ppb	58.050	2.02	77168	5000	
W	182	2	165	32.323	ppb	32.323	3.16	266510	100	
Pt	195	2	165	0.000	ppb	0.000	-392.55	13	100	
Tl	205	2	165	34.105	ppb	34.105	6.01	473747	2000	
Pb	208	2	165	36.416	ppb	36.416	6.20	662946	5000	
Th	232	2	165	36.147	ppb	36.147	4.50	653044	2000	
U	238	2	165	62.394	ppb	62.394	4.55	1228510	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	939405	2.27	1092921	85.95	60	125	
Sc (IS)	45	2	HMI He	4573977	3.90	4591929	99.61	60	125	
Sc (IS)	45	3	No Gas	128518304	0.93	129634638	99.14	60	120	
Ge Internal Standard	72	1	HMI H2	25158033	2.93	26305534	95.64	60	125	
Ge Internal Standard	72	2	HMI He	5176855	1.08	5205670	99.45	60	125	
In Internal standard	115	2	HMI He	16406223	0.97	16441998	99.78	60	125	
Ho-165	165	2	HMI He	39723824	3.70	37362695	106.32	60	125	

Sample Report

Sample Table

Sample Name 280-123051-B-1-C MSD
 Data File Name 066SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T15:14:48-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457028 6020a dod5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	173.820	ppb	173.820	7.35	12461770	40000	
Be	9	1	6	39.773	ppb	39.773	3.12	15714	2000	
B	11	1	6	3759.922	ppb	3759.922	4.50	43960	100	>LDR
Na	23	2	45	24153.992	ppb	24153.992	1.51	20035995	400000	
Mg	24	2	45	136457.109	ppb	136457.109	3.26	46628263	400000	
Al	27	2	45	411.640	ppb	411.640	2.71	40469	400000	
K	39	2	45	4841.841	ppb	4841.841	2.00	1659593	400000	
Ca	44	2	45	248111.415	ppb	248111.415	1.52	6081816	400000	
V	51	2	72	37.684	ppb	37.684	3.30	205363	2000	
Cr	52	2	72	37.953	ppb	37.953	2.74	256341	5000	
Mn	55	2	72	798.907	ppb	798.907	2.62	2396623	10000	
Fe	57	2	72	650.252	ppb	650.252	3.74	83698	400000	
Co	59	2	72	40.951	ppb	40.951	1.87	440428	2000	
Ni	60	2	72	43.521	ppb	43.521	2.35	124819	5000	
Cu	63	2	72	36.855	ppb	36.855	2.17	297002	5000	
Zn	66	2	72	42.429	ppb	42.429	3.18	50454	5000	
As	75	2	72	38.686	ppb	38.686	2.81	33189	2000	
Se	78	1	72	41.507	ppb	41.507	1.54	25475	2000	
Sr	88	2	45	3103.005	ppb	3103.005	2.56	10830722	2000	
Zr	90	2	72	593.772	ppb	593.772	7.91	11898	1000	
Zr	90	1	72	607.999	ppb	607.999	3.69	28733	1000	
Nb	93	2	72	-0.189	ppb	-0.189	-29.98	3657	200	
Mo	95	2	115	44.614	ppb	44.614	3.92	176477	2000	
Pd	105	2	115	0.057	ppb	0.057	50.90	663	100	
Ag	107	2	115	36.906	ppb	36.906	2.71	425613	100	
Cd	111	2	115	38.284	ppb	38.284	1.62	63190	2000	
Sn	120	2	115	39.294	ppb	39.294	2.80	192988	2000	
Sb	121	2	115	41.101	ppb	41.101	2.96	170434	1000	
Ba	137	2	115	55.444	ppb	55.444	1.82	73774	5000	
W	182	2	165	31.893	ppb	31.893	1.54	256938	100	
Pt	195	2	165	-0.001	ppb	-0.001	-241.38	10	100	
Tl	205	2	165	37.089	ppb	37.089	2.54	503775	2000	
Pb	208	2	165	37.681	ppb	37.681	1.17	670747	5000	
Th	232	2	165	37.999	ppb	37.999	1.77	670936	2000	
U	238	2	165	64.208	ppb	64.208	0.72	1235684	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	957909	1.46	1092921	87.65	60	125	
Sc (IS)	45	2	HMI He	4550796	0.73	4591929	99.10	60	125	
Sc (IS)	45	3	No Gas	129977400	0.62	129634638	100.26	60	120	
Ge Internal Standard	72	1	HMI H2	24779328	0.20	26305534	94.20	60	125	
Ge Internal Standard	72	2	HMI He	5269802	2.32	5205670	101.23	60	125	
In Internal standard	115	2	HMI He	16424251	1.92	16441998	99.89	60	125	
Ho-165	165	2	HMI He	38789477	0.95	37362695	103.82	60	125	

Sample Report

Sample Table

Sample Name 280-123051-B-1-A pds
 Data File Name 067SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T15:18:18-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457028 6020a dod5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	93.851	ppb	93.851	1.36	10197082	40000	
Be	9	1	6	201.516	ppb	201.516	2.38	77317	2000	
B	11	1	6	2576.226	ppb	2576.226	2.82	29391	100	>LDR
Na	23	2	45	24528.043	ppb	24528.043	2.07	20192557	400000	
Mg	24	2	45	135953.387	ppb	135953.387	1.21	46115203	400000	
Al	27	2	45	2058.323	ppb	2058.323	2.96	199260	400000	
K	39	2	45	4947.982	ppb	4947.982	1.67	1681056	400000	
Ca	44	2	45	245896.780	ppb	245896.780	0.68	5983975	400000	
V	51	2	72	201.855	ppb	201.855	3.42	1020007	2000	
Cr	52	2	72	200.259	ppb	200.259	5.52	1326291	5000	
Mn	55	2	72	973.585	ppb	973.585	3.01	2879529	10000	
Fe	57	2	72	2103.754	ppb	2103.754	2.91	264208	400000	
Co	59	2	72	198.558	ppb	198.558	5.13	2080746	2000	
Ni	60	2	72	191.514	ppb	191.514	2.55	538343	5000	
Cu	63	2	72	191.028	ppb	191.028	2.14	1500460	5000	
Zn	66	2	72	196.433	ppb	196.433	1.37	227766	5000	
As	75	2	72	196.320	ppb	196.320	3.11	165351	2000	
Se	78	1	72	208.799	ppb	208.799	1.83	126493	2000	
Sr	88	2	45	3007.024	ppb	3007.024	4.11	10417641	2000	
Zr	90	2	72	89285.101	ppb	89285.101	3.42	1689392	1000	>LDR
Zr	90	1	72	88156.812	ppb	88156.812	4.23	3844602	1000	>LDR
Nb	93	2	72	4.789	ppb	4.789	6.22	37265	200	
Mo	95	2	115	206.490	ppb	206.490	2.60	797805	2000	
Pd	105	2	115	0.117	ppb	0.117	47.33	983	100	
Ag	107	2	115	38.806	ppb	38.806	1.12	437453	100	
Cd	111	2	115	196.863	ppb	196.863	2.99	317529	2000	
Sn	120	2	115	206.260	ppb	206.260	0.84	987605	2000	
Sb	121	2	115	219.148	ppb	219.148	3.03	887276	1000	
Ba	137	2	115	228.126	ppb	228.126	2.27	296215	5000	
W	182	2	165	202.223	ppb	202.223	2.29	1639424	100	
Pt	195	2	165	0.087	ppb	0.087	9.09	503	100	
Tl	205	2	165	192.516	ppb	192.516	3.33	2654427	2000	
Pb	208	2	165	197.825	ppb	197.825	1.73	3572883	5000	
Th	232	2	165	1.177	ppb	1.177	3.64	22027	2000	
U	238	2	165	215.082	ppb	215.082	1.59	4205429	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	930446	1.20	1092921	85.13	60	125	
Sc (IS)	45	2	HMI He	4517672	1.64	4591929	98.38	60	125	
Sc (IS)	45	3	No Gas	124928452	1.86	129634638	96.37	60	120	
Ge Internal Standard	72	1	HMI H2	24482151	2.01	26305534	93.07	60	125	
Ge Internal Standard	72	2	HMI He	5196702	2.81	5205670	99.83	60	125	
In Internal standard	115	2	HMI He	16050127	0.91	16441998	97.62	60	125	
Ho-165	165	2	HMI He	39412970	1.89	37362695	105.49	60	125	

Sample Report

Sample Table

Sample Name 280-123051-B-2-A
 Data File Name 068SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T15:21:45-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457028 6020a dod5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	40.795	ppb	40.795	5.62	9074880	40000	
Be	9	1	6	0.118	ppb	0.118	22.95	50	2000	
B	11	1	6	8974.665	ppb	8974.665	1.96	102271	100	>LDR
Na	23	2	45	30326.491	ppb	30326.491	2.19	24714144	400000	
Mg	24	2	45	68292.981	ppb	68292.981	4.52	22936679	400000	
Al	27	2	45	2.229	ppb	2.229	19.73	607	400000	
K	39	2	45	5244.485	ppb	5244.485	2.39	1757933	400000	
Ca	44	2	45	137001.685	ppb	137001.685	1.45	3301436	400000	
V	51	2	72	-1.752	ppb	-1.752	-5.55	6084	2000	
Cr	52	2	72	0.169	ppb	0.169	27.89	2677	5000	
Mn	55	2	72	132.089	ppb	132.089	2.02	389279	10000	
Fe	57	2	72	29.456	ppb	29.456	5.93	4927	400000	
Co	59	2	72	0.298	ppb	0.298	14.45	9239	2000	
Ni	60	2	72	1.933	ppb	1.933	2.39	6348	5000	
Cu	63	2	72	1.629	ppb	1.629	9.74	16852	5000	
Zn	66	2	72	8.199	ppb	8.199	4.31	10153	5000	
As	75	2	72	3.637	ppb	3.637	3.82	3222	2000	
Se	78	1	72	0.175	ppb	0.175	40.84	129	2000	
Sr	88	2	45	10236.215	ppb	10236.215	1.93	35119062	2000	>LDR
Zr	90	2	72	142.926	ppb	142.926	10.24	3200	1000	
Zr	90	1	72	262.177	ppb	262.177	11.81	13449	1000	
Nb	93	2	72	-0.563	ppb	-0.563	-2.67	1080	200	
Mo	95	2	115	26.751	ppb	26.751	2.63	107359	2000	
Pd	105	2	115	0.312	ppb	0.312	21.08	2147	100	
Ag	107	2	115	0.040	ppb	0.040	8.89	597	100	
Cd	111	2	115	0.118	ppb	0.118	39.60	200	2000	
Sn	120	2	115	0.597	ppb	0.597	1.60	3607	2000	
Sb	121	2	115	0.614	ppb	0.614	6.04	2817	1000	
Ba	137	2	115	25.330	ppb	25.330	3.24	34241	5000	
W	182	2	165	0.337	ppb	0.337	9.56	5641	100	
Pt	195	2	165	-0.003	ppb	-0.003	0.00	0	100	
Tl	205	2	165	0.087	ppb	0.087	15.06	1430	2000	
Pb	208	2	165	0.128	ppb	0.128	12.88	3220	5000	
Th	232	2	165	-0.008	ppb	-0.008	-52.23	783	2000	
U	238	2	165	4.204	ppb	4.204	3.79	80992	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	938414	1.03	1092921	85.86	60	125	
Sc (IS)	45	2	HMI He	4473689	0.91	4591929	97.43	60	125	
Sc (IS)	45	3	No Gas	125758313	0.52	129634638	97.01	60	120	
Ge Internal Standard	72	1	HMI H2	24745449	2.19	26305534	94.07	60	125	
Ge Internal Standard	72	2	HMI He	5172633	1.34	5205670	99.37	60	125	
In Internal standard	115	2	HMI He	16651534	1.44	16441998	101.27	60	125	
Ho-165	165	2	HMI He	38798863	1.04	37362695	103.84	60	125	

Sample Report

Sample Table

Sample Name 280-123051-B-3-A
 Data File Name 069SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T15:38:23-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457028 6020a dod5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	36.685	ppb	36.685	13.39	8993698	40000	
Be	9	1	6	-0.002	ppb	-0.002	-659.75	3	2000	
B	11	1	6	9225.188	ppb	9225.188	4.15	101471	100	>LDR
Na	23	2	45	29956.319	ppb	29956.319	1.27	23751878	400000	
Mg	24	2	45	67775.916	ppb	67775.916	1.69	22147559	400000	
Al	27	2	45	1.904	ppb	1.904	42.52	560	400000	
K	39	2	45	5486.738	ppb	5486.738	2.58	1784216	400000	
Ca	44	2	45	139605.767	ppb	139605.767	1.98	3272540	400000	
V	51	2	72	-1.566	ppb	-1.566	-6.97	6805	2000	
Cr	52	2	72	0.205	ppb	0.205	2.71	2837	5000	
Mn	55	2	72	127.626	ppb	127.626	3.11	365821	10000	
Fe	57	2	72	31.657	ppb	31.657	1.65	5064	400000	
Co	59	2	72	0.226	ppb	0.226	2.32	8272	2000	
Ni	60	2	72	1.865	ppb	1.865	12.12	5981	5000	
Cu	63	2	72	1.248	ppb	1.248	4.15	13522	5000	
Zn	66	2	72	7.642	ppb	7.642	7.55	9256	5000	
As	75	2	72	3.528	ppb	3.528	1.08	3046	2000	
Se	78	1	72	0.121	ppb	0.121	16.91	97	2000	
Sr	88	2	45	10083.685	ppb	10083.685	7.19	33632261	2000	>LDR
Zr	90	2	72	28.023	ppb	28.023	31.27	1003	1000	
Zr	90	1	72	26.541	ppb	26.541	19.39	3097	1000	
Nb	93	2	72	-0.580	ppb	-0.580	-2.24	940	200	
Mo	95	2	115	26.190	ppb	26.190	1.34	100558	2000	
Pd	105	2	115	0.356	ppb	0.356	9.64	2304	100	
Ag	107	2	115	0.008	ppb	0.008	54.59	207	100	
Cd	111	2	115	0.050	ppb	0.050	24.98	83	2000	
Sn	120	2	115	0.391	ppb	0.391	13.19	2467	2000	
Sb	121	2	115	0.292	ppb	0.292	9.44	1400	1000	
Ba	137	2	115	24.521	ppb	24.521	3.61	31712	5000	
W	182	2	165	0.049	ppb	0.049	111.92	3274	100	
Pt	195	2	165	-0.001	ppb	-0.001	-242.45	10	100	
Tl	205	2	165	0.027	ppb	0.027	11.89	613	2000	
Pb	208	2	165	0.014	ppb	0.014	79.93	1163	5000	
Th	232	2	165	-0.005	ppb	-0.005	-13.63	817	2000	
U	238	2	165	3.877	ppb	3.877	6.10	73248	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	906488	3.03	1092921	82.94	60	125	
Sc (IS)	45	2	HMI He	4352784	2.36	4591929	94.79	60	125	
Sc (IS)	45	3	No Gas	125916437	0.95	129634638	97.13	60	120	
Ge Internal Standard	72	1	HMI H2	24990498	1.75	26305534	95.00	60	125	
Ge Internal Standard	72	2	HMI He	5033368	2.77	5205670	96.69	60	125	
In Internal standard	115	2	HMI He	15930955	3.19	16441998	96.89	60	125	
Ho-165	165	2	HMI He	38101018	3.59	37362695	101.98	60	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name CCV-5699926
 Data File Name 070_CCV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T15:41:54-06:00
 Sample Type CCV
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	85.773	ppb	14.660	154016	100	85.8	90	110	>+ \-10%
Li	7	3	45	96.043	ppb	6.511	10065646	100	96.0	90	110	
Be	9	1	6	48.763	ppb	2.566	19784	50	97.5	90	110	
B	11	1	6	263.368	ppb	5.701	3550	50	526.7	90	110	>+ \-10%
Na	23	2	45	1043.701	ppb	1.446	870601	1000	104.4	90	110	
Mg	24	2	45	1007.167	ppb	0.772	329124	1000	100.7	90	110	
Al	27	2	45	1005.661	ppb	1.148	93883	1000	100.6	90	110	
K	39	2	45	984.034	ppb	0.939	406946	1000	98.4	90	110	
Ca	44	2	45	977.837	ppb	3.349	23186	1000	97.8	90	110	
V	51	2	72	48.926	ppb	2.867	255717	50	97.9	90	110	
Cr	52	2	72	48.336	ppb	1.275	318064	50	96.7	90	110	
Mn	55	2	72	49.600	ppb	2.163	145348	50	99.2	90	110	
Fe	57	2	72	971.491	ppb	1.196	121384	1000	97.1	90	110	
Co	59	2	72	48.547	ppb	0.502	508169	50	97.1	90	110	
Ni	60	2	72	47.500	ppb	2.241	132778	50	95.0	90	110	
Cu	63	2	72	47.381	ppb	0.861	371239	50	94.8	90	110	
Zn	66	2	72	47.711	ppb	3.006	55249	50	95.4	90	110	
As	75	2	72	49.224	ppb	1.431	41150	50	98.4	90	110	
Se	78	1	72	52.550	ppb	3.499	31943	50	105.1	90	110	
Sr	88	2	45	104.638	ppb	1.502	349038	100	104.6	90	110	
Zr	90	2	72	86.123	ppb	5.710	2113	50	172.2	90	110	>+ \-10%
Zr	90	1	72	95.000	ppb	8.612	6034	50	190.0	90	110	>+ \-10%
Nb	93	2	72	94.285	ppb	4.109	634216	100	94.3	90	110	
Mo	95	2	115	46.978	ppb	2.448	183099	50	94.0	90	110	
Pd	105	2	115	49.752	ppb	3.219	280115	50	99.5	90	110	
Ag	107	2	115	49.858	ppb	2.683	566499	50	99.7	90	110	
Cd	111	2	115	50.681	ppb	3.297	82409	50	101.4	90	110	
Sn	120	2	115	50.753	ppb	0.852	245500	50	101.5	90	110	
Sb	121	2	115	50.690	ppb	2.033	207104	50	101.4	90	110	
Ba	137	2	115	49.990	ppb	2.732	65539	50	100.0	90	110	
W	182	2	165	47.602	ppb	3.662	384009	50	95.2	90	110	
Pt	195	2	165	46.257	ppb	3.165	257255	50	92.5	90	110	
Tl	205	2	165	45.634	ppb	5.041	622642	50	91.3	90	110	
Pb	208	2	165	48.151	ppb	2.502	861261	50	96.3	90	110	
Th	232	2	165	46.772	ppb	4.329	829744	50	93.5	90	110	
U	238	2	165	46.869	ppb	4.223	906576	50	93.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	983531	0.23	1092921	89.99	60	125	
Sc (IS)	45	2	HMI He	4346896	0.55	4591929	94.66	60	125	
Sc IS)	45	3	No Gas	122750338	1.72	129634638	94.69	60	120	
Ge Internal Standard	72	1	HMI H2	24550235	0.73	26305534	93.33	60	125	
Ge Internal Standard	72	2	HMI He	5138888	1.38	5205670	98.72	60	125	
In Internal standard	115	2	HMI He	16184922	2.59	16441998	98.44	60	125	
Ho-165	165	2	HMI He	39010182	2.82	37362695	104.41	60	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name CCB-5699924
 Data File Name 071_CCB.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T15:45:24-06:00
 Sample Type CCB
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	1	45	-18.044	ppb	-51.4	119055	0.1	
Li	7	3	45	-12.095	ppb	-63.2	7790271	0.05	
Be	9	1	6	0.029	ppb	129.6	17	0.5	
B	11	1	6	114.432	ppb	12.1	1780	0.1	>RL
Na	23	2	45	80.397	ppb	4.8	105526	25	>RL
Mg	24	2	45	8.303	ppb	3.9	2984	25	
Al	27	2	45	-0.374	ppb	-278.7	337	15	
K	39	2	45	9.303	ppb	23.4	105591	50	
Ca	44	2	45	12.152	ppb	18.6	557	25	
V	51	2	72	0.019	ppb	370.2	14263	1	
Cr	52	2	72	0.011	ppb	145.7	1567	1	
Mn	55	2	72	0.120	ppb	16.5	570	0.5	
Fe	57	2	72	2.539	ppb	66.9	1517	25	
Co	59	2	72	0.012	ppb	379.1	6004	0.5	
Ni	60	2	72	0.139	ppb	32.2	1280	1	
Cu	63	2	72	0.642	ppb	11.7	8796	1	
Zn	66	2	72	0.250	ppb	54.4	967	5	
As	75	2	72	0.055	ppb	53.7	210	1	
Se	78	1	72	0.065	ppb	46.2	63	1	
Sr	88	2	45	0.847	ppb	16.4	2914	1	
Zr	90	2	72	-7.285	ppb	-32.3	353	1	
Zr	90	1	72	-2.349	ppb	-234.5	1809	1	
Nb	93	2	72	3.142	ppb	7.2	24912	2	>RL
Mo	95	2	115	0.121	ppb	24.3	637	0.5	
Pd	105	2	115	0.003	ppb	552.3	350	1	
Ag	107	2	115	0.029	ppb	24.7	450	1	
Cd	111	2	115	0.035	ppb	59.7	60	0.5	
Sn	120	2	115	0.155	ppb	27.6	1373	1	
Sb	121	2	115	0.122	ppb	32.1	733	1	
Ba	137	2	115	0.072	ppb	99.0	230	0.5	
W	182	2	165	0.066	ppb	35.4	3474	1	
Pt	195	2	165	0.023	ppb	36.9	140	1	
Tl	205	2	165	0.022	ppb	19.5	547	0.1	
Pb	208	2	165	0.037	ppb	20.1	1600	0.5	
Th	232	2	165	0.146	ppb	8.6	3490	1	
U	238	2	165	0.047	ppb	11.4	963	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	985894	2.56	1092921	90.21	60	125	
Sc (IS)	45	2	HMI He	4203039	1.88	4591929	91.53	60	125	
Sc (IS)	45	3	No Gas	124203359	0.63	129634638	95.81	60	120	
Ge Internal Standard	72	1	HMI H2	24965173	0.78	26305534	94.90	60	125	
Ge Internal Standard	72	2	HMI He	4961408	1.95	5205670	95.31	60	125	
In Internal standard	115	2	HMI He	16198051	1.52	16441998	98.52	60	125	
Ho-165	165	2	HMI He	38732979	2.81	37362695	103.67	60	125	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name CCVL-5699928
 Data File Name 072LLCCV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T15:48:55-06:00
 Sample Type LLCCV
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-6.607	ppb	-125.189	7916108	50	-13.2	70	130	> +/-30%
Be	9	1	6	0.862	ppb	13.711	353	1	86.2	70	130	
Na	23	2	45	114.160	ppb	6.238	130734	50	228.3	70	130	> +/-30%
Mg	24	2	45	55.128	ppb	5.631	17676	50	110.3	70	130	
Al	27	2	45	52.901	ppb	2.204	5104	50	105.8	70	130	
K	39	2	45	111.211	ppb	8.233	135083	100	111.2	70	130	
Ca	44	2	45	35.965	ppb	10.354	1090	50	71.9	70	130	
V	51	2	72	5.223	ppb	6.650	39211	5	104.5	70	130	
Cr	52	2	72	1.954	ppb	6.470	13922	2	97.7	70	130	
Mn	55	2	72	1.050	ppb	7.726	3214	1	105.0	70	130	
Fe	57	2	72	50.011	ppb	6.210	7218	50	100.0	70	130	
Co	59	2	72	0.959	ppb	5.651	15544	1	95.9	70	130	
Ni	60	2	72	1.427	ppb	3.147	4761	1.5	95.2	70	130	
Cu	63	2	72	1.876	ppb	7.186	18126	2	93.8	70	130	
Zn	66	2	72	9.234	ppb	0.943	10947	10	92.3	70	130	
As	75	2	72	4.614	ppb	2.662	3896	5	92.3	70	130	
Se	78	1	72	4.933	ppb	5.188	3044	5	98.7	70	130	
Sr	88	2	45	1.492	ppb	5.389	4967	1	149.2	70	130	> +/-30%
Zr	90	2	72	-11.420	ppb	-16.079	280	0.5	-2284.0	70	130	> +/-30%
Zr	90	1	72	-2.107	ppb	-219.814	1802	0.5	-421.4	70	130	> +/-30%
Nb	93	2	72	1.571	ppb	15.651	14867	2	78.6	70	130	
Mo	95	2	115	1.958	ppb	0.399	7832	2	97.9	70	130	
Pd	105	2	115	-0.022	ppb	-27.723	213	1	-2.2	70	130	> +/-30%
Ag	107	2	115	4.734	ppb	2.684	54215	5	94.7	70	130	
Cd	111	2	115	0.982	ppb	15.826	1607	1	98.2	70	130	
Sn	120	2	115	9.741	ppb	6.038	47844	10	97.4	70	130	
Sb	121	2	115	2.021	ppb	6.949	8519	2	101.0	70	130	
Ba	137	2	115	1.092	ppb	11.854	1570	1	109.2	70	130	
W	182	2	165	4.493	ppb	1.501	39428	1	449.3	70	130	> +/-30%
Pt	195	2	165	0.007	ppb	44.113	57	1	0.7	70	130	> +/-30%
Tl	205	2	165	0.861	ppb	2.928	12172	1	86.1	70	130	
Pb	208	2	165	0.935	ppb	1.476	17878	1	93.5	70	130	
Th	232	2	165	1.829	ppb	1.601	33783	2	91.5	70	130	
U	238	2	165	0.956	ppb	7.747	18772	1	95.6	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	982731	2.23	1092921	89.92	60	125	
Sc (IS)	45	2	HMI He	4185661	2.50	4591929	91.15	60	125	
Sc IS)	45	3	No Gas	124284832	1.33	129634638	95.87	60	120	
Ge Internal Standard	72	1	HMI H2	24788190	4.11	26305534	94.23	60	125	
Ge Internal Standard	72	2	HMI He	4989283	1.86	5205670	95.84	60	125	
In Internal standard	115	2	HMI He	16267908	1.74	16441998	98.94	60	125	
Ho-165	165	2	HMI He	39500727	3.77	37362695	105.72	60	125	

Blank Report

Sample Table

Sample Name MB 280-457077/1-A
 Data File Name 073_BLK.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T15:52:27-06:00
 Sample Type Blank
 Dilution 1
 Comment 457077 6020a dod5
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-24.801	ppb	-22.17078792	116536	0.1
Li	7	3	45	-17.743	ppb	-44.09762699	7760909	0.05
Be	9	1	6	0.002	ppb	699.5227286	5	0.5
Na	23	2	45	58.904	ppb	3.421442102	92210	25
Mg	24	2	45	6.987	ppb	5.725998291	2657	25
Al	27	2	45	0.934	ppb	116.4811599	470	15
K	39	2	45	-12.158	ppb	-38.75206335	102678	50
Ca	44	2	45	8.945	ppb	40.80871265	500	25
V	51	2	72	-1.214	ppb	-8.903851138	8679	1
Cr	52	2	72	0.183	ppb	10.72182144	2747	1
Mn	55	2	72	0.465	ppb	22.65617179	1597	0.5
Fe	57	2	72	10.852	ppb	27.96046149	2590	25
Co	59	2	72	-0.044	ppb	-76.79918076	5644	0.5
Ni	60	2	72	0.005	ppb	1054.358893	953	1
Cu	63	2	72	-0.061	ppb	-44.85479622	3657	1
Zn	66	2	72	0.566	ppb	13.95087081	1363	5
As	75	2	72	-0.009	ppb	-309.8988109	164	1
Se	78	1	72	0.012	ppb	139.4896205	29	1
Sr	88	2	45	0.761	ppb	9.60447295	2727	1
Zr	90	2	72	-7.748	ppb	-7.595681433	357	1
Zr	90	1	72	1.143	ppb	482.4158687	1922	1
Nb	93	2	72	1.480	ppb	11.30737802	14733	2
Mo	95	2	115	0.033	ppb	28.50327264	293	0.5
Pd	105	2	115	-0.009	ppb	-231.8232801	283	1
Ag	107	2	115	0.048	ppb	5.223658409	670	1
Cd	111	2	115	0.004	ppb	147.8230628	10	0.5
Sn	120	2	115	0.191	ppb	24.46382641	1553	1
Sb	121	2	115	0.065	ppb	14.58064773	500	1
Ba	137	2	115	0.074	ppb	17.96313944	233	0.5
W	182	2	165	0.144	ppb	21.1882972	4097	1
Pt	195	2	165	0.004	ppb	69.09141255	37	1
Tl	205	2	165	0.002	ppb	328.0448649	277	0.1
Pb	208	2	165	0.053	ppb	19.60879675	1880	0.5
Th	232	2	165	0.475	ppb	8.392511058	9286	1
U	238	2	165	0.015	ppb	16.27664149	353	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	944957	4.60	1092921	86.46	60	125	
Sc (IS)	45	2	HMI He	4348558	1.16	4591929	94.70	60	125	
Sc IS)	45	3	No Gas	125782035	2.06	129634638	97.03	60	120	
Ge Internal Standard	72	1	HMI H2	24475628	2.19	26305534	93.04	60	125	
Ge Internal Standard	72	2	HMI He	5138117	2.92	5205670	98.70	60	125	
In Internal standard	115	2	HMI He	16271172	1.03	16441998	98.96	60	125	
Ho-165	165	2	HMI He	38775154	2.10	37362695	103.78	60	125	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name LCS 280-457077/2-A
 Data File Name 074_LCS.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T15:56:00-06:00
 Sample Type LCS
 Dilution 1
 Analyst Denver Metals
 Comment 457077 6020a dod5
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	63.752	63.752	ppb	8.694	9644183	400	15.9	80	120	> +/-20%
Be	9	1	6	39.313	39.313	ppb	2.258	15715	40	98.3	80	120	
Na	23	2	45	58.268	58.268	ppb	2.113	90601	40	145.7	80	120	> +/-20%
Mg	24	2	45	4.734	4.734	ppb	15.971	1897	40	11.8	80	120	> +/-20%
Al	27	2	45	445.825	445.825	ppb	1.901	41345	40	1114.6	80	120	> +/-20%
K	39	2	45	-2.952	-2.952	ppb	-442.716	104193	40	-7.4	80	120	> +/-20%
Ca	44	2	45	147.031	147.031	ppb	9.048	3690	40	367.6	80	120	> +/-20%
V	51	2	72	37.651	37.651	ppb	2.874	201399	40	94.1	80	120	
Cr	52	2	72	38.123	38.123	ppb	2.721	252697	40	95.3	80	120	
Mn	55	2	72	40.216	40.216	ppb	0.352	118662	40	100.5	80	120	
Fe	57	2	72	419.609	419.609	ppb	2.975	53476	40	1049.0	80	120	> +/-20%
Co	59	2	72	38.308	38.308	ppb	2.322	404712	40	95.8	80	120	
Ni	60	2	72	38.897	38.897	ppb	1.705	109608	40	97.2	80	120	
Cu	63	2	72	38.673	38.673	ppb	3.626	305581	40	96.7	80	120	
Zn	66	2	72	38.829	38.829	ppb	1.330	45393	40	97.1	80	120	
As	75	2	72	36.213	36.213	ppb	0.846	30507	40	90.5	80	120	
Se	78	1	72	37.946	37.946	ppb	2.860	23416	40	94.9	80	120	
Sr	88	2	45	42.554	42.554	ppb	2.027	140407	40	106.4	80	120	
Nb	93	2	72	0.987	0.987	ppb	11.174	11497	40	2.5	80	120	> +/-20%
Mo	95	2	115	37.650	37.650	ppb	3.069	151273	40	94.1	80	120	
Pd	105	2	115	-0.032	-0.032	ppb	-25.999	160	40	-0.1	80	120	> +/-20%
Ag	107	2	115	38.907	38.907	ppb	2.286	455687	40	97.3	80	120	
Cd	111	2	115	37.822	37.822	ppb	2.187	63425	40	94.6	80	120	
Sn	120	2	115	40.167	40.167	ppb	1.458	200356	40	100.4	80	120	
Sb	121	2	115	39.261	39.261	ppb	1.089	165382	40	98.2	80	120	
Ba	137	2	115	40.830	40.830	ppb	1.806	55220	40	102.1	80	120	
W	182	2	165	31.368	31.368	ppb	0.316	256657	40	78.4	80	120	> +/-20%
Pt	195	2	165	0.000	0.000	ppb	886.915	17	40	0.0	80	120	> +/-20%
Tl	205	2	165	36.455	36.455	ppb	3.077	502597	40	91.1	80	120	
Pb	208	2	165	37.529	37.529	ppb	2.417	678138	40	93.8	80	120	
Th	232	2	165	36.445	36.445	ppb	3.443	653351	40	91.1	80	120	
U	238	2	165	37.030	37.030	ppb	2.831	723535	40	92.6	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	969074	0.93	1092921	88.67	60	125	
Sc (IS)	45	2	HMI He	4295735	1.28	4591929	93.55	60	125	
Sc IS)	45	3	No Gas	126493310	1.93	129634638	97.58	60	120	
Ge Internal Standard	72	1	HMI H2	24909661	1.41	26305534	94.69	60	125	
Ge Internal Standard	72	2	HMI He	5171185	1.68	5205670	99.34	60	125	
In Internal standard	115	2	HMI He	16679029	1.64	16441998	101.44	60	125	
Ho-165	165	2	HMI He	39387474	1.34	37362695	105.42	60	125	

Sample Report

Sample Table

Sample Name 280-123275-C-5-D
 Data File Name 075SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T15:59:33-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457077 6020a dod5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-19.474	ppb	-19.474	-64.72	7807559	40000	
Be	9	1	6	0.104	ppb	0.104	32.41	45	2000	
B	11	1	6	2400.105	ppb	2400.105	3.89	27888	100	>LDR
Na	23	2	45	9649.009	ppb	9649.009	2.16	7560895	400000	
Mg	24	2	45	3504.110	ppb	3504.110	1.26	1127722	400000	
Al	27	2	45	1801.721	ppb	1801.721	1.62	165479	400000	
K	39	2	45	1335.334	ppb	1335.334	0.91	506856	400000	
Ca	44	2	45	5502.569	ppb	5502.569	1.87	127268	400000	
V	51	2	72	2.475	ppb	2.475	13.15	26811	2000	
Cr	52	2	72	2.214	ppb	2.214	0.52	16028	5000	
Mn	55	2	72	139.066	ppb	139.066	2.25	406473	10000	
Fe	57	2	72	2115.764	ppb	2115.764	3.22	262406	400000	
Co	59	2	72	1.364	ppb	1.364	2.78	20172	2000	
Ni	60	2	72	4.052	ppb	4.052	3.26	12168	5000	
Cu	63	2	72	2.345	ppb	2.345	4.53	22285	5000	
Zn	66	2	72	14.046	ppb	14.046	2.82	16755	5000	
As	75	2	72	0.832	ppb	0.832	16.79	863	2000	
Se	78	1	72	0.220	ppb	0.220	9.58	156	2000	
Sr	88	2	45	110.585	ppb	110.585	0.91	363562	2000	
Zr	90	2	72	591.631	ppb	591.631	8.97	11551	1000	
Zr	90	1	72	621.689	ppb	621.689	1.72	29004	1000	
Nb	93	2	72	0.534	ppb	0.534	40.80	8379	200	
Mo	95	2	115	0.177	ppb	0.177	20.78	857	2000	
Pd	105	2	115	-0.039	ppb	-0.039	-22.42	117	100	
Ag	107	2	115	0.028	ppb	0.028	60.43	440	100	
Cd	111	2	115	0.075	ppb	0.075	31.80	127	2000	
Sn	120	2	115	0.272	ppb	0.272	9.68	1947	2000	
Sb	121	2	115	0.864	ppb	0.864	9.97	3774	1000	
Ba	137	2	115	71.279	ppb	71.279	3.79	93805	5000	
W	182	2	165	0.137	ppb	0.137	20.23	4097	100	
Pt	195	2	165	0.004	ppb	0.004	132.36	37	100	
Tl	205	2	165	0.046	ppb	0.046	9.72	883	2000	
Pb	208	2	165	2.266	ppb	2.266	2.45	41764	5000	
Th	232	2	165	0.875	ppb	0.875	4.99	16556	2000	
U	238	2	165	0.120	ppb	0.120	7.02	2400	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	946739	0.83	1092921	86.62	60	125	
Sc (IS)	45	2	HMI He	4284703	1.77	4591929	93.31	60	125	
Sc (IS)	45	3	No Gas	127170873	1.68	129634638	98.10	60	120	
Ge Internal Standard	72	1	HMI H2	24502062	2.07	26305534	93.14	60	125	
Ge Internal Standard	72	2	HMI He	5131584	2.02	5205670	98.58	60	125	
In Internal standard	115	2	HMI He	16253856	1.32	16441998	98.86	60	125	
Ho-165	165	2	HMI He	39290866	2.49	37362695	105.16	60	125	

Sample Report

Sample Table

Sample Name 280-123275-C-5-E MS
 Data File Name 076SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T16:03:06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457077 6020a dod5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	69.799	ppb	69.799	17.43	9647404	40000	
Be	9	1	6	39.929	ppb	39.929	1.32	15702	2000	
B	11	1	6	3601.977	ppb	3601.977	6.36	41902	100	>LDR
Na	23	2	45	9147.874	ppb	9147.874	3.63	7274903	400000	
Mg	24	2	45	3390.452	ppb	3390.452	1.42	1106815	400000	
Al	27	2	45	2104.666	ppb	2104.666	0.78	196007	400000	
K	39	2	45	1288.998	ppb	1288.998	1.18	499961	400000	
Ca	44	2	45	5505.926	ppb	5505.926	0.97	129182	400000	
V	51	2	72	40.741	ppb	40.741	2.09	220555	2000	
Cr	52	2	72	39.118	ppb	39.118	1.87	263850	5000	
Mn	55	2	72	172.977	ppb	172.977	1.67	518512	10000	
Fe	57	2	72	2226.563	ppb	2226.563	3.57	283112	400000	
Co	59	2	72	38.272	ppb	38.272	3.32	411392	2000	
Ni	60	2	72	40.861	ppb	40.861	5.68	117023	5000	
Cu	63	2	72	40.169	ppb	40.169	2.99	322858	5000	
Zn	66	2	72	48.860	ppb	48.860	2.85	57917	5000	
As	75	2	72	35.587	ppb	35.587	2.19	30507	2000	
Se	78	1	72	38.131	ppb	38.131	1.66	22659	2000	
Sr	88	2	45	148.758	ppb	148.758	0.42	496023	2000	
Zr	90	2	72	747.348	ppb	747.348	4.60	14830	1000	
Zr	90	1	72	816.331	ppb	816.331	4.23	36720	1000	
Nb	93	2	72	0.335	ppb	0.335	46.29	7232	200	
Mo	95	2	115	39.811	ppb	39.811	2.29	152521	2000	
Pd	105	2	115	-0.041	ppb	-0.041	-11.28	103	100	
Ag	107	2	115	40.670	ppb	40.670	2.67	454101	100	
Cd	111	2	115	41.358	ppb	41.358	2.04	66095	2000	
Sn	120	2	115	24.942	ppb	24.942	1.92	118828	2000	
Sb	121	2	115	31.091	ppb	31.091	0.81	124902	1000	
Ba	137	2	115	116.068	ppb	116.068	1.87	149357	5000	
W	182	2	165	28.375	ppb	28.375	0.37	232999	100	
Pt	195	2	165	0.003	ppb	0.003	32.46	33	100	
Tl	205	2	165	37.690	ppb	37.690	3.75	520912	2000	
Pb	208	2	165	39.663	ppb	39.663	2.39	718535	5000	
Th	232	2	165	35.381	ppb	35.381	2.25	636025	2000	
U	238	2	165	36.688	ppb	36.688	2.17	718763	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	953507	3.11	1092921	87.24	60	125	
Sc (IS)	45	2	HMI He	4345893	0.51	4591929	94.64	60	125	
Sc (IS)	45	3	No Gas	124762507	1.11	129634638	96.24	60	120	
Ge Internal Standard	72	1	HMI H2	23988516	0.42	26305534	91.19	60	125	
Ge Internal Standard	72	2	HMI He	5263068	2.52	5205670	101.10	60	125	
In Internal standard	115	2	HMI He	15899459	1.37	16441998	96.70	60	125	
Ho-165	165	2	HMI He	39480084	1.41	37362695	105.67	60	125	

Sample Report

Sample Table

Sample Name 280-123275-C-5-F MSD
 Data File Name 077SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T16:06:33-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457077 6020a dod5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	60.582	ppb	60.582	7.30	9503393	40000	
Be	9	1	6	40.706	ppb	40.706	2.79	15967	2000	
B	11	1	6	3648.080	ppb	3648.080	1.10	42380	100	>LDR
Na	23	2	45	9475.495	ppb	9475.495	2.70	7405976	400000	
Mg	24	2	45	3526.112	ppb	3526.112	4.09	1131092	400000	
Al	27	2	45	2524.141	ppb	2524.141	3.16	230980	400000	
K	39	2	45	1367.309	ppb	1367.309	4.67	514855	400000	
Ca	44	2	45	5772.322	ppb	5772.322	2.69	133131	400000	
V	51	2	72	41.012	ppb	41.012	0.51	217721	2000	
Cr	52	2	72	40.161	ppb	40.161	1.55	265721	5000	
Mn	55	2	72	182.899	ppb	182.899	1.60	537766	10000	
Fe	57	2	72	2567.697	ppb	2567.697	2.45	320152	400000	
Co	59	2	72	40.474	ppb	40.474	1.74	426527	2000	
Ni	60	2	72	43.163	ppb	43.163	2.58	121278	5000	
Cu	63	2	72	40.606	ppb	40.606	2.24	320147	5000	
Zn	66	2	72	52.664	ppb	52.664	1.64	61192	5000	
As	75	2	72	37.771	ppb	37.771	1.35	31754	2000	
Se	78	1	72	37.217	ppb	37.217	0.96	23041	2000	
Sr	88	2	45	157.638	ppb	157.638	5.32	516329	2000	
Zr	90	2	72	880.275	ppb	880.275	17.03	17069	1000	
Zr	90	1	72	790.979	ppb	790.979	2.41	37128	1000	
Nb	93	2	72	0.172	ppb	0.172	17.90	6008	200	
Mo	95	2	115	37.816	ppb	37.816	2.02	150879	2000	
Pd	105	2	115	-0.031	ppb	-0.031	-25.80	163	100	
Ag	107	2	115	38.749	ppb	38.749	3.55	450497	100	
Cd	111	2	115	39.215	ppb	39.215	1.65	65263	2000	
Sn	120	2	115	25.202	ppb	25.202	4.41	124999	2000	
Sb	121	2	115	32.194	ppb	32.194	0.95	134688	1000	
Ba	137	2	115	115.177	ppb	115.177	2.07	154353	5000	
W	182	2	165	30.432	ppb	30.432	3.05	245588	100	
Pt	195	2	165	0.002	ppb	0.002	126.36	23	100	
Tl	205	2	165	37.937	ppb	37.937	1.23	516024	2000	
Pb	208	2	165	40.967	ppb	40.967	2.98	729881	5000	
Th	232	2	165	37.559	ppb	37.559	2.01	664086	2000	
U	238	2	165	38.465	ppb	38.465	4.15	740982	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	951052	1.18	1092921	87.02	60	125	
Sc (IS)	45	2	HMI He	4275032	3.99	4591929	93.10	60	125	
Sc (IS)	45	3	No Gas	125559229	0.31	129634638	96.86	60	120	
Ge Internal Standard	72	1	HMI H2	24993313	0.68	26305534	95.01	60	125	
Ge Internal Standard	72	2	HMI He	5161724	0.83	5205670	99.16	60	125	
In Internal standard	115	2	HMI He	16559996	2.11	16441998	100.72	60	125	
Ho-165	165	2	HMI He	38850355	2.53	37362695	103.98	60	125	

Sample Report

Sample Table

Sample Name 280-123281-A-1-A
 Data File Name 078SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T16:10:03-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457077 6020a dod5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	639.930	ppb	639.930	2.44	20619336	40000	
Be	9	1	6	0.031	ppb	0.031	29.66	13	2000	
B	11	1	6	15299.184	ppb	15299.184	0.89	143137	100	>LDR
Na	23	2	45	1075370.243	ppb	1075370.243	2.32	830239730	400000	
Mg	24	2	45	599080.117	ppb	599080.117	2.25	190958367	400000	
Al	27	2	45	7.339	ppb	7.339	16.57	1040	400000	
K	39	2	45	16467.611	ppb	16467.611	2.58	5017621	400000	
Ca	44	2	45	354993.526	ppb	354993.526	0.73	8118316	400000	
V	51	2	72	-1.306	ppb	-1.306	-12.93	7575	2000	
Cr	52	2	72	926.531	ppb	926.531	2.83	5590256	5000	
Mn	55	2	72	93.642	ppb	93.642	5.46	252440	10000	
Fe	57	2	72	81.452	ppb	81.452	7.14	10430	400000	
Co	59	2	72	0.315	ppb	0.315	15.24	8619	2000	
Ni	60	2	72	79.576	ppb	79.576	4.62	204238	5000	
Cu	63	2	72	1.847	ppb	1.847	5.98	16985	5000	
Zn	66	2	72	76.151	ppb	76.151	6.07	80782	5000	
As	75	2	72	0.767	ppb	0.767	12.57	748	2000	
Se	78	1	72	11.727	ppb	11.727	2.77	6245	2000	
Sr	88	2	45	10144.234	ppb	10144.234	2.44	33028020	2000	>LDR
Zr	90	2	72	140.281	ppb	140.281	15.09	2887	1000	
Zr	90	1	72	160.121	ppb	160.121	7.28	7766	1000	
Nb	93	2	72	0.027	ppb	0.027	170.22	4631	200	
Mo	95	2	115	0.216	ppb	0.216	2.54	913	2000	
Pd	105	2	115	0.325	ppb	0.325	10.46	1967	100	
Ag	107	2	115	0.051	ppb	0.051	16.80	640	100	
Cd	111	2	115	0.647	ppb	0.647	15.40	960	2000	
Sn	120	2	115	0.287	ppb	0.287	15.69	1827	2000	
Sb	121	2	115	0.375	ppb	0.375	3.65	1603	1000	
Ba	137	2	115	10.406	ppb	10.406	6.23	12508	5000	
W	182	2	165	0.075	ppb	0.075	20.85	3230	100	
Pt	195	2	165	0.003	ppb	0.003	210.40	27	100	
Tl	205	2	165	0.039	ppb	0.039	18.30	713	2000	
Pb	208	2	165	0.097	ppb	0.097	18.97	2417	5000	
Th	232	2	165	0.554	ppb	0.554	4.32	9733	2000	
U	238	2	165	3.038	ppb	3.038	1.65	53283	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	771594	0.23	1092921	70.60	60	125	
Sc (IS)	45	2	HMI He	4245605	1.20	4591929	92.46	60	125	
Sc (IS)	45	3	No Gas	115201477	1.73	129634638	88.87	60	120	
Ge Internal Standard	72	1	HMI H2	21454495	1.13	26305534	81.56	60	125	
Ge Internal Standard	72	2	HMI He	4737271	4.18	5205670	91.00	60	125	
In Internal standard	115	2	HMI He	14727456	1.85	16441998	89.57	60	125	
Ho-165	165	2	HMI He	35308177	1.35	37362695	94.50	60	125	

Sample Report

Sample Table

Sample Name 280-123281-A-1-B MS
 Data File Name 079SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T16:13:33-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457077 6020a dod5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	722.739	ppb	722.739	2.03	22476394	40000	
Be	9	1	6	42.194	ppb	42.194	0.98	12993	2000	
B	11	1	6	17951.165	ppb	17951.165	1.13	162424	100	>LDR
Na	23	2	45	1145020.623	ppb	1145020.623	1.34	870147961	400000	
Mg	24	2	45	635818.783	ppb	635818.783	2.09	199508548	400000	
Al	27	2	45	426.786	ppb	426.786	0.40	38515	400000	
K	39	2	45	17445.306	ppb	17445.306	1.07	5224961	400000	
Ca	44	2	45	368096.577	ppb	368096.577	1.77	8286858	400000	
V	51	2	72	41.124	ppb	41.124	3.76	192705	2000	
Cr	52	2	72	1038.682	ppb	1038.682	3.05	6033361	5000	
Mn	55	2	72	142.575	ppb	142.575	2.81	370325	10000	
Fe	57	2	72	534.105	ppb	534.105	2.79	59689	400000	
Co	59	2	72	38.325	ppb	38.325	2.42	356952	2000	
Ni	60	2	72	126.752	ppb	126.752	5.15	312773	5000	
Cu	63	2	72	37.836	ppb	37.836	5.31	263578	5000	
Zn	66	2	72	115.073	ppb	115.073	3.50	117300	5000	
As	75	2	72	41.013	ppb	41.013	3.51	30433	2000	
Se	78	1	72	59.041	ppb	59.041	3.04	32023	2000	
Sr	88	2	45	10853.462	ppb	10853.462	2.29	34785801	2000	>LDR
Zr	90	2	72	755.792	ppb	755.792	1.02	12998	1000	
Zr	90	1	72	715.989	ppb	715.989	6.34	29586	1000	
Nb	93	2	72	-0.004	ppb	-0.004	-708.96	4264	200	
Mo	95	2	115	40.883	ppb	40.883	2.30	144619	2000	
Pd	105	2	115	0.392	ppb	0.392	4.59	2304	100	
Ag	107	2	115	36.731	ppb	36.731	4.16	378689	100	
Cd	111	2	115	39.355	ppb	39.355	2.30	58079	2000	
Sn	120	2	115	40.447	ppb	40.447	0.16	177656	2000	
Sb	121	2	115	43.429	ppb	43.429	1.69	161035	1000	
Ba	137	2	115	51.965	ppb	51.965	4.29	61835	5000	
W	182	2	165	32.601	ppb	32.601	0.81	235981	100	
Pt	195	2	165	0.003	ppb	0.003	53.83	30	100	
Tl	205	2	165	35.684	ppb	35.684	4.27	435265	2000	
Pb	208	2	165	36.581	ppb	36.581	2.64	584966	5000	
Th	232	2	165	37.985	ppb	37.985	1.73	602692	2000	
U	238	2	165	41.517	ppb	41.517	2.49	717839	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	746467	0.55	1092921	68.30	60	125	
Sc (IS)	45	2	HMI He	4179214	1.37	4591929	91.01	60	125	
Sc (IS)	45	3	No Gas	115992511	1.24	129634638	89.48	60	120	
Ge Internal Standard	72	1	HMI H2	21908421	2.90	26305534	83.28	60	125	
Ge Internal Standard	72	2	HMI He	4559468	2.28	5205670	87.59	60	125	
In Internal standard	115	2	HMI He	14684882	1.69	16441998	89.31	60	125	
Ho-165	165	2	HMI He	34863805	2.75	37362695	93.31	60	125	

Sample Report

Sample Table

Sample Name 280-123281-A-1-C MSD
 Data File Name 080SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T16:17:03-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457077 6020a dod5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	700.327	ppb	700.327	0.42	22106603	40000	
Be	9	1	6	42.361	ppb	42.361	3.63	12616	2000	
B	11	1	6	18088.416	ppb	18088.416	1.20	158338	100	>LDR
Na	23	2	45	1103957.263	ppb	1103957.263	0.48	853520109	400000	
Mg	24	2	45	622783.606	ppb	622783.606	2.08	198819538	400000	
Al	27	2	45	415.963	ppb	415.963	2.46	38194	400000	
K	39	2	45	17286.862	ppb	17286.862	2.71	5268194	400000	
Ca	44	2	45	361698.464	ppb	361698.464	2.03	8283164	400000	
V	51	2	72	40.250	ppb	40.250	1.78	193432	2000	
Cr	52	2	72	1031.999	ppb	1031.999	2.04	6138304	5000	
Mn	55	2	72	137.998	ppb	137.998	3.82	366777	10000	
Fe	57	2	72	468.071	ppb	468.071	2.86	53700	400000	
Co	59	2	72	37.485	ppb	37.485	1.68	357600	2000	
Ni	60	2	72	122.141	ppb	122.141	2.07	308759	5000	
Cu	63	2	72	37.706	ppb	37.706	2.27	269050	5000	
Zn	66	2	72	113.198	ppb	113.198	3.93	118148	5000	
As	75	2	72	40.610	ppb	40.610	3.01	30850	2000	
Se	78	1	72	60.360	ppb	60.360	2.01	32133	2000	
Sr	88	2	45	11057.419	ppb	11057.419	3.00	36049062	2000	>LDR
Zr	90	2	72	687.029	ppb	687.029	6.74	12124	1000	
Zr	90	1	72	711.812	ppb	711.812	2.26	28907	1000	
Nb	93	2	72	-0.142	ppb	-0.142	-15.41	3530	200	
Mo	95	2	115	40.989	ppb	40.989	1.60	143694	2000	
Pd	105	2	115	0.389	ppb	0.389	16.79	2270	100	
Ag	107	2	115	37.132	ppb	37.132	2.33	379447	100	
Cd	111	2	115	38.316	ppb	38.316	2.83	56058	2000	
Sn	120	2	115	41.217	ppb	41.217	0.74	179385	2000	
Sb	121	2	115	42.967	ppb	42.967	1.43	157884	1000	
Ba	137	2	115	51.896	ppb	51.896	0.82	61192	5000	
W	182	2	165	31.776	ppb	31.776	0.67	234968	100	
Pt	195	2	165	0.003	ppb	0.003	155.37	27	100	
Tl	205	2	165	35.783	ppb	35.783	0.38	445982	2000	
Pb	208	2	165	34.899	ppb	34.899	1.84	569906	5000	
Th	232	2	165	37.048	ppb	37.048	1.45	600280	2000	
U	238	2	165	40.297	ppb	40.297	0.64	711658	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	722248	1.76	1092921	66.08	60	125	
Sc (IS)	45	2	HMI He	4251536	1.30	4591929	92.59	60	125	
Sc (IS)	45	3	No Gas	116479922	0.28	129634638	89.85	60	120	
Ge Internal Standard	72	1	HMI H2	21504868	2.45	26305534	81.75	60	125	
Ge Internal Standard	72	2	HMI He	4668316	3.04	5205670	89.68	60	125	
In Internal standard	115	2	HMI He	14551483	1.43	16441998	88.50	60	125	
Ho-165	165	2	HMI He	35596880	2.91	37362695	95.27	60	125	

Sample Report

Sample Table

Sample Name 280-123281-A-2-A
 Data File Name 081SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T16:20:33-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457077 6020a dod5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	142.450	ppb	142.450	0.88	11302476	40000	
Be	9	1	6	0.004	ppb	0.004	370.70	5	2000	
B	11	1	6	11113.811	ppb	11113.811	2.17	107438	100	>LDR
Na	23	2	45	476081.349	ppb	476081.349	1.92	376003767	400000	
Mg	24	2	45	85577.099	ppb	85577.099	2.28	27904364	400000	
Al	27	2	45	2.856	ppb	2.856	30.89	647	400000	
K	39	2	45	4389.451	ppb	4389.451	1.15	1445591	400000	
Ca	44	2	45	108919.901	ppb	108919.901	1.16	2547986	400000	
V	51	2	72	-1.436	ppb	-1.436	-2.69	7602	2000	
Cr	52	2	72	0.660	ppb	0.660	4.50	5874	5000	
Mn	55	2	72	2.400	ppb	2.400	6.98	7268	10000	
Fe	57	2	72	27.034	ppb	27.034	3.09	4601	400000	
Co	59	2	72	-0.014	ppb	-0.014	-41.84	5961	2000	
Ni	60	2	72	2.794	ppb	2.794	7.99	8706	5000	
Cu	63	2	72	0.612	ppb	0.612	9.32	8882	5000	
Zn	66	2	72	2.179	ppb	2.179	1.42	3210	5000	
As	75	2	72	0.593	ppb	0.593	10.65	666	2000	
Se	78	1	72	1.278	ppb	1.278	2.70	773	2000	
Sr	88	2	45	5081.726	ppb	5081.726	1.34	16925025	2000	
Zr	90	2	72	110.006	ppb	110.006	18.26	2560	1000	
Zr	90	1	72	120.198	ppb	120.198	9.32	6908	1000	
Nb	93	2	72	-0.385	ppb	-0.385	-7.08	2267	200	
Mo	95	2	115	0.825	ppb	0.825	6.38	3387	2000	
Pd	105	2	115	0.133	ppb	0.133	9.56	1090	100	
Ag	107	2	115	0.027	ppb	0.027	24.35	423	100	
Cd	111	2	115	0.039	ppb	0.039	73.64	67	2000	
Sn	120	2	115	0.246	ppb	0.246	10.10	1817	2000	
Sb	121	2	115	0.137	ppb	0.137	5.16	793	1000	
Ba	137	2	115	13.370	ppb	13.370	5.84	17653	5000	
W	182	2	165	0.107	ppb	0.107	39.91	3767	100	
Pt	195	2	165	0.004	ppb	0.004	110.90	37	100	
Tl	205	2	165	0.028	ppb	0.028	30.70	630	2000	
Pb	208	2	165	0.054	ppb	0.054	25.66	1883	5000	
Th	232	2	165	0.302	ppb	0.302	5.25	6191	2000	
U	238	2	165	18.368	ppb	18.368	1.64	350300	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	796670	1.32	1092921	72.89	60	125	
Sc (IS)	45	2	HMI He	4342698	1.49	4591929	94.57	60	125	
Sc (IS)	45	3	No Gas	125180853	0.82	129634638	96.56	60	120	
Ge Internal Standard	72	1	HMI H2	23764436	1.69	26305534	90.34	60	125	
Ge Internal Standard	72	2	HMI He	5142016	1.15	5205670	98.78	60	125	
In Internal standard	115	2	HMI He	16230726	4.77	16441998	98.72	60	125	
Ho-165	165	2	HMI He	38426733	1.47	37362695	102.85	60	125	

Sample Report

Sample Table

Sample Name 280-123281-A-3-A
 Data File Name 082SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T16:24:03-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457077 6020a dod5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	86.996	ppb	86.996	4.29	10007191	40000	
Be	9	1	6	0.004	ppb	0.004	354.69	5	2000	
B	11	1	6	5046.186	ppb	5046.186	3.36	48385	100	>LDR
Na	23	2	45	637730.812	ppb	637730.812	1.12	516313756	400000	
Mg	24	2	45	101757.349	ppb	101757.349	0.68	34018277	400000	
Al	27	2	45	7.930	ppb	7.930	3.99	1147	400000	
K	39	2	45	5347.433	ppb	5347.433	1.59	1781807	400000	
Ca	44	2	45	140259.029	ppb	140259.029	2.79	3363707	400000	
V	51	2	72	-0.986	ppb	-0.986	-8.97	9686	2000	
Cr	52	2	72	0.517	ppb	0.517	2.79	4871	5000	
Mn	55	2	72	143.655	ppb	143.655	1.67	414680	10000	
Fe	57	2	72	60.384	ppb	60.384	6.07	8602	400000	
Co	59	2	72	0.320	ppb	0.320	19.77	9269	2000	
Ni	60	2	72	4.573	ppb	4.573	4.18	13439	5000	
Cu	63	2	72	0.487	ppb	0.487	17.80	7809	5000	
Zn	66	2	72	3.411	ppb	3.411	8.63	4557	5000	
As	75	2	72	0.558	ppb	0.558	5.96	628	2000	
Se	78	1	72	0.141	ppb	0.141	3.56	104	2000	
Sr	88	2	45	6890.864	ppb	6890.864	3.83	23526564	2000	
Zr	90	2	72	48.705	ppb	48.705	5.02	1393	1000	
Zr	90	1	72	58.696	ppb	58.696	3.55	4282	1000	
Nb	93	2	72	-0.419	ppb	-0.419	-4.51	2010	200	
Mo	95	2	115	0.330	ppb	0.330	8.19	1423	2000	
Pd	105	2	115	0.210	ppb	0.210	17.09	1487	100	
Ag	107	2	115	0.014	ppb	0.014	19.59	277	100	
Cd	111	2	115	0.023	ppb	0.023	24.03	40	2000	
Sn	120	2	115	0.154	ppb	0.154	34.60	1337	2000	
Sb	121	2	115	0.083	ppb	0.083	34.11	563	1000	
Ba	137	2	115	28.024	ppb	28.024	2.80	36131	5000	
W	182	2	165	0.051	ppb	0.051	52.79	3284	100	
Pt	195	2	165	-0.001	ppb	-0.001	-78.48	7	100	
Tl	205	2	165	0.014	ppb	0.014	16.30	433	2000	
Pb	208	2	165	0.043	ppb	0.043	8.33	1667	5000	
Th	232	2	165	0.073	ppb	0.073	24.38	2157	2000	
U	238	2	165	3.842	ppb	3.842	2.78	72391	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	787155	0.24	1092921	72.02	60	125	
Sc (IS)	45	2	HMI He	4451869	0.80	4591929	96.95	60	125	
Sc (IS)	45	3	No Gas	124468449	1.02	129634638	96.01	60	120	
Ge Internal Standard	72	1	HMI H2	23633780	1.53	26305534	89.84	60	125	
Ge Internal Standard	72	2	HMI He	5067915	2.32	5205670	97.35	60	125	
In Internal standard	115	2	HMI He	15882191	2.99	16441998	96.60	60	125	
Ho-165	165	2	HMI He	37963550	2.56	37362695	101.61	60	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name CCV-5699926
 Data File Name 083_CCV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T16:27:34-06:00
 Sample Type CCV
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	44.337	ppb	33.419	146880	100	44.3	90	110	>+ \-10%
Li	7	3	45	55.199	ppb	7.348	9394289	100	55.2	90	110	>+ \-10%
Be	9	1	6	49.276	ppb	4.213	19382	50	98.6	90	110	
B	11	1	6	285.290	ppb	12.505	3690	50	570.6	90	110	>+ \-10%
Na	23	2	45	2062.743	ppb	3.165	1641469	1000	206.3	90	110	>+ \-10%
Mg	24	2	45	1061.504	ppb	1.613	339746	1000	106.2	90	110	
Al	27	2	45	1048.650	ppb	2.034	95870	1000	104.9	90	110	
K	39	2	45	1040.925	ppb	1.828	415614	1000	104.1	90	110	
Ca	44	2	45	1066.963	ppb	3.783	24751	1000	106.7	90	110	
V	51	2	72	48.911	ppb	1.216	261805	50	97.8	90	110	
Cr	52	2	72	48.273	ppb	1.630	325240	50	96.5	90	110	
Mn	55	2	72	49.931	ppb	2.593	149824	50	99.9	90	110	
Fe	57	2	72	982.588	ppb	1.019	125702	1000	98.3	90	110	
Co	59	2	72	49.106	ppb	0.724	526283	50	98.2	90	110	
Ni	60	2	72	48.574	ppb	1.255	139044	50	97.1	90	110	
Cu	63	2	72	48.823	ppb	1.418	391629	50	97.6	90	110	
Zn	66	2	72	49.446	ppb	3.430	58603	50	98.9	90	110	
As	75	2	72	49.837	ppb	1.909	42657	50	99.7	90	110	
Se	78	1	72	52.523	ppb	1.932	33919	50	105.0	90	110	
Sr	88	2	45	112.248	ppb	3.796	366660	100	112.2	90	110	>+ \-10%
Zr	90	2	72	87.968	ppb	1.301	2200	50	175.9	90	110	>+ \-10%
Zr	90	1	72	88.744	ppb	9.440	6117	50	177.5	90	110	>+ \-10%
Nb	93	2	72	95.836	ppb	3.486	660216	100	95.8	90	110	
Mo	95	2	115	48.838	ppb	3.155	196036	50	97.7	90	110	
Pd	105	2	115	50.771	ppb	1.246	294525	50	101.5	90	110	
Ag	107	2	115	50.310	ppb	0.892	588876	50	100.6	90	110	
Cd	111	2	115	51.522	ppb	1.418	86308	50	103.0	90	110	
Sn	120	2	115	51.892	ppb	0.947	258496	50	103.8	90	110	
Sb	121	2	115	52.255	ppb	1.462	219897	50	104.5	90	110	
Ba	137	2	115	52.238	ppb	2.639	70537	50	104.5	90	110	
W	182	2	165	45.723	ppb	4.401	398896	50	91.4	90	110	
Pt	195	2	165	44.194	ppb	5.382	265692	50	88.4	90	110	>+ \-10%
Tl	205	2	165	46.160	ppb	8.165	680691	50	92.3	90	110	
Pb	208	2	165	46.586	ppb	4.945	900805	50	93.2	90	110	
Th	232	2	165	47.417	ppb	5.355	909568	50	94.8	90	110	
U	238	2	165	46.910	ppb	2.410	981403	50	93.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	954148	2.52	1092921	87.30	60	125	
Sc (IS)	45	2	HMI He	4258155	1.28	4591929	92.73	60	125	
Sc IS)	45	3	No Gas	125712678	0.18	129634638	96.97	60	120	
Ge Internal Standard	72	1	HMI H2	26077347	2.04	26305534	99.13	60	125	
Ge Internal Standard	72	2	HMI He	5262544	1.64	5205670	101.09	60	125	
In Internal standard	115	2	HMI He	16667082	1.36	16441998	101.37	60	125	
Ho-165	165	2	HMI He	42185440	2.88	37362695	112.91	60	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name CCB-5699924
 Data File Name 084_CCB.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T16:31:08-06:00
 Sample Type CCB
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	1	45	-51.316	ppb	-15.6	109275	0.1	
Li	7	3	45	-46.730	ppb	-30.4	7204992	0.05	
Be	9	1	6	0.002	ppb	621.1	5	0.5	
B	11	1	6	182.932	ppb	15.7	2437	0.1	>RL
Na	23	2	45	701.437	ppb	0.4	598389	25	>RL
Mg	24	2	45	40.525	ppb	6.4	13565	25	>RL
Al	27	2	45	-1.021	ppb	-11.6	287	15	
K	39	2	45	-8.733	ppb	-137.5	103408	50	
Ca	44	2	45	17.706	ppb	31.6	703	25	
V	51	2	72	-0.864	ppb	-2.4	10768	1	
Cr	52	2	72	0.055	ppb	6.9	1973	1	
Mn	55	2	72	0.140	ppb	17.8	670	0.5	
Fe	57	2	72	3.248	ppb	55.2	1710	25	
Co	59	2	72	-0.035	ppb	-112.3	5928	0.5	
Ni	60	2	72	0.082	ppb	59.2	1210	1	
Cu	63	2	72	0.719	ppb	6.9	10030	1	
Zn	66	2	72	0.109	ppb	87.5	870	5	
As	75	2	72	0.056	ppb	68.9	226	1	
Se	78	1	72	0.056	ppb	68.1	60	1	
Sr	88	2	45	0.638	ppb	8.2	2307	1	
Zr	90	2	72	-9.639	ppb	-63.6	333	1	
Zr	90	1	72	1.646	ppb	456.8	2069	1	>RL
Nb	93	2	72	2.924	ppb	14.0	25172	2	>RL
Mo	95	2	115	0.093	ppb	10.1	547	0.5	
Pd	105	2	115	-0.011	ppb	-113.6	283	1	
Ag	107	2	115	0.018	ppb	34.5	337	1	
Cd	111	2	115	0.028	ppb	80.9	50	0.5	
Sn	120	2	115	0.142	ppb	19.2	1367	1	
Sb	121	2	115	0.086	ppb	41.1	603	1	
Ba	137	2	115	0.045	ppb	129.6	203	0.5	
W	182	2	165	0.027	ppb	37.6	3294	1	
Pt	195	2	165	0.003	ppb	114.4	30	1	
Tl	205	2	165	0.017	ppb	4.4	510	0.1	
Pb	208	2	165	0.026	ppb	40.3	1453	0.5	
Th	232	2	165	0.141	ppb	19.7	3540	1	
U	238	2	165	0.029	ppb	5.6	650	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	922986	1.60	1092921	84.45	60	125	
Sc (IS)	45	2	HMI He	4334732	0.19	4591929	94.40	60	125	
Sc (IS)	45	3	No Gas	127505138	2.54	129634638	98.36	60	120	
Ge Internal Standard	72	1	HMI H2	26018036	0.49	26305534	98.91	60	125	
Ge Internal Standard	72	2	HMI He	5312161	1.28	5205670	102.05	60	125	
In Internal standard	115	2	HMI He	16830485	3.53	16441998	102.36	60	125	
Ho-165	165	2	HMI He	40369416	2.42	37362695	108.05	60	125	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name CCVL-5699928
 Data File Name 085LLCCV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T16:34:38-06:00
 Sample Type LLCCV
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-29.338	ppb	-22.516	7340492	50	-58.7	70	130	> +/-30%
Be	9	1	6	0.878	ppb	9.707	333	1	87.8	70	130	
Na	23	2	45	634.755	ppb	2.421	528536	50	1269.5	70	130	> +/-30%
Mg	24	2	45	76.052	ppb	2.390	24333	50	152.1	70	130	> +/-30%
Al	27	2	45	48.377	ppb	5.155	4711	50	96.8	70	130	
K	39	2	45	98.886	ppb	7.016	131882	100	98.9	70	130	
Ca	44	2	45	44.577	ppb	8.097	1290	50	89.2	70	130	
V	51	2	72	4.261	ppb	7.104	35092	5	85.2	70	130	
Cr	52	2	72	1.969	ppb	3.786	14216	2	98.5	70	130	
Mn	55	2	72	1.028	ppb	7.685	3197	1	102.8	70	130	
Fe	57	2	72	50.686	ppb	5.353	7398	50	101.4	70	130	
Co	59	2	72	0.900	ppb	10.752	15147	1	90.0	70	130	
Ni	60	2	72	1.383	ppb	6.488	4701	1.5	92.2	70	130	
Cu	63	2	72	2.034	ppb	4.593	19578	2	101.7	70	130	
Zn	66	2	72	9.360	ppb	5.396	11230	10	93.6	70	130	
As	75	2	72	4.557	ppb	5.162	3900	5	91.1	70	130	
Se	78	1	72	5.002	ppb	5.638	3078	5	100.0	70	130	
Sr	88	2	45	1.652	ppb	12.804	5498	1	165.2	70	130	> +/-30%
Zr	90	2	72	-7.944	ppb	-44.520	347	0.5	-1588.8	70	130	> +/-30%
Zr	90	1	72	-7.025	ppb	-33.060	1582	0.5	-1405.0	70	130	> +/-30%
Nb	93	2	72	1.650	ppb	11.541	15581	2	82.5	70	130	
Mo	95	2	115	1.933	ppb	6.325	7782	2	96.7	70	130	
Pd	105	2	115	-0.024	ppb	-33.213	203	1	-2.4	70	130	> +/-30%
Ag	107	2	115	4.954	ppb	2.236	57078	5	99.1	70	130	
Cd	111	2	115	1.029	ppb	5.644	1697	1	102.9	70	130	
Sn	120	2	115	10.140	ppb	1.771	50116	10	101.4	70	130	
Sb	121	2	115	2.008	ppb	4.203	8529	2	100.4	70	130	
Ba	137	2	115	1.004	ppb	9.681	1467	1	100.4	70	130	
W	182	2	165	4.595	ppb	4.010	41246	1	459.5	70	130	> +/-30%
Pt	195	2	165	0.000	ppb	-763.582	13	1	0.0	70	130	> +/-30%
Tl	205	2	165	0.923	ppb	3.203	13329	1	92.3	70	130	
Pb	208	2	165	0.936	ppb	3.700	18331	1	93.6	70	130	
Th	232	2	165	1.815	ppb	3.910	34330	2	90.7	70	130	
U	238	2	165	0.941	ppb	5.043	18942	1	94.1	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	910018	1.61	1092921	83.26	60	125	
Sc (IS)	45	2	HMI He	4198541	1.94	4591929	91.43	60	125	
Sc IS)	45	3	No Gas	123071704	1.00	129634638	94.94	60	120	
Ge Internal Standard	72	1	HMI H2	24679090	0.85	26305534	93.82	60	125	
Ge Internal Standard	72	2	HMI He	5058869	3.19	5205670	97.18	60	125	
In Internal standard	115	2	HMI He	16370721	1.23	16441998	99.57	60	125	
Ho-165	165	2	HMI He	40478738	3.23	37362695	108.34	60	125	

