

Method PT For All Labs

Magruder Fertilizer Proficiency Testing Program

Methods: 128

Sample # 220811

Regular PT Scheme

Labs Reporting: 85

Grade 17-1-0

Statistical Summary

Issue Date : 09/30/2022

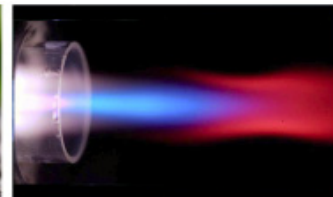
Method Code	Analyte & Method Sample # 220811	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Method Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	Method IA Ratio	Average Range (R-bar)	Horwitz %RSD
001.10	Ammoniacal N, Magnesium Oxide Method (%)	1		17.00									
001.99	Ammoniacal N, Other (%)	9	9	15.41	5.131	17.03		0.4953	0.2064	2.91%		0.2032	2.42%
002.99	Nitrate N, Other (%)	1		0.0085									
005.99	Urea N, Other (%)	1		0.4700									
009.10	Ammoniacal Plus Nitrate N, Devarda (%)	1		17.35									
010.10	Total N, Reduced Iron (17%)	2	2	17.64	0.3359								
010.11	Total N, Modified Comprehensive (17%)	1		17.03									
010.12	Total N, Salicylic (17%)	3	3	17.48	0.4321	17.48	0.6922	0.4321	0.3119	2.47%	1.45	0.2464	2.39%
010.60	Total N, Combustion (17%)	52	51	17.78	0.3462	17.74	0.6961	0.1711	0.0299	0.96%	0.57	0.1042	2.37%
010.99	Total N, Other (17%)	16	15	17.42	0.7874	17.34	0.6902	0.2392	0.0772	1.38%	0.81	0.0738	2.40%
020.10	Total P2O5, Gravimetric Quinolinium MolybdoP (%)	2	2	1.363	0.0389								
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	12	12	1.476	0.1152	1.481		0.1183	0.0427	7.99%		0.0519	3.77%
020.40	Total P2O5, Automated (%)	1		0.9500									
020.50	Total P2O5, ICP (%)	17	17	1.401	0.1273	1.398		0.1161	0.0352	8.30%		0.0610	3.80%
020.99	Total P2O5, Other (%)	11	11	1.313	0.1674	1.312		0.1876	0.0707	14.30%		0.0294	3.84%
030.20	Citrate Insoluble P2O5, Spectrophotometric MolybdovanadoP	1		0.0600									
040.20	Indirect Available P2O5, Spectrophotometric (1%)	1		1.127									
041.10	Direct Available P2O5, Gravimetric Quinolinium (1%)	2	2	1.435	0.0495								
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA	4	4	1.383	0.0366	1.383	0.6700	0.0366	0.0229	2.65%	0.13	0.0100	3.81%
041.20	Direct Available P2O5, Spectrophotometric (1%)	3	3	1.348	0.0749	1.348	0.6700	0.0749	0.0540	5.55%	0.26	0.0233	3.82%
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext.	5	5	1.415	0.2852	1.415	0.6700	0.2852	0.1594	20.15%	0.99	0.1540	3.80%
041.40	Direct Available P2O5, Automated, Citrate-EDTA Ext. (1%)	3	3	1.598	0.0547	1.598	0.6700	0.0547	0.0395	3.43%	0.19	0.0367	3.73%
041.50	Direct Available P2O5, ICP (1%)	3	3	1.320	0.1434	1.320	0.6700	0.1434	0.1035	10.87%	0.50	0.0667	3.84%
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (1%)	9	8	1.345	0.0936	1.371	0.6700	0.0663	0.0293	4.83%	0.23	0.0226	3.81%
041.99	Direct Available P2O5, Other (1%)	9	8	8.510	21.44	1.322	0.6700	0.2237	0.0989	16.92%	0.78	0.0929	3.83%
048.20	Water Soluble P2O5, Spectrophotometric (%)	1		0.0350									
050.00	Soluble K2O, STPB Oxalate (%)	2	2	0.1538	0.1326								
050.30	Soluble K2O, AA (Oxalate) (%)	1		0.0318									
050.32	Soluble K2O, AA (Citrate-EDTA) (%)	1		0.0150									

Method Code	Analyte & Method Sample # 220811	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Method Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	Method IA Ratio	Average Range (R-bar)	Horwitz %RSD
050.50	Soluble K2O, ICP (Oxalate) (%)	3	3	0.0607	0.0387	0.0607	0.4100	0.0387	0.0279	63.78%	0.22	0.0038	6.10%
050.51	Soluble K2O, ICP (Citrate) (%)	1		0.0700									
050.52	Soluble K2O, ICP (Citrate-EDTA) (%)	4	1	0.1734	0.1147	0.0607	0.4100	0.0387	0.0484	63.78%	0.22	0.0030	6.10%
050.99	Soluble K2O, Other (%)	12	9	0.0375	0.0271	0.0438	0.4100	0.0131	0.0055	29.96%	0.07	0.0044	6.40%
060.99	Water (Free), Other (%)	1		1.079									
101.00	Acid Soluble Ca, AA, inorganic 965.09 (%)	1		0.1030									
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	3	3	0.3245	0.0236	0.3245	0.2162	0.0236	0.0170	7.26%	0.25	0.0063	4.74%
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (%)	1		0.3290									
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	3	2	0.1983	0.1640	0.2925	0.2146	0.0247	0.0219	8.46%	0.27	0.0050	4.81%
101.99	Acid Soluble Ca, Other (%)	1		0.6650									
121.00	Acid Soluble Mg, AA, inorganic 965.09 (%)	1		0.0755									
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	2	2	0.0803	0.0138								
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (%)	1		0.0770									
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	4	4	0.0623	0.0249	0.0623	0.2031	0.0249	0.0155	39.94%	0.29	0.0105	6.07%
121.99	Acid Soluble Mg, Other (%)	3	3	0.0875	0.0285	0.0875	0.2044	0.0285	0.0206	32.59%	0.32	0.0500	5.77%
143.99	Elemental S, Other (%)	3	3	20.87	2.300	20.87		2.300	1.660	11.02%		1.127	2.19%
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	3	3	19.89	0.4997	19.89		0.4997	0.3606	2.51%		0.2067	2.24%
145.99	Sulfate S, HCl soluble, Other (%)	4	4	18.60	1.922	18.60		1.922	1.201	10.34%		0.3175	2.32%
146.99	Total S in Liquid, Other (20%)	1		15.77									
148.00	Total S, Combustion (20%)	7	7	20.18	0.6021	20.18	1.0000	0.6828	0.3226	3.38%	1.59	0.5071	2.23%
148.01	Total S, Gravimetric - sulfate and elemental (20%)	13	13	20.32	0.2807	20.30	1.0000	0.2722	0.0944	1.34%	0.63	0.2884	2.22%
148.07	Total S, ICP, test portion as in 2017.02 (20%)	12	11	19.69	1.433	19.59	1.0000	1.609	0.6065	8.21%	3.75	0.2259	2.26%
148.99	Total S, Other (20%)	20	19	20.03	1.373	19.92	1.0000	0.6735	0.1931	3.38%	1.57	0.1751	2.24%
149.04	S - HNO3 soluble, ICP (%)	3	3	20.03	0.3183	20.03		0.3183	0.2297	1.59%		0.5466	2.23%
151.30	Acid Soluble As, ICP (ppm)	4	2	3.095	2.596	3.089		0.9979	0.8820	32.30%		0.2605	13.50%
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	1		0.9500									
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	3	3	3.953	1.659	3.953		1.659	1.197	41.97%		0.3566	13.01%
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	1		0.5000									
151.99	Acid Soluble As, Other (ppm)	3	2	1.653	1.261	0.9800		0.6788	0.6000	69.27%		0.0300	16.05%
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	1		0.0100									
165.99	Acid Soluble B, Other (%)	4	2	0.0097	0.0109	0.0020	0.0033	0.0010	0.0008	48.33%	0.67	0.0002	10.21%
181.30	Acid Soluble Cd, ICP (ppm)	6	5	1.043	0.5719	0.8811		0.4617	0.2581	52.41%		0.2295	16.30%
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	1		0.1000									
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	2	0	0.5001	0.7070								
181.34	Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm)	2	0	0.1005	0.0007								
181.99	Acid Soluble Cd, Other (ppm)	3	1	0.5333	0.4509	0.8811		0.4617	0.5772	52.41%		0.0200	16.30%
190.00	Water Soluble Cl, Titrimetric (%)	1		0.1000									
191.30	Acid Soluble Cr, ICP (ppm)	7	6	21.68	3.145	22.23		3.446	1.758	15.50%		0.2155	10.03%
191.32	Acid Soluble Cr, ICP, 2006.03 (ppm)	1		15.95									
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	2	2	19.73	3.239								

