

Analyte PT For All Labs  
 Sample # 241141  
 Phosphate Rock

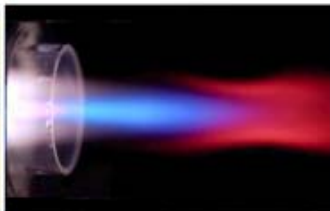
**Magruder Fertilizer Proficiency Testing Program**  
**Phosphorous Select PT Scheme**  
**Statistical Summary**

# Analytes: 25  
 # Labs Reporting: 20  
 Issue Date : 12/31/2024

Analyte Code	Analyte Sample # 241141	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Analyte Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	Analyte IA Ratio	Average Range (R-bar)	Horwitz %RSD
001	Ammoniacal N (%)	1		0.0950									
010	Total N (%)	1		0.0010									
020	Total P2O5 (%)	13	12	22.96	0.6712	22.87		0.6099	0.2201	2.67%		0.1367	2.09%
041	Direct Available P2O5 (%)	6	6	8.975	3.457	8.975	0.6800	3.920	2.000	43.67%	13.43	0.2117	2.87%
050	Soluble K2O (%)	3	3	0.0947	0.0065	0.0947	0.4100	0.0065	0.0047	6.84%	0.04	0.0065	5.70%
060	Water (Free) (%)	2	2	0.5550	0.0707								
101	Acid Soluble Ca (%)	11	11	25.03	4.256	24.82	1.0000	1.620	0.6106	6.53%	3.77	0.3708	2.01%
121	Acid Soluble Mg (%)	13	13	0.4430	0.1618	0.4535	0.2227	0.0461	0.0160	10.18%	0.48	0.0140	4.51%
148	Total S (%)	3	2	0.4190	0.3544	0.6235	0.2312	0.0191	0.0168	3.06%	0.19	0.0383	4.29%
151	Acid Soluble As (ppm)	10	10	17.25	4.343	17.31		1.843	0.7284	10.64%		0.8786	10.42%
165	Acid Soluble B (%)	1		0.0100									
181	Acid Soluble Cd (ppm)	9	8	3.412	1.772	2.838		0.5138	0.2271	18.10%		0.1000	13.67%
190	Water Soluble Cl (%)	1		0.0100									
191	Acid Soluble Cr (ppm)	8	8	44.04	1.672	44.09		1.773	0.7837	4.02%		1.217	9.05%
202	Acid Soluble Co (ppm)	10	9	6.303	1.669	6.052	2.8155	1.542	0.6425	25.48%	1.28	0.2708	12.20%
221	Acid Soluble Cu (%)	8	7	3.065	8.661	0.0030	0.0053	0.0001	0.0001	3.99%	0.05	0.0001	9.58%
241	Acid Soluble Fe (%)	5	5	0.8543	0.2286	0.8543	0.0904	0.2286	0.1278	26.75%	5.89	0.0041	4.10%
251	Acid Soluble Pb (ppm)	9	8	8.504	2.793	7.939		2.694	1.191	33.94%		0.7123	11.71%
261	Acid Soluble Mn (%)	2	2	0.0157	0.0009								
281	Acid Soluble Hg (ppm)	4	1	0.5490	0.9690	0.0157		0.0009	0.0011	5.62%		0.0001	22.00%
289	Acid Soluble Mo (ppm)	11	10	11.76	2.540	11.21	4.3635	1.955	0.7728	17.44%	1.04	0.2804	11.12%
291	Acid Soluble Ni (ppm)	11	10	15.86	2.268	15.91		2.561	1.012	16.10%		0.4014	10.55%
301	Acid Soluble Se (ppm)	8	7	7.059	3.640	7.724		1.923	0.9085	24.89%		0.4294	11.76%
311	Sodium (%)	3	3	0.4657	0.0311	0.4657	0.0516	0.0311	0.0225	6.68%	1.41	0.0053	4.49%
321	Acid Soluble Zn (%)	9	8	0.0042	0.0024	0.0033	0.0053	0.0007	0.0003	22.71%	0.33	0.0004	9.46%

The Analyte IA Ratio = 2.33 \* Robust SD / IA at the Analyte 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.