Sample Report

Sample Table

Sample Name 280-123281-A-4-A
 Data File Name 086SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T16:38:10-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457077 6020a dod5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	175.611	ppb	175.611	3.69	11607327	40000	
Be	9	1	6	0.020	ppb	0.020	77.68	10	2000	
B	11	1	6	9857.925	ppb	9857.925	0.95	92523	100	>LDR
Na	23	2	45	594646.047	ppb	594646.047	2.01	460143969	400000	
Mg	24	2	45	113833.709	ppb	113833.709	3.38	36366605	400000	
Al	27	2	45	330.180	ppb	330.180	3.68	30417	400000	
K	39	2	45	5158.965	ppb	5158.965	1.90	1646594	400000	
Ca	44	2	45	176447.653	ppb	176447.653	0.21	4044874	400000	
V	51	2	72	0.655	ppb	0.655	23.53	16995	2000	
Cr	52	2	72	141.519	ppb	141.519	2.88	881391	5000	
Mn	55	2	72	15.140	ppb	15.140	2.13	42305	10000	
Fe	57	2	72	489.899	ppb	489.899	2.30	58719	400000	
Co	59	2	72	0.284	ppb	0.284	13.81	8589	2000	
Ni	60	2	72	1.943	ppb	1.943	3.83	6021	5000	
Cu	63	2	72	1.488	ppb	1.488	6.24	14873	5000	
Zn	66	2	72	6.835	ppb	6.835	5.40	8099	5000	
As	75	2	72	0.812	ppb	0.812	12.19	806	2000	
Se	78	1	72	0.187	ppb	0.187	5.80	125	2000	
Sr	88	2	45	9920.333	ppb	9920.333	1.41	32376613	2000	
Zr	90	2	72	225.658	ppb	225.658	4.31	4487	1000	
Zr	90	1	72	231.618	ppb	231.618	2.83	11051	1000	
Nb	93	2	72	2.263	ppb	2.263	8.84	18954	200	
Mo	95	2	115	0.303	ppb	0.303	9.49	1333	2000	
Pd	105	2	115	0.314	ppb	0.314	9.49	2077	100	
Ag	107	2	115	0.011	ppb	0.011	26.62	243	100	
Cd	111	2	115	0.052	ppb	0.052	21.11	87	2000	
Sn	120	2	115	0.295	ppb	0.295	8.58	2023	2000	
Sb	121	2	115	0.102	ppb	0.102	10.19	640	1000	
Ba	137	2	115	21.913	ppb	21.913	7.25	28449	5000	
W	182	2	165	0.069	ppb	0.069	43.63	3387	100	
Pt	195	2	165	0.004	ppb	0.004	127.32	37	100	
Tl	205	2	165	0.018	ppb	0.018	32.47	477	2000	
Pb	208	2	165	0.396	ppb	0.396	3.23	7718	5000	
Th	232	2	165	0.749	ppb	0.749	5.93	13683	2000	
U	238	2	165	16.423	ppb	16.423	2.88	305984	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	773058	0.43	1092921	70.73	60	125	
Sc (IS)	45	2	HMI He	4255447	1.24	4591929	92.67	60	125	
Sc (IS)	45	3	No Gas	120670313	1.85	129634638	93.08	60	120	
Ge Internal Standard	72	1	HMI H2	22588641	1.94	26305534	85.87	60	125	
Ge Internal Standard	72	2	HMI He	4881514	2.17	5205670	93.77	60	125	
In Internal standard	115	2	HMI He	16003949	3.50	16441998	97.34	60	125	
Ho-165	165	2	HMI He	37556346	1.66	37362695	100.52	60	125	

Sample Report

Sample Table

Sample Name 280-123281-A-5-A
 Data File Name 087SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T16:41:43-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457077 6020a dod5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	293.335	ppb	293.335	3.36	14499389	40000	
Be	9	1	6	0.026	ppb	0.026	154.07	12	2000	
B	11	1	6	16565.708	ppb	16565.708	1.07	154382	100	>LDR
Na	23	2	45	847664.907	ppb	847664.907	0.81	661241632	400000	
Mg	24	2	45	174190.713	ppb	174190.713	0.53	56114193	400000	
Al	27	2	45	164.553	ppb	164.553	0.66	15477	400000	
K	39	2	45	7092.425	ppb	7092.425	2.97	2243227	400000	
Ca	44	2	45	252689.039	ppb	252689.039	1.99	5841049	400000	
V	51	2	72	-0.899	ppb	-0.899	-13.73	9830	2000	
Cr	52	2	72	1975.325	ppb	1975.325	2.94	12420894	5000	
Mn	55	2	72	64.670	ppb	64.670	4.45	181892	10000	
Fe	57	2	72	249.010	ppb	249.010	5.30	30761	400000	
Co	59	2	72	0.337	ppb	0.337	2.98	9209	2000	
Ni	60	2	72	2.446	ppb	2.446	4.68	7432	5000	
Cu	63	2	72	0.371	ppb	0.371	22.87	6721	5000	
Zn	66	2	72	3.618	ppb	3.618	2.40	4661	5000	
As	75	2	72	0.285	ppb	0.285	17.70	394	2000	
Se	78	1	72	0.963	ppb	0.963	5.64	563	2000	
Sr	88	2	45	15029.667	ppb	15029.667	0.54	49449490	2000	>LDR
Zr	90	2	72	85.502	ppb	85.502	15.43	2023	1000	
Zr	90	1	72	97.308	ppb	97.308	11.58	5677	1000	
Nb	93	2	72	1.102	ppb	1.102	12.72	11708	200	
Mo	95	2	115	0.316	ppb	0.316	8.20	1357	2000	
Pd	105	2	115	0.480	ppb	0.480	3.78	2954	100	
Ag	107	2	115	0.035	ppb	0.035	25.61	507	100	
Cd	111	2	115	0.059	ppb	0.059	42.09	97	2000	
Sn	120	2	115	0.237	ppb	0.237	5.20	1723	2000	
Sb	121	2	115	0.131	ppb	0.131	21.26	750	1000	
Ba	137	2	115	22.579	ppb	22.579	5.19	28910	5000	
W	182	2	165	-0.002	ppb	-0.002	-792.40	2847	100	
Pt	195	2	165	0.008	ppb	0.008	36.91	57	100	
Tl	205	2	165	0.022	ppb	0.022	29.28	537	2000	
Pb	208	2	165	0.649	ppb	0.649	4.68	12095	5000	
Th	232	2	165	0.175	ppb	0.175	7.08	3894	2000	
U	238	2	165	22.056	ppb	22.056	4.06	411457	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	768715	0.29	1092921	70.34	60	125	
Sc (IS)	45	2	HMI He	4289989	2.07	4591929	93.42	60	125	
Sc (IS)	45	3	No Gas	123728084	1.35	129634638	95.44	60	120	
Ge Internal Standard	72	1	HMI H2	22730852	1.64	26305534	86.41	60	125	
Ge Internal Standard	72	2	HMI He	4936523	2.54	5205670	94.83	60	125	
In Internal standard	115	2	HMI He	15766204	2.13	16441998	95.89	60	125	
Ho-165	165	2	HMI He	37610523	2.21	37362695	100.66	60	125	

Sample Report

Sample Table

Sample Name 280-123281-A-6-A
 Data File Name 088SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T16:45:14-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457077 6020a dod5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	215.658	ppb	215.658	4.57	12500080	40000	
Be	9	1	6	0.016	ppb	0.016	156.67	8	2000	
B	11	1	6	9498.610	ppb	9498.610	1.36	87880	100	>LDR
Na	23	2	45	784012.432	ppb	784012.432	2.55	622840261	400000	
Mg	24	2	45	152520.539	ppb	152520.539	6.58	49976021	400000	
Al	27	2	45	88.912	ppb	88.912	6.09	8686	400000	
K	39	2	45	5193.425	ppb	5193.425	1.37	1701471	400000	
Ca	44	2	45	231205.674	ppb	231205.674	2.17	5443608	400000	
V	51	2	72	-1.177	ppb	-1.177	-9.12	8596	2000	
Cr	52	2	72	1.682	ppb	1.682	8.08	12148	5000	
Mn	55	2	72	230.065	ppb	230.065	1.16	651740	10000	
Fe	57	2	72	240.275	ppb	240.275	1.50	29966	400000	
Co	59	2	72	0.209	ppb	0.209	32.52	7989	2000	
Ni	60	2	72	2.631	ppb	2.631	4.45	7985	5000	
Cu	63	2	72	1.050	ppb	1.050	9.16	11861	5000	
Zn	66	2	72	4.737	ppb	4.737	10.56	5931	5000	
As	75	2	72	0.413	ppb	0.413	10.30	500	2000	
Se	78	1	72	0.134	ppb	0.134	66.79	97	2000	
Sr	88	2	45	12325.336	ppb	12325.336	1.57	41297331	2000	>LDR
Zr	90	2	72	199.435	ppb	199.435	10.83	4094	1000	
Zr	90	1	72	198.536	ppb	198.536	7.77	9886	1000	
Nb	93	2	72	0.684	ppb	0.684	7.52	9106	200	
Mo	95	2	115	0.458	ppb	0.458	1.11	1860	2000	
Pd	105	2	115	0.415	ppb	0.415	3.17	2550	100	
Ag	107	2	115	0.006	ppb	0.006	33.79	183	100	
Cd	111	2	115	0.048	ppb	0.048	78.90	77	2000	
Sn	120	2	115	0.268	ppb	0.268	14.78	1833	2000	
Sb	121	2	115	0.106	ppb	0.106	8.90	633	1000	
Ba	137	2	115	16.816	ppb	16.816	5.46	21141	5000	
W	182	2	165	0.023	ppb	0.023	31.16	3047	100	
Pt	195	2	165	0.002	ppb	0.002	272.46	23	100	
Tl	205	2	165	0.017	ppb	0.017	46.56	470	2000	
Pb	208	2	165	0.226	ppb	0.226	6.33	4830	5000	
Th	232	2	165	0.095	ppb	0.095	5.02	2534	2000	
U	238	2	165	61.007	ppb	61.007	6.05	1139191	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	762009	1.04	1092921	69.72	60	125	
Sc (IS)	45	2	HMI He	4369847	3.30	4591929	95.16	60	125	
Sc (IS)	45	3	No Gas	120957134	1.28	129634638	93.31	60	120	
Ge Internal Standard	72	1	HMI H2	23003656	3.48	26305534	87.45	60	125	
Ge Internal Standard	72	2	HMI He	4973859	2.25	5205670	95.55	60	125	
In Internal standard	115	2	HMI He	15454669	1.62	16441998	94.00	60	125	
Ho-165	165	2	HMI He	37701591	4.48	37362695	100.91	60	125	

Sample Report

Sample Table

Sample Name 280-123281-a-7-a
 Data File Name 089SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T16:48:45-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457077 6020a dod5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	178.173	ppb	178.173	0.72	11898409	40000	
Be	9	1	6	0.015	ppb	0.015	117.65	8	2000	
B	11	1	6	10272.944	ppb	10272.944	1.93	96423	100	>LDR
Na	23	2	45	608768.752	ppb	608768.752	4.75	482878528	400000	
Mg	24	2	45	115396.333	ppb	115396.333	3.98	37807344	400000	
Al	27	2	45	357.431	ppb	357.431	10.65	33730	400000	
K	39	2	45	5181.924	ppb	5181.924	2.20	1695728	400000	
Ca	44	2	45	179529.292	ppb	179529.292	1.71	4220704	400000	
V	51	2	72	0.456	ppb	0.456	14.50	16641	2000	
Cr	52	2	72	137.099	ppb	137.099	0.58	884490	5000	
Mn	55	2	72	16.186	ppb	16.186	4.10	46823	10000	
Fe	57	2	72	512.540	ppb	512.540	1.67	63570	400000	
Co	59	2	72	0.187	ppb	0.187	18.61	7905	2000	
Ni	60	2	72	2.017	ppb	2.017	4.42	6431	5000	
Cu	63	2	72	1.376	ppb	1.376	3.85	14550	5000	
Zn	66	2	72	6.543	ppb	6.543	2.21	8062	5000	
As	75	2	72	0.808	ppb	0.808	7.88	831	2000	
Se	78	1	72	0.148	ppb	0.148	40.86	109	2000	
Sr	88	2	45	10207.388	ppb	10207.388	2.40	34161378	2000	>LDR
Zr	90	2	72	247.160	ppb	247.160	7.52	5044	1000	
Zr	90	1	72	235.463	ppb	235.463	4.85	11833	1000	
Nb	93	2	72	0.310	ppb	0.310	54.92	6795	200	
Mo	95	2	115	0.297	ppb	0.297	5.82	1273	2000	
Pd	105	2	115	0.353	ppb	0.353	5.73	2237	100	
Ag	107	2	115	0.001	ppb	0.001	159.20	130	100	
Cd	111	2	115	0.032	ppb	0.032	79.29	53	2000	
Sn	120	2	115	0.279	ppb	0.279	19.19	1903	2000	
Sb	121	2	115	0.062	ppb	0.062	20.91	467	1000	
Ba	137	2	115	21.916	ppb	21.916	3.68	27778	5000	
W	182	2	165	0.022	ppb	0.022	229.48	3110	100	
Pt	195	2	165	0.004	ppb	0.004	93.14	37	100	
Tl	205	2	165	0.021	ppb	0.021	46.18	530	2000	
Pb	208	2	165	0.394	ppb	0.394	5.57	7898	5000	
Th	232	2	165	0.138	ppb	0.138	9.43	3337	2000	
U	238	2	165	16.249	ppb	16.249	0.33	311160	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	773228	1.66	1092921	70.75	60	125	
Sc (IS)	45	2	HMI He	4365220	2.56	4591929	95.06	60	125	
Sc (IS)	45	3	No Gas	123090939	1.49	129634638	94.95	60	120	
Ge Internal Standard	72	1	HMI H2	23869136	2.34	26305534	90.74	60	125	
Ge Internal Standard	72	2	HMI He	5054247	0.35	5205670	97.09	60	125	
In Internal standard	115	2	HMI He	15606560	2.22	16441998	94.92	60	125	
Ho-165	165	2	HMI He	38588689	1.42	37362695	103.28	60	125	

Sample Report

Sample Table

Sample Name 280-123281-a-8-a
 Data File Name 090SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T16:52:15-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457077 6020a dod5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Pass
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-59.816	ppb	-59.816	-20.82	7125324	40000	
Be	9	1	6	-0.007	ppb	-0.007	-118.68	2	2000	
B	11	1	6	305.893	ppb	305.893	6.03	3737	100	
Na	23	2	45	1554.501	ppb	1554.501	1.14	1293494	400000	
Mg	24	2	45	57.111	ppb	57.111	6.25	19304	400000	
Al	27	2	45	5.081	ppb	5.081	22.08	867	400000	
K	39	2	45	36.084	ppb	36.084	15.84	119136	400000	
Ca	44	2	45	196.847	ppb	196.847	3.73	4971	400000	
V	51	2	72	-1.941	ppb	-1.941	-1.31	5344	2000	
Cr	52	2	72	0.346	ppb	0.346	13.12	3991	5000	
Mn	55	2	72	0.639	ppb	0.639	5.58	2207	10000	
Fe	57	2	72	11.955	ppb	11.955	7.41	2857	400000	
Co	59	2	72	-0.033	ppb	-0.033	-83.33	6024	2000	
Ni	60	2	72	0.047	ppb	0.047	71.92	1120	5000	
Cu	63	2	72	0.605	ppb	0.605	8.07	9223	5000	
Zn	66	2	72	2.945	ppb	2.945	5.87	4271	5000	
As	75	2	72	0.006	ppb	0.006	280.37	185	2000	
Se	78	1	72	0.030	ppb	0.030	90.65	43	2000	
Sr	88	2	45	3.653	ppb	3.653	7.02	12555	2000	
Zr	90	2	72	4.901	ppb	4.901	102.03	620	1000	
Zr	90	1	72	14.556	ppb	14.556	33.72	2613	1000	
Nb	93	2	72	-0.090	ppb	-0.090	-65.29	4424	200	
Mo	95	2	115	0.026	ppb	0.026	18.37	287	2000	
Pd	105	2	115	-0.040	ppb	-0.040	-14.71	120	100	
Ag	107	2	115	0.018	ppb	0.018	24.56	353	100	
Cd	111	2	115	0.021	ppb	0.021	73.60	40	2000	
Sn	120	2	115	0.341	ppb	0.341	2.77	2450	2000	
Sb	121	2	115	-0.010	ppb	-0.010	-93.18	207	1000	
Ba	137	2	115	0.950	ppb	0.950	25.98	1483	5000	
W	182	2	165	-0.013	ppb	-0.013	-97.86	3104	100	
Pt	195	2	165	0.000	ppb	0.000	918.60	17	100	
Tl	205	2	165	0.008	ppb	0.008	33.13	390	2000	
Pb	208	2	165	0.041	ppb	0.041	16.37	1817	5000	
Th	232	2	165	0.002	ppb	0.002	359.86	1047	2000	
U	238	2	165	0.020	ppb	0.020	13.90	487	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	906055	0.94	1092921	82.90	60	125	
Sc (IS)	45	2	HMI He	4411654	1.85	4591929	96.07	60	125	
Sc (IS)	45	3	No Gas	131507864	2.35	129634638	101.45	60	120	
Ge Internal Standard	72	1	HMI H2	25512629	2.40	26305534	96.99	60	125	
Ge Internal Standard	72	2	HMI He	5373750	1.73	5205670	103.23	60	125	
In Internal standard	115	2	HMI He	17460757	2.92	16441998	106.20	60	125	
Ho-165	165	2	HMI He	42296911	2.06	37362695	113.21	60	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name CCV-5699926
 Data File Name 091_CCV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T16:55:47-06:00
 Sample Type CCV
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	52.310	ppb	17.286	142821	100	52.3	90	110	>+ \-10%
Li	7	3	45	49.019	ppb	13.491	9257509	100	49.0	90	110	>+ \-10%
Be	9	1	6	49.882	ppb	0.928	18525	50	99.8	90	110	
B	11	1	6	231.738	ppb	4.787	2904	50	463.5	90	110	>+ \-10%
Na	23	2	45	1705.978	ppb	1.400	1380473	1000	170.6	90	110	>+ \-10%
Mg	24	2	45	996.369	ppb	1.301	322433	1000	99.6	90	110	
Al	27	2	45	1015.383	ppb	1.933	93850	1000	101.5	90	110	
K	39	2	45	1001.115	ppb	1.078	408141	1000	100.1	90	110	
Ca	44	2	45	1003.503	ppb	3.677	23549	1000	100.4	90	110	
V	51	2	72	48.097	ppb	2.016	254045	50	96.2	90	110	
Cr	52	2	72	48.074	ppb	2.536	319352	50	96.1	90	110	
Mn	55	2	72	49.995	ppb	3.005	147897	50	100.0	90	110	
Fe	57	2	72	989.124	ppb	1.989	124747	1000	98.9	90	110	
Co	59	2	72	49.064	ppb	0.367	518475	50	98.1	90	110	
Ni	60	2	72	49.227	ppb	2.866	138886	50	98.5	90	110	
Cu	63	2	72	48.124	ppb	1.488	380609	50	96.2	90	110	
Zn	66	2	72	48.412	ppb	2.267	56603	50	96.8	90	110	
As	75	2	72	49.317	ppb	1.687	41619	50	98.6	90	110	
Se	78	1	72	54.186	ppb	3.572	33654	50	108.4	90	110	
Sr	88	2	45	107.470	ppb	4.638	354901	100	107.5	90	110	
Zr	90	2	72	73.475	ppb	11.319	1893	50	147.0	90	110	>+ \-10%
Zr	90	1	72	91.371	ppb	8.144	6011	50	182.7	90	110	>+ \-10%
Nb	93	2	72	96.778	ppb	1.919	657324	100	96.8	90	110	
Mo	95	2	115	48.123	ppb	0.897	193553	50	96.2	90	110	
Pd	105	2	115	48.901	ppb	1.917	284176	50	97.8	90	110	
Ag	107	2	115	48.873	ppb	2.600	573046	50	97.7	90	110	
Cd	111	2	115	50.164	ppb	1.038	84180	50	100.3	90	110	
Sn	120	2	115	50.203	ppb	2.845	250528	50	100.4	90	110	
Sb	121	2	115	50.183	ppb	2.315	211533	50	100.4	90	110	
Ba	137	2	115	52.100	ppb	2.095	70485	50	104.2	90	110	
W	182	2	165	46.798	ppb	4.334	398898	50	93.6	90	110	
Pt	195	2	165	44.901	ppb	3.158	263906	50	89.8	90	110	>+ \-10%
Tl	205	2	165	47.152	ppb	3.446	680047	50	94.3	90	110	
Pb	208	2	165	48.457	ppb	4.544	915550	50	96.9	90	110	
Th	232	2	165	47.217	ppb	3.169	885516	50	94.4	90	110	
U	238	2	165	47.430	ppb	1.025	969944	50	94.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	900172	1.70	1092921	82.36	60	125	
Sc (IS)	45	2	HMI He	4304875	1.46	4591929	93.75	60	125	
Sc IS)	45	3	No Gas	125757398	1.73	129634638	97.01	60	120	
Ge Internal Standard	72	1	HMI H2	25096644	2.72	26305534	95.40	60	125	
Ge Internal Standard	72	2	HMI He	5188628	1.83	5205670	99.67	60	125	
In Internal standard	115	2	HMI He	16695456	0.74	16441998	101.54	60	125	
Ho-165	165	2	HMI He	41222776	2.78	37362695	110.33	60	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name CCB-5699924
 Data File Name 092_CCB.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T16:59:17-06:00
 Sample Type CCB
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	1	45	-40.920	ppb	-20.7	109787	0.1	
Li	7	3	45	-44.129	ppb	-3.2	7143540	0.05	
Be	9	1	6	0.020	ppb	164.9	12	0.5	
B	11	1	6	154.662	ppb	7.4	2030	0.1	>RL
Na	23	2	45	637.517	ppb	2.5	539054	25	>RL
Mg	24	2	45	12.196	ppb	6.6	4277	25	
Al	27	2	45	-0.551	ppb	-248.4	327	15	
K	39	2	45	-10.738	ppb	-26.4	101156	50	
Ca	44	2	45	1.639	ppb	115.3	323	25	
V	51	2	72	-0.674	ppb	-14.0	11227	1	
Cr	52	2	72	0.007	ppb	80.7	1583	1	
Mn	55	2	72	0.088	ppb	24.0	493	0.5	
Fe	57	2	72	2.384	ppb	69.5	1530	25	
Co	59	2	72	-0.018	ppb	-204.6	5868	0.5	
Ni	60	2	72	0.071	ppb	24.4	1127	1	
Cu	63	2	72	0.489	ppb	3.8	7839	1	
Zn	66	2	72	0.185	ppb	38.8	920	5	
As	75	2	72	0.009	ppb	117.6	178	1	
Se	78	1	72	0.057	ppb	101.5	59	1	
Sr	88	2	45	0.481	ppb	4.6	1757	1	
Zr	90	2	72	-6.747	ppb	-64.3	373	1	
Zr	90	1	72	-6.222	ppb	-80.5	1662	1	
Nb	93	2	72	3.474	ppb	11.8	27700	2	>RL
Mo	95	2	115	0.095	ppb	39.2	537	0.5	
Pd	105	2	115	-0.016	ppb	-155.5	247	1	
Ag	107	2	115	0.016	ppb	35.1	310	1	
Cd	111	2	115	0.024	ppb	80.5	43	0.5	
Sn	120	2	115	0.097	ppb	45.4	1103	1	
Sb	121	2	115	0.074	ppb	49.4	537	1	
Ba	137	2	115	0.033	ppb	50.3	180	0.5	
W	182	2	165	0.063	ppb	13.7	3547	1	
Pt	195	2	165	0.009	ppb	104.6	63	1	
Tl	205	2	165	0.020	ppb	32.5	543	0.1	
Pb	208	2	165	0.020	ppb	71.8	1337	0.5	
Th	232	2	165	0.184	ppb	9.1	4287	1	
U	238	2	165	0.035	ppb	11.0	753	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	885419	2.02	1092921	81.01	60	125	
Sc (IS)	45	2	HMI He	4265347	2.23	4591929	92.89	60	125	
Sc (IS)	45	3	No Gas	125286308	2.87	129634638	96.65	60	120	
Ge Internal Standard	72	1	HMI H2	25310876	2.22	26305534	96.22	60	125	
Ge Internal Standard	72	2	HMI He	5086775	2.93	5205670	97.72	60	125	
In Internal standard	115	2	HMI He	16319973	2.05	16441998	99.26	60	125	
Ho-165	165	2	HMI He	39880861	2.25	37362695	106.74	60	125	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name CCVL-5699928
 Data File Name 093LLCCV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T17:02:49-06:00
 Sample Type LLCCV
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-29.602	ppb	-13.012	7170106	50	-59.2	70	130	> +/-30%
Be	9	1	6	0.871	ppb	21.474	320	1	87.1	70	130	
Na	23	2	45	643.107	ppb	0.477	537014	50	1286.2	70	130	> +/-30%
Mg	24	2	45	57.500	ppb	6.291	18556	50	115.0	70	130	
Al	27	2	45	46.304	ppb	8.112	4544	50	92.6	70	130	
K	39	2	45	83.878	ppb	2.216	127944	100	83.9	70	130	
Ca	44	2	45	42.084	ppb	18.749	1237	50	84.2	70	130	
V	51	2	72	4.374	ppb	1.466	34958	5	87.5	70	130	
Cr	52	2	72	1.996	ppb	4.608	14109	2	99.8	70	130	
Mn	55	2	72	1.053	ppb	10.497	3204	1	105.3	70	130	
Fe	57	2	72	50.622	ppb	2.630	7252	50	101.2	70	130	
Co	59	2	72	0.938	ppb	5.553	15250	1	93.8	70	130	
Ni	60	2	72	1.403	ppb	3.603	4667	1.5	93.5	70	130	
Cu	63	2	72	1.922	ppb	7.367	18357	2	96.1	70	130	
Zn	66	2	72	9.302	ppb	2.261	10954	10	93.0	70	130	
As	75	2	72	4.805	ppb	1.603	4027	5	96.1	70	130	
Se	78	1	72	4.923	ppb	3.442	3039	5	98.5	70	130	
Sr	88	2	45	1.416	ppb	7.196	4757	1	141.6	70	130	> +/-30%
Zr	90	2	72	-9.837	ppb	-31.996	307	0.5	-1967.3	70	130	> +/-30%
Zr	90	1	72	-4.804	ppb	-55.284	1685	0.5	-960.7	70	130	> +/-30%
Nb	93	2	72	1.787	ppb	11.446	16178	2	89.4	70	130	
Mo	95	2	115	1.964	ppb	6.077	7894	2	98.2	70	130	
Pd	105	2	115	-0.025	ppb	-23.876	197	1	-2.5	70	130	> +/-30%
Ag	107	2	115	4.851	ppb	2.336	55790	5	97.0	70	130	
Cd	111	2	115	1.031	ppb	5.907	1697	1	103.1	70	130	
Sn	120	2	115	9.963	ppb	0.796	49174	10	99.6	70	130	
Sb	121	2	115	1.952	ppb	6.115	8282	2	97.6	70	130	
Ba	137	2	115	1.042	ppb	13.040	1513	1	104.2	70	130	
W	182	2	165	4.489	ppb	1.592	40398	1	448.9	70	130	> +/-30%
Pt	195	2	165	0.003	ppb	198.163	30	1	0.3	70	130	> +/-30%
Tl	205	2	165	0.917	ppb	4.358	13253	1	91.7	70	130	
Pb	208	2	165	0.987	ppb	4.264	19289	1	98.7	70	130	
Th	232	2	165	1.876	ppb	2.033	35500	2	93.8	70	130	
U	238	2	165	0.943	ppb	1.922	19006	1	94.3	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	882556	2.55	1092921	80.75	60	125	
Sc (IS)	45	2	HMI He	4213899	0.36	4591929	91.77	60	125	
Sc IS)	45	3	No Gas	120294720	0.21	129634638	92.80	60	120	
Ge Internal Standard	72	1	HMI H2	24764035	0.81	26305534	94.14	60	125	
Ge Internal Standard	72	2	HMI He	4958958	0.42	5205670	95.26	60	125	
In Internal standard	115	2	HMI He	16342961	0.86	16441998	99.40	60	125	
Ho-165	165	2	HMI He	40490515	0.89	37362695	108.37	60	125	

Sample Report

Sample Table

Sample Name 280-123183-a-1-d
 Data File Name 094SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T17:06:20-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457077 6020a dod5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-27.868	ppb	-27.868	-28.72	7347168	40000	
Be	9	1	6	-0.011	ppb	-0.011	0.00	0	2000	
B	11	1	6	2849.415	ppb	2849.415	0.34	28867	100	>LDR
Na	23	2	45	11809.651	ppb	11809.651	1.63	9017320	400000	
Mg	24	2	45	28529.775	ppb	28529.775	3.12	8950801	400000	
Al	27	2	45	6.154	ppb	6.154	35.41	920	400000	
K	39	2	45	3465.805	ppb	3465.805	3.38	1119707	400000	
Ca	44	2	45	70303.633	ppb	70303.633	2.67	1582465	400000	
V	51	2	72	-1.742	ppb	-1.742	-2.71	5924	2000	
Cr	52	2	72	0.190	ppb	0.190	26.56	2720	5000	
Mn	55	2	72	98.997	ppb	98.997	0.27	282055	10000	
Fe	57	2	72	841.730	ppb	841.730	1.73	102484	400000	
Co	59	2	72	0.044	ppb	0.044	19.46	6385	2000	
Ni	60	2	72	0.103	ppb	0.103	99.96	1193	5000	
Cu	63	2	72	0.141	ppb	0.141	6.42	5084	5000	
Zn	66	2	72	0.841	ppb	0.841	9.01	1633	5000	
As	75	2	72	1.697	ppb	1.697	1.34	1543	2000	
Se	78	1	72	0.033	ppb	0.033	157.08	41	2000	
Sr	88	2	45	389.697	ppb	389.697	3.50	1248849	2000	
Zr	90	2	72	1.021	ppb	1.021	243.43	507	1000	
Zr	90	1	72	9.567	ppb	9.567	53.50	2222	1000	
Nb	93	2	72	2.111	ppb	2.111	8.93	18414	200	
Mo	95	2	115	1.425	ppb	1.425	13.12	5668	2000	
Pd	105	2	115	-0.021	ppb	-0.021	-26.51	213	100	
Ag	107	2	115	0.012	ppb	0.012	64.59	260	100	
Cd	111	2	115	0.012	ppb	0.012	73.77	23	2000	
Sn	120	2	115	0.155	ppb	0.155	11.21	1363	2000	
Sb	121	2	115	0.030	ppb	0.030	59.68	353	1000	
Ba	137	2	115	23.396	ppb	23.396	5.67	30459	5000	
W	182	2	165	0.037	ppb	0.037	83.31	3360	100	
Pt	195	2	165	0.004	ppb	0.004	183.53	37	100	
Tl	205	2	165	0.009	ppb	0.009	100.99	383	2000	
Pb	208	2	165	0.100	ppb	0.100	3.26	2817	5000	
Th	232	2	165	0.561	ppb	0.561	3.85	11188	2000	
U	238	2	165	0.104	ppb	0.104	13.32	2137	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	827229	0.57	1092921	75.69	60	125	
Sc (IS)	45	2	HMI He	4179343	1.79	4591929	91.01	60	125	
Sc (IS)	45	3	No Gas	122680376	2.83	129634638	94.64	60	120	
Ge Internal Standard	72	1	HMI H2	23719049	0.69	26305534	90.17	60	125	
Ge Internal Standard	72	2	HMI He	4999545	0.91	5205670	96.04	60	125	
In Internal standard	115	2	HMI He	16047999	3.51	16441998	97.60	60	125	
Ho-165	165	2	HMI He	40153509	1.69	37362695	107.47	60	125	

Sample Report

Sample Table

Sample Name 280-123183-a-1-dSD@5
 Data File Name 095SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T17:09:51-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457077 6020a dod5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-35.135	ppb	-35.135	-16.06	7047778	40000	
Be	9	1	6	-0.006	ppb	-0.006	-128.03	2	2000	
B	11	1	6	700.193	ppb	700.193	7.56	7795	100	>LDR
Na	23	2	45	2793.751	ppb	2793.751	1.96	2210590	400000	
Mg	24	2	45	5973.035	ppb	5973.035	2.82	1912392	400000	
Al	27	2	45	-0.019	ppb	-0.019	-82.35	373	400000	
K	39	2	45	686.948	ppb	686.948	1.37	310090	400000	
Ca	44	2	45	13889.217	ppb	13889.217	1.67	319193	400000	
V	51	2	72	-0.982	ppb	-0.982	-2.78	9850	2000	
Cr	52	2	72	0.056	ppb	0.056	56.10	1923	5000	
Mn	55	2	72	19.816	ppb	19.816	2.71	58298	10000	
Fe	57	2	72	160.658	ppb	160.658	3.88	21146	400000	
Co	59	2	72	0.010	ppb	0.010	199.41	6218	2000	
Ni	60	2	72	0.092	ppb	0.092	103.32	1200	5000	
Cu	63	2	72	0.330	ppb	0.330	11.98	6695	5000	
Zn	66	2	72	0.153	ppb	0.153	27.30	893	5000	
As	75	2	72	0.355	ppb	0.355	12.12	469	2000	
Se	78	1	72	0.017	ppb	0.017	88.79	33	2000	
Sr	88	2	45	77.261	ppb	77.261	1.88	252847	2000	
Zr	90	2	72	-7.770	ppb	-7.770	-39.95	357	1000	
Zr	90	1	72	-1.778	ppb	-1.778	-175.25	1842	1000	
Nb	93	2	72	0.523	ppb	0.523	21.49	8342	200	
Mo	95	2	115	0.274	ppb	0.274	6.77	1257	2000	
Pd	105	2	115	-0.044	ppb	-0.044	-3.00	90	100	
Ag	107	2	115	0.002	ppb	0.002	159.50	147	100	
Cd	111	2	115	0.014	ppb	0.014	52.27	27	2000	
Sn	120	2	115	0.051	ppb	0.051	13.15	890	2000	
Sb	121	2	115	0.010	ppb	0.010	250.95	277	1000	
Ba	137	2	115	4.639	ppb	4.639	5.30	6328	5000	
W	182	2	165	-0.068	ppb	-0.068	-12.67	2580	100	
Pt	195	2	165	0.001	ppb	0.001	309.05	23	100	
Tl	205	2	165	0.004	ppb	0.004	113.06	333	2000	
Pb	208	2	165	0.011	ppb	0.011	39.65	1210	5000	
Th	232	2	165	0.009	ppb	0.009	60.65	1163	2000	
U	238	2	165	0.019	ppb	0.019	12.25	460	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	877262	2.78	1092921	80.27	60	125	
Sc (IS)	45	2	HMI He	4263198	1.18	4591929	92.84	60	125	
Sc (IS)	45	3	No Gas	120231038	1.69	129634638	92.75	60	120	
Ge Internal Standard	72	1	HMI H2	25084859	0.80	26305534	95.36	60	125	
Ge Internal Standard	72	2	HMI He	5146115	1.42	5205670	98.86	60	125	
In Internal standard	115	2	HMI He	16516675	2.75	16441998	100.45	60	125	
Ho-165	165	2	HMI He	41490765	3.55	37362695	111.05	60	125	

Sample Report

Sample Table

Sample Name 280-123183-a-1-e.ms
 Data File Name 096SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T17:13:22-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457077 6020a dod5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	54.719	ppb	54.719	21.59	8957586	40000	
Be	9	1	6	39.947	ppb	39.947	1.99	13593	2000	
B	11	1	6	4073.922	ppb	4073.922	3.98	41000	100	>LDR
Na	23	2	45	11618.671	ppb	11618.671	3.65	8903563	400000	
Mg	24	2	45	28701.121	ppb	28701.121	3.43	9038530	400000	
Al	27	2	45	406.924	ppb	406.924	3.19	36872	400000	
K	39	2	45	3440.020	ppb	3440.020	1.83	1116536	400000	
Ca	44	2	45	71813.368	ppb	71813.368	2.34	1623140	400000	
V	51	2	72	37.980	ppb	37.980	2.69	195005	2000	
Cr	52	2	72	38.950	ppb	38.950	0.67	248015	5000	
Mn	55	2	72	137.750	ppb	137.750	1.05	389783	10000	
Fe	57	2	72	1209.613	ppb	1209.613	1.70	145805	400000	
Co	59	2	72	38.630	ppb	38.630	1.58	392074	2000	
Ni	60	2	72	38.000	ppb	38.000	1.98	102860	5000	
Cu	63	2	72	37.912	ppb	37.912	2.58	287859	5000	
Zn	66	2	72	37.119	ppb	37.119	1.89	41701	5000	
As	75	2	72	39.213	ppb	39.213	2.42	31710	2000	
Se	78	1	72	39.621	ppb	39.621	4.25	23054	2000	
Sr	88	2	45	418.325	ppb	418.325	0.76	1346207	2000	
Zr	90	2	72	502.261	ppb	502.261	9.36	9559	1000	
Zr	90	1	72	517.140	ppb	517.140	4.14	23443	1000	
Nb	93	2	72	0.825	ppb	0.825	1.22	9996	200	
Mo	95	2	115	39.992	ppb	39.992	2.95	157907	2000	
Pd	105	2	115	-0.033	ppb	-0.033	-19.22	153	100	
Ag	107	2	115	38.412	ppb	38.412	2.95	442122	100	
Cd	111	2	115	37.483	ppb	37.483	6.15	61715	2000	
Sn	120	2	115	40.140	ppb	40.140	2.57	196791	2000	
Sb	121	2	115	40.929	ppb	40.929	5.16	169349	1000	
Ba	137	2	115	66.122	ppb	66.122	4.44	87755	5000	
W	182	2	165	32.902	ppb	32.902	2.38	272546	100	
Pt	195	2	165	0.004	ppb	0.004	69.86	37	100	
Tl	205	2	165	38.188	ppb	38.188	4.58	533625	2000	
Pb	208	2	165	38.839	ppb	38.839	1.94	711036	5000	
Th	232	2	165	38.773	ppb	38.773	1.58	704327	2000	
U	238	2	165	39.915	ppb	39.915	3.73	790337	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	824953	0.73	1092921	75.48	60	125	
Sc (IS)	45	2	HMI He	4194902	1.51	4591929	91.35	60	125	
Sc (IS)	45	3	No Gas	120028068	1.08	129634638	92.59	60	120	
Ge Internal Standard	72	1	HMI H2	23497126	0.95	26305534	89.32	60	125	
Ge Internal Standard	72	2	HMI He	4967233	2.25	5205670	95.42	60	125	
In Internal standard	115	2	HMI He	16393463	2.00	16441998	99.70	60	125	
Ho-165	165	2	HMI He	39902754	0.99	37362695	106.80	60	125	

Sample Report

Sample Table

Sample Name 280-123183-a-1-f msd
 Data File Name 097SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T17:16:53-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457077 6020a dod5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	62.810	ppb	62.810	2.34	9050586	40000	
Be	9	1	6	40.323	ppb	40.323	5.40	13844	2000	
B	11	1	6	4193.571	ppb	4193.571	3.10	42594	100	>LDR
Na	23	2	45	11694.893	ppb	11694.893	3.52	9053971	400000	
Mg	24	2	45	29040.734	ppb	29040.734	3.68	9240450	400000	
Al	27	2	45	411.666	ppb	411.666	5.61	37663	400000	
K	39	2	45	3517.304	ppb	3517.304	3.61	1150803	400000	
Ca	44	2	45	72315.330	ppb	72315.330	1.98	1651027	400000	
V	51	2	72	38.715	ppb	38.715	2.27	198096	2000	
Cr	52	2	72	40.194	ppb	40.194	1.71	255272	5000	
Mn	55	2	72	142.274	ppb	142.274	1.75	401667	10000	
Fe	57	2	72	1267.849	ppb	1267.849	3.24	152376	400000	
Co	59	2	72	38.731	ppb	38.731	2.56	392062	2000	
Ni	60	2	72	38.259	ppb	38.259	1.22	103321	5000	
Cu	63	2	72	37.830	ppb	37.830	0.85	286654	5000	
Zn	66	2	72	37.763	ppb	37.763	1.32	42319	5000	
As	75	2	72	39.767	ppb	39.767	0.80	32089	2000	
Se	78	1	72	39.173	ppb	39.173	2.56	23329	2000	
Sr	88	2	45	454.684	ppb	454.684	3.41	1478056	2000	
Zr	90	2	72	557.478	ppb	557.478	5.80	10547	1000	
Zr	90	1	72	558.948	ppb	558.948	2.64	25779	1000	
Nb	93	2	72	0.518	ppb	0.518	17.08	7995	200	
Mo	95	2	115	42.101	ppb	42.101	2.29	161404	2000	
Pd	105	2	115	-0.032	ppb	-0.032	-62.38	150	100	
Ag	107	2	115	40.178	ppb	40.178	0.98	449107	100	
Cd	111	2	115	40.702	ppb	40.702	2.75	65135	2000	
Sn	120	2	115	42.012	ppb	42.012	2.72	199911	2000	
Sb	121	2	115	42.785	ppb	42.785	1.88	171940	1000	
Ba	137	2	115	66.728	ppb	66.728	2.11	86018	5000	
W	182	2	165	32.872	ppb	32.872	3.86	271096	100	
Pt	195	2	165	0.006	ppb	0.006	114.61	47	100	
Tl	205	2	165	38.553	ppb	38.553	3.71	536177	2000	
Pb	208	2	165	40.336	ppb	40.336	4.26	735121	5000	
Th	232	2	165	39.034	ppb	39.034	2.76	705943	2000	
U	238	2	165	39.944	ppb	39.944	3.61	787239	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	832473	0.86	1092921	76.17	60	125	
Sc (IS)	45	2	HMI He	4239172	2.68	4591929	92.32	60	125	
Sc (IS)	45	3	No Gas	118950350	0.42	129634638	91.76	60	120	
Ge Internal Standard	72	1	HMI H2	24047411	1.51	26305534	91.42	60	125	
Ge Internal Standard	72	2	HMI He	4955322	0.92	5205670	95.19	60	125	
In Internal standard	115	2	HMI He	15916290	1.97	16441998	96.80	60	125	
Ho-165	165	2	HMI He	39748261	2.83	37362695	106.38	60	125	

Sample Report

Sample Table

Sample Name 280-123183-a-1-d PDS
 Data File Name 098SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T17:20:25-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457077 6020a dod5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-20.164	ppb	-20.164	-27.86	7411511	40000	
Be	9	1	6	208.670	ppb	208.670	0.29	71324	2000	
B	11	1	6	2958.675	ppb	2958.675	4.96	30008	100	>LDR
Na	23	2	45	11551.448	ppb	11551.448	1.87	8752985	400000	
Mg	24	2	45	28288.266	ppb	28288.266	3.23	8807056	400000	
Al	27	2	45	2104.292	ppb	2104.292	1.64	187008	400000	
K	39	2	45	3439.545	ppb	3439.545	0.51	1103834	400000	
Ca	44	2	45	69257.605	ppb	69257.605	2.13	1547062	400000	
V	51	2	72	203.789	ppb	203.789	0.89	982724	2000	
Cr	52	2	72	202.295	ppb	202.295	2.14	1279191	5000	
Mn	55	2	72	306.681	ppb	306.681	0.33	865856	10000	
Fe	57	2	72	2860.112	ppb	2860.112	1.00	342367	400000	
Co	59	2	72	207.707	ppb	207.707	2.05	2077746	2000	
Ni	60	2	72	194.944	ppb	194.944	3.06	522821	5000	
Cu	63	2	72	197.700	ppb	197.700	0.52	1481718	5000	
Zn	66	2	72	201.143	ppb	201.143	0.58	222506	5000	
As	75	2	72	196.723	ppb	196.723	2.10	158124	2000	
Se	78	1	72	203.231	ppb	203.231	2.42	120688	2000	
Sr	88	2	45	380.386	ppb	380.386	1.61	1209919	2000	
Zr	90	2	72	92529.056	ppb	92529.056	1.79	1670987	1000	>LDR
Zr	90	1	72	91147.445	ppb	91147.445	0.35	3898298	1000	>LDR
Nb	93	2	72	8.328	ppb	8.328	6.51	58290	200	
Mo	95	2	115	203.829	ppb	203.829	1.27	803761	2000	
Pd	105	2	115	0.051	ppb	0.051	25.18	630	100	
Ag	107	2	115	41.739	ppb	41.739	2.96	479997	100	
Cd	111	2	115	205.610	ppb	205.610	0.40	338516	2000	
Sn	120	2	115	212.420	ppb	212.420	1.35	1037900	2000	
Sb	121	2	115	223.383	ppb	223.383	1.28	923006	1000	
Ba	137	2	115	244.639	ppb	244.639	3.08	324192	5000	
W	182	2	165	208.357	ppb	208.357	2.14	1754117	100	
Pt	195	2	165	0.101	ppb	0.101	2.82	607	100	
Tl	205	2	165	199.718	ppb	199.718	3.70	2860397	2000	
Pb	208	2	165	212.217	ppb	212.217	6.37	3979381	5000	
Th	232	2	165	1.005	ppb	1.005	6.19	19677	2000	
U	238	2	165	202.545	ppb	202.545	1.59	4113382	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	828740	0.67	1092921	75.83	60	125	
Sc (IS)	45	2	HMI He	4147322	1.89	4591929	90.32	60	125	
Sc (IS)	45	3	No Gas	120924677	0.61	129634638	93.28	60	120	
Ge Internal Standard	72	1	HMI H2	23999101	1.69	26305534	91.23	60	125	
Ge Internal Standard	72	2	HMI He	4957048	0.82	5205670	95.22	60	125	
In Internal standard	115	2	HMI He	16379214	1.91	16441998	99.62	60	125	
Ho-165	165	2	HMI He	40929206	1.03	37362695	109.55	60	125	

Sample Report

Sample Table

Sample Name 280-123183-a-2-b
 Data File Name 099SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T17:23:55-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457077 6020a dod5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Pass
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-45.776	ppb	-45.776	-1.87	6891929	40000	
Be	9	1	6	0.181	ppb	0.181	34.44	70	2000	
B	11	1	6	154.929	ppb	154.929	11.66	1987	100	
Na	23	2	45	403.244	ppb	403.244	4.66	350728	400000	
Mg	24	2	45	8.907	ppb	8.907	14.91	3164	400000	
Al	27	2	45	0.527	ppb	0.527	170.05	417	400000	
K	39	2	45	-14.766	ppb	-14.766	-91.28	98042	400000	
Ca	44	2	45	10.049	ppb	10.049	97.15	510	400000	
V	51	2	72	-1.688	ppb	-1.688	-1.78	6188	2000	
Cr	52	2	72	0.267	ppb	0.267	18.77	3214	5000	
Mn	55	2	72	0.078	ppb	0.078	22.59	457	10000	
Fe	57	2	72	3.343	ppb	3.343	44.05	1623	400000	
Co	59	2	72	0.008	ppb	0.008	396.37	6018	2000	
Ni	60	2	72	0.066	ppb	0.066	59.16	1093	5000	
Cu	63	2	72	-0.058	ppb	-0.058	-17.54	3584	5000	
Zn	66	2	72	0.143	ppb	0.143	143.70	857	5000	
As	75	2	72	0.010	ppb	0.010	24.93	176	2000	
Se	78	1	72	0.131	ppb	0.131	25.90	101	2000	
Sr	88	2	45	0.102	ppb	0.102	16.98	507	2000	
Zr	90	2	72	73.083	ppb	73.083	11.40	1820	1000	
Zr	90	1	72	152.383	ppb	152.383	11.36	8481	1000	
Nb	93	2	72	-0.511	ppb	-0.511	-9.18	1387	200	
Mo	95	2	115	0.192	ppb	0.192	25.50	930	2000	
Pd	105	2	115	-0.050	ppb	-0.050	-12.19	53	100	
Ag	107	2	115	0.028	ppb	0.028	15.69	453	100	
Cd	111	2	115	0.032	ppb	0.032	84.15	57	2000	
Sn	120	2	115	0.262	ppb	0.262	12.98	1927	2000	
Sb	121	2	115	0.289	ppb	0.289	16.57	1440	1000	
Ba	137	2	115	0.099	ppb	0.099	45.59	270	5000	
W	182	2	165	0.225	ppb	0.225	12.05	4931	100	
Pt	195	2	165	-0.001	ppb	-0.001	-69.18	7	100	
Tl	205	2	165	0.046	ppb	0.046	27.47	907	2000	
Pb	208	2	165	0.043	ppb	0.043	24.94	1783	5000	
Th	232	2	165	-0.011	ppb	-0.011	-50.93	753	2000	
U	238	2	165	0.073	ppb	0.073	9.74	1530	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	868732	7.36	1092921	79.49	60	125	
Sc (IS)	45	2	HMI He	4188956	4.20	4591929	91.22	60	125	
Sc (IS)	45	3	No Gas	121505630	0.95	129634638	93.73	60	120	
Ge Internal Standard	72	1	HMI H2	24379713	0.96	26305534	92.68	60	125	
Ge Internal Standard	72	2	HMI He	5001163	0.41	5205670	96.07	60	125	
In Internal standard	115	2	HMI He	16497489	0.56	16441998	100.34	60	125	
Ho-165	165	2	HMI He	40368706	2.43	37362695	108.05	60	125	

Sample Report

Sample Table

Sample Name LCSD 280-457010/3-A
 Data File Name 100SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T17:27:29-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457010 200.8
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	38.284	ppb	38.284	18.34	8571382	40000	
Be	9	1	6	40.159	ppb	40.159	1.62	14943	2000	
B	11	1	6	1328.758	ppb	1328.758	2.71	14880	100	>LDR
Na	23	2	45	313.964	ppb	313.964	1.98	279723	400000	
Mg	24	2	45	7.673	ppb	7.673	10.92	2740	400000	
Al	27	2	45	410.722	ppb	410.722	1.95	36718	400000	
K	39	2	45	-11.681	ppb	-11.681	-48.37	97884	400000	
Ca	44	2	45	137.519	ppb	137.519	8.53	3347	400000	
V	51	2	72	39.242	ppb	39.242	3.52	201448	2000	
Cr	52	2	72	38.652	ppb	38.652	4.13	246540	5000	
Mn	55	2	72	40.017	ppb	40.017	3.60	113608	10000	
Fe	57	2	72	392.882	ppb	392.882	4.45	48250	400000	
Co	59	2	72	39.667	ppb	39.667	3.43	403140	2000	
Ni	60	2	72	39.431	ppb	39.431	2.67	106918	5000	
Cu	63	2	72	39.536	ppb	39.536	3.67	300622	5000	
Zn	66	2	72	40.293	ppb	40.293	3.61	45296	5000	
As	75	2	72	38.280	ppb	38.280	3.09	31025	2000	
Se	78	1	72	41.645	ppb	41.645	1.88	25176	2000	
Sr	88	2	45	44.440	ppb	44.440	2.61	141223	2000	
Zr	90	2	72	431.765	ppb	431.765	5.62	8312	1000	
Zr	90	1	72	428.849	ppb	428.849	3.23	20513	1000	
Nb	93	2	72	-0.578	ppb	-0.578	-2.82	947	200	
Mo	95	2	115	39.594	ppb	39.594	1.46	151793	2000	
Pd	105	2	115	-0.035	ppb	-0.035	-9.95	137	100	
Ag	107	2	115	41.860	ppb	41.860	2.48	467655	100	
Cd	111	2	115	41.735	ppb	41.735	1.58	66731	2000	
Sn	120	2	115	42.028	ppb	42.028	2.63	199931	2000	
Sb	121	2	115	44.104	ppb	44.104	3.37	177154	1000	
Ba	137	2	115	43.917	ppb	43.917	1.99	56637	5000	
W	182	2	165	32.803	ppb	32.803	2.13	263992	100	
Pt	195	2	165	0.002	ppb	0.002	199.62	27	100	
Tl	205	2	165	38.664	ppb	38.664	5.71	524127	2000	
Pb	208	2	165	40.506	ppb	40.506	3.09	719845	5000	
Th	232	2	165	38.740	ppb	38.740	2.67	683328	2000	
U	238	2	165	40.799	ppb	40.799	1.66	784401	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	902031	1.00	1092921	82.53	60	125	
Sc (IS)	45	2	HMI He	4139657	2.26	4591929	90.15	60	125	
Sc (IS)	45	3	No Gas	119544936	1.55	129634638	92.22	60	120	
Ge Internal Standard	72	1	HMI H2	24410147	1.00	26305534	92.79	60	125	
Ge Internal Standard	72	2	HMI He	4979437	3.18	5205670	95.65	60	125	
In Internal standard	115	2	HMI He	15909366	1.26	16441998	96.76	60	125	
Ho-165	165	2	HMI He	38748136	2.19	37362695	103.71	60	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name CCV-5699926
 Data File Name 101_CCV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T17:31:01-06:00
 Sample Type CCV
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	42.091	ppb	4.521	136950	100	42.1	90	110	>+\-10%
Li	7	3	45	57.209	ppb	17.363	8992940	100	57.2	90	110	>+\-10%
Be	9	1	6	50.542	ppb	1.041	17887	50	101.1	90	110	
B	11	1	6	164.916	ppb	6.675	2073	50	329.8	90	110	>+\-10%
Na	23	2	45	1255.551	ppb	1.588	949122	1000	125.6	90	110	>+\-10%
Mg	24	2	45	1022.748	ppb	2.863	305578	1000	102.3	90	110	
Al	27	2	45	1049.474	ppb	1.847	89558	1000	104.9	90	110	
K	39	2	45	1019.264	ppb	0.969	381906	1000	101.9	90	110	
Ca	44	2	45	1008.681	ppb	1.297	21860	1000	100.9	90	110	
V	51	2	72	48.866	ppb	5.578	248371	50	97.7	90	110	
Cr	52	2	72	47.617	ppb	2.355	304810	50	95.2	90	110	
Mn	55	2	72	49.922	ppb	2.031	142355	50	99.8	90	110	
Fe	57	2	72	965.402	ppb	3.525	117351	1000	96.5	90	110	
Co	59	2	72	48.693	ppb	2.924	495725	50	97.4	90	110	
Ni	60	2	72	49.586	ppb	3.043	134849	50	99.2	90	110	
Cu	63	2	72	48.637	ppb	3.428	370675	50	97.3	90	110	
Zn	66	2	72	49.003	ppb	6.229	55189	50	98.0	90	110	
As	75	2	72	49.696	ppb	1.883	40417	50	99.4	90	110	
Se	78	1	72	53.109	ppb	2.280	32098	50	106.2	90	110	
Sr	88	2	45	112.369	ppb	1.486	342708	100	112.4	90	110	>+\-10%
Zr	90	2	72	175.420	ppb	2.278	3684	50	350.8	90	110	>+\-10%
Zr	90	1	72	258.887	ppb	10.541	13118	50	517.8	90	110	>+\-10%
Nb	93	2	72	96.087	ppb	2.259	628850	100	96.1	90	110	
Mo	95	2	115	46.920	ppb	4.481	185586	50	93.8	90	110	
Pd	105	2	115	48.305	ppb	4.089	276093	50	96.6	90	110	
Ag	107	2	115	48.817	ppb	2.459	563102	50	97.6	90	110	
Cd	111	2	115	51.503	ppb	4.826	84978	50	103.0	90	110	
Sn	120	2	115	50.728	ppb	3.528	248960	50	101.5	90	110	
Sb	121	2	115	50.561	ppb	1.628	209683	50	101.1	90	110	
Ba	137	2	115	50.699	ppb	0.993	67501	50	101.4	90	110	
W	182	2	165	48.230	ppb	0.911	387961	50	96.5	90	110	
Pt	195	2	165	47.510	ppb	2.476	263426	50	95.0	90	110	
Tl	205	2	165	49.854	ppb	4.144	678257	50	99.7	90	110	
Pb	208	2	165	51.808	ppb	0.238	923920	50	103.6	90	110	
Th	232	2	165	49.842	ppb	2.220	881707	50	99.7	90	110	
U	238	2	165	48.461	ppb	4.122	934463	50	96.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	857991	2.20	1092921	78.50	60	125	
Sc (IS)	45	2	HMI He	3974425	0.30	4591929	86.55	60	125	
Sc IS)	45	3	No Gas	119776101	0.69	129634638	92.40	60	120	
Ge Internal Standard	72	1	HMI H2	24407792	0.93	26305534	92.79	60	125	
Ge Internal Standard	72	2	HMI He	5000285	2.26	5205670	96.05	60	125	
In Internal standard	115	2	HMI He	16428512	2.54	16441998	99.92	60	125	
Ho-165	165	2	HMI He	38879487	1.58	37362695	104.06	60	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name CCB-5699924
 Data File Name 102_CCB.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T17:34:33-06:00
 Sample Type CCB
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	1	45	-39.975	ppb	-3.8	107594	0.1	
Li	7	3	45	-38.889	ppb	-11.7	6755330	0.05	
Be	9	1	6	0.049	ppb	18.1	22	0.5	
B	11	1	6	67.588	ppb	15.5	1087	0.1	>RL
Na	23	2	45	272.179	ppb	1.5	244693	25	>RL
Mg	24	2	45	3.692	ppb	18.1	1483	25	
Al	27	2	45	-0.177	ppb	-201.4	343	15	
K	39	2	45	-7.393	ppb	-129.6	97683	50	
Ca	44	2	45	0.320	ppb	878.6	280	25	
V	51	2	72	-0.514	ppb	-31.4	12024	1	
Cr	52	2	72	0.000	ppb	9471.3	1537	1	
Mn	55	2	72	0.090	ppb	34.0	500	0.5	
Fe	57	2	72	0.973	ppb	199.4	1360	25	
Co	59	2	72	-0.036	ppb	-42.0	5674	0.5	
Ni	60	2	72	0.049	ppb	191.6	1073	1	
Cu	63	2	72	0.412	ppb	19.9	7272	1	
Zn	66	2	72	0.148	ppb	51.9	880	5	
As	75	2	72	0.040	ppb	66.1	204	1	
Se	78	1	72	0.050	ppb	57.8	52	1	
Sr	88	2	45	0.013	ppb	62.5	217	1	
Zr	90	2	72	-7.394	ppb	-85.9	360	1	
Zr	90	1	72	-1.206	ppb	-161.8	1785	1	
Nb	93	2	72	3.007	ppb	5.9	24722	2	>RL
Mo	95	2	115	0.086	ppb	7.4	500	0.5	
Pd	105	2	115	-0.016	ppb	-70.3	243	1	
Ag	107	2	115	0.014	ppb	33.2	287	1	
Cd	111	2	115	0.012	ppb	125.7	23	0.5	
Sn	120	2	115	0.154	ppb	9.4	1377	1	
Sb	121	2	115	0.124	ppb	11.4	743	1	
Ba	137	2	115	0.046	ppb	50.1	197	0.5	
W	182	2	165	0.055	ppb	47.1	3464	1	
Pt	195	2	165	0.006	ppb	77.8	47	1	
Tl	205	2	165	0.023	ppb	44.5	577	0.1	
Pb	208	2	165	0.017	ppb	31.3	1277	0.5	
Th	232	2	165	0.213	ppb	4.1	4784	1	
U	238	2	165	0.037	ppb	4.7	793	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	873637	3.38	1092921	79.94	60	125	
Sc (IS)	45	2	HMI He	4079069	0.46	4591929	88.83	60	125	
Sc (IS)	45	3	No Gas	116581157	0.82	129634638	89.93	60	120	
Ge Internal Standard	72	1	HMI H2	23969160	2.89	26305534	91.12	60	125	
Ge Internal Standard	72	2	HMI He	5094757	2.75	5205670	97.87	60	125	
In Internal standard	115	2	HMI He	16277805	1.15	16441998	99.00	60	125	
Ho-165	165	2	HMI He	39705880	2.75	37362695	106.27	60	125	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name CCVL-5699928
 Data File Name 103LLCCV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T17:38:03-06:00
 Sample Type LLCCV
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-31.297	ppb	-13.725	6953349	50	-62.6	70	130	> +/-30%
Be	9	1	6	0.897	ppb	11.132	320	1	89.7	70	130	
Na	23	2	45	290.656	ppb	1.691	245422	50	581.3	70	130	> +/-30%
Mg	24	2	45	54.651	ppb	0.460	16234	50	109.3	70	130	
Al	27	2	45	52.942	ppb	7.472	4727	50	105.9	70	130	
K	39	2	45	101.143	ppb	2.431	122331	100	101.1	70	130	
Ca	44	2	45	35.667	ppb	25.897	1003	50	71.3	70	130	
V	51	2	72	4.275	ppb	4.492	34761	5	85.5	70	130	
Cr	52	2	72	1.765	ppb	5.200	12755	2	88.2	70	130	
Mn	55	2	72	0.961	ppb	11.413	2974	1	96.1	70	130	
Fe	57	2	72	46.880	ppb	11.449	6855	50	93.8	70	130	
Co	59	2	72	0.905	ppb	7.195	15037	1	90.5	70	130	
Ni	60	2	72	1.246	ppb	7.356	4277	1.5	83.0	70	130	
Cu	63	2	72	1.763	ppb	5.252	17319	2	88.2	70	130	
Zn	66	2	72	9.134	ppb	1.418	10857	10	91.3	70	130	
As	75	2	72	4.559	ppb	0.666	3861	5	91.2	70	130	
Se	78	1	72	5.098	ppb	1.977	2992	5	102.0	70	130	
Sr	88	2	45	1.142	ppb	5.233	3560	1	114.2	70	130	
Zr	90	2	72	-12.724	ppb	-12.946	257	0.5	-2544.8	70	130	> +/-30%
Zr	90	1	72	-2.628	ppb	-106.316	1695	0.5	-525.6	70	130	> +/-30%
Nb	93	2	72	1.531	ppb	7.955	14657	2	76.5	70	130	
Mo	95	2	115	1.980	ppb	5.315	7849	2	99.0	70	130	
Pd	105	2	115	-0.027	ppb	-20.690	183	1	-2.7	70	130	> +/-30%
Ag	107	2	115	4.989	ppb	1.833	56637	5	99.8	70	130	
Cd	111	2	115	1.094	ppb	4.462	1777	1	109.4	70	130	
Sn	120	2	115	10.050	ppb	2.557	48936	10	100.5	70	130	
Sb	121	2	115	1.959	ppb	6.744	8195	2	98.0	70	130	
Ba	137	2	115	1.085	ppb	4.715	1550	1	108.5	70	130	
W	182	2	165	4.253	ppb	1.198	38212	1	425.3	70	130	> +/-30%
Pt	195	2	165	0.003	ppb	82.628	33	1	0.3	70	130	> +/-30%
Tl	205	2	165	0.943	ppb	1.370	13553	1	94.3	70	130	
Pb	208	2	165	0.917	ppb	3.722	17888	1	91.7	70	130	
Th	232	2	165	1.926	ppb	1.849	36228	2	96.3	70	130	
U	238	2	165	0.945	ppb	1.345	18946	1	94.5	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	854226	3.56	1092921	78.16	60	125	
Sc (IS)	45	2	HMI He	3874251	0.38	4591929	84.37	60	125	
Sc IS)	45	3	No Gas	117266140	2.22	129634638	90.46	60	120	
Ge Internal Standard	72	1	HMI H2	23549882	1.23	26305534	89.52	60	125	
Ge Internal Standard	72	2	HMI He	4999823	1.75	5205670	96.05	60	125	
In Internal standard	115	2	HMI He	16129483	2.30	16441998	98.10	60	125	
Ho-165	165	2	HMI He	40264563	2.60	37362695	107.77	60	125	

Blank Report

Sample Table

Sample Name mb 280-457615/1-a
 Data File Name 104_BLK.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T17:41:34-06:00
 Sample Type Blank
 Dilution 1
 Comment 457615 6020A DOD5
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-50.873	ppb	-14.4561813	101657	0.1
Li	7	3	45	-45.188	ppb	-6.716918781	6648850	0.05
Be	9	1	6	0.028	ppb	60.94760454	13	0.5
Na	23	2	45	223.000	ppb	2.667534693	212281	25
Mg	24	2	45	5.023	ppb	8.476679813	1930	25
Al	27	2	45	1.001	ppb	126.5354825	453	15
K	39	2	45	-31.686	ppb	-8.299932476	92521	50
Ca	44	2	45	0.790	ppb	531.1891592	297	25
V	51	2	72	-1.544	ppb	-8.694347208	6708	1
Cr	52	2	72	0.249	ppb	25.53083503	3027	1
Mn	55	2	72	0.052	ppb	60.78180633	373	0.5
Fe	57	2	72	2.677	ppb	63.31517473	1507	25
Co	59	2	72	0.003	ppb	1113.311534	5828	0.5
Ni	60	2	72	0.018	ppb	265.7937386	943	1
Cu	63	2	72	-0.023	ppb	-510.9955977	3761	1
Zn	66	2	72	0.208	ppb	26.45127283	907	5
As	75	2	72	0.021	ppb	68.55459507	180	1
Se	78	1	72	0.027	ppb	55.5980526	37	1
Sr	88	2	45	0.044	ppb	49.63886225	320	1
Zr	90	2	72	-3.960	ppb	-110.0536821	407	1
Zr	90	1	72	1.739	ppb	91.39206771	1895	1
Nb	93	2	72	1.707	ppb	12.5658437	15424	2
Mo	95	2	115	0.062	ppb	24.58045827	403	0.5
Pd	105	2	115	-0.042	ppb	-3.429561263	97	1
Ag	107	2	115	0.021	ppb	55.25982839	363	1
Cd	111	2	115	0.008	ppb	155.9821423	17	0.5
Sn	120	2	115	0.155	ppb	5.238624197	1367	1
Sb	121	2	115	0.058	ppb	43.15514645	467	1
Ba	137	2	115	0.067	ppb	55.54675269	223	0.5
W	182	2	165	0.039	ppb	106.5411839	3344	1
Pt	195	2	165	0.002	ppb	133.7241135	23	1
Tl	205	2	165	0.010	ppb	66.38150571	400	0.1
Pb	208	2	165	0.014	ppb	62.10467646	1220	0.5
Th	232	2	165	0.712	ppb	4.669819984	13823	1
U	238	2	165	0.020	ppb	1.073222116	463	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	825191	0.81	1092921	75.50	60	125	
Sc (IS)	45	2	HMI He	4159872	2.22	4591929	90.59	60	125	
Sc IS)	45	3	No Gas	117004937	0.14	129634638	90.26	60	120	
Ge Internal Standard	72	1	HMI H2	23767621	1.22	26305534	90.35	60	125	
Ge Internal Standard	72	2	HMI He	4881359	0.73	5205670	93.77	60	125	
In Internal standard	115	2	HMI He	16130812	2.95	16441998	98.11	60	125	
Ho-165	165	2	HMI He	39802940	2.11	37362695	106.53	60	125	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name lcs 280-457615/2-a
 Data File Name 105_LCS.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T17:45:07-06:00
 Sample Type LCS
 Dilution 1
 Analyst Denver Metals
 Comment 457615 6020A DOD5
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	27.281	27.281	ppb	23.127	8231037	400	6.8	80	120	> +/-20%
Be	9	1	6	40.735	40.735	ppb	5.452	14172	40	101.8	80	120	
Na	23	2	45	235.456	235.456	ppb	0.781	220415	40	588.6	80	120	> +/-20%
Mg	24	2	45	93.954	93.954	ppb	3.490	29521	40	234.9	80	120	> +/-20%
Al	27	2	45	420.757	420.757	ppb	1.274	37573	40	1051.9	80	120	> +/-20%
K	39	2	45	36.899	36.899	ppb	7.558	111883	40	92.2	80	120	
Ca	44	2	45	273.300	273.300	ppb	3.666	6365	40	683.2	80	120	> +/-20%
V	51	2	72	38.288	38.288	ppb	2.865	195807	40	95.7	80	120	
Cr	52	2	72	40.034	40.034	ppb	2.734	253959	40	100.1	80	120	
Mn	55	2	72	42.271	42.271	ppb	3.847	119330	40	105.7	80	120	
Fe	57	2	72	433.031	433.031	ppb	0.516	52794	40	1082.6	80	120	> +/-20%
Co	59	2	72	40.182	40.182	ppb	2.771	406050	40	100.5	80	120	
Ni	60	2	72	41.212	41.212	ppb	2.543	111087	40	103.0	80	120	
Cu	63	2	72	39.266	39.266	ppb	1.831	297006	40	98.2	80	120	
Zn	66	2	72	41.601	41.601	ppb	2.196	46496	40	104.0	80	120	
As	75	2	72	37.412	37.412	ppb	3.293	30156	40	93.5	80	120	
Se	78	1	72	39.617	39.617	ppb	2.321	22841	40	99.0	80	120	
Sr	88	2	45	46.665	46.665	ppb	1.756	148149	40	116.7	80	120	
Nb	93	2	72	1.090	1.090	ppb	13.627	11661	40	2.7	80	120	> +/-20%
Mo	95	2	115	38.747	38.747	ppb	5.345	151889	40	96.9	80	120	
Pd	105	2	115	-0.036	-0.036	ppb	-9.939	133	40	-0.1	80	120	> +/-20%
Ag	107	2	115	41.240	41.240	ppb	2.773	471515	40	103.1	80	120	
Cd	111	2	115	40.523	40.523	ppb	2.766	66316	40	101.3	80	120	
Sn	120	2	115	40.881	40.881	ppb	1.977	199033	40	102.2	80	120	
Sb	121	2	115	41.089	41.089	ppb	2.853	168898	40	102.7	80	120	
Ba	137	2	115	43.346	43.346	ppb	6.748	57154	40	108.4	80	120	
W	182	2	165	32.182	32.182	ppb	3.142	265714	40	80.5	80	120	
Pt	195	2	165	0.003	0.003	ppb	169.738	30	40	0.0	80	120	> +/-20%
Tl	205	2	165	38.631	38.631	ppb	5.961	537324	40	96.6	80	120	
Pb	208	2	165	39.414	39.414	ppb	3.228	718949	40	98.5	80	120	
Th	232	2	165	38.054	38.054	ppb	4.318	688543	40	95.1	80	120	
U	238	2	165	39.404	39.404	ppb	3.860	777179	40	98.5	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	844666	4.94	1092921	77.29	60	125	
Sc (IS)	45	2	HMI He	4134542	1.04	4591929	90.04	60	125	
Sc IS)	45	3	No Gas	118020536	1.05	129634638	91.04	60	120	
Ge Internal Standard	72	1	HMI H2	23280401	3.06	26305534	88.50	60	125	
Ge Internal Standard	72	2	HMI He	4950345	1.92	5205670	95.10	60	125	
In Internal standard	115	2	HMI He	16283108	2.54	16441998	99.03	60	125	
Ho-165	165	2	HMI He	39787681	3.85	37362695	106.49	60	125	

