

# magruder fertilizer

## check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Analyte Proficiency From All Labs

Sample # 210611

Grade 19-19-19

### Statistical Summary

# Analytes: 33

# Labs Reporting: 88

Issue Date : 07/31/2021

Analyte Code	Analyte Sample # 210611	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Analyte Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	Analyte IA Ratio	Average Range (R-bar)	Horwitz %RSD
001	Ammoniacal N (%)	29	28	4.731	1.540	4.352		0.4629	0.1094	10.64%		0.0817	3.21%
002	Nitrate N (%)	1		0.0110									
005	Urea N (%)	18	18	14.70	1.257	14.91		0.4144	0.1221	2.78%		0.1328	2.59%
007	Urea (%)	4	4	14.86	0.0382	14.86		0.0382	0.0239	0.26%		0.0975	2.59%
010	Total N (19%)	78	77	19.34	0.3492	19.34	0.7201	0.3046	0.0434	1.57%	0.99	0.1497	2.27%
020	Total P2O5 (%)	47	44	19.38	4.929	18.72		0.5057	0.0953	2.70%		0.1827	2.31%
030	Citrate Insoluble P2O5 (%)	1		19.06									
041	Direct Available P2O5 (19%)	55	53	19.20	4.411	18.61	0.7131	0.3643	0.0625	1.96%	1.19	0.2282	2.32%
048	Water Soluble P2O5 (%)	4	4	16.72	0.4323	16.72		0.4323	0.2702	2.59%		0.3245	2.45%
050	Soluble K2O (19%)	86	85	18.82	0.7585	18.89	1.0410	0.5329	0.0723	2.82%	1.19	0.3616	2.30%
060	Water (Free) (%)	1		0.9250									
101	Acid Soluble Ca (%)	12	11	0.2135	0.1688	0.1913	0.2096	0.0738	0.0278	38.56%	0.82	0.0100	5.13%
121	Acid Soluble Mg (%)	15	14	0.6129	0.1804	0.6478	0.2324	0.0758	0.0253	11.71%	0.76	0.0033	4.27%
143	Elemental S (%)	5	5	0.5066	0.2228	0.5066		0.2228	0.1245	43.97%		0.0152	4.43%
145	Sulfate S, HCl soluble (%)	6	6	0.6913	0.3199	0.5883		0.0880	0.0449	14.96%		0.0193	4.33%
148	Total S (%)	13	11	228.6	822.3	0.5967	0.2298	0.0356	0.0134	5.96%	0.36	0.0137	4.32%
149	S - HNO3 soluble (%)	2	2	0.5723	0.0032								
151	Acid Soluble As (ppm)	14	9	1.132	1.331	1.023		0.4225	0.1760	41.29%		0.0537	15.94%
165	Acid Soluble B (%)	8	6	0.0044	0.0026	0.0041	0.0036	0.0010	0.0005	24.88%	0.65	0.0003	9.16%
181	Acid Soluble Cd (ppm)	19	18	19.29	5.307	20.17		3.031	0.8929	15.02%		0.6821	10.18%
190	Water Soluble Cl (%)	2	1	7.253	10.12								
191	Acid Soluble Cr (ppm)	17	16	101.8	14.93	102.9		13.85	4.327	13.45%		1.344	7.96%
202	Acid Soluble Co (ppm)	15	12	1.325	1.231	0.9639	1.2892	0.4320	0.1559	44.82%	0.78	0.1227	16.09%
221	Acid Soluble Cu (%)	15	3	0.0019	0.0034	0.0020	0.0052	0.0014	0.0010	70.15%	0.62	0.0006	10.22%
241	Acid Soluble Fe (%)	15	14	0.6068	0.1849	0.5584	0.0608	0.0481	0.0161	8.61%	1.84	0.0087	4.37%
251	Acid Soluble Pb (ppm)	17	12	2.615	4.794	1.021		1.211	0.4372	118.68%		0.2129	15.95%
261	Acid Soluble Mn (%)	15	13	0.0108	0.0075	0.0093	0.0059	0.0011	0.0004	11.92%	0.43	0.0004	8.09%
281	Acid Soluble Hg (ppm)	7	1	0.0357	0.0570	0.0093		0.0011	0.0014	11.92%		0.0451	22.00%
289	Acid Soluble Mo (ppm)	16	15	5.904	4.770	4.622	2.3866	1.969	0.6354	42.59%	1.92	0.5019	12.70%
291	Acid Soluble Ni (ppm)	19	19	18.51	5.152	18.33		4.483	1.286	24.45%		0.6514	10.33%
301	Acid Soluble Se (ppm)	11	6	1.609	2.674	1.023		0.5443	0.2778	53.20%		0.3784	15.94%
311	Sodium (%)	11	9	0.9628	1.993	0.4403	0.0490	0.0403	0.0168	9.16%	1.92	0.0047	4.53%
321	Acid Soluble Zn (%)	29	28	10.70	57.46	0.0325	0.0083	0.0030	0.0007	9.08%	0.83	0.0012	6.70%

Analyte Code	Analyte Sample # 210611	# 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
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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.

# magruder fertilizer

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STRIVING FOR EXCELLENCE IN ANALYSIS

