

Method PT For All Labs

Magruder Fertilizer Proficiency Testing Program

Methods: 131

Sample # 220511

Regular PT Scheme

Labs Reporting: 86

Grade 21-7-14

Statistical Summary

Issue Date : 06/30/2022

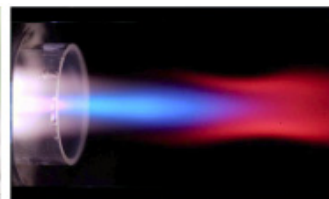
Method Code	Analyte & Method Sample # 220511	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Method Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	Method IA Ratio	Average Range (R-bar)	Horwitz %RSD
001.10	Ammoniacal N, Magnesium Oxide Method (%)	6	6	11.02	0.3253	11.01		0.3306	0.1687	3.00%		0.1563	2.79%
001.99	Ammoniacal N, Other (%)	21	20	11.08	0.2487	11.07		0.2352	0.0657	2.12%		0.0855	2.79%
002.20	Nitrate N, Jones Modified (%)	2	2	9.770	0.0778								
002.99	Nitrate N, Other (%)	18	18	9.833	0.3906	9.875		0.3132	0.0923	3.17%		0.1278	2.83%
005.99	Urea N, Other (%)	1		0.0201									
009.10	Ammoniacal Plus Nitrate N, Devarda (%)	1		21.11									
010.11	Total N, Modified Comprehensive (21%)	1		21.17									
010.12	Total N, Salicylic (21%)	4	4	20.94	0.3128	20.94	0.7394	0.3128	0.1955	1.49%	0.99	0.4525	2.19%
010.60	Total N, Combustion (21%)	53	53	20.63	0.6977	20.65	0.7365	0.5601	0.0962	2.71%	1.77	0.1430	2.20%
010.99	Total N, Other (21%)	14	13	20.99	0.4368	20.91	0.7391	0.3643	0.1263	1.74%	1.15	0.1291	2.19%
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	13	13	7.038	0.1047	7.045		0.0989	0.0343	1.40%		0.0581	2.98%
020.40	Total P2O5, Automated (%)	1		6.400									
020.50	Total P2O5, ICP (%)	21	20	7.128	0.5614	7.028		0.3922	0.1096	5.58%		0.1441	2.98%
020.99	Total P2O5, Other (%)	7	7	7.607	1.577	7.273		0.9076	0.4288	12.48%		0.4512	2.97%
030.10	Citrate Insoluble P2O5, Gravimetric Quinolinium MolybdoP (%)	1		6.760									
030.20	Citrate Insoluble P2O5, Spectrophotometric MolybdovanadoP	1		0.0100									
040.20	Indirect Available P2O5, Spectrophotometric (7%)	1		6.860									
040.99	Indirect Available P2O5, Other (7%)	1		6.970									
041.10	Direct Available P2O5, Gravimetric Quinolinium (7%)	3	3	7.253	0.4543	7.253	0.6800	0.4543	0.3278	6.26%	1.56	0.1354	2.97%
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA	9	8	6.730	0.5052	6.918	0.6792	0.2480	0.1096	3.59%	0.85	0.0513	2.99%
041.20	Direct Available P2O5, Spectrophotometric (7%)	5	5	6.918	0.2327	6.918	0.6792	0.2327	0.1301	3.36%	0.80	0.1200	2.99%
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext.	9	9	6.551	0.6566	6.551	0.6755	0.7445	0.3102	11.37%	2.57	0.0619	3.01%
041.40	Direct Available P2O5, Automated, Citrate-EDTA Ext. (7%)	2	2	7.100	0.0071								
041.50	Direct Available P2O5, ICP (7%)	3	3	7.185	0.2325	7.185	0.6800	0.2325	0.1678	3.24%	0.80	0.2167	2.97%
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (7%)	10	10	7.064	0.2817	7.102	0.6800	0.2195	0.0868	3.09%	0.75	0.1477	2.98%
041.99	Direct Available P2O5, Other (7%)	5	5	7.435	0.6468	7.435	0.6800	0.6468	0.3616	8.70%	2.22	0.0700	2.96%
042.99	Water Soluble OrthoP As P2O5, Other (%)	1		5.540									
048.20	Water Soluble P2O5, Spectrophotometric (%)	1		4.675									
048.99	Water Soluble P2O5, Other (%)	4	4	5.558	1.055	5.558		1.055	0.6595	18.98%		0.1673	3.09%