Sample Report

Sample Table

Sample Name lcsd 280-457615/3-a
 Data File Name 106SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T17:48:40-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457615 6020A DOD5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	31.234	ppb	31.234	23.01	8260900	40000	
Be	9	1	6	41.839	ppb	41.839	1.92	14096	2000	
B	11	1	6	1339.111	ppb	1339.111	4.48	13575	100	>LDR
Na	23	2	45	196.632	ppb	196.632	3.63	187455	400000	
Mg	24	2	45	121.870	ppb	121.870	4.30	37429	400000	
Al	27	2	45	417.821	ppb	417.821	0.45	36591	400000	
K	39	2	45	-18.178	ppb	-18.178	-38.49	94003	400000	
Ca	44	2	45	338.777	ppb	338.777	3.30	7668	400000	
V	51	2	72	37.975	ppb	37.975	2.20	191196	2000	
Cr	52	2	72	39.976	ppb	39.976	1.71	249503	5000	
Mn	55	2	72	42.474	ppb	42.474	3.15	117987	10000	
Fe	57	2	72	398.918	ppb	398.918	1.83	47929	400000	
Co	59	2	72	40.402	ppb	40.402	3.66	401628	2000	
Ni	60	2	72	40.200	ppb	40.200	2.58	106616	5000	
Cu	63	2	72	39.942	ppb	39.942	4.06	297078	5000	
Zn	66	2	72	39.402	ppb	39.402	5.04	43345	5000	
As	75	2	72	37.418	ppb	37.418	2.31	29677	2000	
Se	78	1	72	39.447	ppb	39.447	3.46	23213	2000	
Sr	88	2	45	46.271	ppb	46.271	2.80	144007	2000	
Zr	90	2	72	521.992	ppb	521.992	2.38	9738	1000	
Zr	90	1	72	521.951	ppb	521.951	3.28	23911	1000	
Nb	93	2	72	0.560	ppb	0.560	12.20	8125	200	
Mo	95	2	115	39.636	ppb	39.636	4.43	153467	2000	
Pd	105	2	115	-0.040	ppb	-0.040	-6.22	110	100	
Ag	107	2	115	41.268	ppb	41.268	6.39	465735	100	
Cd	111	2	115	40.600	ppb	40.600	3.95	65587	2000	
Sn	120	2	115	41.227	ppb	41.227	6.16	198071	2000	
Sb	121	2	115	41.998	ppb	41.998	4.31	170446	1000	
Ba	137	2	115	43.680	ppb	43.680	5.34	56889	5000	
W	182	2	165	32.469	ppb	32.469	0.75	263485	100	
Pt	195	2	165	0.000	ppb	0.000	-1123.32	13	100	
Tl	205	2	165	38.632	ppb	38.632	0.32	528602	2000	
Pb	208	2	165	40.211	ppb	40.211	1.81	720929	5000	
Th	232	2	165	39.227	ppb	39.227	3.30	697772	2000	
U	238	2	165	39.514	ppb	39.514	1.17	766128	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	816643	0.32	1092921	74.72	60	125	
Sc (IS)	45	2	HMI He	4054985	2.82	4591929	88.31	60	125	
Sc (IS)	45	3	No Gas	117244737	1.77	129634638	90.44	60	120	
Ge Internal Standard	72	1	HMI H2	23783361	4.83	26305534	90.41	60	125	
Ge Internal Standard	72	2	HMI He	4870234	1.92	5205670	93.56	60	125	
In Internal standard	115	2	HMI He	16082650	2.95	16441998	97.81	60	125	
Ho-165	165	2	HMI He	39081089	1.33	37362695	104.60	60	125	

Sample Report

Sample Table

Sample Name 280-123364-o-1-g
 Data File Name 107SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T17:52:12-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457615 6020A DOD5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-48.317	ppb	-48.317	-6.29	6634292	40000	
Be	9	1	6	0.014	ppb	0.014	221.77	8	2000	
B	11	1	6	855.011	ppb	855.011	5.21	8672	100	>LDR
Na	23	2	45	26291.733	ppb	26291.733	2.84	19405550	400000	
Mg	24	2	45	11017.603	ppb	11017.603	2.55	3351163	400000	
Al	27	2	45	2.885	ppb	2.885	30.75	607	400000	
K	39	2	45	2994.118	ppb	2994.118	1.44	951309	400000	
Ca	44	2	45	19163.761	ppb	19163.761	0.70	418401	400000	
V	51	2	72	-1.358	ppb	-1.358	-4.86	7585	2000	
Cr	52	2	72	1.543	ppb	1.543	2.40	11084	5000	
Mn	55	2	72	0.508	ppb	0.508	6.36	1640	10000	
Fe	57	2	72	14.116	ppb	14.116	5.80	2854	400000	
Co	59	2	72	0.124	ppb	0.124	16.02	7018	2000	
Ni	60	2	72	0.551	ppb	0.551	25.31	2344	5000	
Cu	63	2	72	0.679	ppb	0.679	6.77	8929	5000	
Zn	66	2	72	1.877	ppb	1.877	8.24	2720	5000	
As	75	2	72	0.312	ppb	0.312	12.17	410	2000	
Se	78	1	72	1.127	ppb	1.127	9.69	680	2000	
Sr	88	2	45	112.298	ppb	112.298	1.73	349039	2000	
Zr	90	2	72	45.415	ppb	45.415	19.45	1287	1000	
Zr	90	1	72	44.384	ppb	44.384	2.66	3677	1000	
Nb	93	2	72	0.150	ppb	0.150	36.80	5551	200	
Mo	95	2	115	0.450	ppb	0.450	8.85	1893	2000	
Pd	105	2	115	-0.046	ppb	-0.046	-17.81	77	100	
Ag	107	2	115	0.012	ppb	0.012	55.62	253	100	
Cd	111	2	115	0.021	ppb	0.021	119.74	37	2000	
Sn	120	2	115	0.301	ppb	0.301	15.68	2053	2000	
Sb	121	2	115	0.691	ppb	0.691	12.25	3020	1000	
Ba	137	2	115	89.403	ppb	89.403	4.24	115784	5000	
W	182	2	165	0.055	ppb	0.055	89.26	3387	100	
Pt	195	2	165	0.000	ppb	0.000	-2283.98	13	100	
Tl	205	2	165	0.023	ppb	0.023	12.19	567	2000	
Pb	208	2	165	6.004	ppb	6.004	2.50	107677	5000	
Th	232	2	165	0.599	ppb	0.599	1.32	11488	2000	
U	238	2	165	5.561	ppb	5.561	2.82	107092	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	805841	1.60	1092921	73.73	60	125	
Sc (IS)	45	2	HMI He	4050787	0.92	4591929	88.22	60	125	
Sc (IS)	45	3	No Gas	117909721	0.89	129634638	90.96	60	120	
Ge Internal Standard	72	1	HMI H2	23621934	0.82	26305534	89.80	60	125	
Ge Internal Standard	72	2	HMI He	4885612	2.20	5205670	93.85	60	125	
In Internal standard	115	2	HMI He	16000686	1.34	16441998	97.32	60	125	
Ho-165	165	2	HMI He	38810068	2.29	37362695	103.87	60	125	

Sample Report

Sample Table

Sample Name 280-123364-o-1-gSD@5
 Data File Name 108SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T17:55:42-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457615 6020A DOD5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Pass
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-48.000	ppb	-48.000	-6.87	6624448	40000	
Be	9	1	6	0.004	ppb	0.004	415.97	5	2000	
B	11	1	6	223.008	ppb	223.008	3.89	2610	100	
Na	23	2	45	5271.462	ppb	5271.462	4.27	3955863	400000	
Mg	24	2	45	2125.079	ppb	2125.079	3.77	651822	400000	
Al	27	2	45	-0.502	ppb	-0.502	-94.24	317	400000	
K	39	2	45	586.729	ppb	586.729	6.72	268186	400000	
Ca	44	2	45	3800.933	ppb	3800.933	4.16	83843	400000	
V	51	2	72	-0.650	ppb	-0.650	-11.53	11000	2000	
Cr	52	2	72	0.182	ppb	0.182	12.94	2627	5000	
Mn	55	2	72	0.102	ppb	0.102	23.08	517	10000	
Fe	57	2	72	2.825	ppb	2.825	39.10	1540	400000	
Co	59	2	72	-0.031	ppb	-0.031	-61.22	5548	2000	
Ni	60	2	72	0.158	ppb	0.158	34.61	1323	5000	
Cu	63	2	72	0.357	ppb	0.357	0.97	6621	5000	
Zn	66	2	72	0.164	ppb	0.164	36.40	867	5000	
As	75	2	72	0.063	ppb	0.063	20.44	216	2000	
Se	78	1	72	0.237	ppb	0.237	10.55	161	2000	
Sr	88	2	45	22.154	ppb	22.154	4.60	69539	2000	
Zr	90	2	72	1.080	ppb	1.080	359.15	500	1000	
Zr	90	1	72	6.500	ppb	6.500	21.79	2102	1000	
Nb	93	2	72	-0.251	ppb	-0.251	-0.81	3030	200	
Mo	95	2	115	0.107	ppb	0.107	26.17	577	2000	
Pd	105	2	115	-0.039	ppb	-0.039	-26.43	117	100	
Ag	107	2	115	0.008	ppb	0.008	46.23	213	100	
Cd	111	2	115	0.002	ppb	0.002	168.73	7	2000	
Sn	120	2	115	0.123	ppb	0.123	35.10	1213	2000	
Sb	121	2	115	0.194	ppb	0.194	14.09	1020	1000	
Ba	137	2	115	17.338	ppb	17.338	2.66	22763	5000	
W	182	2	165	-0.001	ppb	-0.001	-1926.93	2974	100	
Pt	195	2	165	0.000	ppb	0.000	-2697.00	13	100	
Tl	205	2	165	0.008	ppb	0.008	30.76	363	2000	
Pb	208	2	165	0.005	ppb	0.005	154.06	1043	5000	
Th	232	2	165	0.022	ppb	0.022	27.51	1320	2000	
U	238	2	165	1.109	ppb	1.109	3.12	21626	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	836313	0.87	1092921	76.52	60	125	
Sc (IS)	45	2	HMI He	4087178	4.80	4591929	89.01	60	125	
Sc (IS)	45	3	No Gas	117603796	1.38	129634638	90.72	60	120	
Ge Internal Standard	72	1	HMI H2	23832242	1.05	26305534	90.60	60	125	
Ge Internal Standard	72	2	HMI He	4929943	2.44	5205670	94.70	60	125	
In Internal standard	115	2	HMI He	16141465	1.46	16441998	98.17	60	125	
Ho-165	165	2	HMI He	39171568	1.15	37362695	104.84	60	125	

Sample Report

Sample Table

Sample Name 280-123364-o-1-h.ms
 Data File Name 109SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T17:59:52-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457615 6020A DOD5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	22.875	ppb	22.875	12.10	8016232	40000	
Be	9	1	6	40.939	ppb	40.939	3.17	13415	2000	
B	11	1	6	2087.425	ppb	2087.425	2.90	20405	100	>LDR
Na	23	2	45	26393.142	ppb	26393.142	5.15	19236054	400000	
Mg	24	2	45	11274.305	ppb	11274.305	5.59	3386388	400000	
Al	27	2	45	425.901	ppb	425.901	5.32	36775	400000	
K	39	2	45	3059.612	ppb	3059.612	4.61	957751	400000	
Ca	44	2	45	19448.433	ppb	19448.433	1.77	419467	400000	
V	51	2	72	38.495	ppb	38.495	1.39	193821	2000	
Cr	52	2	72	39.400	ppb	39.400	1.67	246164	5000	
Mn	55	2	72	40.359	ppb	40.359	0.53	112250	10000	
Fe	57	2	72	399.921	ppb	399.921	2.59	48090	400000	
Co	59	2	72	39.212	ppb	39.212	2.62	390363	2000	
Ni	60	2	72	39.894	ppb	39.894	2.75	105913	5000	
Cu	63	2	72	37.755	ppb	37.755	1.20	281421	5000	
Zn	66	2	72	37.903	ppb	37.903	1.11	41784	5000	
As	75	2	72	37.954	ppb	37.954	2.06	30129	2000	
Se	78	1	72	39.431	ppb	39.431	2.74	22698	2000	
Sr	88	2	45	157.913	ppb	157.913	3.37	484656	2000	
Zr	90	2	72	791.667	ppb	791.667	5.29	14536	1000	
Zr	90	1	72	814.977	ppb	814.977	0.05	35523	1000	
Nb	93	2	72	-0.078	ppb	-0.078	-66.90	4097	200	
Mo	95	2	115	39.225	ppb	39.225	3.85	150630	2000	
Pd	105	2	115	-0.044	ppb	-0.044	-5.69	87	100	
Ag	107	2	115	39.581	ppb	39.581	0.98	443284	100	
Cd	111	2	115	39.403	ppb	39.403	2.40	63161	2000	
Sn	120	2	115	41.504	ppb	41.504	1.50	197909	2000	
Sb	121	2	115	42.986	ppb	42.986	3.42	173054	1000	
Ba	137	2	115	131.296	ppb	131.296	3.84	169362	5000	
W	182	2	165	32.343	ppb	32.343	0.82	259982	100	
Pt	195	2	165	0.003	ppb	0.003	167.95	30	100	
Tl	205	2	165	38.280	ppb	38.280	1.59	518682	2000	
Pb	208	2	165	39.481	ppb	39.481	2.98	700970	5000	
Th	232	2	165	37.606	ppb	37.606	2.51	662487	2000	
U	238	2	165	44.574	ppb	44.574	1.37	856034	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	794500	1.43	1092921	72.70	60	125	
Sc (IS)	45	2	HMI He	4002950	3.14	4591929	87.17	60	125	
Sc (IS)	45	3	No Gas	116232927	0.95	129634638	89.66	60	120	
Ge Internal Standard	72	1	HMI H2	23243721	1.11	26305534	88.36	60	125	
Ge Internal Standard	72	2	HMI He	4874487	1.28	5205670	93.64	60	125	
In Internal standard	115	2	HMI He	15947297	2.53	16441998	96.99	60	125	
Ho-165	165	2	HMI He	38706429	1.56	37362695	103.60	60	125	

Sample Report

Sample Table

Sample Name 280-123364-o-1-i.msd
 Data File Name 110SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T18:03:44-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457615 6020A DOD5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	26.380	ppb	26.380	41.08	8078313	40000	
Be	9	1	6	41.362	ppb	41.362	1.93	13772	2000	
B	11	1	6	2009.314	ppb	2009.314	2.73	19961	100	>LDR
Na	23	2	45	26261.193	ppb	26261.193	2.43	19090157	400000	
Mg	24	2	45	11070.986	ppb	11070.986	4.55	3315678	400000	
Al	27	2	45	418.998	ppb	418.998	3.18	36090	400000	
K	39	2	45	3017.678	ppb	3017.678	3.43	943206	400000	
Ca	44	2	45	19523.489	ppb	19523.489	1.04	419752	400000	
V	51	2	72	38.206	ppb	38.206	3.76	191825	2000	
Cr	52	2	72	39.088	ppb	39.088	2.83	243410	5000	
Mn	55	2	72	40.529	ppb	40.529	4.06	112317	10000	
Fe	57	2	72	406.255	ppb	406.255	3.15	48672	400000	
Co	59	2	72	38.658	ppb	38.658	2.82	383689	2000	
Ni	60	2	72	38.569	ppb	38.569	1.64	102106	5000	
Cu	63	2	72	38.035	ppb	38.035	1.20	282548	5000	
Zn	66	2	72	38.745	ppb	38.745	2.16	42553	5000	
As	75	2	72	38.306	ppb	38.306	2.19	30308	2000	
Se	78	1	72	40.025	ppb	40.025	2.32	23164	2000	
Sr	88	2	45	157.336	ppb	157.336	2.20	481446	2000	
Zr	90	2	72	530.496	ppb	530.496	5.78	9856	1000	
Zr	90	1	72	551.050	ppb	551.050	4.11	24716	1000	
Nb	93	2	72	-0.156	ppb	-0.156	-28.28	3590	200	
Mo	95	2	115	39.872	ppb	39.872	2.24	152731	2000	
Pd	105	2	115	-0.043	ppb	-0.043	-7.99	93	100	
Ag	107	2	115	31.778	ppb	31.778	1.75	354854	100	
Cd	111	2	115	39.413	ppb	39.413	3.08	62959	2000	
Sn	120	2	115	40.995	ppb	40.995	4.65	194808	2000	
Sb	121	2	115	43.442	ppb	43.442	4.07	174317	1000	
Ba	137	2	115	131.839	ppb	131.839	2.56	169599	5000	
W	182	2	165	31.852	ppb	31.852	4.19	261517	100	
Pt	195	2	165	-0.002	ppb	-0.002	-54.80	3	100	
Tl	205	2	165	36.820	ppb	36.820	3.75	509627	2000	
Pb	208	2	165	38.481	ppb	38.481	3.62	698060	5000	
Th	232	2	165	38.060	ppb	38.060	3.93	684925	2000	
U	238	2	165	43.546	ppb	43.546	2.09	854499	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	807201	0.70	1092921	73.86	60	125	
Sc (IS)	45	2	HMI He	3989297	1.88	4591929	86.88	60	125	
Sc (IS)	45	3	No Gas	116110007	1.44	129634638	89.57	60	120	
Ge Internal Standard	72	1	HMI H2	23362560	0.88	26305534	88.81	60	125	
Ge Internal Standard	72	2	HMI He	4859309	2.06	5205670	93.35	60	125	
In Internal standard	115	2	HMI He	15901542	3.06	16441978	96.71	60	125	
Ho-165	165	2	HMI He	39570666	3.89	37362695	105.91	60	125	

Sample Report

Sample Table

Sample Name 280-123364-o-1-g PDS
 Data File Name 111SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T18:07:16-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457615 6020A DOD5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-51.745	ppb	-51.745	-3.31	6492500	40000	
Be	9	1	6	213.775	ppb	213.775	2.24	70597	2000	
B	11	1	6	853.241	ppb	853.241	5.22	8605	100	>LDR
Na	23	2	45	26310.024	ppb	26310.024	2.15	18512880	400000	
Mg	24	2	45	11026.634	ppb	11026.634	1.89	3197509	400000	
Al	27	2	45	2153.468	ppb	2153.468	2.20	178227	400000	
K	39	2	45	3067.264	ppb	3067.264	1.18	926790	400000	
Ca	44	2	45	19536.853	ppb	19536.853	0.29	406675	400000	
V	51	2	72	206.198	ppb	206.198	1.78	956650	2000	
Cr	52	2	72	201.998	ppb	201.998	3.60	1228890	5000	
Mn	55	2	72	209.008	ppb	209.008	2.67	567831	10000	
Fe	57	2	72	2057.466	ppb	2057.466	1.31	237328	400000	
Co	59	2	72	211.120	ppb	211.120	3.20	2032510	2000	
Ni	60	2	72	203.937	ppb	203.937	1.60	526399	5000	
Cu	63	2	72	207.036	ppb	207.036	1.52	1493197	5000	
Zn	66	2	72	209.617	ppb	209.617	1.52	223106	5000	
As	75	2	72	197.272	ppb	197.272	1.78	152589	2000	
Se	78	1	72	204.439	ppb	204.439	2.79	116133	2000	
Sr	88	2	45	114.131	ppb	114.131	3.05	338229	2000	
Zr	90	2	72	92007.008	ppb	92007.008	2.44	1598826	1000	>LDR
Zr	90	1	72	94119.440	ppb	94119.440	3.79	3848857	1000	>LDR
Nb	93	2	72	5.114	ppb	5.114	5.71	36206	200	
Mo	95	2	115	198.307	ppb	198.307	1.86	764043	2000	
Pd	105	2	115	0.038	ppb	0.038	32.33	543	100	
Ag	107	2	115	39.745	ppb	39.745	2.27	446591	100	
Cd	111	2	115	203.755	ppb	203.755	2.27	327714	2000	
Sn	120	2	115	211.261	ppb	211.261	2.70	1008296	2000	
Sb	121	2	115	221.187	ppb	221.187	2.73	892719	1000	
Ba	137	2	115	306.032	ppb	306.032	3.41	396051	5000	
W	182	2	165	207.260	ppb	207.260	2.61	1683781	100	
Pt	195	2	165	0.108	ppb	0.108	30.72	623	100	
Tl	205	2	165	202.215	ppb	202.215	3.36	2794074	2000	
Pb	208	2	165	201.466	ppb	201.466	2.91	3645704	5000	
Th	232	2	165	1.004	ppb	1.004	2.80	18969	2000	
U	238	2	165	204.668	ppb	204.668	4.81	4010620	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	800728	0.36	1092921	73.26	60	125	
Sc (IS)	45	2	HMI He	3861973	1.62	4591929	84.10	60	125	
Sc (IS)	45	3	No Gas	116655801	1.23	129634638	89.99	60	120	
Ge Internal Standard	72	1	HMI H2	22961638	2.77	26305534	87.29	60	125	
Ge Internal Standard	72	2	HMI He	4770862	2.17	5205670	91.65	60	125	
In Internal standard	115	2	HMI He	16000435	1.61	16441998	97.31	60	125	
Ho-165	165	2	HMI He	39495584	1.90	37362695	105.71	60	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name CCV-5699926
 Data File Name 112_CCV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T18:10:45-06:00
 Sample Type CCV
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	58.949	ppb	17.285	136541	100	58.9	90	110	>+ \-10%
Li	7	3	45	51.619	ppb	11.728	8606107	100	51.6	90	110	>+ \-10%
Be	9	1	6	49.965	ppb	2.508	17492	50	99.9	90	110	
B	11	1	6	101.606	ppb	10.981	1403	50	203.2	90	110	>+ \-10%
Na	23	2	45	1047.695	ppb	2.768	814523	1000	104.8	90	110	
Mg	24	2	45	981.735	ppb	1.271	299099	1000	98.2	90	110	
Al	27	2	45	999.340	ppb	0.963	86975	1000	99.9	90	110	
K	39	2	45	981.639	ppb	2.518	378701	1000	98.2	90	110	
Ca	44	2	45	966.645	ppb	3.403	21370	1000	96.7	90	110	
V	51	2	72	47.973	ppb	1.451	237904	50	95.9	90	110	
Cr	52	2	72	47.659	ppb	1.877	297184	50	95.3	90	110	
Mn	55	2	72	50.373	ppb	2.224	139905	50	100.7	90	110	
Fe	57	2	72	968.214	ppb	1.859	114642	1000	96.8	90	110	
Co	59	2	72	48.225	ppb	1.093	478408	50	96.5	90	110	
Ni	60	2	72	48.128	ppb	2.748	127476	50	96.3	90	110	
Cu	63	2	72	47.357	ppb	2.085	351669	50	94.7	90	110	
Zn	66	2	72	47.823	ppb	4.948	52490	50	95.6	90	110	
As	75	2	72	49.727	ppb	1.645	39390	50	99.5	90	110	
Se	78	1	72	53.917	ppb	2.296	31392	50	107.8	90	110	
Sr	88	2	45	107.583	ppb	1.258	334563	100	107.6	90	110	
Zr	90	2	72	145.990	ppb	17.414	3067	50	292.0	90	110	>+ \-10%
Zr	90	1	72	273.500	ppb	16.733	13262	50	547.0	90	110	>+ \-10%
Nb	93	2	72	94.364	ppb	0.997	601785	100	94.4	90	110	
Mo	95	2	115	47.796	ppb	1.705	179391	50	95.6	90	110	
Pd	105	2	115	50.407	ppb	3.839	273258	50	100.8	90	110	
Ag	107	2	115	50.134	ppb	3.856	548426	50	100.3	90	110	
Cd	111	2	115	50.157	ppb	2.374	78539	50	100.3	90	110	
Sn	120	2	115	51.367	ppb	1.200	239223	50	102.7	90	110	
Sb	121	2	115	52.614	ppb	2.092	207003	50	105.2	90	110	
Ba	137	2	115	53.804	ppb	4.149	67903	50	107.6	90	110	
W	182	2	165	47.510	ppb	2.457	377376	50	95.0	90	110	
Pt	195	2	165	46.737	ppb	1.746	255876	50	93.5	90	110	
Tl	205	2	165	49.019	ppb	1.415	658653	50	98.0	90	110	
Pb	208	2	165	49.082	ppb	2.652	863962	50	98.2	90	110	
Th	232	2	165	48.795	ppb	3.270	852107	50	97.6	90	110	
U	238	2	165	48.045	ppb	3.800	914551	50	96.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	848851	1.52	1092921	77.67	60	125	
Sc (IS)	45	2	HMI He	4052979	1.52	4591929	88.26	60	125	
Sc IS)	45	3	No Gas	116169619	1.80	129634638	89.61	60	120	
Ge Internal Standard	72	1	HMI H2	23514541	2.45	26305534	89.39	60	125	
Ge Internal Standard	72	2	HMI He	4870280	1.42	5205670	93.56	60	125	
In Internal standard	115	2	HMI He	15583386	2.05	16441998	94.78	60	125	
Ho-165	165	2	HMI He	38391382	2.71	37362695	102.75	60	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name CCB-5699924
 Data File Name 113_CCB.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T18:14:16-06:00
 Sample Type CCB
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	1	45	-48.397	ppb	-17.1	102696	0.1	
Li	7	3	45	-50.395	ppb	-28.0	6535822	0.05	
Be	9	1	6	0.053	ppb	70.6	22	0.5	
B	11	1	6	53.293	ppb	4.5	873	0.1	>RL
Na	23	2	45	123.035	ppb	2.6	128598	25	>RL
Mg	24	2	45	4.373	ppb	10.5	1623	25	
Al	27	2	45	-1.009	ppb	-48.9	260	15	
K	39	2	45	-11.415	ppb	-44.3	92593	50	
Ca	44	2	45	1.358	ppb	220.2	290	25	
V	51	2	72	-0.446	ppb	-21.8	11607	1	
Cr	52	2	72	0.008	ppb	222.5	1493	1	
Mn	55	2	72	0.098	ppb	20.8	490	0.5	
Fe	57	2	72	1.611	ppb	49.4	1353	25	
Co	59	2	72	-0.016	ppb	-60.4	5521	0.5	
Ni	60	2	72	0.006	ppb	656.7	890	1	
Cu	63	2	72	0.193	ppb	21.6	5231	1	
Zn	66	2	72	0.595	ppb	17.2	1300	5	
As	75	2	72	0.001	ppb	9798.8	161	1	
Se	78	1	72	0.086	ppb	7.0	73	1	
Sr	88	2	45	0.062	ppb	25.5	353	1	
Zr	90	2	72	-2.957	ppb	-197.3	417	1	
Zr	90	1	72	3.225	ppb	121.1	1975	1	>RL
Nb	93	2	72	3.252	ppb	8.7	24712	2	>RL
Mo	95	2	115	0.103	ppb	31.3	553	0.5	
Pd	105	2	115	-0.001	ppb	-865.6	323	1	
Ag	107	2	115	0.022	ppb	40.8	360	1	
Cd	111	2	115	0.030	ppb	99.8	50	0.5	
Sn	120	2	115	0.196	ppb	18.9	1537	1	
Sb	121	2	115	0.175	ppb	18.7	923	1	
Ba	137	2	115	0.020	ppb	137.8	157	0.5	
W	182	2	165	0.058	ppb	114.1	3294	1	
Pt	195	2	165	0.006	ppb	68.0	47	1	
Tl	205	2	165	0.028	ppb	12.9	617	0.1	
Pb	208	2	165	0.045	ppb	39.2	1670	0.5	
Th	232	2	165	0.187	ppb	16.4	4077	1	
U	238	2	165	0.050	ppb	16.9	997	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	817692	0.41	1092921	74.82	60	125	
Sc (IS)	45	2	HMI He	3912819	1.07	4591929	85.21	60	125	
Sc (IS)	45	3	No Gas	117040550	3.37	129634638	90.28	60	120	
Ge Internal Standard	72	1	HMI H2	24015255	2.45	26305534	91.29	60	125	
Ge Internal Standard	72	2	HMI He	4781140	1.76	5205670	91.84	60	125	
In Internal standard	115	2	HMI He	15830271	2.34	16441998	96.28	60	125	
Ho-165	165	2	HMI He	37539148	3.31	37362695	100.47	60	125	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name CCVL-5699928
 Data File Name 114LLCCV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T18:17:49-06:00
 Sample Type LLCCV
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-33.870	ppb	-9.019	6765398	50	-67.7	70	130	> +/-30%
Be	9	1	6	0.835	ppb	15.886	288	1	83.5	70	130	
Na	23	2	45	165.890	ppb	3.653	160712	50	331.8	70	130	> +/-30%
Mg	24	2	45	51.826	ppb	5.984	15717	50	103.7	70	130	
Al	27	2	45	51.522	ppb	3.705	4704	50	103.0	70	130	
K	39	2	45	93.096	ppb	13.369	122593	100	93.1	70	130	
Ca	44	2	45	28.912	ppb	17.106	880	50	57.8	70	130	> +/-30%
V	51	2	72	4.525	ppb	1.621	34451	5	90.5	70	130	
Cr	52	2	72	1.900	ppb	6.942	13038	2	95.0	70	130	
Mn	55	2	72	1.011	ppb	10.732	2980	1	101.1	70	130	
Fe	57	2	72	49.418	ppb	6.637	6865	50	98.8	70	130	
Co	59	2	72	0.911	ppb	3.176	14463	1	91.1	70	130	
Ni	60	2	72	1.409	ppb	10.751	4521	1.5	93.9	70	130	
Cu	63	2	72	1.903	ppb	4.656	17596	2	95.2	70	130	
Zn	66	2	72	10.594	ppb	2.623	11954	10	105.9	70	130	
As	75	2	72	4.610	ppb	3.712	3737	5	92.2	70	130	
Se	78	1	72	5.227	ppb	10.872	2982	5	104.5	70	130	
Sr	88	2	45	1.074	ppb	3.902	3427	1	107.4	70	130	
Zr	90	2	72	-8.280	ppb	-42.269	323	0.5	-1656.0	70	130	> +/-30%
Zr	90	1	72	-0.544	ppb	-530.400	1732	0.5	-108.9	70	130	> +/-30%
Nb	93	2	72	1.428	ppb	9.163	13392	2	71.4	70	130	
Mo	95	2	115	1.874	ppb	7.740	7152	2	93.7	70	130	
Pd	105	2	115	-0.018	ppb	-67.043	223	1	-1.8	70	130	> +/-30%
Ag	107	2	115	4.937	ppb	5.305	53850	5	98.7	70	130	
Cd	111	2	115	1.092	ppb	12.517	1707	1	109.2	70	130	
Sn	120	2	115	9.994	ppb	2.681	46814	10	99.9	70	130	
Sb	121	2	115	1.962	ppb	4.070	7899	2	98.1	70	130	
Ba	137	2	115	1.066	ppb	4.995	1467	1	106.6	70	130	
W	182	2	165	4.485	ppb	5.524	38513	1	448.5	70	130	> +/-30%
Pt	195	2	165	0.002	ppb	232.563	23	1	0.2	70	130	> +/-30%
Tl	205	2	165	0.937	ppb	3.585	12926	1	93.7	70	130	
Pb	208	2	165	1.008	ppb	2.756	18775	1	100.8	70	130	
Th	232	2	165	1.695	ppb	7.016	30672	2	84.7	70	130	
U	238	2	165	0.956	ppb	3.773	18375	1	95.6	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	827803	2.17	1092921	75.74	60	125	
Sc (IS)	45	2	HMI He	3953436	1.73	4591929	86.10	60	125	
Sc IS)	45	3	No Gas	114978654	1.81	129634638	88.69	60	120	
Ge Internal Standard	72	1	HMI H2	22933821	4.80	26305534	87.18	60	125	
Ge Internal Standard	72	2	HMI He	4788921	0.49	5205670	91.99	60	125	
In Internal standard	115	2	HMI He	15515044	2.65	16441998	94.36	60	125	
Ho-165	165	2	HMI He	38651300	2.42	37362695	103.45	60	125	

Sample Report

Sample Table

Sample Name 280-123364-o-2-c
 Data File Name 115SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T18:21:22-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457615 6020A DOD5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-50.541	ppb	-50.541	-13.01	6447291	40000	
Be	9	1	6	0.065	ppb	0.065	44.68	25	2000	
B	11	1	6	840.935	ppb	840.935	5.81	8355	100	>LDR
Na	23	2	45	26085.069	ppb	26085.069	0.63	19193158	400000	
Mg	24	2	45	10989.638	ppb	10989.638	2.81	3332095	400000	
Al	27	2	45	1.984	ppb	1.984	34.60	527	400000	
K	39	2	45	3001.222	ppb	3001.222	2.25	950244	400000	
Ca	44	2	45	19486.198	ppb	19486.198	1.73	424043	400000	
V	51	2	72	-1.207	ppb	-1.207	-9.25	8029	2000	
Cr	52	2	72	0.720	ppb	0.720	6.03	5778	5000	
Mn	55	2	72	0.949	ppb	0.949	17.22	2770	10000	
Fe	57	2	72	19.012	ppb	19.012	9.15	3317	400000	
Co	59	2	72	0.030	ppb	0.030	93.94	5908	2000	
Ni	60	2	72	0.482	ppb	0.482	19.75	2093	5000	
Cu	63	2	72	0.237	ppb	0.237	49.23	5488	5000	
Zn	66	2	72	1.164	ppb	1.164	11.76	1883	5000	
As	75	2	72	0.270	ppb	0.270	10.94	366	2000	
Se	78	1	72	1.178	ppb	1.178	6.61	695	2000	
Sr	88	2	45	113.153	ppb	113.153	1.13	350584	2000	
Zr	90	2	72	3.869	ppb	3.869	185.03	530	1000	
Zr	90	1	72	17.225	ppb	17.225	10.25	2479	1000	
Nb	93	2	72	1.851	ppb	1.851	5.43	15824	200	
Mo	95	2	115	0.301	ppb	0.301	18.21	1300	2000	
Pd	105	2	115	-0.033	ppb	-0.033	-31.21	143	100	
Ag	107	2	115	0.005	ppb	0.005	70.34	173	100	
Cd	111	2	115	0.015	ppb	0.015	23.31	27	2000	
Sn	120	2	115	0.186	ppb	0.186	22.00	1483	2000	
Sb	121	2	115	0.119	ppb	0.119	37.74	700	1000	
Ba	137	2	115	94.052	ppb	94.052	1.25	119960	5000	
W	182	2	165	0.088	ppb	0.088	37.96	3524	100	
Pt	195	2	165	0.004	ppb	0.004	122.26	33	100	
Tl	205	2	165	0.016	ppb	0.016	29.44	453	2000	
Pb	208	2	165	0.046	ppb	0.046	12.08	1690	5000	
Th	232	2	165	0.623	ppb	0.623	4.26	11501	2000	
U	238	2	165	5.812	ppb	5.812	2.35	108028	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	788683	1.95	1092921	72.16	60	125	
Sc (IS)	45	2	HMI He	4037507	0.49	4591929	87.93	60	125	
Sc (IS)	45	3	No Gas	115400969	0.67	129634638	89.02	60	120	
Ge Internal Standard	72	1	HMI H2	23100941	1.46	26305534	87.82	60	125	
Ge Internal Standard	72	2	HMI He	4732032	3.15	5205670	90.90	60	125	
In Internal standard	115	2	HMI He	15754965	1.28	16441998	95.82	60	125	
Ho-165	165	2	HMI He	37462214	3.09	37362695	100.27	60	125	

Sample Report

Sample Table

Sample Name 280-123364-o-3-c
 Data File Name 116SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T18:24:55-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457615 6020A DOD5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-54.401	ppb	-54.401	-13.75	6483883	40000	
Be	9	1	6	0.019	ppb	0.019	135.76	10	2000	
B	11	1	6	808.018	ppb	808.018	4.76	8115	100	>LDR
Na	23	2	45	25069.904	ppb	25069.904	0.81	18390113	400000	
Mg	24	2	45	10735.867	ppb	10735.867	1.55	3245446	400000	
Al	27	2	45	1.994	ppb	1.994	93.10	523	400000	
K	39	2	45	2937.605	ppb	2937.605	1.76	929172	400000	
Ca	44	2	45	18965.417	ppb	18965.417	1.92	411359	400000	
V	51	2	72	-1.397	ppb	-1.397	-5.49	7348	2000	
Cr	52	2	72	0.671	ppb	0.671	6.14	5608	5000	
Mn	55	2	72	0.603	ppb	0.603	8.11	1890	10000	
Fe	57	2	72	14.185	ppb	14.185	11.27	2837	400000	
Co	59	2	72	0.004	ppb	0.004	521.16	5794	2000	
Ni	60	2	72	0.434	ppb	0.434	13.98	2023	5000	
Cu	63	2	72	0.160	ppb	0.160	16.60	5074	5000	
Zn	66	2	72	1.373	ppb	1.373	17.71	2154	5000	
As	75	2	72	0.219	ppb	0.219	18.69	335	2000	
Se	78	1	72	1.077	ppb	1.077	10.02	635	2000	
Sr	88	2	45	110.386	ppb	110.386	1.18	340988	2000	
Zr	90	2	72	-4.537	ppb	-4.537	-54.11	393	1000	
Zr	90	1	72	0.775	ppb	0.775	575.17	1795	1000	
Nb	93	2	72	0.899	ppb	0.899	19.08	10223	200	
Mo	95	2	115	0.300	ppb	0.300	18.05	1297	2000	
Pd	105	2	115	-0.036	ppb	-0.036	-3.80	130	100	
Ag	107	2	115	0.012	ppb	0.012	17.74	247	100	
Cd	111	2	115	0.015	ppb	0.015	23.57	27	2000	
Sn	120	2	115	0.153	ppb	0.153	47.13	1327	2000	
Sb	121	2	115	0.085	ppb	0.085	23.76	567	1000	
Ba	137	2	115	88.421	ppb	88.421	3.52	113064	5000	
W	182	2	165	-0.011	ppb	-0.011	-491.90	2894	100	
Pt	195	2	165	0.004	ppb	0.004	89.51	37	100	
Tl	205	2	165	0.016	ppb	0.016	62.80	477	2000	
Pb	208	2	165	0.033	ppb	0.033	21.43	1547	5000	
Th	232	2	165	0.144	ppb	0.144	11.01	3504	2000	
U	238	2	165	5.265	ppb	5.265	3.57	102651	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	795581	0.59	1092921	72.79	60	125	
Sc (IS)	45	2	HMI He	4025200	2.24	4591929	87.66	60	125	
Sc (IS)	45	3	No Gas	117539398	2.19	129634638	90.67	60	120	
Ge Internal Standard	72	1	HMI H2	23044307	2.10	26305534	87.60	60	125	
Ge Internal Standard	72	2	HMI He	4849608	2.60	5205670	93.16	60	125	
In Internal standard	115	2	HMI He	15800243	2.37	16441998	96.10	60	125	
Ho-165	165	2	HMI He	39293290	2.71	37362695	105.17	60	125	

Sample Report

Sample Table

Sample Name 280-123400-f-1-b
 Data File Name 117SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T18:28:26-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457615 6020A DOD5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-39.465	ppb	-39.465	-23.37	6686882	40000	
Be	9	1	6	0.132	ppb	0.132	45.46	47	2000	
B	11	1	6	639.836	ppb	639.836	6.73	6488	100	>LDR
Na	23	2	45	24095.559	ppb	24095.559	1.14	17147199	400000	
Mg	24	2	45	11484.716	ppb	11484.716	1.79	3367621	400000	
Al	27	2	45	13.633	ppb	13.633	27.01	1480	400000	
K	39	2	45	1385.389	ppb	1385.389	1.78	475603	400000	
Ca	44	2	45	15358.299	ppb	15358.299	1.16	323244	400000	
V	51	2	72	-1.106	ppb	-1.106	-9.75	8412	2000	
Cr	52	2	72	0.344	ppb	0.344	32.81	3467	5000	
Mn	55	2	72	10.235	ppb	10.235	3.14	27549	10000	
Fe	57	2	72	16.335	ppb	16.335	106.31	3004	400000	
Co	59	2	72	-0.012	ppb	-0.012	-378.37	5454	2000	
Ni	60	2	72	4.884	ppb	4.884	2.79	13232	5000	
Cu	63	2	72	-0.007	ppb	-0.007	-241.35	3727	5000	
Zn	66	2	72	1.293	ppb	1.293	15.29	2000	5000	
As	75	2	72	0.502	ppb	0.502	14.67	538	2000	
Se	78	1	72	0.093	ppb	0.093	17.31	73	2000	
Sr	88	2	45	76.947	ppb	76.947	2.09	230616	2000	
Zr	90	2	72	-2.994	ppb	-2.994	-223.17	407	1000	
Zr	90	1	72	6.310	ppb	6.310	43.87	1995	1000	
Nb	93	2	72	0.505	ppb	0.505	1.38	7492	200	
Mo	95	2	115	0.107	ppb	0.107	15.78	577	2000	
Pd	105	2	115	-0.040	ppb	-0.040	-4.02	107	100	
Ag	107	2	115	0.000	ppb	0.000	1522.30	123	100	
Cd	111	2	115	0.008	ppb	0.008	153.48	17	2000	
Sn	120	2	115	0.107	ppb	0.107	23.75	1133	2000	
Sb	121	2	115	0.018	ppb	0.018	82.36	307	1000	
Ba	137	2	115	621.003	ppb	621.003	4.13	806911	5000	
W	182	2	165	-0.027	ppb	-0.027	-13.45	2767	100	
Pt	195	2	165	-0.001	ppb	-0.001	-153.25	7	100	
Tl	205	2	165	0.009	ppb	0.009	99.97	377	2000	
Pb	208	2	165	0.029	ppb	0.029	49.53	1477	5000	
Th	232	2	165	0.048	ppb	0.048	36.12	1787	2000	
U	238	2	165	0.122	ppb	0.122	14.07	2434	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	794533	2.59	1092921	72.70	60	125	
Sc (IS)	45	2	HMI He	3904453	0.99	4591929	85.03	60	125	
Sc (IS)	45	3	No Gas	115605637	1.41	129634638	89.18	60	120	
Ge Internal Standard	72	1	HMI H2	22714035	1.34	26305534	86.35	60	125	
Ge Internal Standard	72	2	HMI He	4691799	2.70	5205670	90.13	60	125	
In Internal standard	115	2	HMI He	16077642	3.28	16441998	97.78	60	125	
Ho-165	165	2	HMI He	39266218	2.16	37362695	105.09	60	125	

Sample Report

Sample Table

Sample Name 280-123400-f-2-b
 Data File Name 118SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T18:31:56-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457615 6020A DOD5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-48.462	ppb	-48.462	-8.74	6592944	40000	
Be	9	1	6	0.020	ppb	0.020	205.19	10	2000	
B	11	1	6	791.512	ppb	791.512	3.77	7842	100	>LDR
Na	23	2	45	23692.640	ppb	23692.640	3.31	17216445	400000	
Mg	24	2	45	14433.255	ppb	14433.255	3.16	4320618	400000	
Al	27	2	45	1.677	ppb	1.677	35.55	493	400000	
K	39	2	45	1239.113	ppb	1239.113	3.08	444638	400000	
Ca	44	2	45	43104.013	ppb	43104.013	1.74	925912	400000	
V	51	2	72	-0.581	ppb	-0.581	-4.39	11094	2000	
Cr	52	2	72	0.355	ppb	0.355	9.07	3637	5000	
Mn	55	2	72	0.098	ppb	0.098	52.20	497	10000	
Fe	57	2	72	12.835	ppb	12.835	12.90	2670	400000	
Co	59	2	72	-0.051	ppb	-0.051	-53.29	5234	2000	
Ni	60	2	72	0.443	ppb	0.443	11.02	2040	5000	
Cu	63	2	72	-0.143	ppb	-0.143	-22.46	2837	5000	
Zn	66	2	72	0.667	ppb	0.667	9.90	1390	5000	
As	75	2	72	1.351	ppb	1.351	2.22	1218	2000	
Se	78	1	72	0.518	ppb	0.518	11.64	313	2000	
Sr	88	2	45	86.960	ppb	86.960	2.23	266057	2000	
Zr	90	2	72	-2.529	ppb	-2.529	-68.20	427	1000	
Zr	90	1	72	-1.111	ppb	-1.111	-486.61	1698	1000	
Nb	93	2	72	0.150	ppb	0.150	47.09	5481	200	
Mo	95	2	115	0.101	ppb	0.101	17.24	550	2000	
Pd	105	2	115	-0.046	ppb	-0.046	-7.73	73	100	
Ag	107	2	115	0.002	ppb	0.002	282.34	137	100	
Cd	111	2	115	0.013	ppb	0.013	30.32	23	2000	
Sn	120	2	115	0.089	ppb	0.089	41.98	1040	2000	
Sb	121	2	115	0.021	ppb	0.021	68.73	313	1000	
Ba	137	2	115	776.385	ppb	776.385	2.21	1001037	5000	
W	182	2	165	-0.013	ppb	-0.013	-114.67	2897	100	
Pt	195	2	165	-0.001	ppb	-0.001	-240.15	10	100	
Tl	205	2	165	0.004	ppb	0.004	144.38	313	2000	
Pb	208	2	165	0.002	ppb	0.002	198.88	1000	5000	
Th	232	2	165	0.021	ppb	0.021	23.63	1323	2000	
U	238	2	165	0.389	ppb	0.389	1.48	7675	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	784219	1.11	1092921	71.75	60	125	
Sc (IS)	45	2	HMI He	3987061	1.15	4591929	86.83	60	125	
Sc (IS)	45	3	No Gas	117231186	1.90	129634638	90.43	60	120	
Ge Internal Standard	72	1	HMI H2	22785180	1.84	26305534	86.62	60	125	
Ge Internal Standard	72	2	HMI He	4826057	1.28	5205670	92.71	60	125	
In Internal standard	115	2	HMI He	15943770	1.55	16441998	96.97	60	125	
Ho-165	165	2	HMI He	39404570	3.62	37362695	105.47	60	125	

Sample Report

Sample Table

Sample Name 280-123400-f-3-b
 Data File Name 119SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T18:35:28-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457615 6020A DOD5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-39.864	ppb	-39.864	-3.52	6647613	40000	
Be	9	1	6	-0.001	ppb	-0.001	-1059.30	3	2000	
B	11	1	6	1104.933	ppb	1104.933	2.46	10943	100	>LDR
Na	23	2	45	14386.119	ppb	14386.119	1.46	10504241	400000	
Mg	24	2	45	18842.663	ppb	18842.663	3.46	5657581	400000	
Al	27	2	45	3.192	ppb	3.192	48.29	627	400000	
K	39	2	45	1218.734	ppb	1218.734	3.33	440303	400000	
Ca	44	2	45	36790.952	ppb	36790.952	1.68	792923	400000	
V	51	2	72	1.410	ppb	1.410	24.27	20032	2000	
Cr	52	2	72	0.460	ppb	0.460	1.85	4237	5000	
Mn	55	2	72	0.154	ppb	0.154	23.31	643	10000	
Fe	57	2	72	13.568	ppb	13.568	33.41	2710	400000	
Co	59	2	72	-0.005	ppb	-0.005	-407.87	5614	2000	
Ni	60	2	72	0.124	ppb	0.124	20.58	1193	5000	
Cu	63	2	72	-0.073	ppb	-0.073	-43.35	3307	5000	
Zn	66	2	72	0.545	ppb	0.545	30.91	1243	5000	
As	75	2	72	2.213	ppb	2.213	3.22	1871	2000	
Se	78	1	72	0.620	ppb	0.620	10.01	376	2000	
Sr	88	2	45	96.465	ppb	96.465	2.26	296045	2000	
Zr	90	2	72	-7.248	ppb	-7.248	-9.75	340	1000	
Zr	90	1	72	0.905	ppb	0.905	239.89	1805	1000	
Nb	93	2	72	-0.018	ppb	-0.018	-122.38	4377	200	
Mo	95	2	115	0.477	ppb	0.477	2.42	1987	2000	
Pd	105	2	115	-0.043	ppb	-0.043	-16.46	93	100	
Ag	107	2	115	0.000	ppb	0.000	1198.41	123	100	
Cd	111	2	115	0.004	ppb	0.004	144.78	10	2000	
Sn	120	2	115	0.109	ppb	0.109	25.31	1133	2000	
Sb	121	2	115	0.010	ppb	0.010	197.89	267	1000	
Ba	137	2	115	753.856	ppb	753.856	2.75	969245	5000	
W	182	2	165	-0.008	ppb	-0.008	-98.89	2924	100	
Pt	195	2	165	0.003	ppb	0.003	62.64	33	100	
Tl	205	2	165	0.005	ppb	0.005	103.45	320	2000	
Pb	208	2	165	0.015	ppb	0.015	40.70	1213	5000	
Th	232	2	165	0.009	ppb	0.009	75.06	1100	2000	
U	238	2	165	0.754	ppb	0.754	2.07	14731	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	793454	1.39	1092921	72.60	60	125	
Sc (IS)	45	2	HMI He	4000156	2.07	4591929	87.11	60	125	
Sc (IS)	45	3	No Gas	115060142	0.61	129634638	88.76	60	120	
Ge Internal Standard	72	1	HMI H2	23088048	2.01	26305534	87.77	60	125	
Ge Internal Standard	72	2	HMI He	4768659	3.17	5205670	91.61	60	125	
In Internal standard	115	2	HMI He	15900638	1.98	16441998	96.71	60	125	
Ho-165	165	2	HMI He	39225881	2.56	37362695	104.99	60	125	

Sample Report

Sample Table

Sample Name 280-123330-b-1-c
 Data File Name 120SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T18:38:59-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457615 6020A DOD5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-13.817	ppb	-13.817	-20.98	7133664	40000	
Be	9	1	6	0.093	ppb	0.093	92.46	33	2000	
B	11	1	6	1388.589	ppb	1388.589	5.81	13432	100	>LDR
Na	23	2	45	25776.731	ppb	25776.731	2.40	18949422	400000	
Mg	24	2	45	45211.466	ppb	45211.466	1.53	13696160	400000	
Al	27	2	45	2131.411	ppb	2131.411	1.21	184207	400000	
K	39	2	45	2421.146	ppb	2421.146	1.42	784834	400000	
Ca	44	2	45	48533.197	ppb	48533.197	2.79	1054429	400000	
V	51	2	72	1.549	ppb	1.549	3.71	20512	2000	
Cr	52	2	72	3.071	ppb	3.071	0.70	19918	5000	
Mn	55	2	72	116.311	ppb	116.311	1.55	313212	10000	
Fe	57	2	72	4973.067	ppb	4973.067	3.35	566544	400000	
Co	59	2	72	1.960	ppb	1.960	6.36	24247	2000	
Ni	60	2	72	4.283	ppb	4.283	1.56	11797	5000	
Cu	63	2	72	2.598	ppb	2.598	1.62	22315	5000	
Zn	66	2	72	9.260	ppb	9.260	6.36	10400	5000	
As	75	2	72	21.943	ppb	21.943	3.14	16953	2000	
Se	78	1	72	0.073	ppb	0.073	21.20	63	2000	
Sr	88	2	45	291.115	ppb	291.115	2.14	900957	2000	
Zr	90	2	72	345.659	ppb	345.659	4.43	6415	1000	
Zr	90	1	72	339.282	ppb	339.282	6.08	15727	1000	
Nb	93	2	72	-0.018	ppb	-0.018	-378.84	4331	200	
Mo	95	2	115	2.815	ppb	2.815	1.12	10784	2000	
Pd	105	2	115	-0.042	ppb	-0.042	-7.12	97	100	
Ag	107	2	115	0.011	ppb	0.011	79.83	240	100	
Cd	111	2	115	0.017	ppb	0.017	37.20	30	2000	
Sn	120	2	115	0.087	ppb	0.087	5.17	1013	2000	
Sb	121	2	115	0.038	ppb	0.038	36.90	373	1000	
Ba	137	2	115	37.371	ppb	37.371	3.56	47504	5000	
W	182	2	165	-0.021	ppb	-0.021	-115.06	2817	100	
Pt	195	2	165	0.000	ppb	0.000	480.09	17	100	
Tl	205	2	165	0.041	ppb	0.041	6.21	823	2000	
Pb	208	2	165	1.727	ppb	1.727	3.25	31941	5000	
Th	232	2	165	0.739	ppb	0.739	3.60	14080	2000	
U	238	2	165	2.830	ppb	2.830	3.55	55029	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	779952	1.01	1092921	71.36	60	125	
Sc (IS)	45	2	HMI He	4033595	1.71	4591929	87.84	60	125	
Sc (IS)	45	3	No Gas	114285375	0.45	129634638	88.16	60	120	
Ge Internal Standard	72	1	HMI H2	23109357	2.46	26305534	87.85	60	125	
Ge Internal Standard	72	2	HMI He	4726223	1.61	5205670	90.79	60	125	
In Internal standard	115	2	HMI He	15679409	1.39	16441998	95.36	60	125	
Ho-165	165	2	HMI He	39163131	3.58	37362695	104.82	60	125	

Sample Report

Sample Table

Sample Name 280-123330-a-2-c
 Data File Name 121SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T18:42:32-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457615 6020A DOD5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-49.253	ppb	-49.253	-7.61	6533358	40000	
Be	9	1	6	0.020	ppb	0.020	154.69	10	2000	
B	11	1	6	577.487	ppb	577.487	4.44	5768	100	>LDR
Na	23	2	45	3275.078	ppb	3275.078	1.72	2421365	400000	
Mg	24	2	45	15235.438	ppb	15235.438	4.12	4569779	400000	
Al	27	2	45	9.384	ppb	9.384	6.00	1153	400000	
K	39	2	45	642.771	ppb	642.771	2.47	278238	400000	
Ca	44	2	45	42970.097	ppb	42970.097	2.15	924989	400000	
V	51	2	72	-1.605	ppb	-1.605	-4.88	6355	2000	
Cr	52	2	72	0.295	ppb	0.295	8.33	3277	5000	
Mn	55	2	72	683.008	ppb	683.008	4.48	1878570	10000	
Fe	57	2	72	23.114	ppb	23.114	7.18	3870	400000	
Co	59	2	72	0.002	ppb	0.002	1074.13	5751	2000	
Ni	60	2	72	0.570	ppb	0.570	13.30	2370	5000	
Cu	63	2	72	-0.060	ppb	-0.060	-36.87	3450	5000	
Zn	66	2	72	0.631	ppb	0.631	14.43	1353	5000	
As	75	2	72	0.046	ppb	0.046	100.17	197	2000	
Se	78	1	72	0.211	ppb	0.211	17.66	143	2000	
Sr	88	2	45	102.290	ppb	102.290	1.87	313652	2000	
Zr	90	2	72	24.799	ppb	24.799	23.08	907	1000	
Zr	90	1	72	42.127	ppb	42.127	4.47	3524	1000	
Nb	93	2	72	-0.226	ppb	-0.226	-24.09	3124	200	
Mo	95	2	115	0.146	ppb	0.146	28.36	733	2000	
Pd	105	2	115	-0.039	ppb	-0.039	-17.55	117	100	
Ag	107	2	115	0.003	ppb	0.003	181.24	160	100	
Cd	111	2	115	0.031	ppb	0.031	23.21	53	2000	
Sn	120	2	115	0.061	ppb	0.061	27.66	923	2000	
Sb	121	2	115	0.013	ppb	0.013	92.57	287	1000	
Ba	137	2	115	8.752	ppb	8.752	2.87	11628	5000	
W	182	2	165	0.024	ppb	0.024	154.10	3187	100	
Pt	195	2	165	-0.001	ppb	-0.001	-74.20	7	100	
Tl	205	2	165	0.010	ppb	0.010	56.69	393	2000	
Pb	208	2	165	0.013	ppb	0.013	8.98	1180	5000	
Th	232	2	165	0.012	ppb	0.012	19.93	1143	2000	
U	238	2	165	1.196	ppb	1.196	1.08	23359	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	778343	0.72	1092921	71.22	60	125	
Sc (IS)	45	2	HMI He	3996646	2.81	4591929	87.04	60	125	
Sc (IS)	45	3	No Gas	116461229	0.65	129634638	89.84	60	120	
Ge Internal Standard	72	1	HMI H2	23233275	0.60	26305534	88.32	60	125	
Ge Internal Standard	72	2	HMI He	4832405	2.66	5205670	92.83	60	125	
In Internal standard	115	2	HMI He	16233967	0.41	16441978	98.73	60	125	
Ho-165	165	2	HMI He	39249905	1.91	37362695	105.05	60	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name CCV-5699926
 Data File Name 122_CCV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T18:46:03-06:00
 Sample Type CCV
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	57.213	ppb	8.414	134603	100	57.2	90	110	>+ \-10%
Li	7	3	45	46.945	ppb	5.005	8411171	100	46.9	90	110	>+ \-10%
Be	9	1	6	50.613	ppb	3.253	17400	50	101.2	90	110	
B	11	1	6	108.503	ppb	9.883	1447	50	217.0	90	110	>+ \-10%
Na	23	2	45	1014.589	ppb	2.822	786491	1000	101.5	90	110	
Mg	24	2	45	973.198	ppb	2.375	295109	1000	97.3	90	110	
Al	27	2	45	995.007	ppb	4.514	86164	1000	99.5	90	110	
K	39	2	45	963.035	ppb	3.072	371649	1000	96.3	90	110	
Ca	44	2	45	959.315	ppb	6.446	21099	1000	95.9	90	110	
V	51	2	72	48.941	ppb	3.190	235971	50	97.9	90	110	
Cr	52	2	72	48.548	ppb	1.730	294654	50	97.1	90	110	
Mn	55	2	72	51.350	ppb	1.972	138806	50	102.7	90	110	
Fe	57	2	72	983.741	ppb	2.349	113374	1000	98.4	90	110	
Co	59	2	72	49.611	ppb	2.279	478903	50	99.2	90	110	
Ni	60	2	72	49.266	ppb	1.720	127013	50	98.5	90	110	
Cu	63	2	72	48.910	ppb	1.023	353393	50	97.8	90	110	
Zn	66	2	72	48.888	ppb	0.790	52216	50	97.8	90	110	
As	75	2	72	49.697	ppb	1.570	38322	50	99.4	90	110	
Se	78	1	72	52.447	ppb	3.446	30749	50	104.9	90	110	
Sr	88	2	45	103.592	ppb	2.759	320624	100	103.6	90	110	
Zr	90	2	72	55.240	ppb	34.149	1417	50	110.5	90	110	>+ \-10%
Zr	90	1	72	75.231	ppb	11.873	4986	50	150.5	90	110	>+ \-10%
Nb	93	2	72	95.518	ppb	2.565	592749	100	95.5	90	110	
Mo	95	2	115	48.178	ppb	3.527	179417	50	96.4	90	110	
Pd	105	2	115	49.752	ppb	3.757	267609	50	99.5	90	110	
Ag	107	2	115	50.587	ppb	4.389	548943	50	101.2	90	110	
Cd	111	2	115	51.613	ppb	4.433	80153	50	103.2	90	110	
Sn	120	2	115	51.984	ppb	6.476	239907	50	104.0	90	110	
Sb	121	2	115	51.082	ppb	5.416	199218	50	102.2	90	110	
Ba	137	2	115	52.789	ppb	4.688	66086	50	105.6	90	110	
W	182	2	165	47.618	ppb	2.291	373452	50	95.2	90	110	
Pt	195	2	165	45.954	ppb	5.246	248343	50	91.9	90	110	
Tl	205	2	165	48.180	ppb	3.522	639158	50	96.4	90	110	
Pb	208	2	165	50.503	ppb	2.456	878035	50	101.0	90	110	
Th	232	2	165	48.920	ppb	5.398	843289	50	97.8	90	110	
U	238	2	165	48.977	ppb	5.110	920525	50	98.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	833518	0.72	1092921	76.27	60	125	
Sc (IS)	45	2	HMI He	4034856	2.26	4591929	87.87	60	125	
Sc IS)	45	3	No Gas	114825367	1.85	129634638	88.58	60	120	
Ge Internal Standard	72	1	HMI H2	23675953	1.20	26305534	90.00	60	125	
Ge Internal Standard	72	2	HMI He	4740045	0.54	5205670	91.06	60	125	
In Internal standard	115	2	HMI He	15471404	4.66	16441998	94.10	60	125	
Ho-165	165	2	HMI He	37922259	3.36	37362695	101.50	60	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name CCB-5699924
 Data File Name 123_CCB.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T18:49:35-06:00
 Sample Type CCB
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	1	45	-39.148	ppb	-26.9	101519	0.1	
Li	7	3	45	-42.579	ppb	-9.5	6458766	0.05	
Be	9	1	6	0.044	ppb	86.3	18	0.5	
B	11	1	6	35.771	ppb	9.9	693	0.1	>RL
Na	23	2	45	89.611	ppb	3.4	104734	25	>RL
Mg	24	2	45	6.712	ppb	15.4	2307	25	
Al	27	2	45	-0.956	ppb	-68.6	263	15	
K	39	2	45	-5.442	ppb	-90.5	94170	50	
Ca	44	2	45	-0.364	ppb	-805.3	253	25	
V	51	2	72	-0.417	ppb	-35.0	12041	1	
Cr	52	2	72	0.008	ppb	433.8	1530	1	
Mn	55	2	72	0.155	ppb	22.8	660	0.5	
Fe	57	2	72	0.523	ppb	250.1	1260	25	
Co	59	2	72	-0.059	ppb	-94.6	5244	0.5	
Ni	60	2	72	0.001	ppb	3826.7	900	1	
Cu	63	2	72	0.159	ppb	8.8	5121	1	
Zn	66	2	72	0.478	ppb	10.8	1207	5	
As	75	2	72	-0.014	ppb	-162.7	154	1	
Se	78	1	72	0.033	ppb	43.2	40	1	
Sr	88	2	45	0.070	ppb	49.1	377	1	
Zr	90	2	72	-10.221	ppb	-10.6	297	1	
Zr	90	1	72	-0.384	ppb	-803.0	1752	1	
Nb	93	2	72	2.982	ppb	11.7	23610	2	>RL
Mo	95	2	115	0.075	ppb	11.0	447	0.5	
Pd	105	2	115	-0.010	ppb	-166.3	273	1	
Ag	107	2	115	0.026	ppb	21.1	410	1	
Cd	111	2	115	0.013	ppb	103.8	23	0.5	
Sn	120	2	115	0.126	ppb	15.1	1203	1	
Sb	121	2	115	0.106	ppb	13.5	650	1	
Ba	137	2	115	0.038	ppb	61.6	180	0.5	
W	182	2	165	0.019	ppb	163.6	3040	1	
Pt	195	2	165	0.018	ppb	39.9	110	1	
Tl	205	2	165	0.038	ppb	39.3	763	0.1	
Pb	208	2	165	0.031	ppb	60.1	1450	0.5	
Th	232	2	165	0.192	ppb	5.0	4227	1	
U	238	2	165	0.044	ppb	17.1	893	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	810074	0.89	1092921	74.12	60	125	
Sc (IS)	45	2	HMI He	3910040	1.81	4591929	85.15	60	125	
Sc (IS)	45	3	No Gas	112745102	1.03	129634638	86.97	60	120	
Ge Internal Standard	72	1	HMI H2	23054999	1.55	26305534	87.64	60	125	
Ge Internal Standard	72	2	HMI He	4905289	1.33	5205670	94.23	60	125	
In Internal standard	115	2	HMI He	15787530	1.61	16441998	96.02	60	125	
Ho-165	165	2	HMI He	38003213	4.73	37362695	101.71	60	125	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name CCVL-5699928
 Data File Name 124LLCCV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T18:53:05-06:00
 Sample Type LLCCV
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-31.020	ppb	-12.014	6611245	50	-62.0	70	130	> +/-30%
Be	9	1	6	0.997	ppb	12.543	340	1	99.7	70	130	
Na	23	2	45	139.290	ppb	0.630	136856	50	278.6	70	130	> +/-30%
Mg	24	2	45	51.747	ppb	3.092	15173	50	103.5	70	130	
Al	27	2	45	50.768	ppb	2.380	4484	50	101.5	70	130	
K	39	2	45	94.907	ppb	1.377	118951	100	94.9	70	130	
Ca	44	2	45	34.397	ppb	8.885	963	50	68.8	70	130	> +/-30%
V	51	2	72	4.612	ppb	5.951	33823	5	92.2	70	130	
Cr	52	2	72	1.824	ppb	3.129	12211	2	91.2	70	130	
Mn	55	2	72	1.148	ppb	0.410	3257	1	114.8	70	130	
Fe	57	2	72	50.013	ppb	7.635	6725	50	100.0	70	130	
Co	59	2	72	0.995	ppb	4.757	14826	1	99.5	70	130	
Ni	60	2	72	1.402	ppb	6.695	4374	1.5	93.4	70	130	
Cu	63	2	72	1.993	ppb	6.510	17699	2	99.6	70	130	
Zn	66	2	72	10.599	ppb	5.528	11604	10	106.0	70	130	
As	75	2	72	4.701	ppb	1.473	3696	5	94.0	70	130	
Se	78	1	72	5.207	ppb	5.933	3023	5	104.1	70	130	
Sr	88	2	45	1.078	ppb	0.778	3324	1	107.8	70	130	
Zr	90	2	72	-12.762	ppb	-48.366	237	0.5	-2552.4	70	130	> +/-30%
Zr	90	1	72	-5.541	ppb	-71.429	1555	0.5	-1108.3	70	130	> +/-30%
Nb	93	2	72	1.532	ppb	12.375	13626	2	76.6	70	130	
Mo	95	2	115	1.911	ppb	1.931	7205	2	95.5	70	130	
Pd	105	2	115	-0.022	ppb	-70.573	200	1	-2.2	70	130	> +/-30%
Ag	107	2	115	5.049	ppb	1.321	54446	5	101.0	70	130	
Cd	111	2	115	0.998	ppb	7.685	1540	1	99.8	70	130	
Sn	120	2	115	9.935	ppb	2.516	45968	10	99.3	70	130	
Sb	121	2	115	2.053	ppb	6.096	8155	2	102.7	70	130	
Ba	137	2	115	1.014	ppb	8.147	1383	1	101.4	70	130	
W	182	2	165	4.438	ppb	2.095	37714	1	443.8	70	130	> +/-30%
Pt	195	2	165	0.010	ppb	27.023	67	1	1.0	70	130	> +/-30%
Tl	205	2	165	0.941	ppb	3.002	12832	1	94.1	70	130	
Pb	208	2	165	0.977	ppb	3.160	18031	1	97.7	70	130	
Th	232	2	165	1.717	ppb	3.819	30736	2	85.8	70	130	
U	238	2	165	0.969	ppb	2.257	18442	1	96.9	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	817115	1.41	1092921	74.76	60	125	
Sc (IS)	45	2	HMI He	3820182	0.55	4591929	83.19	60	125	
Sc IS)	45	3	No Gas	111404923	1.76	129634638	85.94	60	120	
Ge Internal Standard	72	1	HMI H2	23292817	0.99	26305534	88.55	60	125	
Ge Internal Standard	72	2	HMI He	4648655	1.89	5205670	89.30	60	125	
In Internal standard	115	2	HMI He	15324663	2.30	16441998	93.20	60	125	
Ho-165	165	2	HMI He	38209752	1.76	37362695	102.27	60	125	