Analyte Proficiency From All Labs

Sample # 210611

Grade 19-19-19

### Lab Values

# Analytes: 33

# Labs Reporting: 88

Issue Date : 07/31/2021

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 (%)	0230	3.680	0.0200	4.352	0.4629	0.0817	28	-1.45	001.10	0
001	Ammoniacal N (%)	0423	3.790	0.2400	4.352	0.4629	0.0817	28	-1.21	001.99	0
001	Ammoniacal N (%)	0550	3.870	0.0600	4.352	0.4629	0.0817	28	-1.04	001.99	0
001	Ammoniacal N (%)	0394	3.917	0.1140	4.352	0.4629	0.0817	28	-0.94	001.99	0
001	Ammoniacal N (%)	0532	3.980	0.0800	4.352	0.4629	0.0817	28	-0.80	001.99	0
001	Ammoniacal N (%)	0231	4.070	0.0800	4.352	0.4629	0.0817	28	-0.61	001.99	0
001	Ammoniacal N (%)	0444	4.090	0.0600	4.352	0.4629	0.0817	28	-0.57	001.10	0
001	Ammoniacal N (%)	0558	4.090	0.0800	4.352	0.4629	0.0817	28	-0.57	001.99	0
001	Ammoniacal N (%)	0538	4.135	0.0300	4.352	0.4629	0.0817	28	-0.47	001.99	0
001	Ammoniacal N (%)	0553	4.170	0.0400	4.352	0.4629	0.0817	28	-0.39	001.99	0
001	Ammoniacal N (%)	0565	4.200	0.1000	4.352	0.4629	0.0817	28	-0.33	001.99	0
001	Ammoniacal N (%)	0574	4.210	0.0200	4.352	0.4629	0.0817	28	-0.31	001.10	0
001	Ammoniacal N (%)	0564	4.215	0.0300	4.352	0.4629	0.0817	28	-0.30	001.99	0
001	Ammoniacal N (%)	0451	4.240	0.1200	4.352	0.4629	0.0817	28	-0.24	001.10	0
001	Ammoniacal N (%)	0567	4.250	0.1000	4.352	0.4629	0.0817	28	-0.22	001.99	0
001	Ammoniacal N (%)	0563	4.260	0.1200	4.352	0.4629	0.0817	28	-0.20	001.10	0
001	Ammoniacal N (%)	0559	4.295	0.0100	4.352	0.4629	0.0817	28	-0.12	001.99	0
001	Ammoniacal N (%)	0389	4.305	0.0300	4.352	0.4629	0.0817	28	-0.10	001.10	0
001	Ammoniacal N (%)	0549	4.470	0.0200	4.352	0.4629	0.0817	28	0.25	001.99	0
001	Ammoniacal N (%)	0562	4.475	0.1500	4.352	0.4629	0.0817	28	0.26	001.99	0
001	Ammoniacal N (%)	0569	4.490	0.0200	4.352	0.4629	0.0817	28	0.30	001.99	0
001	Ammoniacal N (%)	0027	4.555	0.0100	4.352	0.4629	0.0817	28	0.44	001.99	0
001	Ammoniacal N (%)	0506	4.875	0.2500	4.352	0.4629	0.0817	28	1.13	001.99	0
001	Ammoniacal N (%)	0535	5.050	0.1000	4.352	0.4629	0.0817	28	1.51	001.99	0
001	Ammoniacal N (%)	0220	5.075	0.0500	4.352	0.4629	0.0817	28	1.56	001.99	0
001	Ammoniacal N (%)	0529	5.156	0.2133	4.352	0.4629	0.0817	28	1.74	001.99	0
001	Ammoniacal N (%)	0255	5.190	0.0600	4.352	0.4629	0.0817	28	1.81	001.99	0
001	Ammoniacal N (%)	0419	10.86	0.0800	4.352	0.4629	0.0817	28	14.06	001.99	0
001	Ammoniacal N (%)	0117	9.231	2.165	4.352	0.4629	0.0817	28	10.54	001.10	1
002	Nitrate N (%)	0553	0.0110	0.0000				1		002.99	0
005	Urea N (%)	0230	9.980	0.2400	14.91	0.4144	0.1328	18	-11.90	005.00	0
005	Urea N (%)	0389	14.11	0.0500	14.91	0.4144	0.1328	18	-1.95	005.00	0
005	Urea N (%)	0558	14.50	0.1300	14.91	0.4144	0.1328	18	-1.01	005.99	0
005	Urea N (%)	0029	14.66	0.2900	14.91	0.4144	0.1328	18	-0.62	005.99	0
005	Urea N (%)	0562	14.68	0.0500	14.91	0.4144	0.1328	18	-0.57	005.99	0
005	Urea N (%)	0538	14.83	0.0600	14.91	0.4144	0.1328	18	-0.20	005.99	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				
005	Urea N (%)	0567	14.83	0.1000	14.91	0.4144	0.1328	18	-0.20	005.99	0
005	Urea N (%)	0564	14.86	0.0400	14.91	0.4144	0.1328	18	-0.13	005.99	0
005	Urea N (%)	0574	14.87	0.0300	14.91	0.4144	0.1328	18	-0.12	005.00	0
005	Urea N (%)	0559	14.90	0.0100	14.91	0.4144	0.1328	18	-0.04	005.99	0
005	Urea N (%)	0506	14.90	0.2000	14.91	0.4144	0.1328	18	-0.03	005.99	0
005	Urea N (%)	0565	14.90	0.0400	14.91	0.4144	0.1328	18	-0.03	005.99	0
005	Urea N (%)	0535	15.05	0.1000	14.91	0.4144	0.1328	18	0.33	005.99	0
005	Urea N (%)	0550	15.25	0.0200	14.91	0.4144	0.1328	18	0.81	005.99	0
005	Urea N (%)	0394	15.27	0.3600	14.91	0.4144	0.1328	18	0.86	005.10	0
005	Urea N (%)	0405	15.31	0.5100	14.91	0.4144	0.1328	18	0.95	005.99	0
005	Urea N (%)	0532	15.55	0.1600	14.91	0.4144	0.1328	18	1.54	005.99	0
005	Urea N (%)	0027	16.17	0.0000	14.91	0.4144	0.1328	18	3.03	005.99	0
007	Urea (%)	0549	14.82	0.0400	14.86	0.0382	0.0975	4	-0.95	007.99	0
007	Urea (%)	0220	14.85	0.2300	14.86	0.0382	0.0975	4	-0.29	007.99	0
007	Urea (%)	0569	14.85	0.0600	14.86	0.0382	0.0975	4	-0.16	007.99	0
007	Urea (%)	0444	14.91	0.0600	14.86	0.0382	0.0975	4	1.41	007.00	0
010	Total N (19%)	0529	18.33†	0.0721	19.34	0.3046	0.1497	77	-3.30	010.99	0
010	Total N (19%)	0516	18.55†	0.5000	19.34	0.3046	0.1497	77	-2.59	010.60	0
010	Total N (19%)	0558	18.59†	0.0500	19.34	0.3046	0.1497	77	-2.47	010.99	0
010	Total N (19%)	0389	18.76	0.1300	19.34	0.3046	0.1497	77	-1.92	010.60	0
010	Total N (19%)	0568	18.90	0.4000	19.34	0.3046	0.1497	77	-1.44	010.12	0
010	Total N (19%)	0117	18.92	0.1275	19.34	0.3046	0.1497	77	-1.36	010.12	0
010	Total N (19%)	0538	18.97	0.0300	19.34	0.3046	0.1497	77	-1.23	010.99	0
010	Total N (19%)	0534	18.98	0.0500	19.34	0.3046	0.1497	77	-1.19	010.60	0
010	Total N (19%)	0444	19.00	0.0000	19.34	0.3046	0.1497	77	-1.11	010.60	0
010	Total N (19%)	0571	19.00	0.1000	19.34	0.3046	0.1497	77	-1.11	010.99	0
010	Total N (19%)	0572	19.01	0.0300	19.34	0.3046	0.1497	77	-1.09	010.12	0
010	Total N (19%)	0102	19.01	0.0400	19.34	0.3046	0.1497	77	-1.08	010.60	0
010	Total N (19%)	0540	19.02	0.0600	19.34	0.3046	0.1497	77	-1.05	010.11	0
010	Total N (19%)	0531	19.07	0.0200	19.34	0.3046	0.1497	77	-0.88	010.11	0
010	Total N (19%)	0536	19.08	0.1000	19.34	0.3046	0.1497	77	-0.85	010.11	0
010	Total N (19%)	0574	19.09	0.0700	19.34	0.3046	0.1497	77	-0.83	010.99	0
010	Total N (19%)	0535	19.10	0.2000	19.34	0.3046	0.1497	77	-0.78	010.11	0
010	Total N (19%)	0157	19.10	0.0000	19.34	0.3046	0.1497	77	-0.78	010.60	0
010	Total N (19%)	0486	19.12	0.0100	19.34	0.3046	0.1497	77	-0.73	010.60	0
010	Total N (19%)	0423	19.12	0.0600	19.34	0.3046	0.1497	77	-0.72	010.60	0
010	Total N (19%)	0550	19.12	0.0400	19.34	0.3046	0.1497	77	-0.72	010.60	0
010	Total N (19%)	0564	19.13	0.0300	19.34	0.3046	0.1497	77	-0.70	010.99	0
010	Total N (19%)	0562	19.15	0.2000	19.34	0.3046	0.1497	77	-0.62	010.99	0
010	Total N (19%)	0072	19.17	0.1800	19.34	0.3046	0.1497	77	-0.55	010.60	0
010	Total N (19%)	0567	19.17	0.0600	19.34	0.3046	0.1497	77	-0.55	010.99	0
010	Total N (19%)	0025	19.18	0.4100	19.34	0.3046	0.1497	77	-0.54	010.60	0
010	Total N (19%)	0559	19.19	0.0100	19.34	0.3046	0.1497	77	-0.50	010.99	0
010	Total N (19%)	0117	19.20	0.0000	19.34	0.3046	0.1497	77	-0.45	010.60	0
010	Total N (19%)	0565	19.20	0.1000	19.34	0.3046	0.1497	77	-0.45	010.99	0
010	Total N (19%)	0234	19.22	0.0200	19.34	0.3046	0.1497	77	-0.39	010.60	0
010	Total N (19%)	0230	19.25	0.3000	19.34	0.3046	0.1497	77	-0.29	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 (19%)	0356	19.25	0.1100	19.34	0.3046	0.1497	77	-0.28	010.60	0
010	Total N (19%)	0231	19.30	0.0700	19.34	0.3046	0.1497	77	-0.14	010.60	0
010	Total N (19%)	0354	19.30	0.2000	19.34	0.3046	0.1497	77	-0.13	010.60	0
010	Total N (19%)	0136	19.30	0.0000	19.34	0.3046	0.1497	77	-0.13	010.60	0
