

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Analyte Proficiency From All Labs

Sample # 210211

Grade 22-3-11

Statistical Summary

Analytes: 34

Labs Reporting: 87

Issue Date : 03/31/2021

Analyte Code	Analyte Sample # 210211	# 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 (%)	28	27	1.109	0.7232	0.9577		0.4151	0.0998	43.34%		0.0529	4.03%
005	Urea N (%)	18	17	20.58	0.7334	20.62		0.7802	0.2365	3.78%		0.1503	2.20%
007	Urea (%)	4	4	20.64	0.5253	20.64		0.5253	0.3283	2.55%		0.3425	2.20%
009	Ammoniacal Plus Nitrate N (%)	1		22.30									
010	Total N (22%)	80	78	21.76	0.5997	21.72	0.7472	0.4051	0.0573	1.86%	1.26	0.2214	2.15%
020	Total P2O5 (%)	44	43	3.549	0.3969	3.572		0.1917	0.0365	5.37%		0.0816	3.30%
030	Citrate Insoluble P2O5 (%)	2	2	0.0200	0.0141								
040	Indirect Available P2O5 (3%)	1		3.590									
041	Direct Available P2O5 (3%)	50	49	3.493	0.3681	3.524	0.6700	0.2396	0.0428	6.80%	0.83	0.0949	3.31%
048	Water Soluble P2O5 (%)	4	4	3.246	0.1067	3.246		0.1067	0.0667	3.29%		0.0363	3.35%
050	Soluble K2O (11%)	84	82	19.76	2.077	20.11	1.0839	1.120	0.1546	5.57%	2.41	0.2952	2.23%
060	Water (Free) (%)	3	3	0.4361	0.3396	0.4361		0.3396	0.2451	77.86%		0.0404	4.53%
101	Acid Soluble Ca (%)	14	14	2.890	0.7998	2.661	0.3331	0.1312	0.0438	4.93%	0.92	0.1042	3.45%
121	Acid Soluble Mg (%)	18	18	1.811	0.4457	1.701	0.2850	0.1782	0.0525	10.48%	1.46	0.0694	3.69%
143	Elemental S (%)	3	3	1.038	0.2930	1.038		0.2930	0.2115	28.24%		0.0351	3.98%
145	Sulfate S, HCl soluble (%)	1		0.1190									
148	Total S (%)	7	6	1.596	1.039	1.607	0.2803	1.188	0.6064	73.96%	9.88	0.0480	3.72%
149	S - HNO3 soluble (%)	2	2	1.082	0.4149								
151	Acid Soluble As (ppm)	20	10	1.153	2.202	0.6403		0.7399	0.2925	115.55%		0.0787	17.11%
165	Acid Soluble B (%)	8	5	0.0020	0.0033	0.0013	0.0032	0.0008	0.0004	61.64%	0.56	0.0001	10.94%
181	Acid Soluble Cd (ppm)	24	22	3.930	0.7840	3.833		0.7261	0.1935	18.94%		0.2412	13.07%
190	Water Soluble Cl (%)	2	2	17.25	1.344								
191	Acid Soluble Cr (ppm)	21	20	43.45	7.256	43.26		7.710	2.155	17.82%		1.429	9.07%
202	Acid Soluble Co (ppm)	18	15	1.908	1.023	1.660	1.4980	0.4954	0.1599	29.84%	0.77	0.1650	14.82%
221	Acid Soluble Cu (%)	21	11	1.118	5.099	0.0005	0.0050	0.0004	0.0001	70.99%	0.16	0.0011	12.56%
241	Acid Soluble Fe (%)	19	18	0.1435	0.0596	0.1281	0.0178	0.0079	0.0023	6.19%	1.04	0.0037	5.45%
251	Acid Soluble Pb (ppm)	22	14	1.260	1.565	0.5497		0.5165	0.1726	93.97%		0.1275	17.50%
261	Acid Soluble Mn (%)	16	12	1.693	6.709	0.0028	0.0053	0.0004	0.0002	15.60%	0.19	0.0003	9.71%
281	Acid Soluble Hg (ppm)	10	3	0.0722	0.1536	0.0435		0.0536	0.0387	123.15%		0.0145	22.00%
289	Acid Soluble Mo (ppm)	17	15	2.647	1.212	2.441	1.7322	0.8903	0.2873	36.48%	1.20	0.1030	13.99%
291	Acid Soluble Ni (ppm)	22	21	14.53	3.116	14.60		3.066	0.8364	21.01%		0.4750	10.69%
301	Acid Soluble Se (ppm)	13	7	0.5216	0.4842	0.3619		0.1550	0.0732	42.83%		0.0460	18.64%
311	Sodium (%)	8	8	0.4595	0.0591	0.4503	0.0500	0.0434	0.0192	9.64%	2.02	0.0167	4.51%

Analyte Code	Analyte Sample # 210211	# 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 (%)	30	28	2.062	11.19	0.0070	0.0057	0.0014	0.0003	19.44%	0.56	0.0154	8.44%

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.

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Analyte Proficiency From All Labs

