

Analyte PT For All Labs

Magruder Fertilizer Proficiency Testing Program

Analytes: 30

Sample # 231011

Regular PT Scheme

Labs Reporting: 70

Gypsum

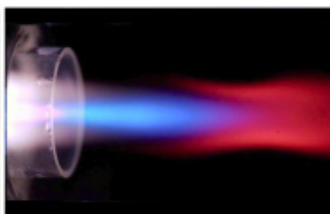
Statistical Summary

Issue Date : 11/30/2023

Analyte Code	Analyte Sample # 231011	# 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 (%)	2	2	0.5985	0.0092								
005	Urea N (%)	1		0.1386									
010	Total N (%)	8	8	0.6265	0.0374	0.6207	0.4900	0.0272	0.0120	4.39%	0.13	0.0164	4.30%
020	Total P2O5 (%)	6	3	0.0302	0.0395	0.0237		0.0272	0.0196	114.71%		0.0022	7.03%
041	Direct Available P2O5 (%)	3	3	0.0152	0.0046	0.0152	0.6700	0.0046	0.0033	30.06%	0.02	0.0055	7.51%
050	Soluble K2O (%)	7	5	0.0558	0.0322	0.0581	0.4100	0.0168	0.0094	28.97%	0.10	0.0045	6.14%
060	Water (Free) (%)	1		1.346									
101	Acid Soluble Ca (21%)	64	61	20.61	1.626	20.73	1.0000	0.8181	0.1309	3.95%	1.91	0.3004	2.20%
121	Acid Soluble Mg (%)	12	11	0.1174	0.0499	0.1037	0.2052	0.0048	0.0018	4.62%	0.05	0.0095	5.63%
131	Water Soluble Mg (%)	2	2	0.0115	0.0000								
143	Elemental S (%)	5	5	17.34	1.560	17.34		1.560	0.8719	8.99%		0.1246	2.40%
145	Sulfate S, HCl soluble (%)	12	12	16.77	0.4762	16.81		0.4293	0.1549	2.55%		0.3037	2.44%
148	Total S (17%)	45	43	16.84	1.827	16.92	1.0000	0.7800	0.1487	4.61%	1.82	0.2393	2.43%
149	S - HNO3 soluble (%)	2	2	18.11	0.2300								
151	Acid Soluble As (ppm)	15	8	4.593	9.310	1.073		1.275	0.5634	118.78%		0.1767	15.83%
165	Acid Soluble B (%)	7	4	0.1448	0.3093	0.2457	0.0399	0.3996	0.2497	162.61%	23.36	0.0487	4.94%
181	Acid Soluble Cd (ppm)	17	8	0.4060	0.4909	0.1251		0.0378	0.0167	30.19%		0.0075	21.87%
191	Acid Soluble Cr (ppm)	17	15	9.629	3.908	10.25		4.241	1.369	41.39%		0.8375	11.27%
202	Acid Soluble Co (ppm)	17	10	2.902	3.855	1.890	1.5669	0.7653	0.3025	40.50%	1.14	0.1279	14.54%
221	Acid Soluble Cu (%)	19	11	0.2606	1.025	0.0016	0.0052	0.0024	0.0009	150.97%	1.08	0.0025	10.56%
241	Acid Soluble Fe (%)	12	11	0.1347	0.1924	0.0861	0.0136	0.0220	0.0083	25.57%	3.77	0.0023	5.79%
251	Acid Soluble Pb (ppm)	16	7	1.676	1.976	0.5359		0.3456	0.1633	64.48%		0.0734	17.57%
261	Acid Soluble Mn (%)	8	6	0.0167	0.0337	0.0039	0.0054	0.0008	0.0004	21.58%	0.36	0.0002	9.22%
271	Water Soluble Mn (%)	2	2	0.0028	0.0001								
281	Acid Soluble Hg (ppm)	9	5	0.3222	0.6313	0.1441		0.0245	0.0137	16.99%		0.0094	21.41%
289	Acid Soluble Mo (ppm)	15	5	1.716	2.548	1.288	1.3864	1.564	0.8742	121.39%	2.63	0.0344	15.40%
291	Acid Soluble Ni (ppm)	17	11	4.085	5.700	2.832		0.6188	0.2332	21.85%		0.3634	13.68%
301	Acid Soluble Se (ppm)	12	7	4.068	4.711	2.861		2.102	0.9932	73.47%		0.3922	13.66%
311	Sodium (%)	4	2	0.0377	0.0447	0.0228	0.0073	0.0243	0.0215	106.41%	7.77	0.0101	7.06%

Analyte Code	Analyte Sample # 231011	# 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
321	Acid Soluble Zn (%)	20	16	1.152	3.573	0.0015	0.0052	0.0008	0.0002	50.83%	0.35	0.0005	10.62%

The Analyte IA Ratio = $2.33 * \text{Robust SD} / \text{IA at the Analyte Assigned Value}$. 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: 30

