



Analyte PT For All Labs
 Sample # 241011
 Liquid AmmPolyP

Magruder Fertilizer Proficiency Testing Program
 Regular PT Scheme
 Statistical Summary

Analytes: 31
 # Labs Reporting: 81
 Issue Date : 11/30/2024

Analyte Code	Analyte Sample # 241011	# 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 (%)	29	29	11.06	0.3368	11.10		0.2429	0.0564	2.19%		0.1286	2.78%
002	Nitrate N (%)	1		0.3850									
005	Urea N (%)	2	2	5.915	7.927								
009	Ammoniacal Plus Nitrate N (%)	2	2	11.32	0.0424								
010	Total N (11%)	64	62	11.16	0.3291	11.18	0.5977	0.2165	0.0344	1.94%	0.84	0.1019	2.78%
020	Total P2O5 (%)	42	40	37.14	3.296	37.16		0.9684	0.1914	2.61%		0.2711	1.64%
040	Indirect Available P2O5 (37%)	1		37.46									
041	Direct Available P2O5 (37%)	39	39	36.46	4.858	37.19	0.8478	1.036	0.2073	2.79%	2.85	0.3318	1.64%
042	Water Soluble OrthoP As P2O5 (%)	1		11.44									
048	Water Soluble P2O5 (%)	6	6	29.20	12.36	29.20		14.02	7.154	48.02%		0.3768	1.85%
050	Soluble K2O (%)	7	6	5.526	14.17	0.1661	0.4100	0.0215	0.0109	12.91%	0.12	0.0163	5.24%
101	Acid Soluble Ca (%)	4	2	0.0338	0.0189	0.0475	0.2024	0.0106	0.0094	22.33%	0.12	0.0100	6.33%
121	Acid Soluble Mg (%)	8	8	0.0790	0.0155	0.0795	0.2040	0.0134	0.0059	16.87%	0.15	0.0095	5.85%
145	Sulfate S, HCl soluble (%)	1		0.3950									
148	Total S (%)	5	4	0.4652	0.2253	0.5565	0.2278	0.1100	0.0688	19.77%	1.13	0.0474	4.37%
149	S - HNO3 soluble (%)	1		0.5157									
151	Acid Soluble As (ppm)	17	12	2.334	2.384	1.313		0.4133	0.1491	31.47%		0.1230	15.35%
165	Acid Soluble B (%)	6	6	0.0096	0.0054	0.0086	0.0043	0.0035	0.0018	40.67%	1.90	0.0005	8.18%
181	Acid Soluble Cd (ppm)	18	17	13.28	1.029	13.34		1.082	0.3280	8.11%		0.3790	10.83%
191	Acid Soluble Cr (ppm)	16	15	188.4	11.54	189.2		12.49	4.030	6.60%		4.276	7.27%
202	Acid Soluble Co (ppm)	15	5	0.8043	1.002	0.5292	1.1588	0.5785	0.3234	109.32%	1.16	0.1148	17.60%
221	Acid Soluble Cu (%)	17	4	0.1362	0.4857	0.0005	0.0051	0.0006	0.0004	121.93%	0.28	0.0003	12.56%
241	Acid Soluble Fe (%)	9	8	0.4278	0.0340	0.4320	0.0482	0.0371	0.0164	8.59%	1.79	0.0095	4.54%
251	Acid Soluble Pb (ppm)	16	4	1.531	1.964	0.4178		0.5612	0.3508	134.34%		0.1000	18.24%
261	Acid Soluble Mn (%)	7	5	0.0057	0.0026	0.0057	0.0056	0.0005	0.0003	8.74%	0.21	0.0003	8.70%
281	Acid Soluble Hg (ppm)	10	2	0.4521	0.6707	0.0051		0.0069	0.0061	135.88%		0.0002	22.00%
289	Acid Soluble Mo (ppm)	17	17	8.568	0.6687	8.557	3.5670	0.6667	0.2021	7.79%	0.44	0.3209	11.58%
291	Acid Soluble Ni (ppm)	16	5	1.582	3.418	0.2241		0.0846	0.0473	37.76%		0.0932	20.04%
301	Acid Soluble Se (ppm)	14	3	2.678	6.137	0.4064		0.4722	0.3408	116.21%		0.0256	18.32%

Analyte Code	Analyte Sample # 241011	# 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
311	Sodium (%)	5	5	139.1	310.8	139.1	1.0000	310.8	173.7	223.41%	724.07	7.513	0.85%
321	Acid Soluble Zn (%)	21	20	9.907	45.27	0.0267	0.0077	0.0033	0.0009	12.28%	1.00	0.0016	6.90%

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.



