

Method PT For All Labs

### Magruder Fertilizer Proficiency Testing Program

# Methods: 79

Sample # 230341

Phosphorous Select PT Scheme

# Labs Reporting: 12

Phosphate Rock

### Statistical Summary

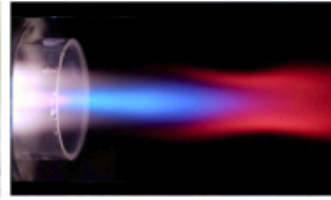
Issue Date : 04/30/2023

Method Code	Analyte & Method Sample # 230341	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Method Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	Method IA Ratio	Average Range (R-bar)	Horwitz %RSD
010.60	Total N, Combustion (%)	1		0.0100									
020.10	Total P2O5, Gravimetric Quinolinium MolybdoP (%)	1		27.59									
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	3	3	26.83	0.8448	26.83		0.8448	0.6097	3.15%		0.3300	1.93%
020.40	Total P2O5, Automated (%)	3	3	26.17	0.1357	26.17		0.1357	0.0979	0.52%		0.2500	1.95%
020.50	Total P2O5, ICP (%)	2	2	28.29	0.1332								
030.40	Citrate Insoluble P2O5, Automated, test portion 963.03 A-B (%)	2	2	19.56	4.409								
040.40	Indirect Available P2O5, Automated (%)	1		9.810									
041.10	Direct Available P2O5, Gravimetric Quinolinium (%)	1		7.125									
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA	1		9.050									
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (%)	2	2	13.74	3.101								
048.10	Water Soluble P2O5, Gravimetric Quinolinium (%)	1		3.228									
050.50	Soluble K2O, ICP (Oxalate) (%)	1		2.107									
050.52	Soluble K2O, ICP (Citrate-EDTA) (%)	1		0.0800									
050.99	Soluble K2O, Other (%)	1		0.1330									
060.00	Water (Free), Vacuum Oven (%)	1		0.5350									
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	1		27.89									
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (%)	1		1.798									
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	3	3	27.10	3.445	27.10	1.0000	3.445	2.486	12.71%	8.03	0.4532	1.92%
101.99	Acid Soluble Ca, Other (%)	3	3	26.72	1.867	26.72	1.0000	1.867	1.347	6.99%	4.35	0.4532	1.93%
121.00	Acid Soluble Mg, AA, inorganic 965.09 (%)	1		0.4200									
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	1		0.0047									
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (%)	1		0.5781									
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	2	2	0.4876	0.0178								
121.99	Acid Soluble Mg, Other (%)	3	3	1.859	2.491	1.859	0.2929	2.491	1.798	134.02%	19.81	0.0595	3.64%
148.07	Total S, ICP, test portion as in 2017.02 (%)	2	2	1.206	0.5171								
151.30	Acid Soluble As, ICP (ppm)	2	2	16.50	0.7071								
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	2	1	9.875	9.723								
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	2	2	19.46	6.063								
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	1		19.95									