Sample # 210211

Grade 22-3-11

Lab Values

Analytes: 34

Labs Reporting: 87

Issue Date : 03/31/2021

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
001	Ammoniacal N (%)	0368	0.0660	0.0023	0.9577	0.4151	0.0529	27	-2.15	001.99	0
001	Ammoniacal N (%)	0538	0.5800	0.0800	0.9577	0.4151	0.0529	27	-0.91	001.99	0
001	Ammoniacal N (%)	0117	0.6050	0.0500	0.9577	0.4151	0.0529	27	-0.85	001.10	0
001	Ammoniacal N (%)	0540	0.6300	0.0000	0.9577	0.4151	0.0529	27	-0.79	001.99	0
001	Ammoniacal N (%)	0537	0.6350	0.0900	0.9577	0.4151	0.0529	27	-0.78	001.99	0
001	Ammoniacal N (%)	0451	0.6375	0.0210	0.9577	0.4151	0.0529	27	-0.77	001.99	0
001	Ammoniacal N (%)	0553	0.6440	0.0240	0.9577	0.4151	0.0529	27	-0.76	001.99	0
001	Ammoniacal N (%)	0562	0.7500	0.1000	0.9577	0.4151	0.0529	27	-0.50	001.99	0
001	Ammoniacal N (%)	0423	0.7550	0.0500	0.9577	0.4151	0.0529	27	-0.49	001.99	0
001	Ammoniacal N (%)	0532	0.7565	0.0090	0.9577	0.4151	0.0529	27	-0.48	001.99	0
001	Ammoniacal N (%)	0569	0.7900	0.1200	0.9577	0.4151	0.0529	27	-0.40	001.99	0
001	Ammoniacal N (%)	0546	0.8000	0.0200	0.9577	0.4151	0.0529	27	-0.38	001.99	0
001	Ammoniacal N (%)	0549	0.8050	0.1300	0.9577	0.4151	0.0529	27	-0.37	001.99	0
001	Ammoniacal N (%)	0563	0.8250	0.0300	0.9577	0.4151	0.0529	27	-0.32	001.10	0
001	Ammoniacal N (%)	0394	0.9100	0.0120	0.9577	0.4151	0.0529	27	-0.11	001.99	0
001	Ammoniacal N (%)	0524	0.9300	0.0200	0.9577	0.4151	0.0529	27	-0.07	001.99	0
001	Ammoniacal N (%)	0309	0.9300	0.3000	0.9577	0.4151	0.0529	27	-0.07	001.10	0
001	Ammoniacal N (%)	0096	0.9450	0.0100	0.9577	0.4151	0.0529	27	-0.03	001.99	0
001	Ammoniacal N (%)	0444	0.9700	0.0200	0.9577	0.4151	0.0529	27	0.03	001.10	0
001	Ammoniacal N (%)	0510	1.174	0.0298	0.9577	0.4151	0.0529	27	0.52	001.99	0
001	Ammoniacal N (%)	0389	1.215	0.0100	0.9577	0.4151	0.0529	27	0.62	001.10	0
001	Ammoniacal N (%)	0230	1.335	0.0100	0.9577	0.4151	0.0529	27	0.91	001.10	0
001	Ammoniacal N (%)	0027	1.730	0.0200	0.9577	0.4151	0.0529	27	1.86	001.99	0
001	Ammoniacal N (%)	0255	2.185	0.2100	0.9577	0.4151	0.0529	27	2.96	001.99	0
001	Ammoniacal N (%)	0559	2.405	0.0100	0.9577	0.4151	0.0529	27	3.49	001.99	0
001	Ammoniacal N (%)	0564	2.440	0.0400	0.9577	0.4151	0.0529	27	3.57	001.99	0
001	Ammoniacal N (%)	0220	3.485	0.0100	0.9577	0.4151	0.0529	27	6.09	001.99	0
001	Ammoniacal N (%)	0136	1.130	0.3600	0.9577	0.4151	0.0529	27	0.42	001.10	1
005	Urea N (%)	0559	19.26	0.0100	20.62	0.7802	0.1503	17	-1.75	005.99	0
005	Urea N (%)	0564	19.27	0.0500	20.62	0.7802	0.1503	17	-1.74	005.99	0
005	Urea N (%)	0389	19.90	0.2000	20.62	0.7802	0.1503	17	-0.93	005.00	0
005	Urea N (%)	0394	20.18	0.0000	20.62	0.7802	0.1503	17	-0.57	005.10	0
005	Urea N (%)	0524	20.22	0.3600	20.62	0.7802	0.1503	17	-0.52	005.99	0
005	Urea N (%)	0029	20.25	0.3400	20.62	0.7802	0.1503	17	-0.48	005.99	0
005	Urea N (%)	0368	20.26	0.2413	20.62	0.7802	0.1503	17	-0.47	005.00	0
005	Urea N (%)	0451	20.33	0.1500	20.62	0.7802	0.1503	17	-0.38	005.20	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
005	Urea N (%)	0546	20.65	0.2600	20.62	0.7802	0.1503	17	0.03	005.99	0
005	Urea N (%)	0309	20.92	0.0800	20.62	0.7802	0.1503	17	0.38	005.99	0
005	Urea N (%)	0532	21.01	0.1910	20.62	0.7802	0.1503	17	0.50	005.99	0
005	Urea N (%)	0117	21.03	0.0121	20.62	0.7802	0.1503	17	0.52	005.20	0
005	Urea N (%)	0569	21.19	0.1000	20.62	0.7802	0.1503	17	0.73	005.00	0
005	Urea N (%)	0549	21.20	0.1300	20.62	0.7802	0.1503	17	0.73	005.99	0
005	Urea N (%)	0562	21.33	0.1500	20.62	0.7802	0.1503	17	0.90	005.99	0
005	Urea N (%)	0538	21.45	0.1900	20.62	0.7802	0.1503	17	1.05	005.99	0
005	Urea N (%)	0027	21.96	0.0900	20.62	0.7802	0.1503	17	1.71	005.99	0
005	Urea N (%)	0136	20.16	0.9400	20.62	0.7802	0.1503	17	-0.59	005.00	1
007	Urea (%)	0444	20.27	0.2800	20.64	0.5253	0.3425	4	-0.70	007.00	0
007	Urea (%)	0220	20.36	0.1300	20.64	0.5253	0.3425	4	-0.54	007.99	0
007	Urea (%)	0356	20.51	0.8000	20.64	0.5253	0.3425	4	-0.24	007.99	0
007	Urea (%)	0537	21.41	0.1600	20.64	0.5253	0.3425	4	1.47	007.99	0
009	Ammoniacal Plus Nitrate N (%)	0518	22.30	0.2000				1		009.99	0
010	Total N (22%)	0394	19.40†	0.4320	21.72	0.4051	0.2214	78	-5.72	010.99	0
010	Total N (22%)	0325	20.70†	0.0000	21.72	0.4051	0.2214	78	-2.52	010.60	0
010	Total N (22%)	0524	20.89†	0.0552	21.72	0.4051	0.2214	78	-2.06	010.99	0
010	Total N (22%)	0035	20.95†	0.3000	21.72	0.4051	0.2214	78	-1.90	010.60	0
010	Total N (22%)	0561	21.03	0.2100	21.72	0.4051	0.2214	78	-1.72	010.60	0
010	Total N (22%)	0522	21.15	0.0900	21.72	0.4051	0.2214	78	-1.41	010.99	0
010	Total N (22%)	0027	21.20	0.0000	21.72	0.4051	0.2214	78	-1.28	010.60	0
010	Total N (22%)	0444	21.24	0.2600	21.72	0.4051	0.2214	78	-1.19	010.60	0
010	Total N (22%)	0230	21.25	0.3000	21.72	0.4051	0.2214	78	-1.16	010.60	0
010	Total N (22%)	0534	21.28	0.1500	21.72	0.4051	0.2214	78	-1.10	010.60	0
010	Total N (22%)	0086	21.28	0.2160	21.72	0.4051	0.2214	78	-1.10	010.60	0
010	Total N (22%)	0423	21.29	0.0900	21.72	0.4051	0.2214	78	-1.07	010.60	0
010	Total N (22%)	0231	21.29	0.0300	21.72	0.4051	0.2214	78	-1.07	010.60	0
010	Total N (22%)	0117	21.30	0.2000	21.72	0.4051	0.2214	78	-1.04	010.12	0
010	Total N (22%)	0556	21.30	0.2000	21.72	0.4051	0.2214	78	-1.04	010.99	0
010	Total N (22%)	0157	21.30	0.4000	21.72	0.4051	0.2214	78	-1.04	010.60	0
010	Total N (22%)	0095	21.36	0.4000	21.72	0.4051	0.2214	78	-0.89	010.60	0
010	Total N (22%)	0292	21.38	0.0200	21.72	0.4051	0.2214	78	-0.84	010.60	0
010	Total N (22%)	0354	21.40	0.0000	21.72	0.4051	0.2214	78	-0.79	010.60	0
010	Total N (22%)	0368	21.42	0.2310	21.72	0.4051	0.2214	78	-0.74	010.60	0
010	Total N (22%)	0421	21.43	0.1800	21.72	0.4051	0.2214	78	-0.72	010.60	0
010	Total N (22%)	0389	21.46	0.9100	21.72	0.4051	0.2214	78	-0.65	010.60	0
010	Total N (22%)	0513	21.46	0.0900	21.72	0.4051	0.2214	78	-0.65	010.99	0
010	Total N (22%)	0023	21.47	0.2270	21.72	0.4051	0.2214	78	-0.62	010.60	0
010	Total N (22%)	0042	21.50	0.4000	21.72	0.4051	0.2214	78	-0.54	010.60	0
010	Total N (22%)	0136	21.50	0.2000	21.72	0.4051	0.2214	78	-0.54	010.60	0
010	Total N (22%)	0451	21.57	0.4500	21.72	0.4051	0.2214	78	-0.38	010.60	0
010	Total N (22%)	0055	21.57	0.1400	21.72	0.4051	0.2214	78	-0.37	010.60	0
010	Total N (22%)	0371	21.62	0.5500	21.72	0.4051	0.2214	78	-0.26	010.60	0
010	Total N (22%)	0096	21.64	0.0800	21.72	0.4051	0.2214	78	-0.20	010.60	0
010	Total N (22%)	0356	21.64	1.086	21.72	0.4051	0.2214	78	-0.20	010.60	0
010	Total N (22%)	0049	21.66	0.0600	21.72	0.4051	0.2214	78	-0.15	010.60	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
010	Total N (22%)	0559	21.66	0.0200	21.72	0.4051	0.2214	78	-0.15	010.99	0
010	Total N (22%)	0422	21.70	0.0500	21.72	0.4051	0.2214	78	-0.06	010.60	0
010	Total N (22%)	0486	21.73	0.0900	21.72	0.4051	0.2214	78	0.01	010.60	0
010	Total N (22%)	0527	21.74	0.1820	21.72	0.4051	0.2214	78	0.04	010.60	0
010	Total N (22%)	0564	21.74	0.0100	21.72	0.4051	0.2214	78	0.04	010.99	0
010	Total N (22%)	0324	21.75	0.5000	21.72	0.4051	0.2214	78	0.07	010.60	0
010	Total N (22%)	0450	21.75	0.7000	21.72	0.4051	0.2214	78	0.07	010.60	0
010	Total N (22%)	0532	21.77	0.1800	21.72	0.4051	0.2214	78	0.12	010.99	0
010	Total N (22%)	0540	21.79	0.0300	21.72	0.4051	0.2214	78	0.16	010.11	0
010	Total N (22%)	0476	21.80	0.0656	21.72	0.4051	0.2214	78	0.20	010.99	0
010	Total N (22%)	0551	21.80	0.2000	21.72	0.4051	0.2214	78	0.20	010.99	0
010	Total N (22%)	0529	21.82	0.0900	21.72	0.4051	0.2214	78	0.23	010.99	0
010	Total N (22%)	0234	21.82	0.4600	21.72	0.4051	0.2214	78	0.25	010.60	0
010	Total N (22%)	0539	21.85	0.0900	21.72	0.4051	0.2214	78	0.31	010.11	0
010	Total N (22%)	0309	21.85	0.2200	21.72	0.4051	0.2214	78	0.32	010.11	0
010	Total N (22%)	0535	21.85	0.1000	21.72	0.4051	0.2214	78	0.32	010.11	0
010	Total N (22%)	0551	21.85	0.1000	21.72	0.4051	0.2214	78	0.32	010.11	0
010	Total N (22%)	0169	21.87	0.3700	21.72	0.4051	0.2214	78	0.36	010.60	0
010	Total N (22%)	0177	21.88	0.2200	21.72	0.4051	0.2214	78	0.39	010.60	0
010	Total N (22%)	0494	21.89	0.0600	21.72	0.4051	0.2214	78	0.42	010.60	0
010	Total N (22%)	0043	21.91	0.1300	21.72	0.4051	0.2214	78	0.46	010.60	0
010	Total N (22%)	0472	21.91	0.0100	21.72	0.4051	0.2214	78	0.46	010.60	0
010	Total N (22%)	0452	21.92	0.1300	21.72	0.4051	0.2214	78	0.48	010.60	0
010	Total N (22%)	0523	21.92	0.0800	21.72	0.4051	0.2214	78	0.49	010.60	0
010	Total N (22%)	0291	21.95	0.0100	21.72	0.4051	0.2214	78	0.56	010.60	0
010	Total N (22%)	0390	21.95	0.0300	21.72	0.4051	0.2214	78	0.56	010.60	0
010	Total N (22%)	0040	21.95	0.3000	21.72	0.4051	0.2214	78	0.57	010.60	0
010	Total N (22%)	0405	21.98	0.1100	21.72	0.4051	0.2214	78	0.63	010.60	0
010	Total N (22%)	0029	21.99	0.4700	21.72	0.4051	0.2214	78	0.65	010.60	0
010	Total N (22%)	0538	22.03	0.1100	21.72	0.4051	0.2214	78	0.75	010.99	0
010	Total N (22%)	0562	22.03	0.1500	21.72	0.4051	0.2214	78	0.75	010.99	0
010	Total N (22%)	0537	22.05	0.2500	21.72	0.4051	0.2214	78	0.80	010.99	0
010	Total N (22%)	0546	22.08	0.0100	21.72	0.4051	0.2214	78	0.88	010.11	0
010	Total N (22%)	0220	22.09	0.0400	21.72	0.4051	0.2214	78	0.91	010.60	0
010	Total N (22%)	0443	22.12	0.1600	21.72	0.4051	0.2214	78	0.99	010.60	0
010	Total N (22%)	0260	22.13	0.6500	21.72	0.4051	0.2214	78	1.00	010.60	0
010	Total N (22%)	0114	22.16	0.0380	21.72	0.4051	0.2214	78	1.07	010.60	0
010	Total N (22%)	0510	22.23	0.0176	21.72	0.4051	0.2214	78	1.25	010.11	0
010	Total N (22%)	0073	22.24	0.0200	21.72	0.4051	0.2214	78	1.28	010.60	0
010	Total N (22%)	0547	22.27	0.0200	21.72	0.4051	0.2214	78	1.36	010.60	0
010	Total N (22%)	0543	22.41	0.8210	21.72	0.4051	0.2214	78	1.70	010.60	0
010	Total N (22%)	0563	22.46	0.1940	21.72	0.4051	0.2214	78	1.83	010.99	0
010	Total N (22%)	0563	22.49‡	0.8510	21.72	0.4051	0.2214	78	1.91	010.12	0
010	Total N (22%)	0307	22.54‡	0.7800	21.72	0.4051	0.2214	78	2.02	010.60	0
010	Total N (22%)	0545	22.57‡	0.1800	21.72	0.4051	0.2214	78	2.10	010.99	0
010	Total N (22%)	0550	24.22‡	0.0100	21.72	0.4051	0.2214	78	6.16	010.60	0
010	Total N (22%)	0255	23.26‡	1.262	21.72	0.4051	0.2214	78	3.80	010.60	1

