

Analyte PT For All Labs

Magruder Fertilizer Proficiency Testing Program

Analytes: 37

Sample # 220811

Regular PT Scheme

Labs Reporting: 85

Grade 17-1-0

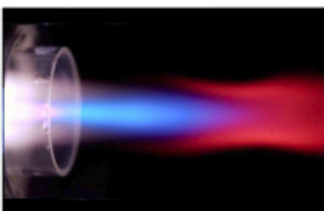
Statistical Summary

Issue Date : 09/30/2022

Analyte Code	Analyte Sample # 220811	# 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 (%)	10	8	15.57	4.864	17.04		0.1908	0.0843	1.12%		0.0911	2.42%
002	Nitrate N (%)	1		0.0085									
005	Urea N (%)	1		0.4700									
009	Ammoniacal Plus Nitrate N (%)	1		17.35									
010	Total N (17%)	74	73	17.68	0.4965	17.64	0.6946	0.2874	0.0420	1.63%	0.96	0.1039	2.38%
020	Total P2O5 (%)	43	43	1.387	0.1571	1.393		0.1574	0.0300	11.30%		0.0491	3.81%
030	Citrate Insoluble P2O5 (%)	1		0.0600									
040	Indirect Available P2O5 (1%)	1		1.127									
041	Direct Available P2O5 (1%)	38	37	3.078	10.43	1.366	0.6700	0.1418	0.0291	10.38%	0.49	0.0660	3.82%
048	Water Soluble P2O5 (%)	1		0.0350									
050	Soluble K2O (%)	24	17	0.0729	0.0786	0.0468	0.4100	0.0235	0.0071	50.23%	0.13	0.0038	6.34%
060	Water (Free) (%)	1		1.079									
101	Acid Soluble Ca (%)	9	7	0.2962	0.1804	0.3047	0.2152	0.0396	0.0187	13.00%	0.43	0.0056	4.78%
121	Acid Soluble Mg (%)	11	10	0.0750	0.0220	0.0737	0.2037	0.0055	0.0022	7.50%	0.06	0.0062	5.92%
143	Elemental S (%)	3	3	20.87	2.300	20.87		2.300	1.660	11.02%		1.127	2.19%
145	Sulfate S, HCl soluble (%)	7	7	19.15	1.551	19.53		0.7393	0.3493	3.79%		0.2700	2.26%
146	Total S in Liquid (20%)	1		15.77									
148	Total S (20%)	52	50	20.04	1.122	20.05	1.0000	0.6743	0.1192	3.36%	1.57	0.2622	2.23%
149	S - HNO3 soluble (%)	3	3	20.03	0.3183	20.03		0.3183	0.2297	1.59%		0.5466	2.23%
151	Acid Soluble As (ppm)	12	8	2.554	2.026	2.586		1.886	0.8337	72.95%		0.2188	13.87%
165	Acid Soluble B (%)	5	2	0.0098	0.0094	0.0020	0.0033	0.0010	0.0008	48.33%	0.67	0.0002	10.21%
181	Acid Soluble Cd (ppm)	14	5	0.6540	0.5856	0.7202		0.5773	0.3227	80.15%		0.0889	16.81%
190	Water Soluble Cl (%)	1		0.1000									
191	Acid Soluble Cr (ppm)	15	15	21.37	3.129	21.38		3.529	1.139	16.50%		0.4283	10.09%
202	Acid Soluble Co (ppm)	14	12	3.679	2.078	3.989	2.1968	1.960	0.7072	49.13%	2.08	0.3842	12.99%
221	Acid Soluble Cu (%)	21	19	0.0088	0.0007	0.0087	0.0059	0.0007	0.0002	7.64%	0.26	0.0002	8.17%
241	Acid Soluble Fe (%)	12	12	1.888	0.0421	1.888	0.1938	0.0478	0.0172	2.53%	0.57	0.0336	3.63%
251	Acid Soluble Pb (ppm)	17	16	10.81	4.417	11.10		3.639	1.137	32.80%		0.5511	11.14%
261	Acid Soluble Mn (%)	10	9	0.0204	0.0066	0.0209	0.0071	0.0017	0.0007	8.06%	0.55	0.0003	7.16%

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281	Acid Soluble Hg (ppm)	9	4	0.5043	0.6781	0.1927		0.0462	0.0289	23.99%		0.0102	20.50%
289	Acid Soluble Mo (ppm)	18	16	10.82	22.36	5.577	2.6732	1.856	0.5799	33.27%	1.62	0.2934	12.35%
291	Acid Soluble Ni (ppm)	17	16	9.840	4.138	8.920		1.941	0.6065	21.76%		0.5794	11.51%
301	Acid Soluble Se (ppm)	10	3	1.586	3.017	0.6996		0.4266	0.3078	60.97%		0.0511	16.88%
311	Sodium (%)	6	6	0.0690	0.0205	0.0633	0.0113	0.0085	0.0043	13.35%	1.74	0.0016	6.06%
321	Acid Soluble Zn (%)	22	20	11.36	53.19	0.0243	0.0074	0.0032	0.0009	13.14%	1.00	0.0009	7.00%
441	Humic Acids (%)	4	4	2.655	4.667	2.655		4.667	2.917	175.80%		0.1235	3.45%
451	Hydrophobic Fulvic Acids (%)	2	2	10.73	14.23								

The Analyte IA Ratio = $2.33 * \text{Robust SD} / \text{IA at the Analyte Assigned Value}$. IA ratios of 1 and less indicate participant data dispersion is as good or less than the IA. Red indicates the IA ratio is significantly greater than 1, Orange indicates marginally greater than 1, Green indicates IA ratio is not significantly greater than 1 and Grey indicates < 6 labs reporting. The Horwitz %RSD is calculated using the Thompson Modification, Analyst,2000,125,385-386.