Sample # 231011

Regular PT Scheme

Labs Reporting: 70

Gypsum

Lab Values

Issue Date : 11/30/2023

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 (%)	0524	0.5920	0.4739				2		001.99	0
001	Ammoniacal N (%)	0626	0.6050	0.0100				2		001.99	0
005	Urea N (%)	0524	0.1386	0.0047				1		005.99	0
010	Total N (%)	0472	0.5930	0.0040	0.6207	0.0272	0.0164	8	-0.93	010.60	0
010	Total N (%)	0527	0.5990	0.0260	0.6207	0.0272	0.0164	8	-0.73	010.60	0
010	Total N (%)	0524	0.6059	0.0155	0.6207	0.0272	0.0164	8	-0.50	010.99	0
010	Total N (%)	0422	0.6100	0.0000	0.6207	0.0272	0.0164	8	-0.36	010.60	0
010	Total N (%)	0354	0.6165	0.0030	0.6207	0.0272	0.0164	8	-0.14	010.60	0
010	Total N (%)	0624	0.6345	0.0190	0.6207	0.0272	0.0164	8	0.46	010.60	0
010	Total N (%)	0626	0.6450	0.0100	0.6207	0.0272	0.0164	8	0.82	010.60	0
010	Total N (%)	0588	0.7085	0.0530	0.6207	0.0272	0.0164	8	2.95	010.60	0
020	Total P2O5 (%)	0572	0.0076	0.0001	0.0237	0.0272	0.0022	3	-0.48	020.99	0
020	Total P2O5 (%)	0524	0.0085	0.0007	0.0237	0.0272	0.0022	3	-0.45	020.50	0
020	Total P2O5 (%)	0422	0.0551	0.0059	0.0237	0.0272	0.0022	3	0.94	020.50	0
020	Total P2O5 (%)	0552	0.0000	0.0000	0.0237	0.0272	0.0022	3		020.50	4
020	Total P2O5 (%)	0588	< 0.01		0.0237	0.0272	0.0022	3		020.50	5
020	Total P2O5 (%)	0527	< 0.1		0.0237	0.0272	0.0022	3		020.50	5
041	Direct Available P2O5 (%)	0472	0.0100	0.0000	0.0152	0.0046	0.0055	3	-1.14	041.21	0
041	Direct Available P2O5 (%)	0624	0.0172	0.0080	0.0152	0.0046	0.0055	3	0.43	041.50	0
041	Direct Available P2O5 (%)	0354	0.0185	0.0030	0.0152	0.0046	0.0055	3	0.71	041.21	0
050	Soluble K2O (%)	0588	0.0290	0.0040	0.0581	0.0168	0.0045	5	-1.51	050.99	0
050	Soluble K2O (%)	0354	0.0595	0.0090	0.0581	0.0168	0.0045	5	0.07	050.52	0
050	Soluble K2O (%)	0624	0.0630	0.0000	0.0581	0.0168	0.0045	5	0.25	050.99	0
050	Soluble K2O (%)	0422	0.0691	0.0010	0.0581	0.0168	0.0045	5	0.57	050.50	0
050	Soluble K2O (%)	0524	0.0699	0.0038	0.0581	0.0168	0.0045	5	0.61	050.99	0
050	Soluble K2O (%)	0552	0.0000	0.0000	0.0581	0.0168	0.0045	5		050.99	4
050	Soluble K2O (%)	0527	< 0.1		0.0581	0.0168	0.0045	5		050.99	5
060	Water (Free) (%)	0510	1.346	0.0001				1		060.99	0
101	Acid Soluble Ca (21%)	0624	12.44†	0.7100	20.73	0.8181	0.3004	61	-10.14	101.33	0
101	Acid Soluble Ca (21%)	0377	17.96†	1.590	20.73	0.8181	0.3004	61	-3.39	101.30	0
101	Acid Soluble Ca (21%)	0055	18.03†	1.010	20.73	0.8181	0.3004	61	-3.31	101.33	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				
101	Acid Soluble Ca (21%)	0255	18.15†	0.2100	20.73	0.8181	0.3004	61	-3.16	101.30	0
101	Acid Soluble Ca (21%)	0042	18.25†	1.500	20.73	0.8181	0.3004	61	-3.03	101.99	0
101	Acid Soluble Ca (21%)	0472	18.60†	0.2000	20.73	0.8181	0.3004	61	-2.60	101.33	0
101	Acid Soluble Ca (21%)	0049	19.15†	0.9400	20.73	0.8181	0.3004	61	-1.93	101.30	0
101	Acid Soluble Ca (21%)	0040	19.40†	0.1000	20.73	0.8181	0.3004	61	-1.62	101.33	0
101	Acid Soluble Ca (21%)	0552	19.47†	0.5700	20.73	0.8181	0.3004	61	-1.55	101.99	0
101	Acid Soluble Ca (21%)	0402	19.53†	0.1000	20.73	0.8181	0.3004	61	-1.47	101.30	0
101	Acid Soluble Ca (21%)	0510	19.97	0.3472	20.73	0.8181	0.3004	61	-0.92	101.70	0
101	Acid Soluble Ca (21%)	0035	20.10	0.4000	20.73	0.8181	0.3004	61	-0.77	101.30	0
101	Acid Soluble Ca (21%)	0580	20.17	0.1800	20.73	0.8181	0.3004	61	-0.68	101.00	0
101	Acid Soluble Ca (21%)	0626	20.22	0.0500	20.73	0.8181	0.3004	61	-0.63	101.70	0
101	Acid Soluble Ca (21%)	0389	20.25	0.7000	20.73	0.8181	0.3004	61	-0.59	101.99	0
101	Acid Soluble Ca (21%)	0043	20.38	0.3800	20.73	0.8181	0.3004	61	-0.43	101.33	0
101	Acid Soluble Ca (21%)	0605	20.39	0.1500	20.73	0.8181	0.3004	61	-0.42	101.99	0
101	Acid Soluble Ca (21%)	0200	20.40	0.0400	20.73	0.8181	0.3004	61	-0.40	101.70	0
101	Acid Soluble Ca (21%)	0626	20.41	0.0400	20.73	0.8181	0.3004	61	-0.39	101.99	0
101	Acid Soluble Ca (21%)	0405	20.45	0.5000	20.73	0.8181	0.3004	61	-0.34	101.32	0
101	Acid Soluble Ca (21%)	0451	20.49	0.2400	20.73	0.8181	0.3004	61	-0.29	101.30	0
101	Acid Soluble Ca (21%)	0536	20.50	0.0800	20.73	0.8181	0.3004	61	-0.28	101.70	0
101	Acid Soluble Ca (21%)	0230	20.50	1.000	20.73	0.8181	0.3004	61	-0.28	101.99	0
101	Acid Soluble Ca (21%)	0136	20.55	0.3000	20.73	0.8181	0.3004	61	-0.22	101.33	0
101	Acid Soluble Ca (21%)	0521	20.57	0.0000	20.73	0.8181	0.3004	61	-0.19	101.32	0
101	Acid Soluble Ca (21%)	0538	20.58	0.1500	20.73	0.8181	0.3004	61	-0.19	101.00	0
101	Acid Soluble Ca (21%)	0177	20.73	0.1685	20.73	0.8181	0.3004	61	0.00	101.33	0
101	Acid Soluble Ca (21%)	0415	20.74	0.9608	20.73	0.8181	0.3004	61	0.02	101.00	0
101	Acid Soluble Ca (21%)	0485	20.80	1.200	20.73	0.8181	0.3004	61	0.09	101.00	0