Analyte PT For All Labs

Magruder Fertilizer Proficiency Testing Program

Analytes: 31

Sample # 241011

Regular PT Scheme

Labs Reporting: 81

Liquid AmmPolyP

Lab Values

Issue Date : 11/30/2024

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 (%)	0368	9.699	0.1310	11.10	0.2429	0.1286	29	-5.76	001.99	0
001	Ammoniacal N (%)	0498	10.65	0.1000	11.10	0.2429	0.1286	29	-1.84	001.10	0
001	Ammoniacal N (%)	0394	10.69	0.2430	11.10	0.2429	0.1286	29	-1.66	001.99	0
001	Ammoniacal N (%)	0524	10.73	0.0100	11.10	0.2429	0.1286	29	-1.52	001.99	0
001	Ammoniacal N (%)	0389	10.76	0.0800	11.10	0.2429	0.1286	29	-1.39	001.10	0
001	Ammoniacal N (%)	0220	10.86	0.0200	11.10	0.2429	0.1286	29	-0.98	001.99	0
001	Ammoniacal N (%)	0451	10.89	0.3200	11.10	0.2429	0.1286	29	-0.86	001.10	0
001	Ammoniacal N (%)	0584	10.99	0.3100	11.10	0.2429	0.1286	29	-0.47	001.99	0
001	Ammoniacal N (%)	0513	11.07	0.0600	11.10	0.2429	0.1286	29	-0.12	001.99	0
001	Ammoniacal N (%)	0605	11.08	0.0300	11.10	0.2429	0.1286	29	-0.09	001.99	0
001	Ammoniacal N (%)	0559	11.10	0.0100	11.10	0.2429	0.1286	29	-0.01	001.99	0
001	Ammoniacal N (%)	0562	11.10	0.0100	11.10	0.2429	0.1286	29	-0.01	001.99	0
001	Ammoniacal N (%)	0564	11.10	0.0100	11.10	0.2429	0.1286	29	-0.01	001.99	0
001	Ammoniacal N (%)	0405	11.13	0.0300	11.10	0.2429	0.1286	29	0.11	001.99	0
001	Ammoniacal N (%)	0549	11.13	0.0500	11.10	0.2429	0.1286	29	0.11	001.99	0
001	Ammoniacal N (%)	0231	11.13	0.0200	11.10	0.2429	0.1286	29	0.13	001.10	0
001	Ammoniacal N (%)	0510	11.14	0.3022	11.10	0.2429	0.1286	29	0.17	001.99	0
001	Ammoniacal N (%)	0517	11.15	0.1000	11.10	0.2429	0.1286	29	0.21	001.99	0
001	Ammoniacal N (%)	0635	11.18	0.0600	11.10	0.2429	0.1286	29	0.34	001.99	0
001	Ammoniacal N (%)	0619	11.25	0.3000	11.10	0.2429	0.1286	29	0.63	001.10	0
001	Ammoniacal N (%)	0027	11.25	0.0400	11.10	0.2429	0.1286	29	0.63	001.99	0
001	Ammoniacal N (%)	0619	11.25	0.3000	11.10	0.2429	0.1286	29	0.63	001.99	0
001	Ammoniacal N (%)	0577	11.26	0.0800	11.10	0.2429	0.1286	29	0.67	001.99	0
001	Ammoniacal N (%)	0136	11.30	0.2000	11.10	0.2429	0.1286	29	0.83	001.10	0
001	Ammoniacal N (%)	0531	11.30	0.1800	11.10	0.2429	0.1286	29	0.83	001.99	0
001	Ammoniacal N (%)	0553	11.30	0.4400	11.10	0.2429	0.1286	29	0.83	001.99	0
001	Ammoniacal N (%)	0444	11.35	0.1000	11.10	0.2429	0.1286	29	1.04	001.10	0
001	Ammoniacal N (%)	0563	11.41	0.0600	11.10	0.2429	0.1286	29	1.28	001.99	0
001	Ammoniacal N (%)	0537	11.48	0.2500	11.10	0.2429	0.1286	29	1.55	001.99	0
002	Nitrate N (%)	0531	0.3850	0.0900				1		002.99	0
005	Urea N (%)	0524	0.3100	0.0080				2		005.99	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				
005	Urea N (%)	0638	11.52	0.2000				2		005.99	0
009	Ammoniacal Plus Nitrate N (%)	0531	11.29	0.2400				2		009.10	0
009	Ammoniacal Plus Nitrate N (%)	0444	11.35	0.1000				2		009.10	0
010	Total N (11%)	0521	10.04†	0.0000	11.18	0.2165	0.1019	62	-5.27	010.60	0
010	Total N (11%)	0498	10.65	0.1000	11.18	0.2165	0.1019	62	-2.46	010.12	0
010	Total N (11%)	0402	10.83	0.0660	11.18	0.2165	0.1019	62	-1.62	010.60	0
010	Total N (11%)	0086	10.88	0.0480	11.18	0.2165	0.1019	62	-1.42	010.60	0
010	Total N (11%)	0029	10.89	0.1600	11.18	0.2165	0.1019	62	-1.35	010.60	0
010	Total N (11%)	0472	10.89	0.0600	11.18	0.2165	0.1019	62	-1.35	010.60	0
010	Total N (11%)	0177	10.90	0.0270	11.18	0.2165	0.1019	62	-1.32	010.60	0
010	Total N (11%)	0324	10.95	0.1000	11.18	0.2165	0.1019	62	-1.08	010.60	0
010	Total N (11%)	0351	10.96	0.0100	11.18	0.2165	0.1019	62	-1.05	010.60	0
010	Total N (11%)	0185	10.97	0.2000	11.18	0.2165	0.1019	62	-0.99	010.60	0
010	Total N (11%)	0524	10.98	0.0171	11.18	0.2165	0.1019	62	-0.93	010.99	0
010	Total N (11%)	0234	10.99	0.1100	11.18	0.2165	0.1019	62	-0.92	010.60	0
010	Total N (11%)	0131	11.00	0.1040	11.18	0.2165	0.1019	62	-0.85	010.60	0
010	Total N (11%)	0538	11.01	0.0500	11.18	0.2165	0.1019	62	-0.82	010.99	0
010	Total N (11%)	0102	11.02	0.0100	11.18	0.2165	0.1019	62	-0.78	010.60	0
010	Total N (11%)	0423	11.02	0.1200	11.18	0.2165	0.1019	62	-0.75	010.60	0
010	Total N (11%)	0389	11.03	0.0300	11.18	0.2165	0.1019	62	-0.73	010.60	0
010	Total N (11%)	0169	11.08	0.0500	11.18	0.2165	0.1019	62	-0.50	010.60	0
010	Total N (11%)	0291	11.08	0.0100	11.18	0.2165	0.1019	62	-0.50	010.60	0
010	Total N (11%)	0605	11.08	0.0300	11.18	0.2165	0.1019	62	-0.50	010.99	0
010	Total N (11%)	0451	11.08	0.2600	11.18	0.2165	0.1019	62	-0.48	010.60	0
010	Total N (11%)	0422	11.13	0.0100	11.18	0.2165	0.1019	62	-0.27	010.60	0
010	Total N (11%)	0510	11.13	0.3288	11.18	0.2165	0.1019	62	-0.23	010.11	0
010	Total N (11%)	0073	11.14	0.5000	11.18	0.2165	0.1019	62	-0.20	010.60	0
010	Total N (11%)	0035	11.15	0.1000	11.18	0.2165	0.1019	62	-0.15	010.60	0
010	Total N (11%)	0588	11.15	0.1000	11.18	0.2165	0.1019	62	-0.15	010.60	0
010	Total N (11%)	0517	11.15	0.1000	11.18	0.2165	0.1019	62	-0.15	010.99	0
010	Total N (11%)	0220	11.16	0.0000	11.18	0.2165	0.1019	62	-0.11	010.60	0
010	Total N (11%)	0095	11.17	0.0700	11.18	0.2165	0.1019	62	-0.08	010.60	0
010	Total N (11%)	0559	11.17	0.0100	11.18	0.2165	0.1019	62	-0.08	010.99	0
010	Total N (11%)	0523	11.17	0.0680	11.18	0.2165	0.1019	62	-0.06	010.60	0
010	Total N (11%)	0562	11.18	0.0100	11.18	0.2165	0.1019	62	-0.04	010.99	0
010	Total N (11%)	0564	11.18	0.0100	11.18	0.2165	0.1019	62	-0.04	010.99	0
010	Total N (11%)	0543	11.18	0.0000	11.18	0.2165	0.1019	62	-0.02	010.60	0
010	Total N (11%)	0527	11.21	0.3545	11.18	0.2165	0.1019	62	0.10	010.60	0
010	Total N (11%)	0027	11.23	0.1000	11.18	0.2165	0.1019	62	0.22	010.60	0
010	Total N (11%)	0356	11.23	0.2230	11.18	0.2165	0.1019	62	0.23	010.60	0
010	Total N (11%)	0231	11.24	0.0700	11.18	0.2165	0.1019	62	0.24	010.60	0
010	Total N (11%)	0405	11.24	0.0000	11.18	0.2165	0.1019	62	0.26	010.60	0
010	Total N (11%)	0307	11.25	0.1000	11.18	0.2165	0.1019	62	0.31	010.60	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				
010	Total N (11%)	0354	11.25	0.1000	11.18	0.2165	0.1019	62	0.31	010.60	0
010	Total N (11%)	0260	11.28	0.0600	11.18	0.2165	0.1019	62	0.45	010.60	0
010	Total N (11%)	0043	11.29	0.0000	11.18	0.2165	0.1019	62	0.49	010.60	0
010	Total N (11%)	0531	11.30	0.1300	11.18	0.2165	0.1019	62	0.52	010.11	0
010	Total N (11%)	0612	11.30	0.0700	11.18	0.2165	0.1019	62	0.52	010.60	0
010	Total N (11%)	0230	11.30	0.0000	11.18	0.2165	0.1019	62	0.54	010.60	0