Method Code	Analyte & Method Sample # 230341	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Method Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	Method IA Ratio	Average Range (R-bar)	Horwitz %RSD
151.99	Acid Soluble As, Other (ppm)	1		6.819									
165.99	Acid Soluble B, Other (%)	1		0.0100									
181.30	Acid Soluble Cd, ICP (ppm)	2	2	7.625	4.419								
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	2	1	4.400	4.808								
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	2	2	9.219	0.3880								
181.34	Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm)	1		8.900									
181.99	Acid Soluble Cd, Other (ppm)	1		6.820									
191.30	Acid Soluble Cr, ICP (ppm)	3	3	66.30	6.751	66.30		6.751	4.872	10.18%		3.267	8.51%
191.32	Acid Soluble Cr, ICP, 2006.03 (ppm)	1		9.000									
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	2	2	64.94	7.338								
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	1		57.60									
191.99	Acid Soluble Cr, Other (ppm)	1		22.27									
202.30	Acid Soluble Co, ICP (ppm)	3	2	1.883	1.478	2.525	1.7575	1.379	1.219	54.61%	1.83	0.1500	13.92%
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	1		1.000									
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	2	2	3.460	0.6005								
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	1		11.80									
202.99	Acid Soluble Co, Other (ppm)	1		1.197									
221.00	Acid Soluble Cu, AA, inorganic 965.09 (%)	1		0.0019									
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	1		0.0016									
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	1		0.0002									
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	2	2	0.0014	0.0001								
221.99	Acid Soluble Cu, Other (%)	4	2	0.5058	0.9962	0.0066	0.0057	0.0077	0.0068	117.67%	3.18	0.0000	8.52%
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	2	2	0.8328	0.0322								
251.30	Acid Soluble Pb, ICP (ppm)	3	2	5.467	4.561	7.450		4.243	3.750	56.95%		0.5000	11.82%
251.32	Acid Soluble Pb, ICP, 2006.03 (ppm)	1		4.000									
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	2	2	8.735	1.768								
251.34	Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm)	1		27.55									
251.99	Acid Soluble Pb, Other (ppm)	1		8.674									
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	2	2	0.0152	0.0001								
281.30	Acid Soluble Hg, ICP (ppm)	4	2	0.5174	0.9888	0.0343		0.0419	0.0370	122.04%		0.0006	22.00%
281.99	Acid Soluble Hg, Other (ppm)	1		0.0221									
289.30	Acid Soluble Mo, ICP (ppm)	3	3	9.267	1.701	9.267	3.7800	1.701	1.228	18.36%	1.05	0.7000	11.44%
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	1		1.000									
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	2	2	8.896	1.592								
289.34	Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm)	1		0.1000									
291.30	Acid Soluble Ni, ICP (ppm)	3	3	13.23	3.198	13.23		3.198	2.308	24.16%		2.333	10.84%
291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	1		4.500									
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	1		20.32									
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	1		16.80									
291.99	Acid Soluble Ni, Other (ppm)	1		4.974									

Method Code	Analyte & Method Sample # 230341	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Method Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	Method IA Ratio	Average Range (R-bar)	Horwitz %RSD
301.30	Acid Soluble Se, ICP (ppm)	1		2.900									
301.32	Acid Soluble Se, ICP, 2006.03 (ppm)	1		10.00									
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	1		0.0100									
301.34	Acid Soluble Se, ICP, EPA 3050B/6010C (ppm)	1		1.100									
311.33	Sodium, ICP, test portion as in 2017.02 (%)	2	2	0.5801	0.0285								
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	1		0.0040									
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	1		0.0060									
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	1		0.0019									
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	3	1	0.0048	0.0047	0.5801	0.0630	0.0285	0.0356	4.91%	1.05	0.0031	4.34%
321.99	Acid Soluble Zn, Other (%)	3	3	8.850	15.29	8.850	0.8900	15.29	11.03	172.71%	40.01	0.3356	2.88%

The Method IA Ratio =  $2.33 * \text{Robust SD} / \text{IA at the Method Assigned Value}$ . IA ratios of 1 and less indicate participant data dispersion is as good or less than the IA. Red indicates the IA ratio is significantly greater than 1, Orange indicates marginally greater than 1, Green indicates IA ratio is not significantly greater than 1 and Grey indicates < 6 labs reporting. The Horwitz %RSD is calculated using the Thompson Modification, Analyst,2000,125,385-386.



Method PT For All Labs

# Magruder Fertilizer Proficiency Testing Program

Sample # 230341

Phosphorous Select PT Scheme

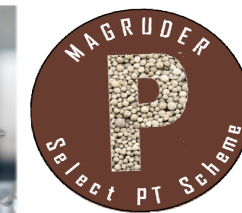
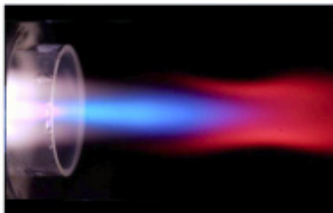
Phosphate Rock

## Method Precision Report

Issue Date : 04/30/2023

Method Code	Analyte & Method	# Tests Submitted	# Tests Used in Precision Calcs	Mean	SD	Between Labs sL	Within Labs sr	Reproducibility sR	Between Labs %RSD	Within Labs %rsd	Reproducibility %RSD	sR/sr

Notes: Precision data calculated when 5 or more Tests included.