101	Acid Soluble Ca (21%)	0553	20.83	0.3600	20.73	0.8181	0.3004	61	0.12	101.00	0
101	Acid Soluble Ca (21%)	0292	20.85	0.2500	20.73	0.8181	0.3004	61	0.14	101.33	0
101	Acid Soluble Ca (21%)	0023	20.91	0.0350	20.73	0.8181	0.3004	61	0.22	101.32	0
101	Acid Soluble Ca (21%)	0513	20.94	0.1200	20.73	0.8181	0.3004	61	0.26	101.99	0
101	Acid Soluble Ca (21%)	0360	20.95	0.0900	20.73	0.8181	0.3004	61	0.26	101.30	0
101	Acid Soluble Ca (21%)	0630	20.97	0.4861	20.73	0.8181	0.3004	61	0.29	101.33	0
101	Acid Soluble Ca (21%)	0029	20.97	0.1000	20.73	0.8181	0.3004	61	0.29	101.99	0
101	Acid Soluble Ca (21%)	0527	20.98	0.1703	20.73	0.8181	0.3004	61	0.31	101.33	0
101	Acid Soluble Ca (21%)	0354	21.00	0.0000	20.73	0.8181	0.3004	61	0.33	101.30	0
101	Acid Soluble Ca (21%)	0095	21.03	0.2800	20.73	0.8181	0.3004	61	0.37	101.32	0
101	Acid Soluble Ca (21%)	0543	21.05	0.2060	20.73	0.8181	0.3004	61	0.39	101.33	0
101	Acid Soluble Ca (21%)	0444	21.05	0.1800	20.73	0.8181	0.3004	61	0.39	101.30	0
101	Acid Soluble Ca (21%)	0102	21.06	0.2900	20.73	0.8181	0.3004	61	0.40	101.33	0
101	Acid Soluble Ca (21%)	0234	21.14	0.1600	20.73	0.8181	0.3004	61	0.50	101.30	0
101	Acid Soluble Ca (21%)	0324	21.15	0.7000	20.73	0.8181	0.3004	61	0.51	101.30	0
101	Acid Soluble Ca (21%)	0231	21.20	0.2000	20.73	0.8181	0.3004	61	0.58	101.99	0
101	Acid Soluble Ca (21%)	0587	21.22	0.0200	20.73	0.8181	0.3004	61	0.60	101.99	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				
101	Acid Soluble Ca (21%)	0231	21.26	0.0800	20.73	0.8181	0.3004	61	0.65	101.30	0
101	Acid Soluble Ca (21%)	0368	21.30	0.3041	20.73	0.8181	0.3004	61	0.70	101.99	0
101	Acid Soluble Ca (21%)	0547	21.35	0.3000	20.73	0.8181	0.3004	61	0.76	101.99	0
101	Acid Soluble Ca (21%)	0422	21.43	0.1100	20.73	0.8181	0.3004	61	0.85	101.33	0
101	Acid Soluble Ca (21%)	0619	21.50	0.4000	20.73	0.8181	0.3004	61	0.94	101.30	0
101	Acid Soluble Ca (21%)	0619	21.50	0.4000	20.73	0.8181	0.3004	61	0.94	101.99	0
101	Acid Soluble Ca (21%)	0073	21.51	0.4400	20.73	0.8181	0.3004	61	0.95	101.32	0
101	Acid Soluble Ca (21%)	0558	21.52	0.0729	20.73	0.8181	0.3004	61	0.97	101.00	0
101	Acid Soluble Ca (21%)	0027	21.59	0.0100	20.73	0.8181	0.3004	61	1.05	101.99	0
101	Acid Soluble Ca (21%)	0433	21.65	0.0400	20.73	0.8181	0.3004	61	1.13	101.30	0
101	Acid Soluble Ca (21%)	0086	21.71	0.2858	20.73	0.8181	0.3004	61	1.20	101.33	0
101	Acid Soluble Ca (21%)	0572	21.79±	0.8300	20.73	0.8181	0.3004	61	1.29	101.99	0
101	Acid Soluble Ca (21%)	0421	22.48±	0.3600	20.73	0.8181	0.3004	61	2.14	101.33	0
101	Acid Soluble Ca (21%)	0291	22.84±	0.0100	20.73	0.8181	0.3004	61	2.57	101.30	0
101	Acid Soluble Ca (21%)	0452	24.02±	0.1800	20.73	0.8181	0.3004	61	4.02	101.30	0
101	Acid Soluble Ca (21%)	0260	18.67↑	3.350	20.73	0.8181	0.3004	61	-2.52	101.33	1
101	Acid Soluble Ca (21%)	0563	21.15	2.900	20.73	0.8181	0.3004	61	0.51	101.33	1
101	Acid Soluble Ca (21%)	0106	25.67±	2.523	20.73	0.8181	0.3004	61	6.04	101.33	1
121	Acid Soluble Mg (%)	0472	0.0900	0.0000	0.1037	0.0048	0.0095	11	-2.86	121.33	0
121	Acid Soluble Mg (%)	0515	0.0996	0.0307	0.1037	0.0048	0.0095	11	-0.86	121.33	0
121	Acid Soluble Mg (%)	0515	0.0996	0.0307	0.1037	0.0048	0.0095	11	-0.86	121.99	0
121	Acid Soluble Mg (%)	0354	0.1000	0.0000	0.1037	0.0048	0.0095	11	-0.77	121.30	0
121	Acid Soluble Mg (%)	0524	0.1029	0.0014	0.1037	0.0048	0.0095	11	-0.16	121.99	0
121	Acid Soluble Mg (%)	0624	0.1057	0.0021	0.1037	0.0048	0.0095	11	0.41	121.33	0
121	Acid Soluble Mg (%)	0527	0.1060	0.0003	0.1037	0.0048	0.0095	11	0.47	121.33	0
121	Acid Soluble Mg (%)	0572	0.1064	0.0000	0.1037	0.0048	0.0095	11	0.57	121.99	0
121	Acid Soluble Mg (%)	0626	0.1070	0.0003	0.1037	0.0048	0.0095	11	0.68	121.00	0
121	Acid Soluble Mg (%)	0626	0.1071	0.0009	0.1037	0.0048	0.0095	11	0.70	121.99	0
121	Acid Soluble Mg (%)	0095	0.1100	0.0000	0.1037	0.0048	0.0095	11	1.32	121.32	0
121	Acid Soluble Mg (%)	0552	0.2750	0.0500	0.1037	0.0048	0.0095	11	35.79	121.99	2
131	Water Soluble Mg (%)	0626	0.0115	0.0005				2		131.00	0
131	Water Soluble Mg (%)	0626	0.0115	0.0010				2		131.30	0
143	Elemental S (%)	0255	15.23	0.1200	17.34	1.560	0.1246	5	-1.35	143.99	0
143	Elemental S (%)	0536	16.36	0.2200	17.34	1.560	0.1246	5	-0.63	143.99	0
143	Elemental S (%)	0291	17.54	0.0200	17.34	1.560	0.1246	5	0.13	143.99	0
143	Elemental S (%)	0368	18.57	0.0629	17.34	1.560	0.1246	5	0.79	143.99	0
143	Elemental S (%)	0389	19.00	0.2000	17.34	1.560	0.1246	5	1.06	143.99	0
145	Sulfate S, HCl soluble (%)	0106	15.65	0.1700	16.81	0.4293	0.3037	12	-2.71	145.00	0
145	Sulfate S, HCl soluble (%)	0626	16.17	0.0800	16.81	0.4293	0.3037	12	-1.49	145.00	0
145	Sulfate S, HCl soluble (%)	0553	16.54	0.1300	16.81	0.4293	0.3037	12	-0.64	145.99	0