Sample Report

Sample Table

Sample Name 280-123330-b-6-e
 Data File Name 125SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T18:56:38-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457615 6020A DOD5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	450.351	ppb	450.351	3.67	16166748	40000	
Be	9	1	6	-0.011	ppb	-0.011	0.00	0	2000	
B	11	1	6	2811.186	ppb	2811.186	3.72	24303	100	>LDR
Na	23	2	45	37507.648	ppb	37507.648	1.56	28815551	400000	
Mg	24	2	45	322408.551	ppb	322408.551	3.08	102116955	400000	
Al	27	2	45	10.979	ppb	10.979	23.52	1360	400000	
K	39	2	45	56136.825	ppb	56136.825	1.64	16743286	400000	
Ca	44	2	45	798503.036	ppb	798503.036	2.35	18145698	400000	
V	51	2	72	-2.122	ppb	-2.122	-2.80	3900	2000	
Cr	52	2	72	0.282	ppb	0.282	4.17	3147	5000	
Mn	55	2	72	2859.015	ppb	2859.015	2.03	7747697	10000	
Fe	57	2	72	160.918	ppb	160.918	2.07	19595	400000	
Co	59	2	72	10.850	ppb	10.850	1.33	109555	2000	
Ni	60	2	72	15.262	ppb	15.262	1.90	40107	5000	
Cu	63	2	72	1.019	ppb	1.019	4.59	11140	5000	
Zn	66	2	72	6.299	ppb	6.299	5.28	7338	5000	
As	75	2	72	0.556	ppb	0.556	6.65	588	2000	
Se	78	1	72	0.054	ppb	0.054	54.46	48	2000	
Sr	88	2	45	3163.097	ppb	3163.097	3.63	10233851	2000	
Zr	90	2	72	69.061	ppb	69.061	18.06	1660	1000	
Zr	90	1	72	91.713	ppb	91.713	4.12	5093	1000	
Nb	93	2	72	2.084	ppb	2.084	11.75	17366	200	
Mo	95	2	115	0.222	ppb	0.222	19.16	980	2000	
Pd	105	2	115	0.073	ppb	0.073	15.97	713	100	
Ag	107	2	115	0.010	ppb	0.010	75.85	220	100	
Cd	111	2	115	0.123	ppb	0.123	24.86	193	2000	
Sn	120	2	115	0.142	ppb	0.142	25.51	1247	2000	
Sb	121	2	115	0.051	ppb	0.051	37.71	420	1000	
Ba	137	2	115	276.399	ppb	276.399	1.29	344983	5000	
W	182	2	165	0.039	ppb	0.039	101.98	3130	100	
Pt	195	2	165	0.001	ppb	0.001	627.38	17	100	
Tl	205	2	165	0.686	ppb	0.686	6.76	9163	2000	
Pb	208	2	165	0.196	ppb	0.196	8.22	4237	5000	
Th	232	2	165	0.557	ppb	0.557	6.12	10290	2000	
U	238	2	165	25.268	ppb	25.268	2.35	466132	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	705765	0.48	1092921	64.58	60	125	
Sc (IS)	45	2	HMI He	4218885	1.22	4591929	91.88	60	125	
Sc (IS)	45	3	No Gas	111342069	0.83	129634638	85.89	60	120	
Ge Internal Standard	72	1	HMI H2	21228540	3.82	26305534	80.70	60	125	
Ge Internal Standard	72	2	HMI He	4759491	2.20	5205670	91.43	60	125	
In Internal standard	115	2	HMI He	15428249	1.15	16441998	93.83	60	125	
Ho-165	165	2	HMI He	37198712	3.45	37362695	99.56	60	125	

Sample Report

Sample Table

Sample Name 280-123330-d-7-c
 Data File Name 126SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T19:00:08-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457615 6020A DOD5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	6.858	ppb	6.858	90.60	7477549	40000	
Be	9	1	6	0.005	ppb	0.005	311.87	5	2000	
B	11	1	6	2393.231	ppb	2393.231	4.81	21903	100	>LDR
Na	23	2	45	22483.161	ppb	22483.161	1.39	17034263	400000	
Mg	24	2	45	71634.799	ppb	71634.799	1.34	22354511	400000	
Al	27	2	45	42.882	ppb	42.882	16.13	4177	400000	
K	39	2	45	3280.545	ppb	3280.545	0.14	1059680	400000	
Ca	44	2	45	107347.938	ppb	107347.938	3.36	2403363	400000	
V	51	2	72	-1.808	ppb	-1.808	-3.62	5498	2000	
Cr	52	2	72	0.411	ppb	0.411	11.44	4044	5000	
Mn	55	2	72	105.995	ppb	105.995	1.10	295998	10000	
Fe	57	2	72	775.399	ppb	775.399	2.47	92636	400000	
Co	59	2	72	1.266	ppb	1.266	5.64	18300	2000	
Ni	60	2	72	1.358	ppb	1.358	6.08	4494	5000	
Cu	63	2	72	1.296	ppb	1.296	6.42	13522	5000	
Zn	66	2	72	4.687	ppb	4.687	5.42	5794	5000	
As	75	2	72	11.543	ppb	11.543	1.42	9327	2000	
Se	78	1	72	-0.011	ppb	-0.011	-266.27	15	2000	
Sr	88	2	45	355.832	ppb	355.832	0.81	1134332	2000	
Zr	90	2	72	21.003	ppb	21.003	27.35	853	1000	
Zr	90	1	72	23.934	ppb	23.934	14.14	2746	1000	
Nb	93	2	72	1.117	ppb	1.117	12.80	11721	200	
Mo	95	2	115	2.718	ppb	2.718	2.15	10287	2000	
Pd	105	2	115	-0.023	ppb	-0.023	-16.31	197	100	
Ag	107	2	115	0.001	ppb	0.001	394.16	130	100	
Cd	111	2	115	0.030	ppb	0.030	21.40	50	2000	
Sn	120	2	115	0.099	ppb	0.099	60.33	1053	2000	
Sb	121	2	115	0.032	ppb	0.032	34.08	347	1000	
Ba	137	2	115	27.553	ppb	27.553	2.92	34625	5000	
W	182	2	165	-0.018	ppb	-0.018	-94.97	2894	100	
Pt	195	2	165	0.000	ppb	0.000	577.78	17	100	
Tl	205	2	165	0.034	ppb	0.034	23.08	733	2000	
Pb	208	2	165	0.319	ppb	0.319	2.80	6807	5000	
Th	232	2	165	0.137	ppb	0.137	7.99	3447	2000	
U	238	2	165	3.595	ppb	3.595	0.81	71289	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	745813	0.86	1092921	68.24	60	125	
Sc (IS)	45	2	HMI He	4155746	0.41	4591929	90.50	60	125	
Sc (IS)	45	3	No Gas	113116071	1.08	129634638	87.26	60	120	
Ge Internal Standard	72	1	HMI H2	23041291	1.64	26305534	87.59	60	125	
Ge Internal Standard	72	2	HMI He	4900235	0.84	5205670	94.13	60	125	
In Internal standard	115	2	HMI He	15481662	0.66	16441998	94.16	60	125	
Ho-165	165	2	HMI He	39937479	0.62	37362695	106.89	60	125	

Sample Report

Sample Table

Sample Name 280-123330-c-8-c
 Data File Name 127SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T19:03:39-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457615 6020A DOD5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-49.023	ppb	-49.023	-1.06	6452794	40000	
Be	9	1	6	0.021	ppb	0.021	131.96	10	2000	
B	11	1	6	834.314	ppb	834.314	0.86	7992	100	>LDR
Na	23	2	45	6973.398	ppb	6973.398	4.20	5178951	400000	
Mg	24	2	45	13676.049	ppb	13676.049	6.13	4159240	400000	
Al	27	2	45	170.923	ppb	170.923	7.92	15167	400000	
K	39	2	45	689.793	ppb	689.793	5.47	295466	400000	
Ca	44	2	45	19087.156	ppb	19087.156	0.43	417032	400000	
V	51	2	72	-1.323	ppb	-1.323	-8.37	7785	2000	
Cr	52	2	72	0.789	ppb	0.789	2.25	6415	5000	
Mn	55	2	72	589.939	ppb	589.939	1.69	1648566	10000	
Fe	57	2	72	2677.319	ppb	2677.319	1.95	317308	400000	
Co	59	2	72	4.418	ppb	4.418	2.17	49457	2000	
Ni	60	2	72	3.069	ppb	3.069	6.32	9032	5000	
Cu	63	2	72	0.155	ppb	0.155	34.30	5091	5000	
Zn	66	2	72	2.255	ppb	2.255	1.19	3147	5000	
As	75	2	72	2.119	ppb	2.119	7.28	1849	2000	
Se	78	1	72	0.039	ppb	0.039	47.93	44	2000	
Sr	88	2	45	67.020	ppb	67.020	4.24	208375	2000	
Zr	90	2	72	56.755	ppb	56.755	24.18	1493	1000	
Zr	90	1	72	75.109	ppb	75.109	15.49	4902	1000	
Nb	93	2	72	0.640	ppb	0.640	18.61	8696	200	
Mo	95	2	115	0.067	ppb	0.067	19.81	413	2000	
Pd	105	2	115	-0.043	ppb	-0.043	-12.73	93	100	
Ag	107	2	115	0.006	ppb	0.006	145.31	190	100	
Cd	111	2	115	0.046	ppb	0.046	27.41	77	2000	
Sn	120	2	115	0.180	ppb	0.180	32.37	1457	2000	
Sb	121	2	115	-0.009	ppb	-0.009	-166.72	190	1000	
Ba	137	2	115	16.530	ppb	16.530	4.41	21228	5000	
W	182	2	165	1.333	ppb	1.333	3.82	13713	100	
Pt	195	2	165	0.000	ppb	0.000	-2090.46	13	100	
Tl	205	2	165	0.013	ppb	0.013	61.80	430	2000	
Pb	208	2	165	0.156	ppb	0.156	2.27	3754	5000	
Th	232	2	165	0.113	ppb	0.113	8.02	2947	2000	
U	238	2	165	0.026	ppb	0.026	12.76	570	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	759962	1.31	1092921	69.53	60	125	
Sc (IS)	45	2	HMI He	4053452	2.71	4591929	88.27	60	125	
Sc (IS)	45	3	No Gas	114939607	0.44	129634638	88.66	60	120	
Ge Internal Standard	72	1	HMI H2	23303879	0.68	26305534	88.59	60	125	
Ge Internal Standard	72	2	HMI He	4907077	0.80	5205670	94.26	60	125	
In Internal standard	115	2	HMI He	15784990	1.00	16441978	96.00	60	125	
Ho-165	165	2	HMI He	39240794	3.90	37362695	105.03	60	125	

Sample Report

Sample Table

Sample Name 280-123330-c-9-c
 Data File Name 128SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T19:07:10-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457615 6020A DOD5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-56.724	ppb	-56.724	-3.06	6339478	40000	
Be	9	1	6	0.021	ppb	0.021	265.20	10	2000	
B	11	1	6	843.914	ppb	843.914	2.44	8159	100	>LDR
Na	23	2	45	9004.568	ppb	9004.568	0.88	6581731	400000	
Mg	24	2	45	21223.913	ppb	21223.913	1.37	6365478	400000	
Al	27	2	45	122.317	ppb	122.317	9.78	10804	400000	
K	39	2	45	897.044	ppb	897.044	2.53	349455	400000	
Ca	44	2	45	55869.627	ppb	55869.627	1.55	1202152	400000	
V	51	2	72	-1.547	ppb	-1.547	-0.32	6598	2000	
Cr	52	2	72	0.385	ppb	0.385	7.13	3810	5000	
Mn	55	2	72	36.731	ppb	36.731	1.13	100787	10000	
Fe	57	2	72	269.847	ppb	269.847	2.92	32387	400000	
Co	59	2	72	0.179	ppb	0.179	25.22	7448	2000	
Ni	60	2	72	0.916	ppb	0.916	10.18	3257	5000	
Cu	63	2	72	0.944	ppb	0.944	3.95	10707	5000	
Zn	66	2	72	1.711	ppb	1.711	7.18	2500	5000	
As	75	2	72	0.359	ppb	0.359	17.53	441	2000	
Se	78	1	72	0.150	ppb	0.150	32.55	105	2000	
Sr	88	2	45	206.160	ppb	206.160	0.94	631714	2000	
Zr	90	2	72	44.228	ppb	44.228	7.89	1243	1000	
Zr	90	1	72	40.102	ppb	40.102	14.01	3370	1000	
Nb	93	2	72	0.321	ppb	0.321	31.73	6525	200	
Mo	95	2	115	0.666	ppb	0.666	3.37	2677	2000	
Pd	105	2	115	-0.033	ppb	-0.033	-12.37	143	100	
Ag	107	2	115	0.010	ppb	0.010	32.13	230	100	
Cd	111	2	115	0.017	ppb	0.017	64.70	30	2000	
Sn	120	2	115	0.175	ppb	0.175	16.67	1427	2000	
Sb	121	2	115	0.043	ppb	0.043	54.78	397	1000	
Ba	137	2	115	18.009	ppb	18.009	3.30	22987	5000	
W	182	2	165	-0.033	ppb	-0.033	-79.06	2764	100	
Pt	195	2	165	0.001	ppb	0.001	384.74	20	100	
Tl	205	2	165	0.017	ppb	0.017	61.13	500	2000	
Pb	208	2	165	0.160	ppb	0.160	10.74	3890	5000	
Th	232	2	165	0.051	ppb	0.051	34.91	1863	2000	
U	238	2	165	0.933	ppb	0.933	4.65	18502	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	767342	0.74	1092921	70.21	60	125	
Sc (IS)	45	2	HMI He	3994325	1.49	4591929	86.99	60	125	
Sc (IS)	45	3	No Gas	115752566	0.07	129634638	89.29	60	120	
Ge Internal Standard	72	1	HMI H2	22772440	1.94	26305534	86.57	60	125	
Ge Internal Standard	72	2	HMI He	4808814	2.32	5205670	92.38	60	125	
In Internal standard	115	2	HMI He	15696261	1.40	16441998	95.46	60	125	
Ho-165	165	2	HMI He	39877745	3.34	37362695	106.73	60	125	

Sample Report

Sample Table

Sample Name 280-123330-a-10-c
 Data File Name 129SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T19:10:41-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457615 6020A DOD5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-40.612	ppb	-40.612	-18.74	6449050	40000	
Be	9	1	6	0.016	ppb	0.016	58.87	8	2000	
B	11	1	6	3709.172	ppb	3709.172	2.03	33658	100	>LDR
Na	23	2	45	10985.269	ppb	10985.269	4.42	7982183	400000	
Mg	24	2	45	63034.225	ppb	63034.225	4.17	18816887	400000	
Al	27	2	45	26.628	ppb	26.628	6.39	2620	400000	
K	39	2	45	2882.226	ppb	2882.226	4.35	902497	400000	
Ca	44	2	45	113473.115	ppb	113473.115	1.55	2432273	400000	
V	51	2	72	-1.815	ppb	-1.815	-3.33	5344	2000	
Cr	52	2	72	1.315	ppb	1.315	0.31	9479	5000	
Mn	55	2	72	843.984	ppb	843.984	3.38	2303232	10000	
Fe	57	2	72	87.588	ppb	87.588	1.36	11274	400000	
Co	59	2	72	0.143	ppb	0.143	30.46	7075	2000	
Ni	60	2	72	10.269	ppb	10.269	5.95	27449	5000	
Cu	63	2	72	28.159	ppb	28.159	3.75	207338	5000	
Zn	66	2	72	392.675	ppb	392.675	2.81	419328	5000	
As	75	2	72	0.119	ppb	0.119	57.73	254	2000	
Se	78	1	72	0.016	ppb	0.016	127.37	29	2000	
Sr	88	2	45	642.291	ppb	642.291	3.75	1958886	2000	
Zr	90	2	72	25.175	ppb	25.175	23.89	907	1000	
Zr	90	1	72	35.288	ppb	35.288	22.00	3117	1000	
Nb	93	2	72	0.055	ppb	0.055	74.03	4857	200	
Mo	95	2	115	2.333	ppb	2.333	11.16	8802	2000	
Pd	105	2	115	-0.030	ppb	-0.030	-23.06	157	100	
Ag	107	2	115	0.004	ppb	0.004	78.60	160	100	
Cd	111	2	115	0.112	ppb	0.112	16.68	177	2000	
Sn	120	2	115	0.103	ppb	0.103	11.23	1070	2000	
Sb	121	2	115	0.181	ppb	0.181	20.62	923	1000	
Ba	137	2	115	59.429	ppb	59.429	2.23	74323	5000	
W	182	2	165	-0.014	ppb	-0.014	-139.19	2820	100	
Pt	195	2	165	0.000	ppb	0.000	-682.45	13	100	
Tl	205	2	165	0.005	ppb	0.005	67.57	323	2000	
Pb	208	2	165	8.285	ppb	8.285	1.25	147092	5000	
Th	232	2	165	0.009	ppb	0.009	44.92	1070	2000	
U	238	2	165	0.005	ppb	0.005	5.27	167	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	742953	1.18	1092921	67.98	60	125	
Sc (IS)	45	2	HMI He	3980987	5.11	4591929	86.70	60	125	
Sc (IS)	45	3	No Gas	111884474	0.47	129634638	86.31	60	120	
Ge Internal Standard	72	1	HMI H2	22348161	1.49	26305534	84.96	60	125	
Ge Internal Standard	72	2	HMI He	4794469	2.35	5205670	92.10	60	125	
In Internal standard	115	2	HMI He	15439258	4.33	16441998	93.90	60	125	
Ho-165	165	2	HMI He	38495492	0.90	37362695	103.03	60	125	

Sample Report

Sample Table

Sample Name 280-123467-a-1-b
 Data File Name 130SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T19:14:11-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457615 6020A DOD5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-57.748	ppb	-57.748	-8.39	6130783	40000	
Be	9	1	6	-0.011	ppb	-0.011	0.00	0	2000	
B	11	1	6	563.137	ppb	563.137	4.83	5464	100	>LDR
Na	23	2	45	4805.369	ppb	4805.369	3.52	3530376	400000	
Mg	24	2	45	10240.872	ppb	10240.872	1.93	3069921	400000	
Al	27	2	45	4.868	ppb	4.868	28.72	767	400000	
K	39	2	45	732.893	ppb	732.893	5.43	303167	400000	
Ca	44	2	45	38870.363	ppb	38870.363	1.30	836355	400000	
V	51	2	72	-1.776	ppb	-1.776	-3.91	5464	2000	
Cr	52	2	72	0.577	ppb	0.577	4.44	4921	5000	
Mn	55	2	72	120.191	ppb	120.191	1.73	324919	10000	
Fe	57	2	72	1462.295	ppb	1462.295	2.10	168128	400000	
Co	59	2	72	-0.002	ppb	-0.002	-967.17	5611	2000	
Ni	60	2	72	0.072	ppb	0.072	16.29	1053	5000	
Cu	63	2	72	-0.090	ppb	-0.090	-34.97	3174	5000	
Zn	66	2	72	0.759	ppb	0.759	8.75	1463	5000	
As	75	2	72	4.899	ppb	4.899	3.08	3925	2000	
Se	78	1	72	0.017	ppb	0.017	308.67	29	2000	
Sr	88	2	45	101.441	ppb	101.441	2.20	310776	2000	
Zr	90	2	72	6.766	ppb	6.766	43.80	580	1000	
Zr	90	1	72	11.653	ppb	11.653	24.30	2169	1000	
Nb	93	2	72	-0.054	ppb	-0.054	-168.94	4134	200	
Mo	95	2	115	0.526	ppb	0.526	8.25	2127	2000	
Pd	105	2	115	-0.037	ppb	-0.037	-28.50	123	100	
Ag	107	2	115	0.000	ppb	0.000	-329.35	113	100	
Cd	111	2	115	0.000	ppb	0.000	2182.69	3	2000	
Sn	120	2	115	0.084	ppb	0.084	29.32	990	2000	
Sb	121	2	115	-0.003	ppb	-0.003	-87.94	210	1000	
Ba	137	2	115	53.959	ppb	53.959	2.71	67992	5000	
W	182	2	165	-0.037	ppb	-0.037	-90.48	2710	100	
Pt	195	2	165	0.000	ppb	0.000	775.53	17	100	
Tl	205	2	165	0.008	ppb	0.008	60.50	363	2000	
Pb	208	2	165	0.070	ppb	0.070	10.28	2237	5000	
Th	232	2	165	-0.001	ppb	-0.001	-136.33	923	2000	
U	238	2	165	0.066	ppb	0.066	13.00	1360	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	755127	0.60	1092921	69.09	60	125	
Sc (IS)	45	2	HMI He	3992635	2.12	4591929	86.95	60	125	
Sc (IS)	45	3	No Gas	112320342	1.13	129634638	86.64	60	120	
Ge Internal Standard	72	1	HMI H2	22255016	2.51	26305534	84.60	60	125	
Ge Internal Standard	72	2	HMI He	4744544	0.91	5205670	91.14	60	125	
In Internal standard	115	2	HMI He	15556493	2.26	16441998	94.61	60	125	
Ho-165	165	2	HMI He	39528856	3.10	37362695	105.80	60	125	

Sample Report

Sample Table

Sample Name 280-123467-c-2-b
 Data File Name 131SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T19:17:41-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457615 6020A DOD5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-37.989	ppb	-37.989	-6.42	6439559	40000	
Be	9	1	6	0.000	ppb	0.000	-4407.71	3	2000	
B	11	1	6	742.668	ppb	742.668	5.84	7118	100	>LDR
Na	23	2	45	13122.247	ppb	13122.247	3.08	9511531	400000	
Mg	24	2	45	25714.151	ppb	25714.151	3.16	7663347	400000	
Al	27	2	45	2.957	ppb	2.957	65.71	600	400000	
K	39	2	45	1189.232	ppb	1189.232	1.42	428688	400000	
Ca	44	2	45	53137.217	ppb	53137.217	2.25	1135980	400000	
V	51	2	72	-1.722	ppb	-1.722	-2.28	5631	2000	
Cr	52	2	72	0.367	ppb	0.367	10.49	3597	5000	
Mn	55	2	72	36.442	ppb	36.442	2.04	97250	10000	
Fe	57	2	72	15.148	ppb	15.148	7.51	2847	400000	
Co	59	2	72	0.025	ppb	0.025	189.36	5788	2000	
Ni	60	2	72	0.137	ppb	0.137	31.84	1203	5000	
Cu	63	2	72	-0.029	ppb	-0.029	-57.10	3554	5000	
Zn	66	2	72	0.373	ppb	0.373	41.35	1040	5000	
As	75	2	72	0.171	ppb	0.171	16.32	286	2000	
Se	78	1	72	0.033	ppb	0.033	113.23	39	2000	
Sr	88	2	45	205.972	ppb	205.972	1.39	627078	2000	
Zr	90	2	72	-6.459	ppb	-6.459	-30.16	347	1000	
Zr	90	1	72	0.607	ppb	0.607	772.26	1732	1000	
Nb	93	2	72	-0.165	ppb	-0.165	-46.80	3397	200	
Mo	95	2	115	2.184	ppb	2.184	5.94	8362	2000	
Pd	105	2	115	-0.043	ppb	-0.043	-16.96	90	100	
Ag	107	2	115	-0.003	ppb	-0.003	-73.22	83	100	
Cd	111	2	115	0.017	ppb	0.017	111.40	30	2000	
Sn	120	2	115	0.069	ppb	0.069	59.40	923	2000	
Sb	121	2	115	-0.007	ppb	-0.007	-152.21	197	1000	
Ba	137	2	115	50.734	ppb	50.734	2.92	64180	5000	
W	182	2	165	-0.023	ppb	-0.023	-28.11	2747	100	
Pt	195	2	165	-0.001	ppb	-0.001	-161.95	7	100	
Tl	205	2	165	0.013	ppb	0.013	88.20	423	2000	
Pb	208	2	165	0.010	ppb	0.010	73.77	1117	5000	
Th	232	2	165	-0.011	ppb	-0.011	-41.24	727	2000	
U	238	2	165	1.951	ppb	1.951	4.52	37311	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	756759	0.61	1092921	69.24	60	125	
Sc (IS)	45	2	HMI He	3968207	0.61	4591929	86.42	60	125	
Sc (IS)	45	3	No Gas	110814809	1.13	129634638	85.48	60	120	
Ge Internal Standard	72	1	HMI H2	22291434	1.63	26305534	84.74	60	125	
Ge Internal Standard	72	2	HMI He	4676474	0.90	5205670	89.83	60	125	
In Internal standard	115	2	HMI He	15610041	0.65	16441998	94.94	60	125	
Ho-165	165	2	HMI He	38508550	2.11	37362695	103.07	60	125	

Sample Report

Sample Table

Sample Name 280-123467-c-5-b
 Data File Name 132SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-13T19:21:14-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457615 6020A DOD5
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Pass
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	18.198	ppb	18.198	48.64	7393732	40000	
Be	9	1	6	0.098	ppb	0.098	50.76	33	2000	
B	11	1	6	447.218	ppb	447.218	3.50	4317	100	
Na	23	2	45	14094.140	ppb	14094.140	1.84	10144806	400000	
Mg	24	2	45	35473.416	ppb	35473.416	1.69	10502684	400000	
Al	27	2	45	1527.926	ppb	1527.926	1.55	129174	400000	
K	39	2	45	24182.055	ppb	24182.055	1.07	6796824	400000	
Ca	44	2	45	46709.485	ppb	46709.485	1.43	992182	400000	
V	51	2	72	1.184	ppb	1.184	6.57	18300	2000	
Cr	52	2	72	2.806	ppb	2.806	1.06	17786	5000	
Mn	55	2	72	359.305	ppb	359.305	3.09	938554	10000	
Fe	57	2	72	5180.272	ppb	5180.272	3.13	572798	400000	
Co	59	2	72	2.604	ppb	2.604	2.63	29489	2000	
Ni	60	2	72	6.037	ppb	6.037	1.72	15794	5000	
Cu	63	2	72	3.980	ppb	3.980	2.36	31212	5000	
Zn	66	2	72	9.300	ppb	9.300	6.43	10133	5000	
As	75	2	72	4.180	ppb	4.180	1.02	3260	2000	
Se	78	1	72	0.031	ppb	0.031	141.94	37	2000	
Sr	88	2	45	788.666	ppb	788.666	0.98	2384908	2000	
Zr	90	2	72	440.891	ppb	440.891	5.03	7812	1000	
Zr	90	1	72	453.264	ppb	453.264	4.34	19595	1000	
Nb	93	2	72	-0.022	ppb	-0.022	-371.31	4184	200	
Mo	95	2	115	0.693	ppb	0.693	9.40	2647	2000	
Pd	105	2	115	-0.018	ppb	-0.018	-38.64	213	100	
Ag	107	2	115	0.000	ppb	0.000	930.24	117	100	
Cd	111	2	115	0.036	ppb	0.036	22.22	57	2000	
Sn	120	2	115	0.204	ppb	0.204	12.78	1487	2000	
Sb	121	2	115	0.158	ppb	0.158	34.30	810	1000	
Ba	137	2	115	144.314	ppb	144.314	1.80	174952	5000	
W	182	2	165	0.053	ppb	0.053	78.47	3327	100	
Pt	195	2	165	-0.001	ppb	-0.001	-264.53	10	100	
Tl	205	2	165	0.044	ppb	0.044	38.60	843	2000	
Pb	208	2	165	2.175	ppb	2.175	7.33	39068	5000	
Th	232	2	165	0.737	ppb	0.737	4.09	13740	2000	
U	238	2	165	0.160	ppb	0.160	5.44	3107	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	740104	0.78	1092921	67.72	60	125	
Sc (IS)	45	2	HMI He	3942892	2.15	4591929	85.87	60	125	
Sc (IS)	45	3	No Gas	108534356	0.84	129634638	83.72	60	120	
Ge Internal Standard	72	1	HMI H2	22171225	1.45	26305534	84.28	60	125	
Ge Internal Standard	72	2	HMI He	4586357	0.94	5205670	88.10	60	125	
In Internal standard	115	2	HMI He	14984194	3.17	16441998	91.13	60	125	
Ho-165	165	2	HMI He	38310102	2.51	37362695	102.54	60	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name CCV-5699926
 Data File Name 133_CCV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T07:28:44-06:00
 Sample Type CCV
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	8.512	ppb	167.990	111817	100	8.5	90	110	>+ \-10%
Li	7	3	45	35.896	ppb	7.059	7127030	100	35.9	90	110	>+ \-10%
Be	9	1	6	53.242	ppb	3.174	14873	50	106.5	90	110	
B	11	1	6	48.800	ppb	28.476	687	50	97.6	90	110	
Na	23	2	45	894.600	ppb	3.143	619768	1000	89.5	90	110	>+ \-10%
Mg	24	2	45	979.628	ppb	2.559	263587	1000	98.0	90	110	
Al	27	2	45	1029.298	ppb	2.528	79109	1000	102.9	90	110	
K	39	2	45	949.590	ppb	2.406	326432	1000	95.0	90	110	
Ca	44	2	45	958.802	ppb	3.384	18740	1000	95.9	90	110	
V	51	2	72	49.271	ppb	2.045	215170	50	98.5	90	110	
Cr	52	2	72	47.074	ppb	0.617	258939	50	94.1	90	110	
Mn	55	2	72	50.637	ppb	2.868	124041	50	101.3	90	110	
Fe	57	2	72	950.886	ppb	3.561	99327	1000	95.1	90	110	
Co	59	2	72	48.085	ppb	1.325	420724	50	96.2	90	110	
Ni	60	2	72	48.196	ppb	2.099	112600	50	96.4	90	110	
Cu	63	2	72	47.856	ppb	2.185	313385	50	95.7	90	110	
Zn	66	2	72	47.441	ppb	1.596	45931	50	94.9	90	110	
As	75	2	72	48.311	ppb	1.967	33759	50	96.6	90	110	
Se	78	1	72	50.505	ppb	1.502	26439	50	101.0	90	110	
Sr	88	2	45	104.825	ppb	4.103	287826	100	104.8	90	110	
Zr	90	2	72	85.342	ppb	18.598	1753	50	170.7	90	110	>+ \-10%
Zr	90	1	72	138.040	ppb	5.805	6818	50	276.1	90	110	>+ \-10%
Nb	93	2	72	93.722	ppb	3.684	527069	100	93.7	90	110	
Mo	95	2	115	49.268	ppb	2.627	154356	50	98.5	90	110	
Pd	105	2	115	49.910	ppb	2.519	225909	50	99.8	90	110	
Ag	107	2	115	49.738	ppb	1.233	454347	50	99.5	90	110	
Cd	111	2	115	51.564	ppb	2.572	67399	50	103.1	90	110	
Sn	120	2	115	52.411	ppb	2.806	203766	50	104.8	90	110	
Sb	121	2	115	51.715	ppb	1.466	169829	50	103.4	90	110	
Ba	137	2	115	51.837	ppb	1.157	54637	50	103.7	90	110	
W	182	2	165	48.740	ppb	5.526	311018	50	97.5	90	110	
Pt	195	2	165	46.598	ppb	5.139	205048	50	93.2	90	110	
Tl	205	2	165	43.940	ppb	3.124	474760	50	87.9	90	110	>+ \-10%
Pb	208	2	165	45.254	ppb	5.482	640368	50	90.5	90	110	
Th	232	2	165	51.196	ppb	5.906	718608	50	102.4	90	110	
U	238	2	165	49.865	ppb	5.646	763400	50	99.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	677224	0.22	1092921	61.96	60	125	
Sc (IS)	45	2	HMI He	3580521	2.53	4591929	77.97	60	125	
Sc IS)	45	3	No Gas	99977803	0.19	129634638	77.12	60	120	
Ge Internal Standard	72	1	HMI H2	21142564	2.91	26305534	80.37	60	125	
Ge Internal Standard	72	2	HMI He	4295376	0.94	5205670	82.51	60	125	
In Internal standard	115	2	HMI He	13005834	0.91	16441998	79.10	60	125	
Ho-165	165	2	HMI He	30884305	3.51	37362695	82.66	60	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name CCB-5699924
 Data File Name 134_CCB.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T07:32:18-06:00
 Sample Type CCB
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	1	45	-68.188	ppb	-6.2	85277	0.1	
Li	7	3	45	-50.115	ppb	-11.5	5493800	0.05	
Be	9	1	6	0.074	ppb	74.6	23	0.5	
B	11	1	6	-2.102	ppb	-435.0	267	0.1	
Na	23	2	45	-4.158	ppb	-20.0	34437	25	
Mg	24	2	45	1.976	ppb	12.4	830	25	
Al	27	2	45	-0.063	ppb	-876.5	307	15	
K	39	2	45	-2.263	ppb	-627.0	85928	50	
Ca	44	2	45	-1.388	ppb	-326.9	210	25	
V	51	2	72	-0.328	ppb	-50.6	10523	1	
Cr	52	2	72	0.036	ppb	43.9	1440	1	
Mn	55	2	72	0.129	ppb	30.0	497	0.5	
Fe	57	2	72	7.123	ppb	22.1	1720	25	
Co	59	2	72	-0.022	ppb	-0.7	4744	0.5	
Ni	60	2	72	0.031	ppb	10.2	830	1	
Cu	63	2	72	0.186	ppb	13.4	4494	1	
Zn	66	2	72	0.656	ppb	22.7	1183	5	
As	75	2	72	0.051	ppb	40.1	174	1	
Se	78	1	72	0.025	ppb	96.9	31	1	
Sr	88	2	45	0.072	ppb	41.9	347	1	
Zr	90	2	72	-5.148	ppb	-39.8	327	1	
Zr	90	1	72	11.771	ppb	44.3	1972	1	>RL
Nb	93	2	72	3.795	ppb	3.1	24358	2	>RL
Mo	95	2	115	0.089	ppb	53.9	410	0.5	
Pd	105	2	115	-0.016	ppb	-128.1	197	1	
Ag	107	2	115	0.040	ppb	29.7	457	1	
Cd	111	2	115	0.006	ppb	135.6	10	0.5	
Sn	120	2	115	0.154	ppb	18.2	1100	1	
Sb	121	2	115	0.083	ppb	4.9	460	1	
Ba	137	2	115	0.062	ppb	31.0	173	0.5	
W	182	2	165	0.373	ppb	11.6	4761	1	
Pt	195	2	165	0.016	ppb	55.8	83	1	
Tl	205	2	165	0.015	ppb	64.2	370	0.1	
Pb	208	2	165	0.014	ppb	67.5	957	0.5	
Th	232	2	165	0.248	ppb	13.7	4261	1	
U	238	2	165	0.053	ppb	16.8	870	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	670339	2.79	1092921	61.33	60	125	
Sc (IS)	45	2	HMI He	3535907	1.38	4591929	77.00	60	125	
Sc (IS)	45	3	No Gas	98210977	1.44	129634638	75.76	60	120	
Ge Internal Standard	72	1	HMI H2	20205170	1.28	26305534	76.81	60	125	
Ge Internal Standard	72	2	HMI He	4147589	3.38	5205670	79.67	60	125	
In Internal standard	115	2	HMI He	13022942	2.86	16441998	79.21	60	125	
Ho-165	165	2	HMI He	31199454	1.88	37362695	83.50	60	125	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name CCVL-5699928
 Data File Name 135LLCCV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T07:35:50-06:00
 Sample Type LLCCV
 Dilution 1
 Comment
 ISTD Ref File Name 025CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-52.476	ppb	-8.663	5566717	50	-105.0	70	130	> +/-30%
Be	9	1	6	1.058	ppb	28.999	295	1	105.8	70	130	
Na	23	2	45	46.754	ppb	6.914	66533	50	93.5	70	130	
Mg	24	2	45	52.299	ppb	4.554	14056	50	104.6	70	130	
Al	27	2	45	49.232	ppb	0.445	3997	50	98.5	70	130	
K	39	2	45	100.945	ppb	3.886	110568	100	100.9	70	130	
Ca	44	2	45	34.041	ppb	12.609	877	50	68.1	70	130	> +/-30%
V	51	2	72	4.604	ppb	2.591	31439	5	92.1	70	130	
Cr	52	2	72	1.953	ppb	5.849	12064	2	97.6	70	130	
Mn	55	2	72	1.098	ppb	12.170	2907	1	109.8	70	130	
Fe	57	2	72	53.634	ppb	5.569	6635	50	107.3	70	130	
Co	59	2	72	0.931	ppb	1.174	13242	1	93.1	70	130	
Ni	60	2	72	1.254	ppb	3.365	3724	1.5	83.6	70	130	
Cu	63	2	72	1.859	ppb	2.233	15601	2	93.0	70	130	
Zn	66	2	72	10.067	ppb	2.192	10293	10	100.7	70	130	
As	75	2	72	4.509	ppb	2.253	3304	5	90.2	70	130	
Se	78	1	72	4.971	ppb	8.756	2543	5	99.4	70	130	
Sr	88	2	45	1.102	ppb	13.806	3107	1	110.2	70	130	
Zr	90	2	72	-6.999	ppb	-142.463	310	0.5	-1399.8	70	130	> +/-30%
Zr	90	1	72	3.059	ppb	213.680	1685	0.5	611.8	70	130	> +/-30%
Nb	93	2	72	1.739	ppb	9.713	13833	2	87.0	70	130	
Mo	95	2	115	2.051	ppb	6.629	6628	2	102.5	70	130	
Pd	105	2	115	-0.044	ppb	-17.471	70	1	-4.4	70	130	> +/-30%
Ag	107	2	115	4.963	ppb	1.901	45977	5	99.3	70	130	
Cd	111	2	115	0.989	ppb	7.246	1313	1	98.9	70	130	
Sn	120	2	115	10.157	ppb	2.922	40377	10	101.6	70	130	
Sb	121	2	115	1.964	ppb	4.144	6708	2	98.2	70	130	
Ba	137	2	115	1.006	ppb	15.836	1183	1	100.6	70	130	
W	182	2	165	4.799	ppb	2.758	33778	1	479.9	70	130	> +/-30%
Pt	195	2	165	0.008	ppb	70.532	47	1	0.8	70	130	> +/-30%
Tl	205	2	165	0.834	ppb	3.396	9500	1	83.4	70	130	
Pb	208	2	165	0.884	ppb	7.601	13653	1	88.4	70	130	
Th	232	2	165	1.884	ppb	7.606	28000	2	94.2	70	130	
U	238	2	165	0.991	ppb	8.753	15685	1	99.1	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	669535	0.26	1092921	61.26	60	125	
Sc (IS)	45	2	HMI He	3503629	2.13	4591929	76.30	60	125	
Sc IS)	45	3	No Gas	100250958	1.22	129634638	77.33	60	120	
Ge Internal Standard	72	1	HMI H2	20511870	1.03	26305534	77.98	60	125	
Ge Internal Standard	72	2	HMI He	4325485	2.29	5205670	83.09	60	125	
In Internal standard	115	2	HMI He	13169312	2.42	16441998	80.10	60	125	
Ho-165	165	2	HMI He	31839625	2.76	37362695	85.22	60	125	

Sample Report

Sample Table

Sample Name rinse-5626316
 Data File Name 136SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T07:39:21-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment PA
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Pass
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-63.660	ppb	-63.660	-3.91	5444783	40000	
Be	9	1	6	0.019	ppb	0.019	145.65	8	2000	
B	11	1	6	13.925	ppb	13.925	123.38	397	100	
Na	23	2	45	-3.871	ppb	-3.871	-37.13	35572	400000	
Mg	24	2	45	3.658	ppb	3.658	13.06	1313	400000	
Al	27	2	45	3.445	ppb	3.445	39.20	587	400000	
K	39	2	45	-2.453	ppb	-2.453	-91.04	88277	400000	
Ca	44	2	45	-2.186	ppb	-2.186	-86.60	200	400000	
V	51	2	72	-0.093	ppb	-0.093	-32.42	11654	2000	
Cr	52	2	72	-0.019	ppb	-0.019	-133.66	1170	5000	
Mn	55	2	72	0.235	ppb	0.235	20.37	760	10000	
Fe	57	2	72	24.368	ppb	24.368	10.54	3500	400000	
Co	59	2	72	-0.002	ppb	-0.002	-1157.49	4987	2000	
Ni	60	2	72	-0.023	ppb	-0.023	-71.03	720	5000	
Cu	63	2	72	0.158	ppb	0.158	35.43	4391	5000	
Zn	66	2	72	0.675	ppb	0.675	40.96	1220	5000	
As	75	2	72	0.027	ppb	0.027	194.12	159	2000	
Se	78	1	72	-0.010	ppb	-0.010	-163.15	13	2000	
Sr	88	2	45	0.048	ppb	0.048	88.14	290	2000	
Zr	90	2	72	-9.649	ppb	-9.649	-26.27	263	1000	
Zr	90	1	72	2.309	ppb	2.309	192.49	1638	1000	
Nb	93	2	72	1.159	ppb	1.159	9.00	10307	200	
Mo	95	2	115	0.009	ppb	0.009	105.81	163	2000	
Pd	105	2	115	-0.044	ppb	-0.044	-16.93	70	100	
Ag	107	2	115	0.003	ppb	0.003	84.42	130	100	
Cd	111	2	115	0.006	ppb	0.006	135.42	10	2000	
Sn	120	2	115	0.098	ppb	0.098	15.62	900	2000	
Sb	121	2	115	-0.011	ppb	-0.011	-64.57	153	1000	
Ba	137	2	115	0.043	ppb	0.043	55.69	157	5000	
W	182	2	165	0.120	ppb	0.120	26.04	3127	100	
Pt	195	2	165	0.006	ppb	0.006	116.14	37	100	
Tl	205	2	165	0.005	ppb	0.005	108.89	257	2000	
Pb	208	2	165	-0.001	ppb	-0.001	-151.82	733	5000	
Th	232	2	165	0.172	ppb	0.172	10.65	3160	2000	
U	238	2	165	0.005	ppb	0.005	45.74	130	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	669088	2.35	1092921	61.22	60	125	
Sc (IS)	45	2	HMI He	3633631	1.97	4591929	79.13	60	125	
Sc (IS)	45	3	No Gas	101722415	1.71	129634638	78.47	60	120	
Ge Internal Standard	72	1	HMI H2	20296916	0.99	26305534	77.16	60	125	
Ge Internal Standard	72	2	HMI He	4213138	1.24	5205670	80.93	60	125	
In Internal standard	115	2	HMI He	13253645	0.99	16441998	80.61	60	125	
Ho-165	165	2	HMI He	30990543	4.46	37362695	82.95	60	125	

Sample Report

Sample Table

Sample Name rinse-5626316
 Data File Name 137SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T07:42:55-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment PA
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Pass
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-57.337	ppb	-57.337	-3.59	5425629	40000	
Be	9	1	6	0.001	ppb	0.001	1923.87	3	2000	
B	11	1	6	5.050	ppb	5.050	47.40	327	100	
Na	23	2	45	-3.163	ppb	-3.163	-63.26	35181	400000	
Mg	24	2	45	4.329	ppb	4.329	19.98	1460	400000	
Al	27	2	45	5.812	ppb	5.812	6.48	753	400000	
K	39	2	45	-4.654	ppb	-4.654	-268.45	85613	400000	
Ca	44	2	45	1.683	ppb	1.683	89.78	270	400000	
V	51	2	72	-0.354	ppb	-0.354	-31.48	11237	2000	
Cr	52	2	72	-0.022	ppb	-0.022	-130.41	1223	5000	
Mn	55	2	72	0.244	ppb	0.244	18.55	830	10000	
Fe	57	2	72	19.456	ppb	19.456	13.36	3177	400000	
Co	59	2	72	-0.039	ppb	-0.039	-26.99	4957	2000	
Ni	60	2	72	0.012	ppb	0.012	521.23	847	5000	
Cu	63	2	72	0.116	ppb	0.116	25.38	4367	5000	
Zn	66	2	72	0.549	ppb	0.549	21.58	1167	5000	
As	75	2	72	-0.021	ppb	-0.021	-107.10	135	2000	
Se	78	1	72	-0.008	ppb	-0.008	-243.73	15	2000	
Sr	88	2	45	0.026	ppb	0.026	99.43	223	2000	
Zr	90	2	72	-9.581	ppb	-9.581	-20.32	280	1000	
Zr	90	1	72	1.083	ppb	1.083	483.93	1605	1000	
Nb	93	2	72	0.520	ppb	0.520	20.20	7215	200	
Mo	95	2	115	0.020	ppb	0.020	110.91	200	2000	
Pd	105	2	115	-0.045	ppb	-0.045	-7.11	67	100	
Ag	107	2	115	0.001	ppb	0.001	697.67	107	100	
Cd	111	2	115	0.001	ppb	0.001	818.75	3	2000	
Sn	120	2	115	0.057	ppb	0.057	56.60	740	2000	
Sb	121	2	115	-0.027	ppb	-0.027	-41.14	100	1000	
Ba	137	2	115	0.082	ppb	0.082	61.91	200	5000	
W	182	2	165	0.058	ppb	0.058	42.61	2834	100	
Pt	195	2	165	0.001	ppb	0.001	323.26	17	100	
Tl	205	2	165	0.003	ppb	0.003	105.12	240	2000	
Pb	208	2	165	-0.011	ppb	-0.011	-19.39	623	5000	
Th	232	2	165	0.063	ppb	0.063	14.35	1687	2000	
U	238	2	165	0.003	ppb	0.003	38.96	103	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	674146	1.14	1092921	61.68	60	125	
Sc (IS)	45	2	HMI He	3548229	2.71	4591929	77.27	60	125	
Sc (IS)	45	3	No Gas	99268421	0.90	129634638	76.58	60	120	
Ge Internal Standard	72	1	HMI H2	20456005	1.89	26305534	77.76	60	125	
Ge Internal Standard	72	2	HMI He	4467323	2.82	5205670	85.82	60	125	
In Internal standard	115	2	HMI He	13304791	2.85	16441998	80.92	60	125	
Ho-165	165	2	HMI He	32212051	2.30	37362695	86.21	60	125	

Sample Report

Sample Table

Sample Name rinse-5620980
 Data File Name 138SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T07:46:28-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment TUNE
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Pass
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-56.801	ppb	-56.801	-6.63	5456504	40000	
Be	9	1	6	-0.005	ppb	-0.005	-213.24	2	2000	
B	11	1	6	16.736	ppb	16.736	33.81	420	100	
Na	23	2	45	-5.082	ppb	-5.082	-46.08	34584	400000	
Mg	24	2	45	3.310	ppb	3.310	30.41	1210	400000	
Al	27	2	45	5.561	ppb	5.561	31.98	747	400000	
K	39	2	45	-4.282	ppb	-4.282	-247.04	87282	400000	
Ca	44	2	45	-1.466	ppb	-1.466	-139.19	213	400000	
V	51	2	72	-0.279	ppb	-0.279	-2.19	11067	2000	
Cr	52	2	72	0.010	ppb	0.010	372.53	1343	5000	
Mn	55	2	72	0.242	ppb	0.242	19.94	790	10000	
Fe	57	2	72	22.627	ppb	22.627	10.31	3374	400000	
Co	59	2	72	-0.016	ppb	-0.016	-422.89	4944	2000	
Ni	60	2	72	0.081	ppb	0.081	46.39	970	5000	
Cu	63	2	72	0.165	ppb	0.165	27.18	4501	5000	
Zn	66	2	72	0.480	ppb	0.480	28.82	1053	5000	
As	75	2	72	-0.016	ppb	-0.016	-201.41	133	2000	
Se	78	1	72	0.015	ppb	0.015	110.63	27	2000	
Sr	88	2	45	0.042	ppb	0.042	63.68	270	2000	
Zr	90	2	72	-7.760	ppb	-7.760	-46.72	297	1000	
Zr	90	1	72	2.186	ppb	2.186	95.71	1678	1000	
Nb	93	2	72	0.198	ppb	0.198	48.58	5128	200	
Mo	95	2	115	0.028	ppb	0.028	59.79	223	2000	
Pd	105	2	115	-0.042	ppb	-0.042	-21.82	80	100	
Ag	107	2	115	0.000	ppb	0.000	606.25	103	100	
Cd	111	2	115	-0.002	ppb	-0.002	0.00	0	2000	
Sn	120	2	115	0.047	ppb	0.047	19.11	697	2000	
Sb	121	2	115	-0.033	ppb	-0.033	-14.35	80	1000	
Ba	137	2	115	0.096	ppb	0.096	86.68	213	5000	
W	182	2	165	0.037	ppb	0.037	39.00	2614	100	
Pt	195	2	165	0.000	ppb	0.000	-711.49	10	100	
Tl	205	2	165	0.000	ppb	0.000	-209.95	200	2000	
Pb	208	2	165	-0.001	ppb	-0.001	-948.89	750	5000	
Th	232	2	165	0.024	ppb	0.024	54.92	1090	2000	
U	238	2	165	0.003	ppb	0.003	13.60	93	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	671092	1.46	1092921	61.40	60	125	
Sc (IS)	45	2	HMI He	3612141	0.84	4591929	78.66	60	125	
Sc (IS)	45	3	No Gas	99673456	2.37	129634638	76.89	60	120	
Ge Internal Standard	72	1	HMI H2	20847819	0.68	26305534	79.25	60	125	
Ge Internal Standard	72	2	HMI He	4277008	0.48	5205670	82.16	60	125	
In Internal standard	115	2	HMI He	13251548	2.09	16441998	80.60	60	125	
Ho-165	165	2	HMI He	31242130	0.72	37362695	83.62	60	125	

Sample Report

Sample Table

Sample Name rinse-5620980
 Data File Name 139SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T07:50:00-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment TUNE
 ISTD Ref FileName 025CALB.d
 Sample QC Pass/Fail Pass
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-59.479	ppb	-59.479	-5.03	5423101	40000	
Be	9	1	6	0.007	ppb	0.007	259.42	5	2000	
B	11	1	6	2.632	ppb	2.632	211.75	307	100	
Na	23	2	45	-4.112	ppb	-4.112	-60.34	34951	400000	
Mg	24	2	45	3.337	ppb	3.337	33.93	1207	400000	
Al	27	2	45	4.531	ppb	4.531	4.78	663	400000	
K	39	2	45	-7.223	ppb	-7.223	-232.75	85905	400000	
Ca	44	2	45	-0.532	ppb	-0.532	-480.07	230	400000	
V	51	2	72	-0.320	ppb	-0.320	-17.91	11347	2000	
Cr	52	2	72	-0.025	ppb	-0.025	-133.16	1203	5000	
Mn	55	2	72	0.262	ppb	0.262	34.16	873	10000	
Fe	57	2	72	19.787	ppb	19.787	5.45	3207	400000	
Co	59	2	72	-0.098	ppb	-0.098	-42.69	4407	2000	
Ni	60	2	72	0.004	ppb	0.004	1341.71	827	5000	
Cu	63	2	72	0.139	ppb	0.139	6.45	4514	5000	
Zn	66	2	72	0.646	ppb	0.646	40.35	1263	5000	
As	75	2	72	-0.028	ppb	-0.028	-46.44	129	2000	
Se	78	1	72	0.008	ppb	0.008	406.03	23	2000	
Sr	88	2	45	0.018	ppb	0.018	46.13	203	2000	
Zr	90	2	72	-9.739	ppb	-9.739	-41.00	277	1000	
Zr	90	1	72	4.656	ppb	4.656	17.15	1732	1000	
Nb	93	2	72	-0.015	ppb	-0.015	-167.47	4104	200	
Mo	95	2	115	0.030	ppb	0.030	54.99	233	2000	
Pd	105	2	115	-0.041	ppb	-0.041	-16.49	87	100	
Ag	107	2	115	-0.002	ppb	-0.002	-173.48	80	100	
Cd	111	2	115	0.010	ppb	0.010	40.00	17	2000	
Sn	120	2	115	0.037	ppb	0.037	68.87	667	2000	
Sb	121	2	115	-0.026	ppb	-0.026	-81.66	107	1000	
Ba	137	2	115	0.011	ppb	0.011	385.03	123	5000	
W	182	2	165	0.055	ppb	0.055	104.18	2834	100	
Pt	195	2	165	0.002	ppb	0.002	280.74	23	100	
Tl	205	2	165	0.002	ppb	0.002	253.48	233	2000	
Pb	208	2	165	0.003	ppb	0.003	224.46	830	5000	
Th	232	2	165	0.010	ppb	0.010	23.08	920	2000	
U	238	2	165	0.002	ppb	0.002	299.68	77	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	672712	1.69	1092921	61.55	60	125	
Sc (IS)	45	2	HMI He	3587914	2.47	4591929	78.14	60	125	
Sc (IS)	45	3	No Gas	99919062	0.56	129634638	77.08	60	120	
Ge Internal Standard	72	1	HMI H2	20398862	2.07	26305534	77.55	60	125	
Ge Internal Standard	72	2	HMI He	4451067	1.32	5205670	85.50	60	125	
In Internal standard	115	2	HMI He	13471431	3.34	16441998	81.93	60	125	
Ho-165	165	2	HMI He	32377559	1.19	37362695	86.66	60	125	

Calibration Blank Report

Sample Table

Sample Name2 ICIS-5699924
 Data File Name 140CALB.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Method
 Acq Date Time 2019-05-14T07:53:33-06:00
 Sample Type CalBlk
 Level 1
 Dilution 1
 Comment

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Li	7	45	1	HMI H2	85568	0.00
Li	7	45	3	No Gas	5384227	0.00
Be	9	6	1	HMI H2	7	1718.47
B	11	6	1	HMI H2	303	8.01
Na	23	45	2	HMI He	33522	0.00
Mg	24	45	2	HMI He	1007	0.97
Al	27	45	2	HMI He	477	3.74
K	39	45	2	HMI He	86431	0.00
Ca	44	45	2	HMI He	170	9.16
V	51	72	2	HMI He	12251	0.02
Cr	52	72	2	HMI He	1313	1.36
Mn	55	72	2	HMI He	293	8.88
Fe	57	72	2	HMI He	1660	1.01
Co	59	72	2	HMI He	4914	0.17
Ni	60	72	2	HMI He	793	1.92
Cu	63	72	2	HMI He	2850	0.20
Zn	66	72	2	HMI He	787	2.87
As	75	72	2	HMI He	120	22.65
Se	78	72	1	HMI H2	16	156.25
Sr	88	45	2	HMI He	207	11.07
Zr	90	72	2	HMI He	287	10.63
Zr	90	72	1	HMI H2	1358	0.21
Nb	93	72	2	HMI He	2727	0.42
Mo	95	115	2	HMI He	153	17.19
Pd	105	115	2	HMI He	40	108.25
Ag	107	115	2	HMI He	83	8.31
Cd	111	115	2	HMI He	17	415.69
Sn	120	115	2	HMI He	543	2.40
Sb	121	115	2	HMI He	90	44.51
Ba	137	115	2	HMI He	97	54.92
W	182	165	2	HMI He	2660	0.23
Tl	205	165	2	HMI He	183	7.49
Pb	208	165	2	HMI He	640	0.88
Th	232	165	2	HMI He	1250	1.34
U	238	165	2	HMI He	97	16.35

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li-6 Internal Standard	6	1	HMI H2	661091	0.65
Sc (IS)	45	2	HMI He	3655967	0.94
Sc IS)	45	3	No Gas	100875794	0.41
Ge Internal Standard	72	1	HMI H2	20569859	3.48
Ge Internal Standard	72	2	HMI He	4348567	2.26
In Internal standard	115	2	HMI He	13519075	1.83
Ho-165	165	2	HMI He	30887613	1.23

Calibration Standard Report

Sample Table

Sample Name IC-5699925
 Data File Name 141CAL.S.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 method
 Acq Date Time 2019-05-14T07:57:07-06:00
 Sample Type CalStd
 Level 2
 Dilution 1
 Comment
 ISTD Ref File Name 140CALB.d
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Li	7	45	1	HMI H2	137959	0.00
Li	7	45	3	No Gas	8695097	0.00
Be	9	6	1	HMI H2	30287	0.00
B	11	6	1	HMI H2	1230	1.40
Na	23	45	2	HMI He	1315762	0.00
Mg	24	45	2	HMI He	542624	0.00
Al	27	45	2	HMI He	164041	0.00
K	39	45	2	HMI He	600197	0.00
Ca	44	45	2	HMI He	39772	0.01
V	51	72	2	HMI He	442967	0.00
Cr	52	72	2	HMI He	550037	0.00
Mn	55	72	2	HMI He	257456	0.00
Fe	57	72	2	HMI He	214386	0.00
Co	59	72	2	HMI He	877622	0.00
Ni	60	72	2	HMI He	233134	0.00
Cu	63	72	2	HMI He	652921	0.00
Zn	66	72	2	HMI He	99744	0.00
As	75	72	2	HMI He	71363	0.00
Se	78	72	1	HMI H2	54854	0.00
Sr	88	45	2	HMI He	616685	0.00
Zr	90	72	2	HMI He	1603	0.66
Zr	90	72	1	HMI H2	4862	0.16
Nb	93	72	2	HMI He	1182057	0.00
Mo	95	115	2	HMI He	331894	0.00
Pd	105	115	2	HMI He	467198	0.00
Ag	107	115	2	HMI He	966449	0.00
Cd	111	115	2	HMI He	140879	0.00
Sn	120	115	2	HMI He	429915	0.00
Sb	121	115	2	HMI He	370958	0.00
Ba	137	115	2	HMI He	119191	0.00
W	182	165	2	HMI He	651332	0.00
Pt	195	165	2	HMI He	426363	0.00
Tl	205	165	2	HMI He	1060237	0.00
Pb	208	165	2	HMI He	1442415	0.00
Th	232	165	2	HMI He	1483774	0.00
U	238	165	2	HMI He	1570992	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	664337	0.37	661091	100.49	60	125	
Sc (IS)	45	2	HMI He	3578859	1.10	3655967	97.89	60	125	
Sc IS)	45	3	No Gas	98322175	1.52	100875794	97.47	60	120	
Ge Internal Standard	72	1	HMI H2	20712040	2.13	20569859	100.69	60	125	
Ge Internal Standard	72	2	HMI He	4415426	0.21	4348567	101.54	60	125	
In Internal standard	115	2	HMI He	13562766	0.81	13519075	100.32	60	125	
Ho-165	165	2	HMI He	31370001	4.85	30887613	101.56	60	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name CCV-5699926
 Data File Name 142_CCV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T08:00:39-06:00
 Sample Type CCV
 Dilution 1
 Comment
 ISTD Ref File Name 140CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	108.600	ppb	11.929	111860	100	108.6	90	110	
Li	7	3	45	113.399	ppb	2.811	7146600	100	113.4	90	110	>+ \-10%
Be	9	1	6	49.439	ppb	2.072	14898	50	98.9	90	110	
B	11	1	6	59.868	ppb	19.473	853	50	119.7	90	110	>+ \-10%
Na	23	2	45	956.314	ppb	4.259	636048	1000	95.6	90	110	
Mg	24	2	45	1006.983	ppb	3.597	269401	1000	100.7	90	110	
Al	27	2	45	1008.705	ppb	2.202	81690	1000	100.9	90	110	
K	39	2	45	1002.453	ppb	5.124	337635	1000	100.2	90	110	
Ca	44	2	45	993.976	ppb	2.591	19561	1000	99.4	90	110	
V	51	2	72	48.091	ppb	1.793	219193	50	96.2	90	110	
Cr	52	2	72	48.618	ppb	1.054	267771	50	97.2	90	110	
Mn	55	2	72	49.730	ppb	1.113	128026	50	99.5	90	110	
Fe	57	2	72	983.789	ppb	2.813	106172	1000	98.4	90	110	
Co	59	2	72	49.702	ppb	1.843	438154	50	99.4	90	110	
Ni	60	2	72	50.614	ppb	1.903	118247	50	101.2	90	110	
Cu	63	2	72	49.231	ppb	0.154	322493	50	98.5	90	110	
Zn	66	2	72	48.557	ppb	0.098	48783	50	97.1	90	110	
As	75	2	72	49.635	ppb	0.868	35436	50	99.3	90	110	
Se	78	1	72	50.436	ppb	2.503	27908	50	100.9	90	110	
Sr	88	2	45	99.935	ppb	2.800	303439	100	99.9	90	110	
Zr	90	2	72	38.899	ppb	3.014	800	50	77.8	90	110	>+ \-10%
Zr	90	1	72	33.016	ppb	29.547	2536	50	66.0	90	110	>+ \-10%
Nb	93	2	72	106.793	ppb	1.384	631658	100	106.8	90	110	
Mo	95	2	115	48.531	ppb	1.549	160935	50	97.1	90	110	
Pd	105	2	115	51.042	ppb	1.790	238146	50	102.1	90	110	
Ag	107	2	115	49.833	ppb	2.412	480891	50	99.7	90	110	
Cd	111	2	115	49.976	ppb	2.093	70311	50	100.0	90	110	
Sn	120	2	115	48.961	ppb	1.990	210465	50	97.9	90	110	
Sb	121	2	115	48.314	ppb	3.506	178973	50	96.6	90	110	
Ba	137	2	115	48.561	ppb	1.642	57853	50	97.1	90	110	
W	182	2	165	48.285	ppb	2.604	320204	50	96.6	90	110	
Pt	195	2	165	50.617	ppb	1.440	218876	50	101.2	90	110	
Tl	205	2	165	46.486	ppb	3.796	499327	50	93.0	90	110	
Pb	208	2	165	46.785	ppb	7.280	684272	50	93.6	90	110	
Th	232	2	165	50.343	ppb	4.305	757561	50	100.7	90	110	
U	238	2	165	49.976	ppb	5.463	795585	50	100.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	660731	1.00	661091	99.95	60	125	
Sc (IS)	45	2	HMI He	3525320	3.58	3655967	96.43	60	125	
Sc IS)	45	3	No Gas	97555025	1.61	100875794	96.71	60	120	
Ge Internal Standard	72	1	HMI H2	20887668	2.81	20569859	101.55	60	125	
Ge Internal Standard	72	2	HMI He	4409817	0.63	4348567	101.41	60	125	
In Internal standard	115	2	HMI He	13547375	2.07	13519075	100.21	60	125	
Ho-165	165	2	HMI He	31776253	2.93	30887613	102.88	60	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name CCB-5699924
 Data File Name 143_CCB.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T08:04:11-06:00
 Sample Type CCB
 Dilution 1
 Comment
 ISTD Ref File Name 140CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	1	45	-14.150	ppb	-29.3	82718	0.1	
Li	7	3	45	9.119	ppb	27.4	5445423	0.05	>RL
Be	9	1	6	0.060	ppb	70.8	25	0.5	
B	11	1	6	1.057	ppb	710.7	313	0.1	>RL
Na	23	2	45	1.847	ppb	89.7	34333	25	
Mg	24	2	45	0.248	ppb	63.1	1063	25	
Al	27	2	45	-0.650	ppb	-141.9	417	15	
K	39	2	45	1.749	ppb	227.1	85915	50	
Ca	44	2	45	2.242	ppb	124.0	213	25	
V	51	2	72	-0.144	ppb	-69.7	11584	1	
Cr	52	2	72	0.026	ppb	20.0	1447	1	
Mn	55	2	72	0.063	ppb	22.2	450	0.5	
Fe	57	2	72	2.704	ppb	28.4	1937	25	
Co	59	2	72	0.053	ppb	35.1	5344	0.5	
Ni	60	2	72	0.061	ppb	64.1	930	1	
Cu	63	2	72	0.292	ppb	17.0	4694	1	
Zn	66	2	72	0.449	ppb	56.9	1220	5	
As	75	2	72	0.065	ppb	41.0	164	1	
Se	78	1	72	0.077	ppb	28.0	59	1	
Sr	88	2	45	0.078	ppb	27.8	447	1	
Zr	90	2	72	-2.138	ppb	-237.2	257	1	
Zr	90	1	72	3.845	ppb	139.9	1505	1	>RL
Nb	93	2	72	7.086	ppb	7.2	43630	2	>RL
Mo	95	2	115	0.143	ppb	8.3	637	0.5	
Pd	105	2	115	0.080	ppb	5.6	420	1	
Ag	107	2	115	0.045	ppb	26.4	523	1	
Cd	111	2	115	0.014	ppb	125.0	37	0.5	
Sn	120	2	115	0.230	ppb	2.3	1553	1	
Sb	121	2	115	0.178	ppb	24.8	760	1	
Ba	137	2	115	0.076	ppb	77.6	190	0.5	
W	182	2	165	0.172	ppb	14.7	3837	1	
Pt	195	2	165	0.037	ppb	39.3	160	1	
Tl	205	2	165	0.046	ppb	48.3	677	0.1	
Pb	208	2	165	0.054	ppb	18.7	1433	0.5	
Th	232	2	165	0.248	ppb	4.6	4968	1	
U	238	2	165	0.078	ppb	5.8	1330	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	661788	1.10	661091	100.11	60	125	
Sc (IS)	45	2	HMI He	3614748	1.28	3655967	98.87	60	125	
Sc (IS)	45	3	No Gas	99055081	1.23	100875794	98.20	60	120	
Ge Internal Standard	72	1	HMI H2	20729457	1.69	20569859	100.78	60	125	
Ge Internal Standard	72	2	HMI He	4323790	0.10	4348567	99.43	60	125	
In Internal standard	115	2	HMI He	13745270	2.46	13519075	101.67	60	125	
Ho-165	165	2	HMI He	31470924	2.58	30887613	101.89	60	125	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name CCVL-5699928
 Data File Name 144LCCV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T08:07:44-06:00
 Sample Type LLCCV
 Dilution 1
 Comment
 ISTD Ref File Name 140CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	13.745	ppb	41.280	5612833	50	27.5	70	130	> +/-30%
Be	9	1	6	0.925	ppb	38.150	287	1	92.5	70	130	
Na	23	2	45	46.170	ppb	3.824	63991	50	92.3	70	130	
Mg	24	2	45	46.817	ppb	3.465	14002	50	93.6	70	130	
Al	27	2	45	46.457	ppb	14.477	4364	50	92.9	70	130	
K	39	2	45	94.942	ppb	11.276	111802	100	94.9	70	130	
Ca	44	2	45	39.089	ppb	6.394	963	50	78.2	70	130	
V	51	2	72	4.506	ppb	8.094	30630	5	90.1	70	130	
Cr	52	2	72	2.001	ppb	3.206	11851	2	100.1	70	130	
Mn	55	2	72	1.096	ppb	7.843	2997	1	109.6	70	130	
Fe	57	2	72	54.709	ppb	6.743	7228	50	109.4	70	130	
Co	59	2	72	1.091	ppb	0.934	13966	1	109.1	70	130	
Ni	60	2	72	1.557	ppb	6.801	4261	1.5	103.8	70	130	
Cu	63	2	72	2.125	ppb	13.083	16066	2	106.2	70	130	
Zn	66	2	72	10.729	ppb	2.075	10984	10	107.3	70	130	
As	75	2	72	4.810	ppb	1.209	3414	5	96.2	70	130	
Se	78	1	72	4.848	ppb	6.524	2612	5	97.0	70	130	
Sr	88	2	45	0.968	ppb	8.084	3264	1	96.8	70	130	
Zr	90	2	72	4.556	ppb	40.836	337	0.5	911.3	70	130	> +/-30%
Zr	90	1	72	5.672	ppb	102.870	1528	0.5	1134.5	70	130	> +/-30%
Nb	93	2	72	4.113	ppb	6.531	25990	2	205.7	70	130	> +/-30%
Mo	95	2	115	1.923	ppb	8.293	6595	2	96.1	70	130	
Pd	105	2	115	0.042	ppb	25.401	237	1	4.2	70	130	> +/-30%
Ag	107	2	115	4.784	ppb	3.600	46772	5	95.7	70	130	
Cd	111	2	115	0.937	ppb	8.741	1350	1	93.7	70	130	
Sn	120	2	115	9.295	ppb	3.766	40858	10	93.0	70	130	
Sb	121	2	115	1.908	ppb	5.444	7238	2	95.4	70	130	
Ba	137	2	115	0.872	ppb	7.729	1147	1	87.2	70	130	
W	182	2	165	4.697	ppb	3.064	34045	1	469.7	70	130	> +/-30%
Pt	195	2	165	0.021	ppb	71.764	93	1	2.1	70	130	> +/-30%
Tl	205	2	165	0.930	ppb	4.899	10297	1	93.0	70	130	
Pb	208	2	165	0.915	ppb	0.607	14216	1	91.5	70	130	
Th	232	2	165	1.793	ppb	1.780	28585	2	89.6	70	130	
U	238	2	165	0.989	ppb	1.920	16049	1	98.9	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	664893	0.52	661091	100.58	60	125	
Sc (IS)	45	2	HMI He	3669148	2.63	3655967	100.36	60	125	
Sc (S)	45	3	No Gas	100631856	1.37	100875794	99.76	60	120	
Ge Internal Standard	72	1	HMI H2	20207448	1.35	20569859	98.24	60	125	
Ge Internal Standard	72	2	HMI He	4248579	1.46	4348567	97.70	60	125	
In Internal standard	115	2	HMI He	13700328	0.83	13519075	101.34	60	125	
Ho-165	165	2	HMI He	32165011	1.39	30887613	104.14	60	125	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name ICSA-5695552
 Data File Name 145ICSA.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T08:11:18-06:00
 Sample Type ICSA
 Dilution 1
 Comment
 ISTD Ref File Name 140CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	1	45	-9.246	ppb	-69.6	79741	10	
Li	7	3	45	9.072	ppb	66.9	5360177	10	
Be	9	1	6	0.018	ppb	197.5	12	1	
B	11	1	6	16.462	ppb	35.8	433	10	>RL or LOD
Na	23	2	45	88136.433	ppb	0.5	57029653	100000	
Mg	24	2	45	91734.585	ppb	1.3	25045168	100000	
Al	27	2	45	92510.768	ppb	3.8	7629576	100000	
K	39	2	45	92316.331	ppb	3.0	24081661	100000	
V	51	2	72	-0.157	ppb	-118.8	11384	1	
Cr	52	2	72	1.315	ppb	1.6	8272	1	>RL or LOD
Mn	55	2	72	0.538	ppb	10.7	1627	1	
Co	59	2	72	0.257	ppb	22.7	6998	1	
Ni	60	2	72	0.229	ppb	40.0	1297	1	
Cu	63	2	72	0.302	ppb	17.5	4701	1	
Zn	66	2	72	0.785	ppb	7.5	1527	1	
As	75	2	72	0.123	ppb	19.8	202	1	
Se	78	1	72	0.111	ppb	39.2	73	1	
Sr	88	2	45	1.681	ppb	7.4	5428	1	>RL or LOD
Nb	93	2	72	19.992	ppb	4.9	116697	1	>RL or LOD
Mo	95	2	115	1989.260	ppb	2.8	6286700	2000	
Pd	105	2	115	0.033	ppb	61.0	183	1	
Ag	107	2	115	0.049	ppb	18.5	530	1	
Cd	111	2	115	0.719	ppb	9.1	980	1	
Sn	120	2	115	0.164	ppb	35.1	1190	1	
Sb	121	2	115	0.148	ppb	9.3	610	1	
Ba	137	2	115	0.814	ppb	11.5	1017	1	
W	182	2	165	0.379	ppb	22.5	5208	1	
Pt	195	2	165	0.026	ppb	19.1	113	1	
Tl	205	2	165	0.012	ppb	11.8	317	1	
Pb	208	2	165	0.279	ppb	7.6	4720	1	
Th	232	2	165	0.567	ppb	6.2	9770	1	
U	238	2	165	0.032	ppb	26.4	607	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	630255	0.67	661091	95.34	60	125	
Sc (IS)	45	2	HMI He	3607528	0.80	3655967	98.68	60	125	
Sc IS)	45	3	No Gas	97525897	0.63	100875794	96.68	60	120	
Ge Internal Standard	72	1	HMI H2	19710995	0.68	20569859	95.82	60	125	
Ge Internal Standard	72	2	HMI He	4271600	0.80	4348567	98.23	60	125	
In Internal standard	115	2	HMI He	12925489	2.17	13519075	95.61	60	125	
Ho-165	165	2	HMI He	31665355	2.56	30887613	102.52	60	125	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name ICSAB-5695553
 Data File Name 146ICSB.d
 Data Path Name D:\Agilent\ICPMH1\DATA\051319.b
 Acq Date Time 2019-05-14T08:14:48-06:00
 Sample Type ICSB
 Dilution 1
 Comment
 ISTD Ref File Name 140CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	181.282	ppb	0.717	132857	100	181.3	80	120	>+ \-20%
Li	7	3	45	195.063	ppb	3.456	8438399	100	195.1	80	120	>+ \-20%
Be	9	1	6	92.510	ppb	2.923	27609	100	92.5	80	120	
B	11	1	6	34.833	ppb	26.362	617	100	34.8	80	120	>+ \-20%
V	51	2	72	98.427	ppb	2.468	430530	100	98.4	80	120	
Cr	52	2	72	97.756	ppb	1.945	530808	100	97.8	80	120	
Mn	55	2	72	99.598	ppb	1.751	253124	100	99.6	80	120	
Co	59	2	72	95.436	ppb	2.509	826964	100	95.4	80	120	
Ni	60	2	72	93.059	ppb	3.587	214164	100	93.1	80	120	
Cu	63	2	72	91.825	ppb	0.918	592108	100	91.8	80	120	
Zn	66	2	72	95.391	ppb	1.481	93985	100	95.4	80	120	
As	75	2	72	101.874	ppb	1.692	71769	100	101.9	80	120	
Se	78	1	72	95.449	ppb	2.492	52594	100	95.4	80	120	
Sr	88	2	45	194.035	ppb	0.582	625808	100	194.0	80	120	>+ \-20%
Zr	90	2	72	149.194	ppb	6.692	2220	100	149.2	80	120	>+ \-20%
Zr	90	1	72	133.166	ppb	5.218	6041	100	133.2	80	120	>+ \-20%
Nb	93	2	72	256.901	ppb	2.785	1497972	100	256.9	80	120	
Mo	95	2	115	2023.385	ppb	0.693	6673799	100	2023.4	80	120	>+ \-20%
Pd	105	2	115	92.783	ppb	1.353	430898	100	92.8	80	120	
Ag	107	2	115	96.117	ppb	3.794	923155	100	96.1	80	120	
Cd	111	2	115	96.818	ppb	2.682	135574	100	96.8	80	120	
Sn	120	2	115	97.659	ppb	2.460	417335	100	97.7	80	120	
Sb	121	2	115	103.300	ppb	0.424	380975	100	103.3	80	120	
Ba	137	2	115	98.493	ppb	0.323	116719	100	98.5	80	120	
W	182	2	165	95.135	ppb	2.059	645391	100	95.1	80	120	
Pt	195	2	165	92.194	ppb	2.180	409371	100	92.2	80	120	
Tl	205	2	165	93.883	ppb	2.415	1036045	100	93.9	80	120	
Pb	208	2	165	91.687	ppb	3.075	1377670	100	91.7	80	120	
Th	232	2	165	97.443	ppb	2.759	1505524	100	97.4	80	120	
U	238	2	165	95.996	ppb	4.401	1570359	100	96.0	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	654430	1.61	661091	98.99	60	125	
Sc (IS)	45	2	HMI He	3743418	0.76	3655967	102.39	60	125	
Sc (IS)	45	3	No Gas	96350207	0.50	100875794	95.51	60	120	
Ge Internal Standard	72	1	HMI H2	20796615	0.96	20569859	101.10	60	125	
Ge Internal Standard	72	2	HMI He	4359507	1.90	4348567	100.25	60	125	
In Internal standard	115	2	HMI He	13484672	1.47	13519075	99.75	60	125	
Ho-165	165	2	HMI He	32631605	1.12	30887613	105.65	60	125	

