



Path: C:\Users\Admin\Documents\Agilent\ICP Expert\My Results\Chem 481\ICP\2016\10\26\SDA60ppm10%1_17.esws

Date created: 10/26/2016 10:00:48 AM

Instrument used: AU14480072

Software Version : 7.100.6821.61355 Firmware Version : 2994

Notes:

Method Setup

Common Conditions

Pump Speed (rpm): 12
 Sample Uptake Time (s): 5
 Sample uptake fast pump: On
 Sample introduction: Manual
 SVS 1 delay (s): N/A
 Rinse time (s): N/A
 Rinse time fast pump: N/A
 Replicates: 3
 Calibration Correlation Coefficient Limit: 0.999
 Reslope: Off
 Standard addition: Off
 Reagent Blank: Off
 QC Active: Off
 IEC: Off
 Oxygen Injection Mode: Off

Drift correct with Argon lines: False

Peak track lines used :

Condition Set 1

Read time (s): 5 Nebulizer flow(L/min): 0.7
 Stabilization time (s): 5 Plasma flow(L/min): 12
 RF power (kW): 1.2 Aux flow(L/min): 1
 Viewing mode: Axial Make up flow(L/min): 0
 Viewing height (mm): N/A Oxygen %: 0

Element	Wavelength(nm)	Label	Type	Background Correction	Points Per Peak	Calibration Fit
Zn	213.857	Zn	Analyte	Fitted	2	Linear Weighted
Zn	334.502	Zn	Analyte	Fitted	2	Linear Weighted
Zn	202.548	Zn	Analyte	Fitted	2	Linear Weighted
Ca	396.847	Ca	Analyte	Fitted	2	Linear Weighted
Ca	317.933	Ca	Analyte	Fitted	2	Linear Weighted
Na	589.592	Na	Analyte	Fitted	2	Linear Weighted
Na	588.995	Na	Analyte	Fitted	2	Linear Weighted
Cu	327.395	Cu	Analyte	Fitted	2	Linear Weighted
Cu	213.598	Cu	Analyte	Fitted	2	Linear Weighted
Pb	220.353	Pb	Analyte	Fitted	2	Linear Weighted
Pb	283.305	Pb	Analyte	Fitted	2	Linear Weighted
Al	396.152	Al	Analyte	Fitted	2	Linear Weighted

Condition Set 2

Read time (s): 5 Nebulizer flow(L/min): 0.7
 Stabilization time (s): 0 Plasma flow(L/min): 12
 RF power (kW): 1.2 Aux flow(L/min): 1
 Viewing mode: Radial Make up flow(L/min): 0
 Viewing height (mm): 8 Oxygen %: 0

Element	Wavelength(nm)	Label	Type	Background Correction	Points Per Peak	Calibration Fit
Zn	213.857	Zn_rad	Analyte	Fitted	2	Linear Weighted
Zn	334.502	Zn_rad	Analyte	Fitted	2	Linear Weighted

Element	Wavelength(nm)	Label	Type	Background Correction	Points Per Peak	Calibration Fit
Zn	202.548	Zn_rad	Analyte	Fitted	2	Linear Weighted
Ca	396.847	Ca_rad	Analyte	Fitted	2	Linear Weighted
Ca	317.933	Ca_rad	Analyte	Fitted	2	Linear Weighted
Na	589.592	Na_rad	Analyte	Fitted	2	Linear Weighted
Na	588.995	Na_rad	Analyte	Fitted	2	Linear Weighted
Cu	327.395	Cu_rad	Analyte	Fitted	2	Linear Weighted
Cu	213.598	Cu_rad	Analyte	Fitted	2	Linear Weighted
Pb	220.353	Pb_rad	Analyte	Fitted	2	Linear Weighted
Pb	283.305	Pb_rad	Analyte	Fitted	2	Linear Weighted
Al	396.152	Al_rad	Analyte	Fitted	2	Linear Weighted

Calibration parameters:

Label (Wavelength nm)	Minimum Concentration	Maximum Concentration	Calibration Error
Zn (213.857)	0 ppm	22 ppm	5 %
Zn_rad (213.857)	0 ppm	22 ppm	5 %
Zn (334.502)	0 ppm	22 ppm	5 %
Zn_rad (334.502)	0 ppm	22 ppm	5 %
Zn (202.548)	0 ppm	22 ppm	5 %
Zn_rad (202.548)	0 ppm	22 ppm	5 %
Ca (396.847)	0 ppm	22 ppm	5 %
Ca_rad (396.847)	0 ppm	22 ppm	5 %
Ca (317.933)	0 ppm	22 ppm	5 %
Ca_rad (317.933)	0 ppm	22 ppm	5 %
Na (589.592)	0 ppm	22 ppm	5 %
Na_rad (589.592)	0 ppm	22 ppm	5 %
Na (588.995)	0 ppm	22 ppm	5 %
Na_rad (588.995)	0 ppm	22 ppm	5 %
Cu (327.395)	0 ppm	22 ppm	5 %
Cu_rad (327.395)	0 ppm	22 ppm	5 %
Cu (213.598)	0 ppm	22 ppm	5 %
Cu_rad (213.598)	0 ppm	22 ppm	5 %
Pb (220.353)	0 ppm	22 ppm	5 %
Pb_rad (220.353)	0 ppm	22 ppm	5 %
Pb (283.305)	0 ppm	22 ppm	5 %
Pb_rad (283.305)	0 ppm	22 ppm	5 %
Al (396.152)	0 ppm	22 ppm	5 %
Al_rad (396.152)	0 ppm	22 ppm	5 %