145	Sulfate S, HCl soluble (%)	0538	16.63	0.2500	16.81	0.4293	0.3037	12	-0.43	145.00	0
145	Sulfate S, HCl soluble (%)	0027	16.76	0.4900	16.81	0.4293	0.3037	12	-0.13	145.00	0
145	Sulfate S, HCl soluble (%)	0029	16.78	0.0800	16.81	0.4293	0.3037	12	-0.07	145.00	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				
145	Sulfate S, HCl soluble (%)	0102	16.93	0.6500	16.81	0.4293	0.3037	12	0.27	145.00	0
145	Sulfate S, HCl soluble (%)	0518	17.05	0.7000	16.81	0.4293	0.3037	12	0.56	145.99	0
145	Sulfate S, HCl soluble (%)	0444	17.10	0.2000	16.81	0.4293	0.3037	12	0.68	145.00	0
145	Sulfate S, HCl soluble (%)	0136	17.10	0.8000	16.81	0.4293	0.3037	12	0.68	145.99	0
145	Sulfate S, HCl soluble (%)	0405	17.20	0.0100	16.81	0.4293	0.3037	12	0.90	145.00	0
145	Sulfate S, HCl soluble (%)	0587	17.31	0.1200	16.81	0.4293	0.3037	12	1.17	145.99	0
148	Total S (17%)	0624	9.001†	0.1410	16.92	0.7800	0.2393	43	-10.16	148.07	0
148	Total S (17%)	0472	14.19†	0.0100	16.92	0.7800	0.2393	43	-3.51	148.07	0
148	Total S (17%)	0515	14.75†	1.900	16.92	0.7800	0.2393	43	-2.79	148.07	0
148	Total S (17%)	0433	15.54†	0.0500	16.92	0.7800	0.2393	43	-1.78	148.99	0
148	Total S (17%)	0035	15.70†	0.4000	16.92	0.7800	0.2393	43	-1.57	148.99	0
148	Total S (17%)	0040	15.80†	0.4000	16.92	0.7800	0.2393	43	-1.44	148.07	0
148	Total S (17%)	0049	15.90†	0.1200	16.92	0.7800	0.2393	43	-1.31	148.00	0
148	Total S (17%)	0230	15.90†	0.2000	16.92	0.7800	0.2393	43	-1.31	148.99	0
148	Total S (17%)	0095	16.26	0.5900	16.92	0.7800	0.2393	43	-0.86	148.01	0
148	Total S (17%)	0231	16.35	0.1000	16.92	0.7800	0.2393	43	-0.73	148.01	0
148	Total S (17%)	0580	16.50	0.1100	16.92	0.7800	0.2393	43	-0.55	148.01	0
148	Total S (17%)	0025	16.71	0.1630	16.92	0.7800	0.2393	43	-0.27	148.00	0
148	Total S (17%)	0354	16.75	0.1000	16.92	0.7800	0.2393	43	-0.22	148.99	0
148	Total S (17%)	0029	16.78	0.0800	16.92	0.7800	0.2393	43	-0.18	148.01	0
148	Total S (17%)	0577	16.81	0.1100	16.92	0.7800	0.2393	43	-0.15	148.99	0
148	Total S (17%)	0521	16.85	0.0000	16.92	0.7800	0.2393	43	-0.09	148.07	0
148	Total S (17%)	0547	16.85	0.1000	16.92	0.7800	0.2393	43	-0.09	148.07	0
148	Total S (17%)	0527	16.85	0.1540	16.92	0.7800	0.2393	43	-0.09	148.07	0
148	Total S (17%)	0324	16.90	0.2000	16.92	0.7800	0.2393	43	-0.03	148.01	0
148	Total S (17%)	0023	16.90	0.1610	16.92	0.7800	0.2393	43	-0.03	148.99	0
148	Total S (17%)	0543	16.94	0.2760	16.92	0.7800	0.2393	43	0.02	148.07	0
148	Total S (17%)	0200	16.95	0.0700	16.92	0.7800	0.2393	43	0.03	148.01	0
148	Total S (17%)	0177	16.97	0.3116	16.92	0.7800	0.2393	43	0.05	148.07	0
148	Total S (17%)	0584	17.01	0.2000	16.92	0.7800	0.2393	43	0.11	148.01	0
148	Total S (17%)	0485	17.05	0.3000	16.92	0.7800	0.2393	43	0.16	148.01	0
148	Total S (17%)	0451	17.15	0.5000	16.92	0.7800	0.2393	43	0.29	148.00	0
148	Total S (17%)	0534	17.17	0.0100	16.92	0.7800	0.2393	43	0.31	148.01	0
148	Total S (17%)	0292	17.25	0.0500	16.92	0.7800	0.2393	43	0.41	148.07	0
148	Total S (17%)	0513	17.27	0.0800	16.92	0.7800	0.2393	43	0.44	148.07	0
148	Total S (17%)	0117	17.33	0.0755	16.92	0.7800	0.2393	43	0.52	148.01	0
148	Total S (17%)	0563	17.40	1.000	16.92	0.7800	0.2393	43	0.61	148.07	0
148	Total S (17%)	0558	17.46	0.0567	16.92	0.7800	0.2393	43	0.69	148.99	0
148	Total S (17%)	0619	17.50	0.0000	16.92	0.7800	0.2393	43	0.74	148.99	0
148	Total S (17%)	0572	17.52	0.4100	16.92	0.7800	0.2393	43	0.76	148.99	0
148	Total S (17%)	0043	17.57	0.1300	16.92	0.7800	0.2393	43	0.82	148.07	0
148	Total S (17%)	0402	17.57	0.4600	16.92	0.7800	0.2393	43	0.83	148.07	0
148	Total S (17%)	0421	17.60	0.6000	16.92	0.7800	0.2393	43	0.87	148.07	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				
148	Total S (17%)	0605	17.60	0.1800	16.92	0.7800	0.2393	43	0.87	148.99	0
148	Total S (17%)	0055	17.62	0.4200	16.92	0.7800	0.2393	43	0.89	148.01	0
148	Total S (17%)	0619	17.65	0.3000	16.92	0.7800	0.2393	43	0.93	148.07	0
148	Total S (17%)	0452	19.50‡	0.1100	16.92	0.7800	0.2393	43	3.30	148.99	0
148	Total S (17%)	0073	21.35‡	0.9100	16.92	0.7800	0.2393	43	5.67	148.00	0
148	Total S (17%)	0422	22.27‡	0.6100	16.92	0.7800	0.2393	43	6.85	148.99	0
148	Total S (17%)	0260	14.87†	2.960	16.92	0.7800	0.2393	43	-2.63	148.07	1
148	Total S (17%)	0377	15.94	3.110	16.92	0.7800	0.2393	43	-1.27	148.99	1
149	S - HNO3 soluble (%)	0086	17.95	0.2142				2		149.04	0
149	S - HNO3 soluble (%)	0524	18.27	1.358				2		149.04	0
151	Acid Soluble As (ppm)	0605	0.2150	0.1820	1.073	1.275	0.1767	8	-0.67	151.30	0
151	Acid Soluble As (ppm)	0626	0.4000	0.0200	1.073	1.275	0.1767	8	-0.53	151.99	0
151	Acid Soluble As (ppm)	0572	0.4330	0.0280	1.073	1.275	0.1767	8	-0.50	151.99	0