Analyte PT For All Labs

Magruder Fertilizer Proficiency Testing Program

Analytes: 37

Sample # 220811

Regular PT Scheme

Labs Reporting: 85

Grade 17-1-0

Lab Values

Issue Date : 09/30/2022

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Range				
001	Ammoniacal N (%)	0524	16.52	0.0550	17.04	0.1908	0.0911	8	-2.48	001.99	0
001	Ammoniacal N (%)	0027	16.90	0.3400	17.04	0.1908	0.0911	8	-0.67	001.99	0
001	Ammoniacal N (%)	0444	17.00	0.0000	17.04	0.1908	0.0911	8	-0.19	001.10	0
001	Ammoniacal N (%)	0549	17.04	0.0300	17.04	0.1908	0.0911	8	-0.03	001.99	0
001	Ammoniacal N (%)	0569	17.07	0.0300	17.04	0.1908	0.0911	8	0.12	001.99	0
001	Ammoniacal N (%)	0419	17.08	0.0640	17.04	0.1908	0.0911	8	0.20	001.99	0
001	Ammoniacal N (%)	0513	17.16	0.0200	17.04	0.1908	0.0911	8	0.57	001.99	0
001	Ammoniacal N (%)	0602	17.71	0.1900	17.04	0.1908	0.0911	8	3.19	001.99	0
001	Ammoniacal N (%)	0553	17.50	0.8000	17.04	0.1908	0.0911	8	2.20	001.99	1
001	Ammoniacal N (%)	0423	1.760	0.3000	17.04	0.1908	0.0911	8	-73.27	001.99	2
002	Nitrate N (%)	0553	0.0085	0.0010				1		002.99	0
005	Urea N (%)	0524	0.4700	0.0600				1		005.99	0
009	Ammoniacal Plus Nitrate N (%)	0444	17.35	0.1000				1		009.10	0
010	Total N (17%)	0575	16.18†	0.0500	17.64	0.2874	0.1039	73	-5.09	010.99	0
010	Total N (17%)	0521	16.96	0.0000	17.64	0.2874	0.1039	73	-2.35	010.60	0
010	Total N (17%)	0117	16.98	0.2091	17.64	0.2874	0.1039	73	-2.27	010.12	0
010	Total N (17%)	0556	17.00	0.4000	17.64	0.2874	0.1039	73	-2.22	010.99	0
010	Total N (17%)	0510	17.03	0.0175	17.64	0.2874	0.1039	73	-2.12	010.11	0
010	Total N (17%)	0558	17.05	0.0149	17.64	0.2874	0.1039	73	-2.04	010.99	0
010	Total N (17%)	0532	17.11	0.1100	17.64	0.2874	0.1039	73	-1.85	010.99	0
010	Total N (17%)	0518	17.22	0.1900	17.64	0.2874	0.1039	73	-1.47	010.99	0
010	Total N (17%)	0577	17.23	0.0500	17.64	0.2874	0.1039	73	-1.43	010.99	0
010	Total N (17%)	0230	17.25	0.1000	17.64	0.2874	0.1039	73	-1.35	010.60	0
010	Total N (17%)	0234	17.29	0.0400	17.64	0.2874	0.1039	73	-1.21	010.60	0
010	Total N (17%)	0524	17.31	0.0144	17.64	0.2874	0.1039	73	-1.15	010.99	0
010	Total N (17%)	0102	17.32	0.0500	17.64	0.2874	0.1039	73	-1.12	010.60	0
010	Total N (17%)	0565	17.35	0.0600	17.64	0.2874	0.1039	73	-1.00	010.99	0
010	Total N (17%)	0564	17.37	0.0600	17.64	0.2874	0.1039	73	-0.93	010.99	0
010	Total N (17%)	0567	17.37	0.0600	17.64	0.2874	0.1039	73	-0.93	010.99	0
010	Total N (17%)	0600	17.38	0.1500	17.64	0.2874	0.1039	73	-0.91	010.99	0
010	Total N (17%)	0560	17.39	0.0470	17.64	0.2874	0.1039	73	-0.87	010.99	0
010	Total N (17%)	0444	17.40	0.0000	17.64	0.2874	0.1039	73	-0.82	010.10	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Range				
010	Total N (17%)	0545	17.44	0.0800	17.64	0.2874	0.1039	73	-0.69	010.99	0
010	Total N (17%)	0472	17.51	0.0100	17.64	0.2874	0.1039	73	-0.46	010.60	0
010	Total N (17%)	0356	17.54	0.0100	17.64	0.2874	0.1039	73	-0.32	010.60	0
010	Total N (17%)	0423	17.55	0.0600	17.64	0.2874	0.1039	73	-0.30	010.60	0
010	Total N (17%)	0481	17.55	0.2000	17.64	0.2874	0.1039	73	-0.30	010.60	0
010	Total N (17%)	0231	17.55	0.0000	17.64	0.2874	0.1039	73	-0.30	010.60	0
010	Total N (17%)	0291	17.56	0.0100	17.64	0.2874	0.1039	73	-0.28	010.60	0
010	Total N (17%)	0559	17.57	0.0100	17.64	0.2874	0.1039	73	-0.25	010.99	0
010	Total N (17%)	0255	17.59	0.0900	17.64	0.2874	0.1039	73	-0.17	010.60	0
010	Total N (17%)	0451	17.63	0.1000	17.64	0.2874	0.1039	73	-0.02	010.60	0
010	Total N (17%)	0360	17.64	0.0100	17.64	0.2874	0.1039	73	-0.01	010.60	0
010	Total N (17%)	0561	17.65	0.0100	17.64	0.2874	0.1039	73	0.03	010.60	0
010	Total N (17%)	0029	17.65	0.1400	17.64	0.2874	0.1039	73	0.05	010.60	0
010	Total N (17%)	0307	17.65	0.1000	17.64	0.2874	0.1039	73	0.05	010.60	0
010	Total N (17%)	0055	17.66	0.0300	17.64	0.2874	0.1039	73	0.06	010.60	0
010	Total N (17%)	0136	17.67	0.0500	17.64	0.2874	0.1039	73	0.10	010.60	0
010	Total N (17%)	0157	17.70	0.0000	17.64	0.2874	0.1039	73	0.22	010.60	0
010	Total N (17%)	0035	17.70	0.2000	17.64	0.2874	0.1039	73	0.22	010.60	0
010	Total N (17%)	0292	17.71	0.0100	17.64	0.2874	0.1039	73	0.24	010.60	0
010	Total N (17%)	0580	17.72	0.3300	17.64	0.2874	0.1039	73	0.27	010.12	0
010	Total N (17%)	0587	17.72	0.1000	17.64	0.2874	0.1039	73	0.29	010.60	0
010	Total N (17%)	0220	17.73	0.0400	17.64	0.2874	0.1039	73	0.32	010.60	0
010	Total N (17%)	0043	17.74	0.0200	17.64	0.2874	0.1039	73	0.36	010.60	0
010	Total N (17%)	0602	17.75	0.2000	17.64	0.2874	0.1039	73	0.39	010.12	0
010	Total N (17%)	0024	17.75	0.1000	17.64	0.2874	0.1039	73	0.39	010.60	0
010	Total N (17%)	0354	17.75	0.1000	17.64	0.2874	0.1039	73	0.39	010.60	0
010	Total N (17%)	0368	17.75	0.1000	17.64	0.2874	0.1039	73	0.39	010.60	0
010	Total N (17%)	0602	17.75	0.2000	17.64	0.2874	0.1039	73	0.39	010.99	0
010	Total N (17%)	0114	17.76	0.0900	17.64	0.2874	0.1039	73	0.41	010.60	0
010	Total N (17%)	0485	17.79	0.0600	17.64	0.2874	0.1039	73	0.53	010.60	0
010	Total N (17%)	0324	17.80	0.2000	17.64	0.2874	0.1039	73	0.57	010.60	0
010	Total N (17%)	0588	17.80	0.2000	17.64	0.2874	0.1039	73	0.57	010.60	0
010	Total N (17%)	0534	17.80	0.0000	17.64	0.2874	0.1039	73	0.57	010.60	0
010	Total N (17%)	0023	17.80	0.1360	17.64	0.2874	0.1039	73	0.57	010.60	0
010	Total N (17%)	0177	17.82	0.0180	17.64	0.2874	0.1039	73	0.62	010.60	0
010	Total N (17%)	0233	17.82	0.0000	17.64	0.2874	0.1039	73	0.64	010.60	0
010	Total N (17%)	0494	17.82	0.2800	17.64	0.2874	0.1039	73	0.64	010.60	0