Sequence table:

Sample Label	Weight (g)	Volume (mL)	Dilution
60 ppm 10% 1	1.0	1.0	1.0
60 ppm 10% 2	1.0	1.0	1.0
60 ppm 10% 3	1.0	1.0	1.0
60 ppm 10% 4	1.0	1.0	1.0

Sample Label	Weight (g)	Volume (mL)	Dilution
60 ppm 10% 5	1.0	1.0	1.0
60 ppm 10% 6	1.0	1.0	1.0
60 ppm 10% 7	1.0	1.0	1.0
60 ppm 10% 8	1.0	1.0	1.0
60 ppm 10% 9	1.0	1.0	1.0
60 ppm 10% 10	1.0	1.0	1.0
60 ppm 10% 11	1.0	1.0	1.0
60 ppm 10% 12	1.0	1.0	1.0
60 ppm 10% 13	1.0	1.0	1.0
60 ppm 10% 14	1.0	1.0	1.0
60 ppm 10% 15	1.0	1.0	1.0
60 ppm 10% 16	1.0	1.0	1.0
60 ppm 10% 17	1.0	1.0	1.0
5ppm stand	1.0	1.0	1.0
20ppm stand	1.0	1.0	1.0
LCMS water	1.0	1.0	1.0

Results

Solution	Al (396.152 nm)	Al_rad (396.152 nm)	Ca (317.933 nm)	Ca (396.847 nm)	Ca_rad (317.933 nm)
Blank	0.00 (ppm)	0.00 (ppm)	0.00 (ppm)	0.00 (ppm)	0.00 (ppm)
Standard 1	5.00 (ppm)	5.00 (ppm)	5.00 (ppm)	5.00 (ppm)	5.00 (ppm)
Standard 2					
Standard 3	15.00 (ppm)	15.00 (ppm)	15.00 (ppm)	#### (ppm)	15.00 (ppm)
Standard 4	20.00 (ppm)	20.00 (ppm)	20.00 (ppm)	#### (ppm)	20.00 (ppm)
Standard 5					
60 ppm 10% 1	0.01 (ppm)	0.01 (ppm)	0.04 (ppm)	0.04 (ppm)	0.04 (ppm)
60 ppm 10% 2	0.04 (ppm)	0.04 (ppm)	0.05 (ppm)	0.06 (ppm)	0.05 (ppm)
60 ppm 10% 3	0.00 (ppm)	0.01 (ppm)	0.05 (ppm)	0.05 (ppm)	0.05 (ppm)
60 ppm 10% 4	0.01 (ppm)	0.01 (ppm)	0.27 (ppm)	0.28 (ppm)	0.28 (ppm)
60 ppm 10% 5	0.00 (ppm)	0.00 (ppm)	0.05 (ppm)	0.05 (ppm)	0.05 (ppm)
60 ppm 10% 6	0.00 (ppm)	0.00 u (ppm)	0.06 (ppm)	0.06 (ppm)	0.06 (ppm)
60 ppm 10% 7	4.47 (ppm)	4.74 (ppm)	0.07 (ppm)	0.08 (ppm)	0.08 (ppm)
60 ppm 10% 8	0.03 (ppm)	0.01 (ppm)	0.07 (ppm)	0.07 (ppm)	0.07 (ppm)
60 ppm 10% 9	0.00 (ppm)	0.00 u (ppm)	0.07 (ppm)	0.07 (ppm)	0.07 (ppm)
60 ppm 10% 10	1.35 (ppm)	1.43 (ppm)	0.07 (ppm)	0.07 (ppm)	0.08 (ppm)
60 ppm 10% 11	0.03 (ppm)	0.04 (ppm)	0.14 (ppm)	0.14 (ppm)	0.15 (ppm)
60 ppm 10% 12	0.03 (ppm)	0.03 (ppm)	0.15 (ppm)	0.15 (ppm)	0.15 (ppm)
60 ppm 10% 13	0.01 (ppm)	0.02 (ppm)	0.18 (ppm)	0.18 (ppm)	0.18 (ppm)
60 ppm 10% 14	0.01 (ppm)	0.01 (ppm)	0.18 (ppm)	0.18 (ppm)	0.19 (ppm)
60 ppm 10% 15	0.01 (ppm)	0.01 (ppm)	0.13 (ppm)	0.13 (ppm)	0.14 (ppm)
60 ppm 10% 16	0.00 (ppm)	0.01 (ppm)	0.11 (ppm)	0.11 (ppm)	0.12 (ppm)
60 ppm 10% 17	0.00 (ppm)	0.01 (ppm)	0.09 (ppm)	0.09 (ppm)	0.10 (ppm)
5ppm stand	4.83 (ppm)	5.02 (ppm)	4.27 (ppm)	3.96 (ppm)	4.72 (ppm)
20ppm stand	17.67 (ppm)	18.79 (ppm)	16.78 (ppm)	#### (ppm)	19.09 (ppm)