010	Total N (19%)	0561	19.33	0.2300	19.34	0.3046	0.1497	77	-0.04	010.60	0
010	Total N (19%)	0513	19.33	0.0900	19.34	0.3046	0.1497	77	-0.04	010.99	0
010	Total N (19%)	0049	19.33	0.0200	19.34	0.3046	0.1497	77	-0.03	010.60	0
010	Total N (19%)	0029	19.34	0.1200	19.34	0.3046	0.1497	77	0.01	010.60	0
010	Total N (19%)	0055	19.37	0.4200	19.34	0.3046	0.1497	77	0.10	010.60	0
010	Total N (19%)	0177	19.37	0.2400	19.34	0.3046	0.1497	77	0.10	010.60	0
010	Total N (19%)	0169	19.37	0.1000	19.34	0.3046	0.1497	77	0.10	010.60	0
010	Total N (19%)	0043	19.38	0.0400	19.34	0.3046	0.1497	77	0.14	010.60	0
010	Total N (19%)	0260	19.38	0.2400	19.34	0.3046	0.1497	77	0.14	010.60	0
010	Total N (19%)	0405	19.38	0.0200	19.34	0.3046	0.1497	77	0.14	010.60	0
010	Total N (19%)	0521	19.40	0.0000	19.34	0.3046	0.1497	77	0.20	010.60	0
010	Total N (19%)	0220	19.45	0.0300	19.34	0.3046	0.1497	77	0.35	010.60	0
010	Total N (19%)	0018	19.45	0.1000	19.34	0.3046	0.1497	77	0.37	010.60	0
010	Total N (19%)	0233	19.46	0.3800	19.34	0.3046	0.1497	77	0.40	010.60	0
010	Total N (19%)	0472	19.49	0.0100	19.34	0.3046	0.1497	77	0.48	010.60	0
010	Total N (19%)	0035	19.50	0.2000	19.34	0.3046	0.1497	77	0.53	010.60	0
010	Total N (19%)	0040	19.50	0.4000	19.34	0.3046	0.1497	77	0.53	010.60	0
010	Total N (19%)	0095	19.51	0.6400	19.34	0.3046	0.1497	77	0.56	010.60	0
010	Total N (19%)	0523	19.51	0.0200	19.34	0.3046	0.1497	77	0.56	010.60	0
010	Total N (19%)	0390	19.52	0.1900	19.34	0.3046	0.1497	77	0.58	010.60	0
010	Total N (19%)	0422	19.54	0.4000	19.34	0.3046	0.1497	77	0.66	010.60	0
010	Total N (19%)	0324	19.55	0.1000	19.34	0.3046	0.1497	77	0.69	010.60	0
010	Total N (19%)	0292	19.56	0.0100	19.34	0.3046	0.1497	77	0.71	010.60	0
010	Total N (19%)	0034	19.56	0.1200	19.34	0.3046	0.1497	77	0.73	010.60	0
010	Total N (19%)	0073	19.57	0.0800	19.34	0.3046	0.1497	77	0.76	010.60	0
010	Total N (19%)	0494	19.57	0.0400	19.34	0.3046	0.1497	77	0.76	010.60	0
010	Total N (19%)	0451	19.59	0.1600	19.34	0.3046	0.1497	77	0.83	010.60	0
010	Total N (19%)	0377	19.60	0.1700	19.34	0.3046	0.1497	77	0.84	010.60	0
010	Total N (19%)	0086	19.60	0.3900	19.34	0.3046	0.1497	77	0.87	010.60	0
010	Total N (19%)	0106	19.61	0.0600	19.34	0.3046	0.1497	77	0.89	010.60	0
010	Total N (19%)	0527	19.63	0.1973	19.34	0.3046	0.1497	77	0.95	010.60	0
010	Total N (19%)	0042	19.65	0.1000	19.34	0.3046	0.1497	77	1.02	010.60	0
010	Total N (19%)	0542	19.66	0.2600	19.34	0.3046	0.1497	77	1.05	010.60	0
010	Total N (19%)	0506	19.70	0.2000	19.34	0.3046	0.1497	77	1.19	010.99	0
010	Total N (19%)	0255	19.72	0.4290	19.34	0.3046	0.1497	77	1.25	010.60	0
010	Total N (19%)	0131	19.75	0.0870	19.34	0.3046	0.1497	77	1.34	010.60	0
010	Total N (19%)	0307	19.78	0.1180	19.34	0.3046	0.1497	77	1.45	010.60	0
010	Total N (19%)	0547	19.98	0.0900	19.34	0.3046	0.1497	77	2.09	010.60	0
010	Total N (19%)	0563	20.04	0.2900	19.34	0.3046	0.1497	77	2.29	010.99	0
010	Total N (19%)	0476	20.07‡	0.3040	19.34	0.3046	0.1497	77	2.42	010.99	0
010	Total N (19%)	0325	20.11‡	0.5300	19.34	0.3046	0.1497	77	2.52	010.60	0
010	Total N (19%)	0485	20.44‡	0.1200	19.34	0.3046	0.1497	77	3.62	010.60	0
010	Total N (19%)	0028	19.23	0.7000	19.34	0.3046	0.1497	77	-0.36	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				
020	Total P2O5 (%)	0255	16.54	0.2920	18.72	0.5057	0.1827	44	-4.30	020.50	0
020	Total P2O5 (%)	0521	16.60	0.0000	18.72	0.5057	0.1827	44	-4.19	020.50	0
020	Total P2O5 (%)	0472	17.21	0.0100	18.72	0.5057	0.1827	44	-2.99	020.50	0
020	Total P2O5 (%)	0390	17.45	0.1000	18.72	0.5057	0.1827	44	-2.51	020.50	0
020	Total P2O5 (%)	0389	17.87	0.1100	18.72	0.5057	0.1827	44	-1.68	020.50	0
020	Total P2O5 (%)	0529	17.94	0.1554	18.72	0.5057	0.1827	44	-1.54	020.99	0
020	Total P2O5 (%)	0451	18.13	0.0400	18.72	0.5057	0.1827	44	-1.16	020.50	0
020	Total P2O5 (%)	0157	18.15	0.9000	18.72	0.5057	0.1827	44	-1.12	020.50	0
020	Total P2O5 (%)	0523	18.15	0.7000	18.72	0.5057	0.1827	44	-1.12	020.50	0
020	Total P2O5 (%)	0394	18.31	0.0890	18.72	0.5057	0.1827	44	-0.81	020.20	0
020	Total P2O5 (%)	0307	18.35	0.1000	18.72	0.5057	0.1827	44	-0.73	020.50	0
020	Total P2O5 (%)	0558	18.50	0.2000	18.72	0.5057	0.1827	44	-0.43	020.20	0
020	Total P2O5 (%)	0444	18.55	0.4900	18.72	0.5057	0.1827	44	-0.34	020.50	0
020	Total P2O5 (%)	0562	18.58	0.2500	18.72	0.5057	0.1827	44	-0.28	020.99	0
020	Total P2O5 (%)	0561	18.58	0.0400	18.72	0.5057	0.1827	44	-0.27	020.20	0
020	Total P2O5 (%)	0476	18.60	0.1766	18.72	0.5057	0.1827	44	-0.24	020.20	0
020	Total P2O5 (%)	0513	18.62	0.0500	18.72	0.5057	0.1827	44	-0.20	020.99	0
020	Total P2O5 (%)	0114	18.65	0.2700	18.72	0.5057	0.1827	44	-0.14	020.10	0
020	Total P2O5 (%)	0035	18.65	0.1000	18.72	0.5057	0.1827	44	-0.13	020.40	0
020	Total P2O5 (%)	0042	18.65	0.1000	18.72	0.5057	0.1827	44	-0.13	020.50	0
020	Total P2O5 (%)	0231	18.68	0.0400	18.72	0.5057	0.1827	44	-0.07	020.20	0
020	Total P2O5 (%)	0234	18.81	0.0200	18.72	0.5057	0.1827	44	0.18	020.50	0
020	Total P2O5 (%)	0027	18.82	0.0800	18.72	0.5057	0.1827	44	0.20	020.20	0
020	Total P2O5 (%)	0292	18.85	0.0400	18.72	0.5057	0.1827	44	0.26	020.20	0
020	Total P2O5 (%)	0169	18.89	0.0500	18.72	0.5057	0.1827	44	0.33	020.20	0
020	Total P2O5 (%)	0547	18.90	0.2000	18.72	0.5057	0.1827	44	0.36	020.20	0
020	Total P2O5 (%)	0157	18.95	0.1000	18.72	0.5057	0.1827	44	0.46	020.10	0
020	Total P2O5 (%)	0169	18.98	0.1600	18.72	0.5057	0.1827	44	0.52	020.50	0
020	Total P2O5 (%)	0444	19.00	0.9400	18.72	0.5057	0.1827	44	0.56	020.10	0
020	Total P2O5 (%)	0527	19.00	0.0778	18.72	0.5057	0.1827	44	0.57	020.50	0
020	Total P2O5 (%)	0405	19.04	0.0400	18.72	0.5057	0.1827	44	0.64	020.20	0
020	Total P2O5 (%)	0564	19.05	0.0400	18.72	0.5057	0.1827	44	0.66	020.99	0
020	Total P2O5 (%)	0356	19.05	0.4500	18.72	0.5057	0.1827	44	0.66	020.20	0
020	Total P2O5 (%)	0559	19.06	0.0200	18.72	0.5057	0.1827	44	0.68	020.99	0
020	Total P2O5 (%)	0567	19.06	0.0200	18.72	0.5057	0.1827	44	0.68	020.99	0
020	Total P2O5 (%)	0574	19.07	0.0400	18.72	0.5057	0.1827	44	0.70	020.10	0
020	Total P2O5 (%)	0565	19.09	0.0400	18.72	0.5057	0.1827	44	0.74	020.99	0
020	Total P2O5 (%)	0423	19.13	0.0500	18.72	0.5057	0.1827	44	0.81	020.50	0
020	Total P2O5 (%)	0571	19.16	0.0900	18.72	0.5057	0.1827	44	0.87	020.20	0
020	Total P2O5 (%)	0534	19.22	0.2100	18.72	0.5057	0.1827	44	0.99	020.20	0
020	Total P2O5 (%)	0542	19.25	0.2500	18.72	0.5057	0.1827	44	1.04	020.50	0
020	Total P2O5 (%)	0550	19.36	0.3100	18.72	0.5057	0.1827	44	1.26	020.20	0
020	Total P2O5 (%)	0324	19.75	0.5000	18.72	0.5057	0.1827	44	2.04	020.20	0
020	Total P2O5 (%)	0516	19.85	0.1000	18.72	0.5057	0.1827	44	2.24	020.50	0
020	Total P2O5 (%)	0515	18.27	2.709	18.72	0.5057	0.1827	44	-0.87	020.99	1
020	Total P2O5 (%)	0422	20.40	2.600	18.72	0.5057	0.1827	44	3.33	020.50	1
020	Total P2O5 (%)	0419	52.10	0.2600	18.72	0.5057	0.1827	44	66.02	020.20	2