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191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	2	2	21.55	2.192								
191.99	Acid Soluble Cr, Other (ppm)	3	3	23.43	2.654	23.43		2.654	1.915	11.33%		0.2000	9.95%
202.30	Acid Soluble Co, ICP (ppm)	5	5	3.951	1.759	3.951	2.1853	1.759	0.9835	44.53%	1.88	0.4306	13.01%
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	2	2	3.468	1.298								
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	2	1	3.251	1.062								
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	2	1	0.7210	0.8895								
202.99	Acid Soluble Co, Other (ppm)	3	3	5.625	2.290	5.625	2.6874	2.290	1.652	40.71%	1.99	0.6460	12.34%
221.00	Acid Soluble Cu, AA, inorganic 965.09 (%)	1		0.0085									
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	8	6	0.0088	0.0010	0.0083	0.0058	0.0004	0.0002	5.32%	0.18	0.0004	8.23%
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	1		0.0090									
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	5	5	0.0094	0.0004	0.0094	0.0059	0.0004	0.0002	4.71%	0.17	0.0001	8.08%
221.99	Acid Soluble Cu, Other (%)	6	6	0.0086	0.0004	0.0086	0.0059	0.0005	0.0003	5.96%	0.20	0.0002	8.19%
241.00	Acid Soluble Fe, AA, inorganic 965.09 (%)	1		1.880									
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	4	4	1.898	0.0514	1.898	0.1948	0.0514	0.0321	2.71%	0.61	0.0350	3.63%
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (%)	1		1.942									
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	4	4	1.880	0.0477	1.880	0.1930	0.0477	0.0298	2.54%	0.58	0.0429	3.64%
241.99	Acid Soluble Fe, Other (%)	2	2	1.863	0.0030								
251.30	Acid Soluble Pb, ICP (ppm)	8	8	12.79	3.460	12.24		2.482	1.097	20.28%		0.8166	10.97%
251.32	Acid Soluble Pb, ICP, 2006.03 (ppm)	1		2.400									
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	2	2	13.30	0.7149								
251.34	Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm)	2	2	9.570	0.5226								
251.99	Acid Soluble Pb, Other (ppm)	4	4	8.300	5.312	8.300		5.312	3.320	64.00%		0.1450	11.63%
261.00	Acid Soluble Mn, AA, Mn2+ only (%)	1		0.0205									
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	2	2	0.0215	0.0022								
261.32	Acid Soluble Mn, ICP, test portion inorganic 965.09 (%)	1		0.0300									
261.34	Acid Soluble Mn, ICP, test portion 2006.03A-C (%)	1		0.0210									
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	3	3	0.0212	0.0016	0.0212	0.0071	0.0016	0.0011	7.31%	0.51	0.0001	7.14%
261.99	Acid Soluble Mn, Other (%)	2	2	0.0127	0.0128								
281.00	Acid Soluble Hg, AA (ppm)	1		0.5000									
281.30	Acid Soluble Hg, ICP (ppm)	3	0	0.4227	0.7165	0.0127		0.0128		101.25%		0.0000	22.00%
281.99	Acid Soluble Hg, Other (ppm)	5	4	0.5542	0.8092	0.1927		0.0462	0.0289	23.99%		0.0102	20.50%
289.30	Acid Soluble Mo, ICP (ppm)	8	8	4.710	2.876	4.697	2.4090	3.232	1.428	68.81%	3.13	0.3648	12.67%
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	1		5.500									
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	4	4	6.726	0.3881	6.726	3.0179	0.3881	0.2425	5.77%	0.30	0.2189	12.01%
289.34	Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm)	2	2	5.886	1.535								
289.99	Acid Soluble Mo, Other (ppm)	3	2	37.62	54.03	6.425	2.9275	0.8132	0.7188	12.66%	0.65	0.3500	12.09%
291.30	Acid Soluble Ni, ICP (ppm)	8	8	9.272	1.411	9.272		1.600	0.7072	17.26%		0.6208	11.44%
291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	1		7.700									
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	3	3	8.820	1.937	8.820		1.937	1.398	21.96%		0.4762	11.53%
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	2	2	6.465	0.4734								

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291.99	Acid Soluble Ni, Other (ppm)	3	3	15.34	8.022	15.34		8.022	5.790	52.31%		3.597	10.61%
301.30	Acid Soluble Se, ICP (ppm)	2	1	1.399	0.3544								
301.32	Acid Soluble Se, ICP, 2006.03 (ppm)	1		0.6500									
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	1		0.0010									
301.34	Acid Soluble Se, ICP, EPA 3050B/6010C (ppm)	2	0	0.8040	0.9843								
301.99	Acid Soluble Se, Other (ppm)	4	1	2.700	4.871	15.34		8.022	10.03	52.31%		0.0000	10.61%
311.00	Sodium, AA (%)	1		0.0555									
311.33	Sodium, ICP, test portion as in 2017.02 (%)	4	4	0.0621	0.0041	0.0621	0.0112	0.0041	0.0026	6.61%	0.85	0.0016	6.08%
311.99	Sodium, Other (%)	1		0.1100									
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	3	3	83.18	144.0	83.18	1.0000	144.0	103.9	173.16%	335.61	0.3337	1.10%
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	8	7	0.0257	0.0065	0.0236	0.0074	0.0035	0.0017	14.96%	1.12	0.0014	7.03%
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	1		0.0285									
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	4	4	0.0240	0.0029	0.0240	0.0074	0.0029	0.0018	12.17%	0.92	0.0004	7.01%
321.99	Acid Soluble Zn, Other (%)	6	6	0.0257	0.0012	0.0257	0.0076	0.0014	0.0007	5.46%	0.43	0.0007	6.94%
441.00	Humic Acids, Gravimetry,Ash-free, alkali dissolved, acid precip	2	2	0.1975	0.0389								
441.10	Humic Acids, Gravimetry, alkali dissolved, acid precipitated (%)	1		0.5740									
441.99	Humic Acids, Other (%)	1		9.650									
451.00	Hydrophobic Fulvic Acids, Gravimetry, acid dissolved binds hy	1		0.6700									
451.99	Hydrophobic Fulvic Acids, Other (%)	1		20.80									

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



Method PT For All Labs

Magruder Fertilizer Proficiency Testing Program

Sample # 220811

Regular PT Scheme

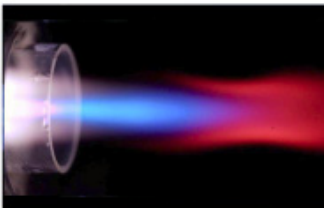
Grade 17-1-0

Method Precision Report

Issue Date : 09/30/2022

Method Code	Analyte & Method	# Tests Submitted	# Tests Used in Precision Calcs	Mean	SD	Between Labs sL	Within Labs sr	Reproducibility SR	Between Labs %RSD	Within Labs %rsd	Reproducibility %RSD	sR/sr
001.99	Ammoniacal N, Other (%)	9	7	17.07	0.3515	0.3432	0.1072	0.3596	2.01%	0.63%	2.11%	3.353
010.60	Total N, Combustion (17%)	52	48	17.72	0.2343	0.2271	0.0813	0.2413	1.28%	0.46%	1.36%	2.967
010.99	Total N, Other (17%)	16	14	17.26	0.3592	0.3558	0.0696	0.3626	2.06%	0.40%	2.10%	5.209
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	12	12	1.476	0.1152	0.1091	0.0523	0.1210	7.39%	3.54%	8.20%	2.314
020.50	Total P2O5, ICP (%)	17	17	1.401	0.1273	0.1178	0.0684	0.1362	8.40%	4.88%	9.72%	1.990
020.99	Total P2O5, Other (%)	11	11	1.313	0.1674	0.1665	0.0250	0.1683	12.67%	1.90%	12.82%	6.743
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (1%)	9	7	1.377	0.0610	0.0603	0.0131	0.0617	4.38%	0.95%	4.48%	4.700
041.99	Direct Available P2O5, Other (1%)	9	7	1.380	0.3101	0.3080	0.0508	0.3121	22.31%	3.68%	22.62%	6.145
050.99	Soluble K2O, Other (%)	12	7	0.0388	0.0124	0.0122	0.0030	0.0126	31.57%	7.83%	32.53%	4.152
148.00	Total S, Combustion (20%)	7	7	20.18	0.6021	0.5159	0.4391	0.6775	2.56%	2.18%	3.36%	1.543
148.01	Total S, Gravimetric - sulfate and elemental (20%)	13	13	20.32	0.2807	0.1808	0.3037	0.3534	0.89%	1.49%	1.74%	1.164
148.07	Total S, ICP, test portion as in 2017.02 (20%)	12	11	19.58	1.448	1.441	0.2078	1.456	7.36%	1.06%	7.44%	7.005
148.99	Total S, Other (20%)	20	18	19.83	0.6980	0.6904	0.1457	0.7056	3.48%	0.73%	3.56%	4.841
191.30	Acid Soluble Cr, ICP (ppm)	7	6	22.19	3.120	3.117	0.1795	3.122	14.05%	0.81%	14.07%	17.39
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	8	6	0.0083	0.0007	0.0006	0.0004	0.0007	7.16%	5.00%	8.73%	1.748
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	5	5	0.0094	0.0004	0.0004	0.0001	0.0004	4.68%	0.75%	4.74%	6.277
221.99	Acid Soluble Cu, Other (%)	6	5	0.0086	0.0005	0.0005	0.0001	0.0005	5.59%	0.90%	5.66%	6.282
251.30	Acid Soluble Pb, ICP (ppm)	8	7	11.71	1.717	1.662	0.6119	1.771	14.19%	5.23%	15.12%	2.894
289.30	Acid Soluble Mo, ICP (ppm)	8	8	4.710	2.876	2.865	0.3536	2.886	60.82%	7.51%	61.28%	8.164
291.30	Acid Soluble Ni, ICP (ppm)	8	8	9.272	1.411	1.352	0.5701	1.468	14.58%	6.15%	15.83%	2.574
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	8	6	0.0228	0.0025	0.0024	0.0006	0.0025	10.63%	2.74%	10.98%	4.001
321.99	Acid Soluble Zn, Other (%)	6	6	0.0257	0.0012	0.0011	0.0007	0.0013	4.44%	2.63%	5.16%	1.962

Notes: Precision data calculated when 5 or more Tests included.