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
010	Total N (22%)	0568	23.45±	1.500	21.72	0.4051	0.2214	78	4.27	010.12	1
020	Total P2O5 (%)	0450	1.580	0.0000	3.572	0.1917	0.0816	43	-10.39	020.50	0
020	Total P2O5 (%)	0529	2.800	0.1400	3.572	0.1917	0.0816	43	-4.03	020.99	0
020	Total P2O5 (%)	0534	3.205	0.0100	3.572	0.1917	0.0816	43	-1.91	020.20	0
020	Total P2O5 (%)	0524	3.232	0.1042	3.572	0.1917	0.0816	43	-1.77	020.50	0
020	Total P2O5 (%)	0255	3.243	0.2610	3.572	0.1917	0.0816	43	-1.72	020.50	0
020	Total P2O5 (%)	0523	3.300	0.2000	3.572	0.1917	0.0816	43	-1.42	020.50	0
020	Total P2O5 (%)	0444	3.365	0.0300	3.572	0.1917	0.0816	43	-1.08	020.50	0
020	Total P2O5 (%)	0405	3.410	0.0200	3.572	0.1917	0.0816	43	-0.84	020.20	0
020	Total P2O5 (%)	0476	3.444	0.0074	3.572	0.1917	0.0816	43	-0.66	020.20	0
020	Total P2O5 (%)	0552	3.465	0.0900	3.572	0.1917	0.0816	43	-0.56	020.50	0
020	Total P2O5 (%)	0561	3.475	0.1100	3.572	0.1917	0.0816	43	-0.50	020.20	0
020	Total P2O5 (%)	0510	3.483	0.0015	3.572	0.1917	0.0816	43	-0.46	020.20	0
020	Total P2O5 (%)	0157	3.485	0.0900	3.572	0.1917	0.0816	43	-0.45	020.10	0
020	Total P2O5 (%)	0443	3.515	0.0700	3.572	0.1917	0.0816	43	-0.30	020.99	0
020	Total P2O5 (%)	0371	3.515	0.1300	3.572	0.1917	0.0816	43	-0.30	020.20	0
020	Total P2O5 (%)	0515	3.516	0.0083	3.572	0.1917	0.0816	43	-0.29	020.99	0
020	Total P2O5 (%)	0390	3.525	0.0100	3.572	0.1917	0.0816	43	-0.24	020.50	0
020	Total P2O5 (%)	0394	3.537	0.0280	3.572	0.1917	0.0816	43	-0.18	020.20	0
020	Total P2O5 (%)	0547	3.540	0.0200	3.572	0.1917	0.0816	43	-0.17	020.50	0
020	Total P2O5 (%)	0451	3.554	0.1510	3.572	0.1917	0.0816	43	-0.10	020.50	0
020	Total P2O5 (%)	0546	3.558	0.1266	3.572	0.1917	0.0816	43	-0.07	020.50	0
020	Total P2O5 (%)	0422	3.570	0.0600	3.572	0.1917	0.0816	43	-0.01	020.50	0
020	Total P2O5 (%)	0389	3.575	0.0300	3.572	0.1917	0.0816	43	0.02	020.50	0
020	Total P2O5 (%)	0169	3.590	0.1000	3.572	0.1917	0.0816	43	0.10	020.50	0
020	Total P2O5 (%)	0096	3.615	0.2100	3.572	0.1917	0.0816	43	0.23	020.40	0
020	Total P2O5 (%)	0472	3.620	0.0800	3.572	0.1917	0.0816	43	0.25	020.50	0
020	Total P2O5 (%)	0444	3.630	0.0800	3.572	0.1917	0.0816	43	0.30	020.10	0
020	Total P2O5 (%)	0423	3.645	0.0300	3.572	0.1917	0.0816	43	0.38	020.50	0
020	Total P2O5 (%)	0035	3.650	0.1000	3.572	0.1917	0.0816	43	0.41	020.40	0
020	Total P2O5 (%)	0368	3.650	0.0161	3.572	0.1917	0.0816	43	0.41	020.50	0
020	Total P2O5 (%)	0513	3.655	0.0100	3.572	0.1917	0.0816	43	0.43	020.99	0
020	Total P2O5 (%)	0177	3.667	0.1642	3.572	0.1917	0.0816	43	0.50	020.20	0
020	Total P2O5 (%)	0231	3.700	0.0000	3.572	0.1917	0.0816	43	0.67	020.20	0
020	Total P2O5 (%)	0231	3.715	0.0100	3.572	0.1917	0.0816	43	0.75	020.50	0
020	Total P2O5 (%)	0543	3.716	0.3340	3.572	0.1917	0.0816	43	0.75	020.50	0
020	Total P2O5 (%)	0300	3.730	0.0600	3.572	0.1917	0.0816	43	0.83	020.20	0
020	Total P2O5 (%)	0356	3.742	0.2170	3.572	0.1917	0.0816	43	0.89	020.20	0
020	Total P2O5 (%)	0433	3.750	0.0200	3.572	0.1917	0.0816	43	0.93	020.50	0
020	Total P2O5 (%)	0292	3.820	0.0200	3.572	0.1917	0.0816	43	1.29	020.20	0
020	Total P2O5 (%)	0260	4.000	0.2000	3.572	0.1917	0.0816	43	2.23	020.50	0
020	Total P2O5 (%)	0550	4.165	0.1500	3.572	0.1917	0.0816	43	3.09	020.20	0
020	Total P2O5 (%)	0527	4.167	0.0013	3.572	0.1917	0.0816	43	3.10	020.50	0
020	Total P2O5 (%)	0564	4.265	0.0100	3.572	0.1917	0.0816	43	3.62	020.99	0
020	Total P2O5 (%)	0324	3.790	0.5400	3.572	0.1917	0.0816	43	1.14	020.20	1
030	Citrate Insoluble P2O5 (%)	0405	0.0100	0.0000				2		030.20	0
030	Citrate Insoluble P2O5 (%)	0096	0.0300	0.0400				2		030.40	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
040	Indirect Available P2O5 (3%)	0096	3.590±	0.2400				1		040.40	0
041	Direct Available P2O5 (3%)	0540	2.905	0.0300	3.524	0.2396	0.0949	49	-2.58	041.99	0
041	Direct Available P2O5 (3%)	0405	3.165	0.0300	3.524	0.2396	0.0949	49	-1.50	041.21	0
041	Direct Available P2O5 (3%)	0532	3.210	0.0600	3.524	0.2396	0.0949	49	-1.31	041.99	0
041	Direct Available P2O5 (3%)	0055	3.245	0.0500	3.524	0.2396	0.0949	49	-1.16	041.11	0
041	Direct Available P2O5 (3%)	0325	3.250	0.1000	3.524	0.2396	0.0949	49	-1.14	041.50	0
041	Direct Available P2O5 (3%)	0535	3.250	0.1000	3.524	0.2396	0.0949	49	-1.14	041.99	0
041	Direct Available P2O5 (3%)	0539	3.250	0.1000	3.524	0.2396	0.0949	49	-1.14	041.99	0
041	Direct Available P2O5 (3%)	0545	3.250	0.1000	3.524	0.2396	0.0949	49	-1.14	041.99	0
041	Direct Available P2O5 (3%)	0423	3.290	0.1000	3.524	0.2396	0.0949	49	-0.98	041.51	0
041	Direct Available P2O5 (3%)	0551	3.300	0.1000	3.524	0.2396	0.0949	49	-0.93	041.99	0
041	Direct Available P2O5 (3%)	0518	3.340	0.1200	3.524	0.2396	0.0949	49	-0.77	041.99	0
041	Direct Available P2O5 (3%)	0230	3.345	0.1500	3.524	0.2396	0.0949	49	-0.75	041.21	0
041	Direct Available P2O5 (3%)	0027	3.360	0.0400	3.524	0.2396	0.0949	49	-0.68	041.20	0
041	Direct Available P2O5 (3%)	0405	3.365	0.0500	3.524	0.2396	0.0949	49	-0.66	041.11	0
041	Direct Available P2O5 (3%)	0553	3.370	0.0200	3.524	0.2396	0.0949	49	-0.64	041.20	0
041	Direct Available P2O5 (3%)	0563	3.375	0.3100	3.524	0.2396	0.0949	49	-0.62	041.21	0
041	Direct Available P2O5 (3%)	0405	3.400	0.0200	3.524	0.2396	0.0949	49	-0.52	041.99	0
041	Direct Available P2O5 (3%)	0472	3.425	0.0100	3.524	0.2396	0.0949	49	-0.41	041.21	0
041	Direct Available P2O5 (3%)	0136	3.445	0.1900	3.524	0.2396	0.0949	49	-0.33	041.51	0
041	Direct Available P2O5 (3%)	0486	3.445	0.0100	3.524	0.2396	0.0949	49	-0.33	041.51	0
041	Direct Available P2O5 (3%)	0559	3.450	0.0200	3.524	0.2396	0.0949	49	-0.31	041.99	0
041	Direct Available P2O5 (3%)	0055	3.485	0.1100	3.524	0.2396	0.0949	49	-0.16	041.21	0
041	Direct Available P2O5 (3%)	0220	3.515	0.0700	3.524	0.2396	0.0949	49	-0.04	041.11	0
041	Direct Available P2O5 (3%)	0086	3.532	0.0110	3.524	0.2396	0.0949	49	0.03	041.10	0
041	Direct Available P2O5 (3%)	0040	3.550	0.1000	3.524	0.2396	0.0949	49	0.11	041.51	0
041	Direct Available P2O5 (3%)	0494	3.550	0.0400	3.524	0.2396	0.0949	49	0.11	041.51	0
041	Direct Available P2O5 (3%)	0513	3.555	0.0500	3.524	0.2396	0.0949	49	0.13	041.11	0
041	Direct Available P2O5 (3%)	0421	3.555	0.2500	3.524	0.2396	0.0949	49	0.13	041.50	0
041	Direct Available P2O5 (3%)	0025	3.600	0.3400	3.524	0.2396	0.0949	49	0.32	041.51	0
041	Direct Available P2O5 (3%)	0562	3.600	0.3000	3.524	0.2396	0.0949	49	0.32	041.99	0
041	Direct Available P2O5 (3%)	0023	3.610	0.0600	3.524	0.2396	0.0949	49	0.36	041.51	0
041	Direct Available P2O5 (3%)	0394	3.613	0.1310	3.524	0.2396	0.0949	49	0.37	041.21	0
041	Direct Available P2O5 (3%)	0231	3.615	0.0100	3.524	0.2396	0.0949	49	0.38	041.51	0
041	Direct Available P2O5 (3%)	0368	3.633	0.0275	3.524	0.2396	0.0949	49	0.46	041.50	0
041	Direct Available P2O5 (3%)	0568	3.640	0.1000	3.524	0.2396	0.0949	49	0.48	041.21	0
041	Direct Available P2O5 (3%)	0043	3.650	0.1600	3.524	0.2396	0.0949	49	0.53	041.51	0