Solution	Al (396.152 nm)	Al_rad (396.152 nm)	Ca (317.933 nm)	Ca (396.847 nm)	Ca_rad (317.933 nm)
LCMS water	0.10 (ppm)	0.00 (ppm)	0.15 (ppm)	0.16 (ppm)	0.02 (ppm)

Solution	Ca_rad (396.847 nm)	Cu (213.598 nm)	Cu (327.395 nm)	Cu_rad (213.598 nm)	Cu_rad (327.395 nm)
Blank	0.00 (ppm)	0.00 (ppm)	0.00 (ppm)	0.00 (ppm)	0.00 (ppm)
Standard 1	5.00 (ppm)	5.00 (ppm)	5.00 (ppm)	5.00 (ppm)	5.00 (ppm)
Standard 2					
Standard 3	15.00 (ppm)	15.00 (ppm)	15.00 (ppm)	15.00 (ppm)	15.00 (ppm)
Standard 4	20.00 (ppm)	20.00 (ppm)	20.00 (ppm)	20.00 (ppm)	20.00 (ppm)
Standard 5					
60 ppm 10% 1	0.04 (ppm)	Uncal (ppm)	0.58 (ppm)	0.50 (ppm)	0.54 (ppm)
60 ppm 10% 2	0.05 (ppm)	Uncal (ppm)	6.14 (ppm)	6.40 (ppm)	6.74 (ppm)
60 ppm 10% 3	0.05 (ppm)	Uncal (ppm)	8.27 (ppm)	8.27 (ppm)	8.77 (ppm)
60 ppm 10% 4	0.28 (ppm)	Uncal (ppm)	9.03 (ppm)	8.94 (ppm)	9.61 (ppm)
60 ppm 10% 5	0.05 (ppm)	Uncal (ppm)	9.28 (ppm)	9.28 (ppm)	9.95 (ppm)
60 ppm 10% 6	0.06 (ppm)	Uncal (ppm)	10.26 (ppm)	10.25 (ppm)	11.05 (ppm)
60 ppm 10% 7	0.08 (ppm)	Uncal (ppm)	8.57 (ppm)	8.26 (ppm)	8.98 (ppm)
60 ppm 10% 8	0.07 (ppm)	Uncal (ppm)	12.09 (ppm)	11.90 (ppm)	12.93 (ppm)
60 ppm 10% 9	0.07 (ppm)	Uncal (ppm)	12.25 (ppm)	12.01 (ppm)	13.14 (ppm)
60 ppm 10% 10	0.07 (ppm)	Uncal (ppm)	12.10 (ppm)	11.93 (ppm)	13.05 (ppm)
60 ppm 10% 11	0.15 (ppm)	Uncal (ppm)	16.30 (ppm)	16.14 (ppm)	17.79 (ppm)
60 ppm 10% 12	0.15 (ppm)	Uncal (ppm)	17.44 (ppm)	17.34 (ppm)	19.07 (ppm)
60 ppm 10% 13	0.18 (ppm)	Uncal (ppm)	17.42 (ppm)	17.13 (ppm)	19.07 (ppm)
60 ppm 10% 14	0.18 (ppm)	Uncal (ppm)	17.14 (ppm)	17.20 (ppm)	19.14 (ppm)
60 ppm 10% 15	0.14 (ppm)	Uncal (ppm)	17.39 (ppm)	17.28 (ppm)	19.17 (ppm)
60 ppm 10% 16	0.11 (ppm)	Uncal (ppm)	17.52 (ppm)	17.66 (ppm)	18.90 (ppm)
60 ppm 10% 17	0.09 (ppm)	Uncal (ppm)	17.55 (ppm)	17.65 (ppm)	18.89 (ppm)
5ppm stand	4.39 (ppm)	Uncal (ppm)	4.78 (ppm)	4.14 (ppm)	4.56 (ppm)
20ppm stand	17.67 (ppm)	Uncal (ppm)	17.01 (ppm)	15.86 (ppm)	17.84 (ppm)
LCMS water	0.03 (ppm)	Uncal (ppm)	0.13 (ppm)	0.01 (ppm)	0.01 (ppm)