010	Total N (11%)	0037	11.34	0.2390	11.18	0.2165	0.1019	62	0.70	010.60	0
010	Total N (11%)	0368	11.34	0.0090	11.18	0.2165	0.1019	62	0.71	010.60	0
010	Total N (11%)	0040	11.35	0.1000	11.18	0.2165	0.1019	62	0.77	010.60	0
010	Total N (11%)	0452	11.35	0.1000	11.18	0.2165	0.1019	62	0.77	010.60	0
010	Total N (11%)	0377	11.38	0.3500	11.18	0.2165	0.1019	62	0.89	010.60	0
010	Total N (11%)	0034	11.39	0.0000	11.18	0.2165	0.1019	62	0.95	010.60	0
010	Total N (11%)	0531	11.39	0.1000	11.18	0.2165	0.1019	62	0.95	010.99	0
010	Total N (11%)	0518	11.40	0.2000	11.18	0.2165	0.1019	62	1.00	010.99	0
010	Total N (11%)	0049	11.46	0.0200	11.18	0.2165	0.1019	62	1.28	010.60	0
010	Total N (11%)	0055	11.47	0.0850	11.18	0.2165	0.1019	62	1.31	010.60	0
010	Total N (11%)	0561	11.49	0.1000	11.18	0.2165	0.1019	62	1.42	010.60	0
010	Total N (11%)	0563	11.50	0.2200	11.18	0.2165	0.1019	62	1.46	010.99	0
010	Total N (11%)	0136	11.55	0.1000	11.18	0.2165	0.1019	62	1.69	010.60	0
010	Total N (11%)	0255	11.60	0.3470	11.18	0.2165	0.1019	62	1.92	010.60	0
010	Total N (11%)	0534	11.60	0.0000	11.18	0.2165	0.1019	62	1.92	010.60	0
010	Total N (11%)	0023	12.59‡	0.4290	11.18	0.2165	0.1019	62	6.51	010.60	0
010	Total N (11%)	0106	10.34†	0.8300	11.18	0.2165	0.1019	62	-3.92	010.60	1
010	Total N (11%)	0494	10.50†	0.8000	11.18	0.2165	0.1019	62	-3.16	010.60	1
020	Total P2O5 (%)	0433	29.36	0.1300	37.16	0.9684	0.2711	40	-8.06	020.50	0
020	Total P2O5 (%)	0524	31.13	1.110	37.16	0.9684	0.2711	40	-6.23	020.50	0
020	Total P2O5 (%)	0389	31.97	0.1200	37.16	0.9684	0.2711	40	-5.36	020.50	0
020	Total P2O5 (%)	0543	34.12	0.1600	37.16	0.9684	0.2711	40	-3.14	020.50	0
020	Total P2O5 (%)	0157	34.50	0.2000	37.16	0.9684	0.2711	40	-2.75	020.10	0
020	Total P2O5 (%)	0042	35.10	1.200	37.16	0.9684	0.2711	40	-2.13	020.40	0
020	Total P2O5 (%)	0255	35.80	0.2520	37.16	0.9684	0.2711	40	-1.40	020.50	0
020	Total P2O5 (%)	0562	36.73	0.0500	37.16	0.9684	0.2711	40	-0.45	020.99	0
020	Total P2O5 (%)	0564	36.73	0.0500	37.16	0.9684	0.2711	40	-0.45	020.99	0
020	Total P2O5 (%)	0452	36.76	0.0600	37.16	0.9684	0.2711	40	-0.41	020.50	0
020	Total P2O5 (%)	0577	36.79	0.2300	37.16	0.9684	0.2711	40	-0.39	020.99	0
020	Total P2O5 (%)	0638	36.80	0.0900	37.16	0.9684	0.2711	40	-0.38	020.99	0
020	Total P2O5 (%)	0510	36.82	0.4798	37.16	0.9684	0.2711	40	-0.35	020.20	0
020	Total P2O5 (%)	0402	36.87	0.2350	37.16	0.9684	0.2711	40	-0.30	020.50	0
020	Total P2O5 (%)	0451	36.97	0.4300	37.16	0.9684	0.2711	40	-0.20	020.50	0
020	Total P2O5 (%)	0220	37.10	0.1100	37.16	0.9684	0.2711	40	-0.07	020.20	0
020	Total P2O5 (%)	0513	37.10	0.0400	37.16	0.9684	0.2711	40	-0.06	020.99	0
020	Total P2O5 (%)	0521	37.10	0.0000	37.16	0.9684	0.2711	40	-0.06	020.50	0
020	Total P2O5 (%)	0307	37.15	2.100	37.16	0.9684	0.2711	40	-0.01	020.50	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				
020	Total P2O5 (%)	0169	37.18	0.0500	37.16	0.9684	0.2711	40	0.02	020.20	0
020	Total P2O5 (%)	0324	37.20	0.6000	37.16	0.9684	0.2711	40	0.04	020.20	0
020	Total P2O5 (%)	0234	37.28	0.0500	37.16	0.9684	0.2711	40	0.12	020.50	0
020	Total P2O5 (%)	0472	37.32	0.6400	37.16	0.9684	0.2711	40	0.17	020.50	0
020	Total P2O5 (%)	0527	37.35	0.1500	37.16	0.9684	0.2711	40	0.20	020.50	0
020	Total P2O5 (%)	0498	37.40	0.2000	37.16	0.9684	0.2711	40	0.25	020.20	0
020	Total P2O5 (%)	0356	37.42	0.3270	37.16	0.9684	0.2711	40	0.27	020.20	0
020	Total P2O5 (%)	0405	37.46	0.0700	37.16	0.9684	0.2711	40	0.31	020.20	0
020	Total P2O5 (%)	0356	37.52	0.0420	37.16	0.9684	0.2711	40	0.37	020.50	0
020	Total P2O5 (%)	0231	37.54	0.0300	37.16	0.9684	0.2711	40	0.39	020.20	0
020	Total P2O5 (%)	0177	37.65	0.4276	37.16	0.9684	0.2711	40	0.50	020.20	0
020	Total P2O5 (%)	0095	37.65	0.3600	37.16	0.9684	0.2711	40	0.51	020.10	0
020	Total P2O5 (%)	0444	37.87	0.2200	37.16	0.9684	0.2711	40	0.73	020.10	0
020	Total P2O5 (%)	0561	37.98	0.0000	37.16	0.9684	0.2711	40	0.85	020.20	0
020	Total P2O5 (%)	0368	38.03	0.1974	37.16	0.9684	0.2711	40	0.90	020.50	0
020	Total P2O5 (%)	0619	38.25	0.1000	37.16	0.9684	0.2711	40	1.13	020.10	0
020	Total P2O5 (%)	0035	38.25	0.5000	37.16	0.9684	0.2711	40	1.13	020.40	0
020	Total P2O5 (%)	0619	38.25	0.1000	37.16	0.9684	0.2711	40	1.13	020.99	0
020	Total P2O5 (%)	0588	38.85	0.5000	37.16	0.9684	0.2711	40	1.75	020.50	0
020	Total P2O5 (%)	0422	39.92	0.5500	37.16	0.9684	0.2711	40	2.85	020.50	0
020	Total P2O5 (%)	0515	53.20	1.330	37.16	0.9684	0.2711	40	16.56	020.99	0
020	Total P2O5 (%)	0612	34.33	3.360	37.16	0.9684	0.2711	40	-2.92	020.50	1
020	Total P2O5 (%)	0523	41.10	2.800	37.16	0.9684	0.2711	40	4.07	020.50	1
040	Indirect Available P2O5 (37%)	0405	37.46‡	0.0700				1		040.99	0
041	Direct Available P2O5 (37%)	0055	13.07†	0.1950	37.19	1.036	0.3318	39	-23.28	041.21	0
041	Direct Available P2O5 (37%)	0472	26.10†	0.0000	37.19	1.036	0.3318	39	-10.70	041.21	0
041	Direct Available P2O5 (37%)	0584	31.79†	0.7400	37.19	1.036	0.3318	39	-5.21	041.99	0
041	Direct Available P2O5 (37%)	0518	31.85†	0.7000	37.19	1.036	0.3318	39	-5.15	041.99	0
041	Direct Available P2O5 (37%)	0009	34.00†	0.0000	37.19	1.036	0.3318	39	-3.08	041.10	0
041	Direct Available P2O5 (37%)	0049	35.53†	0.3000	37.19	1.036	0.3318	39	-1.60	041.11	0
041	Direct Available P2O5 (37%)	0106	35.91†	1.340	37.19	1.036	0.3318	39	-1.23	041.21	0
041	Direct Available P2O5 (37%)	0559	36.65	0.1000	37.19	1.036	0.3318	39	-0.52	041.99	0
041	Direct Available P2O5 (37%)	0034	36.72	1.300	37.19	1.036	0.3318	39	-0.45	041.40	0
041	Direct Available P2O5 (37%)	0354	36.85	0.3000	37.19	1.036	0.3318	39	-0.33	041.21	0
041	Direct Available P2O5 (37%)	0029	36.89	0.9900	37.19	1.036	0.3318	39	-0.29	041.40	0
041	Direct Available P2O5 (37%)	0394	36.92	0.1310	37.19	1.036	0.3318	39	-0.26	041.21	0
041	Direct Available P2O5 (37%)	0423	36.94	0.0500	37.19	1.036	0.3318	39	-0.24	041.51	0
041	Direct Available P2O5 (37%)	0494	36.95	0.6200	37.19	1.036	0.3318	39	-0.23	041.51	0
041	Direct Available P2O5 (37%)	0513	37.01	0.0700	37.19	1.036	0.3318	39	-0.18	041.11	0
041	Direct Available P2O5 (37%)	0538	37.02	0.0700	37.19	1.036	0.3318	39	-0.17	041.99	0
041	Direct Available P2O5 (37%)	0635	37.04	0.1800	37.19	1.036	0.3318	39	-0.14	041.10	0
041	Direct Available P2O5 (37%)	0037	37.07	0.4684	37.19	1.036	0.3318	39	-0.11	041.50	0
041	Direct Available P2O5 (37%)	0517	37.10	0.2000	37.19	1.036	0.3318	39	-0.08	041.11	0