Method PT For All Labs

Magruder Fertilizer Proficiency Testing Program

Methods: 128

Sample # 220811

Regular PT Scheme

Labs Reporting: 85

Grade 17-1-0

Lab Values

Issue Date : 09/30/2022

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	Range				
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0444	17.00	0.0000				1			0
001.99	Ammoniacal N, Other (%)	0423	1.760	0.3000	17.03	0.4953	0.2032	9	-28.45	NA	0
001.99	Ammoniacal N, Other (%)	0524	16.52	0.0550	17.03	0.4953	0.2032	9	-0.94	NA	0
001.99	Ammoniacal N, Other (%)	0027	16.90	0.3400	17.03	0.4953	0.2032	9	-0.24	NA	0
001.99	Ammoniacal N, Other (%)	0549	17.04	0.0300	17.03	0.4953	0.2032	9	0.01	NA	0
001.99	Ammoniacal N, Other (%)	0569	17.07	0.0300	17.03	0.4953	0.2032	9	0.07	NA	0
001.99	Ammoniacal N, Other (%)	0419	17.08	0.0640	17.03	0.4953	0.2032	9	0.10	NA	0
001.99	Ammoniacal N, Other (%)	0513	17.16	0.0200	17.03	0.4953	0.2032	9	0.25	NA	0
001.99	Ammoniacal N, Other (%)	0553	17.50	0.8000	17.03	0.4953	0.2032	9	0.88	NA	0
001.99	Ammoniacal N, Other (%)	0602	17.71	0.1900	17.03	0.4953	0.2032	9	1.26	NA	0
002.99	Nitrate N, Other (%)	0553	0.0085	0.0010				1			0
005.99	Urea N, Other (%)	0524	0.4700	0.0600				1			0
009.10	Ammoniacal Plus Nitrate N, Devarda (%)	0444	17.35	0.1000				1			0
010.10	Total N, Reduced Iron (17%)	0444	17.40	0.0000				2			0
010.10	Total N, Reduced Iron (17%)	0533	17.88	0.0100				2			0
010.11	Total N, Modified Comprehensive (17%)	0510	17.03	0.0175				1			0
010.12	Total N, Salicylic (17%)	0117	16.98	0.2091	17.48	0.4321	0.2464	3	-1.15		0
010.12	Total N, Salicylic (17%)	0580	17.72	0.3300	17.48	0.4321	0.2464	3	0.54		0
010.12	Total N, Salicylic (17%)	0602	17.75	0.2000	17.48	0.4321	0.2464	3	0.62		0
010.60	Total N, Combustion (17%)	0521	16.96	0.0000	17.74	0.1711	0.1042	51	-4.56	Low	0
010.60	Total N, Combustion (17%)	0230	17.25	0.1000	17.74	0.1711	0.1042	51	-2.86	OK	0
010.60	Total N, Combustion (17%)	0234	17.29	0.0400	17.74	0.1711	0.1042	51	-2.63	OK	0
010.60	Total N, Combustion (17%)	0102	17.32	0.0500	17.74	0.1711	0.1042	51	-2.48	OK	0
010.60	Total N, Combustion (17%)	0472	17.51	0.0100	17.74	0.1711	0.1042	51	-1.37	OK	0
010.60	Total N, Combustion (17%)	0356	17.54	0.0100	17.74	0.1711	0.1042	51	-1.15	OK	0
010.60	Total N, Combustion (17%)	0423	17.55	0.0600	17.74	0.1711	0.1042	51	-1.11	OK	0
010.60	Total N, Combustion (17%)	0481	17.55	0.2000	17.74	0.1711	0.1042	51	-1.11	OK	0
010.60	Total N, Combustion (17%)	0231	17.55	0.0000	17.74	0.1711	0.1042	51	-1.11	OK	0
010.60	Total N, Combustion (17%)	0291	17.56	0.0100	17.74	0.1711	0.1042	51	-1.08	OK	0
010.60	Total N, Combustion (17%)	0255	17.59	0.0900	17.74	0.1711	0.1042	51	-0.89	OK	0
010.60	Total N, Combustion (17%)	0451	17.63	0.1000	17.74	0.1711	0.1042	51	-0.64	OK	0
010.60	Total N, Combustion (17%)	0360	17.64	0.0100	17.74	0.1711	0.1042	51	-0.61	OK	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	Range				
010.60	Total N, Combustion (17%)	0561	17.65	0.0100	17.74	0.1711	0.1042	51	-0.56	OK	0
010.60	Total N, Combustion (17%)	0029	17.65	0.1400	17.74	0.1711	0.1042	51	-0.53	OK	0
010.60	Total N, Combustion (17%)	0307	17.65	0.1000	17.74	0.1711	0.1042	51	-0.53	OK	0
010.60	Total N, Combustion (17%)	0055	17.66	0.0300	17.74	0.1711	0.1042	51	-0.50	OK	0
010.60	Total N, Combustion (17%)	0136	17.67	0.0500	17.74	0.1711	0.1042	51	-0.44	OK	0
010.60	Total N, Combustion (17%)	0157	17.70	0.0000	17.74	0.1711	0.1042	51	-0.23	OK	0
010.60	Total N, Combustion (17%)	0035	17.70	0.2000	17.74	0.1711	0.1042	51	-0.23	OK	0
010.60	Total N, Combustion (17%)	0292	17.71	0.0100	17.74	0.1711	0.1042	51	-0.20	OK	0
010.60	Total N, Combustion (17%)	0587	17.72	0.1000	17.74	0.1711	0.1042	51	-0.12	OK	0
010.60	Total N, Combustion (17%)	0220	17.73	0.0400	17.74	0.1711	0.1042	51	-0.06	OK	0
010.60	Total N, Combustion (17%)	0043	17.74	0.0200	17.74	0.1711	0.1042	51	0.00	OK	0
010.60	Total N, Combustion (17%)	0024	17.75	0.1000	17.74	0.1711	0.1042	51	0.06	OK	0
010.60	Total N, Combustion (17%)	0354	17.75	0.1000	17.74	0.1711	0.1042	51	0.06	OK	0
010.60	Total N, Combustion (17%)	0368	17.75	0.1000	17.74	0.1711	0.1042	51	0.06	OK	0
010.60	Total N, Combustion (17%)	0114	17.76	0.0900	17.74	0.1711	0.1042	51	0.09	OK	0
010.60	Total N, Combustion (17%)	0485	17.79	0.0600	17.74	0.1711	0.1042	51	0.29	OK	0
010.60	Total N, Combustion (17%)	0324	17.80	0.2000	17.74	0.1711	0.1042	51	0.35	OK	0
010.60	Total N, Combustion (17%)	0588	17.80	0.2000	17.74	0.1711	0.1042	51	0.35	OK	0
010.60	Total N, Combustion (17%)	0534	17.80	0.0000	17.74	0.1711	0.1042	51	0.35	OK	0
010.60	Total N, Combustion (17%)	0023	17.80	0.1360	17.74	0.1711	0.1042	51	0.36	OK	0
010.60	Total N, Combustion (17%)	0177	17.82	0.0180	17.74	0.1711	0.1042	51	0.44	OK	0
010.60	Total N, Combustion (17%)	0233	17.82	0.0000	17.74	0.1711	0.1042	51	0.47	OK	0
010.60	Total N, Combustion (17%)	0494	17.82	0.2800	17.74	0.1711	0.1042	51	0.47	OK	0
010.60	Total N, Combustion (17%)	0405	17.83	0.0700	17.74	0.1711	0.1042	51	0.50	OK	0
010.60	Total N, Combustion (17%)	0421	17.83	0.1500	17.74	0.1711	0.1042	51	0.50	OK	0
010.60	Total N, Combustion (17%)	0086	17.84	0.0430	17.74	0.1711	0.1042	51	0.56	OK	0
010.60	Total N, Combustion (17%)	0040	17.85	0.1000	17.74	0.1711	0.1042	51	0.64	OK	0
010.60	Total N, Combustion (17%)	0034	17.86	0.3400	17.74	0.1711	0.1042	51	0.70	OK	0
010.60	Total N, Combustion (17%)	0422	17.88	0.0100	17.74	0.1711	0.1042	51	0.79	OK	0
010.60	Total N, Combustion (17%)	0325	17.89	0.6400	17.74	0.1711	0.1042	51	0.88	OK	0
010.60	Total N, Combustion (17%)	0042	17.90	0.6000	17.74	0.1711	0.1042	51	0.94	OK	0
010.60	Total N, Combustion (17%)	0501	17.91	0.0000	17.74	0.1711	0.1042	51	0.99	OK	0
010.60	Total N, Combustion (17%)	0073	17.94	0.2100	17.74	0.1711	0.1042	51	1.14	OK	0
010.60	Total N, Combustion (17%)	0027	18.00	0.2000	17.74	0.1711	0.1042	51	1.52	OK	0
010.60	Total N, Combustion (17%)	0377	18.01	0.1100	17.74	0.1711	0.1042	51	1.55	OK	0
010.60	Total N, Combustion (17%)	0527	18.18	0.0260	17.74	0.1711	0.1042	51	2.58	OK	0
010.60	Total N, Combustion (17%)	0452	18.48	0.0500	17.74	0.1711	0.1042	51	4.30	High	0
010.60	Total N, Combustion (17%)	0260	18.95	0.1000	17.74	0.1711	0.1042	51	7.07	High	0
010.60	Total N, Combustion (17%)	0041	19.18	1.200	17.74	0.1711	0.1042	51	8.42	High	1
010.99	Total N, Other (17%)	0575	16.18	0.0500	17.34	0.2392	0.0738	15	-4.88	Low	0
010.99	Total N, Other (17%)	0558	17.05	0.0149	17.34	0.2392	0.0738	15	-1.22	OK	0
010.99	Total N, Other (17%)	0532	17.11	0.1100	17.34	0.2392	0.0738	15	-1.00	OK	0
010.99	Total N, Other (17%)	0518	17.22	0.1900	17.34	0.2392	0.0738	15	-0.54	OK	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	Range				
010.99	Total N, Other (17%)	0577	17.23	0.0500	17.34	0.2392	0.0738	15	-0.49	OK	0
010.99	Total N, Other (17%)	0524	17.31	0.0144	17.34	0.2392	0.0738	15	-0.15	OK	0
010.99	Total N, Other (17%)	0565	17.35	0.0600	17.34	0.2392	0.0738	15	0.03	OK	0
010.99	Total N, Other (17%)	0564	17.37	0.0600	17.34	0.2392	0.0738	15	0.11	OK	0
010.99	Total N, Other (17%)	0567	17.37	0.0600	17.34	0.2392	0.0738	15	0.11	OK	0
010.99	Total N, Other (17%)	0600	17.38	0.1500	17.34	0.2392	0.0738	15	0.13	OK	0
010.99	Total N, Other (17%)	0560	17.39	0.0470	17.34	0.2392	0.0738	15	0.18	OK	0
010.99	Total N, Other (17%)	0545	17.44	0.0800	17.34	0.2392	0.0738	15	0.40	OK	0