Method Code	Analyte & Method Sample # 220511	# 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)	Howitz %RSD
050.00	Soluble K2O, STPB Oxalate (14%)	9	9	14.87	0.5263	14.87	0.9005	0.5968	0.2487	4.01%	1.54	0.1011	2.59%
050.30	Soluble K2O, AA (Oxalate) (14%)	3	3	15.23	1.141	15.23	0.9130	1.141	0.8237	7.50%	2.91	0.4203	2.56%
050.32	Soluble K2O, AA (Citrate-EDTA) (14%)	1		13.98									
050.50	Soluble K2O, ICP (Oxalate) (14%)	10	10	14.64	0.6144	14.63	0.8921	0.6121	0.2419	4.18%	1.60	0.4683	2.61%
050.51	Soluble K2O, ICP (Citrate) (14%)	3	3	12.72	3.286	12.72	0.8190	3.286	2.371	25.82%	9.35	0.0724	2.73%
050.52	Soluble K2O, ICP (Citrate-EDTA) (14%)	11	11	14.63	0.3153	14.64	0.8924	0.2891	0.1090	1.97%	0.75	0.2290	2.61%
050.60	Soluble K2O, Flame Photometric (Oxalate) (14%)	3	3	14.37	0.7638	14.37	0.8829	0.7638	0.5512	5.32%	2.02	0.0800	2.64%
050.61	Soluble K2O, Flame Photometric (Citrate) (14%)	1		14.55									
050.62	Soluble K2O, Flame Photometric (Citrate-EDTA) (14%)	5	5	14.99	0.3017	14.99	0.9045	0.3017	0.1687	2.01%	0.78	0.2036	2.58%
050.99	Soluble K2O, Other (14%)	34	33	14.64	0.8421	14.62	0.8916	0.6890	0.1499	4.71%	1.80	0.2851	2.62%
060.99	Water (Free), Other (%)	1		0.4207									
101.00	Acid Soluble Ca, AA, inorganic 965.09 (%)	1		1.555									
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	3	3	1.133	0.6661	1.133	0.2567	0.6661	0.4807	58.78%	6.05	0.0923	3.93%
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (%)	1		1.574									
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	3	3	1.609	0.2180	1.609	0.2804	0.2180	0.1573	13.55%	1.81	0.0092	3.72%
101.99	Acid Soluble Ca, Other (%)	2	2	1.786	0.4250								
121.00	Acid Soluble Mg, AA, inorganic 965.09 (%)	1		0.2535									
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	2	2	0.1548	0.1488								
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (%)	2	2	0.2590	0.0000								
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	4	4	0.2471	0.0102	0.2471	0.2124	0.0102	0.0064	4.13%	0.11	0.0196	4.94%
121.99	Acid Soluble Mg, Other (%)	5	5	0.2314	0.0162	0.2314	0.2116	0.0162	0.0091	7.02%	0.18	0.0212	4.99%
131.99	Water Soluble Mg, Other (%)	1		0.1285									
143.99	Elemental S, Other (%)	5	5	5.506	0.4024	5.506		0.4024	0.2250	7.31%		0.0464	3.09%
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	6	6	5.208	0.2457	5.237		0.2066	0.1054	3.95%		0.0483	3.12%
145.99	Sulfate S, HCl soluble, Other (%)	3	3	5.077	0.1776	5.077		0.1776	0.1282	3.50%		0.0333	3.13%
148.00	Total S, Combustion (5.1%)	7	7	5.227	0.2944	5.226	0.4613	0.3319	0.1568	6.35%	1.68	0.1324	3.12%
148.01	Total S, Gravimetric - sulfate and elemental (5.1%)	11	10	5.470	0.1941	5.483	0.4742	0.2258	0.0892	4.12%	1.11	0.0880	3.10%
148.07	Total S, ICP, test portion as in 2017.02 (5.1%)	18	17	5.685	1.729	5.262	0.4631	0.1911	0.0579	3.63%	0.96	0.1453	3.12%
148.99	Total S, Other (5.1%)	16	16	5.328	0.2946	5.309	0.4655	0.2760	0.0862	5.20%	1.38	0.0829	3.11%
149.04	S - HNO3 soluble, ICP (%)	4	4	5.278	0.2816	5.278		0.2816	0.1760	5.33%		0.0350	3.11%
151.00	Acid Soluble As, AA, test portion 2006.03 modified w/dual acid	1		1.000									
151.30	Acid Soluble As, ICP (ppm)	4	3	3.955	4.160	5.273		3.940	2.844	74.72%		0.2015	12.46%
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	4	4	6.655	4.093	6.655		4.093	2.558	61.49%		2.518	12.03%
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	2	2	10.04	3.548								
151.99	Acid Soluble As, Other (ppm)	3	3	5.542	6.514	5.542		6.514	4.701	117.54%		0.0207	12.36%
165.00	Acid Soluble B, Spectrophotometric (%)	1		0.0060									
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	2	1	0.0077	0.0033								
165.99	Acid Soluble B, Other (%)	6	5	0.0062	0.0036	0.0052	0.0038	0.0031	0.0017	59.20%	1.89	0.0005	8.83%
171.99	Water Soluble B, Other (%)	1		0.0110									
181.00	Acid Soluble Cd, AA, test portion 2006.03 modified w/dual acic	1		1.180									