Method PT For All Labs

### Magruder Fertilizer Proficiency Testing Program

# Methods: 79

Sample # 230341

Phosphorous Select PT Scheme

# Labs Reporting: 12

Phosphate Rock

Lab Values

Issue Date : 04/30/2023

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
010.60	Total N, Combustion (%)	0527	< 0.01					0			5
020.10	Total P2O5, Gravimetric Quinolinium MolybdoP (%)	0494	27.59	2.310				1			0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0405	26.25	0.0900	26.83	0.8448	0.3300	3	-0.69		0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0615	26.45	0.5000	26.83	0.8448	0.3300	3	-0.45		0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0547	27.80	0.4000	26.83	0.8448	0.3300	3	1.15		0
020.40	Total P2O5, Automated (%)	0586	26.02	0.1900	26.17	0.1357	0.2500	3	-1.15		0
020.40	Total P2O5, Automated (%)	0042	26.25	0.5000	26.17	0.1357	0.2500	3	0.58		0
020.40	Total P2O5, Automated (%)	0096	26.25	0.0600	26.17	0.1357	0.2500	3	0.58		0
020.50	Total P2O5, ICP (%)	0527	28.19	0.2046				2			0
020.50	Total P2O5, ICP (%)	0368	28.38	1.664				2			0
030.40	Citrate Insoluble P2O5, Automated, test portion 963.03 A-B (%)	0096	16.44	0.1000				2			0
030.40	Citrate Insoluble P2O5, Automated, test portion 963.03 A-B (%)	0586	22.68	0.6300				2			0
040.40	Indirect Available P2O5, Automated (%)	0096	9.810	0.1600				1			0
041.10	Direct Available P2O5, Gravimetric Quinolinium (%)	0494	7.125	0.8900				1			0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA I	0405	9.050	0.0400				1			0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (%)	0040	11.55	0.3000				2			0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (%)	0494	15.94	0.7300				2			0
048.10	Water Soluble P2O5, Gravimetric Quinolinium (%)	0086	3.228	0.6486				1			0
050.50	Soluble K2O, ICP (Oxalate) (%)	0086	2.107	0.0630				1			0
050.52	Soluble K2O, ICP (Citrate-EDTA) (%)	0494	0.0800	0.0200				1			0
050.99	Soluble K2O, Other (%)	0527	0.1330	0.0047				1			0
060.00	Water (Free), Vacuum Oven (%)	0096	0.5350	0.2700				1			0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0096	27.89	0.2300				1			0
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (%)	0405	1.798	0.0030				1			0
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0494	23.17	0.7300	27.10	3.445	0.4532	3	-1.14		0
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0040	28.54	0.3600	27.10	3.445	0.4532	3	0.42		0
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0527	29.59	0.2696	27.10	3.445	0.4532	3	0.72		0
101.99	Acid Soluble Ca, Other (%)	0042	24.77	0.4400	26.72	1.867	0.4532	3	-1.05		0
101.99	Acid Soluble Ca, Other (%)	0586	26.91	0.3000	26.72	1.867	0.4532	3	0.10		0
101.99	Acid Soluble Ca, Other (%)	0368	28.49	0.6197	26.72	1.867	0.4532	3	0.95		0
121.00	Acid Soluble Mg, AA, inorganic 965.09 (%)	0040	0.4200	0.0000				1			0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0096	0.0047	0.0001				1			0
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (%)	0405	0.5781	0.0113				1			0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0494	0.4750	0.0100				2			0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0527	0.5001	0.0008				2			0
121.99	Acid Soluble Mg, Other (%)	0042	0.3950	0.0060	1.859	2.491	0.0595	3	-0.59		0
121.99	Acid Soluble Mg, Other (%)	0368	0.4462	0.0024	1.859	2.491	0.0595	3	-0.57		0
121.99	Acid Soluble Mg, Other (%)	0586	4.735	0.1700	1.859	2.491	0.0595	3	1.15		0
148.07	Total S, ICP, test portion as in 2017.02 (%)	0494	0.8400	0.0200				2			0
148.07	Total S, ICP, test portion as in 2017.02 (%)	0527	1.571	0.0055				2			0
151.30	Acid Soluble As, ICP (ppm)	0586	16.00	0.0000				2			0
151.30	Acid Soluble As, ICP (ppm)	0593	17.00	0.4000				2			0
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	0096	16.75	0.3000				1			0
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	0405	< 3					1			5
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0527	15.18	0.1817				2			0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0494	23.75	1.500				2			0
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	0368	19.95	1.300				1			0
151.99	Acid Soluble As, Other (ppm)	0042	6.819	0.3570				1			0
165.99	Acid Soluble B, Other (%)	0527	< 0.01					0			5
181.30	Acid Soluble Cd, ICP (ppm)	0586	4.500	1.000				2			0
181.30	Acid Soluble Cd, ICP (ppm)	0593	10.75	0.1000				2			0
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	0096	7.800	1.000				1			0
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	0405	< 1					1			5
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0494	8.945	0.1900				2			0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0527	9.494	0.3216				2			0