010.99	Total N, Other (17%)	0559	17.57	0.0100	17.34	0.2392	0.0738	15	0.93	OK	0
010.99	Total N, Other (17%)	0602	17.75	0.2000	17.34	0.2392	0.0738	15	1.70	OK	0
010.99	Total N, Other (17%)	0605	20.09	0.0100	17.34	0.2392	0.0738	15	11.46	High	0
010.99	Total N, Other (17%)	0556	17.00	0.4000	17.34	0.2392	0.0738	15	-1.44	OK	1
020.10	Total P2O5, Gravimetric Quinolinium MolybdoP (%)	0073	1.335	0.0100				2			0
020.10	Total P2O5, Gravimetric Quinolinium MolybdoP (%)	0556	1.390	0.0200				2			0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0481	1.240	0.0000	1.481	0.1183	0.0519	12	-2.04	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0292	1.310	0.0000	1.481	0.1183	0.0519	12	-1.44	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0580	1.395	0.0500	1.481	0.1183	0.0519	12	-0.73	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0419	1.455	0.0100	1.481	0.1183	0.0519	12	-0.22	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0510	1.477	0.0039	1.481	0.1183	0.0519	12	-0.04	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0177	1.488	0.0099	1.481	0.1183	0.0519	12	0.06	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0534	1.490	0.0200	1.481	0.1183	0.0519	12	0.08	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0602	1.495	0.0500	1.481	0.1183	0.0519	12	0.12	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0405	1.560	0.1200	1.481	0.1183	0.0519	12	0.67	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0561	1.560	0.1600	1.481	0.1183	0.0519	12	0.67	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0356	1.613	0.1090	1.481	0.1183	0.0519	12	1.11	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0324	1.625	0.0900	1.481	0.1183	0.0519	12	1.22	NA	0
020.40	Total P2O5, Automated (%)	0035	0.9500	0.1000				1			0
020.50	Total P2O5, ICP (%)	0255	1.151	0.0030	1.398	0.1161	0.0610	17	-2.13	NA	0
020.50	Total P2O5, ICP (%)	0521	1.225	0.0000	1.398	0.1161	0.0610	17	-1.49	NA	0
020.50	Total P2O5, ICP (%)	0260	1.285	0.0700	1.398	0.1161	0.0610	17	-0.97	NA	0
020.50	Total P2O5, ICP (%)	0231	1.310	0.0600	1.398	0.1161	0.0610	17	-0.76	NA	0
020.50	Total P2O5, ICP (%)	0422	1.310	0.0018	1.398	0.1161	0.0610	17	-0.76	NA	0
020.50	Total P2O5, ICP (%)	0501	1.345	0.2100	1.398	0.1161	0.0610	17	-0.46	NA	0
020.50	Total P2O5, ICP (%)	0588	1.375	0.0700	1.398	0.1161	0.0610	17	-0.20	NA	0
020.50	Total P2O5, ICP (%)	0472	1.400	0.0000	1.398	0.1161	0.0610	17	0.02	NA	0
020.50	Total P2O5, ICP (%)	0423	1.415	0.0100	1.398	0.1161	0.0610	17	0.15	NA	0
020.50	Total P2O5, ICP (%)	0524	1.421	0.0119	1.398	0.1161	0.0610	17	0.20	NA	0
020.50	Total P2O5, ICP (%)	0451	1.436	0.0660	1.398	0.1161	0.0610	17	0.33	NA	0
020.50	Total P2O5, ICP (%)	0552	1.465	0.2300	1.398	0.1161	0.0610	17	0.58	NA	0
020.50	Total P2O5, ICP (%)	0368	1.487	0.0587	1.398	0.1161	0.0610	17	0.77	NA	0
020.50	Total P2O5, ICP (%)	0234	1.490	0.0200	1.398	0.1161	0.0610	17	0.79	NA	0
020.50	Total P2O5, ICP (%)	0527	1.491	0.0155	1.398	0.1161	0.0610	17	0.80	NA	0
020.50	Total P2O5, ICP (%)	0291	1.515	0.0100	1.398	0.1161	0.0610	17	1.01	NA	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	Range				
020.50	Total P2O5, ICP (%)	0042	1.700	0.2000	1.398	0.1161	0.0610	17	2.60	NA	0
020.99	Total P2O5, Other (%)	0564	1.125	0.0500	1.312	0.1876	0.0294	11	-0.93	NA	0
020.99	Total P2O5, Other (%)	0567	1.125	0.0500	1.312	0.1876	0.0294	11	-0.93	NA	0
020.99	Total P2O5, Other (%)	0560	1.138	0.0170	1.312	0.1876	0.0294	11	-0.87	NA	0
020.99	Total P2O5, Other (%)	0565	1.145	0.0300	1.312	0.1876	0.0294	11	-0.83	NA	0
020.99	Total P2O5, Other (%)	0559	1.244	0.0030	1.312	0.1876	0.0294	11	-0.34	NA	0
020.99	Total P2O5, Other (%)	0513	1.370	0.0200	1.312	0.1876	0.0294	11	0.29	NA	0
020.99	Total P2O5, Other (%)	0577	1.380	0.0600	1.312	0.1876	0.0294	11	0.34	NA	0
020.99	Total P2O5, Other (%)	0515	1.393	0.0300	1.312	0.1876	0.0294	11	0.40	NA	0
020.99	Total P2O5, Other (%)	0476	1.428	0.0034	1.312	0.1876	0.0294	11	0.58	NA	0
020.99	Total P2O5, Other (%)	0602	1.495	0.0500	1.312	0.1876	0.0294	11	0.91	NA	0
020.99	Total P2O5, Other (%)	0587	1.605	0.0100	1.312	0.1876	0.0294	11	1.46	NA	0
030.20	Citrate Insoluble P2O5, Spectrophotometric MolybdovanadoP (0405	0.0600	0.0000				1			0
040.20	Indirect Available P2O5, Spectrophotometric (1%)	0558	1.127	0.0221				1			0
041.10	Direct Available P2O5, Gravimetric Quinolinium (1%)	0040	1.400	0.0000				2			0
041.10	Direct Available P2O5, Gravimetric Quinolinium (1%)	0102	1.470	0.0400				2			0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA	0405	1.330	0.0000	1.383	0.0366	0.0100	4	-1.43		0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA	0220	1.390	0.0200	1.383	0.0366	0.0100	4	0.20		0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA	0055	1.395	0.0100	1.383	0.0366	0.0100	4	0.34		0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA	0485	1.415	0.0100	1.383	0.0366	0.0100	4	0.89		0
041.20	Direct Available P2O5, Spectrophotometric (1%)	0452	1.265	0.0300	1.348	0.0749	0.0233	3	-1.11		0
041.20	Direct Available P2O5, Spectrophotometric (1%)	0553	1.370	0.0000	1.348	0.0749	0.0233	3	0.29		0
041.20	Direct Available P2O5, Spectrophotometric (1%)	0027	1.410	0.0400	1.348	0.0749	0.0233	3	0.82		0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext.	0230	1.220	0.3000	1.415	0.2852	0.1540	5	-0.68		0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext.	0405	1.250	0.1200	1.415	0.2852	0.1540	5	-0.58		0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext.	0472	1.335	0.0100	1.415	0.2852	0.1540	5	-0.28		0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext.	0354	1.355	0.0300	1.415	0.2852	0.1540	5	-0.21		0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext.	0055	1.915	0.3100	1.415	0.2852	0.1540	5	1.75		0
041.40	Direct Available P2O5, Automated, Citrate-EDTA Ext. (1%)	0018	1.555	0.0100	1.598	0.0547	0.0367	3	-0.78		0
041.40	Direct Available P2O5, Automated, Citrate-EDTA Ext. (1%)	0034	1.579	0.0091	1.598	0.0547	0.0367	3	-0.34		0
041.40	Direct Available P2O5, Automated, Citrate-EDTA Ext. (1%)	0029	1.660	0.0910	1.598	0.0547	0.0367	3	1.13		0
041.50	Direct Available P2O5, ICP (1%)	0605	1.225	0.0100	1.320	0.1434	0.0667	3	-0.66		0
041.50	Direct Available P2O5, ICP (1%)	0325	1.250	0.1000	1.320	0.1434	0.0667	3	-0.49		0
041.50	Direct Available P2O5, ICP (1%)	0421	1.485	0.0900	1.320	0.1434	0.0667	3	1.15		0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (1%)	0423	1.265	0.0100	1.371	0.0663	0.0226	8	-1.46	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (1%)	0136	1.320	0.0800	1.371	0.0663	0.0226	8	-0.70	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (1%)	0023	1.340	0.0000	1.371	0.0663	0.0226	8	-0.42	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (1%)	0231	1.360	0.0200	1.371	0.0663	0.0226	8	-0.15	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (1%)	0360	1.395	0.0300	1.371	0.0663	0.0226	8	0.34	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (1%)	0377	1.415	0.0300	1.371	0.0663	0.0226	8	0.61	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (1%)	0025	1.420	0.0000	1.371	0.0663	0.0226	8	0.68	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (1%)	0117	1.444	0.0107	1.371	0.0663	0.0226	8	1.02	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (1%)	0043	1.145	0.2900	1.371	0.0663	0.0226	8	-3.12	OK	1