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181.30	Acid Soluble Cd, ICP (ppm)	8	6	1.437	1.435	0.5874		0.2766	0.1412	47.09%		0.2739	17.33%
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	4	3	0.8055	0.1357	0.7406		0.0490	0.0354	6.62%		0.0252	16.74%
181.34	Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm)	1		0.7000									
181.99	Acid Soluble Cd, Other (ppm)	3	2	0.8010	0.1725	0.7015		0.0092	0.0081	1.31%		0.0130	16.87%
190.00	Water Soluble Cl, Titrimetric (%)	11	11	0.6009	0.5590	0.5025	0.0552	0.3465	0.1306	68.95%	14.61	0.0153	4.44%
190.99	Water Soluble Cl, Other (%)	2	2	0.4200	0.0212								
191.00	Acid Soluble Cr, AA, test portion 2006.03 modified w/dual acid	1		14.70									
191.30	Acid Soluble Cr, ICP (ppm)	7	7	15.36	3.600	15.36		4.083	1.929	26.57%		0.5436	10.60%
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	5	5	21.78	8.350	21.78		8.350	4.668	38.34%		4.163	10.06%
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	2	2	17.18	3.438								
191.99	Acid Soluble Cr, Other (ppm)	3	2	18.76	2.151	18.14		2.634	2.328	14.52%		0.7520	10.34%
202.30	Acid Soluble Co, ICP (ppm)	5	5	1.446	1.026	1.446	1.4339	1.026	0.5734	70.92%	1.67	0.0933	15.13%
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	1		0.8575									
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	3	2	1.342	1.003	0.7627	1.2288	0.0083	0.0073	1.08%	0.02	0.0478	16.66%
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	1		0.1000									
202.99	Acid Soluble Co, Other (ppm)	4	3	12.10	13.30	9.467	3.8402	14.96	10.80	158.06%	9.08	3.764	11.41%
221.00	Acid Soluble Cu, AA, inorganic 965.09 (%)	2	1	0.0031	0.0027								
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	5	4	0.0043	0.0037	0.0029	0.0053	0.0023	0.0014	79.27%	1.02	0.0001	9.63%
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	3	3	0.0011	0.0003	0.0011	0.0051	0.0003	0.0002	27.65%	0.14	0.0001	11.15%
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	6	5	0.0023	0.0035	0.0028	0.0053	0.0038	0.0021	136.52%	1.66	0.0004	9.71%
221.99	Acid Soluble Cu, Other (%)	9	8	1.059	3.173	0.0011	0.0051	0.0005	0.0002	47.02%	0.24	0.0001	11.16%
241.00	Acid Soluble Fe, AA, inorganic 965.09 (%)	1		0.0475									
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	2	1	0.0323	0.0315								
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (%)	2	2	0.0562	0.0005								
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	4	4	0.1740	0.2229	0.1740	0.0224	0.2229	0.1393	128.15%	23.19	0.0271	5.20%
241.99	Acid Soluble Fe, Other (%)	4	4	0.0478	0.0021	0.0478	0.0098	0.0021	0.0013	4.35%	0.49	0.0029	6.32%
251.00	Acid Soluble Pb, AA, test portion 2006.03 modified w/dual acid	1		0.5000									
251.30	Acid Soluble Pb, ICP (ppm)	8	5	1.990	1.689	2.183		0.8396	0.4694	38.46%		0.0622	14.22%
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	5	4	2.397	0.6751	2.246		0.6754	0.4221	30.07%		0.4906	14.16%
251.34	Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm)	1		0.6000									
251.99	Acid Soluble Pb, Other (ppm)	3	2	2.499	1.322	1.749		0.3376	0.2984	19.31%		0.1295	14.71%
261.00	Acid Soluble Mn, AA, Mn2+ only (%)	1		0.0030									
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	2	1	0.0065	0.0050								
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	2	2	0.0153	0.0173								
261.99	Acid Soluble Mn, Other (%)	3	3	0.0030	0.0001	0.0030	0.0053	0.0001	0.0001	4.22%	0.06	0.0000	9.60%
281.00	Acid Soluble Hg, AA (ppm)	2	0	0.5000	0.0000								
281.30	Acid Soluble Hg, ICP (ppm)	3	0	0.4503	0.6943	0.0030		0.0001		4.22%		0.0000	22.00%
281.99	Acid Soluble Hg, Other (ppm)	5	3	0.4031	0.8927	0.0022		0.0007	0.0005	33.37%		0.0008	22.00%
289.30	Acid Soluble Mo, ICP (ppm)	5	3	0.5239	0.4321	0.8158	1.2447	0.2165	0.1562	26.53%	0.41	0.0155	16.49%
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	5	4	5.349	8.386	6.062	2.8185	9.507	5.942	156.85%	7.86	0.5572	12.20%