181.34	Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm)	0368	8.900	0.6000				1			0
181.99	Acid Soluble Cd, Other (ppm)	0042	6.820	0.1200				1			0
191.30	Acid Soluble Cr, ICP (ppm)	0096	61.00	3.800	66.30	6.751	3.267	3	-0.79		0
191.30	Acid Soluble Cr, ICP (ppm)	0586	64.00	4.000	66.30	6.751	3.267	3	-0.34		0
191.30	Acid Soluble Cr, ICP (ppm)	0593	73.90	2.000	66.30	6.751	3.267	3	1.13		0
191.32	Acid Soluble Cr, ICP, 2006.03 (ppm)	0405	9.000	0.0000				1			0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0494	59.75	2.500				2			0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0527	70.13	0.1770				2			0
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	0368	57.60	2.400				1			0
191.99	Acid Soluble Cr, Other (ppm)	0042	22.27	2.030				1			0
202.30	Acid Soluble Co, ICP (ppm)	0096	1.550	0.1000				2			0
202.30	Acid Soluble Co, ICP (ppm)	0593	3.500	0.2000				2			0
202.30	Acid Soluble Co, ICP (ppm)	0586	< 0.6					2			5
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	0405	< 1					0			5
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0494	3.035	0.1300				2			0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0527	3.884	0.0104				2			0
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	0368	11.80	0.0000				1			0
202.99	Acid Soluble Co, Other (ppm)	0042	1.197	0.0820				1			0
221.00	Acid Soluble Cu, AA, inorganic 965.09 (%)	0040	0.0019	0.0000				1			0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0096	0.0016	0.0001				1			0
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	0405	< 0.0002					0			5
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0494	0.0013	0.0000				2			0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0527	0.0014	0.0000				2			0
221.99	Acid Soluble Cu, Other (%)	0368	0.0011	0.0000				2			0
221.99	Acid Soluble Cu, Other (%)	0042	0.0120	0.0000				2			0
221.99	Acid Soluble Cu, Other (%)	0593	< 0.01					2			5
221.99	Acid Soluble Cu, Other (%)	0586	< 2					2			5
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0494	0.8100	0.0400				2			0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0527	0.8556	0.0289				2			0
251.30	Acid Soluble Pb, ICP (ppm)	0096	4.450	0.7000				2			0
251.30	Acid Soluble Pb, ICP (ppm)	0593	10.45	0.3000				2			0
251.30	Acid Soluble Pb, ICP (ppm)	0586	< 1.5					2			5
251.32	Acid Soluble Pb, ICP, 2006.03 (ppm)	0405	< 4					0			5
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0494	7.485	0.6900				2			0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0527	9.986	0.0259				2			0
251.34	Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm)	0368	27.55	9.500				1			0
251.99	Acid Soluble Pb, Other (ppm)	0042	8.674	0.2600				1			0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0494	0.0151	0.0001				2			0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0527	0.0153	0.0001				2			0
281.30	Acid Soluble Hg, ICP (ppm)	0096	0.0047	0.0000				2			0
281.30	Acid Soluble Hg, ICP (ppm)	0593	0.0639	0.0006				2			0
281.30	Acid Soluble Hg, ICP (ppm)	0527	< 0.001					2			5
281.30	Acid Soluble Hg, ICP (ppm)	0405	< 2					2			5
281.99	Acid Soluble Hg, Other (ppm)	0368	0.0221	0.0009				1			0
289.30	Acid Soluble Mo, ICP (ppm)	0586	8.000	0.0000	9.267	1.701	0.7000	3	-0.74		0
289.30	Acid Soluble Mo, ICP (ppm)	0096	8.600	1.000	9.267	1.701	0.7000	3	-0.39		0
289.30	Acid Soluble Mo, ICP (ppm)	0593	11.20	0.4000	9.267	1.701	0.7000	3	1.14		0
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	0405	< 1					0			5
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0494	7.770	0.7000				2			0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0527	10.02	0.1141				2			0
289.34	Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm)	0368	< 0.1					0			5
291.30	Acid Soluble Ni, ICP (ppm)	0586	10.50	1.000	13.23	3.198	2.333	3	-0.85		0
291.30	Acid Soluble Ni, ICP (ppm)	0096	12.45	5.900	13.23	3.198	2.333	3	-0.24		0
291.30	Acid Soluble Ni, ICP (ppm)	0593	16.75	0.1000	13.23	3.198	2.333	3	1.10		0
291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	0405	4.500	1.000				1			0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0527	20.32	0.3428				1			0
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	0368	16.80	0.6000				1			0
291.99	Acid Soluble Ni, Other (ppm)	0042	4.974	0.3450				1			0
301.30	Acid Soluble Se, ICP (ppm)	0593	2.900	0.0800				1			0
301.32	Acid Soluble Se, ICP, 2006.03 (ppm)	0405	< 10					0			5
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0527	< 0.01					0			5
301.34	Acid Soluble Se, ICP, EPA 3050B/6010C (ppm)	0368	< 1.1					0			5