151	Acid Soluble As (ppm)	0524	0.4587	0.0104	1.073	1.275	0.1767	8	-0.48	151.30	0
151	Acid Soluble As (ppm)	0630	0.5760	0.0400	1.073	1.275	0.1767	8	-0.39	151.30	0
151	Acid Soluble As (ppm)	0563	0.7525	0.0110	1.073	1.275	0.1767	8	-0.25	151.33	0
151	Acid Soluble As (ppm)	0624	2.765	0.5300	1.073	1.275	0.1767	8	1.33	151.33	0
151	Acid Soluble As (ppm)	0515	21.55	6.050	1.073	1.275	0.1767	8	16.06	151.33	0
151	Acid Soluble As (ppm)	0515	31.87	15.33	1.073	1.275	0.1767	8	24.15	151.34	1
151	Acid Soluble As (ppm)	0255	0.0000	0.0000	1.073	1.275	0.1767	8		151.30	4
151	Acid Soluble As (ppm)	0527	< 0.0001		1.073	1.275	0.1767	8		151.33	5
151	Acid Soluble As (ppm)	0368	< 0.3		1.073	1.275	0.1767	8		151.34	5
151	Acid Soluble As (ppm)	0136	< 1		1.073	1.275	0.1767	8		151.33	5
151	Acid Soluble As (ppm)	0405	< 3		1.073	1.275	0.1767	8		151.32	5
151	Acid Soluble As (ppm)	0035	< 5.59		1.073	1.275	0.1767	8		151.30	5
165	Acid Soluble B (%)	0524	0.0007	0.0001	0.2457	0.3996	0.0487	4	-0.52	165.99	0
165	Acid Soluble B (%)	0624	0.0009	0.0000	0.2457	0.3996	0.0487	4	-0.52	165.99	0
165	Acid Soluble B (%)	0552	0.1450	0.0500	0.2457	0.3996	0.0487	4	-0.21	165.99	0
165	Acid Soluble B (%)	0515	0.8363	0.0960	0.2457	0.3996	0.0487	4	1.25	165.99	0
165	Acid Soluble B (%)	0354	< 0.01		0.2457	0.3996	0.0487	4		165.30	5
165	Acid Soluble B (%)	0527	< 0.01		0.2457	0.3996	0.0487	4		165.99	5
165	Acid Soluble B (%)	0572	< 0.011		0.2457	0.3996	0.0487	4		165.99	5
181	Acid Soluble Cd (ppm)	0624	0.0275	0.0030	0.1251	0.0378	0.0075	8	-2.58	181.33	0
181	Acid Soluble Cd (ppm)	0389	0.1150	0.0100	0.1251	0.0378	0.0075	8	-0.27	181.30	0
181	Acid Soluble Cd (ppm)	0572	0.1150	0.0080	0.1251	0.0378	0.0075	8	-0.27	181.99	0
181	Acid Soluble Cd (ppm)	0630	0.1175	0.0090	0.1251	0.0378	0.0075	8	-0.20	181.30	0
181	Acid Soluble Cd (ppm)	0524	0.1176	0.0070	0.1251	0.0378	0.0075	8	-0.20	181.30	0
181	Acid Soluble Cd (ppm)	0563	0.1255	0.0070	0.1251	0.0378	0.0075	8	0.01	181.33	0
181	Acid Soluble Cd (ppm)	0605	0.1600	0.0260	0.1251	0.0378	0.0075	8	0.92	181.30	0
181	Acid Soluble Cd (ppm)	0086	0.2268	0.0018	0.1251	0.0378	0.0075	8	2.69	181.33	0
181	Acid Soluble Cd (ppm)	0255	1.677	3.083	0.1251	0.0378	0.0075	8	41.07	181.30	1
181	Acid Soluble Cd (ppm)	0527	< 0.0001		0.1251	0.0378	0.0075	8		181.33	5
181	Acid Soluble Cd (ppm)	0368	< 0.1		0.1251	0.0378	0.0075	8		181.34	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				
181	Acid Soluble Cd (ppm)	0515	< 0.133		0.1251	0.0378	0.0075	8		181.34	5
181	Acid Soluble Cd (ppm)	0515	< 0.19		0.1251	0.0378	0.0075	8		181.33	5
181	Acid Soluble Cd (ppm)	0035	< 0.798		0.1251	0.0378	0.0075	8		181.30	5
181	Acid Soluble Cd (ppm)	0626	< 1		0.1251	0.0378	0.0075	8		181.30	5
181	Acid Soluble Cd (ppm)	0405	< 1		0.1251	0.0378	0.0075	8		181.32	5
181	Acid Soluble Cd (ppm)	0136	< 1		0.1251	0.0378	0.0075	8		181.33	5
191	Acid Soluble Cr (ppm)	0515	4.842	1.402	10.25	4.241	0.8375	15	-1.27	191.34	0
191	Acid Soluble Cr (ppm)	0136	5.055	0.4100	10.25	4.241	0.8375	15	-1.22	191.33	0
191	Acid Soluble Cr (ppm)	0572	5.417	0.3360	10.25	4.241	0.8375	15	-1.14	191.99	0
191	Acid Soluble Cr (ppm)	0389	6.400	0.0000	10.25	4.241	0.8375	15	-0.91	191.30	0
191	Acid Soluble Cr (ppm)	0524	6.491	0.2234	10.25	4.241	0.8375	15	-0.89	191.30	0
191	Acid Soluble Cr (ppm)	0035	10.15	0.1000	10.25	4.241	0.8375	15	-0.02	191.30	0
191	Acid Soluble Cr (ppm)	0368	10.35	1.300	10.25	4.241	0.8375	15	0.02	191.34	0
191	Acid Soluble Cr (ppm)	0515	10.46	0.8300	10.25	4.241	0.8375	15	0.05	191.33	0
191	Acid Soluble Cr (ppm)	0624	11.84	0.1000	10.25	4.241	0.8375	15	0.38	191.33	0
191	Acid Soluble Cr (ppm)	0563	12.35	0.9000	10.25	4.241	0.8375	15	0.50	191.33	0
191	Acid Soluble Cr (ppm)	0527	12.76	1.369	10.25	4.241	0.8375	15	0.59	191.33	0
191	Acid Soluble Cr (ppm)	0605	13.02	1.734	10.25	4.241	0.8375	15	0.65	191.30	0
191	Acid Soluble Cr (ppm)	0630	13.66	0.3450	10.25	4.241	0.8375	15	0.80	191.30	0
191	Acid Soluble Cr (ppm)	0086	14.90	1.838	10.25	4.241	0.8375	15	1.10	191.33	0
191	Acid Soluble Cr (ppm)	0405	16.00	0.0000	10.25	4.241	0.8375	15	1.36	191.32	0
191	Acid Soluble Cr (ppm)	0626	< 5		10.25	4.241	0.8375	15		191.30	5
191	Acid Soluble Cr (ppm)	0626	< 5		10.25	4.241	0.8375	15		191.99	5
202	Acid Soluble Co (ppm)	0389	0.8350	0.0700	1.890	0.7653	0.1279	10	-1.38	202.30	0
202	Acid Soluble Co (ppm)	0368	1.100	0.0000	1.890	0.7653	0.1279	10	-1.03	202.34	0
202	Acid Soluble Co (ppm)	0035	1.185	0.0500	1.890	0.7653	0.1279	10	-0.92	202.30	0
202	Acid Soluble Co (ppm)	0524	1.775	0.0280	1.890	0.7653	0.1279	10	-0.15	202.30	0
202	Acid Soluble Co (ppm)	0527	1.991	0.0280	1.890	0.7653	0.1279	10	0.13	202.33	0