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				
030	Citrate Insoluble P2O5 (%)	0444	19.06	0.5400				1		030.10	0
041	Direct Available P2O5 (19%)	0230	16.70†	0.8000	18.61	0.3643	0.2282	53	-5.25	041.21	0
041	Direct Available P2O5 (19%)	0106	17.35†	1.060	18.61	0.3643	0.2282	53	-3.47	041.21	0
041	Direct Available P2O5 (19%)	0102	17.95	0.0400	18.61	0.3643	0.2282	53	-1.82	041.10	0
041	Direct Available P2O5 (19%)	0095	18.02	0.4800	18.61	0.3643	0.2282	53	-1.63	041.40	0
041	Direct Available P2O5 (19%)	0486	18.10	0.0600	18.61	0.3643	0.2282	53	-1.41	041.51	0
041	Direct Available P2O5 (19%)	0563	18.11	0.6100	18.61	0.3643	0.2282	53	-1.39	041.21	0
041	Direct Available P2O5 (19%)	0072	18.16	0.0600	18.61	0.3643	0.2282	53	-1.24	041.51	0
041	Direct Available P2O5 (19%)	0549	18.19	0.0400	18.61	0.3643	0.2282	53	-1.16	041.99	0
041	Direct Available P2O5 (19%)	0569	18.20	0.0300	18.61	0.3643	0.2282	53	-1.15	041.99	0
041	Direct Available P2O5 (19%)	0117	18.28	0.1335	18.61	0.3643	0.2282	53	-0.91	041.51	0
041	Direct Available P2O5 (19%)	0494	18.30	1.070	18.61	0.3643	0.2282	53	-0.87	041.51	0
041	Direct Available P2O5 (19%)	0506	18.35	0.5000	18.61	0.3643	0.2282	53	-0.72	041.99	0
041	Direct Available P2O5 (19%)	0070	18.40	0.0000	18.61	0.3643	0.2282	53	-0.58	041.50	0
041	Direct Available P2O5 (19%)	0136	18.40	0.2000	18.61	0.3643	0.2282	53	-0.58	041.51	0
041	Direct Available P2O5 (19%)	0029	18.45	0.1500	18.61	0.3643	0.2282	53	-0.46	041.40	0
041	Direct Available P2O5 (19%)	0117	18.45	0.3000	18.61	0.3643	0.2282	53	-0.45	041.11	0
041	Direct Available P2O5 (19%)	0562	18.45	0.2000	18.61	0.3643	0.2282	53	-0.45	041.99	0
041	Direct Available P2O5 (19%)	0494	18.48	0.8200	18.61	0.3643	0.2282	53	-0.36	041.10	0
041	Direct Available P2O5 (19%)	0553	18.50	0.0000	18.61	0.3643	0.2282	53	-0.31	041.20	0
041	Direct Available P2O5 (19%)	0040	18.50	0.2000	18.61	0.3643	0.2282	53	-0.31	041.51	0
041	Direct Available P2O5 (19%)	0513	18.51	0.0300	18.61	0.3643	0.2282	53	-0.29	041.11	0
041	Direct Available P2O5 (19%)	0231	18.54	0.1100	18.61	0.3643	0.2282	53	-0.21	041.21	0
041	Direct Available P2O5 (19%)	0233	18.56	0.4200	18.61	0.3643	0.2282	53	-0.14	041.51	0
041	Direct Available P2O5 (19%)	0049	18.57	0.0600	18.61	0.3643	0.2282	53	-0.12	041.11	0
041	Direct Available P2O5 (19%)	0072	18.58	0.0080	18.61	0.3643	0.2282	53	-0.09	041.11	0
041	Direct Available P2O5 (19%)	0485	18.60	0.1500	18.61	0.3643	0.2282	53	-0.05	041.11	0
041	Direct Available P2O5 (19%)	0025	18.60	0.2000	18.61	0.3643	0.2282	53	-0.03	041.51	0
041	Direct Available P2O5 (19%)	0544	18.61	0.1100	18.61	0.3643	0.2282	53	-0.02	041.21	0
041	Direct Available P2O5 (19%)	0055	18.65	0.0800	18.61	0.3643	0.2282	53	0.10	041.21	0
041	Direct Available P2O5 (19%)	0394	18.65	0.1270	18.61	0.3643	0.2282	53	0.11	041.21	0
041	Direct Available P2O5 (19%)	0177	18.68	0.0396	18.61	0.3643	0.2282	53	0.19	041.21	0
041	Direct Available P2O5 (19%)	0177	18.69	0.3189	18.61	0.3643	0.2282	53	0.22	041.10	0
041	Direct Available P2O5 (19%)	0354	18.70	0.0000	18.61	0.3643	0.2282	53	0.24	041.21	0
041	Direct Available P2O5 (19%)	0377	18.73	0.1200	18.61	0.3643	0.2282	53	0.32	041.51	0
041	Direct Available P2O5 (19%)	0472	18.79	0.9800	18.61	0.3643	0.2282	53	0.49	041.21	0
041	Direct Available P2O5 (19%)	0028	18.80	0.0600	18.61	0.3643	0.2282	53	0.52	041.40	0
041	Direct Available P2O5 (19%)	0532	18.80	0.2200	18.61	0.3643	0.2282	53	0.52	041.99	0
041	Direct Available P2O5 (19%)	0027	18.84	0.0200	18.61	0.3643	0.2282	53	0.63	041.20	0
041	Direct Available P2O5 (19%)	0535	18.85	0.1000	18.61	0.3643	0.2282	53	0.65	041.99	0
041	Direct Available P2O5 (19%)	0405	18.89	0.1700	18.61	0.3643	0.2282	53	0.75	041.21	0
041	Direct Available P2O5 (19%)	0538	18.91	0.1200	18.61	0.3643	0.2282	53	0.82	041.99	0
041	Direct Available P2O5 (19%)	0405	18.94	0.0700	18.61	0.3643	0.2282	53	0.89	041.11	0
041	Direct Available P2O5 (19%)	0220	18.94	0.0200	18.61	0.3643	0.2282	53	0.90	041.11	0
041	Direct Available P2O5 (19%)	0073	18.96	0.2700	18.61	0.3643	0.2282	53	0.94	041.11	0
041	Direct Available P2O5 (19%)	0055	18.98	0.1000	18.61	0.3643	0.2282	53	1.01	041.11	0
041	Direct Available P2O5 (19%)	0423	18.98	0.1400	18.61	0.3643	0.2282	53	1.01	041.51	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 (19%)	0536	19.00	0.0600	18.61	0.3643	0.2282	53	1.06	041.99	0
041	Direct Available P2O5 (19%)	0531	19.02	0.0100	18.61	0.3643	0.2282	53	1.11	041.99	0
041	Direct Available P2O5 (19%)	0405	19.03	0.0400	18.61	0.3643	0.2282	53	1.15	041.99	0
041	Direct Available P2O5 (19%)	0540	19.05	0.1500	18.61	0.3643	0.2282	53	1.19	041.99	0
041	Direct Available P2O5 (19%)	0043	19.27	0.0400	18.61	0.3643	0.2282	53	1.81	041.51	0
041	Direct Available P2O5 (19%)	0325	19.40‡	0.8000	18.61	0.3643	0.2282	53	2.16	041.50	0
041	Direct Available P2O5 (19%)	0034	19.49‡	0.2000	18.61	0.3643	0.2282	53	2.41	041.40	0
041	Direct Available P2O5 (19%)	0568	20.25‡	1.300	18.61	0.3643	0.2282	53	4.50	041.21	1
041	Direct Available P2O5 (19%)	0419	51.11‡	0.0400	18.61	0.3643	0.2282	53	89.22	041.20	2
048	Water Soluble P2O5 (%)	0394	16.28	0.1180	16.72	0.4323	0.3245	4	-1.01	048.20	0
048	Water Soluble P2O5 (%)	0513	16.63	0.0500	16.72	0.4323	0.3245	4	-0.21	048.99	0
048	Water Soluble P2O5 (%)	0444	16.65	1.080	16.72	0.4323	0.3245	4	-0.16	048.10	0
048	Water Soluble P2O5 (%)	0444	17.32	0.0500	16.72	0.4323	0.3245	4	1.38	048.50	0
050	Soluble K2O (19%)	0255	16.08†	0.0610	18.89	0.5329	0.3616	85	-5.27	050.99	0
050	Soluble K2O (19%)	0476	17.02†	0.1859	18.89	0.5329	0.3616	85	-3.50	050.99	0
050	Soluble K2O (19%)	0390	17.05†	0.3000	18.89	0.5329	0.3616	85	-3.44	050.50	0
050	Soluble K2O (19%)	0523	17.30†	1.200	18.89	0.5329	0.3616	85	-2.97	050.99	0
050	Soluble K2O (19%)	0516	17.50†	0.0000	18.89	0.5329	0.3616	85	-2.60	050.99	0
050	Soluble K2O (19%)	0472	17.65†	0.0700	18.89	0.5329	0.3616	85	-2.33	050.31	0
050	Soluble K2O (19%)	0307	17.75†	0.9000	18.89	0.5329	0.3616	85	-2.13	050.99	0
050	Soluble K2O (19%)	0389	18.03	0.6000	18.89	0.5329	0.3616	85	-1.61	050.99	0
050	Soluble K2O (19%)	0233	18.08	1.060	18.89	0.5329	0.3616	85	-1.51	050.52	0
050	Soluble K2O (19%)	0025	18.20	0.6000	18.89	0.5329	0.3616	85	-1.29	050.52	0
050	Soluble K2O (19%)	0325	18.20	2.200	18.89	0.5329	0.3616	85	-1.29	050.99	0
050	Soluble K2O (19%)	0040	18.30	0.6000	18.89	0.5329	0.3616	85	-1.10	050.30	0
050	Soluble K2O (19%)	0558	18.35	0.3000	18.89	0.5329	0.3616	85	-1.00	050.99	0
050	Soluble K2O (19%)	0506	18.40	0.0000	18.89	0.5329	0.3616	85	-0.91	050.99	0
050	Soluble K2O (19%)	0177	18.43	0.0332	18.89	0.5329	0.3616	85	-0.86	050.99	0
050	Soluble K2O (19%)	0423	18.44	0.2300	18.89	0.5329	0.3616	85	-0.85	050.52	0
050	Soluble K2O (19%)	0106	18.47	1.410	18.89	0.5329	0.3616	85	-0.79	050.50	0
050	Soluble K2O (19%)	0055	18.48	0.0100	18.89	0.5329	0.3616	85	-0.77	050.00	0
050	Soluble K2O (19%)	0072	18.48	0.4179	18.89	0.5329	0.3616	85	-0.75	050.00	0
050	Soluble K2O (19%)	0043	18.55	0.2600	18.89	0.5329	0.3616	85	-0.63	050.52	0
050	Soluble K2O (19%)	0117	18.60	0.2440	18.89	0.5329	0.3616	85	-0.54	050.52	0
050	Soluble K2O (19%)	0070	18.60	0.2000	18.89	0.5329	0.3616	85	-0.54	050.51	0
050	Soluble K2O (19%)	0377	18.62	0.7300	18.89	0.5329	0.3616	85	-0.51	050.52	0
050	Soluble K2O (19%)	0095	18.62	0.5300	18.89	0.5329	0.3616	85	-0.51	050.62	0
050	Soluble K2O (19%)	0055	18.64	0.1000	18.89	0.5329	0.3616	85	-0.46	050.50	0
050	Soluble K2O (19%)	0049	18.65	0.1900	18.89	0.5329	0.3616	85	-0.45	050.00	0
050	Soluble K2O (19%)	0444	18.65	0.5000	18.89	0.5329	0.3616	85	-0.44	050.00	0
050	Soluble K2O (19%)	0157	18.65	0.3000	18.89	0.5329	0.3616	85	-0.44	050.99	0
050	Soluble K2O (19%)	0553	18.65	0.5000	18.89	0.5329	0.3616	85	-0.44	050.99	0