Sample Report

Sample Table

Sample Name RINSE
 Data File Name 147SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T08:18:18-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment
 ISTD Ref FileName 140CALB.d
 Sample QC Pass/Fail Pass
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	16.825	ppb	16.825	35.53	5489555	40000	
Be	9	1	6	0.086	ppb	0.086	89.32	33	2000	
B	11	1	6	-3.819	ppb	-3.819	-160.63	273	100	
Na	23	2	45	113.699	ppb	113.699	9.01	109795	400000	
Mg	24	2	45	68.141	ppb	68.141	6.04	20185	400000	
Al	27	2	45	76.600	ppb	76.600	3.83	6995	400000	
K	39	2	45	79.356	ppb	79.356	17.96	109203	400000	
Ca	44	2	45	53.795	ppb	53.795	6.42	1280	400000	
V	51	2	72	-0.131	ppb	-0.131	-104.66	11944	2000	
Cr	52	2	72	0.106	ppb	0.106	3.80	1930	5000	
Mn	55	2	72	0.088	ppb	0.088	38.49	527	10000	
Fe	57	2	72	88.526	ppb	88.526	6.95	11164	400000	
Co	59	2	72	0.026	ppb	0.026	218.24	5254	2000	
Ni	60	2	72	1.093	ppb	1.093	5.00	3364	5000	
Cu	63	2	72	0.152	ppb	0.152	18.70	3900	5000	
Zn	66	2	72	0.047	ppb	0.047	248.99	853	5000	
As	75	2	72	0.148	ppb	0.148	9.79	227	2000	
Se	78	1	72	0.069	ppb	0.069	52.14	53	2000	
Sr	88	2	45	0.093	ppb	0.093	59.23	503	2000	
Zr	90	2	72	-1.878	ppb	-1.878	-150.05	267	1000	
Zr	90	1	72	2.776	ppb	2.776	158.91	1452	1000	
Nb	93	2	72	0.095	ppb	0.095	78.69	3344	200	
Mo	95	2	115	4.247	ppb	4.247	3.71	14777	2000	
Pd	105	2	115	0.100	ppb	0.100	22.01	523	100	
Ag	107	2	115	0.069	ppb	0.069	12.06	780	100	
Cd	111	2	115	0.061	ppb	0.061	27.98	107	2000	
Sn	120	2	115	0.090	ppb	0.090	22.15	967	2000	
Sb	121	2	115	0.092	ppb	0.092	3.45	447	1000	
Ba	137	2	115	0.051	ppb	0.051	21.83	163	5000	
W	182	2	165	0.071	ppb	0.071	49.76	3260	100	
Pt	195	2	165	0.050	ppb	0.050	37.17	220	100	
Tl	205	2	165	0.109	ppb	0.109	16.61	1377	2000	
Pb	208	2	165	0.081	ppb	0.081	9.78	1867	5000	
Th	232	2	165	0.028	ppb	0.028	29.49	1743	2000	
U	238	2	165	0.094	ppb	0.094	13.63	1620	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	675392	0.97	661091	102.16	60	125	
Sc (IS)	45	2	HMI He	3723375	5.32	3655967	101.84	60	125	
Sc (IS)	45	3	No Gas	97486084	2.30	100875794	96.64	60	120	
Ge Internal Standard	72	1	HMI H2	20504670	3.10	20569859	99.68	60	125	
Ge Internal Standard	72	2	HMI He	4437353	0.84	4348567	102.04	60	125	
In Internal standard	115	2	HMI He	14072156	1.49	13519075	104.09	60	125	
Ho-165	165	2	HMI He	32306288	1.90	30887613	104.59	60	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name CCV-5699926
 Data File Name 148_CCV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T08:21:51-06:00
 Sample Type CCV
 Dilution 1
 Comment
 ISTD Ref File Name 140CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	97.935	ppb	10.688	111850	100	97.9	90	110	
Li	7	3	45	105.361	ppb	2.818	7018332	100	105.4	90	110	
Be	9	1	6	48.025	ppb	1.533	14833	50	96.0	90	110	
B	11	1	6	53.724	ppb	34.569	817	50	107.4	90	110	
Na	23	2	45	933.301	ppb	1.655	677935	1000	93.3	90	110	
Mg	24	2	45	946.486	ppb	2.979	276200	1000	94.6	90	110	
Al	27	2	45	963.855	ppb	1.110	85132	1000	96.4	90	110	
K	39	2	45	938.832	ppb	0.932	350673	1000	93.9	90	110	
Ca	44	2	45	932.847	ppb	1.948	20008	1000	93.3	90	110	
V	51	2	72	48.474	ppb	1.975	222362	50	96.9	90	110	
Cr	52	2	72	49.456	ppb	1.078	274145	50	98.9	90	110	
Mn	55	2	72	49.615	ppb	2.014	128548	50	99.2	90	110	
Fe	57	2	72	1013.925	ppb	2.781	110089	1000	101.4	90	110	
Co	59	2	72	49.394	ppb	2.824	438235	50	98.8	90	110	
Ni	60	2	72	49.590	ppb	2.378	116681	50	99.2	90	110	
Cu	63	2	72	49.401	ppb	0.989	325721	50	98.8	90	110	
Zn	66	2	72	48.583	ppb	0.996	49130	50	97.2	90	110	
As	75	2	72	50.137	ppb	0.217	36034	50	100.3	90	110	
Se	78	1	72	49.233	ppb	3.092	26911	50	98.5	90	110	
Sr	88	2	45	95.130	ppb	2.465	314977	100	95.1	90	110	
Zr	90	2	72	25.565	ppb	16.943	630	50	51.1	90	110	>+ \-10%
Zr	90	1	72	18.968	ppb	6.613	2022	50	37.9	90	110	>+ \-10%
Nb	93	2	72	92.452	ppb	1.313	550810	100	92.5	90	110	
Mo	95	2	115	48.300	ppb	3.125	167872	50	96.6	90	110	
Pd	105	2	115	49.848	ppb	3.026	243730	50	99.7	90	110	
Ag	107	2	115	48.222	ppb	2.112	487684	50	96.4	90	110	
Cd	111	2	115	48.868	ppb	0.731	72065	50	97.7	90	110	
Sn	120	2	115	48.700	ppb	1.554	219412	50	97.4	90	110	
Sb	121	2	115	47.869	ppb	1.834	185883	50	95.7	90	110	
Ba	137	2	115	47.976	ppb	1.375	59898	50	96.0	90	110	
W	182	2	165	48.085	ppb	1.645	327245	50	96.2	90	110	
Pt	195	2	165	49.089	ppb	2.819	217685	50	98.2	90	110	
Tl	205	2	165	49.572	ppb	4.604	546278	50	99.1	90	110	
Pb	208	2	165	49.123	ppb	5.475	737126	50	98.2	90	110	
Th	232	2	165	49.403	ppb	2.919	762951	50	98.8	90	110	
U	238	2	165	50.054	ppb	3.448	817762	50	100.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	677230	0.92	661091	102.44	60	125	
Sc (IS)	45	2	HMI He	3841858	0.70	3655967	105.08	60	125	
Sc (IS)	45	3	No Gas	97682093	1.10	100875794	96.83	60	120	
Ge Internal Standard	72	1	HMI H2	20629264	1.86	20569859	100.29	60	125	
Ge Internal Standard	72	2	HMI He	4439310	1.94	4348567	102.09	60	125	
In Internal standard	115	2	HMI He	14196129	1.59	13519075	105.01	60	125	
Ho-165	165	2	HMI He	32601382	2.95	30887613	105.55	60	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name CCB-5699924
 Data File Name 149_CCB.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T08:25:23-06:00
 Sample Type CCB
 Dilution 1
 Comment
 ISTD Ref File Name 140CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	1	45	-1.426	ppb	-635.6	86399	0.1	
Li	7	3	45	12.166	ppb	33.8	5439856	0.05	>RL
Be	9	1	6	0.016	ppb	61.1	12	0.5	
B	11	1	6	-4.306	ppb	-93.0	267	0.1	
Na	23	2	45	27.421	ppb	6.5	52143	25	>RL
Mg	24	2	45	2.509	ppb	23.3	1723	25	
Al	27	2	45	-0.530	ppb	-235.6	437	15	
K	39	2	45	2.430	ppb	436.1	88173	50	
Ca	44	2	45	2.508	ppb	63.0	223	25	
V	51	2	72	-0.216	ppb	-27.0	11684	1	
Cr	52	2	72	-0.001	ppb	-2297.0	1350	1	
Mn	55	2	72	0.054	ppb	61.8	443	0.5	
Fe	57	2	72	5.130	ppb	36.1	2267	25	
Co	59	2	72	0.032	ppb	102.0	5348	0.5	
Ni	60	2	72	0.074	ppb	27.4	993	1	
Cu	63	2	72	0.295	ppb	15.5	4884	1	
Zn	66	2	72	0.378	ppb	46.8	1193	5	
As	75	2	72	0.104	ppb	61.2	197	1	
Se	78	1	72	0.085	ppb	28.0	63	1	
Sr	88	2	45	0.021	ppb	90.7	277	1	
Zr	90	2	72	0.190	ppb	2638.0	297	1	
Zr	90	1	72	4.545	ppb	73.6	1515	1	>RL
Nb	93	2	72	3.793	ppb	4.6	25513	2	>RL
Mo	95	2	115	0.381	ppb	5.8	1440	0.5	
Pd	105	2	115	0.099	ppb	18.9	510	1	
Ag	107	2	115	0.035	ppb	25.5	430	1	
Cd	111	2	115	0.026	ppb	80.2	53	0.5	
Sn	120	2	115	0.151	ppb	28.9	1210	1	
Sb	121	2	115	0.123	ppb	21.2	553	1	
Ba	137	2	115	0.059	ppb	70.3	170	0.5	
W	182	2	165	0.115	ppb	5.4	3514	1	
Pt	195	2	165	0.034	ppb	11.2	150	1	
Tl	205	2	165	0.052	ppb	45.8	753	0.1	
Pb	208	2	165	0.060	ppb	1.4	1553	0.5	
Th	232	2	165	0.184	ppb	16.8	4074	1	
U	238	2	165	0.056	ppb	3.5	993	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	669132	0.99	661091	101.22	60	125	
Sc (IS)	45	2	HMI He	3702701	1.23	3655967	101.28	60	125	
Sc (IS)	45	3	No Gas	98007485	0.81	100875794	97.16	60	120	
Ge Internal Standard	72	1	HMI H2	20569813	3.14	20569859	100.00	60	125	
Ge Internal Standard	72	2	HMI He	4480482	1.49	4348567	103.03	60	125	
In Internal standard	115	2	HMI He	13790885	2.08	13519075	102.01	60	125	
Ho-165	165	2	HMI He	31985008	4.79	30887613	103.55	60	125	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name CCVL-5699928
 Data File Name 150LCCV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T08:28:55-06:00
 Sample Type LLCCV
 Dilution 1
 Comment
 ISTD Ref File Name 140CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	22.098	ppb	22.214	5529773	50	44.2	70	130	> +/-30%
Be	9	1	6	1.075	ppb	3.831	335	1	107.5	70	130	
Na	23	2	45	72.625	ppb	2.422	81130	50	145.3	70	130	> +/-30%
Mg	24	2	45	49.972	ppb	3.830	14836	50	99.9	70	130	
Al	27	2	45	50.045	ppb	7.833	4661	50	100.1	70	130	
K	39	2	45	100.869	ppb	10.115	113006	100	100.9	70	130	
Ca	44	2	45	38.768	ppb	20.347	953	50	77.5	70	130	
V	51	2	72	4.631	ppb	5.935	32904	5	92.6	70	130	
Cr	52	2	72	1.953	ppb	5.889	12244	2	97.7	70	130	
Mn	55	2	72	1.090	ppb	5.657	3154	1	109.0	70	130	
Fe	57	2	72	48.776	ppb	3.075	6988	50	97.6	70	130	
Co	59	2	72	0.927	ppb	6.758	13299	1	92.7	70	130	
Ni	60	2	72	1.527	ppb	8.141	4427	1.5	101.8	70	130	
Cu	63	2	72	1.928	ppb	6.408	15671	2	96.4	70	130	
Zn	66	2	72	9.848	ppb	4.265	10720	10	98.5	70	130	
As	75	2	72	4.555	ppb	1.532	3421	5	91.1	70	130	
Se	78	1	72	4.503	ppb	6.440	2478	5	90.1	70	130	
Sr	88	2	45	0.973	ppb	8.259	3270	1	97.3	70	130	
Zr	90	2	72	0.439	ppb	2118.185	300	0.5	87.8	70	130	
Zr	90	1	72	3.517	ppb	66.005	1488	0.5	703.5	70	130	> +/-30%
Nb	93	2	72	2.002	ppb	5.182	14817	2	100.1	70	130	
Mo	95	2	115	2.091	ppb	7.433	7325	2	104.6	70	130	
Pd	105	2	115	0.027	ppb	76.741	170	1	2.7	70	130	> +/-30%
Ag	107	2	115	4.656	ppb	3.162	46566	5	93.1	70	130	
Cd	111	2	115	0.932	ppb	4.487	1373	1	93.2	70	130	
Sn	120	2	115	9.111	ppb	1.674	41003	10	91.1	70	130	
Sb	121	2	115	1.756	ppb	10.143	6828	2	87.8	70	130	
Ba	137	2	115	0.991	ppb	6.237	1320	1	99.1	70	130	
W	182	2	165	4.706	ppb	1.895	34420	1	470.6	70	130	> +/-30%
Pt	195	2	165	0.007	ppb	64.813	30	1	0.7	70	130	> +/-30%
Tl	205	2	165	0.949	ppb	5.795	10604	1	94.9	70	130	
Pb	208	2	165	1.006	ppb	5.229	15687	1	100.6	70	130	
Th	232	2	165	1.743	ppb	4.940	28060	2	87.1	70	130	
U	238	2	165	1.001	ppb	5.265	16406	1	100.1	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	670146	0.24	661091	101.37	60	125	
Sc (IS)	45	2	HMI He	3656511	0.98	3655967	100.01	60	125	
Sc IS)	45	3	No Gas	96599850	1.23	100875794	95.76	60	120	
Ge Internal Standard	72	1	HMI H2	20653436	2.35	20569859	100.41	60	125	
Ge Internal Standard	72	2	HMI He	4487509	1.48	4348567	103.20	60	125	
In Internal standard	115	2	HMI He	14019095	1.98	13519075	103.70	60	125	
Ho-165	165	2	HMI He	32458546	2.36	30887613	105.09	60	125	

Blank Report

Sample Table

Sample Name mb 280-457081/1-a
 Data File Name 151_BLK.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T08:32:27-06:00
 Sample Type Blank
 Dilution 1
 Comment 457081 6020A DOD5
 ISTD Ref File Name 140CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-3.679	ppb	-161.1056622	81871	0.1
Li	7	3	45	1.274	ppb	259.3507844	5095843	0.05
Be	9	1	6	0.018	ppb	146.147707	12	0.5
Na	23	2	45	26.447	ppb	12.30772108	50555	25
Mg	24	2	45	2.164	ppb	20.87466525	1600	25
Al	27	2	45	6.555	ppb	38.63897012	1013	15
K	39	2	45	-16.161	ppb	-114.4894579	81652	50
Ca	44	2	45	9.823	ppb	12.2037491	367	25
V	51	2	72	-1.402	ppb	-4.663465066	6408	1
Cr	52	2	72	0.224	ppb	19.0416465	2560	1
Mn	55	2	72	0.066	ppb	94.4121168	467	0.5
Fe	57	2	72	7.916	ppb	5.543610981	2530	25
Co	59	2	72	0.035	ppb	93.80055889	5298	0.5
Ni	60	2	72	0.007	ppb	244.2688561	823	1
Cu	63	2	72	-0.042	ppb	-94.91861972	2624	1
Zn	66	2	72	0.214	ppb	27.23835072	1013	5
As	75	2	72	0.026	ppb	66.76363764	139	1
Se	78	1	72	0.040	ppb	135.8318662	36	1
Sr	88	2	45	0.010	ppb	105.3485826	237	1
Zr	90	2	72	4.337	ppb	48.65304328	347	1
Zr	90	1	72	7.901	ppb	26.77496382	1562	1
Nb	93	2	72	2.214	ppb	9.814130865	15818	2
Mo	95	2	115	0.211	ppb	16.12309751	873	0.5
Pd	105	2	115	0.021	ppb	53.99769387	143	1
Ag	107	2	115	0.008	ppb	39.69604913	167	1
Cd	111	2	115	0.007	ppb	119.911145	27	0.5
Sn	120	2	115	0.114	ppb	14.25027206	1057	1
Sb	121	2	115	0.050	ppb	13.30626569	280	1
Ba	137	2	115	0.114	ppb	71.6959554	237	0.5
W	182	2	165	0.036	ppb	39.79702788	3054	1
Pt	195	2	165	0.007	ppb	89.37918678	30	1
Tl	205	2	165	0.011	ppb	17.84361201	320	0.1
Pb	208	2	165	0.040	ppb	21.91076498	1273	0.5
Th	232	2	165	0.511	ppb	11.98369139	9193	1
U	238	2	165	0.014	ppb	20.17476254	333	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	631427	1.22	661091	95.51	60	125	
Sc (IS)	45	2	HMI He	3638817	4.45	3655967	99.53	60	125	
Sc IS)	45	3	No Gas	95080138	0.92	100875794	94.25	60	120	
Ge Internal Standard	72	1	HMI H2	19672363	1.50	20569859	95.64	60	125	
Ge Internal Standard	72	2	HMI He	4412529	1.39	4348567	101.47	60	125	
In Internal standard	115	2	HMI He	13890435	3.12	13519075	102.75	60	125	
Ho-165	165	2	HMI He	32631899	2.71	30887613	105.65	60	125	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name lcs 280-457081/2-a
 Data File Name 152_LCS.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T08:36:00-06:00
 Sample Type LCS
 Dilution 1
 Analyst Denver Metals
 Comment 457081 6020A DOD5
 ISTD Ref File Name 140CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	74.322	74.322	ppb	13.950	6164666	400	18.6	80	120	> +/-20%
Be	9	1	6	38.789	38.789	ppb	1.239	11037	40	97.0	80	120	
Na	23	2	45	21.558	21.558	ppb	15.502	46611	40	53.9	80	120	> +/-20%
Mg	24	2	45	1.576	1.576	ppb	20.494	1413	40	3.9	80	120	> +/-20%
Al	27	2	45	392.961	392.961	ppb	2.094	32597	40	982.4	80	120	> +/-20%
K	39	2	45	-24.698	-24.698	ppb	-43.045	78200	40	-61.7	80	120	> +/-20%
Ca	44	2	45	143.301	143.301	ppb	5.287	3004	40	358.3	80	120	> +/-20%
V	51	2	72	35.826	35.826	ppb	3.656	166217	40	89.6	80	120	
Cr	52	2	72	39.051	39.051	ppb	4.756	214979	40	97.6	80	120	
Mn	55	2	72	39.147	39.147	ppb	0.957	100734	40	97.9	80	120	
Fe	57	2	72	390.135	390.135	ppb	3.140	43074	40	975.3	80	120	> +/-20%
Co	59	2	72	38.738	38.738	ppb	5.715	341935	40	96.8	80	120	
Ni	60	2	72	39.049	39.049	ppb	5.856	91233	40	97.6	80	120	
Cu	63	2	72	37.648	37.648	ppb	2.422	246972	40	94.1	80	120	
Zn	66	2	72	36.677	36.677	ppb	4.557	36983	40	91.7	80	120	
As	75	2	72	35.694	35.694	ppb	2.787	25482	40	89.2	80	120	
Se	78	1	72	36.350	36.350	ppb	1.957	19296	40	90.9	80	120	
Sr	88	2	45	40.439	40.439	ppb	4.221	124791	40	101.1	80	120	
Nb	93	2	72	1.428	1.428	ppb	1.124	11167	40	3.6	80	120	> +/-20%
Mo	95	2	115	38.460	38.460	ppb	1.871	127959	40	96.1	80	120	
Pd	105	2	115	0.024	0.024	ppb	50.791	150	40	0.1	80	120	> +/-20%
Ag	107	2	115	38.999	38.999	ppb	1.334	377567	40	97.5	80	120	
Cd	111	2	115	38.621	38.621	ppb	4.060	54511	40	96.6	80	120	
Sn	120	2	115	38.834	38.834	ppb	0.467	167568	40	97.1	80	120	
Sb	121	2	115	38.242	38.242	ppb	0.498	142154	40	95.6	80	120	
Ba	137	2	115	39.510	39.510	ppb	0.857	47232	40	98.8	80	120	
W	182	2	165	32.581	32.581	ppb	4.056	217414	40	81.5	80	120	
Pt	195	2	165	0.002	0.002	ppb	86.839	7	40	0.0	80	120	> +/-20%
Tl	205	2	165	39.544	39.544	ppb	7.187	425366	40	98.9	80	120	
Pb	208	2	165	36.910	36.910	ppb	6.529	540985	40	92.3	80	120	
Th	232	2	165	38.748	38.748	ppb	6.836	584254	40	96.9	80	120	
U	238	2	165	41.068	41.068	ppb	8.333	654485	40	102.7	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	623892	0.21	661091	94.37	60	125	
Sc (IS)	45	2	HMI He	3578759	2.51	3655967	97.89	60	125	
Sc IS)	45	3	No Gas	92840746	0.70	100875794	92.03	60	120	
Ge Internal Standard	72	1	HMI H2	20024249	0.34	20569859	97.35	60	125	
Ge Internal Standard	72	2	HMI He	4405981	2.87	4348567	101.32	60	125	
In Internal standard	115	2	HMI He	13586071	0.24	13519075	100.50	60	125	
Ho-165	165	2	HMI He	31871217	5.10	30887613	103.18	60	125	

Sample Report

Sample Table

Sample Name Icsd 280-457081/3-a
 Data File Name 153SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T08:39:34-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457081 6020A DOD5
 ISTD Ref FileName 140CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	74.952	ppb	74.952	10.20	6204116	40000	
Be	9	1	6	37.553	ppb	37.553	3.07	10600	2000	
B	11	1	6	1180.551	ppb	1180.551	5.48	10456	100	>LDR
Na	23	2	45	24.032	ppb	24.032	3.95	47784	400000	
Mg	24	2	45	2.971	ppb	2.971	28.46	1773	400000	
Al	27	2	45	411.881	ppb	411.881	3.21	33839	400000	
K	39	2	45	-16.159	ppb	-16.159	-10.70	79700	400000	
Ca	44	2	45	152.845	ppb	152.845	5.24	3164	400000	
V	51	2	72	35.976	ppb	35.976	3.45	165618	2000	
Cr	52	2	72	38.359	ppb	38.359	2.93	209665	5000	
Mn	55	2	72	39.189	ppb	39.189	0.84	100073	10000	
Fe	57	2	72	383.725	ppb	383.725	2.63	42071	400000	
Co	59	2	72	38.910	ppb	38.910	0.35	341138	2000	
Ni	60	2	72	39.485	ppb	39.485	0.69	91628	5000	
Cu	63	2	72	38.806	ppb	38.806	2.06	252595	5000	
Zn	66	2	72	37.325	ppb	37.325	3.73	37351	5000	
As	75	2	72	35.886	ppb	35.886	4.08	25424	2000	
Se	78	1	72	35.082	ppb	35.082	2.76	18700	2000	
Sr	88	2	45	40.500	ppb	40.500	3.46	123857	2000	
Zr	90	2	72	640.366	ppb	640.366	4.49	8609	1000	
Zr	90	1	72	560.396	ppb	560.396	7.22	20303	1000	
Nb	93	2	72	0.947	ppb	0.947	14.84	8282	200	
Mo	95	2	115	37.676	ppb	37.676	0.46	127775	2000	
Pd	105	2	115	0.025	ppb	0.025	50.34	160	100	
Ag	107	2	115	38.001	ppb	38.001	1.29	375014	100	
Cd	111	2	115	37.903	ppb	37.903	1.94	54527	2000	
Sn	120	2	115	37.775	ppb	37.775	0.70	166163	2000	
Sb	121	2	115	37.686	ppb	37.686	0.47	142793	1000	
Ba	137	2	115	37.660	ppb	37.660	0.75	45895	5000	
W	182	2	165	33.170	ppb	33.170	0.76	219700	100	
Pt	195	2	165	0.003	ppb	0.003	114.81	13	100	
Tl	205	2	165	37.726	ppb	37.726	3.45	403386	2000	
Pb	208	2	165	36.334	ppb	36.334	2.03	529190	5000	
Th	232	2	165	39.558	ppb	39.558	3.94	592626	2000	
U	238	2	165	41.474	ppb	41.474	4.62	657053	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	618804	0.72	661091	93.60	60	125	
Sc (IS)	45	2	HMI He	3545607	0.77	3655967	96.98	60	125	
Sc (IS)	45	3	No Gas	93288428	1.66	100875794	92.48	60	120	
Ge Internal Standard	72	1	HMI H2	20113426	1.92	20569859	97.78	60	125	
Ge Internal Standard	72	2	HMI He	4372004	1.74	4348567	100.54	60	125	
In Internal standard	115	2	HMI He	13848505	0.87	13519075	102.44	60	125	
Ho-165	165	2	HMI He	31600043	0.72	30887613	102.31	60	125	

Sample Report

Sample Table

Sample Name 280-123159-a-3-b
 Data File Name 154SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T08:43:06-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457081 6020A DOD5
 ISTD Ref FileName 140CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	52.997	ppb	52.997	16.42	5728368	40000	
Be	9	1	6	0.033	ppb	0.033	54.08	15	2000	
B	11	1	6	956.164	ppb	956.164	6.40	8222	100	>LDR
Na	23	2	45	28596.190	ppb	28596.190	3.97	17643900	400000	
Mg	24	2	45	14892.070	ppb	14892.070	5.73	3871820	400000	
Al	27	2	45	43.356	ppb	43.356	8.81	3850	400000	
K	39	2	45	1873.090	ppb	1873.090	3.31	544981	400000	
Ca	44	2	45	13136.615	ppb	13136.615	2.25	249991	400000	
V	51	2	72	-1.412	ppb	-1.412	-5.22	6088	2000	
Cr	52	2	72	1.350	ppb	1.350	6.70	8359	5000	
Mn	55	2	72	25.655	ppb	25.655	2.54	63372	10000	
Fe	57	2	72	98.162	ppb	98.162	0.75	11601	400000	
Co	59	2	72	0.361	ppb	0.361	6.10	7795	2000	
Ni	60	2	72	1.614	ppb	1.614	10.63	4361	5000	
Cu	63	2	72	0.265	ppb	0.265	23.51	4417	5000	
Zn	66	2	72	1.883	ppb	1.883	18.28	2547	5000	
As	75	2	72	0.328	ppb	0.328	14.07	339	2000	
Se	78	1	72	1.988	ppb	1.988	6.44	1063	2000	
Sr	88	2	45	181.374	ppb	181.374	2.49	537166	2000	
Zr	90	2	72	66.584	ppb	66.584	10.85	1113	1000	
Zr	90	1	72	61.309	ppb	61.309	9.02	3364	1000	
Nb	93	2	72	0.558	ppb	0.558	5.49	5794	200	
Mo	95	2	115	0.500	ppb	0.500	8.49	1807	2000	
Pd	105	2	115	0.005	ppb	0.005	61.34	63	100	
Ag	107	2	115	0.032	ppb	0.032	29.31	393	100	
Cd	111	2	115	0.112	ppb	0.112	18.02	173	2000	
Sn	120	2	115	0.250	ppb	0.250	13.44	1613	2000	
Sb	121	2	115	0.646	ppb	0.646	1.30	2480	1000	
Ba	137	2	115	53.752	ppb	53.752	4.32	63923	5000	
W	182	2	165	0.087	ppb	0.087	47.99	3337	100	
Pt	195	2	165	0.002	ppb	0.002	173.21	10	100	
Tl	205	2	165	0.064	ppb	0.064	13.60	887	2000	
Pb	208	2	165	0.114	ppb	0.114	4.14	2353	5000	
Th	232	2	165	0.581	ppb	0.581	3.76	10117	2000	
U	238	2	165	0.157	ppb	0.157	4.09	2624	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	596762	1.13	661091	90.27	60	125	
Sc (IS)	45	2	HMI He	3438255	2.66	3655967	94.05	60	125	
Sc (IS)	45	3	No Gas	91414914	0.88	100875794	90.62	60	120	
Ge Internal Standard	72	1	HMI H2	19868530	2.65	20569859	96.59	60	125	
Ge Internal Standard	72	2	HMI He	4222723	0.81	4348567	97.11	60	125	
In Internal standard	115	2	HMI He	13527717	1.74	13519075	100.06	60	125	
Ho-165	165	2	HMI He	32130632	5.83	30887613	104.02	60	125	

Sample Report

Sample Table

Sample Name 280-123159-a-10-b
 Data File Name 155SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T08:46:37-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457081 6020A DOD5
 ISTD Ref FileName 140CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	21.843	ppb	21.843	17.11	5342910	40000	
Be	9	1	6	0.039	ppb	0.039	150.96	17	2000	
B	11	1	6	520.842	ppb	520.842	3.84	4624	100	>LDR
Na	23	2	45	21288.414	ppb	21288.414	3.15	13344026	400000	
Mg	24	2	45	7067.702	ppb	7067.702	0.91	1866778	400000	
Al	27	2	45	27.963	ppb	27.963	23.91	2684	400000	
K	39	2	45	1265.988	ppb	1265.988	0.84	400656	400000	
Ca	44	2	45	5454.793	ppb	5454.793	2.07	105464	400000	
V	51	2	72	-1.341	ppb	-1.341	-2.53	6455	2000	
Cr	52	2	72	15.160	ppb	15.160	2.56	81707	5000	
Mn	55	2	72	5.245	ppb	5.245	4.70	13329	10000	
Fe	57	2	72	191.672	ppb	191.672	1.60	21340	400000	
Co	59	2	72	0.141	ppb	0.141	16.90	6018	2000	
Ni	60	2	72	11.632	ppb	11.632	4.04	26904	5000	
Cu	63	2	72	0.396	ppb	0.396	20.68	5284	5000	
Zn	66	2	72	3.466	ppb	3.466	5.45	4091	5000	
As	75	2	72	0.257	ppb	0.257	3.60	294	2000	
Se	78	1	72	3.960	ppb	3.960	6.46	2040	2000	
Sr	88	2	45	77.887	ppb	77.887	1.98	234211	2000	
Zr	90	2	72	24.899	ppb	24.899	31.59	597	1000	
Zr	90	1	72	33.780	ppb	33.780	25.89	2373	1000	
Nb	93	2	72	0.309	ppb	0.309	23.03	4441	200	
Mo	95	2	115	0.412	ppb	0.412	10.05	1500	2000	
Pd	105	2	115	0.005	ppb	0.005	198.79	63	100	
Ag	107	2	115	0.004	ppb	0.004	162.72	123	100	
Cd	111	2	115	0.151	ppb	0.151	35.83	227	2000	
Sn	120	2	115	0.118	ppb	0.118	21.28	1040	2000	
Sb	121	2	115	0.218	ppb	0.218	16.43	887	1000	
Ba	137	2	115	14.917	ppb	14.917	2.45	17627	5000	
W	182	2	165	0.039	ppb	0.039	100.06	2944	100	
Pt	195	2	165	0.005	ppb	0.005	100.19	20	100	
Tl	205	2	165	0.045	ppb	0.045	21.08	663	2000	
Pb	208	2	165	0.075	ppb	0.075	12.37	1730	5000	
Th	232	2	165	0.136	ppb	0.136	25.13	3280	2000	
U	238	2	165	0.071	ppb	0.071	9.04	1207	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	599699	1.29	661091	90.71	60	125	
Sc (IS)	45	2	HMI He	3488557	0.31	3655967	95.42	60	125	
Sc (IS)	45	3	No Gas	93405008	0.94	100875794	92.59	60	120	
Ge Internal Standard	72	1	HMI H2	19296318	0.99	20569859	93.81	60	125	
Ge Internal Standard	72	2	HMI He	4268688	0.42	4348567	98.16	60	125	
In Internal standard	115	2	HMI He	13385367	0.70	13519075	99.01	60	125	
Ho-165	165	2	HMI He	31243672	0.86	30887613	101.15	60	125	

Sample Report

Sample Table

Sample Name 280-123159-a-20-d
 Data File Name 156SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T08:50:10-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457081 6020A DOD5
 ISTD Ref FileName 140CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	11.694	ppb	11.694	22.69	5077584	40000	
Be	9	1	6	0.071	ppb	0.071	70.71	25	2000	
B	11	1	6	578.733	ppb	578.733	0.99	5034	100	>LDR
Na	23	2	45	36802.671	ppb	36802.671	1.41	23323730	400000	
Mg	24	2	45	25000.094	ppb	25000.094	2.20	6679581	400000	
Al	27	2	45	33.717	ppb	33.717	8.46	3184	400000	
K	39	2	45	724.564	ppb	724.564	3.78	267721	400000	
Ca	44	2	45	26997.623	ppb	26997.623	1.99	527552	400000	
V	51	2	72	-1.434	ppb	-1.434	-5.36	5981	2000	
Cr	52	2	72	1.142	ppb	1.142	12.67	7238	5000	
Mn	55	2	72	11.385	ppb	11.385	4.46	28170	10000	
Fe	57	2	72	83.451	ppb	83.451	5.47	10063	400000	
Co	59	2	72	0.126	ppb	0.126	33.89	5804	2000	
Ni	60	2	72	5.853	ppb	5.853	7.03	13712	5000	
Cu	63	2	72	1.227	ppb	1.227	6.11	10360	5000	
Zn	66	2	72	5.779	ppb	5.779	8.35	6211	5000	
As	75	2	72	0.167	ppb	0.167	26.24	228	2000	
Se	78	1	72	0.467	ppb	0.467	12.38	248	2000	
Sr	88	2	45	160.799	ppb	160.799	1.51	489162	2000	
Zr	90	2	72	31.966	ppb	31.966	13.82	677	1000	
Zr	90	1	72	40.875	ppb	40.875	12.09	2543	1000	
Nb	93	2	72	0.193	ppb	0.193	50.45	3730	200	
Mo	95	2	115	0.115	ppb	0.115	44.63	530	2000	
Pd	105	2	115	0.021	ppb	0.021	24.97	137	100	
Ag	107	2	115	0.002	ppb	0.002	159.39	107	100	
Cd	111	2	115	0.146	ppb	0.146	20.98	220	2000	
Sn	120	2	115	0.186	ppb	0.186	5.56	1330	2000	
Sb	121	2	115	0.120	ppb	0.120	25.95	530	1000	
Ba	137	2	115	75.382	ppb	75.382	2.98	88971	5000	
W	182	2	165	-0.012	ppb	-0.012	-340.66	2694	100	
Pt	195	2	165	0.004	ppb	0.004	91.04	17	100	
Tl	205	2	165	0.018	ppb	0.018	98.12	390	2000	
Pb	208	2	165	0.185	ppb	0.185	5.82	3407	5000	
Th	232	2	165	0.055	ppb	0.055	9.55	2147	2000	
U	238	2	165	0.058	ppb	0.058	5.24	1030	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	590876	1.02	661091	89.38	60	125	
Sc (IS)	45	2	HMI He	3531137	1.94	3655967	96.59	60	125	
Sc (IS)	45	3	No Gas	91615597	0.84	100875794	90.82	60	120	
Ge Internal Standard	72	1	HMI H2	18843562	0.81	20569859	91.61	60	125	
Ge Internal Standard	72	2	HMI He	4206266	1.86	4348567	96.73	60	125	
In Internal standard	115	2	HMI He	13426381	0.74	13519075	99.31	60	125	
Ho-165	165	2	HMI He	32213351	1.44	30887613	104.29	60	125	

Sample Report

Sample Table

Sample Name 280-123159-a-20-dSD@5
 Data File Name 157SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T08:53:43-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457081 6020A DOD5
 ISTD Ref FileName 140CALB.d
 Sample QC Pass/Fail Pass
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	9.469	ppb	9.469	39.08	5122548	40000	
Be	9	1	6	0.001	ppb	0.001	2445.52	7	2000	
B	11	1	6	140.460	ppb	140.460	11.16	1503	100	
Na	23	2	45	7838.013	ppb	7838.013	1.56	4941481	400000	
Mg	24	2	45	5358.262	ppb	5358.262	2.07	1418004	400000	
Al	27	2	45	4.744	ppb	4.744	22.00	833	400000	
K	39	2	45	140.076	ppb	140.076	7.73	117864	400000	
Ca	44	2	45	5598.547	ppb	5598.547	2.01	108409	400000	
V	51	2	72	-0.613	ppb	-0.613	-14.60	9446	2000	
Cr	52	2	72	0.267	ppb	0.267	22.35	2697	5000	
Mn	55	2	72	2.290	ppb	2.290	8.17	5958	10000	
Fe	57	2	72	14.584	ppb	14.584	38.05	3120	400000	
Co	59	2	72	0.057	ppb	0.057	62.44	5294	2000	
Ni	60	2	72	1.381	ppb	1.381	2.01	3867	5000	
Cu	63	2	72	0.684	ppb	0.684	8.56	7072	5000	
Zn	66	2	72	1.684	ppb	1.684	8.45	2377	5000	
As	75	2	72	0.070	ppb	0.070	29.71	165	2000	
Se	78	1	72	0.105	ppb	0.105	19.82	72	2000	
Sr	88	2	45	33.242	ppb	33.242	2.32	100232	2000	
Zr	90	2	72	3.474	ppb	3.474	114.99	323	1000	
Zr	90	1	72	0.682	ppb	0.682	559.55	1358	1000	
Nb	93	2	72	-0.084	ppb	-0.084	-67.86	2194	200	
Mo	95	2	115	0.048	ppb	0.048	28.06	310	2000	
Pd	105	2	115	0.028	ppb	0.028	42.21	170	100	
Ag	107	2	115	0.008	ppb	0.008	55.40	157	100	
Cd	111	2	115	0.038	ppb	0.038	49.24	70	2000	
Sn	120	2	115	0.058	ppb	0.058	39.20	783	2000	
Sb	121	2	115	0.050	ppb	0.050	49.63	273	1000	
Ba	137	2	115	15.306	ppb	15.306	1.16	18114	5000	
W	182	2	165	-0.057	ppb	-0.057	-93.69	2330	100	
Pt	195	2	165	0.001	ppb	0.001	173.21	7	100	
Tl	205	2	165	0.013	ppb	0.013	14.09	320	2000	
Pb	208	2	165	0.044	ppb	0.044	23.91	1297	5000	
Th	232	2	165	-0.047	ppb	-0.047	-14.21	580	2000	
U	238	2	165	0.023	ppb	0.023	37.17	457	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	623003	1.43	661091	94.24	60	125	
Sc (IS)	45	2	HMI He	3494531	1.40	3655967	95.58	60	125	
Sc (IS)	45	3	No Gas	93088727	1.50	100875794	92.28	60	120	
Ge Internal Standard	72	1	HMI H2	20200478	1.96	20569859	98.20	60	125	
Ge Internal Standard	72	2	HMI He	4252862	0.42	4348567	97.80	60	125	
In Internal standard	115	2	HMI He	13405930	0.64	13519075	99.16	60	125	
Ho-165	165	2	HMI He	31454298	4.37	30887613	101.83	60	125	

Sample Report

Sample Table

Sample Name 280-123159-a-20-e.ms
 Data File Name 158SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T08:57:14-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457081 6020A DOD5
 ISTD Ref FileName 140CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	78.738	ppb	78.738	14.58	6195051	40000	
Be	9	1	6	39.464	ppb	39.464	1.47	10518	2000	
B	11	1	6	1668.981	ppb	1668.981	1.20	13852	100	>LDR
Na	23	2	45	35284.019	ppb	35284.019	1.55	22045172	400000	
Mg	24	2	45	23773.625	ppb	23773.625	3.96	6261169	400000	
Al	27	2	45	405.858	ppb	405.858	2.51	32740	400000	
K	39	2	45	709.840	ppb	709.840	4.24	260227	400000	
Ca	44	2	45	26674.350	ppb	26674.350	0.63	513934	400000	
V	51	2	72	36.278	ppb	36.278	3.77	158674	2000	
Cr	52	2	72	38.721	ppb	38.721	2.74	201190	5000	
Mn	55	2	72	48.867	ppb	48.867	3.44	118522	10000	
Fe	57	2	72	465.802	ppb	465.802	6.30	48194	400000	
Co	59	2	72	38.901	ppb	38.901	2.44	324171	2000	
Ni	60	2	72	44.102	ppb	44.102	3.34	97171	5000	
Cu	63	2	72	37.485	ppb	37.485	1.66	232056	5000	
Zn	66	2	72	39.267	ppb	39.267	1.18	37324	5000	
As	75	2	72	36.713	ppb	36.713	0.78	24734	2000	
Se	78	1	72	35.671	ppb	35.671	0.72	17836	2000	
Sr	88	2	45	198.449	ppb	198.449	3.25	594980	2000	
Zr	90	2	72	629.720	ppb	629.720	4.12	8055	1000	
Zr	90	1	72	550.302	ppb	550.302	2.62	18729	1000	
Nb	93	2	72	0.061	ppb	0.061	76.14	2944	200	
Mo	95	2	115	37.752	ppb	37.752	3.53	121680	2000	
Pd	105	2	115	0.010	ppb	0.010	82.08	87	100	
Ag	107	2	115	37.929	ppb	37.929	4.09	355675	100	
Cd	111	2	115	37.097	ppb	37.097	1.95	50735	2000	
Sn	120	2	115	36.487	ppb	36.487	2.43	152583	2000	
Sb	121	2	115	38.203	ppb	38.203	4.17	137602	1000	
Ba	137	2	115	112.267	ppb	112.267	3.71	129847	5000	
W	182	2	165	33.095	ppb	33.095	2.04	209878	100	
Pt	195	2	165	0.002	ppb	0.002	86.61	7	100	
Tl	205	2	165	36.781	ppb	36.781	4.09	376480	2000	
Pb	208	2	165	34.004	ppb	34.004	4.47	474139	5000	
Th	232	2	165	37.962	ppb	37.962	3.07	544589	2000	
U	238	2	165	39.903	ppb	39.903	2.78	605402	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	584364	0.80	661091	88.39	60	125	
Sc (IS)	45	2	HMI He	3481107	2.14	3655967	95.22	60	125	
Sc (IS)	45	3	No Gas	92244589	1.82	100875794	91.44	60	120	
Ge Internal Standard	72	1	HMI H2	18861378	1.86	20569859	91.69	60	125	
Ge Internal Standard	72	2	HMI He	4156311	1.78	4348567	95.58	60	125	
In Internal standard	115	2	HMI He	13169963	3.08	13519075	97.42	60	125	
Ho-165	165	2	HMI He	30256656	0.88	30887613	97.96	60	125	

Sample Report

Sample Table

Sample Name 280-123159-a-20-f msd
 Data File Name 159SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T09:00:46-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457081 6020A DOD5
 ISTD Ref FileName 140CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	85.872	ppb	85.872	16.09	6198069	40000	
Be	9	1	6	40.231	ppb	40.231	2.19	10780	2000	
B	11	1	6	1777.780	ppb	1777.780	0.75	14816	100	>LDR
Na	23	2	45	38134.224	ppb	38134.224	1.79	23734954	400000	
Mg	24	2	45	25875.849	ppb	25875.849	3.45	6788141	400000	
Al	27	2	45	434.801	ppb	434.801	4.56	34891	400000	
K	39	2	45	759.110	ppb	759.110	2.72	271598	400000	
Ca	44	2	45	28240.998	ppb	28240.998	1.67	542025	400000	
V	51	2	72	36.797	ppb	36.797	5.75	164373	2000	
Cr	52	2	72	39.475	ppb	39.475	4.05	209726	5000	
Mn	55	2	72	50.093	ppb	50.093	4.95	124225	10000	
Fe	57	2	72	483.782	ppb	483.782	5.16	51135	400000	
Co	59	2	72	38.176	ppb	38.176	3.31	325475	2000	
Ni	60	2	72	43.213	ppb	43.213	4.82	97375	5000	
Cu	63	2	72	37.793	ppb	37.793	3.96	239214	5000	
Zn	66	2	72	39.175	ppb	39.175	1.64	38096	5000	
As	75	2	72	36.455	ppb	36.455	3.54	25113	2000	
Se	78	1	72	37.333	ppb	37.333	2.92	19035	2000	
Sr	88	2	45	205.467	ppb	205.467	4.82	613397	2000	
Zr	90	2	72	4303.937	ppb	4303.937	4.34	54667	1000	
Zr	90	1	72	3809.191	ppb	3809.191	1.26	124713	1000	
Nb	93	2	72	-0.013	ppb	-0.013	-575.84	2590	200	
Mo	95	2	115	38.714	ppb	38.714	1.81	125245	2000	
Pd	105	2	115	0.008	ppb	0.008	69.39	77	100	
Ag	107	2	115	36.391	ppb	36.391	2.13	342635	100	
Cd	111	2	115	38.335	ppb	38.335	2.44	52608	2000	
Sn	120	2	115	39.517	ppb	39.517	3.36	165754	2000	
Sb	121	2	115	39.706	ppb	39.706	3.12	143527	1000	
Ba	137	2	115	118.551	ppb	118.551	1.66	137644	5000	
W	182	2	165	33.343	ppb	33.343	0.31	217041	100	
Pt	195	2	165	0.002	ppb	0.002	99.21	10	100	
Tl	205	2	165	37.281	ppb	37.281	3.33	391578	2000	
Pb	208	2	165	34.173	ppb	34.173	1.48	489274	5000	
Th	232	2	165	38.676	ppb	38.676	2.22	569520	2000	
U	238	2	165	41.186	ppb	41.186	2.30	641326	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	587477	0.71	661091	88.86	60	125	
Sc (IS)	45	2	HMI He	3468757	3.34	3655967	94.88	60	125	
Sc (IS)	45	3	No Gas	90587839	1.04	100875794	89.80	60	120	
Ge Internal Standard	72	1	HMI H2	19235313	0.99	20569859	93.51	60	125	
Ge Internal Standard	72	2	HMI He	4253248	3.63	4348567	97.81	60	125	
In Internal standard	115	2	HMI He	13214006	2.18	13519075	97.74	60	125	
Ho-165	165	2	HMI He	31056255	1.53	30887613	100.55	60	125	

Sample Report

Sample Table

Sample Name 280-123159-a-20-d PDS
 Data File Name 160SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T09:04:18-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457081 6020A DOD5
 ISTD Ref FileName 140CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	18.086	ppb	18.086	49.98	5119999	40000	
Be	9	1	6	224.197	ppb	224.197	1.90	59308	2000	
B	11	1	6	580.717	ppb	580.717	8.58	4957	100	>LDR
Na	23	2	45	35863.462	ppb	35863.462	4.15	22520895	400000	
Mg	24	2	45	24169.823	ppb	24169.823	5.77	6396548	400000	
Al	27	2	45	2027.742	ppb	2027.742	4.53	162554	400000	
K	39	2	45	746.000	ppb	746.000	6.23	270705	400000	
Ca	44	2	45	26447.341	ppb	26447.341	1.27	512373	400000	
V	51	2	72	215.705	ppb	215.705	1.53	898352	2000	
Cr	52	2	72	219.031	ppb	219.031	2.29	1148563	5000	
Mn	55	2	72	233.224	ppb	233.224	2.24	572914	10000	
Fe	57	2	72	2144.729	ppb	2144.729	1.96	219393	400000	
Co	59	2	72	225.703	ppb	225.703	3.68	1884477	2000	
Ni	60	2	72	218.884	ppb	218.884	2.40	486196	5000	
Cu	63	2	72	213.288	ppb	213.288	2.11	1326285	5000	
Zn	66	2	72	220.890	ppb	220.890	1.55	209418	5000	
As	75	2	72	208.521	ppb	208.521	2.38	141919	2000	
Se	78	1	72	199.514	ppb	199.514	1.64	101508	2000	
Sr	88	2	45	163.139	ppb	163.139	4.19	491680	2000	
Zr	90	2	72	113394.872	ppb	113394.872	4.77	1421060	1000	>LDR
Zr	90	1	72	99791.113	ppb	99791.113	2.20	3230035	1000	>LDR
Nb	93	2	72	4.410	ppb	4.410	2.97	27479	200	
Mo	95	2	115	197.365	ppb	197.365	0.81	645527	2000	
Pd	105	2	115	0.096	ppb	0.096	15.93	480	100	
Ag	107	2	115	41.761	ppb	41.761	1.33	397761	100	
Cd	111	2	115	213.861	ppb	213.861	1.10	296900	2000	
Sn	120	2	115	201.797	ppb	201.797	1.91	854333	2000	
Sb	121	2	115	206.784	ppb	206.784	2.90	755769	1000	
Ba	137	2	115	294.972	ppb	294.972	1.17	346313	5000	
W	182	2	165	213.763	ppb	213.763	4.34	1343896	100	
Pt	195	2	165	0.124	ppb	0.124	11.14	510	100	
Tl	205	2	165	229.976	ppb	229.976	3.63	2357808	2000	
Pb	208	2	165	209.206	ppb	209.206	4.51	2919373	5000	
Th	232	2	165	1.077	ppb	1.077	2.42	16673	2000	
U	238	2	165	230.489	ppb	230.489	4.61	3502044	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	580387	1.99	661091	87.79	60	125	
Sc (IS)	45	2	HMI He	3500921	3.16	3655967	95.76	60	125	
Sc (IS)	45	3	No Gas	90567180	1.30	100875794	89.78	60	120	
Ge Internal Standard	72	1	HMI H2	19207234	1.45	20569859	93.38	60	125	
Ge Internal Standard	72	2	HMI He	4215850	1.99	4348567	96.95	60	125	
In Internal standard	115	2	HMI He	13368601	2.03	13519075	98.89	60	125	
Ho-165	165	2	HMI He	30313169	1.07	30887613	98.14	60	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name CCV-5699926
 Data File Name 161_CCV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T09:07:47-06:00
 Sample Type CCV
 Dilution 1
 Comment
 ISTD Ref File Name 140CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	90.197	ppb	15.949	106877	100	90.2	90	110	
Li	7	3	45	95.970	ppb	0.621	6821006	100	96.0	90	110	
Be	9	1	6	48.922	ppb	0.446	14239	50	97.8	90	110	
B	11	1	6	75.719	ppb	17.717	967	50	151.4	90	110	>+\-10%
Na	23	2	45	973.963	ppb	2.067	659777	1000	97.4	90	110	
Mg	24	2	45	970.072	ppb	2.050	264561	1000	97.0	90	110	
Al	27	2	45	977.855	ppb	0.922	80726	1000	97.8	90	110	
K	39	2	45	944.817	ppb	2.445	329300	1000	94.5	90	110	
Ca	44	2	45	996.667	ppb	7.493	19985	1000	99.7	90	110	
V	51	2	72	47.210	ppb	2.890	215639	50	94.4	90	110	
Cr	52	2	72	48.256	ppb	4.651	265922	50	96.5	90	110	
Mn	55	2	72	49.743	ppb	3.803	128159	50	99.5	90	110	
Fe	57	2	72	963.979	ppb	5.538	104110	1000	96.4	90	110	
Co	59	2	72	48.167	ppb	2.828	425207	50	96.3	90	110	
Ni	60	2	72	48.608	ppb	2.403	113741	50	97.2	90	110	
Cu	63	2	72	48.506	ppb	4.851	317946	50	97.0	90	110	
Zn	66	2	72	47.209	ppb	1.811	47516	50	94.4	90	110	
As	75	2	72	48.928	ppb	3.184	34967	50	97.9	90	110	
Se	78	1	72	49.264	ppb	3.786	26001	50	98.5	90	110	
Sr	88	2	45	98.326	ppb	1.858	304277	100	98.3	90	110	
Zr	90	2	72	183.783	ppb	7.130	2700	50	367.6	90	110	>+\-10%
Zr	90	1	72	351.726	ppb	12.283	13112	50	703.5	90	110	>+\-10%
Nb	93	2	72	90.980	ppb	6.247	538646	100	91.0	90	110	
Mo	95	2	115	47.525	ppb	1.612	158513	50	95.1	90	110	
Pd	105	2	115	49.493	ppb	1.878	232252	50	99.0	90	110	
Ag	107	2	115	48.487	ppb	1.919	470677	50	97.0	90	110	
Cd	111	2	115	49.592	ppb	1.875	70180	50	99.2	90	110	
Sn	120	2	115	49.378	ppb	0.721	213518	50	98.8	90	110	
Sb	121	2	115	48.601	ppb	2.913	181100	50	97.2	90	110	
Ba	137	2	115	49.073	ppb	4.858	58775	50	98.1	90	110	
W	182	2	165	49.810	ppb	3.891	318423	50	99.6	90	110	
Pt	195	2	165	50.685	ppb	5.505	211143	50	101.4	90	110	
Tl	205	2	165	50.590	ppb	7.214	523650	50	101.2	90	110	
Pb	208	2	165	43.186	ppb	5.783	609088	50	86.4	90	110	>+\-10%
Th	232	2	165	49.858	ppb	3.073	723958	50	99.7	90	110	
U	238	2	165	51.754	ppb	3.191	794832	50	103.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	638245	1.35	661091	96.54	60	125	
Sc (IS)	45	2	HMI He	3591123	1.51	3655967	98.23	60	125	
Sc IS)	45	3	No Gas	97157023	1.47	100875794	96.31	60	120	
Ge Internal Standard	72	1	HMI H2	19921980	1.53	20569859	96.85	60	125	
Ge Internal Standard	72	2	HMI He	4417337	3.85	4348567	101.58	60	125	
In Internal standard	115	2	HMI He	13625959	2.09	13519075	100.79	60	125	
Ho-165	165	2	HMI He	30654697	4.16	30887613	99.25	60	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name CCB-5699924
 Data File Name 162_CCB.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T09:11:20-06:00
 Sample Type CCB
 Dilution 1
 Comment
 ISTD Ref File Name 140CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	1	45	-6.719	ppb	-118.1	82818	0.1	
Li	7	3	45	9.233	ppb	70.0	5345992	0.05	>RL
Be	9	1	6	0.069	ppb	51.1	27	0.5	
B	11	1	6	27.229	ppb	39.2	540	0.1	>RL
Na	23	2	45	31.916	ppb	11.5	53858	25	>RL
Mg	24	2	45	5.390	ppb	13.1	2474	25	
Al	27	2	45	-1.273	ppb	-66.8	367	15	
K	39	2	45	-9.845	ppb	-97.2	82951	50	
Ca	44	2	45	4.234	ppb	35.7	253	25	
V	51	2	72	-0.228	ppb	-65.4	11477	1	
Cr	52	2	72	0.009	ppb	402.2	1390	1	
Mn	55	2	72	0.130	ppb	9.5	633	0.5	
Fe	57	2	72	2.138	ppb	11.2	1920	25	
Co	59	2	72	0.049	ppb	80.6	5431	0.5	
Ni	60	2	72	0.035	ppb	32.5	890	1	
Cu	63	2	72	0.297	ppb	16.0	4831	1	
Zn	66	2	72	0.451	ppb	26.7	1250	5	
As	75	2	72	0.059	ppb	20.7	163	1	
Se	78	1	72	0.079	ppb	45.0	59	1	
Sr	88	2	45	0.053	ppb	29.5	370	1	
Zr	90	2	72	4.758	ppb	38.4	353	1	>RL
Zr	90	1	72	27.444	ppb	23.8	2286	1	>RL
Nb	93	2	72	3.570	ppb	9.8	23834	2	>RL
Mo	95	2	115	0.192	ppb	25.2	787	0.5	
Pd	105	2	115	0.052	ppb	18.5	283	1	
Ag	107	2	115	0.062	ppb	20.3	683	1	
Cd	111	2	115	0.031	ppb	21.3	60	0.5	
Sn	120	2	115	0.228	ppb	24.7	1517	1	
Sb	121	2	115	0.184	ppb	6.1	770	1	
Ba	137	2	115	0.130	ppb	31.7	250	0.5	
W	182	2	165	0.156	ppb	26.8	3731	1	
Pt	195	2	165	0.027	ppb	27.2	117	1	
Tl	205	2	165	0.049	ppb	19.6	713	0.1	
Pb	208	2	165	0.049	ppb	24.0	1370	0.5	
Th	232	2	165	0.206	ppb	9.3	4347	1	
U	238	2	165	0.090	ppb	16.4	1523	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	643992	1.64	661091	97.41	60	125	
Sc (IS)	45	2	HMI He	3617914	1.89	3655967	98.96	60	125	
Sc (IS)	45	3	No Gas	97211637	1.38	100875794	96.37	60	120	
Ge Internal Standard	72	1	HMI H2	20372199	1.63	20569859	99.04	60	125	
Ge Internal Standard	72	2	HMI He	4420819	1.67	4348567	101.66	60	125	
In Internal standard	115	2	HMI He	13511455	1.44	13519075	99.94	60	125	
Ho-165	165	2	HMI He	31515193	1.66	30887613	102.03	60	125	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name CCVL-5699928
 Data File Name 163LLCCV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T09:14:53-06:00
 Sample Type LLCCV
 Dilution 1
 Comment
 ISTD Ref File Name 140CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	17.306	ppb	9.572	5380761	50	34.6	70	130	> +/-30%
Be	9	1	6	1.043	ppb	10.499	312	1	104.3	70	130	
Na	23	2	45	72.813	ppb	1.533	79489	50	145.6	70	130	> +/-30%
Mg	24	2	45	50.401	ppb	5.189	14619	50	100.8	70	130	
Al	27	2	45	47.667	ppb	4.875	4361	50	95.3	70	130	
K	39	2	45	89.802	ppb	14.629	107674	100	89.8	70	130	
Ca	44	2	45	33.769	ppb	24.531	833	50	67.5	70	130	> +/-30%
V	51	2	72	4.409	ppb	3.479	30841	5	88.2	70	130	
Cr	52	2	72	1.835	ppb	3.082	11194	2	91.8	70	130	
Mn	55	2	72	1.028	ppb	3.928	2887	1	102.8	70	130	
Fe	57	2	72	47.922	ppb	5.127	6658	50	95.8	70	130	
Co	59	2	72	0.959	ppb	0.544	13115	1	95.9	70	130	
Ni	60	2	72	1.528	ppb	12.530	4277	1.5	101.8	70	130	
Cu	63	2	72	2.041	ppb	3.548	15864	2	102.1	70	130	
Zn	66	2	72	9.895	ppb	5.295	10390	10	98.9	70	130	
As	75	2	72	4.644	ppb	5.269	3364	5	92.9	70	130	
Se	78	1	72	4.842	ppb	4.767	2598	5	96.8	70	130	
Sr	88	2	45	0.989	ppb	6.991	3247	1	98.9	70	130	
Zr	90	2	72	5.328	ppb	89.380	353	0.5	1065.6	70	130	> +/-30%
Zr	90	1	72	8.326	ppb	50.527	1615	0.5	1665.3	70	130	> +/-30%
Nb	93	2	72	1.763	ppb	6.145	12925	2	88.2	70	130	
Mo	95	2	115	2.112	ppb	4.035	7055	2	105.6	70	130	
Pd	105	2	115	0.021	ppb	47.541	137	1	2.1	70	130	> +/-30%
Ag	107	2	115	4.936	ppb	0.588	47067	5	98.7	70	130	
Cd	111	2	115	0.906	ppb	8.870	1273	1	90.6	70	130	
Sn	120	2	115	9.366	ppb	2.578	40157	10	93.7	70	130	
Sb	121	2	115	1.855	ppb	6.265	6865	2	92.7	70	130	
Ba	137	2	115	1.132	ppb	7.087	1423	1	113.2	70	130	
W	182	2	165	4.591	ppb	3.798	32185	1	459.1	70	130	> +/-30%
Pt	195	2	165	0.006	ppb	96.560	27	1	0.6	70	130	> +/-30%
Tl	205	2	165	0.862	ppb	6.827	9230	1	86.2	70	130	
Pb	208	2	165	0.819	ppb	3.757	12346	1	81.9	70	130	
Th	232	2	165	1.725	ppb	5.812	26588	2	86.3	70	130	
U	238	2	165	1.013	ppb	6.574	15859	1	101.3	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	641992	0.71	661091	97.11	60	125	
Sc (IS)	45	2	HMI He	3577341	2.38	3655967	97.85	60	125	
Sc (IS)	45	3	No Gas	95387853	0.66	100875794	94.56	60	120	
Ge Internal Standard	72	1	HMI H2	20147628	3.42	20569859	97.95	60	125	
Ge Internal Standard	72	2	HMI He	4332650	1.02	4348567	99.63	60	125	
In Internal standard	115	2	HMI He	13361885	0.41	13519075	98.84	60	125	
Ho-165	165	2	HMI He	31076882	3.93	30887613	100.61	60	125	

Sample Report

Sample Table

Sample Name 280-123205-a-5-d
 Data File Name 164SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T09:18:27-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457081 6020A DOD5
 ISTD Ref FileName 140CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-3.211	ppb	-3.211	-123.20	4950424	40000	
Be	9	1	6	0.027	ppb	0.027	39.43	13	2000	
B	11	1	6	1806.557	ppb	1806.557	3.25	15233	100	>LDR
Na	23	2	45	27474.728	ppb	27474.728	0.59	17634305	400000	
Mg	24	2	45	27294.398	ppb	27294.398	1.45	7382406	400000	
Al	27	2	45	46.876	ppb	46.876	2.17	4294	400000	
K	39	2	45	348.532	ppb	348.532	0.77	174238	400000	
Ca	44	2	45	56368.826	ppb	56368.826	0.28	1114920	400000	
V	51	2	72	-0.857	ppb	-0.857	-14.01	8392	2000	
Cr	52	2	72	17.619	ppb	17.619	5.82	93875	5000	
Mn	55	2	72	3.620	ppb	3.620	9.81	9196	10000	
Fe	57	2	72	197.133	ppb	197.133	2.78	21737	400000	
Co	59	2	72	0.183	ppb	0.183	14.81	6328	2000	
Ni	60	2	72	4.470	ppb	4.470	3.50	10727	5000	
Cu	63	2	72	0.497	ppb	0.497	14.42	5871	5000	
Zn	66	2	72	0.703	ppb	0.703	11.69	1437	5000	
As	75	2	72	0.216	ppb	0.216	15.42	263	2000	
Se	78	1	72	0.223	ppb	0.223	19.37	131	2000	
Sr	88	2	45	158.644	ppb	158.644	1.33	488522	2000	
Zr	90	2	72	55.938	ppb	55.938	12.00	983	1000	
Zr	90	1	72	46.867	ppb	46.867	11.69	2833	1000	
Nb	93	2	72	2.283	ppb	2.283	10.32	15551	200	
Mo	95	2	115	2.890	ppb	2.890	4.00	9593	2000	
Pd	105	2	115	0.019	ppb	0.019	25.18	127	100	
Ag	107	2	115	0.022	ppb	0.022	14.46	293	100	
Cd	111	2	115	-0.007	ppb	-0.007	-121.31	7	2000	
Sn	120	2	115	0.152	ppb	0.152	3.95	1180	2000	
Sb	121	2	115	0.132	ppb	0.132	22.91	573	1000	
Ba	137	2	115	43.292	ppb	43.292	3.73	50850	5000	
W	182	2	165	0.055	ppb	0.055	62.63	2987	100	
Pt	195	2	165	0.008	ppb	0.008	62.84	33	100	
Tl	205	2	165	0.033	ppb	0.033	24.36	527	2000	
Pb	208	2	165	0.069	ppb	0.069	15.90	1610	5000	
Th	232	2	165	0.559	ppb	0.559	6.31	9335	2000	
U	238	2	165	6.553	ppb	6.553	3.54	100584	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	594596	0.93	661091	89.94	60	125	
Sc (IS)	45	2	HMI He	3573931	1.26	3655967	97.76	60	125	
Sc (IS)	45	3	No Gas	93734800	1.56	100875794	92.92	60	120	
Ge Internal Standard	72	1	HMI H2	19536105	0.52	20569859	94.97	60	125	
Ge Internal Standard	72	2	HMI He	4234403	3.40	4348567	97.37	60	125	
In Internal standard	115	2	HMI He	13356589	1.63	13519075	98.80	60	125	
Ho-165	165	2	HMI He	30599793	1.95	30887613	99.07	60	125	