202	Acid Soluble Co (ppm)	0605	2.028	0.3100	1.890	0.7653	0.1279	10	0.18	202.30	0
202	Acid Soluble Co (ppm)	0563	2.230	0.2400	1.890	0.7653	0.1279	10	0.44	202.33	0
202	Acid Soluble Co (ppm)	0630	2.375	0.2700	1.890	0.7653	0.1279	10	0.63	202.30	0
202	Acid Soluble Co (ppm)	0086	2.379	0.0269	1.890	0.7653	0.1279	10	0.64	202.33	0
202	Acid Soluble Co (ppm)	0405	3.000	0.0000	1.890	0.7653	0.1279	10	1.45	202.32	0
202	Acid Soluble Co (ppm)	0255	16.86	7.160	1.890	0.7653	0.1279	10	19.56	202.99	1
202	Acid Soluble Co (ppm)	0515	< 0.139		1.890	0.7653	0.1279	10		202.34	5
202	Acid Soluble Co (ppm)	0515	< 0.26		1.890	0.7653	0.1279	10		202.33	5
202	Acid Soluble Co (ppm)	0572	< 0.67		1.890	0.7653	0.1279	10		202.99	5
202	Acid Soluble Co (ppm)	0136	< 2.5		1.890	0.7653	0.1279	10		202.33	5
202	Acid Soluble Co (ppm)	0626	< 5		1.890	0.7653	0.1279	10		202.30	5
202	Acid Soluble Co (ppm)	0626	< 5		1.890	0.7653	0.1279	10		202.99	5
221	Acid Soluble Cu (%)	0527	0.0001	0.0000	0.0016	0.0024	0.0025	11	-0.62	221.33	0
221	Acid Soluble Cu (%)	0630	0.0002	0.0001	0.0016	0.0024	0.0025	11	-0.60	221.33	0
221	Acid Soluble Cu (%)	0624	0.0002	0.0000	0.0016	0.0024	0.0025	11	-0.58	221.33	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				
221	Acid Soluble Cu (%)	0524	0.0002	0.0000	0.0016	0.0024	0.0025	11	-0.58	221.99	0
221	Acid Soluble Cu (%)	0572	0.0002	0.0000	0.0016	0.0024	0.0025	11	-0.58	221.99	0
221	Acid Soluble Cu (%)	0368	0.0003	0.0001	0.0016	0.0024	0.0025	11	-0.56	221.99	0
221	Acid Soluble Cu (%)	0515	0.0009	0.0016	0.0016	0.0024	0.0025	11	-0.28	221.33	0
221	Acid Soluble Cu (%)	0255	0.0010	0.0000	0.0016	0.0024	0.0025	11	-0.24	221.30	0
221	Acid Soluble Cu (%)	0402	0.0041	0.0005	0.0016	0.0024	0.0025	11	1.04	221.30	0
221	Acid Soluble Cu (%)	0552	0.0550	0.0100	0.0016	0.0024	0.0025	11	22.44	221.30	0
221	Acid Soluble Cu (%)	0389	0.4000	0.0000	0.0016	0.0024	0.0025	11	167.38	221.99	0
221	Acid Soluble Cu (%)	0086	4.475	0.2760	0.0016	0.0024	0.0025	11	1879.45	221.33	1
221	Acid Soluble Cu (%)	0035	< 0.0001		0.0016	0.0024	0.0025	11		221.30	5
221	Acid Soluble Cu (%)	0405	< 0.0002		0.0016	0.0024	0.0025	11		221.32	5
221	Acid Soluble Cu (%)	0136	< 0.0002		0.0016	0.0024	0.0025	11		221.33	5
221	Acid Soluble Cu (%)	0626	< 0.0005		0.0016	0.0024	0.0025	11		221.00	5
221	Acid Soluble Cu (%)	0626	< 0.0005		0.0016	0.0024	0.0025	11		221.33	5
221	Acid Soluble Cu (%)	0547	< 0.002		0.0016	0.0024	0.0025	11		221.99	5
221	Acid Soluble Cu (%)	0354	< 0.01		0.0016	0.0024	0.0025	11		221.30	5
241	Acid Soluble Fe (%)	0524	0.0625	0.0024	0.0861	0.0220	0.0023	11	-1.07	241.99	0
241	Acid Soluble Fe (%)	0626	0.0690	0.0020	0.0861	0.0220	0.0023	11	-0.78	241.00	0
241	Acid Soluble Fe (%)	0354	0.0700	0.0000	0.0861	0.0220	0.0023	11	-0.73	241.30	0
241	Acid Soluble Fe (%)	0626	0.0715	0.0010	0.0861	0.0220	0.0023	11	-0.66	241.33	0
241	Acid Soluble Fe (%)	0472	0.0800	0.0000	0.0861	0.0220	0.0023	11	-0.28	241.33	0
241	Acid Soluble Fe (%)	0572	0.0807	0.0006	0.0861	0.0220	0.0023	11	-0.24	241.99	0
241	Acid Soluble Fe (%)	0624	0.0850	0.0020	0.0861	0.0220	0.0023	11	-0.05	241.33	0
241	Acid Soluble Fe (%)	0095	0.0900	0.0000	0.0861	0.0220	0.0023	11	0.18	241.32	0
241	Acid Soluble Fe (%)	0527	0.0998	0.0030	0.0861	0.0220	0.0023	11	0.62	241.33	0
241	Acid Soluble Fe (%)	0552	0.1550	0.0100	0.0861	0.0220	0.0023	11	3.13	241.30	0
241	Acid Soluble Fe (%)	0402	0.7375	0.0030	0.0861	0.0220	0.0023	11	29.60	241.30	0
241	Acid Soluble Fe (%)	0515	0.0159	0.0200	0.0861	0.0220	0.0023	11	-3.19	241.33	1
251	Acid Soluble Pb (ppm)	0624	0.0750	0.0300	0.5359	0.3456	0.0734	7	-1.33	251.33	0
251	Acid Soluble Pb (ppm)	0605	0.3015	0.0470	0.5359	0.3456	0.0734	7	-0.68	251.30	0
251	Acid Soluble Pb (ppm)	0572	0.5225	0.0010	0.5359	0.3456	0.0734	7	-0.04	251.99	0
251	Acid Soluble Pb (ppm)	0630	0.5350	0.1400	0.5359	0.3456	0.0734	7	0.00	251.30	0
251	Acid Soluble Pb (ppm)	0563	0.5955	0.0970	0.5359	0.3456	0.0734	7	0.17	251.33	0
251	Acid Soluble Pb (ppm)	0524	0.6677	0.0245	0.5359	0.3456	0.0734	7	0.38	251.30	0
251	Acid Soluble Pb (ppm)	0086	1.307	0.1741	0.5359	0.3456	0.0734	7	2.23	251.33	0
251	Acid Soluble Pb (ppm)	0255	0.0000	0.0000	0.5359	0.3456	0.0734	7		251.30	4
251	Acid Soluble Pb (ppm)	0527	< 0.0001		0.5359	0.3456	0.0734	7		251.33	5
251	Acid Soluble Pb (ppm)	0515	< 0.216		0.5359	0.3456	0.0734	7		251.34	5
251	Acid Soluble Pb (ppm)	0368	< 0.6		0.5359	0.3456	0.0734	7		251.34	5
251	Acid Soluble Pb (ppm)	0136	< 3		0.5359	0.3456	0.0734	7		251.33	5
251	Acid Soluble Pb (ppm)	0405	< 4		0.5359	0.3456	0.0734	7		251.32	5
251	Acid Soluble Pb (ppm)	0035	< 4.99		0.5359	0.3456	0.0734	7		251.30	5
251	Acid Soluble Pb (ppm)	0626	< 5		0.5359	0.3456	0.0734	7		251.00	5