050	Soluble K2O (19%)	0486	18.67	0.4800	18.89	0.5329	0.3616	85	-0.40	050.52	0
050	Soluble K2O (19%)	0028	18.71	1.100	18.89	0.5329	0.3616	85	-0.33	050.62	0
050	Soluble K2O (19%)	0572	18.72	0.6200	18.89	0.5329	0.3616	85	-0.31	050.99	0
050	Soluble K2O (19%)	0029	18.76	0.2300	18.89	0.5329	0.3616	85	-0.24	050.62	0
050	Soluble K2O (19%)	0567	18.77	0.0000	18.89	0.5329	0.3616	85	-0.22	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 (19%)	0231	18.83	0.0100	18.89	0.5329	0.3616	85	-0.11	050.00	0
050	Soluble K2O (19%)	0542	18.83	0.5100	18.89	0.5329	0.3616	85	-0.11	050.99	0
050	Soluble K2O (19%)	0444	18.83	0.8600	18.89	0.5329	0.3616	85	-0.10	050.50	0
050	Soluble K2O (19%)	0564	18.85	0.0500	18.89	0.5329	0.3616	85	-0.08	050.99	0
050	Soluble K2O (19%)	0535	18.85	0.1000	18.89	0.5329	0.3616	85	-0.07	050.61	0
050	Soluble K2O (19%)	0072	18.86	0.4197	18.89	0.5329	0.3616	85	-0.05	050.52	0
050	Soluble K2O (19%)	0114	18.88	0.5900	18.89	0.5329	0.3616	85	-0.02	050.00	0
050	Soluble K2O (19%)	0485	18.88	0.6800	18.89	0.5329	0.3616	85	-0.01	050.52	0
050	Soluble K2O (19%)	0565	18.89	0.0300	18.89	0.5329	0.3616	85	0.00	050.99	0
050	Soluble K2O (19%)	0394	18.89	0.4820	18.89	0.5329	0.3616	85	0.00	050.99	0
050	Soluble K2O (19%)	0035	18.90	0.0000	18.89	0.5329	0.3616	85	0.03	050.61	0
050	Soluble K2O (19%)	0559	18.90	0.0200	18.89	0.5329	0.3616	85	0.03	050.99	0
050	Soluble K2O (19%)	0571	18.90	0.2400	18.89	0.5329	0.3616	85	0.03	050.99	0
050	Soluble K2O (19%)	0544	18.92	0.0400	18.89	0.5329	0.3616	85	0.06	050.00	0
050	Soluble K2O (19%)	0538	18.92	0.0800	18.89	0.5329	0.3616	85	0.06	050.99	0
050	Soluble K2O (19%)	0574	18.93	0.0400	18.89	0.5329	0.3616	85	0.08	050.60	0
050	Soluble K2O (19%)	0535	18.95	0.0900	18.89	0.5329	0.3616	85	0.11	050.99	0
050	Soluble K2O (19%)	0356	18.96	0.4580	18.89	0.5329	0.3616	85	0.13	050.30	0
050	Soluble K2O (19%)	0494	19.00	0.1400	18.89	0.5329	0.3616	85	0.21	050.00	0
050	Soluble K2O (19%)	0513	19.01	0.0300	18.89	0.5329	0.3616	85	0.22	050.62	0
050	Soluble K2O (19%)	0540	19.03	0.0800	18.89	0.5329	0.3616	85	0.27	050.99	0
050	Soluble K2O (19%)	0561	19.04	0.0500	18.89	0.5329	0.3616	85	0.28	050.00	0
050	Soluble K2O (19%)	0042	19.05	0.1000	18.89	0.5329	0.3616	85	0.31	050.99	0
050	Soluble K2O (19%)	0292	19.10	0.0400	18.89	0.5329	0.3616	85	0.40	050.50	0
050	Soluble K2O (19%)	0532	19.14	0.1200	18.89	0.5329	0.3616	85	0.48	050.99	0
050	Soluble K2O (19%)	0220	19.21	0.0300	18.89	0.5329	0.3616	85	0.60	050.00	0
050	Soluble K2O (19%)	0536	19.22	0.1700	18.89	0.5329	0.3616	85	0.62	050.99	0
050	Soluble K2O (19%)	0527	19.22	0.0630	18.89	0.5329	0.3616	85	0.63	050.99	0
050	Soluble K2O (19%)	0494	19.24	1.120	18.89	0.5329	0.3616	85	0.67	050.52	0
050	Soluble K2O (19%)	0169	19.25	0.0700	18.89	0.5329	0.3616	85	0.67	050.60	0
050	Soluble K2O (19%)	0354	19.25	0.1000	18.89	0.5329	0.3616	85	0.68	050.52	0
050	Soluble K2O (19%)	0562	19.25	0.1000	18.89	0.5329	0.3616	85	0.68	050.99	0
050	Soluble K2O (19%)	0405	19.33	0.0500	18.89	0.5329	0.3616	85	0.82	050.00	0
050	Soluble K2O (19%)	0451	19.34	0.0500	18.89	0.5329	0.3616	85	0.84	050.99	0
050	Soluble K2O (19%)	0027	19.37	0.3500	18.89	0.5329	0.3616	85	0.90	050.99	0
050	Soluble K2O (19%)	0563	19.37	0.0652	18.89	0.5329	0.3616	85	0.91	050.99	0
050	Soluble K2O (19%)	0102	19.38	0.1200	18.89	0.5329	0.3616	85	0.93	050.00	0
050	Soluble K2O (19%)	0034	19.40	0.8900	18.89	0.5329	0.3616	85	0.96	050.62	0
050	Soluble K2O (19%)	0324	19.45	1.100	18.89	0.5329	0.3616	85	1.06	050.50	0
050	Soluble K2O (19%)	0549	19.46	0.0200	18.89	0.5329	0.3616	85	1.08	050.99	0
050	Soluble K2O (19%)	0547	19.51	0.5700	18.89	0.5329	0.3616	85	1.16	050.52	0
050	Soluble K2O (19%)	0569	19.52	0.0700	18.89	0.5329	0.3616	85	1.18	050.99	0
050	Soluble K2O (19%)	0073	19.55	0.2400	18.89	0.5329	0.3616	85	1.25	050.30	0
050	Soluble K2O (19%)	0157	19.55	0.1000	18.89	0.5329	0.3616	85	1.25	050.30	0
050	Soluble K2O (19%)	0234	19.70	0.1900	18.89	0.5329	0.3616	85	1.52	050.99	0
050	Soluble K2O (19%)	0550	19.76	0.1500	18.89	0.5329	0.3616	85	1.63	050.00	0
050	Soluble K2O (19%)	0136	19.90	0.4000	18.89	0.5329	0.3616	85	1.90	050.52	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 (19%)	0568	19.95‡	0.9000	18.89	0.5329	0.3616	85	2.00	050.51	0
050	Soluble K2O (19%)	0230	20.35‡	0.7000	18.89	0.5329	0.3616	85	2.75	050.00	0
050	Soluble K2O (19%)	0422	20.45‡	1.700	18.89	0.5329	0.3616	85	2.94	050.50	0
050	Soluble K2O (19%)	0521	20.72‡	0.0000	18.89	0.5329	0.3616	85	3.44	050.99	0
050	Soluble K2O (19%)	0515	16.42‡	5.200	18.89	0.5329	0.3616	85	-4.62	050.99	1
060	Water (Free) (%)	0513	0.9250	0.0100				1		060.20	0
101	Acid Soluble Ca (%)	0563	0.1382	0.0012	0.1913	0.0738	0.0100	11	-0.72	101.33	0
101	Acid Soluble Ca (%)	0102	0.1400	0.0000	0.1913	0.0738	0.0100	11	-0.70	101.30	0
101	Acid Soluble Ca (%)	0568	0.1435	0.0010	0.1913	0.0738	0.0100	11	-0.65	101.30	0
101	Acid Soluble Ca (%)	0423	0.1470	0.0040	0.1913	0.0738	0.0100	11	-0.60	101.32	0
101	Acid Soluble Ca (%)	0389	0.1500	0.0000	0.1913	0.0738	0.0100	11	-0.56	101.99	0
101	Acid Soluble Ca (%)	0035	0.1515	0.0290	0.1913	0.0738	0.0100	11	-0.54	101.30	0
101	Acid Soluble Ca (%)	0494	0.1600	0.0020	0.1913	0.0738	0.0100	11	-0.42	101.33	0
101	Acid Soluble Ca (%)	0472	0.2300	0.0000	0.1913	0.0738	0.0100	11	0.52	101.30	0
101	Acid Soluble Ca (%)	0354	0.2400	0.0400	0.1913	0.0738	0.0100	11	0.66	101.30	0
101	Acid Soluble Ca (%)	0419	0.3773	0.0025	0.1913	0.0738	0.0100	11	2.52	101.33	0
101	Acid Soluble Ca (%)	0553	0.6750	0.0300	0.1913	0.0738	0.0100	11	6.56	101.00	0
101	Acid Soluble Ca (%)	0527	< 0.01		0.1913	0.0738	0.0100	11		101.33	5
121	Acid Soluble Mg (%)	0553	0.0400	0.0000	0.6478	0.0758	0.0033	14	-8.02	121.00	0
121	Acid Soluble Mg (%)	0516	0.5000	0.0000	0.6478	0.0758	0.0033	14	-1.95	121.99	0
121	Acid Soluble Mg (%)	0563	0.6132	0.0015	0.6478	0.0758	0.0033	14	-0.46	121.33	0
121	Acid Soluble Mg (%)	0035	0.6225	0.0090	0.6478	0.0758	0.0033	14	-0.33	121.30	0
121	Acid Soluble Mg (%)	0444	0.6300	0.0000	0.6478	0.0758	0.0033	14	-0.24	121.30	0
121	Acid Soluble Mg (%)	0568	0.6350	0.0020	0.6478	0.0758	0.0033	14	-0.17	121.30	0
121	Acid Soluble Mg (%)	0423	0.6350	0.0020	0.6478	0.0758	0.0033	14	-0.17	121.32	0
121	Acid Soluble Mg (%)	0389	0.6485	0.0010	0.6478	0.0758	0.0033	14	0.01	121.99	0
121	Acid Soluble Mg (%)	0354	0.6500	0.0000	0.6478	0.0758	0.0033	14	0.03	121.30	0
121	Acid Soluble Mg (%)	0494	0.6630	0.0040	0.6478	0.0758	0.0033	14	0.20	121.33	0
121	Acid Soluble Mg (%)	0527	0.6679	0.0133	0.6478	0.0758	0.0033	14	0.26	121.33	0
121	Acid Soluble Mg (%)	0472	0.7300	0.0000	0.6478	0.0758	0.0033	14	1.08	121.30	0
121	Acid Soluble Mg (%)	0102	0.7450	0.0100	0.6478	0.0758	0.0033	14	1.28	121.30	0
121	Acid Soluble Mg (%)	0419	0.8747	0.0039	0.6478	0.0758	0.0033	14	2.99	121.33	0
121	Acid Soluble Mg (%)	0515	0.5391	0.1176	0.6478	0.0758	0.0033	14	-1.43	121.99	1
143	Elemental S (%)	0106	0.1350	0.0500	0.5066	0.2228	0.0152	5	-1.67	143.00	0
143	Elemental S (%)	0255	0.4780	0.0060	0.5066	0.2228	0.0152	5	-0.13	143.99	0
143	Elemental S (%)	0472	0.5800	0.0000	0.5066	0.2228	0.0152	5	0.33	143.99	0
143	Elemental S (%)	0389	0.6500	0.0000	0.5066	0.2228	0.0152	5	0.64	143.99	0
143	Elemental S (%)	0325	0.6900	0.0200	0.5066	0.2228	0.0152	5	0.82	143.99	0
145	Sulfate S, HCl soluble (%)	0553	0.5200	0.0000	0.5883	0.0880	0.0193	6	-0.69	145.99	0
145	Sulfate S, HCl soluble (%)	0027	0.5300	0.0600	0.5883	0.0880	0.0193	6	-0.59	145.00	0
145	Sulfate S, HCl soluble (%)	0444	0.5350	0.0100	0.5883	0.0880	0.0193	6	-0.54	145.99	0
145	Sulfate S, HCl soluble (%)	0550	0.5945	0.0050	0.5883	0.0880	0.0193	6	0.06	145.00	0
145	Sulfate S, HCl soluble (%)	0106	0.6300	0.0400	0.5883	0.0880	0.0193	6	0.42	145.00	0
145	Sulfate S, HCl soluble (%)	0419	1.338	0.0007	0.5883	0.0880	0.0193	6	7.59	145.99	0