010	Total N (17%)	0405	17.83	0.0700	17.64	0.2874	0.1039	73	0.65	010.60	0
010	Total N (17%)	0421	17.83	0.1500	17.64	0.2874	0.1039	73	0.65	010.60	0
010	Total N (17%)	0086	17.84	0.0430	17.64	0.2874	0.1039	73	0.69	010.60	0
010	Total N (17%)	0040	17.85	0.1000	17.64	0.2874	0.1039	73	0.74	010.60	0
010	Total N (17%)	0034	17.86	0.3400	17.64	0.2874	0.1039	73	0.78	010.60	0
010	Total N (17%)	0533	17.88	0.0100	17.64	0.2874	0.1039	73	0.83	010.10	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Range				
010	Total N (17%)	0422	17.88	0.0100	17.64	0.2874	0.1039	73	0.83	010.60	0
010	Total N (17%)	0325	17.89	0.6400	17.64	0.2874	0.1039	73	0.88	010.60	0
010	Total N (17%)	0042	17.90	0.6000	17.64	0.2874	0.1039	73	0.92	010.60	0
010	Total N (17%)	0501	17.91	0.0000	17.64	0.2874	0.1039	73	0.95	010.60	0
010	Total N (17%)	0073	17.94	0.2100	17.64	0.2874	0.1039	73	1.04	010.60	0
010	Total N (17%)	0027	18.00	0.2000	17.64	0.2874	0.1039	73	1.26	010.60	0
010	Total N (17%)	0377	18.01	0.1100	17.64	0.2874	0.1039	73	1.28	010.60	0
010	Total N (17%)	0527	18.18	0.0260	17.64	0.2874	0.1039	73	1.90	010.60	0
010	Total N (17%)	0452	18.48±	0.0500	17.64	0.2874	0.1039	73	2.92	010.60	0
010	Total N (17%)	0260	18.95±	0.1000	17.64	0.2874	0.1039	73	4.57	010.60	0
010	Total N (17%)	0605	20.09±	0.0100	17.64	0.2874	0.1039	73	8.52	010.99	0
010	Total N (17%)	0041	19.18±	1.200	17.64	0.2874	0.1039	73	5.37	010.60	1
020	Total P2O5 (%)	0035	0.9500	0.1000	1.393	0.1574	0.0491	43	-2.81	020.40	0
020	Total P2O5 (%)	0564	1.125	0.0500	1.393	0.1574	0.0491	43	-1.70	020.99	0
020	Total P2O5 (%)	0567	1.125	0.0500	1.393	0.1574	0.0491	43	-1.70	020.99	0
020	Total P2O5 (%)	0560	1.138	0.0170	1.393	0.1574	0.0491	43	-1.62	020.99	0
020	Total P2O5 (%)	0565	1.145	0.0300	1.393	0.1574	0.0491	43	-1.57	020.99	0
020	Total P2O5 (%)	0255	1.151	0.0030	1.393	0.1574	0.0491	43	-1.54	020.50	0
020	Total P2O5 (%)	0521	1.225	0.0000	1.393	0.1574	0.0491	43	-1.07	020.50	0
020	Total P2O5 (%)	0481	1.240	0.0000	1.393	0.1574	0.0491	43	-0.97	020.20	0
020	Total P2O5 (%)	0559	1.244	0.0030	1.393	0.1574	0.0491	43	-0.95	020.99	0
020	Total P2O5 (%)	0260	1.285	0.0700	1.393	0.1574	0.0491	43	-0.68	020.50	0
020	Total P2O5 (%)	0292	1.310	0.0000	1.393	0.1574	0.0491	43	-0.53	020.20	0
020	Total P2O5 (%)	0231	1.310	0.0600	1.393	0.1574	0.0491	43	-0.53	020.50	0
020	Total P2O5 (%)	0422	1.310	0.0018	1.393	0.1574	0.0491	43	-0.52	020.50	0
020	Total P2O5 (%)	0073	1.335	0.0100	1.393	0.1574	0.0491	43	-0.37	020.10	0
020	Total P2O5 (%)	0501	1.345	0.2100	1.393	0.1574	0.0491	43	-0.30	020.50	0
020	Total P2O5 (%)	0513	1.370	0.0200	1.393	0.1574	0.0491	43	-0.14	020.99	0
020	Total P2O5 (%)	0588	1.375	0.0700	1.393	0.1574	0.0491	43	-0.11	020.50	0
020	Total P2O5 (%)	0577	1.380	0.0600	1.393	0.1574	0.0491	43	-0.08	020.99	0
020	Total P2O5 (%)	0556	1.390	0.0200	1.393	0.1574	0.0491	43	-0.02	020.10	0
020	Total P2O5 (%)	0515	1.393	0.0300	1.393	0.1574	0.0491	43	0.00	020.99	0
020	Total P2O5 (%)	0580	1.395	0.0500	1.393	0.1574	0.0491	43	0.01	020.20	0
020	Total P2O5 (%)	0472	1.400	0.0000	1.393	0.1574	0.0491	43	0.05	020.50	0
020	Total P2O5 (%)	0423	1.415	0.0100	1.393	0.1574	0.0491	43	0.14	020.50	0
020	Total P2O5 (%)	0524	1.421	0.0119	1.393	0.1574	0.0491	43	0.18	020.50	0
020	Total P2O5 (%)	0476	1.428	0.0034	1.393	0.1574	0.0491	43	0.22	020.99	0
020	Total P2O5 (%)	0451	1.436	0.0660	1.393	0.1574	0.0491	43	0.28	020.50	0
020	Total P2O5 (%)	0419	1.455	0.0100	1.393	0.1574	0.0491	43	0.40	020.20	0
020	Total P2O5 (%)	0552	1.465	0.2300	1.393	0.1574	0.0491	43	0.46	020.50	0
020	Total P2O5 (%)	0510	1.477	0.0039	1.393	0.1574	0.0491	43	0.53	020.20	0
020	Total P2O5 (%)	0368	1.487	0.0587	1.393	0.1574	0.0491	43	0.60	020.50	0
020	Total P2O5 (%)	0177	1.488	0.0099	1.393	0.1574	0.0491	43	0.60	020.20	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Range				
020	Total P2O5 (%)	0534	1.490	0.0200	1.393	0.1574	0.0491	43	0.62	020.20	0
020	Total P2O5 (%)	0234	1.490	0.0200	1.393	0.1574	0.0491	43	0.62	020.50	0
020	Total P2O5 (%)	0527	1.491	0.0155	1.393	0.1574	0.0491	43	0.63	020.50	0
020	Total P2O5 (%)	0602	1.495	0.0500	1.393	0.1574	0.0491	43	0.65	020.20	0
020	Total P2O5 (%)	0602	1.495	0.0500	1.393	0.1574	0.0491	43	0.65	020.99	0
020	Total P2O5 (%)	0291	1.515	0.0100	1.393	0.1574	0.0491	43	0.78	020.50	0
020	Total P2O5 (%)	0405	1.560	0.1200	1.393	0.1574	0.0491	43	1.06	020.20	0
020	Total P2O5 (%)	0561	1.560	0.1600	1.393	0.1574	0.0491	43	1.06	020.20	0
020	Total P2O5 (%)	0587	1.605	0.0100	1.393	0.1574	0.0491	43	1.35	020.99	0
020	Total P2O5 (%)	0356	1.613	0.1090	1.393	0.1574	0.0491	43	1.40	020.20	0
020	Total P2O5 (%)	0324	1.625	0.0900	1.393	0.1574	0.0491	43	1.48	020.20	0
020	Total P2O5 (%)	0042	1.700	0.2000	1.393	0.1574	0.0491	43	1.95	020.50	0
030	Citrate Insoluble P2O5 (%)	0405	0.0600	0.0000				1		030.20	0
040	Indirect Available P2O5 (1%)	0558	1.127±	0.0221				1		040.20	0
041	Direct Available P2O5 (1%)	0569	1.075	0.0500	1.366	0.1418	0.0660	37	-2.05	041.99	0
041	Direct Available P2O5 (1%)	0043	1.145	0.2900	1.366	0.1418	0.0660	37	-1.56	041.51	0
041	Direct Available P2O5 (1%)	0600	1.160	0.0800	1.366	0.1418	0.0660	37	-1.45	041.99	0
041	Direct Available P2O5 (1%)	0532	1.175	0.1100	1.366	0.1418	0.0660	37	-1.35	041.99	0
041	Direct Available P2O5 (1%)	0230	1.220	0.3000	1.366	0.1418	0.0660	37	-1.03	041.21	0
041	Direct Available P2O5 (1%)	0605	1.225	0.0100	1.366	0.1418	0.0660	37	-1.00	041.50	0
041	Direct Available P2O5 (1%)	0405	1.250	0.1200	1.366	0.1418	0.0660	37	-0.82	041.21	0