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289.34	Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm)	1		0.0000									
289.99	Acid Soluble Mo, Other (ppm)	3	0	34.52	56.72	6.062	2.8185	9.507		156.85%	7.86	0.0000	12.20%
291.30	Acid Soluble Ni, ICP (ppm)	7	6	3.533	1.105	3.162		0.6589	0.3362	20.84%		0.0738	13.45%
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	4	4	4.336	0.6337	4.336		0.6337	0.3961	14.62%		0.0530	12.83%
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	2	1	0.3486	0.2101								
291.99	Acid Soluble Ni, Other (ppm)	4	3	14.96	18.20	16.62		21.92	15.82	131.89%		5.295	10.48%
301.00	Acid Soluble Se, AA, test portion 2006.03 modified w/dual acid	1		0.5000									
301.30	Acid Soluble Se, ICP (ppm)	3	2	2.847	2.205	3.446		2.752	2.433	79.86%		0.1260	13.28%
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	2	1	4.446	4.930								
301.34	Acid Soluble Se, ICP, EPA 3050B/6010C (ppm)	2	1	1.072	0.0400								
301.99	Acid Soluble Se, Other (ppm)	4	1	5.375	5.935	3.446		2.752	3.440	79.86%		1.410	13.28%
311.00	Sodium, AA (%)	1		0.0755									
311.33	Sodium, ICP, test portion as in 2017.02 (%)	3	3	0.0870	0.0015	0.0870	0.0137	0.0015	0.0011	1.72%	0.26	0.0023	5.78%
311.99	Sodium, Other (%)	2	2	0.0933	0.0166								
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	2	2	0.0083	0.0004								
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	6	5	0.0083	0.0052	0.0079	0.0058	0.0058	0.0032	72.73%	2.32	0.0009	8.28%
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	2	2	0.0113	0.0033								
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	8	8	0.0178	0.0309	0.0080	0.0058	0.0040	0.0018	49.57%	1.59	0.0008	8.27%
321.99	Acid Soluble Zn, Other (%)	9	8	9.720	29.14	0.0080	0.0058	0.0018	0.0008	22.48%	0.72	0.0013	8.27%
325.30	Water Soluble Zn, ICP (%)	1		0.0015									
325.99	Water Soluble Zn, Other (%)	1		0.0010									
431.99	Soluble Si in nonliquids, Other (%)	1		0.0105									

The Method IA Ratio = 2.33 * Robust SD / 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 # 220511