148	Total S (%)	0515	0.4368	0.0353	0.5967	0.0356	0.0137	11	-4.50	148.99	0
148	Total S (%)	0444	0.5500	0.0000	0.5967	0.0356	0.0137	11	-1.31	148.07	0
148	Total S (%)	0486	0.5850	0.0100	0.5967	0.0356	0.0137	11	-0.33	148.07	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				
148	Total S (%)	0136	0.5900	0.0200	0.5967	0.0356	0.0137	11	-0.19	148.00	0
148	Total S (%)	0354	0.5900	0.0000	0.5967	0.0356	0.0137	11	-0.19	148.99	0
148	Total S (%)	0494	0.5985	0.0250	0.5967	0.0356	0.0137	11	0.05	148.07	0
148	Total S (%)	0516	0.6000	0.0000	0.5967	0.0356	0.0137	11	0.09	148.99	0
148	Total S (%)	0102	0.6100	0.0000	0.5967	0.0356	0.0137	11	0.37	148.07	0
148	Total S (%)	0534	0.6150	0.0100	0.5967	0.0356	0.0137	11	0.51	148.01	0
148	Total S (%)	0506	0.6320	0.0160	0.5967	0.0356	0.0137	11	0.99	148.99	0
148	Total S (%)	0563	0.6685	0.0348	0.5967	0.0356	0.0137	11	2.02	148.07	0
148	Total S (%)	0394	2,965	5,929	0.5967	0.0356	0.0137	11	83344.43	148.07	2
148	Total S (%)	0527	< 0.01		0.5967	0.0356	0.0137	11		148.07	5
149	S - HNO3 soluble (%)	0231	0.5700	0.0000				2		149.04	0
149	S - HNO3 soluble (%)	0423	0.5745	0.0050				2		149.04	0
151	Acid Soluble As (ppm)	0476	0.5785	0.0230	1.023	0.4225	0.0537	9	-1.05	151.30	0
151	Acid Soluble As (ppm)	0572	0.7400	0.0200	1.023	0.4225	0.0537	9	-0.67	151.99	0
151	Acid Soluble As (ppm)	0534	0.7640	0.0620	1.023	0.4225	0.0537	9	-0.61	151.00	0
151	Acid Soluble As (ppm)	0255	0.8530	0.0180	1.023	0.4225	0.0537	9	-0.40	151.30	0
151	Acid Soluble As (ppm)	0563	0.9869	0.0199	1.023	0.4225	0.0537	9	-0.09	151.33	0
151	Acid Soluble As (ppm)	0405	1.000	0.0000	1.023	0.4225	0.0537	9	-0.06	151.99	0
151	Acid Soluble As (ppm)	0506	1.030	0.0400	1.023	0.4225	0.0537	9	0.02	151.99	0
151	Acid Soluble As (ppm)	0220	1.600	0.2000	1.023	0.4225	0.0537	9	1.37	151.32	0
151	Acid Soluble As (ppm)	0220	1.850	0.1000	1.023	0.4225	0.0537	9	1.96	151.99	0
151	Acid Soluble As (ppm)	0494	5.360	0.4800	1.023	0.4225	0.0537	9	10.26	151.33	1
151	Acid Soluble As (ppm)	0515	0.0000	0.0000	1.023	0.4225	0.0537	9		151.34	4
151	Acid Soluble As (ppm)	0527	< 0.0001		1.023	0.4225	0.0537	9		151.33	5
151	Acid Soluble As (ppm)	0550	< 0.08		1.023	0.4225	0.0537	9		151.99	5
151	Acid Soluble As (ppm)	0136	< 1		1.023	0.4225	0.0537	9		151.33	5
165	Acid Soluble B (%)	0516	0.0020	0.0000	0.0041	0.0010	0.0003	6	-1.82	165.99	0
165	Acid Soluble B (%)	0389	0.0036	0.0000	0.0041	0.0010	0.0003	6	-0.41	165.30	0
165	Acid Soluble B (%)	0527	0.0041	0.0001	0.0041	0.0010	0.0003	6	-0.01	165.99	0
165	Acid Soluble B (%)	0423	0.0045	0.0010	0.0041	0.0010	0.0003	6	0.38	165.99	0
165	Acid Soluble B (%)	0563	0.0047	0.0004	0.0041	0.0010	0.0003	6	0.56	165.99	0
165	Acid Soluble B (%)	0553	0.0050	0.0000	0.0041	0.0010	0.0003	6	0.82	165.00	0
165	Acid Soluble B (%)	0515	0.0014	0.0028	0.0041	0.0010	0.0003	6		165.99	4
165	Acid Soluble B (%)	0354	< 0.01		0.0041	0.0010	0.0003	6		165.30	5
181	Acid Soluble Cd (ppm)	0419	4.055	0.0100	20.17	3.031	0.6821	18	-5.32	181.30	0
181	Acid Soluble Cd (ppm)	0476	13.25	0.4730	20.17	3.031	0.6821	18	-2.28	181.30	0
181	Acid Soluble Cd (ppm)	0444	14.85	1.110	20.17	3.031	0.6821	18	-1.76	181.30	0
181	Acid Soluble Cd (ppm)	0389	17.43	0.0000	20.17	3.031	0.6821	18	-0.91	181.30	0
181	Acid Soluble Cd (ppm)	0534	18.68	0.4700	20.17	3.031	0.6821	18	-0.49	181.00	0
181	Acid Soluble Cd (ppm)	0255	19.43	0.3610	20.17	3.031	0.6821	18	-0.25	181.30	0
181	Acid Soluble Cd (ppm)	0220	20.35	0.5000	20.17	3.031	0.6821	18	0.06	181.99	0
181	Acid Soluble Cd (ppm)	0220	20.50	1.400	20.17	3.031	0.6821	18	0.11	181.32	0
181	Acid Soluble Cd (ppm)	0494	20.55	0.5000	20.17	3.031	0.6821	18	0.12	181.33	0
181	Acid Soluble Cd (ppm)	0394	20.70	0.3040	20.17	3.031	0.6821	18	0.17	181.33	0
181	Acid Soluble Cd (ppm)	0550	20.72	1.300	20.17	3.031	0.6821	18	0.18	181.99	0
181	Acid Soluble Cd (ppm)	0563	21.15	0.3024	20.17	3.031	0.6821	18	0.32	181.33	0
181	Acid Soluble Cd (ppm)	0035	21.85	2.100	20.17	3.031	0.6821	18	0.55	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)	0136	22.15	0.9000	20.17	3.031	0.6821	18	0.65	181.33	0
181	Acid Soluble Cd (ppm)	0405	22.15	0.9000	20.17	3.031	0.6821	18	0.65	181.99	0
181	Acid Soluble Cd (ppm)	0527	22.33	0.3679	20.17	3.031	0.6821	18	0.71	181.33	0
181	Acid Soluble Cd (ppm)	0572	23.54	0.2800	20.17	3.031	0.6821	18	1.11	181.99	0
181	Acid Soluble Cd (ppm)	0506	29.90	1.000	20.17	3.031	0.6821	18	3.21	181.99	0
181	Acid Soluble Cd (ppm)	0515	12.93	16.17	20.17	3.031	0.6821	18	-2.39	181.34	1
190	Water Soluble Cl (%)	0513	14.41	0.0700				1		190.00	0
190	Water Soluble Cl (%)	0553	< 0.1					1		190.00	5
191	Acid Soluble Cr (ppm)	0476	60.79	1.259	102.9	13.85	1.344	16	-3.04	191.30	0
191	Acid Soluble Cr (ppm)	0444	82.87	2.100	102.9	13.85	1.344	16	-1.45	191.30	0
191	Acid Soluble Cr (ppm)	0389	87.46	0.6700	102.9	13.85	1.344	16	-1.12	191.30	0
191	Acid Soluble Cr (ppm)	0572	90.42	0.4100	102.9	13.85	1.344	16	-0.90	191.99	0
191	Acid Soluble Cr (ppm)	0419	90.93	0.4600	102.9	13.85	1.344	16	-0.87	191.30	0
191	Acid Soluble Cr (ppm)	0394	103.8	0.8760	102.9	13.85	1.344	16	0.07	191.33	0
191	Acid Soluble Cr (ppm)	0494	106.0	0.0000	102.9	13.85	1.344	16	0.22	191.33	0
191	Acid Soluble Cr (ppm)	0405	106.0	2.000	102.9	13.85	1.344	16	0.22	191.99	0
191	Acid Soluble Cr (ppm)	0136	107.0	0.0000	102.9	13.85	1.344	16	0.29	191.33	0
191	Acid Soluble Cr (ppm)	0550	109.2	4.080	102.9	13.85	1.344	16	0.45	191.99	0
191	Acid Soluble Cr (ppm)	0563	109.4	1.624	102.9	13.85	1.344	16	0.47	191.33	0
191	Acid Soluble Cr (ppm)	0220	110.0	2.000	102.9	13.85	1.344	16	0.51	191.32	0
191	Acid Soluble Cr (ppm)	0220	110.0	2.000	102.9	13.85	1.344	16	0.51	191.99	0
191	Acid Soluble Cr (ppm)	0506	112.5	1.000	102.9	13.85	1.344	16	0.69	191.99	0
191	Acid Soluble Cr (ppm)	0527	119.2	0.3384	102.9	13.85	1.344	16	1.18	191.33	0
191	Acid Soluble Cr (ppm)	0515	119.9	2.679	102.9	13.85	1.344	16	1.22	191.34	0
191	Acid Soluble Cr (ppm)	0035	105.5	9.000	102.9	13.85	1.344	16	0.19	191.30	1
202	Acid Soluble Co (ppm)	0476	0.4455	0.0310	0.9639	0.4320	0.1227	12	-1.20	202.30	0
202	Acid Soluble Co (ppm)	0572	0.5000	0.1400	0.9639	0.4320	0.1227	12	-1.07	202.99	0
202	Acid Soluble Co (ppm)	0255	0.7045	0.2210	0.9639	0.4320	0.1227	12	-0.60	202.99	0
202	Acid Soluble Co (ppm)	0389	0.7865	0.0030	0.9639	0.4320	0.1227	12	-0.41	202.30	0
202	Acid Soluble Co (ppm)	0405	0.8000	0.0000	0.9639	0.4320	0.1227	12	-0.38	202.99	0
202	Acid Soluble Co (ppm)	0563	0.8106	0.0050	0.9639	0.4320	0.1227	12	-0.35	202.33	0
202	Acid Soluble Co (ppm)	0527	0.8548	0.0172	0.9639	0.4320	0.1227	12	-0.25	202.33	0
202	Acid Soluble Co (ppm)	0494	0.9175	0.2650	0.9639	0.4320	0.1227	12	-0.11	202.33	0
202	Acid Soluble Co (ppm)	0035	1.285	0.4300	0.9639	0.4320	0.1227	12	0.74	202.30	0
202	Acid Soluble Co (ppm)	0220	1.400	0.2000	0.9639	0.4320	0.1227	12	1.01	202.32	0
202	Acid Soluble Co (ppm)	0220	1.450	0.1000	0.9639	0.4320	0.1227	12	1.13	202.99	0
202	Acid Soluble Co (ppm)	0419	2.910	0.0600	0.9639	0.4320	0.1227	12	4.50	202.30	0
202	Acid Soluble Co (ppm)	0515	1.987	3.974	0.9639	0.4320	0.1227	12		202.34	4
202	Acid Soluble Co (ppm)	0550	< 0.03		0.9639	0.4320	0.1227	12		202.30	5
202	Acid Soluble Co (ppm)	0136	< 5		0.9639	0.4320	0.1227	12		202.33	5
221	Acid Soluble Cu (%)	0389	0.0004	0.0000	0.0020	0.0014	0.0006	3	-1.14	221.99	0
221	Acid Soluble Cu (%)	0515	0.0025	0.0018	0.0020	0.0014	0.0006	3	0.39	221.99	0
221	Acid Soluble Cu (%)	0516	0.0030	0.0000	0.0020	0.0014	0.0006	3	0.75	221.99	0
221	Acid Soluble Cu (%)	0255	0.0000	0.0000	0.0020	0.0014	0.0006	3		221.30	4
221	Acid Soluble Cu (%)	0106	0.0000	0.0000	0.0020	0.0014	0.0006	3		221.33	4
221	Acid Soluble Cu (%)	0550	< 0.0001		0.0020	0.0014	0.0006	3		221.00	5
221	Acid Soluble Cu (%)	0394	< 0.0001		0.0020	0.0014	0.0006	3		221.33	5