041	Direct Available P2O5 (1%)	0325	1.250	0.1000	1.366	0.1418	0.0660	37	-0.82	041.50	0
041	Direct Available P2O5 (1%)	0549	1.250	0.3000	1.366	0.1418	0.0660	37	-0.82	041.99	0
041	Direct Available P2O5 (1%)	0452	1.265	0.0300	1.366	0.1418	0.0660	37	-0.71	041.20	0
041	Direct Available P2O5 (1%)	0423	1.265	0.0100	1.366	0.1418	0.0660	37	-0.71	041.51	0
041	Direct Available P2O5 (1%)	0136	1.320	0.0800	1.366	0.1418	0.0660	37	-0.33	041.51	0
041	Direct Available P2O5 (1%)	0545	1.325	0.0300	1.366	0.1418	0.0660	37	-0.29	041.99	0
041	Direct Available P2O5 (1%)	0405	1.330	0.0000	1.366	0.1418	0.0660	37	-0.26	041.11	0
041	Direct Available P2O5 (1%)	0472	1.335	0.0100	1.366	0.1418	0.0660	37	-0.22	041.21	0
041	Direct Available P2O5 (1%)	0023	1.340	0.0000	1.366	0.1418	0.0660	37	-0.18	041.51	0
041	Direct Available P2O5 (1%)	0354	1.355	0.0300	1.366	0.1418	0.0660	37	-0.08	041.21	0
041	Direct Available P2O5 (1%)	0231	1.360	0.0200	1.366	0.1418	0.0660	37	-0.04	041.51	0
041	Direct Available P2O5 (1%)	0553	1.370	0.0000	1.366	0.1418	0.0660	37	0.03	041.20	0
041	Direct Available P2O5 (1%)	0220	1.390	0.0200	1.366	0.1418	0.0660	37	0.17	041.11	0
041	Direct Available P2O5 (1%)	0055	1.395	0.0100	1.366	0.1418	0.0660	37	0.20	041.11	0
041	Direct Available P2O5 (1%)	0360	1.395	0.0300	1.366	0.1418	0.0660	37	0.20	041.51	0
041	Direct Available P2O5 (1%)	0040	1.400	0.0000	1.366	0.1418	0.0660	37	0.24	041.10	0
041	Direct Available P2O5 (1%)	0027	1.410	0.0400	1.366	0.1418	0.0660	37	0.31	041.20	0
041	Direct Available P2O5 (1%)	0485	1.415	0.0100	1.366	0.1418	0.0660	37	0.34	041.11	0
041	Direct Available P2O5 (1%)	0377	1.415	0.0300	1.366	0.1418	0.0660	37	0.34	041.51	0
041	Direct Available P2O5 (1%)	0025	1.420	0.0000	1.366	0.1418	0.0660	37	0.38	041.51	0
041	Direct Available P2O5 (1%)	0575	1.432	0.0230	1.366	0.1418	0.0660	37	0.46	041.99	0
041	Direct Available P2O5 (1%)	0117	1.444	0.0107	1.366	0.1418	0.0660	37	0.55	041.51	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Range				
041	Direct Available P2O5 (1%)	0102	1.470	0.0400	1.366	0.1418	0.0660	37	0.73	041.10	0
041	Direct Available P2O5 (1%)	0421	1.485	0.0900	1.366	0.1418	0.0660	37	0.84	041.50	0
041	Direct Available P2O5 (1%)	0405	1.505	0.1100	1.366	0.1418	0.0660	37	0.98	041.99	0
041	Direct Available P2O5 (1%)	0018	1.555	0.0100	1.366	0.1418	0.0660	37	1.33	041.40	0
041	Direct Available P2O5 (1%)	0034	1.579	0.0091	1.366	0.1418	0.0660	37	1.50	041.40	0
041	Direct Available P2O5 (1%)	0029	1.660	0.0910	1.366	0.1418	0.0660	37	2.07	041.40	0
041	Direct Available P2O5 (1%)	0055	1.915	0.3100	1.366	0.1418	0.0660	37	3.87	041.21	0
041	Direct Available P2O5 (1%)	0533	1.990	0.0400	1.366	0.1418	0.0660	37	4.40	041.99	0
041	Direct Available P2O5 (1%)	0518	65.68±	128.7	1.366	0.1418	0.0660	37	453.53	041.99	2
048	Water Soluble P2O5 (%)	0472	0.0350	0.0100				1		048.20	0
050	Soluble K2O (%)	0472	0.0150	0.0100	0.0468	0.0235	0.0038	17	-1.35	050.32	0
050	Soluble K2O (%)	0421	0.0150	0.0100	0.0468	0.0235	0.0038	17	-1.35	050.99	0
050	Soluble K2O (%)	0292	0.0200	0.0000	0.0468	0.0235	0.0038	17	-1.14	050.50	0
050	Soluble K2O (%)	0515	0.0305	0.0050	0.0468	0.0235	0.0038	17	-0.69	050.99	0
050	Soluble K2O (%)	0558	0.0318	0.0007	0.0468	0.0235	0.0038	17	-0.64	050.30	0
050	Soluble K2O (%)	0481	0.0400	0.0000	0.0468	0.0235	0.0038	17	-0.29	050.99	0
050	Soluble K2O (%)	0553	0.0410	0.0000	0.0468	0.0235	0.0038	17	-0.25	050.99	0
050	Soluble K2O (%)	0524	0.0454	0.0010	0.0468	0.0235	0.0038	17	-0.06	050.99	0
050	Soluble K2O (%)	0354	0.0485	0.0030	0.0468	0.0235	0.0038	17	0.07	050.52	0
050	Soluble K2O (%)	0476	0.0496	0.0018	0.0468	0.0235	0.0038	17	0.12	050.99	0
050	Soluble K2O (%)	0234	0.0500	0.0000	0.0468	0.0235	0.0038	17	0.14	050.99	0
050	Soluble K2O (%)	0501	0.0500	0.0200	0.0468	0.0235	0.0038	17	0.14	050.99	0
050	Soluble K2O (%)	0220	0.0600	0.0000	0.0468	0.0235	0.0038	17	0.56	050.00	0
050	Soluble K2O (%)	0231	0.0650	0.0100	0.0468	0.0235	0.0038	17	0.77	050.50	0
050	Soluble K2O (%)	0452	0.0700	0.0000	0.0468	0.0235	0.0038	17	0.99	050.51	0
050	Soluble K2O (%)	0422	0.0971	0.0013	0.0468	0.0235	0.0038	17	2.14	050.50	0
050	Soluble K2O (%)	0255	0.1030	0.0020	0.0468	0.0235	0.0038	17	2.39	050.99	0
050	Soluble K2O (%)	0049	0.2475	0.0350	0.0468	0.0235	0.0038	17	8.53	050.00	1
050	Soluble K2O (%)	0575	0.0000	0.0000	0.0468	0.0235	0.0038	17		050.99	4
050	Soluble K2O (%)	0552	0.0150	0.0300	0.0468	0.0235	0.0038	17		050.99	4
050	Soluble K2O (%)	0325	< 0.01		0.0468	0.0235	0.0038	17		050.99	5
050	Soluble K2O (%)	0377	< 0.11		0.0468	0.0235	0.0038	17		050.52	5
050	Soluble K2O (%)	0023	< 0.235		0.0468	0.0235	0.0038	17		050.52	5
050	Soluble K2O (%)	0485	< 0.3		0.0468	0.0235	0.0038	17		050.52	5
060	Water (Free) (%)	0510	1.079	0.0028				1		060.99	0
101	Acid Soluble Ca (%)	0553	0.1030	0.0080	0.3047	0.0396	0.0056	7	-4.60	101.00	0
101	Acid Soluble Ca (%)	0472	0.2750	0.0100	0.3047	0.0396	0.0056	7	-0.68	101.33	0
101	Acid Soluble Ca (%)	0035	0.3035	0.0190	0.3047	0.0396	0.0056	7	-0.03	101.30	0
101	Acid Soluble Ca (%)	0419	0.3100	0.0000	0.3047	0.0396	0.0056	7	0.12	101.33	0
101	Acid Soluble Ca (%)	0354	0.3200	0.0000	0.3047	0.0396	0.0056	7	0.35	101.30	0
101	Acid Soluble Ca (%)	0423	0.3290	0.0020	0.3047	0.0396	0.0056	7	0.56	101.32	0
101	Acid Soluble Ca (%)	0231	0.3500	0.0000	0.3047	0.0396	0.0056	7	1.03	101.30	0
101	Acid Soluble Ca (%)	0552	0.6650	0.3300	0.3047	0.0396	0.0056	7	8.22	101.99	1