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	Range				
041.99	Direct Available P2O5, Other (1%)	0569	1.075	0.0500	1.322	0.2237	0.0929	8	-1.01	OK	0
041.99	Direct Available P2O5, Other (1%)	0600	1.160	0.0800	1.322	0.2237	0.0929	8	-0.66	OK	0
041.99	Direct Available P2O5, Other (1%)	0532	1.175	0.1100	1.322	0.2237	0.0929	8	-0.60	OK	0
041.99	Direct Available P2O5, Other (1%)	0549	1.250	0.3000	1.322	0.2237	0.0929	8	-0.30	OK	0
041.99	Direct Available P2O5, Other (1%)	0545	1.325	0.0300	1.322	0.2237	0.0929	8	0.01	OK	0
041.99	Direct Available P2O5, Other (1%)	0575	1.432	0.0230	1.322	0.2237	0.0929	8	0.45	OK	0
041.99	Direct Available P2O5, Other (1%)	0405	1.505	0.1100	1.322	0.2237	0.0929	8	0.75	OK	0
041.99	Direct Available P2O5, Other (1%)	0533	1.990	0.0400	1.322	0.2237	0.0929	8	2.73	OK	0
041.99	Direct Available P2O5, Other (1%)	0518	65.68	128.7	1.322	0.2237	0.0929	8	263.10	High	2
048.20	Water Soluble P2O5, Spectrophotometric (%)	0472	0.0350	0.0100				1			0
050.00	Soluble K2O, STPB Oxalate (%)	0220	0.0600	0.0000				2			0
050.00	Soluble K2O, STPB Oxalate (%)	0049	0.2475	0.0350				2			0
050.30	Soluble K2O, AA (Oxalate) (%)	0558	0.0318	0.0007				1			0
050.32	Soluble K2O, AA (Citrate-EDTA) (%)	0472	0.0150	0.0100				1			0
050.50	Soluble K2O, ICP (Oxalate) (%)	0292	0.0200	0.0000	0.0607	0.0387	0.0038	3	-1.05		0
050.50	Soluble K2O, ICP (Oxalate) (%)	0231	0.0650	0.0100	0.0607	0.0387	0.0038	3	0.11		0
050.50	Soluble K2O, ICP (Oxalate) (%)	0422	0.0971	0.0013	0.0607	0.0387	0.0038	3	0.94		0
050.51	Soluble K2O, ICP (Citrate) (%)	0452	0.0700	0.0000				1			0
050.52	Soluble K2O, ICP (Citrate-EDTA) (%)	0354	0.0485	0.0030				1			0
050.52	Soluble K2O, ICP (Citrate-EDTA) (%)	0377	< 0.11					1			5
050.52	Soluble K2O, ICP (Citrate-EDTA) (%)	0023	< 0.235					1			5
050.52	Soluble K2O, ICP (Citrate-EDTA) (%)	0485	< 0.3					1			5
050.99	Soluble K2O, Other (%)	0421	0.0150	0.0100	0.0438	0.0131	0.0044	9	-2.19	OK	0
050.99	Soluble K2O, Other (%)	0515	0.0305	0.0050	0.0438	0.0131	0.0044	9	-1.01	OK	0
050.99	Soluble K2O, Other (%)	0481	0.0400	0.0000	0.0438	0.0131	0.0044	9	-0.29	OK	0
050.99	Soluble K2O, Other (%)	0553	0.0410	0.0000	0.0438	0.0131	0.0044	9	-0.21	OK	0
050.99	Soluble K2O, Other (%)	0524	0.0454	0.0010	0.0438	0.0131	0.0044	9	0.12	OK	0
050.99	Soluble K2O, Other (%)	0476	0.0496	0.0018	0.0438	0.0131	0.0044	9	0.44	OK	0
050.99	Soluble K2O, Other (%)	0234	0.0500	0.0000	0.0438	0.0131	0.0044	9	0.47	OK	0
050.99	Soluble K2O, Other (%)	0501	0.0500	0.0200	0.0438	0.0131	0.0044	9	0.47	OK	0
050.99	Soluble K2O, Other (%)	0255	0.1030	0.0020	0.0438	0.0131	0.0044	9	4.51	OK	0
050.99	Soluble K2O, Other (%)	0575	0.0000	0.0000	0.0438	0.0131	0.0044	9			4
050.99	Soluble K2O, Other (%)	0552	0.0150	0.0300	0.0438	0.0131	0.0044	9			4
050.99	Soluble K2O, Other (%)	0325	< 0.01		0.0438	0.0131	0.0044	9			5
060.99	Water (Free), Other (%)	0510	1.079	0.0028				1			0
101.00	Acid Soluble Ca, AA, inorganic 965.09 (%)	0553	0.1030	0.0080				1			0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0035	0.3035	0.0190	0.3245	0.0236	0.0063	3	-0.89		0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0354	0.3200	0.0000	0.3245	0.0236	0.0063	3	-0.19		0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0231	0.3500	0.0000	0.3245	0.0236	0.0063	3	1.08		0
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (%)	0423	0.3290	0.0020				1			0
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0472	0.2750	0.0100				2			0
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0419	0.3100	0.0000				2			0
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0527	< 0.01					2			5