Regular PT Scheme

Grade 21-7-14

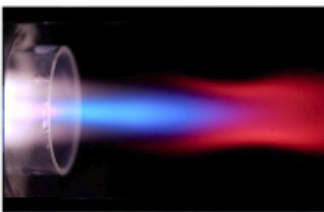
Method Precision Report

Issue Date : 06/30/2022

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
001.10	Ammoniacal N, Magnesium Oxide Method (%)	6	5	10.91	0.1802	0.1734	0.0692	0.1867	1.59%	0.63%	1.71%	2.699
001.99	Ammoniacal N, Other (%)	21	19	11.07	0.2502	0.2462	0.0633	0.2542	2.22%	0.57%	2.30%	4.019
002.99	Nitrate N, Other (%)	18	17	9.903	0.2606	0.2473	0.1164	0.2733	2.50%	1.18%	2.76%	2.347
010.60	Total N, Combustion (21%)	53	51	20.61	0.6569	0.6508	0.1266	0.6630	3.16%	0.61%	3.22%	5.238
010.99	Total N, Other (21%)	14	13	20.92	0.3446	0.3347	0.1162	0.3542	1.60%	0.56%	1.69%	3.049
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	13	11	7.050	0.0771	0.0714	0.0413	0.0825	1.01%	0.59%	1.17%	1.996
020.50	Total P2O5, ICP (%)	21	19	7.068	0.4450	0.4391	0.1022	0.4508	6.21%	1.45%	6.38%	4.411
020.99	Total P2O5, Other (%)	7	6	7.046	0.5798	0.4722	0.4758	0.6704	6.70%	6.75%	9.51%	1.409
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA E	9	8	6.821	0.4552	0.4542	0.0416	0.4561	6.66%	0.61%	6.69%	10.96
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (	9	9	6.551	0.6566	0.6550	0.0642	0.6581	10.00%	0.98%	10.05%	10.25
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (7%)	10	9	7.139	0.1646	0.1219	0.1564	0.1983	1.71%	2.19%	2.78%	1.268
050.00	Soluble K2O, STPB Oxalate (14%)	9	9	14.87	0.5263	0.5226	0.0876	0.5299	3.51%	0.59%	3.56%	6.050
050.50	Soluble K2O, ICP (Oxalate) (14%)	10	10	14.64	0.6144	0.5330	0.4320	0.6861	3.64%	2.95%	4.69%	1.588
050.52	Soluble K2O, ICP (Citrate-EDTA) (14%)	11	11	14.63	0.3153	0.2839	0.1941	0.3439	1.94%	1.33%	2.35%	1.772
050.99	Soluble K2O, Other (14%)	34	31	14.66	0.6678	0.6478	0.2292	0.6872	4.42%	1.56%	4.69%	2.998
121.99	Acid Soluble Mg, Other (%)	5	5	0.2314	0.0162	0.0088	0.0193	0.0212	3.80%	8.35%	9.17%	1.099
143.99	Elemental S, Other (%)	5	5	5.506	0.4024	0.4015	0.0390	0.4034	7.29%	0.71%	7.33%	10.33
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	6	6	5.208	0.2457	0.2441	0.0401	0.2473	4.69%	0.77%	4.75%	6.168
148.00	Total S, Combustion (5.1%)	7	7	5.227	0.2944	0.2825	0.1173	0.3058	5.40%	2.24%	5.85%	2.608
148.01	Total S, Gravimetric - sulfate and elemental (5.1%)	11	9	5.449	0.1787	0.1746	0.0538	0.1827	3.20%	0.99%	3.35%	3.396
148.07	Total S, ICP, test portion as in 2017.02 (5.1%)	18	16	5.280	0.3090	0.3000	0.1050	0.3178	5.68%	1.99%	6.02%	3.027
148.99	Total S, Other (5.1%)	16	16	5.328	0.2946	0.2896	0.0766	0.2996	5.44%	1.44%	5.62%	3.910
165.99	Acid Soluble B, Other (%)	6	5	0.0052	0.0031	0.0031	0.0005	0.0031	58.84%	9.22%	59.56%	6.459
181.30	Acid Soluble Cd, ICP (ppm)	8	5	0.5044	0.1508	0.1495	0.0271	0.1520	29.65%	5.38%	30.13%	5.598
190.00	Water Soluble Cl, Titrimetric (%)	11	10	0.4505	0.2659	0.2657	0.0161	0.2662	58.97%	3.57%	59.08%	16.56
191.30	Acid Soluble Cr, ICP (ppm)	7	7	15.36	3.600	3.581	0.5240	3.619	23.31%	3.41%	23.56%	6.907