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Range				
101	Acid Soluble Ca (%)	0527	< 0.01		0.3047	0.0396	0.0056	7		101.33	5
121	Acid Soluble Mg (%)	0472	0.0250	0.0300	0.0737	0.0055	0.0062	10	-8.19	121.33	0
121	Acid Soluble Mg (%)	0524	0.0670	0.0021	0.0737	0.0055	0.0062	10	-1.13	121.99	0
121	Acid Soluble Mg (%)	0035	0.0705	0.0030	0.0737	0.0055	0.0062	10	-0.54	121.30	0
121	Acid Soluble Mg (%)	0494	0.0735	0.0067	0.0737	0.0055	0.0062	10	-0.04	121.33	0
121	Acid Soluble Mg (%)	0419	0.0750	0.0040	0.0737	0.0055	0.0062	10	0.22	121.33	0
121	Acid Soluble Mg (%)	0515	0.0754	0.0078	0.0737	0.0055	0.0062	10	0.29	121.99	0
121	Acid Soluble Mg (%)	0553	0.0755	0.0050	0.0737	0.0055	0.0062	10	0.30	121.00	0
121	Acid Soluble Mg (%)	0527	0.0757	0.0014	0.0737	0.0055	0.0062	10	0.34	121.33	0
121	Acid Soluble Mg (%)	0423	0.0770	0.0020	0.0737	0.0055	0.0062	10	0.56	121.32	0
121	Acid Soluble Mg (%)	0354	0.0900	0.0000	0.0737	0.0055	0.0062	10	2.74	121.30	0
121	Acid Soluble Mg (%)	0552	0.1200	0.1400	0.0737	0.0055	0.0062	10	7.79	121.99	1
143	Elemental S (%)	0255	18.23	0.4100	20.87	2.300	1.127	3	-1.15	143.99	0
143	Elemental S (%)	0368	22.02	0.0504	20.87	2.300	1.127	3	0.50	143.99	0
143	Elemental S (%)	0325	22.37	2.920	20.87	2.300	1.127	3	0.65	143.99	0
145	Sulfate S, HCl soluble (%)	0444	15.77	0.3400	19.53	0.7393	0.2700	7	-4.60	145.99	0
145	Sulfate S, HCl soluble (%)	0553	19.15	0.3000	19.53	0.7393	0.2700	7	-0.46	145.99	0
145	Sulfate S, HCl soluble (%)	0561	19.32	0.3300	19.53	0.7393	0.2700	7	-0.26	145.00	0
145	Sulfate S, HCl soluble (%)	0481	19.41	0.2800	19.53	0.7393	0.2700	7	-0.14	145.99	0
145	Sulfate S, HCl soluble (%)	0532	20.06	0.3500	19.53	0.7393	0.2700	7	0.64	145.99	0
145	Sulfate S, HCl soluble (%)	0405	20.11	0.0500	19.53	0.7393	0.2700	7	0.71	145.00	0
145	Sulfate S, HCl soluble (%)	0027	20.24	0.2400	19.53	0.7393	0.2700	7	0.87	145.00	0
146	Total S in Liquid (20%)	0444	15.77±	0.3400				1		146.99	0
148	Total S (20%)	0444	17.01†	0.3400	20.05	0.6743	0.2622	50	-4.51	148.07	0
148	Total S (20%)	0260	17.50†	0.4000	20.05	0.6743	0.2622	50	-3.78	148.07	0
148	Total S (20%)	0072	18.11†	0.1445	20.05	0.6743	0.2622	50	-2.87	148.99	0
148	Total S (20%)	0575	18.81†	0.2100	20.05	0.6743	0.2622	50	-1.84	148.99	0
148	Total S (20%)	0472	18.87†	0.1800	20.05	0.6743	0.2622	50	-1.75	148.07	0
148	Total S (20%)	0577	19.15	0.3500	20.05	0.6743	0.2622	50	-1.34	148.99	0
148	Total S (20%)	0114	19.37	1.250	20.05	0.6743	0.2622	50	-1.01	148.00	0
148	Total S (20%)	0177	19.41	0.3432	20.05	0.6743	0.2622	50	-0.95	148.07	0
148	Total S (20%)	0521	19.42	0.0000	20.05	0.6743	0.2622	50	-0.93	148.07	0
148	Total S (20%)	0494	19.45	0.6483	20.05	0.6743	0.2622	50	-0.88	148.07	0
148	Total S (20%)	0501	19.47	0.5900	20.05	0.6743	0.2622	50	-0.87	148.99	0
148	Total S (20%)	0073	19.52	0.1300	20.05	0.6743	0.2622	50	-0.79	148.00	0
148	Total S (20%)	0023	19.65	0.1000	20.05	0.6743	0.2622	50	-0.59	148.99	0
148	Total S (20%)	0533	19.78	0.1800	20.05	0.6743	0.2622	50	-0.40	148.99	0
148	Total S (20%)	0040	19.80	0.0000	20.05	0.6743	0.2622	50	-0.37	148.07	0
148	Total S (20%)	0560	19.80	0.0280	20.05	0.6743	0.2622	50	-0.37	148.99	0
148	Total S (20%)	0559	19.81	0.0100	20.05	0.6743	0.2622	50	-0.36	148.99	0
148	Total S (20%)	0600	19.83	0.1500	20.05	0.6743	0.2622	50	-0.33	148.99	0
148	Total S (20%)	0564	19.83	0.0200	20.05	0.6743	0.2622	50	-0.32	148.99	0
148	Total S (20%)	0567	19.83	0.0200	20.05	0.6743	0.2622	50	-0.32	148.99	0