Horwitz %RSD	
Average Range (R-bar)	
Analyte IA Ratio	
Robust % RSD	
Robust Uncertainty (U)	
Robust sd	
IA at Analyte Value	
Assigned Value Robust Mean	
Raw SD	
Raw Mean	
# Tests in Robust Calculations	
# Tests Submitted	
Analyte Sample # 241141	
Analyte Code	



Analyte PT For All Labs

### Magruder Fertilizer Proficiency Testing Program

# Analytes: 25

Sample # 241141

Phosphorous Select PT Scheme

# Labs Reporting: 20

Phosphate Rock

Lab Values

Issue Date : 12/31/2024

Analyte Group	Analyte (Units)	Lab Code	Lab Data		*Robust Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Rob R-bar				
001	Ammoniacal N (%)	0582	0.0950	0.0900				1		001.99	0
010	Total N (%)	0527	< 0.001					0		010.60	5
020	Total P2O5 (%)	0405	22.10	0.0400	22.87	0.6099	0.1367	12	-1.26	020.20	0
020	Total P2O5 (%)	0517	22.40	0.2000	22.87	0.6099	0.1367	12	-0.76	020.99	0
020	Total P2O5 (%)	0586	22.44	0.0700	22.87	0.6099	0.1367	12	-0.71	020.40	0
020	Total P2O5 (%)	0096	22.62	0.0400	22.87	0.6099	0.1367	12	-0.40	020.40	0
020	Total P2O5 (%)	0561	22.66	0.0000	22.87	0.6099	0.1367	12	-0.34	020.20	0
020	Total P2O5 (%)	0513	22.66	0.0600	22.87	0.6099	0.1367	12	-0.34	020.99	0
020	Total P2O5 (%)	0582	22.73	0.1300	22.87	0.6099	0.1367	12	-0.23	020.50	0
020	Total P2O5 (%)	0371	22.80	0.0000	22.87	0.6099	0.1367	12	-0.11	020.20	0
020	Total P2O5 (%)	0582	22.94	0.0800	22.87	0.6099	0.1367	12	0.12	020.20	0
020	Total P2O5 (%)	0368	23.59	0.2130	22.87	0.6099	0.1367	12	1.19	020.50	0
020	Total P2O5 (%)	0584	23.68	0.3500	22.87	0.6099	0.1367	12	1.33	020.99	0
020	Total P2O5 (%)	0527	24.61	0.2391	22.87	0.6099	0.1367	12	2.86	020.50	0
020	Total P2O5 (%)	0593	23.21	0.8700	22.87	0.6099	0.1367	12	0.56	020.20	1
041	Direct Available P2O5 (%)	0007	4.025	0.0700	8.975	3.920	0.2117	6	-1.12	041.50	0
041	Direct Available P2O5 (%)	0055	7.568	0.1050	8.975	3.920	0.2117	6	-0.32	041.11	0
041	Direct Available P2O5 (%)	0405	8.120	0.0000	8.975	3.920	0.2117	6	-0.19	041.11	0
041	Direct Available P2O5 (%)	0055	8.440	0.2400	8.975	3.920	0.2117	6	-0.12	041.21	0
041	Direct Available P2O5 (%)	0040	11.80	0.2000	8.975	3.920	0.2117	6	0.64	041.51	0
041	Direct Available P2O5 (%)	0037	13.90	0.4434	8.975	3.920	0.2117	6	1.12	041.51	0
050	Soluble K2O (%)	0527	0.0881	0.0029	0.0947	0.0065	0.0065	3	-1.02	050.99	0
050	Soluble K2O (%)	0582	0.0950	0.0100	0.0947	0.0065	0.0065	3	0.05	050.50	0
050	Soluble K2O (%)	0513	0.1010	0.0000	0.0947	0.0065	0.0065	3	0.97	050.99	0
060	Water (Free) (%)	0513	0.5050	0.0100				2		060.99	0