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			Value	Range	Rob Mean	Rob SD	Rob R-bar				
041	Direct Available P2O5 (37%)	0025	37.15	0.9000	37.19	1.036	0.3318	39	-0.04	041.51	0
041	Direct Available P2O5 (37%)	0377	37.27	0.1700	37.19	1.036	0.3318	39	0.08	041.51	0
041	Direct Available P2O5 (37%)	0131	37.31	0.2700	37.19	1.036	0.3318	39	0.11	041.50	0
041	Direct Available P2O5 (37%)	0185	37.33	1.190	37.19	1.036	0.3318	39	0.13	041.11	0
041	Direct Available P2O5 (37%)	0230	37.45	1.100	37.19	1.036	0.3318	39	0.25	041.21	0
041	Direct Available P2O5 (37%)	0086	37.46	0.0149	37.19	1.036	0.3318	39	0.26	041.10	0
041	Direct Available P2O5 (37%)	0231	37.65	0.0300	37.19	1.036	0.3318	39	0.44	041.21	0
041	Direct Available P2O5 (37%)	0485	37.65	0.1000	37.19	1.036	0.3318	39	0.45	041.11	0
041	Direct Available P2O5 (37%)	0055	37.69	0.0350	37.19	1.036	0.3318	39	0.48	041.11	0
041	Direct Available P2O5 (37%)	0136	37.70	0.6000	37.19	1.036	0.3318	39	0.50	041.51	0
041	Direct Available P2O5 (37%)	0220	37.74	0.0300	37.19	1.036	0.3318	39	0.53	041.11	0
041	Direct Available P2O5 (37%)	0040	37.75	0.1000	37.19	1.036	0.3318	39	0.54	041.10	0
041	Direct Available P2O5 (37%)	0494	37.81	0.1200	37.19	1.036	0.3318	39	0.60	041.10	0
041	Direct Available P2O5 (37%)	0043	38.17‡	0.1300	37.19	1.036	0.3318	39	0.94	041.51	0
041	Direct Available P2O5 (37%)	0023	38.27‡	0.2570	37.19	1.036	0.3318	39	1.04	041.51	0
041	Direct Available P2O5 (37%)	0073	38.32‡	0.0200	37.19	1.036	0.3318	39	1.09	041.11	0
041	Direct Available P2O5 (37%)	0102	38.53‡	0.4400	37.19	1.036	0.3318	39	1.30	041.10	0
041	Direct Available P2O5 (37%)	0605	38.97‡	0.2100	37.19	1.036	0.3318	39	1.72	041.50	0
041	Direct Available P2O5 (37%)	0531	45.14‡	0.3700	37.19	1.036	0.3318	39	7.67	041.99	0
041	Direct Available P2O5 (37%)	0537	45.31‡	0.3000	37.19	1.036	0.3318	39	7.84	041.99	0
042	Water Soluble OrthoP As P2O5 (%)	0220	11.44	0.0600				1		042.10	0
048	Water Soluble P2O5 (%)	0394	11.69	0.2640	29.20	14.02	0.3768	6	-1.11	048.20	0
048	Water Soluble P2O5 (%)	0472	14.96	0.0000	29.20	14.02	0.3768	6	-0.90	048.20	0
048	Water Soluble P2O5 (%)	0444	36.26	0.3700	29.20	14.02	0.3768	6	0.45	048.50	0
048	Water Soluble P2O5 (%)	0444	36.28	0.4500	29.20	14.02	0.3768	6	0.45	048.10	0
048	Water Soluble P2O5 (%)	0619	38.00	0.4000	29.20	14.02	0.3768	6	0.56	048.10	0
048	Water Soluble P2O5 (%)	0619	38.00	0.4000	29.20	14.02	0.3768	6	0.56	048.99	0
050	Soluble K2O (%)	0422	0.1425	0.0022	0.1661	0.0215	0.0163	6	-0.98	050.50	0
050	Soluble K2O (%)	0524	0.1542	0.0214	0.1661	0.0215	0.0163	6	-0.50	050.99	0
050	Soluble K2O (%)	0354	0.1615	0.0210	0.1661	0.0215	0.0163	6	-0.19	050.52	0
050	Soluble K2O (%)	0588	0.1700	0.0200	0.1661	0.0215	0.0163	6	0.16	050.99	0
050	Soluble K2O (%)	0527	0.1703	0.0031	0.1661	0.0215	0.0163	6	0.17	050.99	0
050	Soluble K2O (%)	0531	0.2150	0.0300	0.1661	0.0215	0.0163	6	2.03	050.99	0
050	Soluble K2O (%)	0291	37.67	0.0200	0.1661	0.0215	0.0163	6	1557.35	050.51	2
101	Acid Soluble Ca (%)	0472	0.0400	0.0000				2		101.33	0
101	Acid Soluble Ca (%)	0354	0.0550	0.0100				2		101.30	0
101	Acid Soluble Ca (%)	0527	< 0.01					2		101.33	5
101	Acid Soluble Ca (%)	0009	< 0.03					2		101.33	5
121	Acid Soluble Mg (%)	0472	0.0500	0.0200	0.0795	0.0134	0.0095	8	-2.01	121.33	0
121	Acid Soluble Mg (%)	0009	0.0700	0.0000	0.0795	0.0134	0.0095	8	-0.65	121.33	0
121	Acid Soluble Mg (%)	0524	0.0745	0.0027	0.0795	0.0134	0.0095	8	-0.35	121.99	0
121	Acid Soluble Mg (%)	0354	0.0800	0.0000	0.0795	0.0134	0.0095	8	0.03	121.30	0
121	Acid Soluble Mg (%)	0515	0.0824	0.0184	0.0795	0.0134	0.0095	8	0.19	121.99	0