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0494	0.5600	0.0200				2			0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0527	0.6003	0.0031				2			0
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	0040	0.0040	0.0000				1			0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0096	0.0060	0.0013				1			0
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0405	0.0019	0.0001				1			0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0494	0.0035	0.0005				1			0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0527	< 0.001					1			5
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0593	< 0.01					1			5
321.99	Acid Soluble Zn, Other (%)	0368	0.0124	0.0039	8.850	15.29	0.3356	3	-0.58		0
321.99	Acid Soluble Zn, Other (%)	0042	0.0385	0.0030	8.850	15.29	0.3356	3	-0.58		0
321.99	Acid Soluble Zn, Other (%)	0586	26.50	1.000	8.850	15.29	0.3356	3	1.15		0

**Interpreting Z Scores and Flags:**

Interpreting Z Scores: Red indicates a normally distributed Z value >3 or <-3 (requires action), Orange = Z between 2 and 3 or -2 and -3 (warning) and Green = Z < 2 and >-2 (OK at 95%). Flags indicate data usage: 0 = Used, 1 = rejected for duplicates too far apart, 2 = rejected as extreme outlier, 3 = removed from stats, 4 = rejected due to 0s submitted and 5 = LOD. A 9 flag indicates a data problem - scores not calculated.

**Notes:**

Robust statistics not used if < 6 labs used in calculations, in this case Values and Z Scores are grayed out and should be interpreted with extreme caution. IA Status describes where your result is relative to the Assigned Value ± IA. Red indicates Higher or Lower and Green indicates within the IA range about the Robust mean. Method codes in light green indicate a guaranteed analyte. Individual lab values may be below detection limits but are reported solely for the purpose of this Proficiency Testing program.