041	Direct Available P2O5 (3%)	0231	3.665	0.1500	3.524	0.2396	0.0949	49	0.59	041.21	0
041	Direct Available P2O5 (3%)	0029	3.665	0.1700	3.524	0.2396	0.0949	49	0.59	041.40	0
041	Direct Available P2O5 (3%)	0049	3.695	0.0300	3.524	0.2396	0.0949	49	0.71	041.10	0
041	Direct Available P2O5 (3%)	0452	3.720	0.1800	3.524	0.2396	0.0949	49	0.82	041.50	0
041	Direct Available P2O5 (3%)	0300	3.730	0.0000	3.524	0.2396	0.0949	49	0.86	041.21	0
041	Direct Available P2O5 (3%)	0073	3.780	0.1000	3.524	0.2396	0.0949	49	1.07	041.11	0
041	Direct Available P2O5 (3%)	0549	3.805	0.0900	3.524	0.2396	0.0949	49	1.17	041.99	0
041	Direct Available P2O5 (3%)	0291	3.825	0.0100	3.524	0.2396	0.0949	49	1.26	041.50	0
041	Direct Available P2O5 (3%)	0569	3.860	0.1600	3.524	0.2396	0.0949	49	1.40	041.99	0
041	Direct Available P2O5 (3%)	0522	3.905	0.0300	3.524	0.2396	0.0949	49	1.59	041.21	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
041	Direct Available P2O5 (3%)	0538	3.995	0.0900	3.524	0.2396	0.0949	49	1.97	041.99	0
041	Direct Available P2O5 (3%)	0537	4.055	0.0700	3.524	0.2396	0.0949	49	2.22	041.99	0
041	Direct Available P2O5 (3%)	0354	4.200‡	0.1000	3.524	0.2396	0.0949	49	2.82	041.21	0
041	Direct Available P2O5 (3%)	0556	1.600†	0.2000	3.524	0.2396	0.0949	49	-8.03	041.10	2
048	Water Soluble P2O5 (%)	0513	3.120	0.0400	3.246	0.1067	0.0363	4	-1.18	048.99	0
048	Water Soluble P2O5 (%)	0096	3.205	0.0300	3.246	0.1067	0.0363	4	-0.39	048.20	0
048	Water Soluble P2O5 (%)	0394	3.296	0.0450	3.246	0.1067	0.0363	4	0.46	048.20	0
048	Water Soluble P2O5 (%)	0444	3.365	0.0300	3.246	0.1067	0.0363	4	1.11	048.10	0
050	Soluble K2O (11%)	0540	10.95†	0.1100	20.11	1.120	0.2952	82	-8.19	050.99	0
050	Soluble K2O (11%)	0443	11.47†	0.2900	20.11	1.120	0.2952	82	-7.72	050.60	0
050	Soluble K2O (11%)	0532	11.58†	0.0900	20.11	1.120	0.2952	82	-7.62	050.99	0
050	Soluble K2O (11%)	0114	15.36†	0.7000	20.11	1.120	0.2952	82	-4.24	050.00	0
050	Soluble K2O (11%)	0450	16.40†	0.2800	20.11	1.120	0.2952	82	-3.31	050.99	0
050	Soluble K2O (11%)	0523	17.45†	0.5000	20.11	1.120	0.2952	82	-2.38	050.99	0
050	Soluble K2O (11%)	0547	17.58†	0.0000	20.11	1.120	0.2952	82	-2.26	050.52	0
050	Soluble K2O (11%)	0556	17.80†	0.4000	20.11	1.120	0.2952	82	-2.06	050.99	0
050	Soluble K2O (11%)	0390	18.35†	0.1000	20.11	1.120	0.2952	82	-1.57	050.50	0
050	Soluble K2O (11%)	0545	18.40†	0.2000	20.11	1.120	0.2952	82	-1.53	050.99	0
050	Soluble K2O (11%)	0551	18.80†	0.2000	20.11	1.120	0.2952	82	-1.17	050.99	0
050	Soluble K2O (11%)	0073	18.87†	0.0600	20.11	1.120	0.2952	82	-1.11	050.00	0
050	Soluble K2O (11%)	0255	19.14	1.733	20.11	1.120	0.2952	82	-0.87	050.99	0
050	Soluble K2O (11%)	0561	19.15	0.1000	20.11	1.120	0.2952	82	-0.86	050.00	0
050	Soluble K2O (11%)	0535	19.25	0.1000	20.11	1.120	0.2952	82	-0.77	050.99	0
050	Soluble K2O (11%)	0539	19.25	0.1000	20.11	1.120	0.2952	82	-0.77	050.99	0
050	Soluble K2O (11%)	0472	19.26	0.1100	20.11	1.120	0.2952	82	-0.77	050.31	0
050	Soluble K2O (11%)	0543	19.30	0.8900	20.11	1.120	0.2952	82	-0.72	050.99	0
050	Soluble K2O (11%)	0325	19.35	0.9000	20.11	1.120	0.2952	82	-0.68	050.99	0
050	Soluble K2O (11%)	0451	19.35	0.2400	20.11	1.120	0.2952	82	-0.68	050.99	0
050	Soluble K2O (11%)	0564	19.43	0.0500	20.11	1.120	0.2952	82	-0.61	050.99	0
050	Soluble K2O (11%)	0535	19.45	0.1000	20.11	1.120	0.2952	82	-0.59	050.62	0
050	Soluble K2O (11%)	0539	19.46	0.1100	20.11	1.120	0.2952	82	-0.59	050.62	0
050	Soluble K2O (11%)	0552	19.48	0.3200	20.11	1.120	0.2952	82	-0.56	050.99	0
050	Soluble K2O (11%)	0559	19.64	0.0100	20.11	1.120	0.2952	82	-0.43	050.99	0
050	Soluble K2O (11%)	0486	19.68	0.0200	20.11	1.120	0.2952	82	-0.39	050.52	0
050	Soluble K2O (11%)	0324	19.70	1.600	20.11	1.120	0.2952	82	-0.37	050.50	0
050	Soluble K2O (11%)	0394	19.73	0.1050	20.11	1.120	0.2952	82	-0.34	050.99	0
050	Soluble K2O (11%)	0234	19.76	0.1900	20.11	1.120	0.2952	82	-0.32	050.99	0
050	Soluble K2O (11%)	0260	19.76	0.0450	20.11	1.120	0.2952	82	-0.31	050.99	0
050	Soluble K2O (11%)	0476	19.78	0.1108	20.11	1.120	0.2952	82	-0.30	050.99	0
050	Soluble K2O (11%)	0510	19.86	0.3946	20.11	1.120	0.2952	82	-0.23	050.60	0
050	Soluble K2O (11%)	0049	19.96	0.3300	20.11	1.120	0.2952	82	-0.14	050.00	0
050	Soluble K2O (11%)	0423	20.00	0.2000	20.11	1.120	0.2952	82	-0.10	050.52	0
050	Soluble K2O (11%)	0136	20.01	0.2100	20.11	1.120	0.2952	82	-0.10	050.52	0
050	Soluble K2O (11%)	0055	20.02	0.8400	20.11	1.120	0.2952	82	-0.08	050.50	0
050	Soluble K2O (11%)	0055	20.03	0.6200	20.11	1.120	0.2952	82	-0.07	050.00	0
050	Soluble K2O (11%)	0043	20.04	0.7300	20.11	1.120	0.2952	82	-0.07	050.52	0
050	Soluble K2O (11%)	0389	20.05	0.1500	20.11	1.120	0.2952	82	-0.06	050.99	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
050	Soluble K2O (11%)	0537	20.08	0.4100	20.11	1.120	0.2952	82	-0.03	050.99	0
050	Soluble K2O (11%)	0368	20.08	0.2504	20.11	1.120	0.2952	82	-0.03	050.51	0
050	Soluble K2O (11%)	0354	20.10	0.0000	20.11	1.120	0.2952	82	-0.01	050.52	0
050	Soluble K2O (11%)	0035	20.10	0.4000	20.11	1.120	0.2952	82	-0.01	050.61	0
050	Soluble K2O (11%)	0356	20.11	0.0040	20.11	1.120	0.2952	82	0.00	050.30	0
050	Soluble K2O (11%)	0371	20.14	0.0400	20.11	1.120	0.2952	82	0.02	050.99	0
050	Soluble K2O (11%)	0518	20.15	0.0000	20.11	1.120	0.2952	82	0.03	050.99	0
050	Soluble K2O (11%)	0549	20.15	0.1000	20.11	1.120	0.2952	82	0.03	050.99	0
050	Soluble K2O (11%)	0553	20.15	0.1000	20.11	1.120	0.2952	82	0.03	050.99	0
050	Soluble K2O (11%)	0569	20.16	0.1000	20.11	1.120	0.2952	82	0.04	050.99	0
050	Soluble K2O (11%)	0433	20.22	0.0600	20.11	1.120	0.2952	82	0.10	050.99	0
050	Soluble K2O (11%)	0421	20.35	0.1000	20.11	1.120	0.2952	82	0.21	050.99	0
050	Soluble K2O (11%)	0095	20.49	0.8100	20.11	1.120	0.2952	82	0.33	050.62	0
050	Soluble K2O (11%)	0025	20.50	0.2000	20.11	1.120	0.2952	82	0.35	050.52	0
050	Soluble K2O (11%)	0169	20.53	0.1500	20.11	1.120	0.2952	82	0.37	050.60	0
050	Soluble K2O (11%)	0177	20.66	0.0012	20.11	1.120	0.2952	82	0.49	050.99	0
050	Soluble K2O (11%)	0291	20.70	0.0100	20.11	1.120	0.2952	82	0.52	050.51	0
050	Soluble K2O (11%)	0220	20.74	0.3800	20.11	1.120	0.2952	82	0.56	050.00	0
050	Soluble K2O (11%)	0073	20.75	0.1800	20.11	1.120	0.2952	82	0.57	050.30	0
050	Soluble K2O (11%)	0452	20.77	0.2400	20.11	1.120	0.2952	82	0.59	050.51	0
050	Soluble K2O (11%)	0546	20.85	0.1772	20.11	1.120	0.2952	82	0.66	050.99	0
050	Soluble K2O (11%)	0562	20.90	0.5000	20.11	1.120	0.2952	82	0.70	050.99	0
050	Soluble K2O (11%)	0522	20.95	0.0300	20.11	1.120	0.2952	82	0.74	050.00	0
050	Soluble K2O (11%)	0444	20.95	0.0000	20.11	1.120	0.2952	82	0.75	050.00	0
050	Soluble K2O (11%)	0444	20.95	0.0000	20.11	1.120	0.2952	82	0.75	050.50	0
050	Soluble K2O (11%)	0494	20.97	0.1500	20.11	1.120	0.2952	82	0.76	050.00	0
050	Soluble K2O (11%)	0040	21.05	0.1000	20.11	1.120	0.2952	82	0.84	050.30	0
050	Soluble K2O (11%)	0169	21.12	0.0400	20.11	1.120	0.2952	82	0.90	050.50	0