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	Range				
101.99	Acid Soluble Ca, Other (%)	0552	0.6650	0.3300				1			0
121.00	Acid Soluble Mg, AA, inorganic 965.09 (%)	0553	0.0755	0.0050				1			0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0035	0.0705	0.0030				2			0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0354	0.0900	0.0000				2			0
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (%)	0423	0.0770	0.0020				1			0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0472	0.0250	0.0300	0.0623	0.0249	0.0105	4	-1.50		0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0494	0.0735	0.0067	0.0623	0.0249	0.0105	4	0.45		0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0419	0.0750	0.0040	0.0623	0.0249	0.0105	4	0.51		0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0527	0.0757	0.0014	0.0623	0.0249	0.0105	4	0.54		0
121.99	Acid Soluble Mg, Other (%)	0524	0.0670	0.0021	0.0875	0.0285	0.0500	3	-0.72		0
121.99	Acid Soluble Mg, Other (%)	0515	0.0754	0.0078	0.0875	0.0285	0.0500	3	-0.42		0
121.99	Acid Soluble Mg, Other (%)	0552	0.1200	0.1400	0.0875	0.0285	0.0500	3	1.14		0
143.99	Elemental S, Other (%)	0255	18.23	0.4100	20.87	2.300	1.127	3	-1.15		0
143.99	Elemental S, Other (%)	0368	22.02	0.0504	20.87	2.300	1.127	3	0.50		0
143.99	Elemental S, Other (%)	0325	22.37	2.920	20.87	2.300	1.127	3	0.65		0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0561	19.32	0.3300	19.89	0.4997	0.2067	3	-1.14		0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0405	20.11	0.0500	19.89	0.4997	0.2067	3	0.44		0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0027	20.24	0.2400	19.89	0.4997	0.2067	3	0.71		0
145.99	Sulfate S, HCl soluble, Other (%)	0444	15.77	0.3400	18.60	1.922	0.3175	4	-1.47		0
145.99	Sulfate S, HCl soluble, Other (%)	0553	19.15	0.3000	18.60	1.922	0.3175	4	0.29		0
145.99	Sulfate S, HCl soluble, Other (%)	0481	19.41	0.2800	18.60	1.922	0.3175	4	0.42		0
145.99	Sulfate S, HCl soluble, Other (%)	0532	20.06	0.3500	18.60	1.922	0.3175	4	0.76		0
146.99	Total S in Liquid, Other (20%)	0444	15.77	0.3400				1			0
148.00	Total S, Combustion (20%)	0114	19.37	1.250	20.18	0.6828	0.5071	7	-1.08	OK	0
148.00	Total S, Combustion (20%)	0073	19.52	0.1300	20.18	0.6828	0.5071	7	-0.88	OK	0
148.00	Total S, Combustion (20%)	0029	19.97	0.1400	20.18	0.6828	0.5071	7	-0.28	OK	0
148.00	Total S, Combustion (20%)	0049	20.14	0.3700	20.18	0.6828	0.5071	7	-0.06	OK	0
148.00	Total S, Combustion (20%)	0136	20.74	0.5600	20.18	0.6828	0.5071	7	0.74	OK	0
148.00	Total S, Combustion (20%)	0451	20.75	0.7000	20.18	0.6828	0.5071	7	0.75	OK	0
148.00	Total S, Combustion (20%)	0157	20.80	0.4000	20.18	0.6828	0.5071	7	0.82	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (20%)	0549	20.04	0.1300	20.30	0.2722	0.2884	13	-0.96	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (20%)	0569	20.04	0.1200	20.30	0.2722	0.2884	13	-0.95	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (20%)	0231	20.05	0.1000	20.30	0.2722	0.2884	13	-0.91	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (20%)	0494	20.09	0.1090	20.30	0.2722	0.2884	13	-0.75	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (20%)	0545	20.14	0.0700	20.30	0.2722	0.2884	13	-0.60	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (20%)	0534	20.15	0.3000	20.30	0.2722	0.2884	13	-0.54	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (20%)	0230	20.20	1.000	20.30	0.2722	0.2884	13	-0.36	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (20%)	0029	20.32	0.0400	20.30	0.2722	0.2884	13	0.08	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (20%)	0055	20.49	0.6200	20.30	0.2722	0.2884	13	0.71	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (20%)	0513	20.55	0.0600	20.30	0.2722	0.2884	13	0.93	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (20%)	0580	20.55	0.2000	20.30	0.2722	0.2884	13	0.93	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (20%)	0485	20.55	0.1000	20.30	0.2722	0.2884	13	0.93	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (20%)	0324	20.95	0.9000	20.30	0.2722	0.2884	13	2.40	OK	0