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			Value	Range	Rob Mean	Rob SD	Range				
148	Total S (20%)	0565	19.85	0.0200	20.05	0.6743	0.2622	50	-0.29	148.99	0
148	Total S (20%)	0029	19.97	0.1400	20.05	0.6743	0.2622	50	-0.12	148.00	0
148	Total S (20%)	0549	20.04	0.1300	20.05	0.6743	0.2622	50	-0.02	148.01	0
148	Total S (20%)	0569	20.04	0.1200	20.05	0.6743	0.2622	50	-0.01	148.01	0
148	Total S (20%)	0231	20.05	0.1000	20.05	0.6743	0.2622	50	0.00	148.01	0
148	Total S (20%)	0494	20.09	0.1090	20.05	0.6743	0.2622	50	0.07	148.01	0
148	Total S (20%)	0354	20.10	0.0000	20.05	0.6743	0.2622	50	0.08	148.99	0
148	Total S (20%)	0049	20.14	0.3700	20.05	0.6743	0.2622	50	0.13	148.00	0
148	Total S (20%)	0545	20.14	0.0700	20.05	0.6743	0.2622	50	0.13	148.01	0
148	Total S (20%)	0558	20.14	0.0950	20.05	0.6743	0.2622	50	0.14	148.99	0
148	Total S (20%)	0534	20.15	0.3000	20.05	0.6743	0.2622	50	0.15	148.01	0
148	Total S (20%)	0230	20.20	1.000	20.05	0.6743	0.2622	50	0.22	148.01	0
148	Total S (20%)	0527	20.24	0.2270	20.05	0.6743	0.2622	50	0.28	148.07	0
148	Total S (20%)	0605	20.31	0.1500	20.05	0.6743	0.2622	50	0.38	148.99	0
148	Total S (20%)	0029	20.32	0.0400	20.05	0.6743	0.2622	50	0.40	148.01	0
148	Total S (20%)	0513	20.45	0.0800	20.05	0.6743	0.2622	50	0.60	148.07	0
148	Total S (20%)	0055	20.49	0.6200	20.05	0.6743	0.2622	50	0.65	148.01	0
148	Total S (20%)	0513	20.55	0.0600	20.05	0.6743	0.2622	50	0.74	148.01	0
148	Total S (20%)	0580	20.55	0.2000	20.05	0.6743	0.2622	50	0.74	148.01	0
148	Total S (20%)	0485	20.55	0.1000	20.05	0.6743	0.2622	50	0.74	148.01	0
148	Total S (20%)	0220	20.59	0.0300	20.05	0.6743	0.2622	50	0.80	148.99	0
148	Total S (20%)	0452	20.73	0.0100	20.05	0.6743	0.2622	50	1.00	148.99	0
148	Total S (20%)	0136	20.74	0.5600	20.05	0.6743	0.2622	50	1.03	148.00	0
148	Total S (20%)	0451	20.75	0.7000	20.05	0.6743	0.2622	50	1.04	148.00	0
148	Total S (20%)	0157	20.80	0.4000	20.05	0.6743	0.2622	50	1.11	148.00	0
148	Total S (20%)	0324	20.95	0.9000	20.05	0.6743	0.2622	50	1.34	148.01	0
148	Total S (20%)	0043	21.20†	0.3600	20.05	0.6743	0.2622	50	1.71	148.99	0
148	Total S (20%)	0292	21.43†	0.0600	20.05	0.6743	0.2622	50	2.05	148.07	0
148	Total S (20%)	0117	21.77†	0.2064	20.05	0.6743	0.2622	50	2.56	148.07	0
148	Total S (20%)	0422	25.01†	0.8600	20.05	0.6743	0.2622	50	7.36	148.99	0
148	Total S (20%)	0377	18.61†	1.890	20.05	0.6743	0.2622	50	-2.14	148.99	1
148	Total S (20%)	0421	20.90	2.800	20.05	0.6743	0.2622	50	1.26	148.07	1
149	S - HNO3 soluble (%)	0588	19.70	0.2000	20.03	0.3183	0.5466	3	-1.03	149.04	0
149	S - HNO3 soluble (%)	0423	20.05	0.2000	20.03	0.3183	0.5466	3	0.07	149.04	0
149	S - HNO3 soluble (%)	0524	20.34	1.240	20.03	0.3183	0.5466	3	0.96	149.04	0
151	Acid Soluble As (ppm)	0220	0.5000	0.0000	2.586	1.886	0.2188	8	-1.11	151.99	0
151	Acid Soluble As (ppm)	0220	0.9500	0.1000	2.586	1.886	0.2188	8	-0.87	151.32	0
151	Acid Soluble As (ppm)	0481	1.460	0.0600	2.586	1.886	0.2188	8	-0.60	151.99	0
151	Acid Soluble As (ppm)	0136	2.365	0.0100	2.586	1.886	0.2188	8	-0.12	151.33	0
151	Acid Soluble As (ppm)	0524	2.384	0.0310	2.586	1.886	0.2188	8	-0.11	151.30	0
151	Acid Soluble As (ppm)	0419	3.795	0.4900	2.586	1.886	0.2188	8	0.64	151.30	0
151	Acid Soluble As (ppm)	0527	3.818	0.3497	2.586	1.886	0.2188	8	0.65	151.33	0
151	Acid Soluble As (ppm)	0494	5.675	0.7100	2.586	1.886	0.2188	8	1.64	151.33	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Range				
151	Acid Soluble As (ppm)	0255	0.0000	0.0000	2.586	1.886	0.2188	8		151.30	4
151	Acid Soluble As (ppm)	0368	< 0.5		2.586	1.886	0.2188	8		151.34	5
151	Acid Soluble As (ppm)	0405	< 3		2.586	1.886	0.2188	8		151.99	5
151	Acid Soluble As (ppm)	0605	< 6.2		2.586	1.886	0.2188	8		151.30	5
165	Acid Soluble B (%)	0524	0.0013	0.0002				2		165.99	0
165	Acid Soluble B (%)	0423	0.0027	0.0001				2		165.99	0
165	Acid Soluble B (%)	0552	0.0250	0.0500				2		165.99	4
165	Acid Soluble B (%)	0354	< 0.01					2		165.30	5
165	Acid Soluble B (%)	0527	< 0.01					2		165.99	5
181	Acid Soluble Cd (ppm)	0220	0.1000	0.0200	0.7202	0.5773	0.0889	5	-1.07	181.99	0
181	Acid Soluble Cd (ppm)	0444	0.5300	0.0800	0.7202	0.5773	0.0889	5	-0.33	181.30	0
181	Acid Soluble Cd (ppm)	0035	0.6385	0.1410	0.7202	0.5773	0.0889	5	-0.14	181.30	0
181	Acid Soluble Cd (ppm)	0524	0.6625	0.0033	0.7202	0.5773	0.0889	5	-0.10	181.30	0
181	Acid Soluble Cd (ppm)	0419	1.670	0.2000	0.7202	0.5773	0.0889	5	1.65	181.30	0
181	Acid Soluble Cd (ppm)	0255	0.9045	0.7230	0.7202	0.5773	0.0889	5	0.32	181.30	1
181	Acid Soluble Cd (ppm)	0527	< 0.0001		0.7202	0.5773	0.0889	5		181.33	5
181	Acid Soluble Cd (ppm)	0220	< 0.1		0.7202	0.5773	0.0889	5		181.32	5
181	Acid Soluble Cd (ppm)	0368	< 0.1		0.7202	0.5773	0.0889	5		181.34	5
181	Acid Soluble Cd (ppm)	0515	< 0.101		0.7202	0.5773	0.0889	5		181.34	5
181	Acid Soluble Cd (ppm)	0481	< 0.5		0.7202	0.5773	0.0889	5		181.99	5
181	Acid Soluble Cd (ppm)	0136	< 1		0.7202	0.5773	0.0889	5		181.33	5
181	Acid Soluble Cd (ppm)	0405	< 1		0.7202	0.5773	0.0889	5		181.99	5
181	Acid Soluble Cd (ppm)	0605	< 1.85		0.7202	0.5773	0.0889	5		181.30	5
190	Water Soluble Cl (%)	0553	< 0.1					0		190.00	5
191	Acid Soluble Cr (ppm)	0220	15.95	0.3000	21.38	3.529	0.4283	15	-1.54	191.32	0
191	Acid Soluble Cr (ppm)	0444	16.82	0.3200	21.38	3.529	0.4283	15	-1.29	191.30	0
191	Acid Soluble Cr (ppm)	0136	17.44	0.0900	21.38	3.529	0.4283	15	-1.12	191.33	0
191	Acid Soluble Cr (ppm)	0419	18.66	1.690	21.38	3.529	0.4283	15	-0.77	191.30	0
191	Acid Soluble Cr (ppm)	0368	20.00	0.8000	21.38	3.529	0.4283	15	-0.39	191.34	0
191	Acid Soluble Cr (ppm)	0524	20.05	0.2728	21.38	3.529	0.4283	15	-0.38	191.30	0
191	Acid Soluble Cr (ppm)	0220	20.70	0.2000	21.38	3.529	0.4283	15	-0.19	191.99	0
191	Acid Soluble Cr (ppm)	0527	22.02	0.0060	21.38	3.529	0.4283	15	0.18	191.33	0
191	Acid Soluble Cr (ppm)	0515	23.10	1.645	21.38	3.529	0.4283	15	0.49	191.34	0
191	Acid Soluble Cr (ppm)	0605	23.35	0.1000	21.38	3.529	0.4283	15	0.56	191.30	0
191	Acid Soluble Cr (ppm)	0481	23.60	0.4000	21.38	3.529	0.4283	15	0.63	191.99	0
191	Acid Soluble Cr (ppm)	0027	24.00	0.0000	21.38	3.529	0.4283	15	0.74	191.30	0
191	Acid Soluble Cr (ppm)	0513	24.00	0.4000	21.38	3.529	0.4283	15	0.74	191.30	0
191	Acid Soluble Cr (ppm)	0035	24.90	0.2000	21.38	3.529	0.4283	15	1.00	191.30	0
191	Acid Soluble Cr (ppm)	0405	26.00	0.0000	21.38	3.529	0.4283	15	1.31	191.99	0
202	Acid Soluble Co (ppm)	0368	1.350	0.3000	3.989	1.960	0.3842	12	-1.35	202.34	0
202	Acid Soluble Co (ppm)	0485	1.595	0.1100	3.989	1.960	0.3842	12	-1.22	202.30	0
202	Acid Soluble Co (ppm)	0220	2.550	0.1000	3.989	1.960	0.3842	12	-0.73	202.32	0
202	Acid Soluble Co (ppm)	0419	2.605	0.3100	3.989	1.960	0.3842	12	-0.71	202.30	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Range				