050	Soluble K2O (11%)	0538	21.18	0.8500	20.11	1.120	0.2952	82	0.95	050.99	0
050	Soluble K2O (11%)	0230	21.25‡	0.9000	20.11	1.120	0.2952	82	1.02	050.00	0
050	Soluble K2O (11%)	0527	21.26‡	0.2745	20.11	1.120	0.2952	82	1.02	050.99	0
050	Soluble K2O (11%)	0292	21.30‡	0.0400	20.11	1.120	0.2952	82	1.06	050.50	0
050	Soluble K2O (11%)	0157	21.35‡	0.9000	20.11	1.120	0.2952	82	1.11	050.30	0
050	Soluble K2O (11%)	0029	21.36‡	0.1300	20.11	1.120	0.2952	82	1.11	050.62	0
050	Soluble K2O (11%)	0494	21.38‡	0.8600	20.11	1.120	0.2952	82	1.13	050.52	0
050	Soluble K2O (11%)	0524	21.40‡	0.5857	20.11	1.120	0.2952	82	1.15	050.99	0
050	Soluble K2O (11%)	0023	21.50‡	0.0000	20.11	1.120	0.2952	82	1.24	050.52	0
050	Soluble K2O (11%)	0513	21.84‡	0.1100	20.11	1.120	0.2952	82	1.54	050.62	0
050	Soluble K2O (11%)	0300	21.91‡	0.0600	20.11	1.120	0.2952	82	1.61	050.99	0
050	Soluble K2O (11%)	0563	21.93‡	0.2787	20.11	1.120	0.2952	82	1.62	050.99	0
050	Soluble K2O (11%)	0027	22.20‡	0.3300	20.11	1.120	0.2952	82	1.86	050.99	0
050	Soluble K2O (11%)	0422	22.30‡	0.8000	20.11	1.120	0.2952	82	1.95	050.50	0
050	Soluble K2O (11%)	0568	22.51‡	0.3200	20.11	1.120	0.2952	82	2.14	050.51	0
050	Soluble K2O (11%)	0515	16.10†	2.381	20.11	1.120	0.2952	82	-3.58	050.99	1
050	Soluble K2O (11%)	0550	21.35‡	2.730	20.11	1.120	0.2952	82	1.10	050.00	1
060	Water (Free) (%)	0513	0.1250	0.0100	0.4361	0.3396	0.0404	3	-0.92	060.00	0
060	Water (Free) (%)	0096	0.3850	0.1100	0.4361	0.3396	0.0404	3	-0.15	060.00	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
060	Water (Free) (%)	0510	0.7984	0.0011	0.4361	0.3396	0.0404	3	1.07	060.99	0
101	Acid Soluble Ca (%)	0035	2.150	0.2400	2.661	0.1312	0.1042	14	-3.90	101.30	0
101	Acid Soluble Ca (%)	0553	2.545	0.0100	2.661	0.1312	0.1042	14	-0.89	101.00	0
101	Acid Soluble Ca (%)	0389	2.575	0.1100	2.661	0.1312	0.1042	14	-0.66	101.99	0
101	Acid Soluble Ca (%)	0494	2.585	0.0807	2.661	0.1312	0.1042	14	-0.58	101.33	0
101	Acid Soluble Ca (%)	0472	2.605	0.0300	2.661	0.1312	0.1042	14	-0.43	101.30	0
101	Acid Soluble Ca (%)	0423	2.605	0.0500	2.661	0.1312	0.1042	14	-0.43	101.32	0
101	Acid Soluble Ca (%)	0568	2.620	0.1600	2.661	0.1312	0.1042	14	-0.32	101.30	0
101	Acid Soluble Ca (%)	0354	2.635	0.1900	2.661	0.1312	0.1042	14	-0.20	101.30	0
101	Acid Soluble Ca (%)	0563	2.688	0.1711	2.661	0.1312	0.1042	14	0.20	101.33	0
101	Acid Soluble Ca (%)	0552	2.710	0.1000	2.661	0.1312	0.1042	14	0.37	101.99	0
101	Acid Soluble Ca (%)	0368	2.729	0.0349	2.661	0.1312	0.1042	14	0.51	101.99	0
101	Acid Soluble Ca (%)	0527	2.783	0.0022	2.661	0.1312	0.1042	14	0.92	101.33	0
101	Acid Soluble Ca (%)	0421	3.875	0.2500	2.661	0.1312	0.1042	14	9.25	101.33	0
101	Acid Soluble Ca (%)	0096	5.355	0.0300	2.661	0.1312	0.1042	14	20.53	101.30	0
121	Acid Soluble Mg (%)	0035	1.410	0.1600	1.701	0.1782	0.0694	18	-1.63	121.30	0
121	Acid Soluble Mg (%)	0524	1.458	0.0175	1.701	0.1782	0.0694	18	-1.36	121.99	0
121	Acid Soluble Mg (%)	0515	1.554	0.0596	1.701	0.1782	0.0694	18	-0.82	121.33	0
121	Acid Soluble Mg (%)	0515	1.581	0.3003	1.701	0.1782	0.0694	18	-0.67	121.99	0
121	Acid Soluble Mg (%)	0368	1.618	0.0049	1.701	0.1782	0.0694	18	-0.46	121.99	0
121	Acid Soluble Mg (%)	0423	1.630	0.0200	1.701	0.1782	0.0694	18	-0.40	121.32	0
121	Acid Soluble Mg (%)	0563	1.645	0.0574	1.701	0.1782	0.0694	18	-0.31	121.33	0
121	Acid Soluble Mg (%)	0568	1.665	0.0900	1.701	0.1782	0.0694	18	-0.20	121.30	0
121	Acid Soluble Mg (%)	0552	1.670	0.0200	1.701	0.1782	0.0694	18	-0.17	121.99	0
121	Acid Soluble Mg (%)	0494	1.699	0.0166	1.701	0.1782	0.0694	18	-0.01	121.33	0
121	Acid Soluble Mg (%)	0354	1.705	0.0900	1.701	0.1782	0.0694	18	0.03	121.30	0
121	Acid Soluble Mg (%)	0553	1.715	0.0100	1.701	0.1782	0.0694	18	0.08	121.00	0
121	Acid Soluble Mg (%)	0389	1.725	0.0100	1.701	0.1782	0.0694	18	0.14	121.99	0
121	Acid Soluble Mg (%)	0096	1.765	0.0900	1.701	0.1782	0.0694	18	0.36	121.30	0
121	Acid Soluble Mg (%)	0527	1.855	0.0023	1.701	0.1782	0.0694	18	0.87	121.33	0
121	Acid Soluble Mg (%)	0472	1.955	0.0100	1.701	0.1782	0.0694	18	1.43	121.30	0
121	Acid Soluble Mg (%)	0169	2.785	0.0300	1.701	0.1782	0.0694	18	6.09	121.33	0
121	Acid Soluble Mg (%)	0421	3.160	0.2600	1.701	0.1782	0.0694	18	8.19	121.33	0
143	Elemental S (%)	0389	0.7550	0.0300	1.038	0.2930	0.0351	3	-0.96	143.99	0
143	Elemental S (%)	0368	1.018	0.0753	1.038	0.2930	0.0351	3	-0.07	143.99	0
143	Elemental S (%)	0472	1.340	0.0000	1.038	0.2930	0.0351	3	1.03	143.99	0
145	Sulfate S, HCl soluble (%)	0553	0.1190	0.0020				1		145.99	0
148	Total S (%)	0354	0.1550	0.0300	1.607	1.188	0.0480	6	-1.09	148.99	0
148	Total S (%)	0515	1.323	0.0205	1.607	1.188	0.0480	6	-0.21	148.07	0
148	Total S (%)	0494	1.433	0.0120	1.607	1.188	0.0480	6	-0.13	148.07	0
148	Total S (%)	0563	1.462	0.0700	1.607	1.188	0.0480	6	-0.11	148.07	0
148	Total S (%)	0527	1.878	0.0254	1.607	1.188	0.0480	6	0.20	148.07	0
148	Total S (%)	0114	3.625	0.1300	1.607	1.188	0.0480	6	1.51	148.00	0
148	Total S (%)	0421	1.295	0.4700	1.607	1.188	0.0480	6	-0.23	148.07	1
149	S - HNO3 soluble (%)	0524	0.7883	0.0090				2		149.04	0
149	S - HNO3 soluble (%)	0423	1.375	0.0700				2		149.04	0
151	Acid Soluble As (ppm)	0255	0.1745	0.0350	0.6403	0.7399	0.0787	10	-0.63	151.30	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
151	Acid Soluble As (ppm)	0476	0.1766	0.0553	0.6403	0.7399	0.0787	10	-0.63	151.30	0
151	Acid Soluble As (ppm)	0529	0.1950	0.0100	0.6403	0.7399	0.0787	10	-0.60	151.32	0
151	Acid Soluble As (ppm)	0534	0.2260	0.0040	0.6403	0.7399	0.0787	10	-0.56	151.00	0
151	Acid Soluble As (ppm)	0524	0.2629	0.0253	0.6403	0.7399	0.0787	10	-0.51	151.30	0
151	Acid Soluble As (ppm)	0523	0.2742	0.0142	0.6403	0.7399	0.0787	10	-0.49	151.30	0
151	Acid Soluble As (ppm)	0563	0.3908	0.0128	0.6403	0.7399	0.0787	10	-0.34	151.33	0
151	Acid Soluble As (ppm)	0515	1.303	0.2903	0.6403	0.7399	0.0787	10	0.90	151.33	0
151	Acid Soluble As (ppm)	0220	1.650	0.1000	0.6403	0.7399	0.0787	10	1.36	151.32	0
151	Acid Soluble As (ppm)	0260	2.910	0.2400	0.6403	0.7399	0.0787	10	3.07	151.33	0
151	Acid Soluble As (ppm)	0220	1.400	0.4000	0.6403	0.7399	0.0787	10	1.03	151.99	1
151	Acid Soluble As (ppm)	0515	0.0000	0.0000	0.6403	0.7399	0.0787	10		151.34	4
151	Acid Soluble As (ppm)	0527	< 0.0001		0.6403	0.7399	0.0787	10		151.33	5
151	Acid Soluble As (ppm)	0494	< 0.193		0.6403	0.7399	0.0787	10		151.33	5
151	Acid Soluble As (ppm)	0368	< 0.4		0.6403	0.7399	0.0787	10		151.34	5
151	Acid Soluble As (ppm)	0450	< 0.5		0.6403	0.7399	0.0787	10		151.30	5
151	Acid Soluble As (ppm)	0096	< 1		0.6403	0.7399	0.0787	10		151.32	5
151	Acid Soluble As (ppm)	0136	< 1		0.6403	0.7399	0.0787	10		151.33	5
151	Acid Soluble As (ppm)	0405	< 1		0.6403	0.7399	0.0787	10		151.99	5
151	Acid Soluble As (ppm)	0117	< 10		0.6403	0.7399	0.0787	10		151.33	5
165	Acid Soluble B (%)	0389	0.0007	0.0000	0.0013	0.0008	0.0001	5	-0.62	165.30	0