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			Value	Range	Rob Mean	Rob SD	Rob R-bar				
121	Acid Soluble Mg (%)	0527	0.0836	0.0011	0.0795	0.0134	0.0095	8	0.27	121.33	0
121	Acid Soluble Mg (%)	0515	0.0869	0.0059	0.0795	0.0134	0.0095	8	0.50	121.33	0
121	Acid Soluble Mg (%)	0035	0.1045	0.0090	0.0795	0.0134	0.0095	8	1.70	121.30	0
145	Sulfate S, HCl soluble (%)	0531	0.3950	0.1100				1		145.99	0
148	Total S (%)	0422	0.4443	0.0007	0.5565	0.1100	0.0474	4	-1.02	148.99	0
148	Total S (%)	0472	0.5000	0.0000	0.5565	0.1100	0.0474	4	-0.51	148.07	0
148	Total S (%)	0354	0.5850	0.0100	0.5565	0.1100	0.0474	4	0.26	148.99	0
148	Total S (%)	0515	0.6969	0.1314	0.5565	0.1100	0.0474	4	1.28	148.07	0
148	Total S (%)	0527	< 0.1		0.5565	0.1100	0.0474	4		148.07	5
149	S - HNO3 soluble (%)	0524	0.5157	0.0259				1		149.04	0
151	Acid Soluble As (ppm)	0515	0.8025	0.2150	1.313	0.4133	0.1230	12	-1.24	151.33	0
151	Acid Soluble As (ppm)	0220	0.9500	0.1000	1.313	0.4133	0.1230	12	-0.88	151.99	0
151	Acid Soluble As (ppm)	0220	1.050	0.1000	1.313	0.4133	0.1230	12	-0.64	151.32	0
151	Acid Soluble As (ppm)	0523	1.088	0.0280	1.313	0.4133	0.1230	12	-0.54	151.30	0
151	Acid Soluble As (ppm)	0498	1.200	0.0000	1.313	0.4133	0.1230	12	-0.27	151.00	0
151	Acid Soluble As (ppm)	0136	1.200	0.0000	1.313	0.4133	0.1230	12	-0.27	151.33	0
151	Acid Soluble As (ppm)	0524	1.261	0.0305	1.313	0.4133	0.1230	12	-0.13	151.30	0
151	Acid Soluble As (ppm)	0086	1.290	0.0000	1.313	0.4133	0.1230	12	-0.06	151.32	0
151	Acid Soluble As (ppm)	0009	1.350	0.1000	1.313	0.4133	0.1230	12	0.09	151.99	0
151	Acid Soluble As (ppm)	0563	1.700	0.0000	1.313	0.4133	0.1230	12	0.94	151.33	0
151	Acid Soluble As (ppm)	0527	2.017	0.1463	1.313	0.4133	0.1230	12	1.70	151.33	0
151	Acid Soluble As (ppm)	0515	2.223	0.7890	1.313	0.4133	0.1230	12	2.20	151.34	0
151	Acid Soluble As (ppm)	0368	9.350	1.700	1.313	0.4133	0.1230	12	19.45	151.34	1
151	Acid Soluble As (ppm)	0255	0.0000	0.0000	1.313	0.4133	0.1230	12		151.30	4
151	Acid Soluble As (ppm)	0405	< 3		1.313	0.4133	0.1230	12		151.32	5
151	Acid Soluble As (ppm)	0009	< 5		1.313	0.4133	0.1230	12		151.33	5
151	Acid Soluble As (ppm)	0605	< 6.2		1.313	0.4133	0.1230	12		151.30	5
165	Acid Soluble B (%)	0515	0.0047	0.0009	0.0086	0.0035	0.0005	6	-1.01	165.99	0
165	Acid Soluble B (%)	0009	0.0075	0.0002	0.0086	0.0035	0.0005	6	-0.28	165.99	0
165	Acid Soluble B (%)	0524	0.0078	0.0005	0.0086	0.0035	0.0005	6	-0.22	165.99	0
165	Acid Soluble B (%)	0527	0.0079	0.0002	0.0086	0.0035	0.0005	6	-0.18	165.99	0
165	Acid Soluble B (%)	0354	0.0100	0.0000	0.0086	0.0035	0.0005	6	0.35	165.30	0
165	Acid Soluble B (%)	0472	0.0200	0.0000	0.0086	0.0035	0.0005	6	2.90	165.99	0
181	Acid Soluble Cd (ppm)	0368	11.15	0.9000	13.34	1.082	0.3790	17	-2.03	181.34	0
181	Acid Soluble Cd (ppm)	0534	11.45	0.9100	13.34	1.082	0.3790	17	-1.75	181.99	0
181	Acid Soluble Cd (ppm)	0605	11.65	0.2400	13.34	1.082	0.3790	17	-1.56	181.30	0
181	Acid Soluble Cd (ppm)	0009	13.00	0.0000	13.34	1.082	0.3790	17	-0.32	181.33	0
181	Acid Soluble Cd (ppm)	0255	13.08	0.2000	13.34	1.082	0.3790	17	-0.24	181.30	0
181	Acid Soluble Cd (ppm)	0220	13.15	0.1000	13.34	1.082	0.3790	17	-0.18	181.32	0
181	Acid Soluble Cd (ppm)	0220	13.15	0.1000	13.34	1.082	0.3790	17	-0.18	181.99	0
181	Acid Soluble Cd (ppm)	0136	13.25	0.1000	13.34	1.082	0.3790	17	-0.08	181.33	0
181	Acid Soluble Cd (ppm)	0524	13.33	0.1259	13.34	1.082	0.3790	17	-0.01	181.30	0
181	Acid Soluble Cd (ppm)	0086	13.49	0.1800	13.34	1.082	0.3790	17	0.13	181.33	0