060	Water (Free) (%)	0096	0.6050	0.0900				2		060.00	0
101	Acid Soluble Ca (%)	0042	17.18	0.5800	24.82	1.620	0.3708	11	-4.41	101.99	0
101	Acid Soluble Ca (%)	0494	21.77	0.9993	24.82	1.620	0.3708	11	-1.76	101.33	0
101	Acid Soluble Ca (%)	0561	24.58	0.0100	24.82	1.620	0.3708	11	-0.14	101.99	0
101	Acid Soluble Ca (%)	0040	24.59	0.4300	24.82	1.620	0.3708	11	-0.14	101.33	0
101	Acid Soluble Ca (%)	0513	24.62	0.1800	24.82	1.620	0.3708	11	-0.12	101.30	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		*Robust Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Rob R-bar				
101	Acid Soluble Ca (%)	0096	24.88	0.0300	24.82	1.620	0.3708	11	0.03	101.30	0
101	Acid Soluble Ca (%)	0405	25.25	0.5000	24.82	1.620	0.3708	11	0.25	101.32	0
101	Acid Soluble Ca (%)	0593	25.56	0.9700	24.82	1.620	0.3708	11	0.42	101.99	0
101	Acid Soluble Ca (%)	0527	25.74	0.1972	24.82	1.620	0.3708	11	0.53	101.33	0
101	Acid Soluble Ca (%)	0368	25.81	0.1180	24.82	1.620	0.3708	11	0.57	101.99	0
101	Acid Soluble Ca (%)	0582	35.37	0.1100	24.82	1.620	0.3708	11	6.09	101.33	0
121	Acid Soluble Mg (%)	0368	0.0005	0.0000	0.4535	0.0461	0.0140	13	-9.82	121.99	0
121	Acid Soluble Mg (%)	0513	0.3920	0.0020	0.4535	0.0461	0.0140	13	-1.33	121.30	0
121	Acid Soluble Mg (%)	0494	0.4313	0.0166	0.4535	0.0461	0.0140	13	-0.48	121.33	0
121	Acid Soluble Mg (%)	0040	0.4350	0.0300	0.4535	0.0461	0.0140	13	-0.40	121.33	0
121	Acid Soluble Mg (%)	0042	0.4350	0.0300	0.4535	0.0461	0.0140	13	-0.40	121.99	0
121	Acid Soluble Mg (%)	0037	0.4475	0.0075	0.4535	0.0461	0.0140	13	-0.13	121.33	0
121	Acid Soluble Mg (%)	0096	0.4500	0.0200	0.4535	0.0461	0.0140	13	-0.08	121.30	0
121	Acid Soluble Mg (%)	0220	0.4500	0.0000	0.4535	0.0461	0.0140	13	-0.08	121.32	0
121	Acid Soluble Mg (%)	0405	0.4675	0.0050	0.4535	0.0461	0.0140	13	0.30	121.32	0
121	Acid Soluble Mg (%)	0593	0.4800	0.0000	0.4535	0.0461	0.0140	13	0.57	121.99	0
121	Acid Soluble Mg (%)	0527	0.4952	0.0046	0.4535	0.0461	0.0140	13	0.90	121.33	0
121	Acid Soluble Mg (%)	0561	0.5050	0.0100	0.4535	0.0461	0.0140	13	1.12	121.33	0
121	Acid Soluble Mg (%)	0582	0.7700	0.0000	0.4535	0.0461	0.0140	13	6.86	121.33	0
148	Total S (%)	0513	0.6100	0.0000				2		148.07	0
148	Total S (%)	0494	0.6370	0.0383				2		148.07	0
148	Total S (%)	0527	< 0.01					2		148.07	5
151	Acid Soluble As (ppm)	0096	8.050	1.900	17.31	1.843	0.8786	10	-4.67	151.30	0
151	Acid Soluble As (ppm)	0527	15.64	0.6187	17.31	1.843	0.8786	10	-0.84	151.33	0
151	Acid Soluble As (ppm)	0494	16.35	1.700	17.31	1.843	0.8786	10	-0.49	151.33	0