165	Acid Soluble B (%)	0527	0.0008	0.0001	0.0013	0.0008	0.0001	5	-0.57	165.99	0
165	Acid Soluble B (%)	0524	0.0009	0.0000	0.0013	0.0008	0.0001	5	-0.40	165.99	0
165	Acid Soluble B (%)	0563	0.0014	0.0001	0.0013	0.0008	0.0001	5	0.11	165.99	0
165	Acid Soluble B (%)	0553	0.0026	0.0001	0.0013	0.0008	0.0001	5	1.47	165.00	0
165	Acid Soluble B (%)	0515	0.0000	0.0000	0.0013	0.0008	0.0001	5		165.99	4
165	Acid Soluble B (%)	0552	0.0000	0.0000	0.0013	0.0008	0.0001	5		165.99	4
165	Acid Soluble B (%)	0354	< 0.01		0.0013	0.0008	0.0001	5		165.30	5
181	Acid Soluble Cd (ppm)	0444	2.520	0.0800	3.833	0.7261	0.2412	22	-1.81	181.30	0
181	Acid Soluble Cd (ppm)	0524	2.590	0.0683	3.833	0.7261	0.2412	22	-1.71	181.30	0
181	Acid Soluble Cd (ppm)	0255	2.820	0.0270	3.833	0.7261	0.2412	22	-1.40	181.30	0
181	Acid Soluble Cd (ppm)	0515	3.237	1.957	3.833	0.7261	0.2412	22	-0.82	181.34	0
181	Acid Soluble Cd (ppm)	0220	3.450	0.1000	3.833	0.7261	0.2412	22	-0.53	181.99	0
181	Acid Soluble Cd (ppm)	0476	3.472	0.0834	3.833	0.7261	0.2412	22	-0.50	181.30	0
181	Acid Soluble Cd (ppm)	0534	3.490	0.1400	3.833	0.7261	0.2412	22	-0.47	181.00	0
181	Acid Soluble Cd (ppm)	0096	3.500	0.0000	3.833	0.7261	0.2412	22	-0.46	181.32	0
181	Acid Soluble Cd (ppm)	0220	3.550	0.5000	3.833	0.7261	0.2412	22	-0.39	181.32	0
181	Acid Soluble Cd (ppm)	0389	3.570	0.0200	3.833	0.7261	0.2412	22	-0.36	181.30	0
181	Acid Soluble Cd (ppm)	0563	3.844	0.0244	3.833	0.7261	0.2412	22	0.01	181.33	0
181	Acid Soluble Cd (ppm)	0394	3.960	0.1600	3.833	0.7261	0.2412	22	0.17	181.30	0
181	Acid Soluble Cd (ppm)	0035	4.015	0.0900	3.833	0.7261	0.2412	22	0.25	181.30	0
181	Acid Soluble Cd (ppm)	0529	4.090	0.1000	3.833	0.7261	0.2412	22	0.35	181.32	0
181	Acid Soluble Cd (ppm)	0494	4.092	0.4033	3.833	0.7261	0.2412	22	0.36	181.33	0
181	Acid Soluble Cd (ppm)	0136	4.125	0.0700	3.833	0.7261	0.2412	22	0.40	181.33	0
181	Acid Soluble Cd (ppm)	0368	4.305	0.0500	3.833	0.7261	0.2412	22	0.65	181.34	0
181	Acid Soluble Cd (ppm)	0523	4.369	0.8150	3.833	0.7261	0.2412	22	0.74	181.30	0
181	Acid Soluble Cd (ppm)	0405	4.515	0.0900	3.833	0.7261	0.2412	22	0.94	181.99	0
181	Acid Soluble Cd (ppm)	0450	4.600	0.2000	3.833	0.7261	0.2412	22	1.06	181.30	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
181	Acid Soluble Cd (ppm)	0527	5.434	0.3289	3.833	0.7261	0.2412	22	2.20	181.33	0
181	Acid Soluble Cd (ppm)	0260	5.620	0.0000	3.833	0.7261	0.2412	22	2.46	181.33	0
181	Acid Soluble Cd (ppm)	0515	4.159	3.011	3.833	0.7261	0.2412	22	0.45	181.33	1
181	Acid Soluble Cd (ppm)	0117	< 5		3.833	0.7261	0.2412	22		181.33	5
190	Water Soluble Cl (%)	0513	16.30	0.1000				2		190.00	0
190	Water Soluble Cl (%)	0553	18.20	0.2000				2		190.00	0
191	Acid Soluble Cr (ppm)	0444	29.48	0.0400	43.26	7.710	1.429	20	-1.79	191.30	0
191	Acid Soluble Cr (ppm)	0524	29.67	0.1421	43.26	7.710	1.429	20	-1.76	191.30	0
191	Acid Soluble Cr (ppm)	0476	32.70	0.4202	43.26	7.710	1.429	20	-1.37	191.30	0
191	Acid Soluble Cr (ppm)	0035	36.85	4.700	43.26	7.710	1.429	20	-0.83	191.30	0
191	Acid Soluble Cr (ppm)	0394	37.55	2.700	43.26	7.710	1.429	20	-0.74	191.30	0
191	Acid Soluble Cr (ppm)	0389	37.62	0.4300	43.26	7.710	1.429	20	-0.73	191.30	0
191	Acid Soluble Cr (ppm)	0529	37.93	0.3200	43.26	7.710	1.429	20	-0.69	191.32	0
191	Acid Soluble Cr (ppm)	0368	42.42	1.200	43.26	7.710	1.429	20	-0.11	191.34	0
191	Acid Soluble Cr (ppm)	0136	43.55	2.570	43.26	7.710	1.429	20	0.04	191.33	0
191	Acid Soluble Cr (ppm)	0405	46.00	0.0000	43.26	7.710	1.429	20	0.36	191.99	0
191	Acid Soluble Cr (ppm)	0494	46.03	0.0500	43.26	7.710	1.429	20	0.36	191.33	0
191	Acid Soluble Cr (ppm)	0515	46.49	2.993	43.26	7.710	1.429	20	0.42	191.33	0
191	Acid Soluble Cr (ppm)	0220	46.50	1.000	43.26	7.710	1.429	20	0.42	191.32	0
191	Acid Soluble Cr (ppm)	0220	47.00	0.0000	43.26	7.710	1.429	20	0.49	191.99	0
191	Acid Soluble Cr (ppm)	0523	47.36	2.320	43.26	7.710	1.429	20	0.53	191.30	0
191	Acid Soluble Cr (ppm)	0096	48.05	3.700	43.26	7.710	1.429	20	0.62	191.32	0
191	Acid Soluble Cr (ppm)	0450	50.00	2.000	43.26	7.710	1.429	20	0.87	191.30	0
191	Acid Soluble Cr (ppm)	0260	50.11	0.3000	43.26	7.710	1.429	20	0.89	191.33	0
191	Acid Soluble Cr (ppm)	0563	52.28	3.302	43.26	7.710	1.429	20	1.17	191.33	0
191	Acid Soluble Cr (ppm)	0527	53.30	0.3909	43.26	7.710	1.429	20	1.30	191.33	0
191	Acid Soluble Cr (ppm)	0515	51.55	16.51	43.26	7.710	1.429	20	1.08	191.34	1
202	Acid Soluble Co (ppm)	0368	1.040	0.1000	1.660	0.4954	0.1650	15	-1.25	202.34	0
202	Acid Soluble Co (ppm)	0476	1.045	0.1610	1.660	0.4954	0.1650	15	-1.24	202.30	0
202	Acid Soluble Co (ppm)	0255	1.184	0.0950	1.660	0.4954	0.1650	15	-0.96	202.99	0
202	Acid Soluble Co (ppm)	0389	1.230	0.0000	1.660	0.4954	0.1650	15	-0.87	202.30	0
202	Acid Soluble Co (ppm)	0035	1.270	0.0000	1.660	0.4954	0.1650	15	-0.79	202.30	0
202	Acid Soluble Co (ppm)	0220	1.500	0.2000	1.660	0.4954	0.1650	15	-0.32	202.32	0
202	Acid Soluble Co (ppm)	0524	1.566	0.0976	1.660	0.4954	0.1650	15	-0.19	202.30	0
202	Acid Soluble Co (ppm)	0220	1.600	0.2000	1.660	0.4954	0.1650	15	-0.12	202.99	0
202	Acid Soluble Co (ppm)	0494	1.955	0.0200	1.660	0.4954	0.1650	15	0.60	202.33	0
202	Acid Soluble Co (ppm)	0515	1.957	1.480	1.660	0.4954	0.1650	15	0.60	202.34	0
202	Acid Soluble Co (ppm)	0563	1.995	0.0062	1.660	0.4954	0.1650	15	0.68	202.33	0
202	Acid Soluble Co (ppm)	0405	2.000	0.0000	1.660	0.4954	0.1650	15	0.69	202.99	0
202	Acid Soluble Co (ppm)	0527	2.050	0.0089	1.660	0.4954	0.1650	15	0.79	202.33	0
202	Acid Soluble Co (ppm)	0523	2.106	0.0760	1.660	0.4954	0.1650	15	0.90	202.30	0
202	Acid Soluble Co (ppm)	0260	3.925	0.0300	1.660	0.4954	0.1650	15	4.57	202.33	0
202	Acid Soluble Co (ppm)	0515	1.920	2.516	1.660	0.4954	0.1650	15	0.52	202.33	1
202	Acid Soluble Co (ppm)	0096	< 1		1.660	0.4954	0.1650	15		202.30	5
202	Acid Soluble Co (ppm)	0136	< 5		1.660	0.4954	0.1650	15		202.33	5
221	Acid Soluble Cu (%)	0394	0.0001	0.0000	0.0005	0.0004	0.0011	11	-1.13	221.32	0
221	Acid Soluble Cu (%)	0368	0.0002	0.0000	0.0005	0.0004	0.0011	11	-0.84	221.99	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
221	Acid Soluble Cu (%)	0405	0.0002	0.0000	0.0005	0.0004	0.0011	11	-0.84	221.99	0
221	Acid Soluble Cu (%)	0550	0.0003	0.0001	0.0005	0.0004	0.0011	11	-0.70	221.00	0
221	Acid Soluble Cu (%)	0515	0.0004	0.0002	0.0005	0.0004	0.0011	11	-0.28	221.33	0
221	Acid Soluble Cu (%)	0535	0.0006	0.0001	0.0005	0.0004	0.0011	11	0.15	221.00	0
221	Acid Soluble Cu (%)	0538	0.0006	0.0001	0.0005	0.0004	0.0011	11	0.15	221.00	0
221	Acid Soluble Cu (%)	0515	0.0006	0.0003	0.0005	0.0004	0.0011	11	0.15	221.99	0
221	Acid Soluble Cu (%)	0539	0.0007	0.0001	0.0005	0.0004	0.0011	11	0.43	221.00	0
221	Acid Soluble Cu (%)	0043	0.0010	0.0000	0.0005	0.0004	0.0011	11	1.42	221.33	0
221	Acid Soluble Cu (%)	0552	0.0755	0.0110	0.0005	0.0004	0.0011	11	212.13	221.30	0
221	Acid Soluble Cu (%)	0096	23.37	7.340	0.0005	0.0004	0.0011	11	66096.19	221.30	2