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181	Acid Soluble Cd (ppm)	0523	13.64	0.0130	13.34	1.082	0.3790	17	0.27	181.30	0
181	Acid Soluble Cd (ppm)	0035	13.75	0.5000	13.34	1.082	0.3790	17	0.38	181.30	0
181	Acid Soluble Cd (ppm)	0515	13.84	1.130	13.34	1.082	0.3790	17	0.46	181.33	0
181	Acid Soluble Cd (ppm)	0394	13.91	0.2450	13.34	1.082	0.3790	17	0.53	181.30	0
181	Acid Soluble Cd (ppm)	0009	14.50	1.000	13.34	1.082	0.3790	17	1.07	181.99	0
181	Acid Soluble Cd (ppm)	0527	14.60	0.0457	13.34	1.082	0.3790	17	1.16	181.33	0
181	Acid Soluble Cd (ppm)	0405	15.00	0.0000	13.34	1.082	0.3790	17	1.53	181.32	0
181	Acid Soluble Cd (ppm)	0515	13.15	2.850	13.34	1.082	0.3790	17	-0.18	181.34	1
191	Acid Soluble Cr (ppm)	0605	164.4	3.760	189.2	12.49	4.276	15	-1.98	191.30	0
191	Acid Soluble Cr (ppm)	0368	170.0	20.00	189.2	12.49	4.276	15	-1.53	191.34	0
191	Acid Soluble Cr (ppm)	0035	174.0	4.000	189.2	12.49	4.276	15	-1.21	191.30	0
191	Acid Soluble Cr (ppm)	0220	182.8	0.5000	189.2	12.49	4.276	15	-0.51	191.32	0
191	Acid Soluble Cr (ppm)	0220	184.5	1.000	189.2	12.49	4.276	15	-0.37	191.99	0
191	Acid Soluble Cr (ppm)	0527	189.0	0.7883	189.2	12.49	4.276	15	-0.01	191.33	0
191	Acid Soluble Cr (ppm)	0009	190.0	0.0000	189.2	12.49	4.276	15	0.07	191.33	0
191	Acid Soluble Cr (ppm)	0523	190.6	1.074	189.2	12.49	4.276	15	0.11	191.30	0
191	Acid Soluble Cr (ppm)	0136	191.4	7.000	189.2	12.49	4.276	15	0.18	191.33	0
191	Acid Soluble Cr (ppm)	0394	194.7	7.376	189.2	12.49	4.276	15	0.45	191.30	0
191	Acid Soluble Cr (ppm)	0086	196.5	2.950	189.2	12.49	4.276	15	0.58	191.33	0
191	Acid Soluble Cr (ppm)	0524	197.0	4.987	189.2	12.49	4.276	15	0.62	191.30	0
191	Acid Soluble Cr (ppm)	0515	198.2	16.20	189.2	12.49	4.276	15	0.72	191.33	0
191	Acid Soluble Cr (ppm)	0009	200.0	0.0000	189.2	12.49	4.276	15	0.87	191.99	0
191	Acid Soluble Cr (ppm)	0405	208.0	2.000	189.2	12.49	4.276	15	1.51	191.32	0
191	Acid Soluble Cr (ppm)	0515	183.8	40.50	189.2	12.49	4.276	15	-0.43	191.34	1
202	Acid Soluble Co (ppm)	0523	0.0010	0.0000	0.5292	0.5785	0.1148	5	-0.91	202.30	0
202	Acid Soluble Co (ppm)	0515	0.1296	0.0511	0.5292	0.5785	0.1148	5	-0.69	202.33	0
202	Acid Soluble Co (ppm)	0220	0.2000	0.0000	0.5292	0.5785	0.1148	5	-0.57	202.99	0
202	Acid Soluble Co (ppm)	0515	1.129	0.2120	0.5292	0.5785	0.1148	5	1.04	202.34	0
202	Acid Soluble Co (ppm)	0524	1.186	0.0812	0.5292	0.5785	0.1148	5	1.14	202.30	0
202	Acid Soluble Co (ppm)	0255	3.419	1.115	0.5292	0.5785	0.1148	5	4.99	202.99	1
202	Acid Soluble Co (ppm)	0527	< 0.0001		0.5292	0.5785	0.1148	5		202.33	5
202	Acid Soluble Co (ppm)	0136	< 0.05		0.5292	0.5785	0.1148	5		202.33	5
202	Acid Soluble Co (ppm)	0220	< 0.1		0.5292	0.5785	0.1148	5		202.32	5
202	Acid Soluble Co (ppm)	0368	< 0.1		0.5292	0.5785	0.1148	5		202.34	5
202	Acid Soluble Co (ppm)	0009	< 0.25		0.5292	0.5785	0.1148	5		202.99	5
202	Acid Soluble Co (ppm)	0086	< 0.5		0.5292	0.5785	0.1148	5		202.33	5
202	Acid Soluble Co (ppm)	0405	< 1		0.5292	0.5785	0.1148	5		202.32	5
202	Acid Soluble Co (ppm)	0498	< 2		0.5292	0.5785	0.1148	5		202.00	5
202	Acid Soluble Co (ppm)	0009	< 2		0.5292	0.5785	0.1148	5		202.33	5
221	Acid Soluble Cu (%)	0515	0.0001	0.0000	0.0005	0.0006	0.0003	4	-0.66	221.33	0
221	Acid Soluble Cu (%)	0515	0.0002	0.0001	0.0005	0.0006	0.0003	4	-0.57	221.99	0
221	Acid Soluble Cu (%)	0035	0.0004	0.0001	0.0005	0.0006	0.0003	4	-0.25	221.30	0
221	Acid Soluble Cu (%)	0402	0.0014	0.0006	0.0005	0.0006	0.0003	4	1.48	221.30	0