202	Acid Soluble Co (ppm)	0220	3.400	0.0000	3.989	1.960	0.3842	12	-0.30	202.99	0
202	Acid Soluble Co (ppm)	0527	4.002	0.0488	3.989	1.960	0.3842	12	0.01	202.33	0
202	Acid Soluble Co (ppm)	0423	4.385	0.0700	3.989	1.960	0.3842	12	0.20	202.32	0
202	Acid Soluble Co (ppm)	0035	4.705	0.3300	3.989	1.960	0.3842	12	0.37	202.30	0
202	Acid Soluble Co (ppm)	0605	5.200	1.200	3.989	1.960	0.3842	12	0.62	202.30	0
202	Acid Soluble Co (ppm)	0405	5.500	1.000	3.989	1.960	0.3842	12	0.77	202.99	0
202	Acid Soluble Co (ppm)	0524	5.651	0.2032	3.989	1.960	0.3842	12	0.85	202.30	0
202	Acid Soluble Co (ppm)	0255	7.974	0.9380	3.989	1.960	0.3842	12	2.03	202.99	0
202	Acid Soluble Co (ppm)	0515	< 0.092		3.989	1.960	0.3842	12		202.34	5
202	Acid Soluble Co (ppm)	0136	< 2.5		3.989	1.960	0.3842	12		202.33	5
221	Acid Soluble Cu (%)	0049	0.0075	0.0010	0.0087	0.0007	0.0002	19	-1.83	221.30	0
221	Acid Soluble Cu (%)	0255	0.0080	0.0000	0.0087	0.0007	0.0002	19	-1.07	221.30	0
221	Acid Soluble Cu (%)	0481	0.0080	0.0000	0.0087	0.0007	0.0002	19	-1.07	221.99	0
221	Acid Soluble Cu (%)	0524	0.0082	0.0001	0.0087	0.0007	0.0002	19	-0.85	221.99	0
221	Acid Soluble Cu (%)	0035	0.0082	0.0002	0.0087	0.0007	0.0002	19	-0.77	221.30	0
221	Acid Soluble Cu (%)	0234	0.0083	0.0002	0.0087	0.0007	0.0002	19	-0.62	221.30	0
221	Acid Soluble Cu (%)	0515	0.0083	0.0006	0.0087	0.0007	0.0002	19	-0.62	221.99	0
221	Acid Soluble Cu (%)	0553	0.0085	0.0010	0.0087	0.0007	0.0002	19	-0.32	221.00	0
221	Acid Soluble Cu (%)	0513	0.0085	0.0000	0.0087	0.0007	0.0002	19	-0.32	221.30	0
221	Acid Soluble Cu (%)	0368	0.0089	0.0002	0.0087	0.0007	0.0002	19	0.28	221.99	0
221	Acid Soluble Cu (%)	0405	0.0090	0.0001	0.0087	0.0007	0.0002	19	0.35	221.99	0
221	Acid Soluble Cu (%)	0423	0.0090	0.0000	0.0087	0.0007	0.0002	19	0.43	221.32	0
221	Acid Soluble Cu (%)	0043	0.0090	0.0000	0.0087	0.0007	0.0002	19	0.43	221.33	0
221	Acid Soluble Cu (%)	0419	0.0090	0.0000	0.0087	0.0007	0.0002	19	0.43	221.33	0
221	Acid Soluble Cu (%)	0027	0.0090	0.0000	0.0087	0.0007	0.0002	19	0.43	221.99	0
221	Acid Soluble Cu (%)	0136	0.0092	0.0002	0.0087	0.0007	0.0002	19	0.73	221.33	0
221	Acid Soluble Cu (%)	0444	0.0095	0.0010	0.0087	0.0007	0.0002	19	1.18	221.30	0
221	Acid Soluble Cu (%)	0527	0.0097	0.0001	0.0087	0.0007	0.0002	19	1.41	221.33	0
221	Acid Soluble Cu (%)	0472	0.0100	0.0000	0.0087	0.0007	0.0002	19	1.93	221.33	0
221	Acid Soluble Cu (%)	0552	0.0100	0.0200	0.0087	0.0007	0.0002	19		221.30	4
221	Acid Soluble Cu (%)	0354	< 0.01		0.0087	0.0007	0.0002	19		221.30	5
241	Acid Soluble Fe (%)	0552	1.830	0.0200	1.888	0.0478	0.0336	12	-1.22	241.30	0
241	Acid Soluble Fe (%)	0494	1.854	0.1261	1.888	0.0478	0.0336	12	-0.71	241.33	0
241	Acid Soluble Fe (%)	0472	1.855	0.0100	1.888	0.0478	0.0336	12	-0.70	241.33	0
241	Acid Soluble Fe (%)	0419	1.860	0.0200	1.888	0.0478	0.0336	12	-0.59	241.33	0
241	Acid Soluble Fe (%)	0515	1.861	0.0280	1.888	0.0478	0.0336	12	-0.57	241.99	0
241	Acid Soluble Fe (%)	0524	1.865	0.0002	1.888	0.0478	0.0336	12	-0.48	241.99	0
241	Acid Soluble Fe (%)	0553	1.880	0.0600	1.888	0.0478	0.0336	12	-0.17	241.00	0
241	Acid Soluble Fe (%)	0035	1.885	0.0300	1.888	0.0478	0.0336	12	-0.07	241.30	0
241	Acid Soluble Fe (%)	0354	1.935	0.0500	1.888	0.0478	0.0336	12	0.98	241.30	0
241	Acid Soluble Fe (%)	0231	1.940	0.0400	1.888	0.0478	0.0336	12	1.08	241.30	0
241	Acid Soluble Fe (%)	0423	1.942	0.0030	1.888	0.0478	0.0336	12	1.12	241.32	0
241	Acid Soluble Fe (%)	0527	1.952	0.0156	1.888	0.0478	0.0336	12	1.33	241.33	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Range				
251	Acid Soluble Pb (ppm)	0220	2.000	0.4000	11.10	3.639	0.5511	16	-2.50	251.99	0
251	Acid Soluble Pb (ppm)	0220	2.400	0.6000	11.10	3.639	0.5511	16	-2.39	251.32	0
251	Acid Soluble Pb (ppm)	0481	8.050	0.0800	11.10	3.639	0.5511	16	-0.84	251.99	0
251	Acid Soluble Pb (ppm)	0534	8.150	0.1000	11.10	3.639	0.5511	16	-0.81	251.99	0
251	Acid Soluble Pb (ppm)	0485	9.080	0.1600	11.10	3.639	0.5511	16	-0.55	251.30	0
251	Acid Soluble Pb (ppm)	0515	9.939	1.074	11.10	3.639	0.5511	16	-0.32	251.34	0
251	Acid Soluble Pb (ppm)	0444	10.26	0.1700	11.10	3.639	0.5511	16	-0.23	251.30	0
251	Acid Soluble Pb (ppm)	0524	10.87	0.1426	11.10	3.639	0.5511	16	-0.06	251.30	0
251	Acid Soluble Pb (ppm)	0255	11.75	0.2600	11.10	3.639	0.5511	16	0.18	251.30	0
251	Acid Soluble Pb (ppm)	0136	12.80	0.0300	11.10	3.639	0.5511	16	0.47	251.33	0
251	Acid Soluble Pb (ppm)	0513	13.25	0.7000	11.10	3.639	0.5511	16	0.59	251.30	0
251	Acid Soluble Pb (ppm)	0605	13.25	1.900	11.10	3.639	0.5511	16	0.59	251.30	0
251	Acid Soluble Pb (ppm)	0027	13.50	1.000	11.10	3.639	0.5511	16	0.66	251.30	0
251	Acid Soluble Pb (ppm)	0527	13.81	0.0008	11.10	3.639	0.5511	16	0.74	251.33	0
251	Acid Soluble Pb (ppm)	0405	15.00	0.0000	11.10	3.639	0.5511	16	1.07	251.99	0
251	Acid Soluble Pb (ppm)	0035	20.40	2.200	11.10	3.639	0.5511	16	2.56	251.30	0
251	Acid Soluble Pb (ppm)	0368	9.200	11.40	11.10	3.639	0.5511	16	-0.52	251.34	1
261	Acid Soluble Mn (%)	0515	0.0036	0.0014	0.0209	0.0017	0.0003	9	-9.48	261.99	0
261	Acid Soluble Mn (%)	0354	0.0200	0.0000	0.0209	0.0017	0.0003	9	-0.50	261.30	0
261	Acid Soluble Mn (%)	0472	0.0200	0.0000	0.0209	0.0017	0.0003	9	-0.50	261.35	0
261	Acid Soluble Mn (%)	0553	0.0205	0.0010	0.0209	0.0017	0.0003	9	-0.23	261.00	0
261	Acid Soluble Mn (%)	0494	0.0207	0.0003	0.0209	0.0017	0.0003	9	-0.15	261.35	0
261	Acid Soluble Mn (%)	0423	0.0210	0.0000	0.0209	0.0017	0.0003	9	0.04	261.34	0
261	Acid Soluble Mn (%)	0524	0.0218	0.0001	0.0209	0.0017	0.0003	9	0.45	261.99	0
261	Acid Soluble Mn (%)	0527	0.0230	0.0001	0.0209	0.0017	0.0003	9	1.11	261.35	0
261	Acid Soluble Mn (%)	0035	0.0231	0.0001	0.0209	0.0017	0.0003	9	1.17	261.30	0
261	Acid Soluble Mn (%)	0552	0.0300	0.0600	0.0209	0.0017	0.0003	9		261.32	4
281	Acid Soluble Hg (ppm)	0220	0.1250	0.0300	0.1927	0.0462	0.0102	4	-1.24	281.99	0
281	Acid Soluble Hg (ppm)	0524	0.2015	0.0008	0.1927	0.0462	0.0102	4	0.16	281.99	0
281	Acid Soluble Hg (ppm)	0368	0.2194	0.0081	0.1927	0.0462	0.0102	4	0.49	281.99	0
281	Acid Soluble Hg (ppm)	0035	0.2250	0.0020	0.1927	0.0462	0.0102	4	0.59	281.99	0
281	Acid Soluble Hg (ppm)	0527	< 0.001		0.1927	0.0462	0.0102	4		281.30	5
281	Acid Soluble Hg (ppm)	0515	< 0.017		0.1927	0.0462	0.0102	4		281.30	5
281	Acid Soluble Hg (ppm)	0481	< 0.5		0.1927	0.0462	0.0102	4		281.00	5
281	Acid Soluble Hg (ppm)	0605	< 1.25		0.1927	0.0462	0.0102	4		281.30	5
281	Acid Soluble Hg (ppm)	0405	< 2		0.1927	0.0462	0.0102	4		281.99	5
289	Acid Soluble Mo (ppm)	0444	0.0015	0.0010	5.577	1.856	0.2934	16	-3.00	289.30	0
289	Acid Soluble Mo (ppm)	0035	3.460	0.3200	5.577	1.856	0.2934	16	-1.14	289.30	0
289	Acid Soluble Mo (ppm)	0234	3.500	1.000	5.577	1.856	0.2934	16	-1.12	289.30	0
289	Acid Soluble Mo (ppm)	0524	3.976	0.0872	5.577	1.856	0.2934	16	-0.86	289.30	0