Solution	Na (588.995 nm)	Na (589.592 nm)	Na_rad (588.995 nm)	Na_rad (589.592 nm)	Pb (220.353 nm)
Blank	0.00 (ppm)	0.00 (ppm)	0.00 (ppm)	0.00 (ppm)	0.00 (ppm)
Standard 1	5.00 (ppm)	5.00 (ppm)	5.00 (ppm)	5.00 (ppm)	5.00 (ppm)
Standard 2					
Standard 3	15.00 (ppm)	15.00 (ppm)	15.00 (ppm)	15.00 (ppm)	15.00 (ppm)
Standard 4	20.00 (ppm)	20.00 (ppm)	20.00 (ppm)	20.00 (ppm)	20.00 (ppm)
Standard 5					
60 ppm 10% 1	Uncal (ppm)	Uncal (ppm)	36.36 o (ppm)	24.92 o (ppm)	Uncal (ppm)
60 ppm 10% 2	Uncal (ppm)	Uncal (ppm)	10.52 (ppm)	7.42 (ppm)	Uncal (ppm)
60 ppm 10% 3	Uncal (ppm)	Uncal (ppm)	7.67 (ppm)	5.20 (ppm)	Uncal (ppm)
60 ppm 10% 4	Uncal (ppm)	Uncal (ppm)	5.91 (ppm)	4.05 (ppm)	Uncal (ppm)
60 ppm 10% 5	Uncal (ppm)	Uncal (ppm)	5.57 (ppm)	3.83 (ppm)	Uncal (ppm)
60 ppm 10% 6	Uncal (ppm)	Uncal (ppm)	3.53 (ppm)	2.46 (ppm)	Uncal (ppm)

Solution	Na (588.995 nm)	Na (589.592 nm)	Na_rad (588.995 nm)	Na_rad (589.592 nm)	Pb (220.353 nm)
60 ppm 10% 7	Uncal (ppm)	Uncal (ppm)	2.76 (ppm)	1.94 (ppm)	Uncal (ppm)
60 ppm 10% 8	Uncal (ppm)	Uncal (ppm)	1.19 (ppm)	0.94 (ppm)	Uncal (ppm)
60 ppm 10% 9	Uncal (ppm)	Uncal (ppm)	0.89 (ppm)	0.70 (ppm)	Uncal (ppm)
60 ppm 10% 10	Uncal (ppm)	Uncal (ppm)	0.61 (ppm)	0.51 (ppm)	Uncal (ppm)
60 ppm 10% 11	Uncal (ppm)	Uncal (ppm)	2.24 (ppm)	1.62 (ppm)	Uncal (ppm)
60 ppm 10% 12	Uncal (ppm)	Uncal (ppm)	0.27 (ppm)	0.31 (ppm)	Uncal (ppm)
60 ppm 10% 13	Uncal (ppm)	Uncal (ppm)	-0.06 u (ppm)	0.10 (ppm)	Uncal (ppm)
60 ppm 10% 14	Uncal (ppm)	Uncal (ppm)	-0.13 u (ppm)	0.05 (ppm)	Uncal (ppm)
60 ppm 10% 15	Uncal (ppm)	Uncal (ppm)	-0.13 u (ppm)	0.06 (ppm)	Uncal (ppm)
60 ppm 10% 16	Uncal (ppm)	Uncal (ppm)	-0.05 u (ppm)	0.09 (ppm)	Uncal (ppm)
60 ppm 10% 17	Uncal (ppm)	Uncal (ppm)	-0.07 u (ppm)	0.08 (ppm)	Uncal (ppm)
5ppm stand	Uncal (ppm)	Uncal (ppm)	4.14 (ppm)	4.52 (ppm)	Uncal (ppm)
20ppm stand	Uncal (ppm)	Uncal (ppm)	19.55 (ppm)	18.61 (ppm)	Uncal (ppm)
LCMS water	Uncal (ppm)	Uncal (ppm)	-0.08 u (ppm)	0.07 (ppm)	Uncal (ppm)