Sample Report

Sample Table

Sample Name 280-123205-a-5-e.ms
 Data File Name 165SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T09:21:59-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457081 6020A DOD5
 ISTD Ref FileName 140CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	60.955	ppb	60.955	6.65	6132767	40000	
Be	9	1	6	39.762	ppb	39.762	0.87	10783	2000	
B	11	1	6	2984.784	ppb	2984.784	1.63	24994	100	>LDR
Na	23	2	45	27178.749	ppb	27178.749	1.05	17579597	400000	
Mg	24	2	45	26808.290	ppb	26808.290	0.63	7307813	400000	
Al	27	2	45	417.404	ppb	417.404	3.48	34821	400000	
K	39	2	45	339.671	ppb	339.671	1.35	173289	400000	
Ca	44	2	45	56093.661	ppb	56093.661	0.46	1118142	400000	
V	51	2	72	36.835	ppb	36.835	2.65	168933	2000	
Cr	52	2	72	55.021	ppb	55.021	1.35	299545	5000	
Mn	55	2	72	41.100	ppb	41.100	2.46	104681	10000	
Fe	57	2	72	552.828	ppb	552.828	2.61	59736	400000	
Co	59	2	72	37.001	ppb	37.001	1.19	323887	2000	
Ni	60	2	72	40.986	ppb	40.986	2.43	94842	5000	
Cu	63	2	72	36.727	ppb	36.727	1.79	238649	5000	
Zn	66	2	72	36.100	ppb	36.100	2.50	36068	5000	
As	75	2	72	35.849	ppb	35.849	3.45	25342	2000	
Se	78	1	72	34.349	ppb	34.349	2.36	17752	2000	
Sr	88	2	45	195.575	ppb	195.575	1.15	606857	2000	
Zr	90	2	72	626.208	ppb	626.208	5.32	8406	1000	
Zr	90	1	72	587.788	ppb	587.788	4.93	20604	1000	
Nb	93	2	72	1.286	ppb	1.286	8.98	10237	200	
Mo	95	2	115	41.216	ppb	41.216	2.54	134240	2000	
Pd	105	2	115	0.013	ppb	0.013	59.40	100	100	
Ag	107	2	115	37.724	ppb	37.724	3.10	357450	100	
Cd	111	2	115	38.029	ppb	38.029	4.53	52531	2000	
Sn	120	2	115	37.741	ppb	37.741	3.38	159444	2000	
Sb	121	2	115	38.145	ppb	38.145	1.50	138813	1000	
Ba	137	2	115	80.954	ppb	80.954	1.65	94651	5000	
W	182	2	165	31.512	ppb	31.512	5.51	204153	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	35.555	ppb	35.555	4.14	372330	2000	
Pb	208	2	165	30.973	ppb	30.973	4.36	441191	5000	
Th	232	2	165	36.434	ppb	36.434	4.19	533912	2000	
U	238	2	165	45.373	ppb	45.373	4.97	702914	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	594631	1.34	661091	89.95	60	125	
Sc (IS)	45	2	HMI He	3601883	1.48	3655967	98.52	60	125	
Sc (IS)	45	3	No Gas	95735767	1.18	100875794	94.90	60	120	
Ge Internal Standard	72	1	HMI H2	19498610	1.52	20569859	94.79	60	125	
Ge Internal Standard	72	2	HMI He	4361742	1.35	4348567	100.30	60	125	
In Internal standard	115	2	HMI He	13299826	1.11	13519075	98.38	60	125	
Ho-165	165	2	HMI He	30938308	4.66	30887613	100.16	60	125	

Sample Report

Sample Table

Sample Name 280-123205-a-5-f msd
 Data File Name 166SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T09:25:31-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457081 6020A DOD5
 ISTD Ref FileName 140CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	70.652	ppb	70.652	9.59	6232368	40000	
Be	9	1	6	39.857	ppb	39.857	3.77	10830	2000	
B	11	1	6	3192.570	ppb	3192.570	2.35	26773	100	>LDR
Na	23	2	45	27693.115	ppb	27693.115	2.74	18300071	400000	
Mg	24	2	45	26900.605	ppb	26900.605	2.84	7491458	400000	
Al	27	2	45	439.368	ppb	439.368	4.54	37423	400000	
K	39	2	45	353.416	ppb	353.416	3.97	180688	400000	
Ca	44	2	45	56038.996	ppb	56038.996	1.98	1141221	400000	
V	51	2	72	35.983	ppb	35.983	1.78	171342	2000	
Cr	52	2	72	52.654	ppb	52.654	4.38	296987	5000	
Mn	55	2	72	40.497	ppb	40.497	3.00	106893	10000	
Fe	57	2	72	529.215	ppb	529.215	1.14	59385	400000	
Co	59	2	72	36.605	ppb	36.605	2.62	332077	2000	
Ni	60	2	72	40.809	ppb	40.809	2.12	97894	5000	
Cu	63	2	72	35.426	ppb	35.426	0.90	238774	5000	
Zn	66	2	72	34.540	ppb	34.540	1.32	35827	5000	
As	75	2	72	35.855	ppb	35.855	2.83	26270	2000	
Se	78	1	72	34.414	ppb	34.414	5.27	18234	2000	
Sr	88	2	45	199.700	ppb	199.700	2.00	633213	2000	
Zr	90	2	72	671.209	ppb	671.209	2.63	9326	1000	
Zr	90	1	72	711.722	ppb	711.722	25.73	25241	1000	
Nb	93	2	72	0.742	ppb	0.742	8.71	7318	200	
Mo	95	2	115	42.024	ppb	42.024	1.47	138730	2000	
Pd	105	2	115	0.014	ppb	0.014	80.30	103	100	
Ag	107	2	115	37.173	ppb	37.173	3.01	357108	100	
Cd	111	2	115	37.013	ppb	37.013	1.47	51839	2000	
Sn	120	2	115	37.640	ppb	37.640	1.19	161191	2000	
Sb	121	2	115	38.437	ppb	38.437	1.18	141784	1000	
Ba	137	2	115	79.393	ppb	79.393	3.50	94110	5000	
W	182	2	165	31.467	ppb	31.467	0.93	208384	100	
Pt	195	2	165	0.004	ppb	0.004	92.25	17	100	
Tl	205	2	165	35.202	ppb	35.202	4.04	375879	2000	
Pb	208	2	165	31.767	ppb	31.767	1.98	462447	5000	
Th	232	2	165	36.657	ppb	36.657	0.54	548937	2000	
U	238	2	165	45.164	ppb	45.164	1.09	714974	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	595877	0.98	661091	90.14	60	125	
Sc (IS)	45	2	HMI He	3680351	1.27	3655967	100.67	60	125	
Sc (IS)	45	3	No Gas	94765033	1.58	100875794	93.94	60	120	
Ge Internal Standard	72	1	HMI H2	20008341	3.13	20569859	97.27	60	125	
Ge Internal Standard	72	2	HMI He	4522025	3.11	4348567	103.99	60	125	
In Internal standard	115	2	HMI He	13482923	1.02	13519075	99.73	60	125	
Ho-165	165	2	HMI He	31573734	1.64	30887613	102.22	60	125	

Sample Report

Sample Table

Sample Name 280-123205-a-13-b
 Data File Name 167SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T09:29:02-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457081 6020A DOD5
 ISTD Ref FileName 140CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	73.310	ppb	73.310	7.39	6222289	40000	
Be	9	1	6	0.057	ppb	0.057	48.73	22	2000	
B	11	1	6	1232.331	ppb	1232.331	0.22	10543	100	>LDR
Na	23	2	45	52571.708	ppb	52571.708	1.27	33859303	400000	
Mg	24	2	45	27173.458	ppb	27173.458	0.68	7382665	400000	
Al	27	2	45	28.275	ppb	28.275	17.11	2784	400000	
K	39	2	45	2204.806	ppb	2204.806	2.87	654910	400000	
Ca	44	2	45	23910.757	ppb	23910.757	2.18	475037	400000	
V	51	2	72	-1.042	ppb	-1.042	-8.00	7915	2000	
Cr	52	2	72	6.383	ppb	6.383	4.29	36151	5000	
Mn	55	2	72	89.139	ppb	89.139	3.18	228183	10000	
Fe	57	2	72	119.396	ppb	119.396	3.04	14303	400000	
Co	59	2	72	0.448	ppb	0.448	7.60	8856	2000	
Ni	60	2	72	9.821	ppb	9.821	2.31	23489	5000	
Cu	63	2	72	0.397	ppb	0.397	5.47	5444	5000	
Zn	66	2	72	2.487	ppb	2.487	5.66	3244	5000	
As	75	2	72	0.324	ppb	0.324	11.73	350	2000	
Se	78	1	72	3.549	ppb	3.549	9.84	1859	2000	
Sr	88	2	45	242.611	ppb	242.611	2.25	750152	2000	
Zr	90	2	72	32.297	ppb	32.297	25.03	710	1000	
Zr	90	1	72	35.372	ppb	35.372	11.92	2463	1000	
Nb	93	2	72	0.324	ppb	0.324	7.26	4654	200	
Mo	95	2	115	1.316	ppb	1.316	6.78	4414	2000	
Pd	105	2	115	0.013	ppb	0.013	9.18	97	100	
Ag	107	2	115	0.034	ppb	0.034	16.50	407	100	
Cd	111	2	115	0.056	ppb	0.056	71.18	93	2000	
Sn	120	2	115	0.227	ppb	0.227	18.07	1490	2000	
Sb	121	2	115	0.584	ppb	0.584	5.61	2207	1000	
Ba	137	2	115	30.141	ppb	30.141	1.88	35177	5000	
W	182	2	165	0.026	ppb	0.026	125.74	2804	100	
Pt	195	2	165	0.002	ppb	0.002	173.21	10	100	
Tl	205	2	165	0.136	ppb	0.136	5.82	1593	2000	
Pb	208	2	165	0.100	ppb	0.100	16.85	2047	5000	
Th	232	2	165	0.475	ppb	0.475	7.52	8136	2000	
U	238	2	165	0.160	ppb	0.160	3.67	2557	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	598273	0.23	661091	90.50	60	125	
Sc (IS)	45	2	HMI He	3589891	1.67	3655967	98.19	60	125	
Sc (IS)	45	3	No Gas	93940363	0.90	100875794	93.12	60	120	
Ge Internal Standard	72	1	HMI H2	19612726	2.43	20569859	95.35	60	125	
Ge Internal Standard	72	2	HMI He	4390078	1.15	4348567	100.95	60	125	
In Internal standard	115	2	HMI He	13256665	2.59	13519075	98.06	60	125	
Ho-165	165	2	HMI He	30640149	0.82	30887613	99.20	60	125	

Sample Report

Sample Table

Sample Name 280-123221-e-2-b
 Data File Name 168SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T09:32:34-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457081 6020A DOD5
 ISTD Ref FileName 140CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	10.083	ppb	10.083	23.57	5148198	40000	
Be	9	1	6	0.002	ppb	0.002	1272.08	7	2000	
B	11	1	6	710.617	ppb	710.617	9.10	6181	100	>LDR
Na	23	2	45	5828.231	ppb	5828.231	7.53	3847763	400000	
Mg	24	2	45	20013.651	ppb	20013.651	7.45	5530096	400000	
Al	27	2	45	31.496	ppb	31.496	4.81	3110	400000	
K	39	2	45	1214.071	ppb	1214.071	6.05	405860	400000	
Ca	44	2	45	52738.265	ppb	52738.265	3.50	1066420	400000	
V	51	2	72	-1.537	ppb	-1.537	-3.12	5918	2000	
Cr	52	2	72	0.279	ppb	0.279	20.82	2910	5000	
Mn	55	2	72	331.477	ppb	331.477	1.67	865128	10000	
Fe	57	2	72	974.473	ppb	974.473	2.18	106854	400000	
Co	59	2	72	0.003	ppb	0.003	525.81	5097	2000	
Ni	60	2	72	0.069	ppb	0.069	177.05	983	5000	
Cu	63	2	72	-0.031	ppb	-0.031	-24.42	2734	5000	
Zn	66	2	72	0.468	ppb	0.468	32.10	1283	5000	
As	75	2	72	5.963	ppb	5.963	3.27	4433	2000	
Se	78	1	72	0.007	ppb	0.007	184.39	19	2000	
Sr	88	2	45	132.952	ppb	132.952	4.69	418486	2000	
Zr	90	2	72	37.222	ppb	37.222	12.57	790	1000	
Zr	90	1	72	33.827	ppb	33.827	19.14	2406	1000	
Nb	93	2	72	0.119	ppb	0.119	77.79	3520	200	
Mo	95	2	115	1.535	ppb	1.535	6.86	5244	2000	
Pd	105	2	115	0.010	ppb	0.010	14.73	87	100	
Ag	107	2	115	0.013	ppb	0.013	42.73	207	100	
Cd	111	2	115	0.010	ppb	0.010	196.59	30	2000	
Sn	120	2	115	0.134	ppb	0.134	12.58	1120	2000	
Sb	121	2	115	0.190	ppb	0.190	2.08	797	1000	
Ba	137	2	115	82.765	ppb	82.765	4.08	98685	5000	
W	182	2	165	-0.007	ppb	-0.007	-536.03	2640	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	0.012	ppb	0.012	26.25	310	2000	
Pb	208	2	165	0.085	ppb	0.085	12.44	1860	5000	
Th	232	2	165	0.129	ppb	0.129	9.72	3164	2000	
U	238	2	165	0.988	ppb	0.988	3.10	15552	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	596291	1.65	661091	90.20	60	125	
Sc (IS)	45	2	HMI He	3656497	3.25	3655967	100.01	60	125	
Sc (IS)	45	3	No Gas	93364206	0.81	100875794	92.55	60	120	
Ge Internal Standard	72	1	HMI H2	19558292	0.87	20569859	95.08	60	125	
Ge Internal Standard	72	2	HMI He	4480082	1.03	4348567	103.02	60	125	
In Internal standard	115	2	HMI He	13574455	2.50	13519075	100.41	60	125	
Ho-165	165	2	HMI He	31204079	3.53	30887613	101.02	60	125	

Sample Report

Sample Table

Sample Name 280-123221-j-4-b
 Data File Name 169SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T09:36:06-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457081 6020A DOD5
 ISTD Ref FileName 140CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	10.042	ppb	10.042	49.98	5149328	40000	
Be	9	1	6	-0.004	ppb	-0.004	-865.75	5	2000	
B	11	1	6	873.375	ppb	873.375	4.59	7525	100	>LDR
Na	23	2	45	10451.385	ppb	10451.385	1.53	6909874	400000	
Mg	24	2	45	30993.176	ppb	30993.176	1.33	8608144	400000	
Al	27	2	45	4.503	ppb	4.503	39.45	857	400000	
K	39	2	45	1653.737	ppb	1653.737	2.51	523869	400000	
Ca	44	2	45	55962.315	ppb	55962.315	2.14	1136335	400000	
V	51	2	72	-1.605	ppb	-1.605	-2.97	5514	2000	
Cr	52	2	72	0.277	ppb	0.277	8.67	2844	5000	
Mn	55	2	72	242.268	ppb	242.268	2.17	620505	10000	
Fe	57	2	72	1884.079	ppb	1884.079	0.32	201189	400000	
Co	59	2	72	0.287	ppb	0.287	24.30	7472	2000	
Ni	60	2	72	0.066	ppb	0.066	95.15	957	5000	
Cu	63	2	72	-0.035	ppb	-0.035	-89.51	2657	5000	
Zn	66	2	72	1.410	ppb	1.410	11.89	2187	5000	
As	75	2	72	9.190	ppb	9.190	1.15	6639	2000	
Se	78	1	72	0.014	ppb	0.014	120.73	23	2000	
Sr	88	2	45	139.800	ppb	139.800	1.22	442047	2000	
Zr	90	2	72	860.837	ppb	860.837	3.26	11547	1000	
Zr	90	1	72	797.083	ppb	797.083	2.12	27890	1000	
Nb	93	2	72	0.004	ppb	0.004	647.37	2780	200	
Mo	95	2	115	0.816	ppb	0.816	4.98	2814	2000	
Pd	105	2	115	0.005	ppb	0.005	126.98	63	100	
Ag	107	2	115	0.005	ppb	0.005	64.35	133	100	
Cd	111	2	115	0.010	ppb	0.010	263.87	30	2000	
Sn	120	2	115	0.097	ppb	0.097	27.11	947	2000	
Sb	121	2	115	0.080	ppb	0.080	48.26	380	1000	
Ba	137	2	115	42.524	ppb	42.524	0.88	49928	5000	
W	182	2	165	-0.016	ppb	-0.016	-119.07	2600	100	
Pt	195	2	165	0.002	ppb	0.002	173.21	7	100	
Tl	205	2	165	0.014	ppb	0.014	27.00	333	2000	
Pb	208	2	165	0.039	ppb	0.039	23.46	1207	5000	
Th	232	2	165	0.018	ppb	0.018	66.67	1530	2000	
U	238	2	165	0.902	ppb	0.902	3.91	14257	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	596260	0.80	661091	90.19	60	125	
Sc (IS)	45	2	HMI He	3670050	2.04	3655967	100.39	60	125	
Sc (IS)	45	3	No Gas	93397500	1.10	100875794	92.59	60	120	
Ge Internal Standard	72	1	HMI H2	19797017	4.37	20569859	96.24	60	125	
Ge Internal Standard	72	2	HMI He	4396473	1.43	4348567	101.10	60	125	
In Internal standard	115	2	HMI He	13344959	0.49	13519075	98.71	60	125	
Ho-165	165	2	HMI He	31360788	4.57	30887613	101.53	60	125	

Sample Report

Sample Table

Sample Name 280-123221-f-5-b
 Data File Name 170SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T09:39:37-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457081 6020A DOD5
 ISTD Ref FileName 140CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	13.166	ppb	13.166	23.89	5135421	40000	
Be	9	1	6	-0.016	ppb	-0.016	-66.98	2	2000	
B	11	1	6	820.155	ppb	820.155	4.33	6988	100	>LDR
Na	23	2	45	10316.626	ppb	10316.626	1.33	6767707	400000	
Mg	24	2	45	30467.935	ppb	30467.935	2.56	8396012	400000	
Al	27	2	45	1.918	ppb	1.918	55.66	633	400000	
K	39	2	45	1646.521	ppb	1646.521	1.67	518043	400000	
Ca	44	2	45	55133.605	ppb	55133.605	2.25	1111036	400000	
V	51	2	72	-1.602	ppb	-1.602	-7.27	5504	2000	
Cr	52	2	72	0.211	ppb	0.211	13.93	2474	5000	
Mn	55	2	72	239.791	ppb	239.791	2.53	611960	10000	
Fe	57	2	72	1808.588	ppb	1808.588	0.51	192465	400000	
Co	59	2	72	0.243	ppb	0.243	15.23	7065	2000	
Ni	60	2	72	0.109	ppb	0.109	150.26	1053	5000	
Cu	63	2	72	-0.041	ppb	-0.041	-15.42	2607	5000	
Zn	66	2	72	0.354	ppb	0.354	42.73	1143	5000	
As	75	2	72	9.261	ppb	9.261	2.59	6664	2000	
Se	78	1	72	0.020	ppb	0.020	194.81	25	2000	
Sr	88	2	45	138.033	ppb	138.033	4.80	432977	2000	
Zr	90	2	72	105.590	ppb	105.590	8.70	1663	1000	
Zr	90	1	72	115.076	ppb	115.076	7.53	5046	1000	
Nb	93	2	72	-0.053	ppb	-0.053	-20.75	2440	200	
Mo	95	2	115	0.810	ppb	0.810	3.99	2870	2000	
Pd	105	2	115	0.015	ppb	0.015	80.96	110	100	
Ag	107	2	115	0.009	ppb	0.009	42.38	170	100	
Cd	111	2	115	0.002	ppb	0.002	624.79	20	2000	
Sn	120	2	115	0.071	ppb	0.071	57.20	857	2000	
Sb	121	2	115	0.077	ppb	0.077	10.97	380	1000	
Ba	137	2	115	42.075	ppb	42.075	1.69	50727	5000	
W	182	2	165	-0.025	ppb	-0.025	-202.56	2504	100	
Pt	195	2	165	0.002	ppb	0.002	86.77	7	100	
Tl	205	2	165	0.011	ppb	0.011	48.39	300	2000	
Pb	208	2	165	0.015	ppb	0.015	80.20	857	5000	
Th	232	2	165	-0.007	ppb	-0.007	-137.93	1157	2000	
U	238	2	165	0.900	ppb	0.900	8.02	14090	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	588193	0.65	661091	88.97	60	125	
Sc (IS)	45	2	HMI He	3641941	1.47	3655967	99.62	60	125	
Sc (IS)	45	3	No Gas	92232869	1.38	100875794	91.43	60	120	
Ge Internal Standard	72	1	HMI H2	19399157	2.41	20569859	94.31	60	125	
Ge Internal Standard	72	2	HMI He	4379708	0.63	4348567	100.72	60	125	
In Internal standard	115	2	HMI He	13699995	2.28	13519075	101.34	60	125	
Ho-165	165	2	HMI He	31085872	5.23	30887613	100.64	60	125	

Sample Report

Sample Table

Sample Name 280-123221-j-7-b
 Data File Name 171SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T09:43:10-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457081 6020A DOD5
 ISTD Ref FileName 140CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-7.475	ppb	-7.475	-93.05	4957559	40000	
Be	9	1	6	0.002	ppb	0.002	1257.51	7	2000	
B	11	1	6	1744.067	ppb	1744.067	3.56	14856	100	>LDR
Na	23	2	45	2019.468	ppb	2019.468	4.25	1352981	400000	
Mg	24	2	45	24075.161	ppb	24075.161	3.25	6642893	400000	
Al	27	2	45	1.711	ppb	1.711	67.29	617	400000	
K	39	2	45	1095.601	ppb	1095.601	0.35	374074	400000	
Ca	44	2	45	83465.737	ppb	83465.737	1.27	1684335	400000	
V	51	2	72	-1.572	ppb	-1.572	-4.41	5618	2000	
Cr	52	2	72	0.549	ppb	0.549	6.50	4301	5000	
Mn	55	2	72	0.634	ppb	0.634	9.65	1910	10000	
Fe	57	2	72	20.348	ppb	20.348	13.95	3814	400000	
Co	59	2	72	0.035	ppb	0.035	36.47	5248	2000	
Ni	60	2	72	0.138	ppb	0.138	44.01	1117	5000	
Cu	63	2	72	1.488	ppb	1.488	4.67	12428	5000	
Zn	66	2	72	14.359	ppb	14.359	2.08	14847	5000	
As	75	2	72	0.177	ppb	0.177	35.11	244	2000	
Se	78	1	72	0.048	ppb	0.048	71.72	40	2000	
Sr	88	2	45	253.649	ppb	253.649	3.16	796636	2000	
Zr	90	2	72	75.001	ppb	75.001	16.12	1260	1000	
Zr	90	1	72	63.183	ppb	63.183	19.93	3387	1000	
Nb	93	2	72	-0.093	ppb	-0.093	-38.89	2204	200	
Mo	95	2	115	0.166	ppb	0.166	9.14	697	2000	
Pd	105	2	115	0.022	ppb	0.022	38.46	140	100	
Ag	107	2	115	0.009	ppb	0.009	17.44	170	100	
Cd	111	2	115	0.064	ppb	0.064	32.48	107	2000	
Sn	120	2	115	0.105	ppb	0.105	17.65	987	2000	
Sb	121	2	115	0.262	ppb	0.262	15.55	1053	1000	
Ba	137	2	115	57.735	ppb	57.735	2.34	68233	5000	
W	182	2	165	-0.027	ppb	-0.027	-116.95	2517	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	0.006	ppb	0.006	122.39	247	2000	
Pb	208	2	165	0.079	ppb	0.079	3.88	1787	5000	
Th	232	2	165	-0.023	ppb	-0.023	-50.22	930	2000	
U	238	2	165	2.015	ppb	2.015	6.62	31688	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	600228	0.27	661091	90.79	60	125	
Sc (IS)	45	2	HMI He	3647027	1.88	3655967	99.76	60	125	
Sc (IS)	45	3	No Gas	95229298	1.02	100875794	94.40	60	120	
Ge Internal Standard	72	1	HMI H2	19617126	1.55	20569859	95.37	60	125	
Ge Internal Standard	72	2	HMI He	4368290	1.42	4348567	100.45	60	125	
In Internal standard	115	2	HMI He	13441939	1.22	13519075	99.43	60	125	
Ho-165	165	2	HMI He	31262029	2.54	30887613	101.21	60	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name CCV-5699926
 Data File Name 172_CCV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T09:46:41-06:00
 Sample Type CCV
 Dilution 1
 Comment
 ISTD Ref File Name 140CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	86.146	ppb	9.947	107575	100	86.1	90	110	>+\-10%
Li	7	3	45	98.337	ppb	5.180	6902253	100	98.3	90	110	
Be	9	1	6	48.841	ppb	1.519	14397	50	97.7	90	110	
B	11	1	6	103.354	ppb	8.403	1227	50	206.7	90	110	>+\-10%
Na	23	2	45	952.236	ppb	1.641	657653	1000	95.2	90	110	
Mg	24	2	45	993.236	ppb	3.889	275755	1000	99.3	90	110	
Al	27	2	45	981.541	ppb	3.607	82480	1000	98.2	90	110	
K	39	2	45	987.914	ppb	2.788	346671	1000	98.8	90	110	
Ca	44	2	45	1021.027	ppb	4.355	20833	1000	102.1	90	110	
V	51	2	72	47.384	ppb	3.880	219873	50	94.8	90	110	
Cr	52	2	72	48.043	ppb	2.926	269169	50	96.1	90	110	
Mn	55	2	72	49.266	ppb	4.253	128982	50	98.5	90	110	
Fe	57	2	72	966.461	ppb	3.774	106125	1000	96.6	90	110	
Co	59	2	72	48.703	ppb	2.346	436914	50	97.4	90	110	
Ni	60	2	72	48.651	ppb	1.578	115711	50	97.3	90	110	
Cu	63	2	72	48.495	ppb	3.958	323143	50	97.0	90	110	
Zn	66	2	72	47.244	ppb	2.644	48308	50	94.5	90	110	
As	75	2	72	49.109	ppb	3.155	35667	50	98.2	90	110	
Se	78	1	72	47.841	ppb	1.176	26530	50	95.7	90	110	
Sr	88	2	45	98.831	ppb	4.895	311319	100	98.8	90	110	
Zr	90	2	72	150.410	ppb	13.738	2297	50	300.8	90	110	>+\-10%
Zr	90	1	72	147.186	ppb	4.128	6571	50	294.4	90	110	>+\-10%
Nb	93	2	72	89.986	ppb	1.222	542091	100	90.0	90	110	>+\-10%
Mo	95	2	115	48.514	ppb	3.665	162648	50	97.0	90	110	
Pd	105	2	115	49.584	ppb	1.191	233937	50	99.2	90	110	
Ag	107	2	115	48.305	ppb	1.973	471404	50	96.6	90	110	
Cd	111	2	115	48.904	ppb	2.528	69567	50	97.8	90	110	
Sn	120	2	115	48.956	ppb	1.014	212802	50	97.9	90	110	
Sb	121	2	115	47.918	ppb	2.653	179513	50	95.8	90	110	
Ba	137	2	115	47.032	ppb	1.413	56658	50	94.1	90	110	
W	182	2	165	47.684	ppb	2.195	315568	50	95.4	90	110	
Pt	195	2	165	48.218	ppb	5.239	207839	50	96.4	90	110	
Tl	205	2	165	47.796	ppb	6.477	511941	50	95.6	90	110	
Pb	208	2	165	41.473	ppb	0.876	605887	50	82.9	90	110	>+\-10%
Th	232	2	165	46.559	ppb	4.385	699105	50	93.1	90	110	
U	238	2	165	48.706	ppb	4.985	773556	50	97.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	646421	0.36	661091	97.78	60	125	
Sc (IS)	45	2	HMI He	3657099	1.95	3655967	100.03	60	125	
Sc IS)	45	3	No Gas	97754427	2.18	100875794	96.91	60	120	
Ge Internal Standard	72	1	HMI H2	20923547	0.29	20569859	101.72	60	125	
Ge Internal Standard	72	2	HMI He	4488649	3.24	4348567	103.22	60	125	
In Internal standard	115	2	HMI He	13696250	0.94	13519075	101.31	60	125	
Ho-165	165	2	HMI He	31705936	3.14	30887613	102.65	60	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name CCB-5699924
 Data File Name 173_CCB.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T09:50:15-06:00
 Sample Type CCB
 Dilution 1
 Comment
 ISTD Ref File Name 140CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	1	45	-14.358	ppb	-107.2	83385	0.1	
Li	7	3	45	10.041	ppb	52.7	5328448	0.05	>RL
Be	9	1	6	0.046	ppb	74.9	20	0.5	
B	11	1	6	38.637	ppb	32.2	643	0.1	>RL
Na	23	2	45	27.251	ppb	5.3	51775	25	>RL
Mg	24	2	45	6.712	ppb	16.1	2884	25	
Al	27	2	45	-1.622	ppb	-27.7	343	15	
K	39	2	45	8.204	ppb	124.2	89265	50	
Ca	44	2	45	8.619	ppb	28.9	347	25	
V	51	2	72	-0.125	ppb	-13.4	11944	1	
Cr	52	2	72	0.003	ppb	753.2	1360	1	
Mn	55	2	72	0.089	ppb	52.6	527	0.5	
Fe	57	2	72	2.372	ppb	89.0	1947	25	
Co	59	2	72	0.000	ppb	13394.3	5011	0.5	
Ni	60	2	72	0.016	ppb	81.1	847	1	
Cu	63	2	72	0.291	ppb	7.3	4797	1	
Zn	66	2	72	0.444	ppb	16.9	1243	5	
As	75	2	72	0.084	ppb	33.6	181	1	
Se	78	1	72	0.075	ppb	33.9	57	1	
Sr	88	2	45	0.074	ppb	57.0	443	1	
Zr	90	2	72	6.748	ppb	28.6	380	1	>RL
Zr	90	1	72	3.323	ppb	255.6	1485	1	>RL
Nb	93	2	72	3.479	ppb	4.0	23343	2	>RL
Mo	95	2	115	0.112	ppb	31.7	543	0.5	
Pd	105	2	115	0.047	ppb	13.6	270	1	
Ag	107	2	115	0.060	ppb	28.1	683	1	
Cd	111	2	115	0.032	ppb	52.1	63	0.5	
Sn	120	2	115	0.126	ppb	19.4	1123	1	
Sb	121	2	115	0.150	ppb	32.9	667	1	
Ba	137	2	115	0.082	ppb	162.5	200	0.5	
W	182	2	165	0.017	ppb	309.1	2840	1	
Pt	195	2	165	0.043	ppb	27.9	187	1	
Tl	205	2	165	0.037	ppb	5.9	580	0.1	
Pb	208	2	165	0.035	ppb	15.8	1170	0.5	
Th	232	2	165	0.185	ppb	10.1	4054	1	
U	238	2	165	0.047	ppb	10.7	847	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	645815	0.62	661091	97.69	60	125	
Sc (IS)	45	2	HMI He	3684506	1.56	3655967	100.78	60	125	
Sc (IS)	45	3	No Gas	96664333	1.98	100875794	95.83	60	120	
Ge Internal Standard	72	1	HMI H2	20723655	0.36	20569859	100.75	60	125	
Ge Internal Standard	72	2	HMI He	4429356	2.27	4348567	101.86	60	125	
In Internal standard	115	2	HMI He	14030276	1.87	13519075	103.78	60	125	
Ho-165	165	2	HMI He	31690243	1.80	30887613	102.60	60	125	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name CCVL-5699928
 Data File Name 174LCCV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T09:53:46-06:00
 Sample Type LLCCV
 Dilution 1
 Comment
 ISTD Ref File Name 140CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	11.832	ppb	7.589	5455875	50	23.7	70	130	> +/-30%
Be	9	1	6	0.970	ppb	18.434	295	1	97.0	70	130	
Na	23	2	45	72.872	ppb	6.192	81307	50	145.7	70	130	> +/-30%
Mg	24	2	45	51.555	ppb	6.146	15270	50	103.1	70	130	
Al	27	2	45	47.696	ppb	7.267	4464	50	95.4	70	130	
K	39	2	45	100.799	ppb	20.400	113000	100	100.8	70	130	
Ca	44	2	45	40.445	ppb	16.231	987	50	80.9	70	130	
V	51	2	72	4.519	ppb	4.888	31946	5	90.4	70	130	
Cr	52	2	72	1.726	ppb	2.269	10827	2	86.3	70	130	
Mn	55	2	72	1.010	ppb	2.305	2900	1	101.0	70	130	
Fe	57	2	72	49.184	ppb	16.201	6928	50	98.4	70	130	
Co	59	2	72	0.963	ppb	6.536	13419	1	96.3	70	130	
Ni	60	2	72	1.427	ppb	14.409	4127	1.5	95.1	70	130	
Cu	63	2	72	1.968	ppb	3.764	15711	2	98.4	70	130	
Zn	66	2	72	10.289	ppb	0.863	11000	10	102.9	70	130	
As	75	2	72	4.625	ppb	4.803	3419	5	92.5	70	130	
Se	78	1	72	4.694	ppb	4.211	2519	5	93.9	70	130	
Sr	88	2	45	0.975	ppb	4.072	3277	1	97.5	70	130	
Zr	90	2	72	-1.552	ppb	-142.566	270	0.5	-310.5	70	130	> +/-30%
Zr	90	1	72	0.246	ppb	2436.885	1338	0.5	49.3	70	130	> +/-30%
Nb	93	2	72	1.817	ppb	6.843	13506	2	90.9	70	130	
Mo	95	2	115	1.901	ppb	4.005	6535	2	95.0	70	130	
Pd	105	2	115	0.023	ppb	20.741	150	1	2.3	70	130	> +/-30%
Ag	107	2	115	4.713	ppb	4.832	46144	5	94.3	70	130	
Cd	111	2	115	1.108	ppb	2.724	1597	1	110.8	70	130	
Sn	120	2	115	9.298	ppb	4.315	40932	10	93.0	70	130	
Sb	121	2	115	1.854	ppb	8.863	7048	2	92.7	70	130	
Ba	137	2	115	0.902	ppb	10.266	1183	1	90.2	70	130	
W	182	2	165	4.485	ppb	1.525	33301	1	448.5	70	130	> +/-30%
Pt	195	2	165	0.007	ppb	64.938	30	1	0.7	70	130	> +/-30%
Tl	205	2	165	0.926	ppb	1.102	10474	1	92.6	70	130	
Pb	208	2	165	0.785	ppb	3.844	12532	1	78.5	70	130	
Th	232	2	165	1.679	ppb	8.831	27386	2	84.0	70	130	
U	238	2	165	0.919	ppb	2.989	15228	1	91.9	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	652599	0.37	661091	98.72	60	125	
Sc (IS)	45	2	HMI He	3660064	3.27	3655967	100.11	60	125	
Sc IS)	45	3	No Gas	98393595	1.87	100875794	97.54	60	120	
Ge Internal Standard	72	1	HMI H2	20137489	1.49	20569859	97.90	60	125	
Ge Internal Standard	72	2	HMI He	4422791	2.76	4348567	101.71	60	125	
In Internal standard	115	2	HMI He	13732450	3.43	13519075	101.58	60	125	
Ho-165	165	2	HMI He	32829638	3.14	30887613	106.29	60	125	

Sample Report

Sample Table

Sample Name 280-123221-c-8-b
 Data File Name 175SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T09:57:19-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457081 6020A DOD5
 ISTD Ref FileName 140CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	19.415	ppb	19.415	68.33	5370480	40000	
Be	9	1	6	-0.010	ppb	-0.010	-107.36	3	2000	
B	11	1	6	1982.373	ppb	1982.373	4.28	16671	100	>LDR
Na	23	2	45	9229.378	ppb	9229.378	2.65	5988169	400000	
Mg	24	2	45	60814.094	ppb	60814.094	3.13	16565513	400000	
Al	27	2	45	37.023	ppb	37.023	14.86	3517	400000	
K	39	2	45	2193.524	ppb	2193.524	1.50	653993	400000	
Ca	44	2	45	83915.370	ppb	83915.370	1.52	1671758	400000	
V	51	2	72	-1.466	ppb	-1.466	-2.27	5901	2000	
Cr	52	2	72	0.508	ppb	0.508	2.32	3964	5000	
Mn	55	2	72	126.577	ppb	126.577	1.10	313269	10000	
Fe	57	2	72	185.986	ppb	185.986	4.28	20649	400000	
Co	59	2	72	0.419	ppb	0.419	7.76	8322	2000	
Ni	60	2	72	1.155	ppb	1.155	3.08	3357	5000	
Cu	63	2	72	0.253	ppb	0.253	26.48	4371	5000	
Zn	66	2	72	2.698	ppb	2.698	6.53	3337	5000	
As	75	2	72	0.289	ppb	0.289	9.22	314	2000	
Se	78	1	72	0.058	ppb	0.058	94.20	45	2000	
Sr	88	2	45	225.275	ppb	225.275	1.93	698643	2000	
Zr	90	2	72	34.944	ppb	34.944	10.40	720	1000	
Zr	90	1	72	30.972	ppb	30.972	8.13	2323	1000	
Nb	93	2	72	2.200	ppb	2.200	8.01	15137	200	
Mo	95	2	115	0.398	ppb	0.398	14.76	1450	2000	
Pd	105	2	115	0.016	ppb	0.016	17.53	113	100	
Ag	107	2	115	0.005	ppb	0.005	36.66	127	100	
Cd	111	2	115	0.036	ppb	0.036	25.40	67	2000	
Sn	120	2	115	0.314	ppb	0.314	14.68	1863	2000	
Sb	121	2	115	0.043	ppb	0.043	62.55	247	1000	
Ba	137	2	115	20.220	ppb	20.220	1.56	23822	5000	
W	182	2	165	0.014	ppb	0.014	61.01	2834	100	
Pt	195	2	165	0.002	ppb	0.002	101.82	10	100	
Tl	205	2	165	0.045	ppb	0.045	16.99	670	2000	
Pb	208	2	165	0.092	ppb	0.092	18.45	2013	5000	
Th	232	2	165	0.549	ppb	0.549	4.69	9550	2000	
U	238	2	165	1.985	ppb	1.985	4.27	31741	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	593795	0.93	661091	89.82	60	125	
Sc (IS)	45	2	HMI He	3600192	1.17	3655967	98.47	60	125	
Sc (IS)	45	3	No Gas	94631565	1.86	100875794	93.81	60	120	
Ge Internal Standard	72	1	HMI H2	19647914	2.12	20569859	95.52	60	125	
Ge Internal Standard	72	2	HMI He	4245790	0.82	4348567	97.64	60	125	
In Internal standard	115	2	HMI He	13365254	1.76	13519075	98.86	60	125	
Ho-165	165	2	HMI He	31801037	2.71	30887613	102.96	60	125	

Sample Report

Sample Table

Sample Name 280-123221-c-9-b
 Data File Name 176SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T10:00:50-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457081 6020A DOD5
 ISTD Ref FileName 140CALB.d
 Sample QC Pass/Fail Pass
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-2.389	ppb	-2.389	-257.31	4978058	40000	
Be	9	1	6	0.082	ppb	0.082	79.01	28	2000	
B	11	1	6	316.415	ppb	316.415	7.01	2904	100	
Na	23	2	45	3571.290	ppb	3571.290	1.19	2326095	400000	
Mg	24	2	45	9721.659	ppb	9721.659	0.78	2636350	400000	
Al	27	2	45	11.497	ppb	11.497	11.49	1407	400000	
K	39	2	45	734.060	ppb	734.060	1.92	274110	400000	
Ca	44	2	45	18984.534	ppb	18984.534	0.69	376471	400000	
V	51	2	72	-1.436	ppb	-1.436	-4.41	6145	2000	
Cr	52	2	72	0.184	ppb	0.184	22.17	2300	5000	
Mn	55	2	72	217.581	ppb	217.581	1.03	548799	10000	
Fe	57	2	72	3317.764	ppb	3317.764	1.20	347550	400000	
Co	59	2	72	0.375	ppb	0.375	19.28	8109	2000	
Ni	60	2	72	2.206	ppb	2.206	11.78	5814	5000	
Cu	63	2	72	0.219	ppb	0.219	15.22	4234	5000	
Zn	66	2	72	1.262	ppb	1.262	11.86	2010	5000	
As	75	2	72	1.215	ppb	1.215	8.05	967	2000	
Se	78	1	72	-0.001	ppb	-0.001	-1378.56	15	2000	
Sr	88	2	45	37.843	ppb	37.843	0.37	116961	2000	
Zr	90	2	72	7.684	ppb	7.684	71.59	383	1000	
Zr	90	1	72	15.620	ppb	15.620	32.02	1822	1000	
Nb	93	2	72	1.228	ppb	1.228	8.25	9813	200	
Mo	95	2	115	0.130	ppb	0.130	36.60	587	2000	
Pd	105	2	115	0.006	ppb	0.006	60.23	67	100	
Ag	107	2	115	0.005	ppb	0.005	33.30	133	100	
Cd	111	2	115	0.005	ppb	0.005	229.78	23	2000	
Sn	120	2	115	0.128	ppb	0.128	33.98	1100	2000	
Sb	121	2	115	0.031	ppb	0.031	42.78	207	1000	
Ba	137	2	115	14.870	ppb	14.870	4.22	17897	5000	
W	182	2	165	-0.002	ppb	-0.002	-442.42	2754	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	0.014	ppb	0.014	66.43	347	2000	
Pb	208	2	165	0.074	ppb	0.074	14.00	1753	5000	
Th	232	2	165	0.090	ppb	0.090	12.35	2674	2000	
U	238	2	165	0.007	ppb	0.007	50.12	210	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	597013	1.13	661091	90.31	60	125	
Sc (IS)	45	2	HMI He	3582427	1.80	3655967	97.99	60	125	
Sc (IS)	45	3	No Gas	94003239	0.42	100875794	93.19	60	120	
Ge Internal Standard	72	1	HMI H2	19721658	0.97	20569859	95.88	60	125	
Ge Internal Standard	72	2	HMI He	4328520	0.23	4348567	99.54	60	125	
In Internal standard	115	2	HMI He	13633396	1.66	13519075	100.85	60	125	
Ho-165	165	2	HMI He	32146583	1.77	30887613	104.08	60	125	

Sample Report

Sample Table

Sample Name 280-123221-c-10-b
 Data File Name 177SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T10:04:21-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457081 6020A DOD5
 ISTD Ref FileName 140CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	11.233	ppb	11.233	113.80	5248695	40000	
Be	9	1	6	-0.016	ppb	-0.016	-67.60	2	2000	
B	11	1	6	2067.366	ppb	2067.366	1.02	17318	100	>LDR
Na	23	2	45	5034.935	ppb	5034.935	2.60	3384205	400000	
Mg	24	2	45	24803.545	ppb	24803.545	2.20	6968669	400000	
Al	27	2	45	26.719	ppb	26.719	10.29	2750	400000	
K	39	2	45	752.783	ppb	752.783	1.48	289100	400000	
Ca	44	2	45	49332.408	ppb	49332.408	0.86	1013579	400000	
V	51	2	72	-1.518	ppb	-1.518	-7.02	5864	2000	
Cr	52	2	72	0.226	ppb	0.226	11.78	2550	5000	
Mn	55	2	72	99.324	ppb	99.324	4.18	253321	10000	
Fe	57	2	72	61.179	ppb	61.179	3.67	8122	400000	
Co	59	2	72	0.286	ppb	0.286	0.89	7425	2000	
Ni	60	2	72	0.329	ppb	0.329	24.83	1557	5000	
Cu	63	2	72	0.167	ppb	0.167	13.89	3947	5000	
Zn	66	2	72	0.519	ppb	0.519	65.48	1303	5000	
As	75	2	72	0.093	ppb	0.093	6.83	186	2000	
Se	78	1	72	0.051	ppb	0.051	52.32	43	2000	
Sr	88	2	45	112.466	ppb	112.466	1.06	359815	2000	
Zr	90	2	72	21.171	ppb	21.171	11.50	563	1000	
Zr	90	1	72	17.514	ppb	17.514	16.55	1915	1000	
Nb	93	2	72	0.834	ppb	0.834	13.17	7629	200	
Mo	95	2	115	1.454	ppb	1.454	3.55	5091	2000	
Pd	105	2	115	0.014	ppb	0.014	79.91	110	100	
Ag	107	2	115	0.005	ppb	0.005	52.59	133	100	
Cd	111	2	115	0.025	ppb	0.025	115.90	53	2000	
Sn	120	2	115	0.067	ppb	0.067	54.67	850	2000	
Sb	121	2	115	0.040	ppb	0.040	52.70	243	1000	
Ba	137	2	115	20.518	ppb	20.518	0.94	25094	5000	
W	182	2	165	-0.035	ppb	-0.035	-116.50	2530	100	
Pt	195	2	165	0.004	ppb	0.004	93.06	17	100	
Tl	205	2	165	0.017	ppb	0.017	7.88	370	2000	
Pb	208	2	165	0.075	ppb	0.075	20.80	1767	5000	
Th	232	2	165	0.035	ppb	0.035	48.71	1823	2000	
U	238	2	165	0.858	ppb	0.858	0.81	13873	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	591997	0.83	661091	89.55	60	125	
Sc (IS)	45	2	HMI He	3712644	1.20	3655967	101.55	60	125	
Sc (IS)	45	3	No Gas	94877886	1.83	100875794	94.05	60	120	
Ge Internal Standard	72	1	HMI H2	20037896	0.46	20569859	97.41	60	125	
Ge Internal Standard	72	2	HMI He	4375948	1.56	4348567	100.63	60	125	
In Internal standard	115	2	HMI He	13872399	1.09	13519075	102.61	60	125	
Ho-165	165	2	HMI He	31995105	3.62	30887613	103.59	60	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name CCV-5699926
 Data File Name 178_CCV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T10:07:52-06:00
 Sample Type CCV
 Dilution 1
 Comment
 ISTD Ref File Name 140CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	85.341	ppb	10.216	107880	100	85.3	90	110	>+ \-10%
Li	7	3	45	102.415	ppb	2.277	6910113	100	102.4	90	110	
Be	9	1	6	50.397	ppb	4.017	14623	50	100.8	90	110	
B	11	1	6	85.555	ppb	13.814	1050	50	171.1	90	110	>+ \-10%
Na	23	2	45	918.405	ppb	2.505	656782	1000	91.8	90	110	
Mg	24	2	45	958.408	ppb	1.944	275139	1000	95.8	90	110	
Al	27	2	45	945.091	ppb	1.616	82135	1000	94.5	90	110	
K	39	2	45	939.949	ppb	3.178	345255	1000	94.0	90	110	
Ca	44	2	45	968.951	ppb	3.253	20442	1000	96.9	90	110	
V	51	2	72	47.000	ppb	0.651	217802	50	94.0	90	110	
Cr	52	2	72	48.485	ppb	0.291	271117	50	97.0	90	110	
Mn	55	2	72	49.336	ppb	1.228	128951	50	98.7	90	110	
Fe	57	2	72	971.999	ppb	1.744	106525	1000	97.2	90	110	
Co	59	2	72	47.889	ppb	1.874	428817	50	95.8	90	110	
Ni	60	2	72	49.122	ppb	2.009	116533	50	98.2	90	110	
Cu	63	2	72	48.144	ppb	3.333	320238	50	96.3	90	110	
Zn	66	2	72	47.652	ppb	0.788	48619	50	95.3	90	110	
As	75	2	72	49.763	ppb	1.326	36072	50	99.5	90	110	
Se	78	1	72	49.308	ppb	2.066	26809	50	98.6	90	110	
Sr	88	2	45	94.595	ppb	2.801	308077	100	94.6	90	110	
Zr	90	2	72	69.781	ppb	0.878	1223	50	139.6	90	110	>+ \-10%
Zr	90	1	72	60.701	ppb	15.457	3454	50	121.4	90	110	>+ \-10%
Nb	93	2	72	91.866	ppb	2.050	552053	100	91.9	90	110	
Mo	95	2	115	46.722	ppb	3.414	159668	50	93.4	90	110	
Pd	105	2	115	48.145	ppb	0.112	231526	50	96.3	90	110	
Ag	107	2	115	47.291	ppb	0.517	470402	50	94.6	90	110	
Cd	111	2	115	48.267	ppb	3.618	69971	50	96.5	90	110	
Sn	120	2	115	48.180	ppb	1.938	213443	50	96.4	90	110	
Sb	121	2	115	47.395	ppb	2.570	180981	50	94.8	90	110	
Ba	137	2	115	47.849	ppb	1.914	58745	50	95.7	90	110	
W	182	2	165	45.080	ppb	2.230	311698	50	90.2	90	110	
Pt	195	2	165	44.818	ppb	4.103	201810	50	89.6	90	110	>+ \-10%
Tl	205	2	165	46.540	ppb	4.439	520783	50	93.1	90	110	
Pb	208	2	165	41.855	ppb	4.740	637996	50	83.7	90	110	>+ \-10%
Th	232	2	165	45.717	ppb	4.233	716845	50	91.4	90	110	
U	238	2	165	46.584	ppb	5.408	772452	50	93.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	636237	0.77	661091	96.24	60	125	
Sc (IS)	45	2	HMI He	3780467	2.56	3655967	103.41	60	125	
Sc IS)	45	3	No Gas	96869526	0.61	100875794	96.03	60	120	
Ge Internal Standard	72	1	HMI H2	20514163	0.31	20569859	99.73	60	125	
Ge Internal Standard	72	2	HMI He	4477308	0.85	4348567	102.96	60	125	
In Internal standard	115	2	HMI He	13960147	1.46	13519075	103.26	60	125	
Ho-165	165	2	HMI He	33113059	3.82	30887613	107.20	60	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name CCB-5699924
 Data File Name 179_CCB.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T10:11:24-06:00
 Sample Type CCB
 Dilution 1
 Comment
 ISTD Ref File Name 140CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	1	45	-7.700	ppb	-67.7	83247	0.1	
Li	7	3	45	7.539	ppb	66.6	5366021	0.05	>RL
Be	9	1	6	0.034	ppb	158.7	17	0.5	
B	11	1	6	34.732	ppb	15.6	610	0.1	>RL
Na	23	2	45	19.498	ppb	10.5	46657	25	
Mg	24	2	45	5.142	ppb	26.5	2447	25	
Al	27	2	45	-0.957	ppb	-54.2	400	15	
K	39	2	45	8.058	ppb	82.5	89242	50	
Ca	44	2	45	7.156	ppb	37.4	317	25	
V	51	2	72	-0.147	ppb	-101.4	11807	1	
Cr	52	2	72	0.010	ppb	236.3	1393	1	
Mn	55	2	72	0.131	ppb	36.5	637	0.5	
Fe	57	2	72	3.055	ppb	32.4	2013	25	
Co	59	2	72	0.036	ppb	68.2	5311	0.5	
Ni	60	2	72	0.035	ppb	99.1	890	1	
Cu	63	2	72	0.264	ppb	13.9	4611	1	
Zn	66	2	72	0.393	ppb	54.6	1193	5	
As	75	2	72	0.087	ppb	38.5	183	1	
Se	78	1	72	0.044	ppb	91.1	40	1	
Sr	88	2	45	0.074	ppb	41.8	443	1	
Zr	90	2	72	3.290	ppb	30.2	333	1	>RL
Zr	90	1	72	3.614	ppb	184.4	1468	1	>RL
Nb	93	2	72	3.853	ppb	3.6	25493	2	>RL
Mo	95	2	115	0.104	ppb	33.7	500	0.5	
Pd	105	2	115	0.056	ppb	47.1	300	1	
Ag	107	2	115	0.047	ppb	31.8	540	1	
Cd	111	2	115	0.021	ppb	152.8	47	0.5	
Sn	120	2	115	0.129	ppb	2.6	1107	1	
Sb	121	2	115	0.110	ppb	31.7	503	1	
Ba	137	2	115	0.047	ppb	86.9	153	0.5	
W	182	2	165	0.019	ppb	278.2	2924	1	
Pt	195	2	165	0.032	ppb	37.6	140	1	
Tl	205	2	165	0.041	ppb	34.5	643	0.1	
Pb	208	2	165	0.043	ppb	26.0	1317	0.5	
Th	232	2	165	0.167	ppb	11.5	3884	1	
U	238	2	165	0.046	ppb	15.8	850	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	647268	1.39	661091	97.91	60	125	
Sc (IS)	45	2	HMI He	3685065	1.98	3655967	100.80	60	125	
Sc (IS)	45	3	No Gas	98116427	1.39	100875794	97.26	60	120	
Ge Internal Standard	72	1	HMI H2	20351472	1.43	20569859	98.94	60	125	
Ge Internal Standard	72	2	HMI He	4414724	2.52	4348567	101.52	60	125	
In Internal standard	115	2	HMI He	13672435	2.92	13519075	101.13	60	125	
Ho-165	165	2	HMI He	32430870	0.86	30887613	105.00	60	125	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name CCVL-5699928
 Data File Name 180LCCV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T10:14:56-06:00
 Sample Type LLCCV
 Dilution 1
 Comment
 ISTD Ref File Name 140CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	6.309	ppb	17.771	5354813	50	12.6	70	130	> +/-30%
Be	9	1	6	0.957	ppb	3.548	287	1	95.7	70	130	
Na	23	2	45	63.136	ppb	6.046	74662	50	126.3	70	130	
Mg	24	2	45	49.748	ppb	6.103	14726	50	99.5	70	130	
Al	27	2	45	46.027	ppb	5.961	4314	50	92.1	70	130	
K	39	2	45	101.495	ppb	14.392	112808	100	101.5	70	130	
Ca	44	2	45	38.148	ppb	21.325	940	50	76.3	70	130	
V	51	2	72	4.305	ppb	10.906	31492	5	86.1	70	130	
Cr	52	2	72	1.782	ppb	6.086	11300	2	89.1	70	130	
Mn	55	2	72	1.041	ppb	3.491	3027	1	104.1	70	130	
Fe	57	2	72	48.788	ppb	9.053	6992	50	97.6	70	130	
Co	59	2	72	0.856	ppb	15.121	12665	1	85.6	70	130	
Ni	60	2	72	1.384	ppb	10.897	4101	1.5	92.3	70	130	
Cu	63	2	72	2.016	ppb	4.381	16298	2	100.8	70	130	
Zn	66	2	72	9.529	ppb	3.521	10407	10	95.3	70	130	
As	75	2	72	4.531	ppb	4.281	3406	5	90.6	70	130	
Se	78	1	72	4.644	ppb	2.960	2499	5	92.9	70	130	
Sr	88	2	45	0.898	ppb	4.778	3024	1	89.8	70	130	
Zr	90	2	72	0.027	ppb	12536.808	297	0.5	5.4	70	130	> +/-30%
Zr	90	1	72	4.145	ppb	138.165	1475	0.5	829.0	70	130	> +/-30%
Nb	93	2	72	1.910	ppb	9.264	14280	2	95.5	70	130	
Mo	95	2	115	1.986	ppb	8.103	6895	2	99.3	70	130	
Pd	105	2	115	0.032	ppb	19.180	197	1	3.2	70	130	> +/-30%
Ag	107	2	115	4.540	ppb	3.694	45001	5	90.8	70	130	
Cd	111	2	115	0.967	ppb	17.572	1407	1	96.7	70	130	
Sn	120	2	115	9.090	ppb	3.959	40517	10	90.9	70	130	
Sb	121	2	115	1.855	ppb	6.858	7132	2	92.7	70	130	
Ba	137	2	115	0.901	ppb	6.326	1197	1	90.1	70	130	
W	182	2	165	4.392	ppb	3.330	32192	1	439.2	70	130	> +/-30%
Pt	195	2	165	0.008	ppb	57.460	37	1	0.8	70	130	> +/-30%
Tl	205	2	165	0.852	ppb	2.387	9527	1	85.2	70	130	
Pb	208	2	165	0.833	ppb	1.470	13082	1	83.3	70	130	
Th	232	2	165	1.620	ppb	2.157	26107	2	81.0	70	130	
U	238	2	165	0.947	ppb	4.263	15468	1	94.7	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	642686	1.17	661091	97.22	60	125	
Sc (IS)	45	2	HMI He	3646167	2.32	3655967	99.73	60	125	
Sc IS)	45	3	No Gas	98289667	1.69	100875794	97.44	60	120	
Ge Internal Standard	72	1	HMI H2	20187416	0.75	20569859	98.14	60	125	
Ge Internal Standard	72	2	HMI He	4494165	3.36	4348567	103.35	60	125	
In Internal standard	115	2	HMI He	13901438	4.72	13519075	102.83	60	125	
Ho-165	165	2	HMI He	32370164	4.41	30887613	104.80	60	125	

Sample Report

Sample Table

Sample Name rinse-5620980
 Data File Name 181SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T10:18:29-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment TUNE
 ISTD Ref FileName 140CALB.d
 Sample QC Pass/Fail Pass
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-0.015	ppb	-0.015	-35925.63	5188128	40000	
Be	9	1	6	-0.011	ppb	-0.011	-92.12	3	2000	
B	11	1	6	20.481	ppb	20.481	36.97	477	100	
Na	23	2	45	18.520	ppb	18.520	8.96	45060	400000	
Mg	24	2	45	3.902	ppb	3.902	18.79	2057	400000	
Al	27	2	45	4.689	ppb	4.689	6.76	857	400000	
K	39	2	45	-1.666	ppb	-1.666	-898.27	84847	400000	
Ca	44	2	45	3.691	ppb	3.691	156.61	243	400000	
V	51	2	72	-0.076	ppb	-0.076	-138.78	12164	2000	
Cr	52	2	72	0.006	ppb	0.006	377.22	1373	5000	
Mn	55	2	72	0.173	ppb	0.173	20.40	747	10000	
Fe	57	2	72	14.191	ppb	14.191	10.65	3210	400000	
Co	59	2	72	-0.014	ppb	-0.014	-331.77	4887	2000	
Ni	60	2	72	0.001	ppb	0.001	2085.79	813	5000	
Cu	63	2	72	0.281	ppb	0.281	10.46	4737	5000	
Zn	66	2	72	0.473	ppb	0.473	16.17	1273	5000	
As	75	2	72	0.070	ppb	0.070	23.71	171	2000	
Se	78	1	72	0.032	ppb	0.032	50.59	33	2000	
Sr	88	2	45	-0.004	ppb	-0.004	-326.70	190	2000	
Zr	90	2	72	-8.190	ppb	-8.190	-18.34	183	1000	
Zr	90	1	72	6.411	ppb	6.411	94.59	1582	1000	
Nb	93	2	72	1.504	ppb	1.504	19.77	11664	200	
Mo	95	2	115	0.022	ppb	0.022	82.25	230	2000	
Pd	105	2	115	0.041	ppb	0.041	33.01	237	100	
Ag	107	2	115	0.010	ppb	0.010	14.41	187	100	
Cd	111	2	115	-0.007	ppb	-0.007	-114.57	7	2000	
Sn	120	2	115	0.062	ppb	0.062	54.91	823	2000	
Sb	121	2	115	0.023	ppb	0.023	25.37	177	1000	
Ba	137	2	115	0.032	ppb	0.032	142.76	137	5000	
W	182	2	165	-0.064	ppb	-0.064	-34.62	2337	100	
Pt	195	2	165	0.008	ppb	0.008	44.21	33	100	
Tl	205	2	165	0.001	ppb	0.001	458.63	197	2000	
Pb	208	2	165	0.013	ppb	0.013	31.90	860	5000	
Th	232	2	165	0.074	ppb	0.074	13.54	2430	2000	
U	238	2	165	0.004	ppb	0.004	144.12	163	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	640470	1.12	661091	96.88	60	125	
Sc (IS)	45	2	HMI He	3609390	2.71	3655967	98.73	60	125	
Sc (IS)	45	3	No Gas	97202208	0.61	100875794	96.36	60	120	
Ge Internal Standard	72	1	HMI H2	20566951	2.32	20569859	99.99	60	125	
Ge Internal Standard	72	2	HMI He	4429833	0.94	4348567	101.87	60	125	
In Internal standard	115	2	HMI He	13742720	0.70	13519075	101.65	60	125	
Ho-165	165	2	HMI He	32104929	3.19	30887613	103.94	60	125	

Sample Report

Sample Table

Sample Name rinse-5620980
 Data File Name 182SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T10:22:00-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment TUNE
 ISTD Ref FileName 140CALB.d
 Sample QC Pass/Fail Pass
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	0.928	ppb	0.928	404.04	5214854	40000	
Be	9	1	6	-0.017	ppb	-0.017	-59.22	2	2000	
B	11	1	6	24.421	ppb	24.421	27.41	517	100	
Na	23	2	45	17.071	ppb	17.071	10.38	44826	400000	
Mg	24	2	45	3.261	ppb	3.261	15.14	1913	400000	
Al	27	2	45	3.187	ppb	3.187	72.27	743	400000	
K	39	2	45	5.896	ppb	5.896	263.29	88196	400000	
Ca	44	2	45	2.008	ppb	2.008	273.50	210	400000	
V	51	2	72	-0.216	ppb	-0.216	-44.74	11654	2000	
Cr	52	2	72	-0.011	ppb	-0.011	-359.06	1293	5000	
Mn	55	2	72	0.226	ppb	0.226	3.59	890	10000	
Fe	57	2	72	16.670	ppb	16.670	12.67	3504	400000	
Co	59	2	72	0.010	ppb	0.010	322.32	5144	2000	
Ni	60	2	72	-0.013	ppb	-0.013	-673.30	787	5000	
Cu	63	2	72	0.239	ppb	0.239	15.03	4507	5000	
Zn	66	2	72	0.404	ppb	0.404	14.58	1217	5000	
As	75	2	72	0.047	ppb	0.047	53.50	156	2000	
Se	78	1	72	0.005	ppb	0.005	490.68	19	2000	
Sr	88	2	45	0.001	ppb	0.001	1416.79	210	2000	
Zr	90	2	72	-6.581	ppb	-6.581	-69.88	207	1000	
Zr	90	1	72	7.168	ppb	7.168	47.02	1598	1000	
Nb	93	2	72	0.941	ppb	0.941	21.02	8429	200	
Mo	95	2	115	0.012	ppb	0.012	164.42	200	2000	
Pd	105	2	115	0.025	ppb	0.025	40.21	163	100	
Ag	107	2	115	0.003	ppb	0.003	39.35	113	100	
Cd	111	2	115	0.000	ppb	0.000	-3468.59	17	2000	
Sn	120	2	115	0.061	ppb	0.061	45.75	833	2000	
Sb	121	2	115	0.016	ppb	0.016	51.41	153	1000	
Ba	137	2	115	0.051	ppb	0.051	102.67	163	5000	
W	182	2	165	-0.077	ppb	-0.077	-45.93	2234	100	
Pt	195	2	165	0.001	ppb	0.001	173.21	7	100	
Tl	205	2	165	0.004	ppb	0.004	223.69	230	2000	
Pb	208	2	165	0.003	ppb	0.003	59.95	703	5000	
Th	232	2	165	0.003	ppb	0.003	73.21	1330	2000	
U	238	2	165	0.000	ppb	0.000	936.12	107	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	646644	1.00	661091	97.81	60	125	
Sc (IS)	45	2	HMI He	3666612	1.90	3655967	100.29	60	125	
Sc (IS)	45	3	No Gas	97412900	0.93	100875794	96.57	60	120	
Ge Internal Standard	72	1	HMI H2	20444588	2.21	20569859	99.39	60	125	
Ge Internal Standard	72	2	HMI He	4469265	1.58	4348567	102.78	60	125	
In Internal standard	115	2	HMI He	14044786	1.12	13519075	103.89	60	125	
Ho-165	165	2	HMI He	31884034	2.80	30887613	103.23	60	125	

Calibration Blank Report

Sample Table

Sample Name2 ICIS-5699924
 Data File Name 183CALB.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Method
 Acq Date Time 2019-05-14T10:25:32-06:00
 Sample Type CalBlk
 Level 1
 Dilution 1
 Comment

QC Analyte Table

Name	Mass	I.S	Tune Step	Tune Mode	CPS	%RSD
Li	7	45	1	HMI H2	81942	0.00
Li	7	45	3	No Gas	5232825	0.00
B	11	6	1	HMI H2	460	6.67
Na	23	45	2	HMI He	43533	0.00
Mg	24	45	2	HMI He	1630	0.67
Al	27	45	2	HMI He	423	3.27
K	39	45	2	HMI He	85838	0.00
Ca	44	45	2	HMI He	210	13.79
V	51	72	2	HMI He	12305	0.03
Cr	52	72	2	HMI He	1290	0.42
Mn	55	72	2	HMI He	360	2.67
Fe	57	72	2	HMI He	1817	0.96
Co	59	72	2	HMI He	4767	0.02
Ni	60	72	2	HMI He	923	1.42
Cu	63	72	2	HMI He	3084	0.36
Zn	66	72	2	HMI He	857	1.24
As	75	72	2	HMI He	157	0.80
Se	78	72	1	HMI H2	31	201.00
Sr	88	45	2	HMI He	177	13.34
Zr	90	72	2	HMI He	310	10.03
Zr	90	72	1	HMI H2	1535	1.53
Nb	93	72	2	HMI He	5321	0.20
Mo	95	115	2	HMI He	197	21.99
Pd	105	115	2	HMI He	70	53.99
Ag	107	115	2	HMI He	173	1.92
Cd	111	115	2	HMI He	13	859.23
Sn	120	115	2	HMI He	633	1.04
Sb	121	115	2	HMI He	100	30.00
Ba	137	115	2	HMI He	110	46.01
W	182	165	2	HMI He	2280	0.24
Pt	195	165	2	HMI He	7	1299.04
Tl	205	165	2	HMI He	267	5.32
Pb	208	165	2	HMI He	777	1.74
Th	232	165	2	HMI He	1333	0.82
U	238	165	2	HMI He	77	19.65

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li-6 Internal Standard	6	1	HMI H2	640661	0.66
Sc (IS)	45	2	HMI He	3683202	1.30
Sc IS)	45	3	No Gas	97710586	1.01
Ge Internal Standard	72	1	HMI H2	20068360	2.26
Ge Internal Standard	72	2	HMI He	4425118	4.58
In Internal standard	115	2	HMI He	13821071	0.54
Ho-165	165	2	HMI He	32625871	2.08