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
221.99	Acid Soluble Cu, Other (%)	9	7	0.0012	0.0006	0.0006	0.0000	0.0006	52.02%	3.04%	52.11%	17.13
251.30	Acid Soluble Pb, ICP (ppm)	8	5	2.183	0.8396	0.8385	0.0620	0.8408	38.40%	2.84%	38.51%	13.56
291.30	Acid Soluble Ni, ICP (ppm)	7	6	3.171	0.5991	0.5971	0.0695	0.6012	18.83%	2.19%	18.96%	8.652
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	6	5	0.0079	0.0058	0.0057	0.0008	0.0058	72.40%	9.91%	73.07%	7.377
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	8	7	0.0070	0.0032	0.0032	0.0006	0.0032	45.57%	8.36%	46.33%	5.539
321.99	Acid Soluble Zn, Other (%)	9	7	0.0084	0.0012	0.0012	0.0005	0.0013	14.31%	5.58%	15.36%	2.754

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



Method PT For All Labs

Magruder Fertilizer Proficiency Testing Program

Methods: 131

Sample # 220511

Regular PT Scheme

Labs Reporting: 86

Grade 21-7-14

Lab Values

Issue Date : 06/30/2022

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	R-bar				
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0451	10.66	0.0500	11.01	0.3306	0.1563	6	-0.95	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0444	10.85	0.1000	11.01	0.3306	0.1563	6	-0.42	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0117	10.89	0.1880	11.01	0.3306	0.1563	6	-0.30	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0547	11.00	0.0000	11.01	0.3306	0.1563	6	-0.02	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0452	11.14	0.0000	11.01	0.3306	0.1563	6	0.36	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0498	11.60	0.6000	11.01	0.3306	0.1563	6	1.60	NA	0
001.99	Ammoniacal N, Other (%)	0220	10.50	0.0100	11.07	0.2352	0.0855	20	-2.46	NA	0
001.99	Ammoniacal N, Other (%)	0549	10.81	0.2000	11.07	0.2352	0.0855	20	-1.12	NA	0
001.99	Ammoniacal N, Other (%)	0423	10.82	0.0600	11.07	0.2352	0.0855	20	-1.07	NA	0
001.99	Ammoniacal N, Other (%)	0524	10.86	0.1050	11.07	0.2352	0.0855	20	-0.89	NA	0
001.99	Ammoniacal N, Other (%)	0553	10.90	0.2000	11.07	0.2352	0.0855	20	-0.73	NA	0
001.99	Ammoniacal N, Other (%)	0513	10.92	0.0100	11.07	0.2352	0.0855	20	-0.67	NA	0
001.99	Ammoniacal N, Other (%)	0394	10.98	0.0640	11.07	0.2352	0.0855	20	-0.38	NA	0
001.99	Ammoniacal N, Other (%)	0602	11.00	0.0800	11.07	0.2352	0.0855	20	-0.31	NA	0
001.99	Ammoniacal N, Other (%)	0027	11.04	0.0600	11.07	0.2352	0.0855	20	-0.14	NA	0
001.99	Ammoniacal N, Other (%)	0255	11.05	0.3500	11.07	0.2352	0.0855	20	-0.12	NA	0
001.99	Ammoniacal N, Other (%)	0572	11.07	0.0690	11.07	0.2352	0.0855	20	0.00	NA	0
001.99	Ammoniacal N, Other (%)	0405	11.08	0.0800	11.07	0.2352	0.0855	20	0.03	NA	0
001.99	Ammoniacal N, Other (%)	0538	11.12	0.0100	11.07	0.2352	0.0855	20	0.18	NA	0
001.99	Ammoniacal N, Other (%)	0533	11.14	0.1100	11.07	0.2352	0.0855	20	0.27	NA	0
001.99	Ammoniacal N, Other (%)	0575	11.14	0.0200	11.07	0.2352	0.0855	20	0.29	NA	0
001.99	Ammoniacal N, Other (%)	0605	11.27	0.0500	11.07	0.2352	0.0855	20	0.82	NA	0
001.99	Ammoniacal N, Other (%)	0559	11.34	0.0100	11.07	0.2352	0.0855	20	1.12	NA	0