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			Value	Range	Rob Mean	Rob SD	Range				
148.07	Total S, ICP, test portion as in 2017.02 (20%)	0444	17.01	0.3400	19.59	1.609	0.2259	11	-1.61	Low	0
148.07	Total S, ICP, test portion as in 2017.02 (20%)	0260	17.50	0.4000	19.59	1.609	0.2259	11	-1.30	Low	0
148.07	Total S, ICP, test portion as in 2017.02 (20%)	0472	18.87	0.1800	19.59	1.609	0.2259	11	-0.45	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (20%)	0177	19.41	0.3432	19.59	1.609	0.2259	11	-0.12	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (20%)	0521	19.42	0.0000	19.59	1.609	0.2259	11	-0.11	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (20%)	0494	19.45	0.6483	19.59	1.609	0.2259	11	-0.09	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (20%)	0040	19.80	0.0000	19.59	1.609	0.2259	11	0.13	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (20%)	0527	20.24	0.2270	19.59	1.609	0.2259	11	0.40	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (20%)	0513	20.45	0.0800	19.59	1.609	0.2259	11	0.53	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (20%)	0292	21.43	0.0600	19.59	1.609	0.2259	11	1.14	High	0
148.07	Total S, ICP, test portion as in 2017.02 (20%)	0117	21.77	0.2064	19.59	1.609	0.2259	11	1.35	High	0
148.07	Total S, ICP, test portion as in 2017.02 (20%)	0421	20.90	2.800	19.59	1.609	0.2259	11	0.81	High	1
148.99	Total S, Other (20%)	0072	18.11	0.1445	19.92	0.6735	0.1751	19	-2.69	Low	0
148.99	Total S, Other (20%)	0575	18.81	0.2100	19.92	0.6735	0.1751	19	-1.66	Low	0
148.99	Total S, Other (20%)	0577	19.15	0.3500	19.92	0.6735	0.1751	19	-1.15	OK	0
148.99	Total S, Other (20%)	0501	19.47	0.5900	19.92	0.6735	0.1751	19	-0.68	OK	0
148.99	Total S, Other (20%)	0023	19.65	0.1000	19.92	0.6735	0.1751	19	-0.40	OK	0
148.99	Total S, Other (20%)	0533	19.78	0.1800	19.92	0.6735	0.1751	19	-0.21	OK	0
148.99	Total S, Other (20%)	0560	19.80	0.0280	19.92	0.6735	0.1751	19	-0.18	OK	0
148.99	Total S, Other (20%)	0559	19.81	0.0100	19.92	0.6735	0.1751	19	-0.17	OK	0
148.99	Total S, Other (20%)	0600	19.83	0.1500	19.92	0.6735	0.1751	19	-0.14	OK	0
148.99	Total S, Other (20%)	0564	19.83	0.0200	19.92	0.6735	0.1751	19	-0.14	OK	0
148.99	Total S, Other (20%)	0567	19.83	0.0200	19.92	0.6735	0.1751	19	-0.14	OK	0
148.99	Total S, Other (20%)	0565	19.85	0.0200	19.92	0.6735	0.1751	19	-0.11	OK	0
148.99	Total S, Other (20%)	0354	20.10	0.0000	19.92	0.6735	0.1751	19	0.26	OK	0
148.99	Total S, Other (20%)	0558	20.14	0.0950	19.92	0.6735	0.1751	19	0.33	OK	0
148.99	Total S, Other (20%)	0605	20.31	0.1500	19.92	0.6735	0.1751	19	0.57	OK	0
148.99	Total S, Other (20%)	0220	20.59	0.0300	19.92	0.6735	0.1751	19	0.98	OK	0
148.99	Total S, Other (20%)	0452	20.73	0.0100	19.92	0.6735	0.1751	19	1.19	OK	0
148.99	Total S, Other (20%)	0043	21.20	0.3600	19.92	0.6735	0.1751	19	1.90	High	0
148.99	Total S, Other (20%)	0422	25.01	0.8600	19.92	0.6735	0.1751	19	7.55	High	0
148.99	Total S, Other (20%)	0377	18.61	1.890	19.92	0.6735	0.1751	19	-1.96	Low	1
149.04	S - HNO3 soluble, ICP (%)	0588	19.70	0.2000	20.03	0.3183	0.5466	3	-1.03		0
149.04	S - HNO3 soluble, ICP (%)	0423	20.05	0.2000	20.03	0.3183	0.5466	3	0.07		0
149.04	S - HNO3 soluble, ICP (%)	0524	20.34	1.240	20.03	0.3183	0.5466	3	0.96		0
151.30	Acid Soluble As, ICP (ppm)	0524	2.384	0.0310				2			0
151.30	Acid Soluble As, ICP (ppm)	0419	3.795	0.4900				2			0
151.30	Acid Soluble As, ICP (ppm)	0255	0.0000	0.0000				2			4
151.30	Acid Soluble As, ICP (ppm)	0605	< 6.2					2			5
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	0220	0.9500	0.1000				1			0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0136	2.365	0.0100	3.953	1.659	0.3566	3	-0.96		0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0527	3.818	0.3497	3.953	1.659	0.3566	3	-0.08		0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0494	5.675	0.7100	3.953	1.659	0.3566	3	1.04		0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	Range				
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	0368	< 0.5					0			5
151.99	Acid Soluble As, Other (ppm)	0220	0.5000	0.0000				2			0
151.99	Acid Soluble As, Other (ppm)	0481	1.460	0.0600				2			0
151.99	Acid Soluble As, Other (ppm)	0405	< 3					2			5
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	0354	< 0.01					0			5
165.99	Acid Soluble B, Other (%)	0524	0.0013	0.0002				2			0
165.99	Acid Soluble B, Other (%)	0423	0.0027	0.0001				2			0
165.99	Acid Soluble B, Other (%)	0552	0.0250	0.0500				2			4
165.99	Acid Soluble B, Other (%)	0527	< 0.01					2			5
181.30	Acid Soluble Cd, ICP (ppm)	0444	0.5300	0.0800	0.8811	0.4617	0.2295	5	-0.66		0
181.30	Acid Soluble Cd, ICP (ppm)	0035	0.6385	0.1410	0.8811	0.4617	0.2295	5	-0.46		0
181.30	Acid Soluble Cd, ICP (ppm)	0524	0.6625	0.0033	0.8811	0.4617	0.2295	5	-0.41		0
181.30	Acid Soluble Cd, ICP (ppm)	0255	0.9045	0.7230	0.8811	0.4617	0.2295	5	0.04		0
181.30	Acid Soluble Cd, ICP (ppm)	0419	1.670	0.2000	0.8811	0.4617	0.2295	5	1.49		0
181.30	Acid Soluble Cd, ICP (ppm)	0605	< 1.85		0.8811	0.4617	0.2295	5			5
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	0220	< 0.1					0			5
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0527	< 0.0001					0			5
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0136	< 1					0			5
181.34	Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm)	0368	< 0.1					0			5
181.34	Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm)	0515	< 0.101					0			5
181.99	Acid Soluble Cd, Other (ppm)	0220	0.1000	0.0200				1			0
181.99	Acid Soluble Cd, Other (ppm)	0481	< 0.5					1			5
181.99	Acid Soluble Cd, Other (ppm)	0405	< 1					1			5
190.00	Water Soluble Cl, Titrimetric (%)	0553	< 0.1					0			5
191.30	Acid Soluble Cr, ICP (ppm)	0444	16.82	0.3200	22.23	3.446	0.2155	6	-1.40	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0524	20.05	0.2728	22.23	3.446	0.2155	6	-0.56	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0605	23.35	0.1000	22.23	3.446	0.2155	6	0.29	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0027	24.00	0.0000	22.23	3.446	0.2155	6	0.46	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0513	24.00	0.4000	22.23	3.446	0.2155	6	0.46	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0035	24.90	0.2000	22.23	3.446	0.2155	6	0.69	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0419	18.66	1.690	22.23	3.446	0.2155	6	-0.92	NA	1
191.32	Acid Soluble Cr, ICP, 2006.03 (ppm)	0220	15.95	0.3000				1			0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0136	17.44	0.0900				2			0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0527	22.02	0.0060				2			0
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	0368	20.00	0.8000				2			0
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	0515	23.10	1.645				2			0
191.99	Acid Soluble Cr, Other (ppm)	0220	20.70	0.2000	23.43	2.654	0.2000	3	-1.03		0
191.99	Acid Soluble Cr, Other (ppm)	0481	23.60	0.4000	23.43	2.654	0.2000	3	0.06		0
191.99	Acid Soluble Cr, Other (ppm)	0405	26.00	0.0000	23.43	2.654	0.2000	3	0.97		0
202.30	Acid Soluble Co, ICP (ppm)	0485	1.595	0.1100	3.951	1.759	0.4306	5	-1.34		0
202.30	Acid Soluble Co, ICP (ppm)	0419	2.605	0.3100	3.951	1.759	0.4306	5	-0.77		0
202.30	Acid Soluble Co, ICP (ppm)	0035	4.705	0.3300	3.951	1.759	0.4306	5	0.43		0
202.30	Acid Soluble Co, ICP (ppm)	0605	5.200	1.200	3.951	1.759	0.4306	5	0.71		0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	Range				
202.30	Acid Soluble Co, ICP (ppm)	0524	5.651	0.2032	3.951	1.759	0.4306	5	0.97		0
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	0220	2.550	0.1000				2			0
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	0423	4.385	0.0700				2			0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0527	4.002	0.0488				1			0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0136	< 2.5					1			5
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	0368	1.350	0.3000				1			0
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	0515	< 0.092					1			5
202.99	Acid Soluble Co, Other (ppm)	0220	3.400	0.0000	5.625	2.290	0.6460	3	-0.97		0
202.99	Acid Soluble Co, Other (ppm)	0405	5.500	1.000	5.625	2.290	0.6460	3	-0.05		0
202.99	Acid Soluble Co, Other (ppm)	0255	7.974	0.9380	5.625	2.290	0.6460	3	1.03		0
221.00	Acid Soluble Cu, AA, inorganic 965.09 (%)	0553	0.0085	0.0010				1			0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0049	0.0075	0.0010	0.0083	0.0004	0.0004	6	-1.52	OK	0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0255	0.0080	0.0000	0.0083	0.0004	0.0004	6	-0.51	OK	0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0035	0.0082	0.0002	0.0083	0.0004	0.0004	6	-0.10	OK	0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0234	0.0083	0.0002	0.0083	0.0004	0.0004	6	0.10	OK	0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0513	0.0085	0.0000	0.0083	0.0004	0.0004	6	0.51	OK	0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0444	0.0095	0.0010	0.0083	0.0004	0.0004	6	2.54	OK	0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0552	0.0100	0.0200	0.0083	0.0004	0.0004	6			4
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0354	< 0.01		0.0083	0.0004	0.0004	6			5
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	0423	0.0090	0.0000				1			0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0043	0.0090	0.0000	0.0094	0.0004	0.0001	5	-0.84		0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0419	0.0090	0.0000	0.0094	0.0004	0.0001	5	-0.84		0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0136	0.0092	0.0002	0.0094	0.0004	0.0001	5	-0.39		0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0527	0.0097	0.0001	0.0094	0.0004	0.0001	5	0.63		0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0472	0.0100	0.0000	0.0094	0.0004	0.0001	5	1.43		0
221.99	Acid Soluble Cu, Other (%)	0481	0.0080	0.0000	0.0086	0.0005	0.0002	6	-0.96	OK	0
221.99	Acid Soluble Cu, Other (%)	0524	0.0082	0.0001	0.0086	0.0005	0.0002	6	-0.70	OK	0
221.99	Acid Soluble Cu, Other (%)	0515	0.0083	0.0006	0.0086	0.0005	0.0002	6	-0.44	OK	0
221.99	Acid Soluble Cu, Other (%)	0368	0.0089	0.0002	0.0086	0.0005	0.0002	6	0.61	OK	0
221.99	Acid Soluble Cu, Other (%)	0405	0.0090	0.0001	0.0086	0.0005	0.0002	6	0.70	OK	0
221.99	Acid Soluble Cu, Other (%)	0027	0.0090	0.0000	0.0086	0.0005	0.0002	6	0.79	OK	0
241.00	Acid Soluble Fe, AA, inorganic 965.09 (%)	0553	1.880	0.0600				1			0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0552	1.830	0.0200	1.898	0.0514	0.0350	4	-1.31		0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0035	1.885	0.0300	1.898	0.0514	0.0350	4	-0.24		0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0354	1.935	0.0500	1.898	0.0514	0.0350	4	0.73		0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0231	1.940	0.0400	1.898	0.0514	0.0350	4	0.83		0