151	Acid Soluble As (ppm)	0368	16.60	1.000	17.31	1.843	0.8786	10	-0.36	151.34	0
151	Acid Soluble As (ppm)	0586	17.00	0.0000	17.31	1.843	0.8786	10	-0.16	151.30	0
151	Acid Soluble As (ppm)	0220	17.85	0.5000	17.31	1.843	0.8786	10	0.27	151.32	0
151	Acid Soluble As (ppm)	0086	17.91	1.010	17.31	1.843	0.8786	10	0.30	151.32	0
151	Acid Soluble As (ppm)	0220	18.15	0.1000	17.31	1.843	0.8786	10	0.42	151.99	0
151	Acid Soluble As (ppm)	0593	19.00	0.2000	17.31	1.843	0.8786	10	0.85	151.30	0
151	Acid Soluble As (ppm)	0405	26.00	0.0000	17.31	1.843	0.8786	10	4.38	151.32	0
165	Acid Soluble B (%)	0527	< 0.01					0		165.99	5
181	Acid Soluble Cd (ppm)	0096	2.100	0.6000	2.838	0.5138	0.1000	8	-1.31	181.30	0
181	Acid Soluble Cd (ppm)	0368	2.150	0.1000	2.838	0.5138	0.1000	8	-1.22	181.34	0
181	Acid Soluble Cd (ppm)	0220	2.950	0.1000	2.838	0.5138	0.1000	8	0.20	181.32	0
181	Acid Soluble Cd (ppm)	0220	2.950	0.1000	2.838	0.5138	0.1000	8	0.20	181.99	0
181	Acid Soluble Cd (ppm)	0405	3.000	0.0000	2.838	0.5138	0.1000	8	0.29	181.32	0
181	Acid Soluble Cd (ppm)	0494	3.140	0.1800	2.838	0.5138	0.1000	8	0.54	181.33	0
181	Acid Soluble Cd (ppm)	0527	3.165	0.2106	2.838	0.5138	0.1000	8	0.58	181.33	0
181	Acid Soluble Cd (ppm)	0593	3.250	0.1000	2.838	0.5138	0.1000	8	0.73	181.30	0
181	Acid Soluble Cd (ppm)	0586	8.000	6.000	2.838	0.5138	0.1000	8	9.19	181.30	1
190	Water Soluble Cl (%)	0513	0.0100	0.0000				1		190.99	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		*Robust Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Rob R-bar				
191	Acid Soluble Cr (ppm)	0405	41.00	2.000	44.09	1.773	1.217	8	-1.59	191.32	0
191	Acid Soluble Cr (ppm)	0527	42.80	0.7080	44.09	1.773	1.217	8	-0.67	191.33	0
191	Acid Soluble Cr (ppm)	0220	43.35	0.7000	44.09	1.773	1.217	8	-0.38	191.32	0
191	Acid Soluble Cr (ppm)	0220	43.85	0.5000	44.09	1.773	1.217	8	-0.12	191.99	0
191	Acid Soluble Cr (ppm)	0042	44.39	0.5300	44.09	1.773	1.217	8	0.15	191.99	0
191	Acid Soluble Cr (ppm)	0494	45.20	2.000	44.09	1.773	1.217	8	0.57	191.33	0
191	Acid Soluble Cr (ppm)	0586	45.50	5.000	44.09	1.773	1.217	8	0.73	191.30	0
191	Acid Soluble Cr (ppm)	0593	46.20	0.6000	44.09	1.773	1.217	8	1.09	191.30	0
202	Acid Soluble Co (ppm)	0096	3.300	0.2000	6.052	1.542	0.2708	9	-1.65	202.30	0
202	Acid Soluble Co (ppm)	0368	4.550	0.5000	6.052	1.542	0.2708	9	-0.90	202.34	0
202	Acid Soluble Co (ppm)	0220	5.800	0.0000	6.052	1.542	0.2708	9	-0.15	202.99	0