001.99	Ammoniacal N, Other (%)	0563	11.38	0.0900	11.07	0.2352	0.0855	20	1.29	NA	0
001.99	Ammoniacal N, Other (%)	0558	11.41	0.0600	11.07	0.2352	0.0855	20	1.44	NA	0
001.99	Ammoniacal N, Other (%)	0510	11.55	0.0712	11.07	0.2352	0.0855	20	2.02	NA	0
001.99	Ammoniacal N, Other (%)	0368	11.41	0.5910	11.07	0.2352	0.0855	20	1.42	NA	1
002.20	Nitrate N, Jones Modified (%)	0029	9.715	0.0100				2			0
002.20	Nitrate N, Jones Modified (%)	0563	9.825	0.0100				2			0
002.99	Nitrate N, Other (%)	0553	8.640	0.4400	9.875	0.3132	0.1278	18	-3.94	NA	0
002.99	Nitrate N, Other (%)	0029	9.400	0.1800	9.875	0.3132	0.1278	18	-1.52	NA	0
002.99	Nitrate N, Other (%)	0452	9.530	0.1400	9.875	0.3132	0.1278	18	-1.10	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	R-bar				
002.99	Nitrate N, Other (%)	0547	9.550	0.0200	9.875	0.3132	0.1278	18	-1.04	NA	0
002.99	Nitrate N, Other (%)	0549	9.660	0.2000	9.875	0.3132	0.1278	18	-0.69	NA	0
002.99	Nitrate N, Other (%)	0498	9.800	0.4000	9.875	0.3132	0.1278	18	-0.24	NA	0
002.99	Nitrate N, Other (%)	0368	9.824	0.4160	9.875	0.3132	0.1278	18	-0.16	NA	0
002.99	Nitrate N, Other (%)	0538	9.890	0.0400	9.875	0.3132	0.1278	18	0.05	NA	0
002.99	Nitrate N, Other (%)	0575	9.890	0.0000	9.875	0.3132	0.1278	18	0.05	NA	0
002.99	Nitrate N, Other (%)	0605	9.915	0.0300	9.875	0.3132	0.1278	18	0.13	NA	0
002.99	Nitrate N, Other (%)	0444	9.950	0.1000	9.875	0.3132	0.1278	18	0.24	NA	0
002.99	Nitrate N, Other (%)	0423	9.990	0.0600	9.875	0.3132	0.1278	18	0.37	NA	0
002.99	Nitrate N, Other (%)	0394	10.000	0.0250	9.875	0.3132	0.1278	18	0.40	NA	0
002.99	Nitrate N, Other (%)	0558	10.08	0.0700	9.875	0.3132	0.1278	18	0.64	NA	0
002.99	Nitrate N, Other (%)	0513	10.11	0.0200	9.875	0.3132	0.1278	18	0.75	NA	0
002.99	Nitrate N, Other (%)	0027	10.14	0.1100	9.875	0.3132	0.1278	18	0.83	NA	0
002.99	Nitrate N, Other (%)	0559	10.27	0.0200	9.875	0.3132	0.1278	18	1.26	NA	0
002.99	Nitrate N, Other (%)	0220	10.37	0.0300	9.875	0.3132	0.1278	18	1.57	NA	0
005.99	Urea N, Other (%)	0524	0.0201	0.0399				1			0
009.10	Ammoniacal Plus Nitrate N, Devarda (%)	0587	21.11	0.0550				1			0
010.11	Total N, Modified Comprehensive (21%)	0510	21.17	0.0275				1			0
010.12	Total N, Salicylic (21%)	0602	20.71	0.1400	20.94	0.3128	0.4525	4	-0.73		0
010.12	Total N, Salicylic (21%)	0481	20.80	0.2700	20.94	0.3128	0.4525	4	-0.46		0
010.12	Total N, Salicylic (21%)	0580	20.85	0.4000	20.94	0.3128	0.4525	4	-0.28		0
010.12	Total N, Salicylic (21%)	0498	21.40	1.000	20.94	0.3128	0.4525	4	1.47		0
010.60	Total N, Combustion (21%)	0185	18.96	0.0500	20.65	0.5601	0.1430	53	-3.02	Low	0
010.60	Total N, Combustion (21%)	0588	19.02	0.1200	20.65	0.5601	0.1430	53	-2.90	Low	0
010.60	Total N, Combustion (21%)	0073	19.18	0.1500	20.65	0.5601	0.1430	53	-2.63	Low	0
010.60	Total N, Combustion (21%)	0360	19.44	0.3500	20.65	0.5601	0.1430	53	-2.16	Low	0
010.60	Total N, Combustion (21%)	0234	19.55	0.1800	20.65	0.5601	0.1430	53	-1.96	Low	0