Solution	Pb (283.305 nm)	Pb_rad (220.353 nm)	Pb_rad (283.305 nm)	Zn (202.548 nm)	Zn (213.857 nm)
Blank	0.00 (ppm)	0.00 (ppm)	0.00 (ppm)	0.00 (ppm)	0.00 (ppm)
Standard 1	5.00 (ppm)	5.00 (ppm)	5.00 (ppm)	5.00 (ppm)	5.00 (ppm)
Standard 2					
Standard 3	15.00 (ppm)	15.00 (ppm)	15.00 (ppm)	15.00 (ppm)	15.00 (ppm)
Standard 4	20.00 (ppm)	20.00 (ppm)	20.00 (ppm)	20.00 (ppm)	20.00 (ppm)
Standard 5					
60 ppm 10% 1	0.45 (ppm)	Uncal (ppm)	0.30 (ppm)	Uncal (ppm)	Uncal (ppm)
60 ppm 10% 2	3.72 (ppm)	Uncal (ppm)	4.06 (ppm)	Uncal (ppm)	Uncal (ppm)
60 ppm 10% 3	5.56 (ppm)	Uncal (ppm)	5.85 (ppm)	Uncal (ppm)	Uncal (ppm)
60 ppm 10% 4	6.31 (ppm)	Uncal (ppm)	6.66 (ppm)	Uncal (ppm)	Uncal (ppm)
60 ppm 10% 5	6.64 (ppm)	Uncal (ppm)	7.01 (ppm)	Uncal (ppm)	Uncal (ppm)
60 ppm 10% 6	7.43 (ppm)	Uncal (ppm)	8.02 (ppm)	Uncal (ppm)	Uncal (ppm)
60 ppm 10% 7	7.74 (ppm)	Uncal (ppm)	8.29 (ppm)	Uncal (ppm)	Uncal (ppm)
60 ppm 10% 8	8.48 (ppm)	Uncal (ppm)	8.95 (ppm)	Uncal (ppm)	Uncal (ppm)
60 ppm 10% 9	8.86 (ppm)	Uncal (ppm)	9.62 (ppm)	Uncal (ppm)	Uncal (ppm)
60 ppm 10% 10	9.26 (ppm)	Uncal (ppm)	10.06 (ppm)	Uncal (ppm)	Uncal (ppm)
60 ppm 10% 11	16.51 (ppm)	Uncal (ppm)	18.15 (ppm)	Uncal (ppm)	Uncal (ppm)
60 ppm 10% 12	18.08 (ppm)	Uncal (ppm)	19.81 (ppm)	Uncal (ppm)	Uncal (ppm)
60 ppm 10% 13	17.29 (ppm)	Uncal (ppm)	18.92 (ppm)	Uncal (ppm)	Uncal (ppm)
60 ppm 10% 14	17.05 (ppm)	Uncal (ppm)	18.73 (ppm)	Uncal (ppm)	Uncal (ppm)
60 ppm 10% 15	18.04 (ppm)	Uncal (ppm)	19.99 (ppm)	Uncal (ppm)	Uncal (ppm)
60 ppm 10% 16	18.44 (ppm)	Uncal (ppm)	20.32 (ppm)	Uncal (ppm)	Uncal (ppm)
60 ppm 10% 17	18.88 (ppm)	Uncal (ppm)	20.84 (ppm)	Uncal (ppm)	Uncal (ppm)
5ppm stand	5.11 (ppm)	Uncal (ppm)	4.55 (ppm)	Uncal (ppm)	Uncal (ppm)
20ppm stand	16.85 (ppm)	Uncal (ppm)	17.80 (ppm)	Uncal (ppm)	Uncal (ppm)
LCMS water	0.10 (ppm)	Uncal (ppm)	-0.13 u (ppm)	Uncal (ppm)	Uncal (ppm)

Solution	Zn (334.502 nm)	Zn_rad (202.548 nm)	Zn_rad (213.857 nm)	Zn_rad (334.502 nm)
Blank	0.00 (ppm)	0.00 (ppm)	0.00 (ppm)	0.00 (ppm)
Standard 1	5.00 (ppm)	5.00 (ppm)	5.00 (ppm)	5.00 (ppm)
Standard 2				
Standard 3	15.00 (ppm)	15.00 (ppm)	15.00 (ppm)	15.00 (ppm)
Standard 4	20.00 (ppm)	20.00 (ppm)	20.00 (ppm)	20.00 (ppm)
Standard 5				
60 ppm 10% 1	Uncal (ppm)	4.43 (ppm)	4.52 (ppm)	4.16 (ppm)
60 ppm 10% 2	Uncal (ppm)	10.16 (ppm)	10.37 (ppm)	10.35 (ppm)
60 ppm 10% 3	Uncal (ppm)	11.88 (ppm)	12.03 (ppm)	11.61 (ppm)
60 ppm 10% 4	Uncal (ppm)	12.83 (ppm)	12.93 (ppm)	13.00 (ppm)
60 ppm 10% 5	Uncal (ppm)	12.99 (ppm)	13.18 (ppm)	13.19 (ppm)
60 ppm 10% 6	Uncal (ppm)	14.27 (ppm)	14.49 (ppm)	14.54 (ppm)
60 ppm 10% 7	Uncal (ppm)	14.29 (ppm)	14.44 (ppm)	14.61 (ppm)
60 ppm 10% 8	Uncal (ppm)	16.49 (ppm)	16.89 (ppm)	16.52 (ppm)
60 ppm 10% 9	Uncal (ppm)	16.41 (ppm)	16.68 (ppm)	16.47 (ppm)
60 ppm 10% 10	Uncal (ppm)	16.02 (ppm)	16.32 (ppm)	16.30 (ppm)
60 ppm 10% 11	Uncal (ppm)	22.67 o (ppm)	22.96 o (ppm)	23.38 o (ppm)
60 ppm 10% 12	Uncal (ppm)	24.65 o (ppm)	24.82 o (ppm)	24.77 o (ppm)
60 ppm 10% 13	Uncal (ppm)	24.77 o (ppm)	25.25 o (ppm)	25.48 o (ppm)
60 ppm 10% 14	Uncal (ppm)	24.88 o (ppm)	25.41 o (ppm)	25.52 o (ppm)
60 ppm 10% 15	Uncal (ppm)	24.89 o (ppm)	25.21 o (ppm)	25.36 o (ppm)
60 ppm 10% 16	Uncal (ppm)	25.40 o (ppm)	25.17 o (ppm)	25.09 o (ppm)
60 ppm 10% 17	Uncal (ppm)	25.30 o (ppm)	25.12 o (ppm)	24.32 o (ppm)
5ppm stand	Uncal (ppm)	4.18 (ppm)	4.21 (ppm)	3.91 (ppm)
20ppm stand	Uncal (ppm)	16.50 (ppm)	16.52 (ppm)	15.96 (ppm)
LCMS water	Uncal (ppm)	0.02 (ppm)	0.02 (ppm)	-0.12 u (ppm)