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221	Acid Soluble Cu (%)	0255	0.0000	0.0000	0.0005	0.0006	0.0003	4		221.30	4
221	Acid Soluble Cu (%)	0106	0.0000	0.0000	0.0005	0.0006	0.0003	4		221.33	4
221	Acid Soluble Cu (%)	0086	< 0.0001		0.0005	0.0006	0.0003	4		221.33	5
221	Acid Soluble Cu (%)	0527	< 0.0001		0.0005	0.0006	0.0003	4		221.33	5
221	Acid Soluble Cu (%)	0563	< 0.0001		0.0005	0.0006	0.0003	4		221.33	5
221	Acid Soluble Cu (%)	0405	< 0.0002		0.0005	0.0006	0.0003	4		221.32	5
221	Acid Soluble Cu (%)	0136	< 0.0002		0.0005	0.0006	0.0003	4		221.33	5
221	Acid Soluble Cu (%)	0394	< 0.0002		0.0005	0.0006	0.0003	4		221.33	5
221	Acid Soluble Cu (%)	0009	< 0.0008		0.0005	0.0006	0.0003	4		221.99	5
221	Acid Soluble Cu (%)	0009	< 0.0025		0.0005	0.0006	0.0003	4		221.33	5
221	Acid Soluble Cu (%)	0354	< 0.01		0.0005	0.0006	0.0003	4		221.30	5
221	Acid Soluble Cu (%)	0368	< 0.3		0.0005	0.0006	0.0003	4		221.99	5
221	Acid Soluble Cu (%)	0498	< 2		0.0005	0.0006	0.0003	4		221.03	5
241	Acid Soluble Fe (%)	0524	0.3676	0.0117	0.4320	0.0371	0.0095	8	-1.59	241.99	0
241	Acid Soluble Fe (%)	0402	0.4086	0.0046	0.4320	0.0371	0.0095	8	-0.58	241.30	0
241	Acid Soluble Fe (%)	0009	0.4150	0.0100	0.4320	0.0371	0.0095	8	-0.42	241.33	0
241	Acid Soluble Fe (%)	0527	0.4247	0.0064	0.4320	0.0371	0.0095	8	-0.18	241.33	0
241	Acid Soluble Fe (%)	0515	0.4394	0.0330	0.4320	0.0371	0.0095	8	0.18	241.33	0
241	Acid Soluble Fe (%)	0354	0.4550	0.0100	0.4320	0.0371	0.0095	8	0.57	241.30	0
241	Acid Soluble Fe (%)	0035	0.4570	0.0080	0.4320	0.0371	0.0095	8	0.62	241.30	0
241	Acid Soluble Fe (%)	0472	0.4800	0.0000	0.4320	0.0371	0.0095	8	1.18	241.33	0
241	Acid Soluble Fe (%)	0515	0.4031	0.0884	0.4320	0.0371	0.0095	8	-0.71	241.99	1
251	Acid Soluble Pb (ppm)	0523	0.0210	0.0000	0.4178	0.5612	0.1000	4	-0.71	251.30	0
251	Acid Soluble Pb (ppm)	0220	0.2000	0.0000	0.4178	0.5612	0.1000	4	-0.39	251.32	0
251	Acid Soluble Pb (ppm)	0220	0.2000	0.0000	0.4178	0.5612	0.1000	4	-0.39	251.99	0
251	Acid Soluble Pb (ppm)	0368	1.250	0.1000	0.4178	0.5612	0.1000	4	1.48	251.34	0
251	Acid Soluble Pb (ppm)	0255	0.0000	0.0000	0.4178	0.5612	0.1000	4		251.30	4
251	Acid Soluble Pb (ppm)	0527	< 0.0001		0.4178	0.5612	0.1000	4		251.33	5
251	Acid Soluble Pb (ppm)	0515	< 0.21		0.4178	0.5612	0.1000	4		251.33	5
251	Acid Soluble Pb (ppm)	0515	< 0.216		0.4178	0.5612	0.1000	4		251.34	5
251	Acid Soluble Pb (ppm)	0394	< 0.4		0.4178	0.5612	0.1000	4		251.30	5
251	Acid Soluble Pb (ppm)	0498	< 0.5		0.4178	0.5612	0.1000	4		251.00	5
251	Acid Soluble Pb (ppm)	0086	< 1		0.4178	0.5612	0.1000	4		251.33	5
251	Acid Soluble Pb (ppm)	0009	< 2.5		0.4178	0.5612	0.1000	4		251.99	5
251	Acid Soluble Pb (ppm)	0136	< 3		0.4178	0.5612	0.1000	4		251.33	5
251	Acid Soluble Pb (ppm)	0405	< 4		0.4178	0.5612	0.1000	4		251.32	5
251	Acid Soluble Pb (ppm)	0605	< 5		0.4178	0.5612	0.1000	4		251.30	5
251	Acid Soluble Pb (ppm)	0009	< 6		0.4178	0.5612	0.1000	4		251.33	5
261	Acid Soluble Mn (%)	0524	0.0050	0.0000	0.0057	0.0005	0.0003	5	-1.29	261.99	0
261	Acid Soluble Mn (%)	0009	0.0057	0.0001	0.0057	0.0005	0.0003	5	-0.16	261.35	0
261	Acid Soluble Mn (%)	0527	0.0058	0.0000	0.0057	0.0005	0.0003	5	0.10	261.35	0
261	Acid Soluble Mn (%)	0515	0.0059	0.0005	0.0057	0.0005	0.0003	5	0.19	261.35	0
261	Acid Soluble Mn (%)	0035	0.0064	0.0000	0.0057	0.0005	0.0003	5	1.15	261.30	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				
261	Acid Soluble Mn (%)	0515	< 0.0011		0.0057	0.0005	0.0003	5		261.99	5
261	Acid Soluble Mn (%)	0354	< 0.01		0.0057	0.0005	0.0003	5		261.30	5
281	Acid Soluble Hg (ppm)	0524	0.0002	0.0002				2		281.99	0
281	Acid Soluble Hg (ppm)	0220	0.0100	0.0000				2		281.99	0
281	Acid Soluble Hg (ppm)	0527	< 0.001					2		281.30	5
281	Acid Soluble Hg (ppm)	0563	< 0.02					2		281.30	5
281	Acid Soluble Hg (ppm)	0515	< 0.1					2		281.30	5
281	Acid Soluble Hg (ppm)	0086	< 0.14					2		281.99	5
281	Acid Soluble Hg (ppm)	0498	< 0.5					2		281.00	5
281	Acid Soluble Hg (ppm)	0009	< 0.5					2		281.30	5
281	Acid Soluble Hg (ppm)	0605	< 1.25					2		281.30	5
281	Acid Soluble Hg (ppm)	0405	< 2					2		281.30	5
289	Acid Soluble Mo (ppm)	0515	7.315	0.6550	8.557	0.6667	0.3209	17	-1.86	289.33	0
289	Acid Soluble Mo (ppm)	0515	7.722	0.5990	8.557	0.6667	0.3209	17	-1.25	289.34	0
289	Acid Soluble Mo (ppm)	0220	8.000	0.0000	8.557	0.6667	0.3209	17	-0.83	289.32	0
289	Acid Soluble Mo (ppm)	0563	8.000	0.2000	8.557	0.6667	0.3209	17	-0.83	289.33	0
289	Acid Soluble Mo (ppm)	0220	8.000	0.2000	8.557	0.6667	0.3209	17	-0.83	289.99	0
289	Acid Soluble Mo (ppm)	0009	8.150	0.3000	8.557	0.6667	0.3209	17	-0.61	289.33	0
289	Acid Soluble Mo (ppm)	0402	8.350	0.5000	8.557	0.6667	0.3209	17	-0.31	289.30	0
289	Acid Soluble Mo (ppm)	0255	8.475	0.0730	8.557	0.6667	0.3209	17	-0.12	289.30	0
289	Acid Soluble Mo (ppm)	0136	8.600	0.2000	8.557	0.6667	0.3209	17	0.07	289.33	0
289	Acid Soluble Mo (ppm)	0368	8.650	0.5000	8.557	0.6667	0.3209	17	0.14	289.34	0
289	Acid Soluble Mo (ppm)	0009	8.900	0.2000	8.557	0.6667	0.3209	17	0.52	289.99	0
289	Acid Soluble Mo (ppm)	0035	8.940	0.4200	8.557	0.6667	0.3209	17	0.58	289.30	0
289	Acid Soluble Mo (ppm)	0405	9.000	0.0000	8.557	0.6667	0.3209	17	0.67	289.32	0
289	Acid Soluble Mo (ppm)	0524	9.100	0.0086	8.557	0.6667	0.3209	17	0.82	289.30	0
289	Acid Soluble Mo (ppm)	0527	9.153	0.0068	8.557	0.6667	0.3209	17	0.89	289.33	0
289	Acid Soluble Mo (ppm)	0086	9.309	0.6300	8.557	0.6667	0.3209	17	1.13	289.33	0
289	Acid Soluble Mo (ppm)	0106	10.00	0.0000	8.557	0.6667	0.3209	17	2.16	289.33	0
291	Acid Soluble Ni (ppm)	0524	0.1524	0.0749	0.2241	0.0846	0.0932	5	-0.85	291.30	0
291	Acid Soluble Ni (ppm)	0523	0.1595	0.0030	0.2241	0.0846	0.0932	5	-0.76	291.30	0
291	Acid Soluble Ni (ppm)	0220	0.2000	0.0000	0.2241	0.0846	0.0932	5	-0.28	291.99	0
291	Acid Soluble Ni (ppm)	0220	0.2500	0.1000	0.2241	0.0846	0.0932	5	0.31	291.32	0
291	Acid Soluble Ni (ppm)	0515	0.3585	0.1950	0.2241	0.0846	0.0932	5	1.59	291.34	0
291	Acid Soluble Ni (ppm)	0255	13.87	20.41	0.2241	0.0846	0.0932	5	161.33	291.99	1
291	Acid Soluble Ni (ppm)	0527	< 0.0001		0.2241	0.0846	0.0932	5		291.33	5
291	Acid Soluble Ni (ppm)	0136	< 0.05		0.2241	0.0846	0.0932	5		291.33	5
291	Acid Soluble Ni (ppm)	0368	< 0.2		0.2241	0.0846	0.0932	5		291.34	5
291	Acid Soluble Ni (ppm)	0515	< 0.26		0.2241	0.0846	0.0932	5		291.33	5
291	Acid Soluble Ni (ppm)	0394	< 0.4		0.2241	0.0846	0.0932	5		291.30	5
291	Acid Soluble Ni (ppm)	0086	< 0.5		0.2241	0.0846	0.0932	5		291.33	5
291	Acid Soluble Ni (ppm)	0405	< 1		0.2241	0.0846	0.0932	5		291.32	5
291	Acid Soluble Ni (ppm)	0605	< 2.4		0.2241	0.0846	0.0932	5		291.30	5