221	Acid Soluble Cu (%)	0524	0.0000	0.0000	0.0005	0.0004	0.0011	11		221.99	4
221	Acid Soluble Cu (%)	0255	0.0005	0.0010	0.0005	0.0004	0.0011	11		221.30	4
221	Acid Soluble Cu (%)	0543	0.0005	0.0010	0.0005	0.0004	0.0011	11		221.33	4
221	Acid Soluble Cu (%)	0527	< 0.0001		0.0005	0.0004	0.0011	11		221.33	5
221	Acid Soluble Cu (%)	0563	< 0.0001		0.0005	0.0004	0.0011	11		221.33	5
221	Acid Soluble Cu (%)	0494	< 0.0002		0.0005	0.0004	0.0011	11		221.33	5
221	Acid Soluble Cu (%)	0136	< 0.0025		0.0005	0.0004	0.0011	11		221.33	5
221	Acid Soluble Cu (%)	0553	< 0.005		0.0005	0.0004	0.0011	11		221.00	5
221	Acid Soluble Cu (%)	0354	< 0.01		0.0005	0.0004	0.0011	11		221.30	5
241	Acid Soluble Fe (%)	0524	0.1051	0.0009	0.1281	0.0079	0.0037	18	-2.91	241.99	0
241	Acid Soluble Fe (%)	0546	0.1173	0.0018	0.1281	0.0079	0.0037	18	-1.37	241.33	0
241	Acid Soluble Fe (%)	0035	0.1200	0.0060	0.1281	0.0079	0.0037	18	-1.02	241.30	0
241	Acid Soluble Fe (%)	0389	0.1200	0.0000	0.1281	0.0079	0.0037	18	-1.02	241.99	0
241	Acid Soluble Fe (%)	0563	0.1233	0.0006	0.1281	0.0079	0.0037	18	-0.61	241.33	0
241	Acid Soluble Fe (%)	0538	0.1250	0.0100	0.1281	0.0079	0.0037	18	-0.39	241.00	0
241	Acid Soluble Fe (%)	0553	0.1265	0.0030	0.1281	0.0079	0.0037	18	-0.21	241.00	0
241	Acid Soluble Fe (%)	0368	0.1271	0.0012	0.1281	0.0079	0.0037	18	-0.13	241.99	0
241	Acid Soluble Fe (%)	0423	0.1285	0.0010	0.1281	0.0079	0.0037	18	0.05	241.32	0
241	Acid Soluble Fe (%)	0515	0.1291	0.0088	0.1281	0.0079	0.0037	18	0.12	241.99	0
241	Acid Soluble Fe (%)	0494	0.1293	0.0133	0.1281	0.0079	0.0037	18	0.14	241.33	0
241	Acid Soluble Fe (%)	0354	0.1300	0.0000	0.1281	0.0079	0.0037	18	0.24	241.30	0
241	Acid Soluble Fe (%)	0472	0.1300	0.0000	0.1281	0.0079	0.0037	18	0.24	241.30	0
241	Acid Soluble Fe (%)	0096	0.1350	0.0100	0.1281	0.0079	0.0037	18	0.87	241.30	0
241	Acid Soluble Fe (%)	0535	0.1355	0.0010	0.1281	0.0079	0.0037	18	0.93	241.00	0
241	Acid Soluble Fe (%)	0539	0.1360	0.0020	0.1281	0.0079	0.0037	18	0.99	241.00	0
241	Acid Soluble Fe (%)	0515	0.1376	0.0050	0.1281	0.0079	0.0037	18	1.19	241.33	0
241	Acid Soluble Fe (%)	0527	0.1912	0.0028	0.1281	0.0079	0.0037	18	7.95	241.33	0
241	Acid Soluble Fe (%)	0552	0.3800	0.3400	0.1281	0.0079	0.0037	18	31.73	241.30	2
251	Acid Soluble Pb (ppm)	0389	0.0350	0.0100	0.5497	0.5165	0.1275	14	-1.00	251.30	0
251	Acid Soluble Pb (ppm)	0394	0.1650	0.0300	0.5497	0.5165	0.1275	14	-0.74	251.30	0
251	Acid Soluble Pb (ppm)	0255	0.1755	0.0170	0.5497	0.5165	0.1275	14	-0.72	251.30	0
251	Acid Soluble Pb (ppm)	0476	0.2286	0.0358	0.5497	0.5165	0.1275	14	-0.62	251.30	0
251	Acid Soluble Pb (ppm)	0524	0.2334	0.0603	0.5497	0.5165	0.1275	14	-0.61	251.30	0
251	Acid Soluble Pb (ppm)	0563	0.3463	0.0369	0.5497	0.5165	0.1275	14	-0.39	251.33	0
251	Acid Soluble Pb (ppm)	0405	0.3500	0.1000	0.5497	0.5165	0.1275	14	-0.39	251.99	0
251	Acid Soluble Pb (ppm)	0523	0.3964	0.0402	0.5497	0.5165	0.1275	14	-0.30	251.30	0
251	Acid Soluble Pb (ppm)	0527	0.4066	0.0144	0.5497	0.5165	0.1275	14	-0.28	251.33	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
251	Acid Soluble Pb (ppm)	0529	0.6600	0.0400	0.5497	0.5165	0.1275	14	0.21	251.32	0
251	Acid Soluble Pb (ppm)	0220	0.7500	0.3000	0.5497	0.5165	0.1275	14	0.39	251.32	0
251	Acid Soluble Pb (ppm)	0220	1.300	0.4000	0.5497	0.5165	0.1275	14	1.45	251.99	0
251	Acid Soluble Pb (ppm)	0260	2.065	0.1900	0.5497	0.5165	0.1275	14	2.93	251.33	0
251	Acid Soluble Pb (ppm)	0035	2.445	0.5100	0.5497	0.5165	0.1275	14	3.67	251.30	0
251	Acid Soluble Pb (ppm)	0515	5.684	3.725	0.5497	0.5165	0.1275	14	9.94	251.33	1
251	Acid Soluble Pb (ppm)	0515	0.0000	0.0000	0.5497	0.5165	0.1275	14		251.34	4
251	Acid Soluble Pb (ppm)	0450	< 0.5		0.5497	0.5165	0.1275	14		251.30	5
251	Acid Soluble Pb (ppm)	0368	< 0.7		0.5497	0.5165	0.1275	14		251.34	5
251	Acid Soluble Pb (ppm)	0494	< 1.27		0.5497	0.5165	0.1275	14		251.33	5
251	Acid Soluble Pb (ppm)	0534	< 2		0.5497	0.5165	0.1275	14		251.00	5
251	Acid Soluble Pb (ppm)	0136	< 3		0.5497	0.5165	0.1275	14		251.33	5
251	Acid Soluble Pb (ppm)	0117	< 5		0.5497	0.5165	0.1275	14		251.33	5
261	Acid Soluble Mn (%)	0494	0.0023	0.0003	0.0028	0.0004	0.0003	12	-1.18	261.35	0
261	Acid Soluble Mn (%)	0389	0.0025	0.0001	0.0028	0.0004	0.0003	12	-0.72	261.99	0
261	Acid Soluble Mn (%)	0539	0.0025	0.0002	0.0028	0.0004	0.0003	12	-0.60	261.12	0
261	Acid Soluble Mn (%)	0423	0.0025	0.0010	0.0028	0.0004	0.0003	12	-0.60	261.34	0
261	Acid Soluble Mn (%)	0535	0.0026	0.0001	0.0028	0.0004	0.0003	12	-0.48	261.12	0
261	Acid Soluble Mn (%)	0538	0.0026	0.0001	0.0028	0.0004	0.0003	12	-0.48	261.12	0
261	Acid Soluble Mn (%)	0515	0.0027	0.0005	0.0028	0.0004	0.0003	12	-0.25	261.99	0
261	Acid Soluble Mn (%)	0524	0.0028	0.0007	0.0028	0.0004	0.0003	12	-0.02	261.99	0
261	Acid Soluble Mn (%)	0563	0.0030	0.0001	0.0028	0.0004	0.0003	12	0.44	261.35	0
261	Acid Soluble Mn (%)	0035	0.0032	0.0002	0.0028	0.0004	0.0003	12	1.03	261.30	0
261	Acid Soluble Mn (%)	0527	0.0034	0.0001	0.0028	0.0004	0.0003	12	1.37	261.35	0
261	Acid Soluble Mn (%)	0552	0.2000	0.0000	0.0028	0.0004	0.0003	12	458.35	261.32	0
261	Acid Soluble Mn (%)	0096	26.85	3.700	0.0028	0.0004	0.0003	12	62387.20	261.30	2
261	Acid Soluble Mn (%)	0515	0.0000	0.0000	0.0028	0.0004	0.0003	12		261.35	4
261	Acid Soluble Mn (%)	0553	< 0.005		0.0028	0.0004	0.0003	12		261.11	5
261	Acid Soluble Mn (%)	0354	< 0.01		0.0028	0.0004	0.0003	12		261.30	5
281	Acid Soluble Hg (ppm)	0035	0.0070	0.0000	0.0435	0.0536	0.0145	3	-0.55	281.99	0
281	Acid Soluble Hg (ppm)	0524	0.0185	0.0334	0.0435	0.0536	0.0145	3	-0.38	281.99	0
281	Acid Soluble Hg (ppm)	0529	0.1050	0.0100	0.0435	0.0536	0.0145	3	0.93	281.30	0
281	Acid Soluble Hg (ppm)	0515	0.0000	0.0000	0.0435	0.0536	0.0145	3		281.30	4
281	Acid Soluble Hg (ppm)	0527	< 0.001		0.0435	0.0536	0.0145	3		281.30	5
281	Acid Soluble Hg (ppm)	0368	< 0.01		0.0435	0.0536	0.0145	3		281.99	5
281	Acid Soluble Hg (ppm)	0405	< 0.01		0.0435	0.0536	0.0145	3		281.99	5
281	Acid Soluble Hg (ppm)	0563	< 0.02		0.0435	0.0536	0.0145	3		281.30	5
281	Acid Soluble Hg (ppm)	0534	< 0.05		0.0435	0.0536	0.0145	3		281.00	5
281	Acid Soluble Hg (ppm)	0450	< 0.5		0.0435	0.0536	0.0145	3		281.30	5
289	Acid Soluble Mo (ppm)	0255	0.7495	0.0050	2.441	0.8903	0.1030	15	-1.90	289.30	0
289	Acid Soluble Mo (ppm)	0515	0.8561	0.1279	2.441	0.8903	0.1030	15	-1.78	289.33	0
289	Acid Soluble Mo (ppm)	0476	1.725	0.0022	2.441	0.8903	0.1030	15	-0.80	289.30	0
289	Acid Soluble Mo (ppm)	0524	1.996	0.0230	2.441	0.8903	0.1030	15	-0.50	289.30	0
289	Acid Soluble Mo (ppm)	0220	2.100	0.0000	2.441	0.8903	0.1030	15	-0.38	289.99	0
289	Acid Soluble Mo (ppm)	0450	2.150	0.1000	2.441	0.8903	0.1030	15	-0.33	289.30	0
289	Acid Soluble Mo (ppm)	0563	2.223	0.0516	2.441	0.8903	0.1030	15	-0.24	289.33	0
289	Acid Soluble Mo (ppm)	0494	2.470	0.0866	2.441	0.8903	0.1030	15	0.03	289.33	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