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 (%)	0527	< 0.0001		0.0020	0.0014	0.0006	3		221.33	5
221	Acid Soluble Cu (%)	0563	< 0.0001		0.0020	0.0014	0.0006	3		221.33	5
221	Acid Soluble Cu (%)	0405	< 0.0001		0.0020	0.0014	0.0006	3		221.99	5
221	Acid Soluble Cu (%)	0572	< 0.0001		0.0020	0.0014	0.0006	3		221.99	5
221	Acid Soluble Cu (%)	0494	< 0.0002		0.0020	0.0014	0.0006	3		221.33	5
221	Acid Soluble Cu (%)	0136	< 0.0025		0.0020	0.0014	0.0006	3		221.33	5
221	Acid Soluble Cu (%)	0102	< 0.01		0.0020	0.0014	0.0006	3		221.30	5
221	Acid Soluble Cu (%)	0354	< 0.01		0.0020	0.0014	0.0006	3		221.30	5
241	Acid Soluble Fe (%)	0102	0.5000	0.0000	0.5584	0.0481	0.0087	14	-1.21	241.30	0
241	Acid Soluble Fe (%)	0516	0.5000	0.0000	0.5584	0.0481	0.0087	14	-1.21	241.99	0
241	Acid Soluble Fe (%)	0535	0.5100	0.0200	0.5584	0.0481	0.0087	14	-1.01	241.00	0
241	Acid Soluble Fe (%)	0035	0.5110	0.0340	0.5584	0.0481	0.0087	14	-0.99	241.30	0
241	Acid Soluble Fe (%)	0423	0.5320	0.0020	0.5584	0.0481	0.0087	14	-0.55	241.32	0
241	Acid Soluble Fe (%)	0563	0.5536	0.0034	0.5584	0.0481	0.0087	14	-0.10	241.33	0
241	Acid Soluble Fe (%)	0472	0.5600	0.0000	0.5584	0.0481	0.0087	14	0.03	241.30	0
241	Acid Soluble Fe (%)	0354	0.5650	0.0100	0.5584	0.0481	0.0087	14	0.14	241.30	0
241	Acid Soluble Fe (%)	0389	0.5750	0.0003	0.5584	0.0481	0.0087	14	0.34	241.99	0
241	Acid Soluble Fe (%)	0494	0.5816	0.0001	0.5584	0.0481	0.0087	14	0.48	241.33	0
241	Acid Soluble Fe (%)	0527	0.5947	0.0033	0.5584	0.0481	0.0087	14	0.75	241.33	0
241	Acid Soluble Fe (%)	0515	0.5997	0.0364	0.5584	0.0481	0.0087	14	0.86	241.99	0
241	Acid Soluble Fe (%)	0444	0.6050	0.0100	0.5584	0.0481	0.0087	14	0.97	241.30	0
241	Acid Soluble Fe (%)	0419	1.255	0.0020	0.5584	0.0481	0.0087	14	14.48	241.33	0
241	Acid Soluble Fe (%)	0553	0.6600	0.0800	0.5584	0.0481	0.0087	14	2.11	241.00	1
251	Acid Soluble Pb (ppm)	0389	0.0065	0.0010	1.021	1.211	0.2129	12	-0.84	251.30	0
251	Acid Soluble Pb (ppm)	0476	0.1740	0.0200	1.021	1.211	0.2129	12	-0.70	251.30	0
251	Acid Soluble Pb (ppm)	0255	0.2325	0.0710	1.021	1.211	0.2129	12	-0.65	251.30	0
251	Acid Soluble Pb (ppm)	0563	0.2483	0.0081	1.021	1.211	0.2129	12	-0.64	251.33	0
251	Acid Soluble Pb (ppm)	0572	0.2600	0.0000	1.021	1.211	0.2129	12	-0.63	251.99	0
251	Acid Soluble Pb (ppm)	0394	0.2755	0.0250	1.021	1.211	0.2129	12	-0.62	251.33	0
251	Acid Soluble Pb (ppm)	0405	0.3000	0.0000	1.021	1.211	0.2129	12	-0.59	251.99	0
251	Acid Soluble Pb (ppm)	0419	1.140	0.5400	1.021	1.211	0.2129	12	0.10	251.30	0
251	Acid Soluble Pb (ppm)	0220	2.150	0.3000	1.021	1.211	0.2129	12	0.93	251.99	0
251	Acid Soluble Pb (ppm)	0220	2.250	0.1000	1.021	1.211	0.2129	12	1.01	251.32	0
251	Acid Soluble Pb (ppm)	0035	2.375	0.0900	1.021	1.211	0.2129	12	1.12	251.30	0
251	Acid Soluble Pb (ppm)	0550	10.01	1.400	1.021	1.211	0.2129	12	7.42	251.99	0
251	Acid Soluble Pb (ppm)	0515	18.77	5.713	1.021	1.211	0.2129	12	14.65	251.34	1
251	Acid Soluble Pb (ppm)	0527	< 0.0001		1.021	1.211	0.2129	12		251.33	5
251	Acid Soluble Pb (ppm)	0494	< 1.27		1.021	1.211	0.2129	12		251.33	5
251	Acid Soluble Pb (ppm)	0534	< 2		1.021	1.211	0.2129	12		251.00	5
251	Acid Soluble Pb (ppm)	0136	< 3		1.021	1.211	0.2129	12		251.33	5
261	Acid Soluble Mn (%)	0535	0.0043	0.0005	0.0093	0.0011	0.0004	13	-4.55	261.12	0
261	Acid Soluble Mn (%)	0515	0.0053	0.0004	0.0093	0.0011	0.0004	13	-3.60	261.99	0
261	Acid Soluble Mn (%)	0553	0.0085	0.0010	0.0093	0.0011	0.0004	13	-0.71	261.11	0
261	Acid Soluble Mn (%)	0516	0.0090	0.0000	0.0093	0.0011	0.0004	13	-0.26	261.99	0
261	Acid Soluble Mn (%)	0494	0.0091	0.0005	0.0093	0.0011	0.0004	13	-0.21	261.35	0
261	Acid Soluble Mn (%)	0389	0.0092	0.0002	0.0093	0.0011	0.0004	13	-0.08	261.99	0
261	Acid Soluble Mn (%)	0035	0.0094	0.0001	0.0093	0.0011	0.0004	13	0.06	261.30	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				
261	Acid Soluble Mn (%)	0423	0.0095	0.0010	0.0093	0.0011	0.0004	13	0.20	261.34	0
261	Acid Soluble Mn (%)	0563	0.0096	0.0000	0.0093	0.0011	0.0004	13	0.29	261.35	0
261	Acid Soluble Mn (%)	0527	0.0098	0.0000	0.0093	0.0011	0.0004	13	0.47	261.35	0
261	Acid Soluble Mn (%)	0472	0.0100	0.0000	0.0093	0.0011	0.0004	13	0.65	261.30	0
261	Acid Soluble Mn (%)	0444	0.0105	0.0010	0.0093	0.0011	0.0004	13	1.10	261.30	0
261	Acid Soluble Mn (%)	0419	0.0372	0.0002	0.0093	0.0011	0.0004	13	25.23	261.35	0
261	Acid Soluble Mn (%)	0102	< 0.01		0.0093	0.0011	0.0004	13		261.30	5
261	Acid Soluble Mn (%)	0354	< 0.01		0.0093	0.0011	0.0004	13		261.30	5
281	Acid Soluble Hg (ppm)	0550	0.1592	0.0451				1		281.99	0
281	Acid Soluble Hg (ppm)	0515	0.0000	0.0000				1		281.30	4
281	Acid Soluble Hg (ppm)	0527	< 0.001					1		281.30	5
281	Acid Soluble Hg (ppm)	0220	< 0.01					1		281.99	5
281	Acid Soluble Hg (ppm)	0405	< 0.01					1		281.99	5
281	Acid Soluble Hg (ppm)	0563	< 0.02					1		281.30	5
281	Acid Soluble Hg (ppm)	0534	< 0.05					1		281.00	5
289	Acid Soluble Mo (ppm)	0516	0.1000	0.0000	4.622	1.969	0.5019	15	-2.30	289.30	0
289	Acid Soluble Mo (ppm)	0550	1.780	2.220	4.622	1.969	0.5019	15	-1.44	289.99	0
289	Acid Soluble Mo (ppm)	0476	3.053	0.1710	4.622	1.969	0.5019	15	-0.80	289.30	0
289	Acid Soluble Mo (ppm)	0255	3.095	0.6500	4.622	1.969	0.5019	15	-0.78	289.30	0
289	Acid Soluble Mo (ppm)	0220	4.050	0.3000	4.622	1.969	0.5019	15	-0.29	289.32	0
289	Acid Soluble Mo (ppm)	0220	4.050	0.3000	4.622	1.969	0.5019	15	-0.29	289.99	0
289	Acid Soluble Mo (ppm)	0035	4.065	0.5700	4.622	1.969	0.5019	15	-0.28	289.30	0
289	Acid Soluble Mo (ppm)	0563	5.005	0.0258	4.622	1.969	0.5019	15	0.19	289.33	0
289	Acid Soluble Mo (ppm)	0136	5.305	0.4700	4.622	1.969	0.5019	15	0.35	289.33	0
289	Acid Soluble Mo (ppm)	0423	5.380	0.3200	4.622	1.969	0.5019	15	0.38	289.33	0
289	Acid Soluble Mo (ppm)	0106	5.500	1.000	4.622	1.969	0.5019	15	0.45	289.33	0
289	Acid Soluble Mo (ppm)	0405	5.540	0.2200	4.622	1.969	0.5019	15	0.47	289.99	0
289	Acid Soluble Mo (ppm)	0527	6.500	0.0422	4.622	1.969	0.5019	15	0.95	289.33	0