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			Value	Range	Rob Mean	Rob SD	Rob R-bar				
251	Acid Soluble Pb (ppm)	0626	< 5		0.5359	0.3456	0.0734	7		251.30	5
261	Acid Soluble Mn (%)	0626	0.0030	0.0001	0.0039	0.0008	0.0002	6	-1.01	261.30	0
261	Acid Soluble Mn (%)	0626	0.0030	0.0000	0.0039	0.0008	0.0002	6	-0.95	261.11	0
261	Acid Soluble Mn (%)	0624	0.0040	0.0000	0.0039	0.0008	0.0002	6	0.11	261.35	0
261	Acid Soluble Mn (%)	0572	0.0044	0.0002	0.0039	0.0008	0.0002	6	0.53	261.99	0
261	Acid Soluble Mn (%)	0524	0.0045	0.0002	0.0039	0.0008	0.0002	6	0.63	261.99	0
261	Acid Soluble Mn (%)	0527	0.0046	0.0001	0.0039	0.0008	0.0002	6	0.69	261.35	0
261	Acid Soluble Mn (%)	0552	0.1000	0.0200	0.0039	0.0008	0.0002	6	101.69	261.32	1
261	Acid Soluble Mn (%)	0354	< 0.01		0.0039	0.0008	0.0002	6		261.30	5
271	Water Soluble Mn (%)	0626	0.0028	0.0001				2		271.30	0
271	Water Soluble Mn (%)	0626	0.0029	0.0001				2		271.00	0
281	Acid Soluble Hg (ppm)	0524	0.1165	0.0051	0.1441	0.0245	0.0094	5	-0.99	281.99	0
281	Acid Soluble Hg (ppm)	0572	0.1353	0.0099	0.1441	0.0245	0.0094	5	-0.32	281.99	0
281	Acid Soluble Hg (ppm)	0630	0.1420	0.0160	0.1441	0.0245	0.0094	5	-0.08	281.30	0
281	Acid Soluble Hg (ppm)	0563	0.1435	0.0150	0.1441	0.0245	0.0094	5	-0.02	281.30	0
281	Acid Soluble Hg (ppm)	0626	0.1835	0.0010	0.1441	0.0245	0.0094	5	1.40	281.99	0
281	Acid Soluble Hg (ppm)	0605	0.0785	0.1090	0.1441	0.0245	0.0094	5	-2.34	281.30	1
281	Acid Soluble Hg (ppm)	0527	< 0.001		0.1441	0.0245	0.0094	5		281.30	5
281	Acid Soluble Hg (ppm)	0515	< 0.1		0.1441	0.0245	0.0094	5		281.30	5
281	Acid Soluble Hg (ppm)	0405	< 2		0.1441	0.0245	0.0094	5		281.30	5
289	Acid Soluble Mo (ppm)	0524	0.2486	0.0044	1.288	1.564	0.0344	5	-0.66	289.30	0
289	Acid Soluble Mo (ppm)	0630	0.4015	0.0150	1.288	1.564	0.0344	5	-0.57	289.30	0
289	Acid Soluble Mo (ppm)	0086	0.5407	0.0180	1.288	1.564	0.0344	5	-0.48	289.33	0
289	Acid Soluble Mo (ppm)	0368	1.250	0.1000	1.288	1.564	0.0344	5	-0.02	289.34	0
289	Acid Soluble Mo (ppm)	0234	4.000	0.0000	1.288	1.564	0.0344	5	1.73	289.30	0
289	Acid Soluble Mo (ppm)	0255	0.4370	0.2600	1.288	1.564	0.0344	5	-0.54	289.30	1
289	Acid Soluble Mo (ppm)	0527	< 0.0001		1.288	1.564	0.0344	5		289.33	5
289	Acid Soluble Mo (ppm)	0515	< 0.178		1.288	1.564	0.0344	5		289.34	5
289	Acid Soluble Mo (ppm)	0515	< 0.23		1.288	1.564	0.0344	5		289.33	5
289	Acid Soluble Mo (ppm)	0405	< 1		1.288	1.564	0.0344	5		289.32	5
289	Acid Soluble Mo (ppm)	0563	< 1		1.288	1.564	0.0344	5		289.33	5
289	Acid Soluble Mo (ppm)	0035	< 1.4		1.288	1.564	0.0344	5		289.30	5
289	Acid Soluble Mo (ppm)	0136	< 2.5		1.288	1.564	0.0344	5		289.33	5
289	Acid Soluble Mo (ppm)	0572	< 2.55		1.288	1.564	0.0344	5		289.99	5
289	Acid Soluble Mo (ppm)	0626	< 10		1.288	1.564	0.0344	5		289.33	5
291	Acid Soluble Ni (ppm)	0624	1.626	0.0770	2.832	0.6188	0.3634	11	-1.95	291.33	0
291	Acid Soluble Ni (ppm)	0389	2.300	0.2000	2.832	0.6188	0.3634	11	-0.86	291.30	0
291	Acid Soluble Ni (ppm)	0527	2.367	0.0540	2.832	0.6188	0.3634	11	-0.75	291.33	0
291	Acid Soluble Ni (ppm)	0035	2.435	0.0700	2.832	0.6188	0.3634	11	-0.64	291.30	0
291	Acid Soluble Ni (ppm)	0524	2.689	0.3347	2.832	0.6188	0.3634	11	-0.23	291.30	0
291	Acid Soluble Ni (ppm)	0563	2.755	0.4500	2.832	0.6188	0.3634	11	-0.12	291.33	0
291	Acid Soluble Ni (ppm)	0605	3.056	0.6740	2.832	0.6188	0.3634	11	0.36	291.30	0
291	Acid Soluble Ni (ppm)	0368	3.250	0.1000	2.832	0.6188	0.3634	11	0.68	291.34	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				