202	Acid Soluble Co (ppm)	0220	5.850	0.5000	6.052	1.542	0.2708	9	-0.12	202.32	0
202	Acid Soluble Co (ppm)	0405	6.000	0.0000	6.052	1.542	0.2708	9	-0.03	202.32	0
202	Acid Soluble Co (ppm)	0037	6.288	0.0880	6.052	1.542	0.2708	9	0.14	202.33	0
202	Acid Soluble Co (ppm)	0527	6.479	0.0659	6.052	1.542	0.2708	9	0.26	202.33	0
202	Acid Soluble Co (ppm)	0593	7.600	0.0000	6.052	1.542	0.2708	9	0.93	202.30	0
202	Acid Soluble Co (ppm)	0042	8.160	0.0000	6.052	1.542	0.2708	9	1.26	202.99	0
202	Acid Soluble Co (ppm)	0586	9.000	4.000	6.052	1.542	0.2708	9	1.76	202.30	1
221	Acid Soluble Cu (%)	0494	0.0029	0.0001	0.0030	0.0001	0.0001	7	-1.18	221.33	0
221	Acid Soluble Cu (%)	0220	0.0029	0.0002	0.0030	0.0001	0.0001	7	-0.81	221.32	0
221	Acid Soluble Cu (%)	0368	0.0030	0.0000	0.0030	0.0001	0.0001	7	-0.05	221.99	0
221	Acid Soluble Cu (%)	0593	0.0030	0.0000	0.0030	0.0001	0.0001	7	-0.05	221.99	0
221	Acid Soluble Cu (%)	0527	0.0031	0.0001	0.0030	0.0001	0.0001	7	0.32	221.33	0
221	Acid Soluble Cu (%)	0405	0.0031	0.0000	0.0030	0.0001	0.0001	7	0.70	221.32	0
221	Acid Soluble Cu (%)	0040	0.0032	0.0001	0.0030	0.0001	0.0001	7	1.08	221.33	0
221	Acid Soluble Cu (%)	0586	24.50	5.000	0.0030	0.0001	0.0001	7	184639.31	221.99	1
241	Acid Soluble Fe (%)	0593	0.5000	0.0000	0.8543	0.2286	0.0041	5	-1.55	241.99	0
241	Acid Soluble Fe (%)	0494	0.8407	0.0001	0.8543	0.2286	0.0041	5	-0.06	241.33	0
241	Acid Soluble Fe (%)	0513	0.8520	0.0000	0.8543	0.2286	0.0041	5	-0.01	241.30	0
241	Acid Soluble Fe (%)	0527	0.9541	0.0023	0.8543	0.2286	0.0041	5	0.44	241.33	0
241	Acid Soluble Fe (%)	0582	1.125	0.0100	0.8543	0.2286	0.0041	5	1.18	241.33	0
251	Acid Soluble Pb (ppm)	0096	5.250	0.1000	7.939	2.694	0.7123	8	-0.91	251.30	0
251	Acid Soluble Pb (ppm)	0494	5.510	0.2000	7.939	2.694	0.7123	8	-0.82	251.33	0
251	Acid Soluble Pb (ppm)	0220	7.000	0.0000	7.939	2.694	0.7123	8	-0.32	251.99	0
251	Acid Soluble Pb (ppm)	0220	7.050	0.1000	7.939	2.694	0.7123	8	-0.30	251.32	0
251	Acid Soluble Pb (ppm)	0593	7.500	0.0000	7.939	2.694	0.7123	8	-0.15	251.30	0
251	Acid Soluble Pb (ppm)	0527	8.473	0.3740	7.939	2.694	0.7123	8	0.18	251.33	0
251	Acid Soluble Pb (ppm)	0368	10.75	1.500	7.939	2.694	0.7123	8	0.95	251.34	0
251	Acid Soluble Pb (ppm)	0405	13.00	2.000	7.939	2.694	0.7123	8	1.72	251.32	0
251	Acid Soluble Pb (ppm)	0586	12.00	6.000	7.939	2.694	0.7123	8	1.38	251.30	1
261	Acid Soluble Mn (%)	0494	0.0151	0.0012				2		261.35	0
261	Acid Soluble Mn (%)	0527	0.0164	0.0001				2		261.35	0
281	Acid Soluble Hg (ppm)	0220	0.0550	0.0100				1		281.99	0