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (%)	0423	1.942	0.0030				1			0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0494	1.854	0.1261	1.880	0.0477	0.0429	4	-0.54		0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0472	1.855	0.0100	1.880	0.0477	0.0429	4	-0.53		0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0419	1.860	0.0200	1.880	0.0477	0.0429	4	-0.42		0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0527	1.952	0.0156	1.880	0.0477	0.0429	4	1.50		0
241.99	Acid Soluble Fe, Other (%)	0515	1.861	0.0280				2			0
241.99	Acid Soluble Fe, Other (%)	0524	1.865	0.0002				2			0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	Range				
251.30	Acid Soluble Pb, ICP (ppm)	0485	9.080	0.1600	12.24	2.482	0.8166	8	-1.16	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0444	10.26	0.1700	12.24	2.482	0.8166	8	-0.73	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0524	10.87	0.1426	12.24	2.482	0.8166	8	-0.51	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0255	11.75	0.2600	12.24	2.482	0.8166	8	-0.18	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0513	13.25	0.7000	12.24	2.482	0.8166	8	0.37	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0605	13.25	1.900	12.24	2.482	0.8166	8	0.37	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0027	13.50	1.000	12.24	2.482	0.8166	8	0.46	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0035	20.40	2.200	12.24	2.482	0.8166	8	3.01	NA	0
251.32	Acid Soluble Pb, ICP, 2006.03 (ppm)	0220	2.400	0.6000				1			0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0136	12.80	0.0300				2			0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0527	13.81	0.0008				2			0
251.34	Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm)	0368	9.200	11.40				2			0
251.34	Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm)	0515	9.939	1.074				2			0
251.99	Acid Soluble Pb, Other (ppm)	0220	2.000	0.4000	8.300	5.312	0.1450	4	-1.19		0
251.99	Acid Soluble Pb, Other (ppm)	0481	8.050	0.0800	8.300	5.312	0.1450	4	-0.05		0
251.99	Acid Soluble Pb, Other (ppm)	0534	8.150	0.1000	8.300	5.312	0.1450	4	-0.03		0
251.99	Acid Soluble Pb, Other (ppm)	0405	15.00	0.0000	8.300	5.312	0.1450	4	1.26		0
261.00	Acid Soluble Mn, AA, Mn2+ only (%)	0553	0.0205	0.0010				1			0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0354	0.0200	0.0000				2			0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0035	0.0231	0.0001				2			0
261.32	Acid Soluble Mn, ICP, test portion inorganic 965.09 (%)	0552	0.0300	0.0600				0			4
261.34	Acid Soluble Mn, ICP, test portion 2006.03A-C (%)	0423	0.0210	0.0000				1			0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0472	0.0200	0.0000	0.0212	0.0016	0.0001	3	-0.77		0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0494	0.0207	0.0003	0.0212	0.0016	0.0001	3	-0.35		0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0527	0.0230	0.0001	0.0212	0.0016	0.0001	3	1.13		0
261.99	Acid Soluble Mn, Other (%)	0515	0.0036	0.0014				2			0
261.99	Acid Soluble Mn, Other (%)	0524	0.0218	0.0001				2			0
281.00	Acid Soluble Hg, AA (ppm)	0481	< 0.5					0			5
281.30	Acid Soluble Hg, ICP (ppm)	0527	< 0.001					0			5
281.30	Acid Soluble Hg, ICP (ppm)	0515	< 0.017					0			5
281.30	Acid Soluble Hg, ICP (ppm)	0605	< 1.25					0			5
281.99	Acid Soluble Hg, Other (ppm)	0220	0.1250	0.0300	0.1927	0.0462	0.0102	4	-1.46		0
281.99	Acid Soluble Hg, Other (ppm)	0524	0.2015	0.0008	0.1927	0.0462	0.0102	4	0.19		0
281.99	Acid Soluble Hg, Other (ppm)	0368	0.2194	0.0081	0.1927	0.0462	0.0102	4	0.58		0
281.99	Acid Soluble Hg, Other (ppm)	0035	0.2250	0.0020	0.1927	0.0462	0.0102	4	0.70		0
281.99	Acid Soluble Hg, Other (ppm)	0405	< 2		0.1927	0.0462	0.0102	4			5
289.30	Acid Soluble Mo, ICP (ppm)	0444	0.0015	0.0010	4.697	3.232	0.3648	8	-1.33	Low	0
289.30	Acid Soluble Mo, ICP (ppm)	0035	3.460	0.3200	4.697	3.232	0.3648	8	-0.35	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0234	3.500	1.000	4.697	3.232	0.3648	8	-0.34	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0524	3.976	0.0872	4.697	3.232	0.3648	8	-0.20	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0049	4.360	0.3000	4.697	3.232	0.3648	8	-0.10	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0255	5.332	0.0100	4.697	3.232	0.3648	8	0.18	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0513	7.400	0.8000	4.697	3.232	0.3648	8	0.77	High	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	Range				
289.30	Acid Soluble Mo, ICP (ppm)	0419	9.650	0.4000	4.697	3.232	0.3648	8	1.40	High	0
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	0220	5.500	0.0000				1			0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0494	6.445	0.3700	6.726	0.3881	0.2189	4	-0.72		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0423	6.560	0.0200	6.726	0.3881	0.2189	4	-0.43		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0136	6.600	0.2200	6.726	0.3881	0.2189	4	-0.33		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0527	7.300	0.2656	6.726	0.3881	0.2189	4	1.48		0
289.34	Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm)	0368	4.800	0.2000				2			0
289.34	Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm)	0515	6.972	3.295				2			0
289.99	Acid Soluble Mo, Other (ppm)	0220	5.850	0.7000				2			0
289.99	Acid Soluble Mo, Other (ppm)	0405	7.000	0.0000				2			0
289.99	Acid Soluble Mo, Other (ppm)	0481	< 100					2			5
291.30	Acid Soluble Ni, ICP (ppm)	0444	7.595	0.1700	9.272	1.600	0.6208	8	-0.96	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0485	7.685	1.290	9.272	1.600	0.6208	8	-0.91	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0419	7.875	1.190	9.272	1.600	0.6208	8	-0.80	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0524	9.374	0.0160	9.272	1.600	0.6208	8	0.06	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0605	9.500	0.4000	9.272	1.600	0.6208	8	0.13	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0513	10.25	0.7000	9.272	1.600	0.6208	8	0.56	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0035	10.90	1.200	9.272	1.600	0.6208	8	0.93	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0027	11.00	0.0000	9.272	1.600	0.6208	8	0.99	NA	0
291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	0220	7.700	0.4000				1			0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0136	6.930	0.1600	8.820	1.937	0.4762	3	-0.98		0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0527	8.729	0.0687	8.820	1.937	0.4762	3	-0.05		0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0494	10.80	1.200	8.820	1.937	0.4762	3	1.02		0
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	0515	6.131	0.1750				2			0
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	0368	6.800	1.200				2			0
291.99	Acid Soluble Ni, Other (ppm)	0220	9.950	0.1000	15.34	8.022	3.597	3	-0.67		0
291.99	Acid Soluble Ni, Other (ppm)	0405	11.50	1.000	15.34	8.022	3.597	3	-0.48		0
291.99	Acid Soluble Ni, Other (ppm)	0255	24.56	9.690	15.34	8.022	3.597	3	1.15		0
301.30	Acid Soluble Se, ICP (ppm)	0524	1.149	0.0534				1			0
301.30	Acid Soluble Se, ICP (ppm)	0605	< 1.65					1			5
301.32	Acid Soluble Se, ICP, 2006.03 (ppm)	0220	0.6500	0.1000				1			0
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0527	< 0.001					0			5
301.34	Acid Soluble Se, ICP, EPA 3050B/6010C (ppm)	0515	< 0.108					0			5
301.34	Acid Soluble Se, ICP, EPA 3050B/6010C (ppm)	0368	< 1.5					0			5
301.99	Acid Soluble Se, Other (ppm)	0220	0.3000	0.0000				1			0
301.99	Acid Soluble Se, Other (ppm)	0255	0.0000	0.0000				1			4
301.99	Acid Soluble Se, Other (ppm)	0481	< 0.5					1			5
301.99	Acid Soluble Se, Other (ppm)	0405	< 10					1			5
311.00	Sodium, AA (%)	0553	0.0555	0.0030				1			0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0035	0.0575	0.0050	0.0621	0.0041	0.0016	4	-1.11		0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0423	0.0605	0.0010	0.0621	0.0041	0.0016	4	-0.38		0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0419	0.0630	0.0000	0.0621	0.0041	0.0016	4	0.23		0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0527	0.0672	0.0004	0.0621	0.0041	0.0016	4	1.25		0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	Range				
311.99	Sodium, Other (%)	0354	0.1100	0.0000				1			0
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	0534	0.0200	0.0000	83.18	144.0	0.3337	3	-0.58		0
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	0553	0.0215	0.0010	83.18	144.0	0.3337	3	-0.58		0
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	0485	249.5	1.000	83.18	144.0	0.3337	3	1.15		0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0049	0.0195	0.0010	0.0236	0.0035	0.0014	7	-1.05	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0354	0.0200	0.0000	0.0236	0.0035	0.0014	7	-0.93	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0234	0.0236	0.0007	0.0236	0.0035	0.0014	7	-0.02	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0035	0.0238	0.0011	0.0236	0.0035	0.0014	7	0.03	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0255	0.0245	0.0010	0.0236	0.0035	0.0014	7	0.23	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0513	0.0255	0.0010	0.0236	0.0035	0.0014	7	0.48	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0444	0.0285	0.0050	0.0236	0.0035	0.0014	7	1.25	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0552	0.0400	0.0800	0.0236	0.0035	0.0014	7			4
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0423	0.0285	0.0010				1			0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0472	0.0200	0.0000	0.0240	0.0029	0.0004	4	-1.37		0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0136	0.0238	0.0004	0.0240	0.0029	0.0004	4	-0.07		0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0043	0.0255	0.0010	0.0240	0.0029	0.0004	4	0.51		0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0527	0.0267	0.0002	0.0240	0.0029	0.0004	4	0.92		0
321.99	Acid Soluble Zn, Other (%)	0481	0.0240	0.0000	0.0257	0.0014	0.0007	6	-1.05	OK	0
321.99	Acid Soluble Zn, Other (%)	0515	0.0247	0.0011	0.0257	0.0014	0.0007	6	-0.64	OK	0
321.99	Acid Soluble Zn, Other (%)	0027	0.0255	0.0010	0.0257	0.0014	0.0007	6	-0.10	OK	0
321.99	Acid Soluble Zn, Other (%)	0524	0.0258	0.0001	0.0257	0.0014	0.0007	6	0.06	OK	0
321.99	Acid Soluble Zn, Other (%)	0405	0.0268	0.0018	0.0257	0.0014	0.0007	6	0.73	OK	0
321.99	Acid Soluble Zn, Other (%)	0368	0.0273	0.0001	0.0257	0.0014	0.0007	6	1.01	OK	0
441.00	Humic Acids, Gravimetry, Ash-free, alkali dissolved, acid precip	0220	0.1700	0.0200				2			0
441.00	Humic Acids, Gravimetry, Ash-free, alkali dissolved, acid precip	0136	0.2250	0.0300				2			0
441.10	Humic Acids, Gravimetry, alkali dissolved, acid precipitated (%)	0368	0.5740	0.0240				1			0
441.99	Humic Acids, Other (%)	0481	9.650	0.4200				1			0
451.00	Hydrophobic Fulvic Acids, Gravimetry, acid dissolved binds hyc	0220	0.6700	0.0400				1			0
451.99	Hydrophobic Fulvic Acids, Other (%)	0481	20.80	0.3700				1			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. IA Status describes where your result is relative to the Assigned Value ± IA. Red indicates Higher or Lower and Green indicates within the IA range about the Robust mean. Method 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.