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				
291	Acid Soluble Ni (ppm)	0009	< 2.5		0.2241	0.0846	0.0932	5		291.99	5
291	Acid Soluble Ni (ppm)	0009	< 3		0.2241	0.0846	0.0932	5		291.33	5
301	Acid Soluble Se (ppm)	0524	0.0611	0.0008	0.4064	0.4722	0.0256	3	-0.73	301.30	0
301	Acid Soluble Se (ppm)	0523	0.2135	0.0130	0.4064	0.4722	0.0256	3	-0.41	301.30	0
301	Acid Soluble Se (ppm)	0515	0.9445	0.0630	0.4064	0.4722	0.0256	3	1.14	301.33	0
301	Acid Soluble Se (ppm)	0255	0.0000	0.0000	0.4064	0.4722	0.0256	3		301.99	4
301	Acid Soluble Se (ppm)	0527	< 0.001		0.4064	0.4722	0.0256	3		301.33	5
301	Acid Soluble Se (ppm)	0086	< 0.14		0.4064	0.4722	0.0256	3		301.32	5
301	Acid Soluble Se (ppm)	0515	< 0.226		0.4064	0.4722	0.0256	3		301.34	5
301	Acid Soluble Se (ppm)	0009	< 0.25		0.4064	0.4722	0.0256	3		301.99	5
301	Acid Soluble Se (ppm)	0220	< 0.3		0.4064	0.4722	0.0256	3		301.32	5
301	Acid Soluble Se (ppm)	0220	< 0.3		0.4064	0.4722	0.0256	3		301.99	5
301	Acid Soluble Se (ppm)	0368	< 1.4		0.4064	0.4722	0.0256	3		301.34	5
301	Acid Soluble Se (ppm)	0605	< 1.65		0.4064	0.4722	0.0256	3		301.30	5
301	Acid Soluble Se (ppm)	0405	< 10		0.4064	0.4722	0.0256	3		301.32	5
301	Acid Soluble Se (ppm)	0009	< 22		0.4064	0.4722	0.0256	3		301.33	5
311	Sodium (%)	0009	0.0970	0.0000	139.1	310.8	7.513	5	-0.45	311.33	0
311	Sodium (%)	0527	0.1050	0.0017	139.1	310.8	7.513	5	-0.45	311.33	0
311	Sodium (%)	0035	0.1210	0.0020	139.1	310.8	7.513	5	-0.45	311.33	0
311	Sodium (%)	0354	0.1550	0.0500	139.1	310.8	7.513	5	-0.45	311.99	0
311	Sodium (%)	0368	695.0	30.00	139.1	310.8	7.513	5	1.79	311.99	0
321	Acid Soluble Zn (%)	0354	0.0200	0.0000	0.0267	0.0033	0.0016	20	-2.05	321.30	0
321	Acid Soluble Zn (%)	0515	0.0217	0.0019	0.0267	0.0033	0.0016	20	-1.55	321.99	0
321	Acid Soluble Zn (%)	0524	0.0243	0.0008	0.0267	0.0033	0.0016	20	-0.75	321.99	0
321	Acid Soluble Zn (%)	0220	0.0248	0.0001	0.0267	0.0033	0.0016	20	-0.61	321.99	0
321	Acid Soluble Zn (%)	0220	0.0250	0.0002	0.0267	0.0033	0.0016	20	-0.53	321.32	0
321	Acid Soluble Zn (%)	0009	0.0250	0.0000	0.0267	0.0033	0.0016	20	-0.53	321.33	0
321	Acid Soluble Zn (%)	0136	0.0250	0.0100	0.0267	0.0033	0.0016	20	-0.53	321.33	0
321	Acid Soluble Zn (%)	0106	0.0251	0.0006	0.0267	0.0033	0.0016	20	-0.50	321.33	0
321	Acid Soluble Zn (%)	0394	0.0259	0.0007	0.0267	0.0033	0.0016	20	-0.27	321.33	0
321	Acid Soluble Zn (%)	0255	0.0260	0.0000	0.0267	0.0033	0.0016	20	-0.23	321.30	0
321	Acid Soluble Zn (%)	0405	0.0264	0.0016	0.0267	0.0033	0.0016	20	-0.11	321.32	0
321	Acid Soluble Zn (%)	0527	0.0266	0.0002	0.0267	0.0033	0.0016	20	-0.05	321.33	0
321	Acid Soluble Zn (%)	0498	0.0270	0.0000	0.0267	0.0033	0.0016	20	0.08	321.03	0
321	Acid Soluble Zn (%)	0402	0.0278	0.0009	0.0267	0.0033	0.0016	20	0.30	321.30	0
321	Acid Soluble Zn (%)	0086	0.0288	0.0067	0.0267	0.0033	0.0016	20	0.61	321.33	0
321	Acid Soluble Zn (%)	0095	0.0300	0.0000	0.0267	0.0033	0.0016	20	0.99	321.32	0
321	Acid Soluble Zn (%)	0523	0.0300	0.0020	0.0267	0.0033	0.0016	20	0.99	321.99	0
321	Acid Soluble Zn (%)	0035	0.0305	0.0010	0.0267	0.0033	0.0016	20	1.14	321.30	0
321	Acid Soluble Zn (%)	0472	0.0400	0.0000	0.0267	0.0033	0.0016	20	4.03	321.33	0
321	Acid Soluble Zn (%)	0515	0.0427	0.0083	0.0267	0.0033	0.0016	20	4.84	321.33	0
321	Acid Soluble Zn (%)	0368	207.5	25.00	0.0267	0.0033	0.0016	20	63150.40	321.99	1

Interpreting Z Scores and Flags:

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				

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.