Calibration Standard Report

Sample Table

Sample Name IC-5699925
 Data File Name 184CAL5.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 method
 Acq Date Time 2019-05-14T10:29:03-06:00
 Sample Type CalStd
 Level 2
 Dilution 1
 Comment
 ISTD Ref File Name 183CALB.d
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	IS	Tune Step	Tune Mode	CPS	%RSD
Li	7	45	1	HMI H2	133086	0.00
Li	7	45	3	No Gas	8530278	0.00
Be	9	6	1	HMI H2	28788	0.00
B	11	6	1	HMI H2	1430	0.43
Na	23	45	2	HMI He	1310837	0.00
Mg	24	45	2	HMI He	549501	0.00
Al	27	45	2	HMI He	163134	0.00
K	39	45	2	HMI He	609857	0.00
Ca	44	45	2	HMI He	40794	0.00
V	51	72	2	HMI He	436290	0.00
Cr	52	72	2	HMI He	543582	0.00
Mn	55	72	2	HMI He	256023	0.00
Fe	57	72	2	HMI He	207552	0.00
Co	59	72	2	HMI He	859239	0.00
Ni	60	72	2	HMI He	228789	0.00
Cu	63	72	2	HMI He	647933	0.00
Zn	66	72	2	HMI He	97813	0.00
As	75	72	2	HMI He	71255	0.00
Se	78	72	1	HMI H2	52191	0.00
Sr	88	45	2	HMI He	627213	0.00
Zr	90	72	2	HMI He	1670	0.82
Zr	90	72	1	HMI H2	4762	0.09
Nb	93	72	2	HMI He	1187766	0.00
Mo	95	115	2	HMI He	326465	0.00
Pd	105	115	2	HMI He	452363	0.00
Ag	107	115	2	HMI He	960887	0.00
Cd	111	115	2	HMI He	141884	0.00
Sn	120	115	2	HMI He	428948	0.00
Sb	121	115	2	HMI He	364866	0.00
Ba	137	115	2	HMI He	119747	0.00
W	182	165	2	HMI He	637556	0.00
Pt	195	165	2	HMI He	425714	0.00
Tl	205	165	2	HMI He	1074945	0.00
Pb	208	165	2	HMI He	1419800	0.00
Th	232	165	2	HMI He	1506331	0.00
U	238	165	2	HMI He	1577098	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	642330	0.27	640661	100.26	60	125	
Sc (IS)	45	2	HMI He	3744049	1.34	3683202	101.65	60	125	
Sc IS)	45	3	No Gas	96758262	1.62	97710586	99.03	60	120	
Ge Internal Standard	72	1	HMI H2	20344704	1.59	20068360	101.38	60	125	
Ge Internal Standard	72	2	HMI He	4388769	1.83	4425118	99.18	60	125	
In Internal standard	115	2	HMI He	13971377	1.56	13821071	101.09	60	125	
Ho-165	165	2	HMI He	32846751	3.16	32625871	100.68	60	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name CCV-5699926
 Data File Name 185_CCV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T10:32:34-06:00
 Sample Type CCV
 Dilution 1
 Comment
 ISTD Ref File Name 183CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	100.817	ppb	7.663	107239	100	100.8	90	110	
Li	7	3	45	99.068	ppb	15.747	6883717	100	99.1	90	110	
Be	9	1	6	48.613	ppb	1.155	14187	50	97.2	90	110	
B	11	1	6	36.522	ppb	13.068	827	50	73.0	90	110	>+ \-10%
Na	23	2	45	960.405	ppb	3.387	632908	1000	96.0	90	110	
Mg	24	2	45	993.876	ppb	2.593	265658	1000	99.4	90	110	
Al	27	2	45	1001.905	ppb	3.671	79453	1000	100.2	90	110	
K	39	2	45	1028.116	ppb	4.996	345154	1000	102.8	90	110	
Ca	44	2	45	969.547	ppb	4.242	19284	1000	97.0	90	110	
V	51	2	72	46.499	ppb	5.478	216409	50	93.0	90	110	
Cr	52	2	72	47.911	ppb	2.943	269903	50	95.8	90	110	
Mn	55	2	72	47.909	ppb	1.570	127031	50	95.8	90	110	
Fe	57	2	72	961.691	ppb	2.220	104144	1000	96.2	90	110	
Co	59	2	72	47.230	ppb	2.667	422141	50	94.5	90	110	
Ni	60	2	72	47.226	ppb	3.775	112184	50	94.5	90	110	
Cu	63	2	72	46.712	ppb	2.695	314591	50	93.4	90	110	
Zn	66	2	72	46.382	ppb	4.456	47355	50	92.8	90	110	
As	75	2	72	47.764	ppb	1.925	35269	50	95.5	90	110	
Se	78	1	72	50.959	ppb	0.580	26550	50	101.9	90	110	
Sr	88	2	45	100.184	ppb	2.351	304786	100	100.2	90	110	
Zr	90	2	72	27.083	ppb	36.643	700	50	54.2	90	110	>+ \-10%
Zr	90	1	72	23.518	ppb	20.252	2309	50	47.0	90	110	>+ \-10%
Nb	93	2	72	101.815	ppb	2.424	627664	100	101.8	90	110	
Mo	95	2	115	47.276	ppb	4.464	157941	50	94.6	90	110	
Pd	105	2	115	49.812	ppb	3.181	230495	50	99.6	90	110	
Ag	107	2	115	47.108	ppb	2.578	463098	50	94.2	90	110	
Cd	111	2	115	47.552	ppb	3.211	69005	50	95.1	90	110	
Sn	120	2	115	47.896	ppb	3.512	210474	50	95.8	90	110	
Sb	121	2	115	47.924	ppb	2.361	178902	50	95.8	90	110	
Ba	137	2	115	47.689	ppb	2.202	58470	50	95.4	90	110	
W	182	2	165	48.475	ppb	1.699	316829	50	97.0	90	110	
Pt	195	2	165	47.763	ppb	2.124	207804	50	95.5	90	110	
Tl	205	2	165	47.487	ppb	2.401	522169	50	95.0	90	110	
Pb	208	2	165	48.315	ppb	3.659	700441	50	96.6	90	110	
Th	232	2	165	48.824	ppb	1.826	751740	50	97.6	90	110	
U	238	2	165	48.264	ppb	1.669	778446	50	96.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	651129	0.97	640661	101.63	60	125	
Sc (IS)	45	2	HMI He	3631625	1.84	3683202	98.60	60	125	
Sc IS)	45	3	No Gas	97370750	0.92	97710586	99.65	60	120	
Ge Internal Standard	72	1	HMI H2	20295531	1.11	20068360	101.13	60	125	
Ge Internal Standard	72	2	HMI He	4536940	1.59	4425118	102.53	60	125	
In Internal standard	115	2	HMI He	14291393	2.38	13821071	103.40	60	125	
Ho-165	165	2	HMI He	33544406	1.90	32625871	102.82	60	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name CCB-5699924
 Data File Name 186_CCB.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T10:36:04-06:00
 Sample Type CCB
 Dilution 1
 Comment
 ISTD Ref File Name 183CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	1	45	10.261	ppb	30.9	84393	0.1	>RL
Li	7	3	45	2.815	ppb	318.7	5259584	0.05	>RL
Be	9	1	6	0.103	ppb	45.1	30	0.5	
B	11	1	6	-9.486	ppb	-77.1	373	0.1	
Na	23	2	45	-0.074	ppb	-5567.2	44405	25	
Mg	24	2	45	-0.836	ppb	-24.8	1437	25	
Al	27	2	45	0.078	ppb	1086.1	440	15	
K	39	2	45	8.127	ppb	151.5	89861	50	
Ca	44	2	45	0.506	ppb	858.5	223	25	
V	51	2	72	-0.186	ppb	-22.0	11797	1	
Cr	52	2	72	0.049	ppb	21.2	1597	1	
Mn	55	2	72	0.110	ppb	52.3	660	0.5	
Fe	57	2	72	3.720	ppb	14.6	2247	25	
Co	59	2	72	0.023	ppb	78.3	5084	0.5	
Ni	60	2	72	0.138	ppb	53.3	1273	1	
Cu	63	2	72	0.680	ppb	13.3	7678	1	
Zn	66	2	72	-0.095	ppb	-88.3	780	5	
As	75	2	72	0.002	ppb	284.3	162	1	
Se	78	1	72	0.051	ppb	29.1	57	1	
Sr	88	2	45	0.075	ppb	32.0	417	1	
Zr	90	2	72	1.278	ppb	237.6	337	1	>RL
Zr	90	1	72	-5.288	ppb	-83.4	1381	1	
Nb	93	2	72	5.325	ppb	5.5	37946	2	>RL
Mo	95	2	115	0.150	ppb	12.4	690	0.5	
Pd	105	2	115	0.089	ppb	28.4	473	1	
Ag	107	2	115	0.032	ppb	17.6	487	1	
Cd	111	2	115	0.038	ppb	13.7	67	0.5	
Sn	120	2	115	0.156	ppb	7.3	1310	1	
Sb	121	2	115	0.127	ppb	17.6	563	1	
Ba	137	2	115	0.094	ppb	76.8	223	0.5	
W	182	2	165	0.114	ppb	6.9	3100	1	
Pt	195	2	165	0.039	ppb	12.8	177	1	
Tl	205	2	165	0.044	ppb	5.6	763	0.1	
Pb	208	2	165	0.044	ppb	20.9	1440	0.5	
Th	232	2	165	0.148	ppb	14.0	3654	1	
U	238	2	165	0.065	ppb	4.6	1130	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	649463	1.51	640661	101.37	60	125	
Sc (IS)	45	2	HMI He	3765181	2.80	3683202	102.23	60	125	
Sc (IS)	45	3	No Gas	97312697	0.51	97710586	99.59	60	120	
Ge Internal Standard	72	1	HMI H2	20198509	1.27	20068360	100.65	60	125	
Ge Internal Standard	72	2	HMI He	4527834	1.24	4425118	102.32	60	125	
In Internal standard	115	2	HMI He	13995310	2.84	13821071	101.26	60	125	
Ho-165	165	2	HMI He	33654421	2.22	32625871	103.15	60	125	

Blank Report

Sample Table

Sample Name mb 280-457759/1-a
 Data File Name 187_BLK.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T10:39:50-06:00
 Sample Type Blank
 Dilution 1
 Comment 457759 200.8
 ISTD Ref File Name 183CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	6.528	ppb	30.49379886	83689	0.1
Li	7	3	45	-0.483	ppb	-857.8041047	5199070	0.05
Be	9	1	6	0.052	ppb	88.11076549	15	0.5
Na	23	2	45	1.438	ppb	126.4503411	44235	25
Mg	24	2	45	0.022	ppb	4899.222442	1627	25
Al	27	2	45	-0.171	ppb	-561.1541096	407	15
K	39	2	45	14.739	ppb	83.68843974	89238	50
Ca	44	2	45	4.943	ppb	21.04665535	307	25
V	51	2	72	0.260	ppb	32.85928873	13535	1
Cr	52	2	72	0.041	ppb	20.53714275	1527	1
Mn	55	2	72	0.278	ppb	8.378473296	1087	0.5
Fe	57	2	72	12.995	ppb	13.26336063	3184	25
Co	59	2	72	-0.013	ppb	-114.5822569	4694	0.5
Ni	60	2	72	-0.079	ppb	-23.21741353	750	1
Cu	63	2	72	-0.037	ppb	-30.24829369	2864	1
Zn	66	2	72	0.438	ppb	16.50042084	1293	5
As	75	2	72	-0.037	ppb	-42.73948949	131	1
Se	78	1	72	-0.018	ppb	-68.76272061	21	1
Sr	88	2	45	0.012	ppb	90.86417138	213	1
Zr	90	2	72	-3.178	ppb	-85.20528025	270	1
Zr	90	1	72	1.866	ppb	239.4498028	1625	1
Nb	93	2	72	2.971	ppb	11.47960057	23206	2
Mo	95	2	115	0.006	ppb	313.9856561	223	0.5
Pd	105	2	115	0.042	ppb	25.37425313	263	1
Ag	107	2	115	-0.002	ppb	-412.6514521	160	1
Cd	111	2	115	0.002	ppb	703.3585262	17	0.5
Sn	120	2	115	0.128	ppb	25.01539656	1210	1
Sb	121	2	115	0.046	ppb	50.88645298	273	1
Ba	137	2	115	0.092	ppb	113.2335833	223	0.5
W	182	2	165	0.023	ppb	46.23816868	2434	1
Pt	195	2	165	0.007	ppb	75.9702905	37	1
Tl	205	2	165	0.004	ppb	77.79716807	310	0.1
Pb	208	2	165	0.015	ppb	97.35491477	983	0.5
Th	232	2	165	0.095	ppb	15.32949518	2754	1
U	238	2	165	0.010	ppb	16.71074313	240	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	648718	0.70	640661	101.26	60	125	
Sc (IS)	45	2	HMI He	3667787	2.42	3683202	99.58	60	125	
Sc IS)	45	3	No Gas	97232280	0.36	97710586	99.51	60	120	
Ge Internal Standard	72	1	HMI H2	20403816	3.27	20068360	101.67	60	125	
Ge Internal Standard	72	2	HMI He	4458802	0.87	4425118	100.76	60	125	
In Internal standard	115	2	HMI He	14193094	2.49	13821071	102.69	60	125	
Ho-165	165	2	HMI He	32741949	4.49	32625871	100.36	60	125	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name lcs 280-457759/2-a
 Data File Name 188_LCS.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T10:43:26-06:00
 Sample Type LCS
 Dilution 1
 Analyst Denver Metals
 Comment 457759 200.8
 ISTD Ref File Name 183CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	62.634	62.634	ppb	13.397	6231472	400	15.7	80	120	> +/-20%
Be	9	1	6	30.597	30.597	ppb	2.417	8794	40	76.5	80	120	> +/-20%
Na	23	2	45	6.327	6.327	ppb	34.102	47079	40	15.8	80	120	> +/-20%
Mg	24	2	45	-0.353	-0.353	ppb	-137.156	1523	40	-0.9	80	120	> +/-20%
Al	27	2	45	306.392	306.392	ppb	3.645	24737	40	766.0	80	120	> +/-20%
K	39	2	45	-1.674	-1.674	ppb	-186.788	84743	40	-4.2	80	120	> +/-20%
Ca	44	2	45	103.171	103.171	ppb	4.157	2250	40	257.9	80	120	> +/-20%
V	51	2	72	29.709	29.709	ppb	3.486	140034	40	74.3	80	120	> +/-20%
Cr	52	2	72	30.287	30.287	ppb	1.801	167738	40	75.7	80	120	> +/-20%
Mn	55	2	72	30.721	30.721	ppb	3.271	79980	40	76.8	80	120	> +/-20%
Fe	57	2	72	336.148	336.148	ppb	0.923	36873	40	840.4	80	120	> +/-20%
Co	59	2	72	30.552	30.552	ppb	1.336	269409	40	76.4	80	120	> +/-20%
Ni	60	2	72	30.362	30.362	ppb	1.056	71046	40	75.9	80	120	> +/-20%
Cu	63	2	72	29.821	29.821	ppb	1.639	197992	40	74.6	80	120	> +/-20%
Zn	66	2	72	30.400	30.400	ppb	3.776	30724	40	76.0	80	120	> +/-20%
As	75	2	72	29.043	29.043	ppb	1.820	21084	40	72.6	80	120	> +/-20%
Se	78	1	72	30.482	30.482	ppb	4.598	15817	40	76.2	80	120	> +/-20%
Sr	88	2	45	31.055	31.055	ppb	3.762	95163	40	77.6	80	120	> +/-20%
Nb	93	2	72	2.324	2.324	ppb	10.399	19274	40	5.8	80	120	> +/-20%
Mo	95	2	115	29.418	29.418	ppb	2.789	97068	40	73.5	80	120	> +/-20%
Pd	105	2	115	0.031	0.031	ppb	57.951	213	40	0.1	80	120	> +/-20%
Ag	107	2	115	30.558	30.558	ppb	2.047	296497	40	76.4	80	120	> +/-20%
Cd	111	2	115	29.418	29.418	ppb	4.218	42124	40	73.5	80	120	> +/-20%
Sn	120	2	115	29.838	29.838	ppb	0.684	129688	40	74.6	80	120	> +/-20%
Sb	121	2	115	32.086	32.086	ppb	1.572	118224	40	80.2	80	120	> +/-20%
Ba	137	2	115	29.653	29.653	ppb	1.177	35918	40	74.1	80	120	> +/-20%
W	182	2	165	15.479	15.479	ppb	0.898	98235	40	38.7	80	120	> +/-20%
Pt	195	2	165	0.002	0.002	ppb	87.986	13	40	0.0	80	120	> +/-20%
Tl	205	2	165	29.881	29.881	ppb	4.051	313878	40	74.7	80	120	> +/-20%
Pb	208	2	165	29.717	29.717	ppb	2.724	412129	40	74.3	80	120	> +/-20%
Th	232	2	165	29.454	29.454	ppb	4.194	433975	40	73.6	80	120	> +/-20%
U	238	2	165	31.684	31.684	ppb	1.211	488453	40	79.2	80	120	> +/-20%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	641165	1.37	640661	100.08	60	125	
Sc (IS)	45	2	HMI He	3653230	1.25	3683202	99.19	60	125	
Sc IS)	45	3	No Gas	96790641	1.68	97710586	99.06	60	120	
Ge Internal Standard	72	1	HMI H2	20193201	1.14	20068360	100.62	60	125	
Ge Internal Standard	72	2	HMI He	4446983	1.20	4425118	100.49	60	125	
In Internal standard	115	2	HMI He	14100338	1.92	13821071	102.02	60	125	
Ho-165	165	2	HMI He	32058443	1.89	32625871	98.26	60	125	

Sample Report

Sample Table

Sample Name 280-123521-a-5-a
 Data File Name 189SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T10:46:59-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457759 200.8
 ISTD Ref FileName 183CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	3.658	ppb	3.658	125.16	5147504	40000	
Be	9	1	6	0.147	ppb	0.147	48.91	42	2000	
B	11	1	6	822.600	ppb	822.600	5.59	8285	100	>LDR
Na	23	2	45	58550.866	ppb	58550.866	2.22	35447386	400000	
Mg	24	2	45	8947.767	ppb	8947.767	0.49	2341042	400000	
Al	27	2	45	231.330	ppb	231.330	3.73	18370	400000	
K	39	2	45	1570.815	ppb	1570.815	1.12	475085	400000	
Ca	44	2	45	13419.347	ppb	13419.347	2.66	260030	400000	
V	51	2	72	1.364	ppb	1.364	11.79	18180	2000	
Cr	52	2	72	0.456	ppb	0.456	10.32	3794	5000	
Mn	55	2	72	236.307	ppb	236.307	2.75	610453	10000	
Fe	57	2	72	582.620	ppb	582.620	5.20	62315	400000	
Co	59	2	72	0.571	ppb	0.571	5.63	9706	2000	
Ni	60	2	72	1.277	ppb	1.277	9.81	3864	5000	
Cu	63	2	72	1.773	ppb	1.773	5.49	14626	5000	
Zn	66	2	72	8.868	ppb	8.868	4.82	9546	5000	
As	75	2	72	1.380	ppb	1.380	2.43	1148	2000	
Se	78	1	72	0.309	ppb	0.309	39.34	187	2000	
Sr	88	2	45	64.059	ppb	64.059	2.08	191835	2000	
Zr	90	2	72	127.239	ppb	127.239	7.09	2060	1000	
Zr	90	1	72	143.655	ppb	143.655	41.80	5990	1000	
Nb	93	2	72	1.462	ppb	1.462	19.42	14046	200	
Mo	95	2	115	5.480	ppb	5.480	5.45	17720	2000	
Pd	105	2	115	0.035	ppb	0.035	23.23	227	100	
Ag	107	2	115	0.018	ppb	0.018	70.32	347	100	
Cd	111	2	115	0.053	ppb	0.053	25.60	87	2000	
Sn	120	2	115	0.142	ppb	0.142	23.02	1227	2000	
Sb	121	2	115	0.173	ppb	0.173	11.48	717	1000	
Ba	137	2	115	19.916	ppb	19.916	1.95	23471	5000	
W	182	2	165	0.048	ppb	0.048	28.79	2547	100	
Pt	195	2	165	-0.001	ppb	-0.001	-176.83	3	100	
Tl	205	2	165	0.053	ppb	0.053	26.97	817	2000	
Pb	208	2	165	0.691	ppb	0.691	1.54	10358	5000	
Th	232	2	165	0.616	ppb	0.616	6.04	10384	2000	
U	238	2	165	0.582	ppb	0.582	1.20	9076	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	631373	0.96	640661	98.55	60	125	
Sc (IS)	45	2	HMI He	3573114	1.15	3683202	97.01	60	125	
Sc (IS)	45	3	No Gas	94992183	0.05	97710586	97.22	60	120	
Ge Internal Standard	72	1	HMI H2	19788740	0.48	20068360	98.61	60	125	
Ge Internal Standard	72	2	HMI He	4431960	2.64	4425118	100.15	60	125	
In Internal standard	115	2	HMI He	13699739	2.53	13821071	99.12	60	125	
Ho-165	165	2	HMI He	32140020	1.31	32625871	98.51	60	125	

Sample Report

Sample Table

Sample Name 280-123521-a-6-a
 Data File Name 190SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T10:50:32-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457759 200.8
 ISTD Ref FileName 183CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	0.586	ppb	0.586	925.98	5185973	40000	
Be	9	1	6	0.076	ppb	0.076	27.10	22	2000	
B	11	1	6	826.138	ppb	826.138	1.38	8339	100	>LDR
Na	23	2	45	59096.466	ppb	59096.466	4.06	35903005	400000	
Mg	24	2	45	8932.252	ppb	8932.252	4.08	2345293	400000	
Al	27	2	45	344.539	ppb	344.539	5.65	27245	400000	
K	39	2	45	1573.115	ppb	1573.115	6.27	477183	400000	
Ca	44	2	45	13302.925	ppb	13302.925	3.86	258743	400000	
V	51	2	72	1.317	ppb	1.317	10.98	17856	2000	
Cr	52	2	72	0.518	ppb	0.518	4.36	4104	5000	
Mn	55	2	72	194.146	ppb	194.146	2.22	498056	10000	
Fe	57	2	72	689.144	ppb	689.144	0.87	72883	400000	
Co	59	2	72	0.583	ppb	0.583	8.29	9743	2000	
Ni	60	2	72	1.411	ppb	1.411	11.48	4144	5000	
Cu	63	2	72	1.681	ppb	1.681	2.50	13929	5000	
Zn	66	2	72	8.460	ppb	8.460	4.89	9076	5000	
As	75	2	72	1.404	ppb	1.404	10.73	1156	2000	
Se	78	1	72	0.302	ppb	0.302	24.34	184	2000	
Sr	88	2	45	64.578	ppb	64.578	3.90	194109	2000	
Zr	90	2	72	119.910	ppb	119.910	3.24	1944	1000	
Zr	90	1	72	123.966	ppb	123.966	14.12	5417	1000	
Nb	93	2	72	1.008	ppb	1.008	15.35	11269	200	
Mo	95	2	115	5.621	ppb	5.621	1.76	17993	2000	
Pd	105	2	115	0.030	ppb	0.030	45.93	200	100	
Ag	107	2	115	0.004	ppb	0.004	70.68	207	100	
Cd	111	2	115	0.022	ppb	0.022	138.71	43	2000	
Sn	120	2	115	0.036	ppb	0.036	80.23	770	2000	
Sb	121	2	115	0.139	ppb	0.139	20.12	590	1000	
Ba	137	2	115	19.997	ppb	19.997	3.59	23308	5000	
W	182	2	165	-0.037	ppb	-0.037	-66.09	2037	100	
Pt	195	2	165	0.001	ppb	0.001	283.41	10	100	
Tl	205	2	165	0.015	ppb	0.015	45.03	427	2000	
Pb	208	2	165	0.632	ppb	0.632	6.46	9628	5000	
Th	232	2	165	0.211	ppb	0.211	6.86	4461	2000	
U	238	2	165	0.575	ppb	0.575	0.75	9050	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	633023	0.80	640661	98.81	60	125	
Sc (IS)	45	2	HMI He	3590221	4.74	3683202	97.48	60	125	
Sc (IS)	45	3	No Gas	96661299	1.08	97710586	98.93	60	120	
Ge Internal Standard	72	1	HMI H2	19901087	1.80	20068360	99.17	60	125	
Ge Internal Standard	72	2	HMI He	4398862	0.89	4425118	99.41	60	125	
In Internal standard	115	2	HMI He	13554459	3.07	13821071	98.07	60	125	
Ho-165	165	2	HMI He	32454354	2.46	32625871	99.47	60	125	

Sample Report

Sample Table

Sample Name 280-123521-a-9-a
 Data File Name 191SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T10:54:05-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457759 200.8
 ISTD Ref FileName 183CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	-2.096	ppb	-2.096	-420.97	5143633	40000	
Be	9	1	6	0.017	ppb	0.017	98.78	5	2000	
B	11	1	6	742.191	ppb	742.191	2.59	7522	100	>LDR
Na	23	2	45	48611.717	ppb	48611.717	2.81	29569078	400000	
Mg	24	2	45	13465.091	ppb	13465.091	4.83	3536981	400000	
Al	27	2	45	44.956	ppb	44.956	5.46	3917	400000	
K	39	2	45	1484.767	ppb	1484.767	2.22	455780	400000	
Ca	44	2	45	18711.252	ppb	18711.252	1.99	364257	400000	
V	51	2	72	0.610	ppb	0.610	21.79	14776	2000	
Cr	52	2	72	0.349	ppb	0.349	13.16	3174	5000	
Mn	55	2	72	56.419	ppb	56.419	2.02	144348	10000	
Fe	57	2	72	265.883	ppb	265.883	1.63	29095	400000	
Co	59	2	72	0.227	ppb	0.227	17.88	6668	2000	
Ni	60	2	72	1.747	ppb	1.747	8.74	4887	5000	
Cu	63	2	72	1.719	ppb	1.719	0.74	14118	5000	
Zn	66	2	72	19.369	ppb	19.369	5.45	19585	5000	
As	75	2	72	0.546	ppb	0.546	3.18	543	2000	
Se	78	1	72	0.149	ppb	0.149	45.21	108	2000	
Sr	88	2	45	93.264	ppb	93.264	1.87	280570	2000	
Zr	90	2	72	47.748	ppb	47.748	50.32	953	1000	
Zr	90	1	72	27.037	ppb	27.037	23.39	2419	1000	
Nb	93	2	72	0.558	ppb	0.558	24.50	8559	200	
Mo	95	2	115	2.637	ppb	2.637	2.82	8719	2000	
Pd	105	2	115	0.018	ppb	0.018	65.14	150	100	
Ag	107	2	115	-0.005	ppb	-0.005	-81.80	127	100	
Cd	111	2	115	0.007	ppb	0.007	56.08	23	2000	
Sn	120	2	115	0.056	ppb	0.056	79.98	873	2000	
Sb	121	2	115	0.248	ppb	0.248	20.31	997	1000	
Ba	137	2	115	21.888	ppb	21.888	2.75	26045	5000	
W	182	2	165	-0.040	ppb	-0.040	-5.34	1993	100	
Pt	195	2	165	0.002	ppb	0.002	333.88	13	100	
Tl	205	2	165	0.001	ppb	0.001	903.25	270	2000	
Pb	208	2	165	0.236	ppb	0.236	10.35	4020	5000	
Th	232	2	165	0.092	ppb	0.092	6.76	2657	2000	
U	238	2	165	4.595	ppb	4.595	3.06	70797	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	631910	2.46	640661	98.63	60	125	
Sc (IS)	45	2	HMI He	3590894	2.50	3683202	97.49	60	125	
Sc (IS)	45	3	No Gas	96761028	3.53	97710586	99.03	60	120	
Ge Internal Standard	72	1	HMI H2	20283377	0.84	20068360	101.07	60	125	
Ge Internal Standard	72	2	HMI He	4379785	1.33	4425118	98.98	60	125	
In Internal standard	115	2	HMI He	13835777	0.60	13821071	100.11	60	125	
Ho-165	165	2	HMI He	32016254	2.51	32625871	98.13	60	125	

Sample Report

Sample Table

Sample Name 280-123521-a-13-a
 Data File Name 192SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T10:57:37-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457759 200.8
 ISTD Ref FileName 183CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	4.994	ppb	4.994	167.74	5225754	40000	
Be	9	1	6	0.018	ppb	0.018	99.57	5	2000	
B	11	1	6	1855.295	ppb	1855.295	2.70	17896	100	>LDR
Na	23	2	45	44393.735	ppb	44393.735	1.79	27750126	400000	
Mg	24	2	45	21062.174	ppb	21062.174	3.18	5685138	400000	
Al	27	2	45	4.500	ppb	4.500	35.96	783	400000	
K	39	2	45	4396.367	ppb	4396.367	1.43	1218067	400000	
Ca	44	2	45	26318.804	ppb	26318.804	1.73	526299	400000	
V	51	2	72	0.497	ppb	0.497	23.98	14103	2000	
Cr	52	2	72	0.228	ppb	0.228	8.01	2480	5000	
Mn	55	2	72	2.364	ppb	2.364	1.37	6301	10000	
Fe	57	2	72	29.729	ppb	29.729	11.61	4774	400000	
Co	59	2	72	0.246	ppb	0.246	4.14	6728	2000	
Ni	60	2	72	2.489	ppb	2.489	9.82	6481	5000	
Cu	63	2	72	1.233	ppb	1.233	5.50	10830	5000	
Zn	66	2	72	16.442	ppb	16.442	4.70	16518	5000	
As	75	2	72	0.314	ppb	0.314	4.51	373	2000	
Se	78	1	72	0.487	ppb	0.487	8.90	283	2000	
Sr	88	2	45	183.510	ppb	183.510	1.18	567050	2000	
Zr	90	2	72	31.125	ppb	31.125	19.72	720	1000	
Zr	90	1	72	22.724	ppb	22.724	23.82	2269	1000	
Nb	93	2	72	0.389	ppb	0.389	18.32	7462	200	
Mo	95	2	115	22.557	ppb	22.557	0.83	71829	2000	
Pd	105	2	115	0.024	ppb	0.024	41.21	173	100	
Ag	107	2	115	-0.008	ppb	-0.008	-30.35	93	100	
Cd	111	2	115	0.027	ppb	0.027	48.92	50	2000	
Sn	120	2	115	0.116	ppb	0.116	25.85	1107	2000	
Sb	121	2	115	0.159	ppb	0.159	26.37	663	1000	
Ba	137	2	115	16.357	ppb	16.357	3.98	19162	5000	
W	182	2	165	0.011	ppb	0.011	231.91	2300	100	
Pt	195	2	165	0.004	ppb	0.004	94.45	23	100	
Tl	205	2	165	0.001	ppb	0.001	217.88	273	2000	
Pb	208	2	165	0.031	ppb	0.031	8.75	1187	5000	
Th	232	2	165	0.044	ppb	0.044	37.62	1940	2000	
U	238	2	165	0.936	ppb	0.936	2.94	14417	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	623863	0.65	640661	97.38	60	125	
Sc (IS)	45	2	HMI He	3688618	1.34	3683202	100.15	60	125	
Sc (IS)	45	3	No Gas	96029872	0.31	97710586	98.28	60	120	
Ge Internal Standard	72	1	HMI H2	20170567	1.81	20068360	100.51	60	125	
Ge Internal Standard	72	2	HMI He	4318181	1.14	4425118	97.58	60	125	
In Internal standard	115	2	HMI He	13595033	1.71	13821071	98.36	60	125	
Ho-165	165	2	HMI He	31894980	3.32	32625871	97.76	60	125	

Sample Report

Sample Table

Sample Name 280-123521-a-13-b.ms
 Data File Name 193SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T11:01:10-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457759 200.8
 ISTD Ref FileName 183CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	69.186	ppb	69.186	4.38	6212275	40000	
Be	9	1	6	32.160	ppb	32.160	1.17	8892	2000	
B	11	1	6	2791.195	ppb	2791.195	1.30	26403	100	>LDR
Na	23	2	45	45999.690	ppb	45999.690	2.07	28141531	400000	
Mg	24	2	45	21112.123	ppb	21112.123	2.45	5578219	400000	
Al	27	2	45	315.184	ppb	315.184	2.90	25138	400000	
K	39	2	45	4570.248	ppb	4570.248	2.99	1235768	400000	
Ca	44	2	45	27099.992	ppb	27099.992	1.87	530387	400000	
V	51	2	72	30.676	ppb	30.676	2.16	142291	2000	
Cr	52	2	72	30.073	ppb	30.073	1.38	164365	5000	
Mn	55	2	72	32.493	ppb	32.493	3.48	83443	10000	
Fe	57	2	72	336.335	ppb	336.335	1.07	36398	400000	
Co	59	2	72	30.920	ppb	30.920	0.41	268978	2000	
Ni	60	2	72	33.069	ppb	33.069	2.23	76268	5000	
Cu	63	2	72	30.734	ppb	30.734	1.31	201259	5000	
Zn	66	2	72	46.263	ppb	46.263	1.93	45701	5000	
As	75	2	72	30.294	ppb	30.294	0.77	21695	2000	
Se	78	1	72	31.819	ppb	31.819	4.55	16405	2000	
Sr	88	2	45	220.944	ppb	220.944	1.60	668095	2000	
Zr	90	2	72	87.152	ppb	87.152	5.00	1493	1000	
Zr	90	1	72	79.600	ppb	79.600	9.63	4055	1000	
Nb	93	2	72	0.331	ppb	0.331	45.48	7238	200	
Mo	95	2	115	53.824	ppb	53.824	2.25	172531	2000	
Pd	105	2	115	0.030	ppb	0.030	56.04	203	100	
Ag	107	2	115	31.317	ppb	31.317	1.10	295478	100	
Cd	111	2	115	30.968	ppb	30.968	3.74	43120	2000	
Sn	120	2	115	31.273	ppb	31.273	1.47	132097	2000	
Sb	121	2	115	33.360	ppb	33.360	3.99	119485	1000	
Ba	137	2	115	47.895	ppb	47.895	3.17	56328	5000	
W	182	2	165	16.431	ppb	16.431	4.15	100454	100	
Pt	195	2	165	0.009	ppb	0.009	88.79	43	100	
Tl	205	2	165	30.126	ppb	30.126	2.57	305416	2000	
Pb	208	2	165	28.858	ppb	28.858	2.70	386155	5000	
Th	232	2	165	27.262	ppb	27.262	3.18	387682	2000	
U	238	2	165	34.444	ppb	34.444	3.74	512220	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	616950	0.41	640661	96.30	60	125	
Sc (IS)	45	2	HMI He	3609805	0.32	3683202	98.01	60	125	
Sc (IS)	45	3	No Gas	94803572	1.00	97710586	97.02	60	120	
Ge Internal Standard	72	1	HMI H2	20080423	1.83	20068360	100.06	60	125	
Ge Internal Standard	72	2	HMI He	4387736	0.47	4425118	99.16	60	125	
In Internal standard	115	2	HMI He	13709372	1.60	13821071	99.19	60	125	
Ho-165	165	2	HMI He	30937978	2.57	32625871	94.83	60	125	

Sample Report

Sample Table

Sample Name 280-123521-a-13-c msd
 Data File Name 194SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T11:04:42-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457759 200.8
 ISTD Ref FileName 183CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	58.856	ppb	58.856	19.80	6226961	40000	
Be	9	1	6	34.196	ppb	34.196	2.51	9536	2000	
B	11	1	6	2927.508	ppb	2927.508	3.88	27885	100	>LDR
Na	23	2	45	47746.827	ppb	47746.827	3.15	29210646	400000	
Mg	24	2	45	22721.143	ppb	22721.143	3.94	6003096	400000	
Al	27	2	45	347.734	ppb	347.734	4.94	27705	400000	
K	39	2	45	4890.723	ppb	4890.723	4.56	1316570	400000	
Ca	44	2	45	28394.738	ppb	28394.738	1.13	555904	400000	
V	51	2	72	32.273	ppb	32.273	2.99	150849	2000	
Cr	52	2	72	32.586	ppb	32.586	5.03	180033	5000	
Mn	55	2	72	34.318	ppb	34.318	4.21	89148	10000	
Fe	57	2	72	364.466	ppb	364.466	3.09	39759	400000	
Co	59	2	72	31.992	ppb	31.992	3.29	281467	2000	
Ni	60	2	72	34.652	ppb	34.652	1.65	80851	5000	
Cu	63	2	72	33.031	ppb	33.031	4.63	218575	5000	
Zn	66	2	72	49.021	ppb	49.021	3.62	48946	5000	
As	75	2	72	31.639	ppb	31.639	3.16	22919	2000	
Se	78	1	72	33.268	ppb	33.268	2.84	17289	2000	
Sr	88	2	45	232.806	ppb	232.806	2.09	704126	2000	
Zr	90	2	72	84.493	ppb	84.493	13.96	1477	1000	
Zr	90	1	72	87.657	ppb	87.657	8.43	4345	1000	
Nb	93	2	72	0.090	ppb	0.090	134.72	5904	200	
Mo	95	2	115	57.204	ppb	57.204	3.30	182057	2000	
Pd	105	2	115	0.018	ppb	0.018	89.38	150	100	
Ag	107	2	115	32.953	ppb	32.953	1.56	308618	100	
Cd	111	2	115	32.934	ppb	32.934	2.48	45534	2000	
Sn	120	2	115	33.058	ppb	33.058	2.11	138582	2000	
Sb	121	2	115	35.558	ppb	35.558	2.63	126451	1000	
Ba	137	2	115	50.682	ppb	50.682	1.89	59176	5000	
W	182	2	165	17.760	ppb	17.760	4.75	110750	100	
Pt	195	2	165	0.006	ppb	0.006	112.21	30	100	
Tl	205	2	165	31.837	ppb	31.837	1.16	329701	2000	
Pb	208	2	165	29.613	ppb	29.613	3.46	404766	5000	
Th	232	2	165	28.846	ppb	28.846	0.41	418895	2000	
U	238	2	165	35.225	ppb	35.225	1.89	535172	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	622024	1.81	640661	97.09	60	125	
Sc (IS)	45	2	HMI He	3611124	1.61	3683202	98.04	60	125	
Sc (IS)	45	3	No Gas	97725087	2.01	97710586	100.01	60	120	
Ge Internal Standard	72	1	HMI H2	20237420	1.99	20068360	100.84	60	125	
Ge Internal Standard	72	2	HMI He	4442515	3.12	4425118	100.39	60	125	
In Internal standard	115	2	HMI He	13608734	0.83	13821071	98.46	60	125	
Ho-165	165	2	HMI He	31591192	0.28	32625871	96.83	60	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name CCV-5699926
 Data File Name 195_CCV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T11:08:13-06:00
 Sample Type CCV
 Dilution 1
 Comment
 ISTD Ref File Name 183CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	96.792	ppb	16.399	107232	100	96.8	90	110	
Li	7	3	45	93.673	ppb	8.759	6765132	100	93.7	90	110	
Be	9	1	6	48.274	ppb	1.852	13879	50	96.5	90	110	
B	11	1	6	131.691	ppb	16.015	1733	50	263.4	90	110	>+ \-10%
Na	23	2	45	1000.344	ppb	2.130	673870	1000	100.0	90	110	
Mg	24	2	45	975.326	ppb	2.562	267214	1000	97.5	90	110	
Al	27	2	45	972.952	ppb	3.515	79088	1000	97.3	90	110	
K	39	2	45	973.663	ppb	3.380	339633	1000	97.4	90	110	
Ca	44	2	45	1010.053	ppb	5.447	20582	1000	101.0	90	110	
V	51	2	72	46.332	ppb	2.979	212042	50	92.7	90	110	
Cr	52	2	72	47.669	ppb	3.263	263971	50	95.3	90	110	
Mn	55	2	72	47.532	ppb	5.580	123808	50	95.1	90	110	
Fe	57	2	72	958.800	ppb	3.828	102041	1000	95.9	90	110	
Co	59	2	72	47.897	ppb	1.415	420813	50	95.8	90	110	
Ni	60	2	72	48.437	ppb	1.487	113103	50	96.9	90	110	
Cu	63	2	72	47.010	ppb	3.101	311135	50	94.0	90	110	
Zn	66	2	72	46.737	ppb	1.316	46914	50	93.5	90	110	
As	75	2	72	48.749	ppb	3.024	35373	50	97.5	90	110	
Se	78	1	72	50.537	ppb	1.561	26426	50	101.1	90	110	
Sr	88	2	45	98.244	ppb	2.324	306324	100	98.2	90	110	
Zr	90	2	72	65.112	ppb	4.361	1213	50	130.2	90	110	>+ \-10%
Zr	90	1	72	44.006	ppb	15.471	2977	50	88.0	90	110	>+ \-10%
Nb	93	2	72	90.117	ppb	5.798	546387	100	90.1	90	110	
Mo	95	2	115	47.928	ppb	2.976	158232	50	95.9	90	110	
Pd	105	2	115	50.288	ppb	3.653	229900	50	100.6	90	110	
Ag	107	2	115	47.380	ppb	4.038	460132	50	94.8	90	110	
Cd	111	2	115	47.143	ppb	2.351	67613	50	94.3	90	110	
Sn	120	2	115	47.747	ppb	2.509	207347	50	95.5	90	110	
Sb	121	2	115	47.943	ppb	0.408	176878	50	95.9	90	110	
Ba	137	2	115	48.365	ppb	2.628	58584	50	96.7	90	110	
W	182	2	165	49.388	ppb	3.541	307457	50	98.8	90	110	
Pt	195	2	165	49.450	ppb	3.818	204925	50	98.9	90	110	
Tl	205	2	165	49.847	ppb	3.244	521981	50	99.7	90	110	
Pb	208	2	165	46.012	ppb	4.259	635561	50	92.0	90	110	
Th	232	2	165	48.803	ppb	3.602	715847	50	97.6	90	110	
U	238	2	165	49.448	ppb	1.893	759912	50	98.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	641512	1.07	640661	100.13	60	125	
Sc (IS)	45	2	HMI He	3721971	2.15	3683202	101.05	60	125	
Sc IS)	45	3	No Gas	96971216	0.91	97710586	99.24	60	120	
Ge Internal Standard	72	1	HMI H2	20373875	2.37	20068360	101.52	60	125	
Ge Internal Standard	72	2	HMI He	4460312	2.62	4425118	100.80	60	125	
In Internal standard	115	2	HMI He	14120287	2.04	13821071	102.16	60	125	
Ho-165	165	2	HMI He	31964691	2.19	32625871	97.97	60	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name CCB-5699924
 Data File Name 196_CCB.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T11:11:46-06:00
 Sample Type CCB
 Dilution 1
 Comment
 ISTD Ref File Name 183CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	1	45	6.204	ppb	59.3	83261	0.1	>RL
Li	7	3	45	-0.652	ppb	-863.7	5209255	0.05	
Be	9	1	6	0.098	ppb	90.2	28	0.5	
B	11	1	6	24.091	ppb	39.7	697	0.1	>RL
Na	23	2	45	23.121	ppb	13.7	59001	25	
Mg	24	2	45	1.994	ppb	20.3	2210	25	
Al	27	2	45	0.882	ppb	85.6	503	15	
K	39	2	45	8.162	ppb	87.0	89580	50	
Ca	44	2	45	0.850	ppb	383.0	230	25	
V	51	2	72	-0.186	ppb	-10.3	11644	1	
Cr	52	2	72	0.031	ppb	29.5	1480	1	
Mn	55	2	72	0.076	ppb	49.6	563	0.5	
Fe	57	2	72	3.103	ppb	58.6	2154	25	
Co	59	2	72	0.018	ppb	71.3	4981	0.5	
Ni	60	2	72	0.097	ppb	37.0	1160	1	
Cu	63	2	72	0.624	ppb	12.4	7208	1	
Zn	66	2	72	-0.085	ppb	-213.2	780	5	
As	75	2	72	0.068	ppb	48.2	208	1	
Se	78	1	72	0.042	ppb	98.7	52	1	
Sr	88	2	45	0.064	ppb	17.2	380	1	
Zr	90	2	72	16.511	ppb	27.5	543	1	>RL
Zr	90	1	72	10.495	ppb	59.1	1885	1	>RL
Nb	93	2	72	3.259	ppb	3.8	25005	2	>RL
Mo	95	2	115	0.118	ppb	27.7	583	0.5	
Pd	105	2	115	0.049	ppb	17.4	290	1	
Ag	107	2	115	0.027	ppb	21.9	437	1	
Cd	111	2	115	0.031	ppb	74.7	57	0.5	
Sn	120	2	115	0.097	ppb	81.6	1057	1	
Sb	121	2	115	0.133	ppb	19.9	587	1	
Ba	137	2	115	0.068	ppb	111.2	193	0.5	
W	182	2	165	0.118	ppb	43.1	2980	1	
Pt	195	2	165	0.020	ppb	40.4	90	1	
Tl	205	2	165	0.040	ppb	19.8	687	0.1	
Pb	208	2	165	0.046	ppb	8.7	1407	0.5	
Th	232	2	165	0.185	ppb	12.5	4031	1	
U	238	2	165	0.059	ppb	4.2	993	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	643815	0.85	640661	100.49	60	125	
Sc (IS)	45	2	HMI He	3751012	1.97	3683202	101.84	60	125	
Sc (IS)	45	3	No Gas	97482043	0.74	97710586	99.77	60	120	
Ge Internal Standard	72	1	HMI H2	20196402	1.19	20068360	100.64	60	125	
Ge Internal Standard	72	2	HMI He	4468556	0.40	4425118	100.98	60	125	
In Internal standard	115	2	HMI He	13960143	0.88	13821071	101.01	60	125	
Ho-165	165	2	HMI He	32173619	4.15	32625871	98.61	60	125	

Sample Report

Sample Table

Sample Name 280-123521-a-16-a
 Data File Name 197SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T11:15:19-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457759 200.8
 ISTD Ref FileName 183CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	2.203	ppb	2.203	134.41	5195412	40000	
Be	9	1	6	0.036	ppb	0.036	51.10	10	2000	
B	11	1	6	888.524	ppb	888.524	1.84	8796	100	>LDR
Na	23	2	45	30728.045	ppb	30728.045	1.07	19210785	400000	
Mg	24	2	45	15795.485	ppb	15795.485	2.54	4261663	400000	
Al	27	2	45	285.501	ppb	285.501	4.14	23290	400000	
K	39	2	45	1943.897	ppb	1943.897	0.83	586185	400000	
Ca	44	2	45	19442.805	ppb	19442.805	1.85	388614	400000	
V	51	2	72	0.921	ppb	0.921	23.43	16218	2000	
Cr	52	2	72	0.841	ppb	0.841	4.57	5878	5000	
Mn	55	2	72	172.293	ppb	172.293	2.12	443595	10000	
Fe	57	2	72	459.837	ppb	459.837	3.59	49420	400000	
Co	59	2	72	0.790	ppb	0.790	9.95	11561	2000	
Ni	60	2	72	1.795	ppb	1.795	4.87	5037	5000	
Cu	63	2	72	1.197	ppb	1.197	1.96	10844	5000	
Zn	66	2	72	17.486	ppb	17.486	1.67	17909	5000	
As	75	2	72	0.901	ppb	0.901	4.54	801	2000	
Se	78	1	72	0.180	ppb	0.180	10.67	123	2000	
Sr	88	2	45	112.223	ppb	112.223	2.23	346598	2000	
Zr	90	2	72	105.791	ppb	105.791	6.06	1757	1000	
Zr	90	1	72	146.864	ppb	146.864	56.30	6131	1000	
Nb	93	2	72	1.890	ppb	1.890	13.98	16565	200	
Mo	95	2	115	2.162	ppb	2.162	10.25	7092	2000	
Pd	105	2	115	0.032	ppb	0.032	49.73	210	100	
Ag	107	2	115	0.001	ppb	0.001	314.41	180	100	
Cd	111	2	115	0.039	ppb	0.039	9.53	67	2000	
Sn	120	2	115	0.173	ppb	0.173	22.32	1350	2000	
Sb	121	2	115	0.219	ppb	0.219	15.99	880	1000	
Ba	137	2	115	29.592	ppb	29.592	5.59	34722	5000	
W	182	2	165	0.023	ppb	0.023	231.36	2370	100	
Pt	195	2	165	0.003	ppb	0.003	126.11	20	100	
Tl	205	2	165	0.035	ppb	0.035	35.61	627	2000	
Pb	208	2	165	0.552	ppb	0.552	5.95	8378	5000	
Th	232	2	165	0.279	ppb	0.279	6.91	5398	2000	
U	238	2	165	3.356	ppb	3.356	2.33	51617	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	623113	1.56	640661	97.26	60	125	
Sc (IS)	45	2	HMI He	3686325	1.14	3683202	100.08	60	125	
Sc (IS)	45	3	No Gas	96323528	0.41	97710586	98.58	60	120	
Ge Internal Standard	72	1	HMI H2	20020080	1.93	20068360	99.76	60	125	
Ge Internal Standard	72	2	HMI He	4414779	1.18	4425118	99.77	60	125	
In Internal standard	115	2	HMI He	13660835	1.20	13821071	98.84	60	125	
Ho-165	165	2	HMI He	31937865	1.79	32625871	97.89	60	125	

Sample Report

Sample Table

Sample Name 280-123521-a-20-a
 Data File Name 198SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T11:18:51-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457759 200.8
 ISTD Ref FileName 183CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	4.591	ppb	4.591	65.58	5237688	40000	
Be	9	1	6	0.012	ppb	0.012	173.21	3	2000	
B	11	1	6	900.671	ppb	900.671	7.76	8976	100	>LDR
Na	23	2	45	31745.747	ppb	31745.747	4.86	19718360	400000	
Mg	24	2	45	14342.420	ppb	14342.420	4.39	3845534	400000	
Al	27	2	45	128.042	ppb	128.042	6.66	10623	400000	
K	39	2	45	1668.104	ppb	1668.104	3.09	512071	400000	
Ca	44	2	45	19239.792	ppb	19239.792	1.70	382343	400000	
V	51	2	72	0.484	ppb	0.484	27.02	14376	2000	
Cr	52	2	72	0.371	ppb	0.371	15.07	3317	5000	
Mn	55	2	72	159.658	ppb	159.658	0.89	411701	10000	
Fe	57	2	72	285.120	ppb	285.120	1.23	31362	400000	
Co	59	2	72	0.589	ppb	0.589	11.19	9836	2000	
Ni	60	2	72	1.212	ppb	1.212	7.51	3710	5000	
Cu	63	2	72	0.929	ppb	0.929	5.02	9116	5000	
Zn	66	2	72	15.816	ppb	15.816	4.41	16301	5000	
As	75	2	72	0.570	ppb	0.570	7.05	565	2000	
Se	78	1	72	0.164	ppb	0.164	23.28	113	2000	
Sr	88	2	45	101.817	ppb	101.817	4.84	312448	2000	
Zr	90	2	72	119.949	ppb	119.949	91.86	1948	1000	
Zr	90	1	72	65.843	ppb	65.843	9.64	3564	1000	
Nb	93	2	72	1.001	ppb	1.001	26.96	11267	200	
Mo	95	2	115	1.882	ppb	1.882	9.55	6361	2000	
Pd	105	2	115	0.011	ppb	0.011	58.19	120	100	
Ag	107	2	115	-0.006	ppb	-0.006	-67.81	120	100	
Cd	111	2	115	0.009	ppb	0.009	193.44	27	2000	
Sn	120	2	115	0.057	ppb	0.057	63.21	887	2000	
Sb	121	2	115	0.177	ppb	0.177	7.01	750	1000	
Ba	137	2	115	26.270	ppb	26.270	4.40	31619	5000	
W	182	2	165	0.003	ppb	0.003	742.62	2314	100	
Pt	195	2	165	0.002	ppb	0.002	230.38	13	100	
Tl	205	2	165	0.005	ppb	0.005	84.99	317	2000	
Pb	208	2	165	0.221	ppb	0.221	4.82	3907	5000	
Th	232	2	165	0.109	ppb	0.109	7.22	2970	2000	
U	238	2	165	1.616	ppb	1.616	7.58	25482	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	627933	0.33	640661	98.01	60	125	
Sc (IS)	45	2	HMI He	3665895	3.14	3683202	99.53	60	125	
Sc (IS)	45	3	No Gas	96370836	0.58	97710586	98.63	60	120	
Ge Internal Standard	72	1	HMI H2	19756337	0.27	20068360	98.45	60	125	
Ge Internal Standard	72	2	HMI He	4420912	1.93	4425118	99.90	60	125	
In Internal standard	115	2	HMI He	14011730	2.35	13821071	101.38	60	125	
Ho-165	165	2	HMI He	32746192	3.33	32625871	100.37	60	125	

Sample Report

Sample Table

Sample Name 280-123521-a-20-b.ms
 Data File Name 199SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T11:22:25-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457759 200.8
 ISTD Ref FileName 183CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	59.758	ppb	59.758	10.40	6191062	40000	
Be	9	1	6	32.397	ppb	32.397	3.76	9016	2000	
B	11	1	6	1743.569	ppb	1743.569	5.36	16765	100	>LDR
Na	23	2	45	32612.386	ppb	32612.386	2.88	20252976	400000	
Mg	24	2	45	14476.668	ppb	14476.668	1.57	3882113	400000	
Al	27	2	45	452.068	ppb	452.068	1.97	36401	400000	
K	39	2	45	1690.714	ppb	1690.714	2.81	517563	400000	
Ca	44	2	45	19537.007	ppb	19537.007	2.09	387964	400000	
V	51	2	72	30.794	ppb	30.794	2.30	143511	2000	
Cr	52	2	72	30.770	ppb	30.770	2.02	168977	5000	
Mn	55	2	72	194.258	ppb	194.258	3.05	499541	10000	
Fe	57	2	72	626.788	ppb	626.788	1.67	66610	400000	
Co	59	2	72	30.838	ppb	30.838	2.41	269608	2000	
Ni	60	2	72	31.211	ppb	31.211	1.19	72398	5000	
Cu	63	2	72	30.825	ppb	30.825	0.92	202873	5000	
Zn	66	2	72	46.851	ppb	46.851	2.34	46513	5000	
As	75	2	72	30.063	ppb	30.063	1.16	21640	2000	
Se	78	1	72	31.176	ppb	31.176	1.02	16052	2000	
Sr	88	2	45	136.792	ppb	136.792	2.50	419811	2000	
Zr	90	2	72	125.989	ppb	125.989	10.74	2030	1000	
Zr	90	1	72	136.269	ppb	136.269	8.56	5834	1000	
Nb	93	2	72	0.643	ppb	0.643	24.22	9129	200	
Mo	95	2	115	33.029	ppb	33.029	2.51	106143	2000	
Pd	105	2	115	0.025	ppb	0.025	13.83	180	100	
Ag	107	2	115	31.424	ppb	31.424	3.54	296945	100	
Cd	111	2	115	31.403	ppb	31.403	0.48	43823	2000	
Sn	120	2	115	31.092	ppb	31.092	0.97	131610	2000	
Sb	121	2	115	32.784	ppb	32.784	2.34	117699	1000	
Ba	137	2	115	56.603	ppb	56.603	4.24	66665	5000	
W	182	2	165	15.707	ppb	15.707	1.76	100019	100	
Pt	195	2	165	0.006	ppb	0.006	84.26	33	100	
Tl	205	2	165	28.775	ppb	28.775	7.61	303307	2000	
Pb	208	2	165	29.016	ppb	29.016	4.80	403831	5000	
Th	232	2	165	28.458	ppb	28.458	1.75	421116	2000	
U	238	2	165	33.598	ppb	33.598	5.04	520062	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	620902	0.35	640661	96.92	60	125	
Sc (IS)	45	2	HMI He	3662958	1.95	3683202	99.45	60	125	
Sc (IS)	45	3	No Gas	96876729	1.50	97710586	99.15	60	120	
Ge Internal Standard	72	1	HMI H2	20040574	1.05	20068360	99.86	60	125	
Ge Internal Standard	72	2	HMI He	4410018	1.08	4425118	99.66	60	125	
In Internal standard	115	2	HMI He	13735319	1.77	13821071	99.38	60	125	
Ho-165	165	2	HMI He	32185396	2.09	32625871	98.65	60	125	

Sample Report

Sample Table

Sample Name 280-123521-a-20-c msd
 Data File Name 200SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T11:26:17-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457759 200.8
 ISTD Ref FileName 183CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	57.872	ppb	57.872	4.11	6116822	40000	
Be	9	1	6	31.491	ppb	31.491	2.16	8927	2000	
B	11	1	6	1685.213	ppb	1685.213	1.35	16521	100	>LDR
Na	23	2	45	33218.929	ppb	33218.929	3.94	20223001	400000	
Mg	24	2	45	14961.464	ppb	14961.464	2.23	3933222	400000	
Al	27	2	45	481.478	ppb	481.478	4.41	37971	400000	
K	39	2	45	1740.073	ppb	1740.073	3.57	519891	400000	
Ca	44	2	45	19932.754	ppb	19932.754	1.71	388196	400000	
V	51	2	72	29.788	ppb	29.788	2.90	142140	2000	
Cr	52	2	72	29.390	ppb	29.390	4.11	164811	5000	
Mn	55	2	72	189.238	ppb	189.238	3.88	496780	10000	
Fe	57	2	72	615.972	ppb	615.972	5.94	66825	400000	
Co	59	2	72	29.717	ppb	29.717	2.95	265416	2000	
Ni	60	2	72	29.698	ppb	29.698	1.40	70399	5000	
Cu	63	2	72	29.114	ppb	29.114	3.11	195770	5000	
Zn	66	2	72	44.259	ppb	44.259	2.49	44898	5000	
As	75	2	72	28.481	ppb	28.481	2.83	20936	2000	
Se	78	1	72	30.011	ppb	30.011	3.41	15591	2000	
Sr	88	2	45	136.001	ppb	136.001	2.71	409269	2000	
Zr	90	2	72	146.962	ppb	146.962	24.15	2360	1000	
Zr	90	1	72	118.426	ppb	118.426	14.70	5313	1000	
Nb	93	2	72	0.315	ppb	0.315	4.81	7332	200	
Mo	95	2	115	32.544	ppb	32.544	1.26	105097	2000	
Pd	105	2	115	0.016	ppb	0.016	76.66	140	100	
Ag	107	2	115	30.761	ppb	30.761	1.14	292132	100	
Cd	111	2	115	29.252	ppb	29.252	3.98	41004	2000	
Sn	120	2	115	29.840	ppb	29.840	2.61	126928	2000	
Sb	121	2	115	31.134	ppb	31.134	1.17	112294	1000	
Ba	137	2	115	55.662	ppb	55.662	1.94	65897	5000	
W	182	2	165	14.915	ppb	14.915	1.51	96745	100	
Pt	195	2	165	0.006	ppb	0.006	114.77	33	100	
Tl	205	2	165	28.648	ppb	28.648	1.68	307513	2000	
Pb	208	2	165	27.509	ppb	27.509	4.50	389842	5000	
Th	232	2	165	27.928	ppb	27.928	2.96	420306	2000	
U	238	2	165	32.095	ppb	32.095	1.55	505359	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	632479	0.86	640661	98.72	60	125	
Sc (IS)	45	2	HMI He	3592642	2.94	3683202	97.54	60	125	
Sc (IS)	45	3	No Gas	96219397	1.05	97710586	98.47	60	120	
Ge Internal Standard	72	1	HMI H2	20219371	2.58	20068360	100.75	60	125	
Ge Internal Standard	72	2	HMI He	4503950	2.69	4425118	101.78	60	125	
In Internal standard	115	2	HMI He	13799178	0.85	13821071	99.84	60	125	
Ho-165	165	2	HMI He	32740198	0.72	32625871	100.35	60	125	

Sample Report

Sample Table

Sample Name 280-123521-a-23-a
 Data File Name 201SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T11:29:50-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457759 200.8
 ISTD Ref FileName 183CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	10.923	ppb	10.923	61.17	4913769	40000	
Be	9	1	6	0.115	ppb	0.115	33.68	30	2000	
B	11	1	6	1286.268	ppb	1286.268	3.79	11721	100	>LDR
Na	23	2	45	34035.326	ppb	34035.326	2.36	19479019	400000	
Mg	24	2	45	18069.833	ppb	18069.833	1.63	4464281	400000	
Al	27	2	45	23.723	ppb	23.723	5.68	2127	400000	
K	39	2	45	2052.671	ppb	2052.671	1.85	562328	400000	
Ca	44	2	45	23498.611	ppb	23498.611	1.25	430060	400000	
V	51	2	72	0.667	ppb	0.667	43.03	14169	2000	
Cr	52	2	72	1.286	ppb	1.286	2.70	7775	5000	
Mn	55	2	72	148.366	ppb	148.366	0.94	357735	10000	
Fe	57	2	72	374.282	ppb	374.282	0.96	37965	400000	
Co	59	2	72	0.350	ppb	0.350	10.15	7275	2000	
Ni	60	2	72	1.031	ppb	1.031	3.09	3077	5000	
Cu	63	2	72	1.736	ppb	1.736	6.82	13419	5000	
Zn	66	2	72	42.754	ppb	42.754	3.25	39839	5000	
As	75	2	72	0.719	ppb	0.719	14.62	628	2000	
Se	78	1	72	0.591	ppb	0.591	18.58	309	2000	
Sr	88	2	45	139.298	ppb	139.298	0.48	393958	2000	
Zr	90	2	72	12.926	ppb	12.926	12.88	457	1000	
Zr	90	1	72	22.556	ppb	22.556	34.80	2082	1000	
Nb	93	2	72	0.049	ppb	0.049	172.65	5251	200	
Mo	95	2	115	3.105	ppb	3.105	5.92	9506	2000	
Pd	105	2	115	0.016	ppb	0.016	56.20	130	100	
Ag	107	2	115	0.026	ppb	0.026	43.46	387	100	
Cd	111	2	115	0.098	ppb	0.098	14.91	140	2000	
Sn	120	2	115	0.088	ppb	0.088	69.79	933	2000	
Sb	121	2	115	0.442	ppb	0.442	12.22	1577	1000	
Ba	137	2	115	25.276	ppb	25.276	1.57	27949	5000	
W	182	2	165	0.037	ppb	0.037	52.53	2324	100	
Pt	195	2	165	0.002	ppb	0.002	214.21	13	100	
Tl	205	2	165	0.072	ppb	0.072	38.38	953	2000	
Pb	208	2	165	0.355	ppb	0.355	2.83	5327	5000	
Th	232	2	165	0.673	ppb	0.673	4.90	10527	2000	
U	238	2	165	2.312	ppb	2.312	3.19	33512	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	582939	0.59	640661	90.99	60	125	
Sc (IS)	45	2	HMI He	3375589	1.49	3683202	91.65	60	125	
Sc (IS)	45	3	No Gas	88629825	1.14	97710586	90.71	60	120	
Ge Internal Standard	72	1	HMI H2	18573064	1.98	20068360	92.55	60	125	
Ge Internal Standard	72	2	HMI He	4133459	1.12	4425118	93.41	60	125	
In Internal standard	115	2	HMI He	12866130	2.69	13821071	93.09	60	125	
Ho-165	165	2	HMI He	30102388	3.25	32625871	92.27	60	125	

Sample Report

Sample Table

Sample Name LCSD 280-457010/3-A
 Data File Name 202SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T11:33:21-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457010 200.8
 ISTD Ref FileName 183CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	75.263	ppb	75.263	5.37	5991454	40000	
Be	9	1	6	42.137	ppb	42.137	4.48	11152	2000	
B	11	1	6	1180.478	ppb	1180.478	3.44	10933	100	>LDR
Na	23	2	45	74.502	ppb	74.502	5.26	83608	400000	
Mg	24	2	45	20.715	ppb	20.715	8.97	6701	400000	
Al	27	2	45	442.234	ppb	442.234	4.25	33278	400000	
K	39	2	45	46.044	ppb	46.044	24.90	90796	400000	
Ca	44	2	45	179.307	ppb	179.307	7.32	3520	400000	
V	51	2	72	41.085	ppb	41.085	3.66	174894	2000	
Cr	52	2	72	41.632	ppb	41.632	3.53	213037	5000	
Mn	55	2	72	42.123	ppb	42.123	1.67	101404	10000	
Fe	57	2	72	415.282	ppb	415.282	3.17	41764	400000	
Co	59	2	72	41.830	ppb	41.830	2.23	339859	2000	
Ni	60	2	72	42.276	ppb	42.276	0.80	91279	5000	
Cu	63	2	72	40.738	ppb	40.738	1.45	249419	5000	
Zn	66	2	72	42.220	ppb	42.220	3.02	39195	5000	
As	75	2	72	39.547	ppb	39.547	1.54	26528	2000	
Se	78	1	72	41.431	ppb	41.431	1.75	20145	2000	
Sr	88	2	45	44.269	ppb	44.269	0.55	127100	2000	
Zr	90	2	72	493.141	ppb	493.141	10.91	6578	1000	
Zr	90	1	72	498.383	ppb	498.383	2.29	16304	1000	
Nb	93	2	72	-0.020	ppb	-0.020	-441.99	4847	200	
Mo	95	2	115	43.268	ppb	43.268	2.84	127714	2000	
Pd	105	2	115	0.010	ppb	0.010	93.75	103	100	
Ag	107	2	115	43.498	ppb	43.498	3.34	377663	100	
Cd	111	2	115	42.107	ppb	42.107	4.57	53962	2000	
Sn	120	2	115	43.455	ppb	43.455	0.77	168785	2000	
Sb	121	2	115	44.548	ppb	44.548	1.24	146934	1000	
Ba	137	2	115	42.985	ppb	42.985	0.94	46570	5000	
W	182	2	165	35.339	ppb	35.339	1.63	204940	100	
Pt	195	2	165	0.003	ppb	0.003	144.90	17	100	
Tl	205	2	165	39.110	ppb	39.110	3.81	380416	2000	
Pb	208	2	165	39.550	ppb	39.550	2.09	507682	5000	
Th	232	2	165	39.681	ppb	39.681	4.31	540585	2000	
U	238	2	165	43.513	ppb	43.513	1.90	620971	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	590517	0.68	640661	92.17	60	125	
Sc (IS)	45	2	HMI He	3424111	2.37	3683202	92.97	60	125	
Sc (IS)	45	3	No Gas	89985780	1.21	97710586	92.09	60	120	
Ge Internal Standard	72	1	HMI H2	18936753	0.37	20068360	94.36	60	125	
Ge Internal Standard	72	2	HMI He	4117927	2.41	4425118	93.06	60	125	
In Internal standard	115	2	HMI He	12620683	1.73	13821071	91.31	60	125	
Ho-165	165	2	HMI He	29683234	2.52	32625871	90.98	60	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name CCV-5699926
 Data File Name 203_CCV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T11:36:56-06:00
 Sample Type CCV
 Dilution 1
 Comment
 ISTD Ref File Name 183CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	98.707	ppb	8.046	100330	100	98.7	90	110	
Li	7	3	45	101.489	ppb	6.461	6437340	100	101.5	90	110	
Be	9	1	6	50.888	ppb	2.596	13784	50	101.8	90	110	
B	11	1	6	81.891	ppb	21.029	1180	50	163.8	90	110	>+ \-10%
Na	23	2	45	1013.842	ppb	1.522	640789	1000	101.4	90	110	
Mg	24	2	45	1030.771	ppb	3.442	265034	1000	103.1	90	110	
Al	27	2	45	1056.666	ppb	1.946	80632	1000	105.7	90	110	
K	39	2	45	1073.413	ppb	1.879	343264	1000	107.3	90	110	
Ca	44	2	45	1037.800	ppb	2.879	19848	1000	103.8	90	110	
V	51	2	72	50.409	ppb	1.665	215790	50	100.8	90	110	
Cr	52	2	72	50.678	ppb	1.709	263666	50	101.4	90	110	
Mn	55	2	72	50.314	ppb	2.463	123197	50	100.6	90	110	
Fe	57	2	72	1035.854	ppb	0.665	103490	1000	103.6	90	110	
Co	59	2	72	52.075	ppb	1.799	429558	50	104.1	90	110	
Ni	60	2	72	51.125	ppb	2.324	112113	50	102.3	90	110	
Cu	63	2	72	49.611	ppb	1.501	308429	50	99.2	90	110	
Zn	66	2	72	51.243	ppb	3.590	48244	50	102.5	90	110	
As	75	2	72	51.412	ppb	1.602	35059	50	102.8	90	110	
Se	78	1	72	52.412	ppb	2.292	26002	50	104.8	90	110	
Sr	88	2	45	104.914	ppb	2.800	307105	100	104.9	90	110	
Zr	90	2	72	96.713	ppb	7.576	1550	50	193.4	90	110	>+ \-10%
Zr	90	1	72	182.755	ppb	11.211	7045	50	365.5	90	110	>+ \-10%
Nb	93	2	72	97.825	ppb	2.774	557211	100	97.8	90	110	
Mo	95	2	115	53.254	ppb	1.644	160518	50	106.5	90	110	
Pd	105	2	115	54.929	ppb	2.319	229288	50	109.9	90	110	
Ag	107	2	115	52.187	ppb	0.550	462799	50	104.4	90	110	
Cd	111	2	115	52.933	ppb	3.892	69320	50	105.9	90	110	
Sn	120	2	115	52.655	ppb	1.970	208736	50	105.3	90	110	
Sb	121	2	115	51.882	ppb	2.430	174682	50	103.8	90	110	
Ba	137	2	115	51.660	ppb	2.043	57125	50	103.3	90	110	
W	182	2	165	52.681	ppb	3.692	301157	50	105.4	90	110	
Pt	195	2	165	53.778	ppb	3.039	204751	50	107.6	90	110	
Tl	205	2	165	51.137	ppb	4.482	491923	50	102.3	90	110	
Pb	208	2	165	49.976	ppb	4.629	634158	50	100.0	90	110	
Th	232	2	165	53.409	ppb	2.930	719622	50	106.8	90	110	
U	238	2	165	54.731	ppb	1.969	772717	50	109.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	604403	0.87	640661	94.34	60	125	
Sc (IS)	45	2	HMI He	3494488	1.80	3683202	94.88	60	125	
Sc (IS)	45	3	No Gas	90524771	1.49	97710586	92.65	60	120	
Ge Internal Standard	72	1	HMI H2	19328659	0.79	20068360	96.31	60	125	
Ge Internal Standard	72	2	HMI He	4190118	0.93	4425118	94.69	60	125	
In Internal standard	115	2	HMI He	12887967	0.88	13821071	93.25	60	125	
Ho-165	165	2	HMI He	29369763	3.01	32625871	90.02	60	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name CCB-5699924
 Data File Name 204_CCB.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T11:40:29-06:00
 Sample Type CCB
 Dilution 1
 Comment
 ISTD Ref File Name 183CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	1	45	3.259	ppb	211.2	77944	0.1	>RL
Li	7	3	45	9.115	ppb	36.0	4926438	0.05	>RL
Be	9	1	6	0.111	ppb	58.8	30	0.5	
B	11	1	6	21.250	ppb	63.0	623	0.1	>RL
Na	23	2	45	21.687	ppb	1.4	54129	25	
Mg	24	2	45	-0.890	ppb	-37.8	1320	25	
Al	27	2	45	1.160	ppb	123.4	490	15	
K	39	2	45	53.098	ppb	14.2	94436	50	>RL
Ca	44	2	45	1.631	ppb	271.8	230	25	
V	51	2	72	0.040	ppb	368.7	11874	1	
Cr	52	2	72	0.022	ppb	300.4	1347	1	
Mn	55	2	72	0.079	ppb	11.8	537	0.5	
Fe	57	2	72	-7.750	ppb	-18.3	957	25	
Co	59	2	72	0.065	ppb	31.1	5071	0.5	
Ni	60	2	72	0.006	ppb	964.9	893	1	
Cu	63	2	72	0.872	ppb	10.1	8315	1	
Zn	66	2	72	0.054	ppb	89.5	863	5	
As	75	2	72	0.061	ppb	22.9	191	1	
Se	78	1	72	0.081	ppb	29.0	68	1	
Sr	88	2	45	0.084	ppb	13.1	413	1	
Zr	90	2	72	-3.027	ppb	-154.5	257	1	
Zr	90	1	72	-0.554	ppb	-833.7	1442	1	
Nb	93	2	72	3.777	ppb	6.5	26468	2	>RL
Mo	95	2	115	0.122	ppb	27.0	560	0.5	
Pd	105	2	115	0.053	ppb	65.2	290	1	
Ag	107	2	115	0.040	ppb	6.9	523	1	
Cd	111	2	115	0.056	ppb	40.6	87	0.5	
Sn	120	2	115	0.115	ppb	39.2	1063	1	
Sb	121	2	115	0.124	ppb	16.8	520	1	
Ba	137	2	115	0.062	ppb	48.6	173	0.5	
W	182	2	165	0.169	ppb	18.2	3114	1	
Pt	195	2	165	0.042	ppb	30.8	170	1	
Tl	205	2	165	0.055	ppb	11.7	790	0.1	
Pb	208	2	165	0.038	ppb	18.0	1223	0.5	
Th	232	2	165	0.227	ppb	9.5	4391	1	
U	238	2	165	0.074	ppb	6.1	1153	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	598621	1.53	640661	93.44	60	125	
Sc (IS)	45	2	HMI He	3494646	1.04	3683202	94.88	60	125	
Sc (IS)	45	3	No Gas	89352700	1.53	97710586	91.45	60	120	
Ge Internal Standard	72	1	HMI H2	18997280	1.54	20068360	94.66	60	125	
Ge Internal Standard	72	2	HMI He	4205881	0.38	4425118	95.05	60	125	
In Internal standard	115	2	HMI He	13096810	0.81	13821071	94.76	60	125	
Ho-165	165	2	HMI He	30324428	0.82	32625871	92.95	60	125	