289	Acid Soluble Mo (ppm)	0220	2.600	0.2000	2.441	0.8903	0.1030	15	0.18	289.32	0
289	Acid Soluble Mo (ppm)	0035	2.650	0.2600	2.441	0.8903	0.1030	15	0.23	289.30	0
289	Acid Soluble Mo (ppm)	0523	2.952	0.0390	2.441	0.8903	0.1030	15	0.57	289.30	0
289	Acid Soluble Mo (ppm)	0260	3.205	0.0100	2.441	0.8903	0.1030	15	0.86	289.33	0
289	Acid Soluble Mo (ppm)	0368	3.225	0.2100	2.441	0.8903	0.1030	15	0.88	289.34	0
289	Acid Soluble Mo (ppm)	0405	3.330	0.1800	2.441	0.8903	0.1030	15	1.00	289.99	0
289	Acid Soluble Mo (ppm)	0527	5.444	0.2494	2.441	0.8903	0.1030	15	3.37	289.33	0
289	Acid Soluble Mo (ppm)	0515	2.332	1.258	2.441	0.8903	0.1030	15	-0.12	289.34	1
289	Acid Soluble Mo (ppm)	0136	< 5		2.441	0.8903	0.1030	15		289.33	5
291	Acid Soluble Ni (ppm)	0476	8.034	0.1067	14.60	3.066	0.4750	21	-2.14	291.30	0
291	Acid Soluble Ni (ppm)	0444	9.405	0.1100	14.60	3.066	0.4750	21	-1.69	291.30	0
291	Acid Soluble Ni (ppm)	0524	9.878	0.0008	14.60	3.066	0.4750	21	-1.54	291.30	0
291	Acid Soluble Ni (ppm)	0035	12.05	0.3000	14.60	3.066	0.4750	21	-0.83	291.30	0
291	Acid Soluble Ni (ppm)	0394	12.35	0.9000	14.60	3.066	0.4750	21	-0.73	291.30	0
291	Acid Soluble Ni (ppm)	0136	13.57	1.350	14.60	3.066	0.4750	21	-0.34	291.33	0
291	Acid Soluble Ni (ppm)	0515	14.01	0.7470	14.60	3.066	0.4750	21	-0.19	291.34	0
291	Acid Soluble Ni (ppm)	0563	14.10	0.8919	14.60	3.066	0.4750	21	-0.16	291.33	0
291	Acid Soluble Ni (ppm)	0368	14.11	0.2300	14.60	3.066	0.4750	21	-0.16	291.34	0
291	Acid Soluble Ni (ppm)	0515	14.39	0.1225	14.60	3.066	0.4750	21	-0.07	291.33	0
291	Acid Soluble Ni (ppm)	0523	14.43	0.0700	14.60	3.066	0.4750	21	-0.06	291.30	0
291	Acid Soluble Ni (ppm)	0450	15.00	0.0000	14.60	3.066	0.4750	21	0.13	291.30	0
291	Acid Soluble Ni (ppm)	0405	15.00	0.0000	14.60	3.066	0.4750	21	0.13	291.99	0
291	Acid Soluble Ni (ppm)	0220	15.15	0.1000	14.60	3.066	0.4750	21	0.18	291.32	0
291	Acid Soluble Ni (ppm)	0494	15.73	0.8500	14.60	3.066	0.4750	21	0.37	291.33	0
291	Acid Soluble Ni (ppm)	0220	16.00	0.4000	14.60	3.066	0.4750	21	0.46	291.99	0
291	Acid Soluble Ni (ppm)	0260	17.35	0.5900	14.60	3.066	0.4750	21	0.90	291.33	0
291	Acid Soluble Ni (ppm)	0117	17.35	1.780	14.60	3.066	0.4750	21	0.90	291.33	0
291	Acid Soluble Ni (ppm)	0527	17.98	0.4351	14.60	3.066	0.4750	21	1.10	291.33	0
291	Acid Soluble Ni (ppm)	0096	18.80	0.2000	14.60	3.066	0.4750	21	1.37	291.30	0
291	Acid Soluble Ni (ppm)	0529	21.58	0.7900	14.60	3.066	0.4750	21	2.28	291.32	0
291	Acid Soluble Ni (ppm)	0255	13.45	4.114	14.60	3.066	0.4750	21	-0.37	291.99	1
301	Acid Soluble Se (ppm)	0524	0.0628	0.0161	0.3619	0.1550	0.0460	7	-1.93	301.30	0
301	Acid Soluble Se (ppm)	0523	0.2734	0.0560	0.3619	0.1550	0.0460	7	-0.57	301.30	0
301	Acid Soluble Se (ppm)	0476	0.3158	0.0419	0.3619	0.1550	0.0460	7	-0.30	301.30	0
301	Acid Soluble Se (ppm)	0220	0.4000	0.0000	0.3619	0.1550	0.0460	7	0.25	301.32	0
301	Acid Soluble Se (ppm)	0220	0.4000	0.0000	0.3619	0.1550	0.0460	7	0.25	301.99	0
301	Acid Soluble Se (ppm)	0563	0.4700	0.0061	0.3619	0.1550	0.0460	7	0.70	301.33	0
301	Acid Soluble Se (ppm)	0494	0.5450	0.2020	0.3619	0.1550	0.0460	7	1.18	301.33	0
301	Acid Soluble Se (ppm)	0255	0.0000	0.0000	0.3619	0.1550	0.0460	7		301.99	4
301	Acid Soluble Se (ppm)	0515	0.5825	1.165	0.3619	0.1550	0.0460	7		301.34	4
301	Acid Soluble Se (ppm)	0515	1.731	3.461	0.3619	0.1550	0.0460	7		301.33	4
301	Acid Soluble Se (ppm)	0527	< 0.001		0.3619	0.1550	0.0460	7		301.33	5
301	Acid Soluble Se (ppm)	0368	< 1		0.3619	0.1550	0.0460	7		301.34	5
301	Acid Soluble Se (ppm)	0405	< 1		0.3619	0.1550	0.0460	7		301.99	5
311	Sodium (%)	0035	0.3935	0.0370	0.4503	0.0434	0.0167	8	-1.20	311.33	0
311	Sodium (%)	0368	0.4129	0.0047	0.4503	0.0434	0.0167	8	-0.79	311.99	0
311	Sodium (%)	0553	0.4325	0.0350	0.4503	0.0434	0.0167	8	-0.38	311.00	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
311	Sodium (%)	0354	0.4450	0.0100	0.4503	0.0434	0.0167	8	-0.11	311.99	0
311	Sodium (%)	0096	0.4600	0.0200	0.4503	0.0434	0.0167	8	0.20	311.99	0
311	Sodium (%)	0423	0.4680	0.0120	0.4503	0.0434	0.0167	8	0.37	311.33	0
311	Sodium (%)	0563	0.4754	0.0138	0.4503	0.0434	0.0167	8	0.53	311.33	0
311	Sodium (%)	0527	0.5885	0.0014	0.4503	0.0434	0.0167	8	2.91	311.33	0
321	Acid Soluble Zn (%)	0260	0.0016	0.0006	0.0070	0.0014	0.0154	28	-3.97	321.33	0
321	Acid Soluble Zn (%)	0234	0.0052	0.0004	0.0070	0.0014	0.0154	28	-1.33	321.30	0
321	Acid Soluble Zn (%)	0476	0.0053	0.0001	0.0070	0.0014	0.0154	28	-1.29	321.99	0
321	Acid Soluble Zn (%)	0534	0.0058	0.0002	0.0070	0.0014	0.0154	28	-0.89	321.00	0
321	Acid Soluble Zn (%)	0389	0.0058	0.0002	0.0070	0.0014	0.0154	28	-0.89	321.99	0
321	Acid Soluble Zn (%)	0423	0.0060	0.0000	0.0070	0.0014	0.0154	28	-0.74	321.32	0
321	Acid Soluble Zn (%)	0136	0.0060	0.0006	0.0070	0.0014	0.0154	28	-0.74	321.33	0
321	Acid Soluble Zn (%)	0550	0.0064	0.0005	0.0070	0.0014	0.0154	28	-0.48	321.00	0
321	Acid Soluble Zn (%)	0220	0.0064	0.0006	0.0070	0.0014	0.0154	28	-0.45	321.32	0
321	Acid Soluble Zn (%)	0494	0.0065	0.0006	0.0070	0.0014	0.0154	28	-0.37	321.33	0
321	Acid Soluble Zn (%)	0524	0.0066	0.0011	0.0070	0.0014	0.0154	28	-0.34	321.99	0
321	Acid Soluble Zn (%)	0368	0.0068	0.0001	0.0070	0.0014	0.0154	28	-0.19	321.99	0
321	Acid Soluble Zn (%)	0405	0.0068	0.0003	0.0070	0.0014	0.0154	28	-0.19	321.99	0
321	Acid Soluble Zn (%)	0394	0.0068	0.0000	0.0070	0.0014	0.0154	28	-0.15	321.32	0
321	Acid Soluble Zn (%)	0538	0.0070	0.0001	0.0070	0.0014	0.0154	28	-0.04	321.00	0
321	Acid Soluble Zn (%)	0553	0.0070	0.0000	0.0070	0.0014	0.0154	28	-0.01	321.00	0
321	Acid Soluble Zn (%)	0527	0.0072	0.0001	0.0070	0.0014	0.0154	28	0.10	321.33	0
321	Acid Soluble Zn (%)	0035	0.0072	0.0000	0.0070	0.0014	0.0154	28	0.14	321.30	0
321	Acid Soluble Zn (%)	0515	0.0073	0.0011	0.0070	0.0014	0.0154	28	0.18	321.33	0
321	Acid Soluble Zn (%)	0535	0.0073	0.0002	0.0070	0.0014	0.0154	28	0.21	321.00	0
321	Acid Soluble Zn (%)	0539	0.0074	0.0001	0.0070	0.0014	0.0154	28	0.25	321.00	0
321	Acid Soluble Zn (%)	0563	0.0078	0.0005	0.0070	0.0014	0.0154	28	0.54	321.33	0
321	Acid Soluble Zn (%)	0255	0.0085	0.0030	0.0070	0.0014	0.0154	28	1.09	321.30	0
321	Acid Soluble Zn (%)	0043	0.0085	0.0010	0.0070	0.0014	0.0154	28	1.09	321.33	0
321	Acid Soluble Zn (%)	0543	0.0095	0.0010	0.0070	0.0014	0.0154	28	1.83	321.33	0
321	Acid Soluble Zn (%)	0096	0.0100	0.0000	0.0070	0.0014	0.0154	28	2.19	321.30	0
321	Acid Soluble Zn (%)	0472	0.0150	0.0100	0.0070	0.0014	0.0154	28	5.86	321.30	0
321	Acid Soluble Zn (%)	0552	0.3550	0.4100	0.0070	0.0014	0.0154	28	255.37	321.30	0
321	Acid Soluble Zn (%)	0515	61.31	1.463	0.0070	0.0014	0.0154	28	44988.86	321.99	2
321	Acid Soluble Zn (%)	0354	< 0.01		0.0070	0.0014	0.0154	28		321.30	5

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. Robust statistics not used if < 6 labs used in calculations, in this case the Z Scores are grey and included for information only. 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.