291	Acid Soluble Ni (ppm)	0086	3.419	1.085	2.832	0.6188	0.3634	11	0.95	291.33	0
291	Acid Soluble Ni (ppm)	0630	3.478	0.0990	2.832	0.6188	0.3634	11	1.04	291.30	0
291	Acid Soluble Ni (ppm)	0405	3.500	1.000	2.832	0.6188	0.3634	11	1.08	291.32	0
291	Acid Soluble Ni (ppm)	0255	25.63	8.720	2.832	0.6188	0.3634	11	36.84	291.99	1
291	Acid Soluble Ni (ppm)	0515	< 0.18		2.832	0.6188	0.3634	11		291.34	5
291	Acid Soluble Ni (ppm)	0515	< 0.26		2.832	0.6188	0.3634	11		291.33	5
291	Acid Soluble Ni (ppm)	0136	< 2.5		2.832	0.6188	0.3634	11		291.33	5
291	Acid Soluble Ni (ppm)	0626	< 5		2.832	0.6188	0.3634	11		291.00	5
291	Acid Soluble Ni (ppm)	0626	< 5		2.832	0.6188	0.3634	11		291.34	5
301	Acid Soluble Se (ppm)	0626	0.9100	0.0000	2.861	2.102	0.3922	7	-0.93	301.00	0
301	Acid Soluble Se (ppm)	0605	1.804	0.7280	2.861	2.102	0.3922	7	-0.50	301.30	0
301	Acid Soluble Se (ppm)	0572	2.075	0.4030	2.861	2.102	0.3922	7	-0.37	301.99	0
301	Acid Soluble Se (ppm)	0524	2.150	0.0023	2.861	2.102	0.3922	7	-0.34	301.30	0
301	Acid Soluble Se (ppm)	0630	2.177	0.1360	2.861	2.102	0.3922	7	-0.33	301.30	0
301	Acid Soluble Se (ppm)	0368	4.900	0.2000	2.861	2.102	0.3922	7	0.97	301.34	0
301	Acid Soluble Se (ppm)	0027	12.53	0.8840	2.861	2.102	0.3922	7	4.60	301.30	0
301	Acid Soluble Se (ppm)	0255	0.0000	0.0000	2.861	2.102	0.3922	7		301.99	4
301	Acid Soluble Se (ppm)	0527	< 0.01		2.861	2.102	0.3922	7		301.33	5
301	Acid Soluble Se (ppm)	0515	< 0.266		2.861	2.102	0.3922	7		301.34	5
301	Acid Soluble Se (ppm)	0405	< 10		2.861	2.102	0.3922	7		301.32	5
301	Acid Soluble Se (ppm)	0035	< 12		2.861	2.102	0.3922	7		301.30	5
311	Sodium (%)	0624	0.0057	0.0001				2		311.33	0
311	Sodium (%)	0354	0.0400	0.0200				2		311.99	0
311	Sodium (%)	0572	< 0.005					2		311.99	5
311	Sodium (%)	0527	< 0.1					2		311.33	5
321	Acid Soluble Zn (%)	0626	0.0009	0.0000	0.0015	0.0008	0.0005	16	-0.80	321.33	0
321	Acid Soluble Zn (%)	0626	0.0010	0.0000	0.0015	0.0008	0.0005	16	-0.68	321.00	0
321	Acid Soluble Zn (%)	0035	0.0010	0.0000	0.0015	0.0008	0.0005	16	-0.68	321.30	0
321	Acid Soluble Zn (%)	0136	0.0010	0.0000	0.0015	0.0008	0.0005	16	-0.68	321.33	0
321	Acid Soluble Zn (%)	0368	0.0010	0.0002	0.0015	0.0008	0.0005	16	-0.68	321.99	0
321	Acid Soluble Zn (%)	0405	0.0011	0.0001	0.0015	0.0008	0.0005	16	-0.61	321.32	0
321	Acid Soluble Zn (%)	0624	0.0011	0.0000	0.0015	0.0008	0.0005	16	-0.55	321.33	0
321	Acid Soluble Zn (%)	0630	0.0013	0.0003	0.0015	0.0008	0.0005	16	-0.35	321.33	0
321	Acid Soluble Zn (%)	0524	0.0013	0.0003	0.0015	0.0008	0.0005	16	-0.35	321.99	0
321	Acid Soluble Zn (%)	0572	0.0014	0.0001	0.0015	0.0008	0.0005	16	-0.22	321.99	0
321	Acid Soluble Zn (%)	0515	0.0015	0.0003	0.0015	0.0008	0.0005	16	-0.09	321.99	0
321	Acid Soluble Zn (%)	0027	0.0015	0.0002	0.0015	0.0008	0.0005	16	-0.03	321.99	0
321	Acid Soluble Zn (%)	0255	0.0025	0.0010	0.0015	0.0008	0.0005	16	1.26	321.30	0
321	Acid Soluble Zn (%)	0563	0.0027	0.0005	0.0015	0.0008	0.0005	16	1.46	321.33	0
321	Acid Soluble Zn (%)	0552	0.1200	0.0400	0.0015	0.0008	0.0005	16	153.05	321.30	0
321	Acid Soluble Zn (%)	0389	9.550	0.1000	0.0015	0.0008	0.0005	16	12334.70	321.99	0
321	Acid Soluble Zn (%)	0086	13.33	0.6336	0.0015	0.0008	0.0005	16	17223.89	321.33	1
321	Acid Soluble Zn (%)	0527	< 0.001		0.0015	0.0008	0.0005	16		321.33	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				
321	Acid Soluble Zn (%)	0547	< 0.002		0.0015	0.0008	0.0005	16		321.99	5
321	Acid Soluble Zn (%)	0354	< 0.01		0.0015	0.0008	0.0005	16		321.30	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.