Analyte Group	Analyte (Units)	Lab Code	Lab Data		*Robust Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Rob R-bar				
281	Acid Soluble Hg (ppm)	0527	< 0.001					1		281.30	5
281	Acid Soluble Hg (ppm)	0086	< 0.14					1		281.99	5
281	Acid Soluble Hg (ppm)	0405	< 2					1		281.30	5
289	Acid Soluble Mo (ppm)	0042	8.025	0.1500	11.21	1.955	0.2804	10	-1.52	289.99	0
289	Acid Soluble Mo (ppm)	0096	8.900	0.2000	11.21	1.955	0.2804	10	-1.10	289.30	0
289	Acid Soluble Mo (ppm)	0368	9.600	1.000	11.21	1.955	0.2804	10	-0.77	289.34	0
289	Acid Soluble Mo (ppm)	0220	11.15	0.3000	11.21	1.955	0.2804	10	-0.03	289.32	0
289	Acid Soluble Mo (ppm)	0220	11.60	0.2000	11.21	1.955	0.2804	10	0.18	289.99	0
289	Acid Soluble Mo (ppm)	0494	11.85	0.3000	11.21	1.955	0.2804	10	0.30	289.33	0
289	Acid Soluble Mo (ppm)	0405	12.00	0.0000	11.21	1.955	0.2804	10	0.38	289.32	0
289	Acid Soluble Mo (ppm)	0527	12.47	0.0996	11.21	1.955	0.2804	10	0.60	289.33	0
289	Acid Soluble Mo (ppm)	0037	12.97	0.3728	11.21	1.955	0.2804	10	0.84	289.33	0
289	Acid Soluble Mo (ppm)	0593	13.30	0.4000	11.21	1.955	0.2804	10	0.99	289.30	0
289	Acid Soluble Mo (ppm)	0586	17.50	5.000	11.21	1.955	0.2804	10	2.99	289.30	1
291	Acid Soluble Ni (ppm)	0368	11.40	0.6000	15.91	2.561	0.4014	10	-1.64	291.34	0
291	Acid Soluble Ni (ppm)	0096	12.45	2.300	15.91	2.561	0.4014	10	-1.26	291.30	0
291	Acid Soluble Ni (ppm)	0220	15.25	0.5000	15.91	2.561	0.4014	10	-0.24	291.32	0
291	Acid Soluble Ni (ppm)	0220	15.65	0.1000	15.91	2.561	0.4014	10	-0.09	291.99	0
291	Acid Soluble Ni (ppm)	0494	15.80	0.0000	15.91	2.561	0.4014	10	-0.04	291.33	0
291	Acid Soluble Ni (ppm)	0037	16.48	0.2781	15.91	2.561	0.4014	10	0.21	291.33	0
291	Acid Soluble Ni (ppm)	0405	17.00	0.0000	15.91	2.561	0.4014	10	0.40	291.32	0
291	Acid Soluble Ni (ppm)	0042	17.31	0.3200	15.91	2.561	0.4014	10	0.51	291.99	0
291	Acid Soluble Ni (ppm)	0527	17.74	0.0625	15.91	2.561	0.4014	10	0.66	291.33	0
291	Acid Soluble Ni (ppm)	0593	19.35	0.5000	15.91	2.561	0.4014	10	1.25	291.30	0
291	Acid Soluble Ni (ppm)	0586	16.00	4.000	15.91	2.561	0.4014	10	0.03	291.30	1
301	Acid Soluble Se (ppm)	0368	6.050	1.300	7.724	1.923	0.4294	7	-0.79	301.34	0
301	Acid Soluble Se (ppm)	0220	6.500	0.4000	7.724	1.923	0.4294	7	-0.58	301.32	0
301	Acid Soluble Se (ppm)	0220	6.600	0.2000	7.724	1.923	0.4294	7	-0.53	301.99	0
301	Acid Soluble Se (ppm)	0086	6.807	0.1340	7.724	1.923	0.4294	7	-0.43	301.32	0
301	Acid Soluble Se (ppm)	0593	8.300	0.4000	7.724	1.923	0.4294	7	0.27	301.30	0
301	Acid Soluble Se (ppm)	0042	9.205	0.5500	7.724	1.923	0.4294	7	0.70	301.99	0
301	Acid Soluble Se (ppm)	0405	13.00	0.0000	7.724	1.923	0.4294	7	2.48	301.32	0
301	Acid Soluble Se (ppm)	0527	< 0.01		7.724	1.923	0.4294	7		301.33	5
311	Sodium (%)	0527	0.4392	0.0046	0.4657	0.0311	0.0053	3	-0.85	311.33	0
311	Sodium (%)	0513	0.4580	0.0060	0.4657	0.0311	0.0053	3	-0.25	311.99	0
311	Sodium (%)	0582	0.5000	0.0000	0.4657	0.0311	0.0053	3	1.10	311.32	0
321	Acid Soluble Zn (%)	0494	0.0025	0.0002	0.0033	0.0007	0.0004	8	-0.96	321.33	0
321	Acid Soluble Zn (%)	0368	0.0026	0.0008	0.0033	0.0007	0.0004	8	-0.84	321.99	0
321	Acid Soluble Zn (%)	0040	0.0028	0.0010	0.0033	0.0007	0.0004	8	-0.59	321.33	0
321	Acid Soluble Zn (%)	0220	0.0033	0.0001	0.0033	0.0007	0.0004	8	-0.04	321.32	0
321	Acid Soluble Zn (%)	0405	0.0034	0.0001	0.0033	0.0007	0.0004	8	0.08	321.32	0
321	Acid Soluble Zn (%)	0593	0.0034	0.0000	0.0033	0.0007	0.0004	8	0.15	321.99	0
321	Acid Soluble Zn (%)	0527	0.0040	0.0001	0.0033	0.0007	0.0004	8	0.82	321.33	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		*Robust Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Rob R-bar				
321	Acid Soluble Zn (%)	0096	0.0057	0.0006	0.0033	0.0007	0.0004	8	2.97	321.30	0
321	Acid Soluble Zn (%)	0586	< 0.01		0.0033	0.0007	0.0004	8		321.99	5

**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. Identical duplicates not included in calculation of Rob R-bar. Your offset values are higher (‡) or lower (†) than the Robust Analyte value ± Investigational Allowance. Analyte 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.