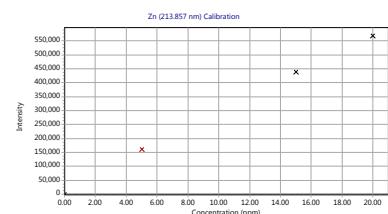
Calibration Curves:

Zn (213.857 nm)

Uncalibrated (Error Cal)

Correlation coefficient: 0.99933

Standards	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	14.39	0.00	0.00	N/A
Standard 1	161288.68	5.00	5.44	8.80
Standard 3	439666.87	15.00	14.82	1.20
Standard 4	569106.21	20.00	19.18	4.10

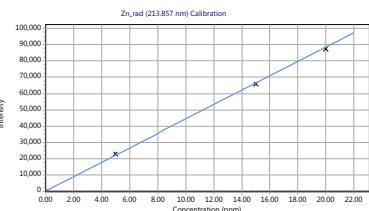


Zn_rad (213.857 nm)

Intensity = 4431.20 * Concentration + 3.76

Correlation coefficient: 0.99993

Standards	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	3.59	0.00	0.00	N/A
Standard 1	22940.23	5.00	5.18	3.60
Standard 3	66064.94	15.00	14.91	0.60
Standard 4	87597.99	20.00	19.77	1.15

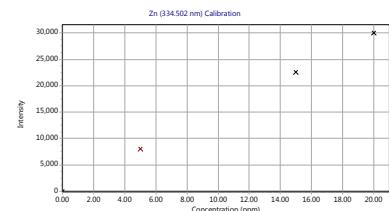


Zn (334.502 nm)

Uncalibrated (Error Cal)

Correlation coefficient: 0.99985

Standards	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	32.50	0.00	0.00	N/A
Standard 1	8047.09	5.00	5.27	5.40
Standard 3	22581.12	15.00	14.82	1.20
Standard 4	30083.88	20.00	19.75	1.25

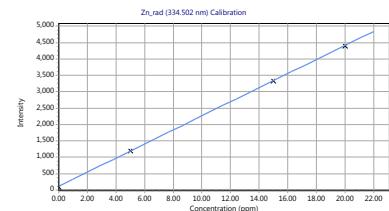


Zn_rad (334.502 nm)

Intensity = 214.58 * Concentration + 118.42

Correlation coefficient: 0.99999

Standards	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	97.36	0.00	-0.10	N/A
Standard 1	1192.90	5.00	5.01	0.20
Standard 3	3336.49	15.00	15.00	0.00
Standard 4	4399.62	20.00	19.95	0.25

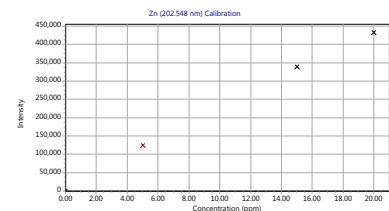


Zn (202.548 nm)

Uncalibrated (Error Cal)

Correlation coefficient: 0.99894

Standards	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	9.07	0.00	0.00	N/A
Standard 1	125115.16	5.00	5.51	10.20
Standard 3	339857.56	15.00	14.97	0.20
Standard 4	433496.17	20.00	19.09	4.55

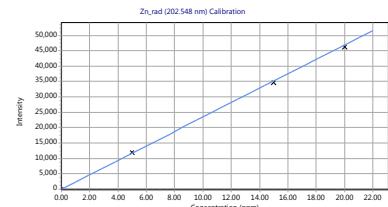


Zn_rad (202.548 nm)

Intensity = 2344.63 * Concentration + 3.63

Correlation coefficient: 0.99995

Standards	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	3.43	0.00	0.00	N/A
Standard 1	12007.36	5.00	5.12	2.40
Standard 3	34607.50	15.00	14.76	1.60
Standard 4	46156.59	20.00	19.68	1.60

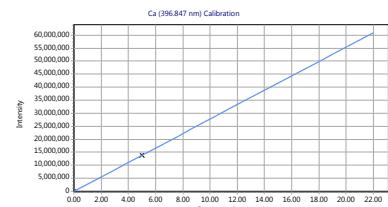


Ca (396.847 nm)

Intensity = 2770974.66 * Concentration + 9412.57

Correlation coefficient: 1.00000

Standards	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	9412.57	0.00	0.00	N/A
Standard 1	13864285.86	5.00	5.00	0.00

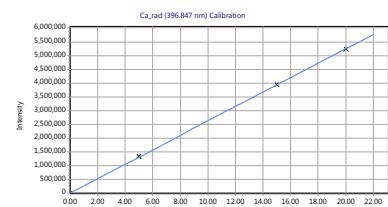


Ca_rad (396.847 nm)

Intensity = 262142.12 * Concentration + 824.03

Correlation coefficient: 0.99997

Standards	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	823.90	0.00	0.00	N/A
Standard 1	1342266.41	5.00	5.12	2.40
Standard 3	3955627.48	15.00	15.09	0.60
Standard 4	5237116.56	20.00	19.98	0.10