289	Acid Soluble Mo (ppm)	0494	6.765	1.010	4.622	1.969	0.5019	15	1.09	289.33	0
289	Acid Soluble Mo (ppm)	0419	15.02	0.2300	4.622	1.969	0.5019	15	5.28	289.30	0
289	Acid Soluble Mo (ppm)	0515	19.26	7.816	4.622	1.969	0.5019	15	7.44	289.34	1
291	Acid Soluble Ni (ppm)	0476	8.177	0.5860	18.33	4.483	0.6514	19	-2.27	291.30	0
291	Acid Soluble Ni (ppm)	0550	13.25	0.7000	18.33	4.483	0.6514	19	-1.13	291.99	0
291	Acid Soluble Ni (ppm)	0444	13.49	0.7600	18.33	4.483	0.6514	19	-1.08	291.30	0
291	Acid Soluble Ni (ppm)	0419	13.86	0.0000	18.33	4.483	0.6514	19	-1.00	291.30	0
291	Acid Soluble Ni (ppm)	0389	14.98	0.0100	18.33	4.483	0.6514	19	-0.75	291.30	0
291	Acid Soluble Ni (ppm)	0535	16.00	2.000	18.33	4.483	0.6514	19	-0.52	291.99	0
291	Acid Soluble Ni (ppm)	0572	16.01	0.2600	18.33	4.483	0.6514	19	-0.52	291.99	0
291	Acid Soluble Ni (ppm)	0563	16.09	0.4354	18.33	4.483	0.6514	19	-0.50	291.33	0
291	Acid Soluble Ni (ppm)	0394	18.43	0.1300	18.33	4.483	0.6514	19	0.02	291.33	0
291	Acid Soluble Ni (ppm)	0136	19.10	0.2000	18.33	4.483	0.6514	19	0.17	291.33	0
291	Acid Soluble Ni (ppm)	0220	19.75	0.1000	18.33	4.483	0.6514	19	0.32	291.32	0
291	Acid Soluble Ni (ppm)	0035	19.80	1.800	18.33	4.483	0.6514	19	0.33	291.30	0
291	Acid Soluble Ni (ppm)	0494	20.18	0.7500	18.33	4.483	0.6514	19	0.41	291.33	0
291	Acid Soluble Ni (ppm)	0405	20.50	1.000	18.33	4.483	0.6514	19	0.48	291.99	0
291	Acid Soluble Ni (ppm)	0220	20.75	0.5000	18.33	4.483	0.6514	19	0.54	291.99	0
291	Acid Soluble Ni (ppm)	0527	21.19	0.1670	18.33	4.483	0.6514	19	0.64	291.33	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				
291	Acid Soluble Ni (ppm)	0506	23.85	0.1000	18.33	4.483	0.6514	19	1.23	291.99	0
291	Acid Soluble Ni (ppm)	0255	24.42	0.6960	18.33	4.483	0.6514	19	1.36	291.99	0
291	Acid Soluble Ni (ppm)	0515	31.91	2.182	18.33	4.483	0.6514	19	3.03	291.34	0
301	Acid Soluble Se (ppm)	0220	0.5000	0.0000	1.023	0.5443	0.3784	6	-0.86	301.32	0
301	Acid Soluble Se (ppm)	0220	0.5000	0.2000	1.023	0.5443	0.3784	6	-0.86	301.99	0
301	Acid Soluble Se (ppm)	0476	0.9465	0.2290	1.023	0.5443	0.3784	6	-0.13	301.30	0
301	Acid Soluble Se (ppm)	0563	1.064	0.0075	1.023	0.5443	0.3784	6	0.07	301.33	0
301	Acid Soluble Se (ppm)	0572	1.490	0.1200	1.023	0.5443	0.3784	6	0.76	301.99	0
301	Acid Soluble Se (ppm)	0255	1.639	1.714	1.023	0.5443	0.3784	6	1.01	301.99	0
301	Acid Soluble Se (ppm)	0515	9.520	4.235	1.023	0.5443	0.3784	6	13.90	301.34	1
301	Acid Soluble Se (ppm)	0527	< 0.01		1.023	0.5443	0.3784	6		301.33	5
301	Acid Soluble Se (ppm)	0550	< 0.08		1.023	0.5443	0.3784	6		301.99	5
301	Acid Soluble Se (ppm)	0494	< 0.95		1.023	0.5443	0.3784	6		301.33	5
301	Acid Soluble Se (ppm)	0405	< 1		1.023	0.5443	0.3784	6		301.99	5
311	Sodium (%)	0419	0.0534	0.0039	0.4403	0.0403	0.0047	9	-8.85	311.33	0
311	Sodium (%)	0035	0.4110	0.0080	0.4403	0.0403	0.0047	9	-0.67	311.33	0
311	Sodium (%)	0563	0.4166	0.0003	0.4403	0.0403	0.0047	9	-0.54	311.33	0
311	Sodium (%)	0494	0.4300	0.0011	0.4403	0.0403	0.0047	9	-0.24	311.33	0
311	Sodium (%)	0423	0.4370	0.0020	0.4403	0.0403	0.0047	9	-0.07	311.33	0
311	Sodium (%)	0572	0.4500	0.0000	0.4403	0.0403	0.0047	9	0.22	311.99	0
311	Sodium (%)	0527	0.4682	0.0028	0.4403	0.0403	0.0047	9	0.64	311.33	0
311	Sodium (%)	0354	0.4800	0.0200	0.4403	0.0403	0.0047	9	0.91	311.99	0
311	Sodium (%)	0389	0.4900	0.0040	0.4403	0.0403	0.0047	9	1.14	311.99	0
311	Sodium (%)	0535	6.950	0.1000	0.4403	0.0403	0.0047	9	148.95	311.99	2
311	Sodium (%)	0553	< 0.005		0.4403	0.0403	0.0047	9		311.00	5
321	Acid Soluble Zn (%)	0419	0.0091	0.0022	0.0325	0.0030	0.0012	28	-7.93	321.33	0
321	Acid Soluble Zn (%)	0476	0.0190	0.0000	0.0325	0.0030	0.0012	28	-4.58	321.30	0
321	Acid Soluble Zn (%)	0255	0.0260	0.0020	0.0325	0.0030	0.0012	28	-2.21	321.30	0
321	Acid Soluble Zn (%)	0534	0.0300	0.0000	0.0325	0.0030	0.0012	28	-0.86	321.00	0
321	Acid Soluble Zn (%)	0535	0.0300	0.0020	0.0325	0.0030	0.0012	28	-0.86	321.00	0
321	Acid Soluble Zn (%)	0102	0.0300	0.0000	0.0325	0.0030	0.0012	28	-0.86	321.30	0
321	Acid Soluble Zn (%)	0354	0.0300	0.0000	0.0325	0.0030	0.0012	28	-0.86	321.30	0
321	Acid Soluble Zn (%)	0472	0.0300	0.0000	0.0325	0.0030	0.0012	28	-0.86	321.30	0
321	Acid Soluble Zn (%)	0389	0.0305	0.0001	0.0325	0.0030	0.0012	28	-0.70	321.99	0
321	Acid Soluble Zn (%)	0494	0.0310	0.0027	0.0325	0.0030	0.0012	28	-0.54	321.33	0
321	Acid Soluble Zn (%)	0027	0.0315	0.0010	0.0325	0.0030	0.0012	28	-0.35	321.99	0
321	Acid Soluble Zn (%)	0043	0.0320	0.0000	0.0325	0.0030	0.0012	28	-0.18	321.33	0
321	Acid Soluble Zn (%)	0550	0.0321	0.0004	0.0325	0.0030	0.0012	28	-0.15	321.00	0
321	Acid Soluble Zn (%)	0563	0.0328	0.0004	0.0325	0.0030	0.0012	28	0.09	321.33	0
321	Acid Soluble Zn (%)	0515	0.0333	0.0011	0.0325	0.0030	0.0012	28	0.24	321.99	0
321	Acid Soluble Zn (%)	0506	0.0335	0.0010	0.0325	0.0030	0.0012	28	0.33	321.99	0
321	Acid Soluble Zn (%)	0405	0.0336	0.0025	0.0325	0.0030	0.0012	28	0.34	321.99	0
321	Acid Soluble Zn (%)	0527	0.0339	0.0007	0.0325	0.0030	0.0012	28	0.45	321.33	0
321	Acid Soluble Zn (%)	0106	0.0345	0.0023	0.0325	0.0030	0.0012	28	0.65	321.33	0
321	Acid Soluble Zn (%)	0136	0.0345	0.0010	0.0325	0.0030	0.0012	28	0.67	321.33	0
321	Acid Soluble Zn (%)	0394	0.0349	0.0002	0.0325	0.0030	0.0012	28	0.80	321.33	0
321	Acid Soluble Zn (%)	0553	0.0350	0.0100	0.0325	0.0030	0.0012	28	0.83	321.00	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				
321	Acid Soluble Zn (%)	0444	0.0350	0.0020	0.0325	0.0030	0.0012	28	0.83	321.30	0
321	Acid Soluble Zn (%)	0220	0.0350	0.0000	0.0325	0.0030	0.0012	28	0.83	321.32	0
321	Acid Soluble Zn (%)	0423	0.0355	0.0010	0.0325	0.0030	0.0012	28	1.00	321.32	0
321	Acid Soluble Zn (%)	0220	0.0355	0.0010	0.0325	0.0030	0.0012	28	1.00	321.99	0
321	Acid Soluble Zn (%)	0234	0.0359	0.0009	0.0325	0.0030	0.0012	28	1.12	321.30	0
321	Acid Soluble Zn (%)	0516	0.0400	0.0000	0.0325	0.0030	0.0012	28	2.53	321.99	0
321	Acid Soluble Zn (%)	0572	309.5	4.110	0.0325	0.0030	0.0012	28	104709.24	321.99	2

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.