289	Acid Soluble Mo (ppm)	0049	4.360	0.3000	5.577	1.856	0.2934	16	-0.66	289.30	0
289	Acid Soluble Mo (ppm)	0368	4.800	0.2000	5.577	1.856	0.2934	16	-0.42	289.34	0
289	Acid Soluble Mo (ppm)	0255	5.332	0.0100	5.577	1.856	0.2934	16	-0.13	289.30	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Range				
289	Acid Soluble Mo (ppm)	0220	5.500	0.0000	5.577	1.856	0.2934	16	-0.04	289.32	0
289	Acid Soluble Mo (ppm)	0220	5.850	0.7000	5.577	1.856	0.2934	16	0.15	289.99	0
289	Acid Soluble Mo (ppm)	0494	6.445	0.3700	5.577	1.856	0.2934	16	0.47	289.33	0
289	Acid Soluble Mo (ppm)	0423	6.560	0.0200	5.577	1.856	0.2934	16	0.53	289.33	0
289	Acid Soluble Mo (ppm)	0136	6.600	0.2200	5.577	1.856	0.2934	16	0.55	289.33	0
289	Acid Soluble Mo (ppm)	0405	7.000	0.0000	5.577	1.856	0.2934	16	0.77	289.99	0
289	Acid Soluble Mo (ppm)	0527	7.300	0.2656	5.577	1.856	0.2934	16	0.93	289.33	0
289	Acid Soluble Mo (ppm)	0513	7.400	0.8000	5.577	1.856	0.2934	16	0.98	289.30	0
289	Acid Soluble Mo (ppm)	0419	9.650	0.4000	5.577	1.856	0.2934	16	2.19	289.30	0
289	Acid Soluble Mo (ppm)	0515	6.972	3.295	5.577	1.856	0.2934	16	0.75	289.34	1
289	Acid Soluble Mo (ppm)	0481	< 100		5.577	1.856	0.2934	16		289.99	5
291	Acid Soluble Ni (ppm)	0515	6.131	0.1750	8.920	1.941	0.5794	16	-1.44	291.34	0
291	Acid Soluble Ni (ppm)	0368	6.800	1.200	8.920	1.941	0.5794	16	-1.09	291.34	0
291	Acid Soluble Ni (ppm)	0136	6.930	0.1600	8.920	1.941	0.5794	16	-1.03	291.33	0
291	Acid Soluble Ni (ppm)	0444	7.595	0.1700	8.920	1.941	0.5794	16	-0.68	291.30	0
291	Acid Soluble Ni (ppm)	0485	7.685	1.290	8.920	1.941	0.5794	16	-0.64	291.30	0
291	Acid Soluble Ni (ppm)	0220	7.700	0.4000	8.920	1.941	0.5794	16	-0.63	291.32	0
291	Acid Soluble Ni (ppm)	0419	7.875	1.190	8.920	1.941	0.5794	16	-0.54	291.30	0
291	Acid Soluble Ni (ppm)	0527	8.729	0.0687	8.920	1.941	0.5794	16	-0.10	291.33	0
291	Acid Soluble Ni (ppm)	0524	9.374	0.0160	8.920	1.941	0.5794	16	0.23	291.30	0
291	Acid Soluble Ni (ppm)	0605	9.500	0.4000	8.920	1.941	0.5794	16	0.30	291.30	0
291	Acid Soluble Ni (ppm)	0220	9.950	0.1000	8.920	1.941	0.5794	16	0.53	291.99	0
291	Acid Soluble Ni (ppm)	0513	10.25	0.7000	8.920	1.941	0.5794	16	0.69	291.30	0
291	Acid Soluble Ni (ppm)	0494	10.80	1.200	8.920	1.941	0.5794	16	0.97	291.33	0
291	Acid Soluble Ni (ppm)	0035	10.90	1.200	8.920	1.941	0.5794	16	1.02	291.30	0
291	Acid Soluble Ni (ppm)	0027	11.00	0.0000	8.920	1.941	0.5794	16	1.07	291.30	0
291	Acid Soluble Ni (ppm)	0405	11.50	1.000	8.920	1.941	0.5794	16	1.33	291.99	0
291	Acid Soluble Ni (ppm)	0255	24.56	9.690	8.920	1.941	0.5794	16	8.06	291.99	1
301	Acid Soluble Se (ppm)	0220	0.3000	0.0000	0.6996	0.4266	0.0511	3	-0.76	301.99	0
301	Acid Soluble Se (ppm)	0220	0.6500	0.1000	0.6996	0.4266	0.0511	3	-0.09	301.32	0
301	Acid Soluble Se (ppm)	0524	1.149	0.0534	0.6996	0.4266	0.0511	3	0.85	301.30	0
301	Acid Soluble Se (ppm)	0255	0.0000	0.0000	0.6996	0.4266	0.0511	3		301.99	4
301	Acid Soluble Se (ppm)	0527	< 0.001		0.6996	0.4266	0.0511	3		301.33	5
301	Acid Soluble Se (ppm)	0515	< 0.108		0.6996	0.4266	0.0511	3		301.34	5
301	Acid Soluble Se (ppm)	0481	< 0.5		0.6996	0.4266	0.0511	3		301.99	5
301	Acid Soluble Se (ppm)	0368	< 1.5		0.6996	0.4266	0.0511	3		301.34	5
301	Acid Soluble Se (ppm)	0605	< 1.65		0.6996	0.4266	0.0511	3		301.30	5
301	Acid Soluble Se (ppm)	0405	< 10		0.6996	0.4266	0.0511	3		301.99	5
311	Sodium (%)	0553	0.0555	0.0030	0.0633	0.0085	0.0016	6	-0.82	311.00	0
311	Sodium (%)	0035	0.0575	0.0050	0.0633	0.0085	0.0016	6	-0.61	311.33	0
311	Sodium (%)	0423	0.0605	0.0010	0.0633	0.0085	0.0016	6	-0.29	311.33	0
311	Sodium (%)	0419	0.0630	0.0000	0.0633	0.0085	0.0016	6	-0.03	311.33	0
311	Sodium (%)	0527	0.0672	0.0004	0.0633	0.0085	0.0016	6	0.41	311.33	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Range				
311	Sodium (%)	0354	0.1100	0.0000	0.0633	0.0085	0.0016	6	4.93	311.99	0
321	Acid Soluble Zn (%)	0049	0.0195	0.0010	0.0243	0.0032	0.0009	20	-1.49	321.30	0
321	Acid Soluble Zn (%)	0534	0.0200	0.0000	0.0243	0.0032	0.0009	20	-1.34	321.00	0
321	Acid Soluble Zn (%)	0354	0.0200	0.0000	0.0243	0.0032	0.0009	20	-1.34	321.30	0
321	Acid Soluble Zn (%)	0472	0.0200	0.0000	0.0243	0.0032	0.0009	20	-1.34	321.33	0
321	Acid Soluble Zn (%)	0553	0.0215	0.0010	0.0243	0.0032	0.0009	20	-0.87	321.00	0
321	Acid Soluble Zn (%)	0234	0.0236	0.0007	0.0243	0.0032	0.0009	20	-0.22	321.30	0
321	Acid Soluble Zn (%)	0035	0.0238	0.0011	0.0243	0.0032	0.0009	20	-0.16	321.30	0
321	Acid Soluble Zn (%)	0136	0.0238	0.0004	0.0243	0.0032	0.0009	20	-0.15	321.33	0
321	Acid Soluble Zn (%)	0481	0.0240	0.0000	0.0243	0.0032	0.0009	20	-0.08	321.99	0
321	Acid Soluble Zn (%)	0255	0.0245	0.0010	0.0243	0.0032	0.0009	20	0.07	321.30	0
321	Acid Soluble Zn (%)	0515	0.0247	0.0011	0.0243	0.0032	0.0009	20	0.12	321.99	0
321	Acid Soluble Zn (%)	0513	0.0255	0.0010	0.0243	0.0032	0.0009	20	0.39	321.30	0
321	Acid Soluble Zn (%)	0043	0.0255	0.0010	0.0243	0.0032	0.0009	20	0.39	321.33	0
321	Acid Soluble Zn (%)	0027	0.0255	0.0010	0.0243	0.0032	0.0009	20	0.39	321.99	0
321	Acid Soluble Zn (%)	0524	0.0258	0.0001	0.0243	0.0032	0.0009	20	0.47	321.99	0
321	Acid Soluble Zn (%)	0527	0.0267	0.0002	0.0243	0.0032	0.0009	20	0.76	321.33	0
321	Acid Soluble Zn (%)	0405	0.0268	0.0018	0.0243	0.0032	0.0009	20	0.80	321.99	0
321	Acid Soluble Zn (%)	0368	0.0273	0.0001	0.0243	0.0032	0.0009	20	0.94	321.99	0
321	Acid Soluble Zn (%)	0444	0.0285	0.0050	0.0243	0.0032	0.0009	20	1.33	321.30	0
321	Acid Soluble Zn (%)	0423	0.0285	0.0010	0.0243	0.0032	0.0009	20	1.33	321.32	0
321	Acid Soluble Zn (%)	0485	249.5	1.000	0.0243	0.0032	0.0009	20	78270.01	321.00	2
321	Acid Soluble Zn (%)	0552	0.0400	0.0800	0.0243	0.0032	0.0009	20		321.30	4
441	Humic Acids (%)	0220	0.1700	0.0200	2.655	4.667	0.1235	4	-0.53	441.00	0
441	Humic Acids (%)	0136	0.2250	0.0300	2.655	4.667	0.1235	4	-0.52	441.00	0
441	Humic Acids (%)	0368	0.5740	0.0240	2.655	4.667	0.1235	4	-0.45	441.10	0
441	Humic Acids (%)	0481	9.650	0.4200	2.655	4.667	0.1235	4	1.50	441.99	0
451	Hydrophobic Fulvic Acids (%)	0220	0.6700	0.0400				2		451.00	0
451	Hydrophobic Fulvic Acids (%)	0481	20.80	0.3700				2		451.99	0

Interpreting Z Scores and Flags:

Interpreting Z Scores: Red indicates a normally distributed Z value >3 or <-3 (requires action), Orange = Z between 2 and 3 or -2 and -3 (warning) and Green = Z < 2 and >-2 (OK at 95%). Flags indicate data usage: 0 = Used, 1 = rejected for duplicates too far apart, 2 = rejected as extreme outlier, 3 = removed from stats, 4 = rejected due to 0s submitted and 5 = LOD. A 9 flag indicates a data problem - scores not calculated.

Notes:

Robust statistics not used if < 6 labs used in calculations, in this case Values and Z Scores are grayed out and should be interpreted with extreme caution. 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.