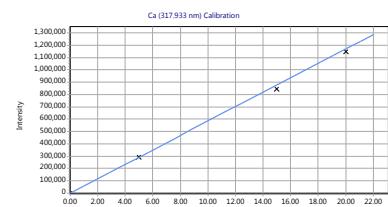


Ca (317.933 nm)

Intensity = 58488.29 * Concentration + 156.53

Correlation coefficient: 0.99986

Standards	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	153.53	0.00	0.00	N/A
Standard 1	294014.96	5.00	5.02	0.40
Standard 3	844324.49	15.00	14.43	3.80
Standard 4	1146780.76	20.00	19.60	2.00

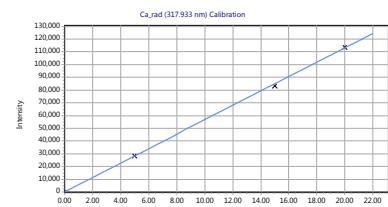


Ca_rad (317.933 nm)

Intensity = 5661.52 * Concentration + 23.20

Correlation coefficient: 0.99984

Standards	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	23.04	0.00	0.00	N/A
Standard 1	28395.79	5.00	5.01	0.20
Standard 3	83206.22	15.00	14.69	2.07

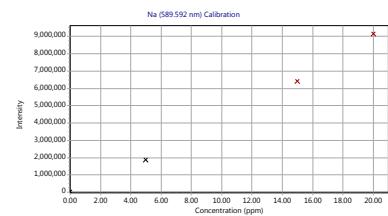


Standards	Intensity	Method Concentration	Calculated Concentration	% Error
Standard 4	113556.25	20.00	20.05	0.25

Na (589.592 nm)

Uncalibrated (Error Cal)

Correlation coefficient: 0.99821

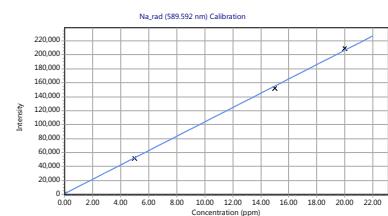


Standards	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	18885.79	0.00	0.00	N/A
Standard 1	1890766.23	5.00	4.89	2.20
Standard 3	6429605.87	15.00	16.73	11.53
Standard 4	9166072.40	20.00	23.87	19.35

Na_rad (589.592 nm)

Intensity = 10295.59 * Concentration + 975.99

Correlation coefficient: 0.99973

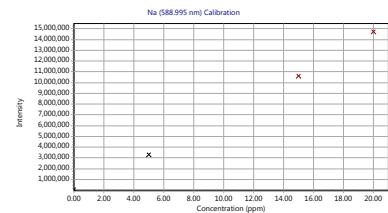


Standards	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	1125.32	0.00	0.01	N/A
Standard 1	51751.44	5.00	4.93	1.40
Standard 3	152169.31	15.00	14.69	2.07
Standard 4	208941.07	20.00	20.20	1.00

Na (588.995 nm)

Uncalibrated (Error Cal)

Correlation coefficient: 0.99931

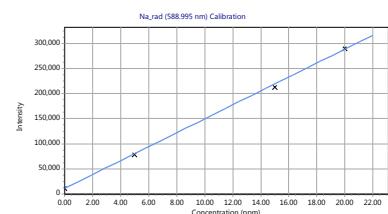


Standards	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	72522.02	0.00	0.00	N/A
Standard 1	3334496.14	5.00	4.97	0.60
Standard 3	10632022.95	15.00	16.08	7.20
Standard 4	14751071.08	20.00	22.35	11.75

Na_rad (588.995 nm)

Intensity = 13875.84 * Concentration + 10856.55

Correlation coefficient: 0.99962



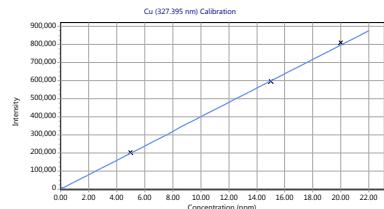
Standards	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	11351.47	0.00	0.04	N/A
Standard 1	77753.34	5.00	4.82	3.60
Standard 3	212144.81	15.00	14.51	3.27
Standard 4	289187.27	20.00	20.06	0.30

Cu (327.395 nm)

Intensity = 39793.46 * Concentration + 81.91

Correlation coefficient: 0.99991

Standards	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	81.31	0.00	0.00	N/A
Standard 1	202165.16	5.00	5.08	1.60
Standard 3	595757.44	15.00	14.97	0.20
Standard 4	808468.13	20.00	20.31	1.55

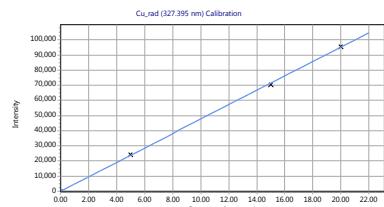


Cu_rad (327.395 nm)