Blank Report

Sample Table

Sample Name mb 280-457042/1-a
 Data File Name 205_BLK.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T11:44:04-06:00
 Sample Type Blank
 Dilution 1
 Comment 457042 200.8
 ISTD Ref File Name 183CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	5.632	ppb	117.225518	76641	0.1
Li	7	3	45	6.358	ppb	73.4233601	4894742	0.05
Be	9	1	6	0.044	ppb	67.02234381	12	0.5
Na	23	2	45	16.498	ppb	22.52954443	49599	25
Mg	24	2	45	0.763	ppb	117.1987091	1693	25
Al	27	2	45	1.222	ppb	32.64222819	480	15
K	39	2	45	42.659	ppb	6.129229076	89258	50
Ca	44	2	45	4.175	ppb	80.97415673	270	25
V	51	2	72	0.342	ppb	36.86267318	12872	1
Cr	52	2	72	0.029	ppb	58.13548369	1353	1
Mn	55	2	72	0.519	ppb	10.9498717	1587	0.5
Fe	57	2	72	12.659	ppb	17.59932372	2914	25
Co	59	2	72	0.042	ppb	103.7015196	4794	0.5
Ni	60	2	72	-0.087	ppb	-31.65738284	677	1
Cu	63	2	72	0.091	ppb	36.71964792	3430	1
Zn	66	2	72	0.422	ppb	9.256563868	1183	5
As	75	2	72	-0.020	ppb	-36.64314236	133	1
Se	78	1	72	-0.014	ppb	-355.7766149	21	1
Sr	88	2	45	0.036	ppb	96.52151523	267	1
Zr	90	2	72	-4.259	ppb	-63.41966582	237	1
Zr	90	1	72	3.611	ppb	77.43422842	1535	1
Nb	93	2	72	1.754	ppb	9.727111725	14740	2
Mo	95	2	115	0.020	ppb	19.0331806	247	0.5
Pd	105	2	115	0.011	ppb	56.59435548	113	1
Ag	107	2	115	-0.002	ppb	-87.15212568	143	1
Cd	111	2	115	-0.009	ppb	0	0	0.5
Sn	120	2	115	0.089	ppb	13.56190043	950	1
Sb	121	2	115	0.043	ppb	24.48309144	240	1
Ba	137	2	115	0.130	ppb	43.85968022	250	0.5
W	182	2	165	-0.001	ppb	-1979.015818	2040	1
Pt	195	2	165	0.005	ppb	119.8510421	23	1
Tl	205	2	165	0.002	ppb	275.9637861	257	0.1
Pb	208	2	165	0.015	ppb	18.09765681	880	0.5
Th	232	2	165	0.174	ppb	4.887702224	3534	1
U	238	2	165	0.015	ppb	21.94327036	277	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	598884	2.08	640661	93.48	60	125	
Sc (IS)	45	2	HMI He	3394730	0.14	3683202	92.17	60	125	
Sc IS)	45	3	No Gas	89571374	1.87	97710586	91.67	60	120	
Ge Internal Standard	72	1	HMI H2	18612898	1.71	20068360	92.75	60	125	
Ge Internal Standard	72	2	HMI He	4129915	1.30	4425118	93.33	60	125	
In Internal standard	115	2	HMI He	13016589	2.51	13821071	94.18	60	125	
Ho-165	165	2	HMI He	29286613	0.81	32625871	89.77	60	125	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name lcs 280-457042/2-a
 Data File Name 206_LCS.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T11:47:37-06:00
 Sample Type LCS
 Dilution 1
 Analyst Denver Metals
 Comment 457042 200.8
 ISTD Ref File Name 183CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	68.903	68.903	ppb	12.333	5874031	400	17.2	80	120	> +/-20%
Be	9	1	6	35.956	35.956	ppb	2.537	9669	40	89.9	80	120	
Na	23	2	45	17.730	17.730	ppb	14.705	49896	40	44.3	80	120	> +/-20%
Mg	24	2	45	-0.605	-0.605	ppb	-70.557	1343	40	-1.5	80	120	> +/-20%
Al	27	2	45	379.940	379.940	ppb	1.336	28202	40	949.9	80	120	> +/-20%
K	39	2	45	50.659	50.659	ppb	33.071	90391	40	126.6	80	120	> +/-20%
Ca	44	2	45	132.293	132.293	ppb	2.407	2607	40	330.7	80	120	> +/-20%
V	51	2	72	34.967	34.967	ppb	2.635	150886	40	87.4	80	120	
Cr	52	2	72	35.116	35.116	ppb	1.682	180245	40	87.8	80	120	
Mn	55	2	72	35.855	35.855	ppb	1.990	86545	40	89.6	80	120	
Fe	57	2	72	367.416	367.416	ppb	3.593	37224	40	918.5	80	120	> +/-20%
Co	59	2	72	34.798	34.798	ppb	3.043	283990	40	87.0	80	120	
Ni	60	2	72	35.078	35.078	ppb	2.738	75999	40	87.7	80	120	
Cu	63	2	72	35.206	35.206	ppb	4.855	216234	40	88.0	80	120	
Zn	66	2	72	35.284	35.284	ppb	3.994	32948	40	88.2	80	120	
As	75	2	72	33.188	33.188	ppb	2.633	22328	40	83.0	80	120	
Se	78	1	72	34.839	34.839	ppb	1.266	16633	40	87.1	80	120	
Sr	88	2	45	36.363	36.363	ppb	2.916	102696	40	90.9	80	120	
Nb	93	2	72	1.254	1.254	ppb	8.029	11934	40	3.1	80	120	> +/-20%
Mo	95	2	115	35.171	35.171	ppb	1.594	104235	40	87.9	80	120	
Pd	105	2	115	0.018	0.018	ppb	26.164	140	40	0.0	80	120	> +/-20%
Ag	107	2	115	37.045	37.045	ppb	0.526	322878	40	92.6	80	120	
Cd	111	2	115	36.439	36.439	ppb	3.461	46887	40	91.1	80	120	
Sn	120	2	115	36.089	36.089	ppb	1.391	140755	40	90.2	80	120	
Sb	121	2	115	37.862	37.862	ppb	1.624	125312	40	94.7	80	120	
Ba	137	2	115	36.624	36.624	ppb	1.224	39828	40	91.6	80	120	
W	182	2	165	17.593	17.593	ppb	2.360	105956	40	44.0	80	120	> +/-20%
Pt	195	2	165	0.000	0.000	ppb	1239.207	7	40	0.0	80	120	> +/-20%
Tl	205	2	165	33.636	33.636	ppb	4.515	336266	40	84.1	80	120	
Pb	208	2	165	32.544	32.544	ppb	2.883	429594	40	81.4	80	120	
Th	232	2	165	32.179	32.179	ppb	2.254	451070	40	80.4	80	120	
U	238	2	165	34.916	34.916	ppb	2.434	512226	40	87.3	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	600060	0.36	640661	93.66	60	125	
Sc (IS)	45	2	HMI He	3368498	2.36	3683202	91.46	60	125	
Sc IS)	45	3	No Gas	89708211	0.91	97710586	91.81	60	120	
Ge Internal Standard	72	1	HMI H2	18589327	1.41	20068360	92.63	60	125	
Ge Internal Standard	72	2	HMI He	4126217	2.30	4425118	93.25	60	125	
In Internal standard	115	2	HMI He	12664783	0.17	13821071	91.63	60	125	
Ho-165	165	2	HMI He	30509765	1.53	32625871	93.51	60	125	

Sample Report

Sample Table

Sample Name 280-123318-a-1-a
 Data File Name 207SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T11:51:12-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457042 200.8
 ISTD Ref FileName 183CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	28.283	ppb	28.283	25.40	5158639	40000	
Be	9	1	6	0.076	ppb	0.076	66.36	20	2000	
B	11	1	6	2673.659	ppb	2673.659	2.77	24103	100	>LDR
Na	23	2	45	83418.624	ppb	83418.624	3.78	47105398	400000	
Mg	24	2	45	5089.662	ppb	5089.662	2.17	1243679	400000	
Al	27	2	45	77.129	ppb	77.129	13.87	5961	400000	
K	39	2	45	32354.392	ppb	32354.392	3.44	7608385	400000	
Ca	44	2	45	12049.277	ppb	12049.277	3.08	217994	400000	
V	51	2	72	0.620	ppb	0.620	38.27	13752	2000	
Cr	52	2	72	1.404	ppb	1.404	8.59	8242	5000	
Mn	55	2	72	20.942	ppb	20.942	2.40	49935	10000	
Fe	57	2	72	343.852	ppb	343.852	4.23	34441	400000	
Co	59	2	72	0.265	ppb	0.265	10.46	6481	2000	
Ni	60	2	72	3.464	ppb	3.464	7.29	8162	5000	
Cu	63	2	72	89.752	ppb	89.752	0.71	539047	5000	
Zn	66	2	72	69.499	ppb	69.499	2.42	63199	5000	
As	75	2	72	0.397	ppb	0.397	16.37	406	2000	
Se	78	1	72	0.825	ppb	0.825	23.21	423	2000	
Sr	88	2	45	106.078	ppb	106.078	3.83	296345	2000	
Zr	90	2	72	115.784	ppb	115.784	3.05	1743	1000	
Zr	90	1	72	100.159	ppb	100.159	12.88	4375	1000	
Nb	93	2	72	1.641	ppb	1.641	15.63	13883	200	
Mo	95	2	115	2.633	ppb	2.633	7.20	7879	2000	
Pd	105	2	115	0.026	ppb	0.026	89.09	167	100	
Ag	107	2	115	0.132	ppb	0.132	8.75	1293	100	
Cd	111	2	115	0.088	ppb	0.088	55.02	123	2000	
Sn	120	2	115	0.757	ppb	0.757	11.36	3477	2000	
Sb	121	2	115	0.887	ppb	0.887	3.34	2994	1000	
Ba	137	2	115	18.929	ppb	18.929	1.39	20404	5000	
W	182	2	165	0.376	ppb	0.376	18.33	4247	100	
Pt	195	2	165	0.006	ppb	0.006	71.67	30	100	
Tl	205	2	165	0.039	ppb	0.039	34.67	627	2000	
Pb	208	2	165	0.527	ppb	0.527	12.66	7454	5000	
Th	232	2	165	0.924	ppb	0.924	4.05	13790	2000	
U	238	2	165	0.069	ppb	0.069	5.43	1050	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	587503	0.71	640661	91.70	60	125	
Sc (IS)	45	2	HMI He	3336377	2.94	3683202	90.58	60	125	
Sc (IS)	45	3	No Gas	88265324	1.78	97710586	90.33	60	120	
Ge Internal Standard	72	1	HMI H2	18669194	1.69	20068360	93.03	60	125	
Ge Internal Standard	72	2	HMI He	4064566	0.91	4425118	91.85	60	125	
In Internal standard	115	2	HMI He	12525016	1.53	13821071	90.62	60	125	
Ho-165	165	2	HMI He	29713544	2.65	32625871	91.07	60	125	

Sample Report

Sample Table

Sample Name 280-123318-a-1-b.ms
 Data File Name 208SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T11:54:45-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457042 200.8
 ISTD Ref FileName 183CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	113.562	ppb	113.562	4.24	6418378	40000	
Be	9	1	6	40.523	ppb	40.523	1.95	10545	2000	
B	11	1	6	4112.700	ppb	4112.700	2.45	36413	100	>LDR
Na	23	2	45	91370.975	ppb	91370.975	5.32	52166662	400000	
Mg	24	2	45	5689.550	ppb	5689.550	5.82	1404836	400000	
Al	27	2	45	483.017	ppb	483.017	4.97	35776	400000	
K	39	2	45	35100.664	ppb	35100.664	3.32	8343064	400000	
Ca	44	2	45	13235.324	ppb	13235.324	2.36	242175	400000	
V	51	2	72	39.636	ppb	39.636	1.43	164416	2000	
Cr	52	2	72	39.535	ppb	39.535	2.81	196680	5000	
Mn	55	2	72	63.218	ppb	63.218	1.57	147739	10000	
Fe	57	2	72	788.403	ppb	788.403	1.05	75607	400000	
Co	59	2	72	39.074	ppb	39.074	0.16	308828	2000	
Ni	60	2	72	42.604	ppb	42.604	1.14	89363	5000	
Cu	63	2	72	138.213	ppb	138.213	0.77	815603	5000	
Zn	66	2	72	115.533	ppb	115.533	1.19	102912	5000	
As	75	2	72	37.652	ppb	37.652	0.82	24553	2000	
Se	78	1	72	36.724	ppb	36.724	1.95	17556	2000	
Sr	88	2	45	157.453	ppb	157.453	3.29	444888	2000	
Zr	90	2	72	92.913	ppb	92.913	9.59	1433	1000	
Zr	90	1	72	80.659	ppb	80.659	6.74	3791	1000	
Nb	93	2	72	1.213	ppb	1.213	15.34	11357	200	
Mo	95	2	115	40.077	ppb	40.077	0.91	117934	2000	
Pd	105	2	115	0.019	ppb	0.019	57.01	140	100	
Ag	107	2	115	38.040	ppb	38.040	3.02	329199	100	
Cd	111	2	115	37.809	ppb	37.809	0.30	48322	2000	
Sn	120	2	115	23.765	ppb	23.765	1.99	92268	2000	
Sb	121	2	115	40.200	ppb	40.200	0.95	132148	1000	
Ba	137	2	115	60.053	ppb	60.053	1.90	64795	5000	
W	182	2	165	19.803	ppb	19.803	3.38	114471	100	
Pt	195	2	165	0.000	ppb	0.000	770.79	7	100	
Tl	205	2	165	39.919	ppb	39.919	1.64	384073	2000	
Pb	208	2	165	38.194	ppb	38.194	5.08	484712	5000	
Th	232	2	165	9.015	ppb	9.015	3.65	122447	2000	
U	238	2	165	39.473	ppb	39.473	1.22	557242	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	580587	0.28	640661	90.62	60	125	
Sc (IS)	45	2	HMI He	3375188	3.46	3683202	91.64	60	125	
Sc (IS)	45	3	No Gas	87679908	1.79	97710586	89.73	60	120	
Ge Internal Standard	72	1	HMI H2	18616037	1.81	20068360	92.76	60	125	
Ge Internal Standard	72	2	HMI He	4001143	0.53	4425118	90.42	60	125	
In Internal standard	115	2	HMI He	12579010	1.78	13821071	91.01	60	125	
Ho-165	165	2	HMI He	29353881	1.20	32625871	89.97	60	125	

Sample Report

Sample Table

Sample Name 280-123318-a-1-c msd
 Data File Name 209SMPL.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T11:58:17-06:00
 Analyst Denver Metals
 Sample Type Sample
 Dilution 1
 Comment 457042 200.8
 ISTD Ref FileName 183CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	100.308	ppb	100.308	2.57	6190219	40000	
Be	9	1	6	36.581	ppb	36.581	2.04	9604	2000	
B	11	1	6	3632.666	ppb	3632.666	0.96	32503	100	>LDR
Na	23	2	45	82149.746	ppb	82149.746	2.42	47423988	400000	
Mg	24	2	45	5090.393	ppb	5090.393	1.87	1271253	400000	
Al	27	2	45	457.443	ppb	457.443	4.19	34266	400000	
K	39	2	45	32812.505	ppb	32812.505	0.87	7890772	400000	
Ca	44	2	45	12090.941	ppb	12090.941	1.65	223586	400000	
V	51	2	72	35.467	ppb	35.467	2.60	155686	2000	
Cr	52	2	72	35.542	ppb	35.542	2.06	185762	5000	
Mn	55	2	72	55.798	ppb	55.798	5.19	136869	10000	
Fe	57	2	72	679.169	ppb	679.169	3.55	68595	400000	
Co	59	2	72	34.671	ppb	34.671	4.43	288082	2000	
Ni	60	2	72	37.294	ppb	37.294	5.46	82188	5000	
Cu	63	2	72	119.598	ppb	119.598	3.53	741119	5000	
Zn	66	2	72	101.869	ppb	101.869	2.44	95376	5000	
As	75	2	72	34.433	ppb	34.433	1.82	23588	2000	
Se	78	1	72	35.966	ppb	35.966	3.16	17073	2000	
Sr	88	2	45	142.113	ppb	142.113	1.39	405895	2000	
Zr	90	2	72	79.655	ppb	79.655	17.69	1333	1000	
Zr	90	1	72	68.721	ppb	68.721	6.06	3417	1000	
Nb	93	2	72	0.513	ppb	0.513	9.93	7959	200	
Mo	95	2	115	37.449	ppb	37.449	4.66	112830	2000	
Pd	105	2	115	0.020	ppb	0.020	25.64	150	100	
Ag	107	2	115	34.765	ppb	34.765	2.73	308274	100	
Cd	111	2	115	34.967	ppb	34.967	5.53	45737	2000	
Sn	120	2	115	22.474	ppb	22.474	3.69	89366	2000	
Sb	121	2	115	36.782	ppb	36.782	1.99	123853	1000	
Ba	137	2	115	54.145	ppb	54.145	2.06	59852	5000	
W	182	2	165	18.482	ppb	18.482	5.44	107275	100	
Pt	195	2	165	0.001	ppb	0.001	243.87	10	100	
Tl	205	2	165	35.643	ppb	35.643	2.12	344018	2000	
Pb	208	2	165	35.596	ppb	35.596	4.29	453321	5000	
Th	232	2	165	9.344	ppb	9.344	17.54	126930	2000	
U	238	2	165	36.412	ppb	36.412	2.54	515624	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	585862	1.17	640661	91.45	60	125	
Sc (IS)	45	2	HMI He	3409831	2.67	3683202	92.58	60	125	
Sc (IS)	45	3	No Gas	87287639	1.95	97710586	89.33	60	120	
Ge Internal Standard	72	1	HMI H2	18487088	1.63	20068360	92.12	60	125	
Ge Internal Standard	72	2	HMI He	4201798	2.52	4425118	94.95	60	125	
In Internal standard	115	2	HMI He	12889207	3.19	13821071	93.26	60	125	
Ho-165	165	2	HMI He	29456397	2.85	32625871	90.29	60	125	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name CCV-5699926
 Data File Name 210_CCV.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T12:01:47-06:00
 Sample Type CCV
 Dilution 1
 Comment
 ISTD Ref File Name 183CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	105.156	ppb	12.317	100910	100	105.2	90	110	
Li	7	3	45	107.743	ppb	5.666	6410987	100	107.7	90	110	
Be	9	1	6	53.676	ppb	0.841	14249	50	107.4	90	110	
B	11	1	6	149.566	ppb	17.288	1760	50	299.1	90	110	>+ \-10%
Na	23	2	45	1120.651	ppb	2.806	709343	1000	112.1	90	110	>+ \-10%
Mg	24	2	45	1036.679	ppb	4.020	268613	1000	103.7	90	110	
Al	27	2	45	1065.133	ppb	3.290	81901	1000	106.5	90	110	
K	39	2	45	1113.419	ppb	3.292	355763	1000	111.3	90	110	>+ \-10%
Ca	44	2	45	1019.362	ppb	1.048	19658	1000	101.9	90	110	
V	51	2	72	50.036	ppb	1.273	218048	50	100.1	90	110	
Cr	52	2	72	50.577	ppb	1.794	267741	50	101.2	90	110	
Mn	55	2	72	51.020	ppb	1.497	127115	50	102.0	90	110	
Fe	57	2	72	1013.658	ppb	0.820	103081	1000	101.4	90	110	
Co	59	2	72	50.393	ppb	0.673	423092	50	100.8	90	110	
Ni	60	2	72	50.380	ppb	1.908	112466	50	100.8	90	110	
Cu	63	2	72	49.771	ppb	1.843	314916	50	99.5	90	110	
Zn	66	2	72	50.992	ppb	0.579	48863	50	102.0	90	110	
As	75	2	72	52.114	ppb	1.713	36152	50	104.2	90	110	
Se	78	1	72	52.972	ppb	3.146	25968	50	105.9	90	110	
Sr	88	2	45	105.524	ppb	1.820	311375	100	105.5	90	110	
Zr	90	2	72	29.399	ppb	52.664	687	50	58.8	90	110	>+ \-10%
Zr	90	1	72	27.914	ppb	32.001	2306	50	55.8	90	110	>+ \-10%
Nb	93	2	72	95.003	ppb	3.172	550790	100	95.0	90	110	
Mo	95	2	115	51.446	ppb	7.197	159167	50	102.9	90	110	
Pd	105	2	115	53.690	ppb	4.083	230240	50	107.4	90	110	
Ag	107	2	115	50.736	ppb	3.998	462118	50	101.5	90	110	
Cd	111	2	115	52.969	ppb	3.666	71248	50	105.9	90	110	
Sn	120	2	115	52.279	ppb	4.482	212814	50	104.6	90	110	
Sb	121	2	115	52.300	ppb	6.551	180760	50	104.6	90	110	
Ba	137	2	115	51.904	ppb	4.377	58961	50	103.8	90	110	
W	182	2	165	52.896	ppb	5.463	314254	50	105.8	90	110	
Pt	195	2	165	51.606	ppb	3.941	204280	50	103.2	90	110	
Tl	205	2	165	49.949	ppb	3.060	499783	50	99.9	90	110	
Pb	208	2	165	51.211	ppb	4.270	675618	50	102.4	90	110	
Th	232	2	165	52.611	ppb	5.241	736718	50	105.2	90	110	
U	238	2	165	53.521	ppb	4.921	785245	50	107.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	592368	1.97	640661	92.46	60	125	
Sc (IS)	45	2	HMI He	3522426	2.36	3683202	95.63	60	125	
Sc IS)	45	3	No Gas	88797466	1.13	97710586	90.88	60	120	
Ge Internal Standard	72	1	HMI H2	19097780	0.80	20068360	95.16	60	125	
Ge Internal Standard	72	2	HMI He	4263710	1.32	4425118	96.35	60	125	
In Internal standard	115	2	HMI He	13250476	3.95	13821071	95.87	60	125	
Ho-165	165	2	HMI He	30550935	4.30	32625871	93.64	60	125	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name CCB-5699924
 Data File Name 212_CCB.d
 Data Path Name D:\Agilent\ICPMH\1\DATA\051319.b
 Acq Date Time 2019-05-14T12:12:24-06:00
 Sample Type CCB
 Dilution 1
 Comment
 ISTD Ref File Name 183CALB.d
 Sample QC Pass/Fail Fail
 ISTD Pass/Fail Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	1	45	-8.127	ppb	-99.1	76886	0.1	
Li	7	3	45	3.156	ppb	109.1	4955234	0.05	>RL
Be	9	1	6	0.082	ppb	48.4	22	0.5	
B	11	1	6	48.457	ppb	28.0	857	0.1	>RL
Na	23	2	45	17.028	ppb	2.9	52393	25	
Mg	24	2	45	-2.383	ppb	-21.7	957	25	
Al	27	2	45	0.273	ppb	285.9	430	15	
K	39	2	45	16.882	ppb	13.6	87292	50	
Ca	44	2	45	6.439	ppb	69.3	327	25	
V	51	2	72	-0.016	ppb	-553.5	12385	1	
Cr	52	2	72	-0.041	ppb	-40.2	1080	1	
Mn	55	2	72	0.044	ppb	13.2	480	0.5	
Fe	57	2	72	-8.640	ppb	-2.5	923	25	
Co	59	2	72	0.011	ppb	356.1	4914	0.5	
Ni	60	2	72	0.040	ppb	136.4	1027	1	
Cu	63	2	72	0.943	ppb	15.1	9303	1	
Zn	66	2	72	0.207	ppb	50.0	1070	5	
As	75	2	72	0.204	ppb	19.0	307	1	
Se	78	1	72	-0.033	ppb	-75.5	13	1	
Sr	88	2	45	-0.005	ppb	-484.9	157	1	
Zr	90	2	72	-0.557	ppb	-657.0	307	1	
Zr	90	1	72	1.882	ppb	351.0	1582	1	>RL
Nb	93	2	72	0.925	ppb	19.3	10947	2	
Mo	95	2	115	0.012	ppb	194.3	250	0.5	
Pd	105	2	115	0.019	ppb	17.6	163	1	
Ag	107	2	115	-0.005	ppb	-31.5	130	1	
Cd	111	2	115	-0.003	ppb	-418.7	10	0.5	
Sn	120	2	115	0.022	ppb	126.9	777	1	
Sb	121	2	115	0.024	ppb	45.8	200	1	
Ba	137	2	115	0.029	ppb	152.8	153	0.5	
W	182	2	165	-0.039	ppb	-54.3	2270	1	
Pt	195	2	165	0.009	ppb	39.6	50	1	
Tl	205	2	165	-0.001	ppb	-191.8	290	0.1	
Pb	208	2	165	0.007	ppb	269.1	980	0.5	
Th	232	2	165	0.009	ppb	14.8	1637	1	
U	238	2	165	0.005	ppb	40.0	170	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	590872	0.65	640661	92.23	60	125	
Sc (IS)	45	2	HMI He	3563931	1.18	3683202	96.76	60	125	
Sc (IS)	45	3	No Gas	91594621	2.06	97710586	93.74	60	120	
Ge Internal Standard	72	1	HMI H2	19861668	1.40	20068360	98.97	60	125	
Ge Internal Standard	72	2	HMI He	4472562	2.04	4425118	101.07	60	125	
In Internal standard	115	2	HMI He	14722360	0.39	13821071	106.52	60	125	
Ho-165	165	2	HMI He	36424191	1.29	32625871	111.64	60	125	

Report Generated By CETAC QuickTrace

Analyst: denmet

Worksheet file: C:\Program Files\QuickTrace\Worksheets\190513-33A.wsz

Date Started: 5/13/2019 2:58:13 PM

Comment:

Results

Sample Name	Type	Date/Time	Conc (ppb)	μAbs	%RSD	Flags	Wt.	Vol. ODF
IC 280-457940/1-A	STD	05/13/19 04:14:02 pm	0.000	366	4.17		1.00	1.00
IC 280-457940/2-A	STD	05/13/19 04:16:15 pm	0.060	1477	2.43		1.00	1.00
IC 280-457940/3-A	STD	05/13/19 04:18:28 pm	0.120	2621	0.98		1.00	1.00
IC 280-457940/4-A	STD	05/13/19 04:20:42 pm	0.300	6162	2.63		1.00	1.00
IC 280-457940/5-A	STD	05/13/19 04:22:56 pm	0.600	12090	0.86		1.00	1.00
IC 280-457940/6-A	STD	05/13/19 04:25:11 pm	1.200	23585	0.93		1.00	1.00
IC 280-457940/7-A	STD	05/13/19 04:27:26 pm	3.000	59333	0.88		1.00	1.00
IC 280-457940/8-A	STD	05/13/19 04:29:42 pm	6.000	118966	0.75		1.00	1.00

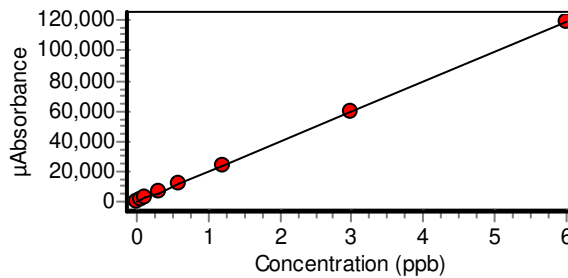
Calibration

Equation: $A = 199.832 + 19769.520C$

R2: 0.99998

SEE: 186.1613

Flags:



ICV 280-457940/9-A	ICV	05/13/19 04:33:00 pm	2.364	46943	0.86		1.00	1.00
% Recovery	98.52						1.00	
ICB 280-457940/10-A	ICB	05/13/19 04:35:12 pm	0.004	271	4.37		1.00	1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
CRA 280-457940/11-A % Recovery 101.92	CRDL	05/13/19 04:37:25 pm	0.122	2618	1.78		1.00	1.00 1.00
CCV 280-457940/12-A % Recovery 100.15	CCV	05/13/19 04:39:40 pm	3.005	59598	0.88		1.00	1.00 1.00
CCB 280-457940/13-A	CCB	05/13/19 04:41:52 pm	0.004	272	4.65		1.00	1.00 1.00
MB 280-457904/1-A	UNK	05/13/19 04:44:04 pm	0.000	195	6.55	s	1.00	1.00 1.00
LCS 280-457904/2-A	UNK	05/13/19 04:46:17 pm	2.986	59239	1.20		1.00	1.00 1.00
LCSD 280-457904/3-A	UNK	05/13/19 04:48:29 pm	3.028	60066	0.53		1.00	1.00 1.00
280-123440-A-10-B@250	UNK	05/13/19 04:50:42 pm	6.644	131545	0.72	O	1.00	1.00 1.00
280-123440-A-13-B@100	UNK	05/13/19 04:53:25 pm	3.833	75966	0.19		1.00	1.00 1.00
280-123440-A-13-Bsd@500	UNK	05/13/19 04:57:31 pm	0.726	14549	0.28		1.00	1.00 1.00
280-123440-A-13-C MS@100	UNK	05/13/19 04:59:45 pm	3.892	77133	1.20		1.00	1.00 1.00
280-123440-A-13-D MSD@100	UNK	05/13/19 05:01:59 pm	4.408	87344	0.63		1.00	1.00 1.00
280-123440-A-13-Bpds@100	UNK	05/13/19 05:04:13 pm	6.769	134028	0.86	O	1.00	1.00 1.00
280-123440-A-10-B@500	UNK	05/13/19 05:07:01 pm	3.466	68729	0.33		1.00	1.00 1.00
CCV 280-457940/12-A % Recovery 102.97	CCV	05/13/19 05:09:17 pm	3.089	61271	0.43		1.00	1.00 1.00
CCB 280-457940/13-A	CCB	05/13/19 05:11:29 pm	0.059	1366	30.80	s	1.00	1.00 1.00
MB 280-457910/1-A	UNK	05/13/19 05:13:43 pm	-0.031	-408	0.88		1.00	1.00 1.00
LCS 280-457910/2-A	UNK	05/13/19 05:15:58 pm	2.913	57780	1.04		1.00	1.00 1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
280-123318-A-1-D	UNK	05/13/19 05:18:13 pm	0.049	1176	29.09	s	1.00	1.00 1.00
280-123318-A-1-E MS	UNK	05/13/19 05:20:25 pm	3.000	59510	1.45		1.00	1.00 1.00
280-23318-A-1-F MSD	UNK	05/13/19 05:22:37 pm	2.766	54888	0.33		1.00	1.00 1.00
680-168600-B-1-B	UNK	05/13/19 05:24:49 pm	0.016	514	33.64	s	1.00	1.00 1.00
280-123213-F-1-D	UNK	05/13/19 05:27:02 pm	0.000	202	3.72		1.00	1.00 1.00
280-123256-B-1-D	UNK	05/13/19 05:29:14 pm	0.000	193	4.89		1.00	1.00 1.00
280-123529-E-2-A	UNK	05/13/19 05:31:27 pm	-0.028	-351	1.98		1.00	1.00 1.00
CCV 280-457940/12-A % Recovery 101.12	CCV	05/13/19 05:33:43 pm	3.034	60174	0.81		1.00	1.00 1.00
CCB 280-457940/13-A	CCB	05/13/19 05:35:55 pm	0.045	1083	36.26	s	1.00	1.00 1.00
MB 280-457935/1-A	UNK	05/13/19 05:38:08 pm	-0.032	-434	1.33		1.00	1.00 1.00
LCS 280-457935/2-A	UNK	05/13/19 05:40:22 pm	2.885	57233	1.12		1.00	1.00 1.00
280-123155-E-1-S	UNK	05/13/19 05:42:36 pm	0.048	1147	32.59	s	1.00	1.00 1.00
280-123155-E-2-E	UNK	05/13/19 05:44:50 pm	-0.034	-468	0.76		1.00	1.00 1.00
280-123155-E-3-C	UNK	05/13/19 05:47:05 pm	-0.033	-462	1.15		1.00	1.00 1.00
280-123155-E-4-C	UNK	05/13/19 05:49:19 pm	-0.033	-461	2.06		1.00	1.00 1.00
280-123155-E-5-C	UNK	05/13/19 05:51:31 pm	-0.035	-497	0.80		1.00	1.00 1.00
280-123155-E-6-C	UNK	05/13/19 05:53:43 pm	-0.033	-460	1.21		1.00	1.00 1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
280-123155-E-7-C	UNK	05/13/19 05:55:55 pm	-0.031	-414	1.87		1.00	1.00 1.00
280-123155-E-8-C	UNK	05/13/19 05:58:08 pm	-0.033	-461	1.39		1.00	1.00 1.00
CCV 280-457940/12-A % Recovery 101.02	CCV	05/13/19 06:00:23 pm	3.030	60110	1.06		1.00	1.00 1.00
CCB 280-457940/13-A	CCB	05/13/19 06:02:35 pm	0.054	1274	31.49	s	1.00	1.00 1.00
280-123155-E-9-C	UNK	05/13/19 06:04:48 pm	-0.035	-495	1.22		1.00	1.00 1.00
280-123155-E-10-C	UNK	05/13/19 06:07:01 pm	-0.032	-434	1.54		1.00	1.00 1.00
280-123155-E-11-C	UNK	05/13/19 06:09:14 pm	-0.035	-490	1.60		1.00	1.00 1.00
280-123155-E-12-C	UNK	05/13/19 06:11:28 pm	-0.033	-453	1.62		1.00	1.00 1.00
280-123155-E-12-D MS	UNK	05/13/19 06:13:42 pm	2.963	58770	0.91		1.00	1.00 1.00
280-123155-E-12-E MSD	UNK	05/13/19 06:15:56 pm	2.958	58679	0.39		1.00	1.00 1.00
280-123156-T-1-C	UNK	05/13/19 06:18:11 pm	0.046	1115	36.78	s	1.00	1.00 1.00
280-123214-E-1-C	UNK	05/13/19 06:20:31 pm	-0.113	-2037	0.25		1.00	1.00 1.00
280-123214-E-2-C	UNK	05/13/19 06:22:43 pm	-0.002	161	4.89		1.00	1.00 1.00
280-123214-E-1-C	UNK	05/13/19 06:26:35 pm	-0.001	186	2.18		1.00	1.00 1.00
CCV 280-457940/12-A % Recovery 100.63	CCV	05/13/19 06:28:51 pm	3.019	59885	0.90		1.00	1.00 1.00
CCB 280-457940/13-A	CCB	05/13/19 06:31:03 pm	0.002	245	4.12		1.00	1.00 1.00
LB2 280-457229/1-C	UNK	05/13/19 06:33:15 pm	0.012	431	2.03		1.00	1.00 1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
LCS 280-457229/2-C	UNK	05/13/19 06:35:27 pm	2.967	58863	0.81		1.00	1.00 1.00
280-123326-A-1-M	UNK	05/13/19 06:37:39 pm	0.008	355	2.82		1.00	1.00 1.00
280-123326-A-1-N MS	UNK	05/13/19 06:39:52 pm	2.344	46548	1.33		1.00	1.00 1.00
280-123326-A-1-O MSD	UNK	05/13/19 06:42:05 pm	2.271	45094	1.01		1.00	1.00 1.00
CCV 280-457940/12-A % Recovery 99.44	CCV	05/13/19 06:44:21 pm	2.983	59174	0.60		1.00	1.00 1.00
CCB 280-457940/13-A	CCB	05/13/19 06:46:33 pm	0.004	275	3.50		1.00	1.00 1.00
MB 280-457926/1-A	UNK	05/13/19 06:48:46 pm	-0.002	153	6.78	s	1.00	1.00 1.00
LCS 280-457926/2-A	UNK	05/13/19 06:51:00 pm	2.822	55985	0.61		1.00	1.00 1.00
LCSD 280-457926/3-A	UNK	05/13/19 06:53:14 pm	2.867	56870	0.93		1.00	1.00 1.00
280-123566-A-2-A	UNK	05/13/19 06:55:28 pm	0.020	589	0.39		1.00	1.00 1.00
280-123510-A-1-A	UNK	05/13/19 06:57:42 pm	-0.002	153	3.71		1.00	1.00 1.00
280-123510-A-1-B MS	UNK	05/13/19 06:59:57 pm	2.960	58718	0.79		1.00	1.00 1.00
CCV 280-457940/12-A % Recovery 100.63	CCV	05/13/19 07:02:13 pm	3.019	59882	0.87		1.00	1.00 1.00
CCB 280-457940/13-A	CCB	05/13/19 07:04:25 pm	0.004	283	3.69		1.00	1.00 1.00
280-123510-A-1-C MSD	UNK	05/13/19 07:06:37 pm	3.052	60534	0.84		1.00	1.00 1.00
280-123510-A-2-A	UNK	05/13/19 07:08:50 pm	-0.002	165	5.06	s	1.00	1.00 1.00
280-123510-A-5-A	UNK	05/13/19 07:11:02 pm	-0.001	186	5.62	s	1.00	1.00 1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
280-122974-A-1-A	UNK	05/13/19 07:13:15 pm	-0.002	164	2.42		1.00	1.00 1.00
280-122974-A-2-A	UNK	05/13/19 07:15:27 pm	0.010	398	2.38		1.00	1.00 1.00
490-173250-A-2-C	UNK	05/13/19 07:17:40 pm	-0.001	190	6.54	s	1.00	1.00 1.00
280-123248-E-2-B	UNK	05/13/19 07:19:54 pm	-0.009	26	28.03		1.00	1.00 1.00
280-123258-E-2-B	UNK	05/13/19 07:22:08 pm	0.094	2054	1.05		1.00	1.00 1.00
280-123562-A-2-D	UNK	05/13/19 07:24:21 pm	0.052	1232	1.32		1.00	1.00 1.00
CCV 280-457940/12-A % Recovery 100.15	CCV	05/13/19 07:26:37 pm	3.004	59595	1.30		1.00	1.00 1.00
CCB 280-457940/13-A	CCB	05/13/19 07:28:49 pm	0.005	300	3.35		1.00	1.00 1.00
LB 280-457530/1-B	UNK	05/13/19 07:31:03 pm	0.001	219	2.92		1.00	1.00 1.00
LCS 280-457530/2-B	UNK	05/13/19 07:33:18 pm	2.827	56095	0.73		1.00	1.00 1.00
280-123440-A-1-H@50	UNK	05/13/19 07:35:33 pm	0.004	279	4.32		1.00	1.00 1.00
280-123440-B-2-B@50	UNK	05/13/19 07:37:45 pm	0.004	288	4.55		1.00	1.00 1.00
280-123440-A-3-D@50	UNK	05/13/19 07:39:58 pm	0.006	315	3.08		1.00	1.00 1.00
280-123440-B-4-B@50	UNK	05/13/19 07:42:11 pm	0.006	325	2.06		1.00	1.00 1.00
280-123440-A-5-D@50	UNK	05/13/19 07:44:24 pm	0.079	1764	0.87		1.00	1.00 1.00
280-123440-A-6-D@50	UNK	05/13/19 07:46:37 pm	0.005	294	3.33		1.00	1.00 1.00
280-123440-A-7-D@50	UNK	05/13/19 07:48:50 pm	6.113	121048	0.99	O	1.00	1.00 1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
280-123440-A-8-D@50	UNK	05/13/19 07:52:16 pm	0.004	274	2.01		1.00	1.00 1.00
CCV 280-457940/12-A % Recovery 100.40	CCV	05/13/19 07:54:32 pm	3.012	59746	0.95		1.00	1.00 1.00
CCB 280-457940/13-A	CCB	05/13/19 07:56:44 pm	0.004	281	2.76		1.00	1.00 1.00
280-123440-A-14-D@50	UNK	05/13/19 07:58:57 pm	0.015	504	3.95		1.00	1.00 1.00
280-123440-A-15-D@50	UNK	05/13/19 08:01:11 pm	0.050	1183	1.83		1.00	1.00 1.00
280-123440-A-16-D@50	UNK	05/13/19 08:03:25 pm	0.008	352	3.28		1.00	1.00 1.00
280-123440-A-19-D@50	UNK	05/13/19 08:05:40 pm	0.033	845	1.28		1.00	1.00 1.00
280-123440-A-20-D@50	UNK	05/13/19 08:07:55 pm	0.005	306	3.73		1.00	1.00 1.00
280-123440-A-21-D@50	UNK	05/13/19 08:10:08 pm	0.009	384	2.72		1.00	1.00 1.00
280-123440-A-22-D@50	UNK	05/13/19 08:12:21 pm	0.011	418	1.40		1.00	1.00 1.00
280-123440-A-23-D@50	UNK	05/13/19 08:14:34 pm	0.011	416	2.44		1.00	1.00 1.00
280-123440-A-24-D@50	UNK	05/13/19 08:16:48 pm	0.008	352	3.01		1.00	1.00 1.00
CCV 280-457940/12-A % Recovery 100.95	CCV	05/13/19 08:19:03 pm	3.028	60070	0.97		1.00	1.00 1.00
CCB 280-457940/13-A	CCB	05/13/19 08:21:15 pm	0.004	277	4.15		1.00	1.00 1.00
280-123440-A-25-D@50	UNK	05/13/19 08:23:28 pm	0.006	316	1.69		1.00	1.00 1.00
280-123440-A-25-Dsd@250	UNK	05/13/19 08:25:42 pm	0.006	309	4.03		1.00	1.00 1.00
280-123440-A-25-E MS@50	UNK	05/13/19 08:27:55 pm	0.065	1488	1.33		1.00	1.00 1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
280-123440-A-25-F MSD@50	UNK	05/13/19 08:30:09 pm	0.066	1495	1.56		1.00	1.00 1.00
280-123440-A-25-Dpds@50	UNK	05/13/19 08:32:23 pm	2.894	57405	0.86		1.00	1.00 1.00
LB 280-457227/1-B	UNK	05/13/19 08:34:37 pm	0.027	741	1.75		1.00	1.00 1.00
LCS 280-457227/2-B	UNK	05/13/19 08:36:51 pm	2.983	59183	0.72		1.00	1.00 1.00
280-123294-A-19-D	UNK	05/13/19 08:39:06 pm	0.069	1573	0.99		1.00	1.00 1.00
280-123294-A-20-D	UNK	05/13/19 08:41:20 pm	0.047	1132	1.92		1.00	1.00 1.00
280-123294-A-21-D	UNK	05/13/19 08:43:33 pm	0.067	1524	1.30		1.00	1.00 1.00
CCV 280-457940/12-A % Recovery 100.26	CCV	05/13/19 08:45:49 pm	3.008	59663	0.65		1.00	1.00 1.00
CCB 280-457940/13-A	CCB	05/13/19 08:48:01 pm	0.003	262	4.14		1.00	1.00 1.00
280-123294-A-22-F	UNK	05/13/19 08:50:14 pm	0.101	2191	0.97		1.00	1.00 1.00
280-123294-A-22-Fsd@5	UNK	05/13/19 08:52:28 pm	0.027	733	1.89		1.00	1.00 1.00
280-123294-A-22-G MS	UNK	05/13/19 08:54:41 pm	2.949	58509	1.14		1.00	1.00 1.00
280-123294-A-22-H MSD	UNK	05/13/19 08:56:54 pm	3.024	59977	0.64		1.00	1.00 1.00
280-123294-A-22-Fpds	UNK	05/13/19 08:59:08 pm	2.945	58427	0.85		1.00	1.00 1.00
MB 280-457916/1-A	UNK	05/13/19 09:01:22 pm	-0.003	148	3.44		1.00	1.00 1.00
LCS 280-457916/2-A	UNK	05/13/19 09:03:36 pm	2.640	52392	0.84		1.00	1.00 1.00
LCSD 280-457916/3-A	UNK	05/13/19 09:05:50 pm	2.882	57186	0.80		1.00	1.00 1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
280-123364-O-1-J	UNK	05/13/19 09:08:04 pm	-0.002	169	4.01		1.00	1.00 1.00
280-123364-O-1-J	UNK	05/13/19 09:10:19 pm	0.004	281	1.71		1.00	1.00 1.00
CCV 280-457940/12-A % Recovery 99.92	CCV	05/13/19 09:12:35 pm	2.998	59462	0.91		1.00	1.00 1.00
CCB 280-457940/13-A	CCB	05/13/19 09:14:47 pm	0.004	281	3.95		1.00	1.00 1.00
280-123364-O-1-K MS	UNK	05/13/19 09:17:00 pm	2.584	51293	1.63		1.00	1.00 1.00
280-123364-O-1-L MSD	UNK	05/13/19 09:19:14 pm	2.631	52220	0.85		1.00	1.00 1.00
280-123364-O-1-J	UNK	05/13/19 09:21:28 pm	-0.001	190	3.53		1.00	1.00 1.00
280-123364-P-2-A	UNK	05/13/19 09:23:42 pm	-0.001	185	4.56		1.00	1.00 1.00
280-123364-P-3-A	UNK	05/13/19 09:25:55 pm	-0.001	184	4.58		1.00	1.00 1.00
280-123183-A-1-G	UNK	05/13/19 09:28:09 pm	-0.001	178	4.53		1.00	1.00 1.00
280-123183-A-1-H MS	UNK	05/13/19 09:30:23 pm	2.858	56699	0.87		1.00	1.00 1.00
280-123183-A-1-I MSD	UNK	05/13/19 09:32:37 pm	2.432	48278	1.03		1.00	1.00 1.00
280-123183-A-2-C	UNK	05/13/19 09:34:51 pm	-0.004	121	6.41	s	1.00	1.00 1.00
280-123221-E-2-C	UNK	05/13/19 09:37:05 pm	-0.002	159	3.99		1.00	1.00 1.00
CCV 280-457940/12-A % Recovery 99.49	CCV	05/13/19 09:39:20 pm	2.985	59207	0.87		1.00	1.00 1.00
CCB 280-457940/13-A	CCB	05/13/19 09:41:32 pm	0.003	256	3.58		1.00	1.00 1.00
280-123221-J-4-C	UNK	05/13/19 09:43:47 pm	0.000	198	4.66		1.00	1.00 1.00

Sample Name	Type	Date/Time	Conc (ppb)	μAbs	%RSD	Flags	Wt.	Vol. ODF
280-123221-F-5-C	UNK	05/13/19 09:46:02 pm	-0.002	152	8.96	s	1.00	1.00 1.00
280-123221-J-7-C	UNK	05/13/19 09:48:16 pm	-0.004	118	5.85	s	1.00	1.00 1.00
280-123221-C-8-C	UNK	05/13/19 09:50:30 pm	0.000	196	5.45	s	1.00	1.00 1.00
280-123221-C-9-C	UNK	05/13/19 09:52:44 pm	-0.003	139	6.68	s	1.00	1.00 1.00
280-123221-C-10-C	UNK	05/13/19 09:54:58 pm	-0.001	171	0.61		1.00	1.00 1.00
280-123221-C-11-C	UNK	05/13/19 09:57:12 pm	-0.002	151	8.58	s	1.00	1.00 1.00
280-123221-C-12-C	UNK	05/13/19 09:59:26 pm	-0.001	175	2.94		1.00	1.00 1.00
280-123221-C-13-C	UNK	05/13/19 10:01:40 pm	0.001	228	3.66		1.00	1.00 1.00
CCV 280-457940/12-A % Recovery 99.39	CCV	05/13/19 10:03:55 pm	2.982	59144	0.91		1.00	1.00 1.00
CCB 280-457940/13-A	CCB	05/13/19 10:06:07 pm	0.002	235	2.90		1.00	1.00 1.00
LB 280-457665/1-B	UNK	05/13/19 10:08:22 pm	0.001	216	3.33		1.00	1.00 1.00
LCS 280-457665/2-B	UNK	05/13/19 10:10:36 pm	2.796	55465	0.78		1.00	1.00 1.00
280-123440-A-27-B@50	UNK	05/13/19 10:12:50 pm	0.034	866	2.03		1.00	1.00 1.00
280-123440-A-29-B@50	UNK	05/13/19 10:15:04 pm	0.008	354	1.33		1.00	1.00 1.00
280-123440-A-30-D@50	UNK	05/13/19 10:17:19 pm	0.019	573	2.09		1.00	1.00 1.00
280-123440-A-30-Dsd@250	UNK	05/13/19 10:19:34 pm	0.007	339	2.35		1.00	1.00 1.00
280-123440-A-30-E MS@50	UNK	05/13/19 10:21:48 pm	0.076	1706	1.12		1.00	1.00 1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
280-123440-A-30-F MSD@50	UNK	05/13/19 10:24:03 pm	0.078	1738	1.24		1.00	1.00 1.00
280-123440-A-30-Dpds@50	UNK	05/13/19 10:26:17 pm	2.839	56324	1.18		1.00	1.00 1.00
280-123440-A-47-C@50	UNK	05/13/19 10:28:32 pm	0.006	312	2.61		1.00	1.00 1.00
CCV 280-457940/12-A % Recovery 99.49	CCV	05/13/19 10:30:47 pm	2.985	59204	0.90		1.00	1.00 1.00
CCB 280-457940/13-A	CCB	05/13/19 10:32:59 pm	0.003	264	3.47		1.00	1.00 1.00
280-123440-A-48-C@50	UNK	05/13/19 10:35:14 pm	0.005	305	3.42		1.00	1.00 1.00
280-123440-A-49-C@50	UNK	05/13/19 10:37:28 pm	0.027	728	2.06		1.00	1.00 1.00
280-123440-A-50-C@50	UNK	05/13/19 10:39:43 pm	0.006	324	2.51		1.00	1.00 1.00
280-123440-A-51-C@50	UNK	05/13/19 10:41:57 pm	0.007	340	2.75		1.00	1.00 1.00
280-123440-B-52-C@50	UNK	05/13/19 10:44:12 pm	0.015	496	1.56		1.00	1.00 1.00
280-123440-B-53-C@50	UNK	05/13/19 10:46:26 pm	0.012	445	2.17		1.00	1.00 1.00
280-123440-B-54-C@50	UNK	05/13/19 10:48:41 pm	0.013	453	2.47		1.00	1.00 1.00
280-123440-A-55-G@50	UNK	05/13/19 10:50:56 pm	0.008	358	2.57		1.00	1.00 1.00
280-123440-A-55-H MS@50	UNK	05/13/19 10:53:11 pm	0.063	1436	1.42		1.00	1.00 1.00
280-123440-A-55-I MSD@50	UNK	05/13/19 10:55:25 pm	0.063	1453	1.49		1.00	1.00 1.00
CCV 280-457940/12-A % Recovery 99.11	CCV	05/13/19 10:57:41 pm	2.973	58978	1.07		1.00	1.00 1.00
CCB 280-457940/13-A	CCB	05/13/19 10:59:53 pm	0.004	272	2.99		1.00	1.00 1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
280-123440-A-57-C@50	UNK	05/13/19 11:02:08 pm	0.006	319	2.45		1.00	1.00 1.00
280-123440-A-58-C@50	UNK	05/13/19 11:04:22 pm	0.015	502	2.24		1.00	1.00 1.00
280-123440-A-62-C@50	UNK	05/13/19 11:06:37 pm	0.016	523	2.41		1.00	1.00 1.00
LB 280-457682/1-B	UNK	05/13/19 11:08:52 pm	0.001	219	4.72		1.00	1.00 1.00
LCS 280-457682/2-B	UNK	05/13/19 11:11:07 pm	2.948	58472	0.73		1.00	1.00 1.00
280-123440-A-63-B@50	UNK	05/13/19 11:13:21 pm	0.011	408	6.70	s	1.00	1.00 1.00
280-123440-A-67-B@50	UNK	05/13/19 11:15:36 pm	0.006	327	2.79		1.00	1.00 1.00
280-123440-A-69-B@50	UNK	05/13/19 11:17:51 pm	0.005	301	2.50		1.00	1.00 1.00
280-123440-A-71-B@50	UNK	05/13/19 11:20:06 pm	0.008	350	3.15		1.00	1.00 1.00
280-123440-A-74-B@50	UNK	05/13/19 11:22:21 pm	0.013	452	2.57		1.00	1.00 1.00
CCV 280-457940/12-A % Recovery 98.96	CCV	05/13/19 11:24:36 pm	2.969	58893	0.92		1.00	1.00 1.00
CCB 280-457940/13-A	CCB	05/13/19 11:26:48 pm	0.004	288	1.84		1.00	1.00 1.00
280-123440-A-75-B@50	UNK	05/13/19 11:29:03 pm	0.010	393	3.18		1.00	1.00 1.00
280-123440-A-76-B@50	UNK	05/13/19 11:31:18 pm	0.009	382	2.84		1.00	1.00 1.00
280-123440-A-77-B@50	UNK	05/13/19 11:33:34 pm	0.009	385	1.85		1.00	1.00 1.00
280-123440-A-78-B@50	UNK	05/13/19 11:35:49 pm	0.022	628	1.30		1.00	1.00 1.00
280-123440-A-79-B@50	UNK	05/13/19 11:38:04 pm	0.011	418	1.41		1.00	1.00 1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
280-123440-A-80-B@50	UNK	05/13/19 11:40:19 pm	0.006	310	1.27		1.00	1.00 1.00
CCV 280-457940/12-A % Recovery 98.91	CCV	05/13/19 11:42:34 pm	2.967	58864	0.93		1.00	1.00 1.00
CCB 280-457940/13-A	CCB	05/13/19 11:44:46 pm	0.003	265	2.18		1.00	1.00 1.00
280-123440-A-81-D@50	UNK	05/13/19 11:47:01 pm	0.025	696	1.96		1.00	1.00 1.00
280-123440-A-81-Dsd@250	UNK	05/13/19 11:49:16 pm	0.009	373	2.30		1.00	1.00 1.00
280-123440-A-81-E MS@50	UNK	05/13/19 11:51:30 pm	0.074	1671	1.17		1.00	1.00 1.00
280-123440-A-81-F MSD@50	UNK	05/13/19 11:53:45 pm	0.072	1631	1.09		1.00	1.00 1.00
280-123440-A-81-Dpds@50	UNK	05/13/19 11:56:00 pm	2.809	55736	1.41		1.00	1.00 1.00
CCV 280-457940/12-A % Recovery 98.41	CCV	05/13/19 11:58:16 pm	2.952	58564	0.97		1.00	1.00 1.00
CCB 280-457940/13-A	CCB	05/14/19 12:00:28 am	0.003	269	2.99		1.00	1.00 1.00
CCV 280-457940/12-A % Recovery 101.82	CCV	05/14/19 07:49:05 am	3.054	60586	0.83		1.00	1.00 1.00
CCB 280-457940/13-A	CCB	05/14/19 07:51:17 am	0.005	289	1.46		1.00	1.00 1.00
LCS 280-457916/2-A	UNK	05/14/19 07:53:29 am	3.008	59670	0.73		1.00	1.00 1.00
280-123440-A-1-H	UNK	05/14/19 07:55:41 am	0.052	1224	0.75		1.00	1.00 1.00
280-123440-B-2-B	UNK	05/14/19 07:57:54 am	0.034	879	0.96		1.00	1.00 1.00
280-123440-A-3-D	UNK	05/14/19 08:00:06 am	0.052	1234	1.01		1.00	1.00 1.00
280-123440-B-4-B	UNK	05/14/19 08:02:20 am	0.031	809	1.47		1.00	1.00 1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
280-123440-A-5-D	UNK	05/14/19 08:04:33 am	4.155	82341	0.52		1.00	1.00 1.00
280-123440-A-6-D	UNK	05/14/19 08:06:47 am	0.018	550	1.05		1.00	1.00 1.00
280-123440-A-7-D@100	UNK	05/14/19 08:09:01 am	3.344	66310	0.85		1.00	1.00 1.00
280-123440-A-8-D	UNK	05/14/19 08:11:15 am	0.004	280	1.56		1.00	1.00 1.00
280-123440-A-14-D	UNK	05/14/19 08:13:30 am	0.572	11502	0.60		1.00	1.00 1.00
CCV 280-457940/12-A % Recovery 101.96	CCV	05/14/19 08:15:45 am	3.059	60670	0.68		1.00	1.00 1.00
CCB 280-457940/13-A	CCB	05/14/19 08:17:57 am	0.004	287	2.13		1.00	1.00 1.00
280-123440-A-15-D	UNK	05/14/19 08:20:12 am	2.318	46024	0.88		1.00	1.00 1.00
280-123440-A-16-D	UNK	05/14/19 08:22:27 am	0.187	3897	0.62		1.00	1.00 1.00
280-123440-A-19-D	UNK	05/14/19 08:24:39 am	1.498	29823	0.60		1.00	1.00 1.00
280-123440-A-20-D	UNK	05/14/19 08:26:51 am	0.052	1218	0.85		1.00	1.00 1.00
280-123440-A-21-D	UNK	05/14/19 08:29:03 am	0.232	4781	0.53		1.00	1.00 1.00
280-123440-A-22-D	UNK	05/14/19 08:31:16 am	0.271	5558	0.74		1.00	1.00 1.00
280-123440-A-23-D	UNK	05/14/19 08:33:29 am	0.287	5881	1.08		1.00	1.00 1.00
280-123440-A-24-D	UNK	05/14/19 08:35:42 am	0.109	2364	1.02		1.00	1.00 1.00
280-123440-A-25-D	UNK	05/14/19 08:37:55 am	0.102	2221	0.66		1.00	1.00 1.00
280-123440-A-25-Dsd@5	UNK	05/14/19 08:40:09 am	0.017	538	1.60		1.00	1.00 1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
CCV 280-457940/12-A % Recovery 102.59	CCV	05/14/19 08:42:24 am	3.078	61043	0.66		1.00	1.00 1.00
CCB 280-457940/13-A	CCB	05/14/19 08:44:36 am	0.005	298	3.00		1.00	1.00 1.00
280-123440-A-25-E MS	UNK	05/14/19 08:46:50 am	3.139	62250	0.82		1.00	1.00 1.00
280-123440-A-25-F MSD	UNK	05/14/19 08:49:04 am	3.128	62041	0.61		1.00	1.00 1.00
280-123440-A-25-Dpds	UNK	05/14/19 08:51:19 am	2.951	58533	0.65		1.00	1.00 1.00
280-123440-A-27-B	UNK	05/14/19 08:53:34 am	1.557	30978	0.83		1.00	1.00 1.00
280-123440-A-29-B	UNK	05/14/19 08:55:47 am	0.173	3623	0.64		1.00	1.00 1.00
280-123440-A-30-D	UNK	05/14/19 08:57:59 am	0.716	14353	0.61		1.00	1.00 1.00
280-123440-A-30-Dsd@5	UNK	05/14/19 09:00:11 am	0.139	2946	1.04		1.00	1.00 1.00
280-123440-A-30-E MS	UNK	05/14/19 09:02:24 am	3.685	73047	0.95		1.00	1.00 1.00
280-123440-A-30-F MSD	UNK	05/14/19 09:04:37 am	3.761	74554	0.72		1.00	1.00 1.00
280-123440-A-30-Dpds	UNK	05/14/19 09:06:50 am	3.551	70401	0.69		1.00	1.00 1.00
CCV 280-457940/12-A % Recovery 102.87	CCV	05/14/19 09:09:06 am	3.086	61209	0.78		1.00	1.00 1.00
CCB 280-457940/13-A	CCB	05/14/19 09:11:18 am	0.004	272	3.68		1.00	1.00 1.00
280-123440-A-47-C	UNK	05/14/19 09:13:31 am	0.175	3652	1.25		1.00	1.00 1.00
280-123440-A-48-C	UNK	05/14/19 09:15:45 am	0.027	725	1.43		1.00	1.00 1.00
280-123440-A-49-C	UNK	05/14/19 09:17:59 am	1.221	24346	1.19		1.00	1.00 1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
280-123440-A-50-C	UNK	05/14/19 09:20:13 am	0.070	1581	0.85		1.00	1.00 1.00
280-123440-A-51-C	UNK	05/14/19 09:22:27 am	0.162	3412	0.72		1.00	1.00 1.00
280-123440-B-52-C	UNK	05/14/19 09:24:42 am	0.559	11247	0.77		1.00	1.00 1.00
280-123440-B-53-C	UNK	05/14/19 09:26:55 am	0.459	9271	0.90		1.00	1.00 1.00
280-123440-B-54-C	UNK	05/14/19 09:29:07 am	0.463	9349	0.77		1.00	1.00 1.00
280-123440-A-55-G	UNK	05/14/19 09:31:19 am	0.216	4479	1.05		1.00	1.00 1.00
280-123440-A-55-H MS	UNK	05/14/19 09:33:32 am	3.278	64996	0.74		1.00	1.00 1.00
CCV 280-457940/12-A % Recovery 103.59	CCV	05/14/19 09:35:47 am	3.108	61640	0.87		1.00	1.00 1.00
CCB 280-457940/13-A	CCB	05/14/19 09:37:59 am	0.005	294	3.05		1.00	1.00 1.00
280-123440-A-55-I MSD	UNK	05/14/19 09:40:12 am	3.183	63116	0.64		1.00	1.00 1.00
280-123440-A-57-C	UNK	05/14/19 09:42:25 am	0.086	1898	1.31		1.00	1.00 1.00
280-123440-A-58-C	UNK	05/14/19 09:44:38 am	0.619	12443	0.69		1.00	1.00 1.00
280-123440-A-62-C	UNK	05/14/19 09:46:52 am	0.778	15583	0.49		1.00	1.00 1.00
280-123440-A-63-B	UNK	05/14/19 09:49:06 am	0.304	6207	0.67		1.00	1.00 1.00
280-123440-A-67-B	UNK	05/14/19 09:51:20 am	0.130	2778	0.99		1.00	1.00 1.00
280-123440-A-69-B	UNK	05/14/19 09:53:35 am	0.078	1742	1.10		1.00	1.00 1.00
280-123440-A-71-B	UNK	05/14/19 09:55:50 am	0.109	2358	0.94		1.00	1.00 1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt. ODF	Vol.
280-123440-A-74-B	UNK	05/14/19 09:58:02 am	0.381	7724	1.01		1.00 1.00	1.00
280-123440-A-75-B	UNK	05/14/19 10:00:15 am	0.324	6597	0.49		1.00 1.00	1.00
CCV 280-457940/12-A % Recovery 103.46	CCV	05/14/19 10:02:30 am	3.104	61558	1.08		1.00 1.00	1.00
CCB 280-457940/13-A	CCB	05/14/19 10:04:42 am	0.006	315	3.36		1.00 1.00	1.00
280-123440-A-76-B	UNK	05/14/19 10:06:55 am	0.240	4940	0.58		1.00 1.00	1.00
280-123440-A-77-B	UNK	05/14/19 10:09:07 am	0.277	5682	0.50		1.00 1.00	1.00
280-123440-A-78-B	UNK	05/14/19 10:11:20 am	0.938	18751	0.65		1.00 1.00	1.00
280-123440-A-79-B	UNK	05/14/19 10:13:33 am	0.333	6786	0.65		1.00 1.00	1.00
280-123440-A-80-B	UNK	05/14/19 10:15:47 am	0.077	1721	0.79		1.00 1.00	1.00
280-123440-A-81-D	UNK	05/14/19 10:18:00 am	1.411	28090	0.78		1.00 1.00	1.00
280-123440-A-81-Dsd@5	UNK	05/14/19 10:20:14 am	0.340	6921	0.68		1.00 1.00	1.00
280-123440-A-81-E MS	UNK	05/14/19 10:22:29 am	4.557	90282	0.50		1.00 1.00	1.00
280-123440-A-81-F MSD	UNK	05/14/19 10:24:43 am	4.633	91781	0.85		1.00 1.00	1.00
280-123440-A-81-Dpds	UNK	05/14/19 10:26:58 am	4.169	82622	0.66		1.00 1.00	1.00
CCV 280-457940/12-A % Recovery 104.83	CCV	05/14/19 10:29:13 am	3.145	62374	0.79		1.00 1.00	1.00
CCB 280-457940/13-A	CCB	05/14/19 10:31:26 am	0.005	297	2.51		1.00 1.00	1.00
280-123510-A-1-Asd@5	UNK	05/14/19 11:56:38 am	-0.002	154	3.69		1.00 1.00	1.00

Sample Name	Type	Date/Time	Conc (ppb)	μAbs	%RSD	Flags	Wt. ODF	Vol.
CCV 280-457940/12-A % Recovery 106.32	CCV	05/14/19 11:58:53 am	3.190	63258	0.91		1.00 1.00	1.00
CCB 280-457940/13-A	CCB	05/14/19 12:01:05 pm	0.006	311	2.18		1.00 1.00	1.00

Analysis Parameters

Instrument M-7500 Mercury Analyzer

Conditions

Gas flow (mL/min)	Sample Uptake (s)	Rinse (s)	Read delay (s)	Replicates (#)	Replicate time (s)	Pump speed (%)	Wavelength (nm)
100	35.00	90.00	55.00	4	1.50	50	253.65
ASX Pump Rate (%)							
100							

Instrumental Zero

Zero before first sample: No

Zero periodically: Yes
Before each calibration.

Baseline Correction

#1 Start time (s)	#1 End time (s)	#2 Start time (s)	#2 End time (s)
20.00	24.00		

Standby Mode

Enabled: Yes

Standby Options: pump off, gas off, lamp off

Autodilution

Enabled: No

Condition:

Tube # range:

If no autodilution tubes remaining

Calibration

Settings

Algorithm	Through blank	Weighted fit	Cal. Type	Racalibration rate	Reslope rate	Reslope standard
Linear	No	No	Normal	0	0	N/A

Limits

Calibration slope		Reslope		Coeff. of Determination
Lower (%)	Upper (%)	Lower (%)	Upper (%)	
20	150	75	125	0.99500

Error action: Flag and continue

QC

GLP Override: Yes

QC Tests

CCB

Concentration
(ppb)
0.0600

Failure flag: Q

Error action for manually inserted QC: Stop analysis

ICB

Concentration
(ppb)
0.0600

Failure flag: Z

Error action for manually inserted QC: Stop analysis

CCV

Concentration (ppb)	Low Limit %	High Limit %
3.0000	80.0000	120.0000

Failure flag: Q

Error action for manually inserted QC: Stop analysis

ICV

Concentration (ppb)	Low Limit %	High Limit %
2.4000	94.6000	105.4000

Failure flag: Q

Error action for manually inserted QC: Stop analysis

CRDL

Concentration (ppb)	Low Limit %	High Limit %
0.1200	50.0000	150.0000

Failure flag: Y

Error action for manually inserted QC: Stop analysis

Shipping and Receiving Documents



280-123183 Chain of Custody



Chain of Custody Record

COC No.: **RVAAP-100-TA**

Date: **04/29/2019**

Page | of 1

Name Leidos Address: 8866 Commons Blvd. Suite 201, Twinsburg, OH 44087 Phone Number: (330) 405-5802 Project Manager: Jed Thomas Project: RVAAP FWGW Sampling Event Spring 2019 Job/P.O. No.: P010216426 Sampler (Signature) <i>[Signature]</i> (Printed Name) LINDSEY NIGR		Laboratory Name: Test America - Canton Address: 4101 Shuffel St NW North Canton, OH 44720 Phone: (330) 497-9396 Fax: _____ Contact: _____	
Laboratory No. _____ Sample ID: DA2mw-115-190401-GW Site Type: <i>GW</i> Date: 4/29/19 Time: 0930 Matrix: W	Total Number of Containers: 1 Temperature Blank: _____ TAL Metals (7C): 1	Requested Parameters: _____ Notes: _____	OBSERVATIONS, COMMENTS SPECIAL INSTRUCTIONS Extra Volume for MS/MSD
Signature: <i>[Signature]</i> Printed Name: AMANDA SEWELL Leidos: _____ Company: _____	Date: 4/29/19 Time: 1501	Received by: <i>[Signature]</i> Signature: RE ROBIN Printed Name: RICK ROBISON Company: _____	A. Cool, 4C B. HCl, pH<2, Cool, 4C C. HNO3, pH<2, Cool, 4C D. NaOH, pH>12, Cool 4C 1. SW 8260B 2. SW 8270D 3. SW 8270D SIM 4. SW 8082A 5. SW 8081B 6. SW 8330 7. SW 6010/6020/7470 8. SW 9012B 9. SW 9034 10. SW 9056/9056A 11. SW 6860 12. EPA 353.2 13. SW 7196 14. SM2320B
Relinquished by: <i>[Signature]</i> Signature: RE ROBIN Printed Name: RICK ROBISON Company: _____	Date: _____ Time: _____	Received by: <i>[Signature]</i> Signature: _____ Printed Name: _____ Company: _____	Temperature Blank Lab: Leidos 8866 Commons Drive Twinsburg, OH 44087 (330) 405-5802

1.9, 10, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

Login Sample Receipt Checklist

Client: Leidos, Inc.

Job Number: 280-123183-1

Login Number: 123183
List Number: 1
Creator: Pottruff, Reed W

List Source: Eurofins TestAmerica, Denver

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	