Intensity = 4760.44 * Concentration + 28.02

Correlation coefficient: 0.99994

Standards	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	27.94	0.00	0.00	N/A
Standard 1	24188.76	5.00	5.08	1.60
Standard 3	70643.35	15.00	14.83	1.13
Standard 4	95419.70	20.00	20.04	0.20

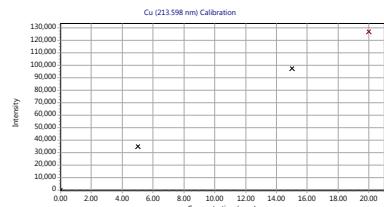


Cu (213.598 nm)

Uncalibrated (Error Cal)

Correlation coefficient: 0.99963

Standards	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	3.95	0.00	0.00	N/A
Standard 1	34969.30	5.00	5.15	3.00
Standard 3	97270.37	15.00	14.33	4.47
Standard 4	126976.14	20.00	18.71	6.45

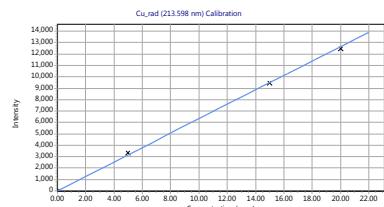


Cu_rad (213.598 nm)

Intensity = 632.25 * Concentration + 4.72

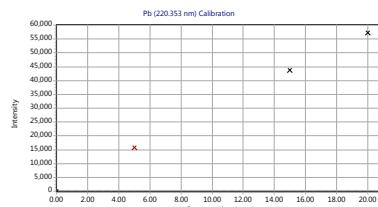
Correlation coefficient: 0.99989

Standards	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	3.72	0.00	0.00	N/A
Standard 1	3311.65	5.00	5.23	4.60
Standard 3	9462.83	15.00	14.96	0.27
Standard 4	12501.13	20.00	19.77	1.15



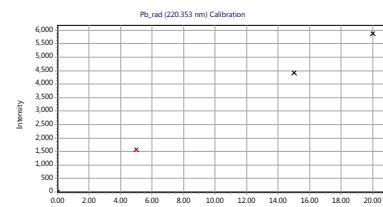
Pb (220.353 nm)
 Uncalibrated (Error Cal)
 Correlation coefficient: 0.99969

Standards	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	22.26	0.00	0.00	N/A
Standard 1	15741.01	5.00	5.26	5.20
Standard 3	43740.84	15.00	14.63	2.47
Standard 4	57388.15	20.00	19.20	4.00



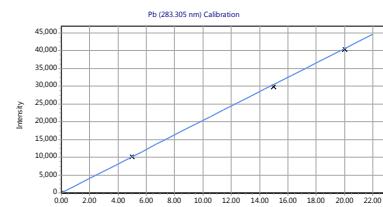
Pb_rad (220.353 nm)
 Uncalibrated (Error Cal)
 Correlation coefficient: 0.99987

Standards	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	3.95	0.00	-0.02	N/A
Standard 1	1569.95	5.00	5.27	5.40
Standard 3	4432.51	15.00	14.93	0.47
Standard 4	5887.91	20.00	19.84	0.80



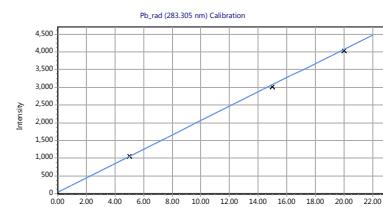
Pb (283.305 nm)
 Intensity = 2028.40 * Concentration + 38.64
 Correlation coefficient: 0.99990

Standards	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	37.41	0.00	0.00	N/A
Standard 1	10254.91	5.00	5.04	0.80
Standard 3	29804.86	15.00	14.67	2.20
Standard 4	40395.82	20.00	19.90	0.50



Pb_rad (283.305 nm)
 Intensity = 202.01 * Concentration + 37.28
 Correlation coefficient: 0.99994

Standards	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	18.79	0.00	-0.09	N/A
Standard 1	1055.21	5.00	5.04	0.80
Standard 3	3012.39	15.00	14.73	1.80
Standard 4	4041.85	20.00	19.82	0.90

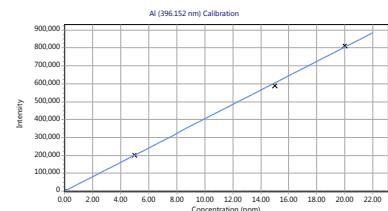


Al (396.152 nm)

Intensity = $40271.50 * \text{Concentration} + 199.94$

Correlation coefficient: 0.99967

Standards	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	195.65	0.00	0.00	N/A
Standard 1	203263.25	5.00	5.04	0.80
Standard 3	588163.00	15.00	14.60	2.67
Standard 4	810892.44	20.00	20.13	0.65



Al_rad (396.152 nm)

Intensity = $3202.96 * \text{Concentration} + 39.84$

Correlation coefficient: 0.99984

Standards	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	39.55	0.00	0.00	N/A
Standard 1	16105.04	5.00	5.02	0.40
Standard 3	47067.10	15.00	14.68	2.13
Standard 4	64219.92	20.00	20.04	0.20