010.60	Total N, Combustion (21%)	0324	19.65	0.3000	20.65	0.5601	0.1430	53	-1.78	Low	0
010.60	Total N, Combustion (21%)	0422	19.91	0.0100	20.65	0.5601	0.1430	53	-1.32	Low	0
010.60	Total N, Combustion (21%)	0095	19.96	0.4100	20.65	0.5601	0.1430	53	-1.23	OK	0
010.60	Total N, Combustion (21%)	0086	19.96	0.5710	20.65	0.5601	0.1430	53	-1.23	OK	0
010.60	Total N, Combustion (21%)	0018	20.05	0.1000	20.65	0.5601	0.1430	53	-1.06	OK	0
010.60	Total N, Combustion (21%)	0035	20.20	0.2000	20.65	0.5601	0.1430	53	-0.80	OK	0
010.60	Total N, Combustion (21%)	0042	20.20	0.2000	20.65	0.5601	0.1430	53	-0.80	OK	0
010.60	Total N, Combustion (21%)	0102	20.27	0.0200	20.65	0.5601	0.1430	53	-0.67	OK	0
010.60	Total N, Combustion (21%)	0542	20.28	0.2390	20.65	0.5601	0.1430	53	-0.65	OK	0
010.60	Total N, Combustion (21%)	0307	20.35	0.5000	20.65	0.5601	0.1430	53	-0.53	OK	0
010.60	Total N, Combustion (21%)	0292	20.39	0.0000	20.65	0.5601	0.1430	53	-0.46	OK	0
010.60	Total N, Combustion (21%)	0356	20.47	0.0560	20.65	0.5601	0.1430	53	-0.32	OK	0
010.60	Total N, Combustion (21%)	0131	20.49	0.0200	20.65	0.5601	0.1430	53	-0.29	OK	0
010.60	Total N, Combustion (21%)	0106	20.54	0.0700	20.65	0.5601	0.1430	53	-0.20	OK	0
010.60	Total N, Combustion (21%)	0472	20.56	0.0100	20.65	0.5601	0.1430	53	-0.16	OK	0
010.60	Total N, Combustion (21%)	0481	20.56	0.0600	20.65	0.5601	0.1430	53	-0.15	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	R-bar				
010.60	Total N, Combustion (21%)	0451	20.57	0.4900	20.65	0.5601	0.1430	53	-0.14	OK	0
010.60	Total N, Combustion (21%)	0029	20.61	0.0200	20.65	0.5601	0.1430	53	-0.06	OK	0
010.60	Total N, Combustion (21%)	0136	20.67	0.2900	20.65	0.5601	0.1430	53	0.03	OK	0
010.60	Total N, Combustion (21%)	0561	20.67	0.0100	20.65	0.5601	0.1430	53	0.03	OK	0
010.60	Total N, Combustion (21%)	0389	20.67	0.0600	20.65	0.5601	0.1430	53	0.04	OK	0
010.60	Total N, Combustion (21%)	0027	20.75	0.0100	20.65	0.5601	0.1430	53	0.18	OK	0
010.60	Total N, Combustion (21%)	0231	20.76	0.0100	20.65	0.5601	0.1430	53	0.19	OK	0
010.60	Total N, Combustion (21%)	0055	20.80	0.0200	20.65	0.5601	0.1430	53	0.28	OK	0
010.60	Total N, Combustion (21%)	0444	20.80	0.2000	20.65	0.5601	0.1430	53	0.28	OK	0
010.60	Total N, Combustion (21%)	0034	20.84	0.0700	20.65	0.5601	0.1430	53	0.34	OK	0
010.60	Total N, Combustion (21%)	0260	20.85	0.1000	20.65	0.5601	0.1430	53	0.36	OK	0
010.60	Total N, Combustion (21%)	0390	20.85	0.0890	20.65	0.5601	0.1430	53	0.37	OK	0
010.60	Total N, Combustion (21%)	0233	20.89	0.0900	20.65	0.5601	0.1430	53	0.43	OK	0
010.60	Total N, Combustion (21%)	0523	20.89	0.0700	20.65	0.5601	0.1430	53	0.43	OK	0
010.60	Total N, Combustion (21%)	0169	20.89	0.0200	20.65	0.5601	0.1430	53	0.44	OK	0
010.60	Total N, Combustion (21%)	0040	20.90	0.2000	20.65	0.5601	0.1430	53	0.45	OK	0
010.60	Total N, Combustion (21%)	0230	20.90	0.0000	20.65	0.5601	0.1430	53	0.45	OK	0
010.60	Total N, Combustion (21%)	0043	20.92	0.0600	20.65	0.5601	0.1430	53	0.49	OK	0
010.60	Total N, Combustion (21%)	0494	20.95	0.1500	20.65	0.5601	0.1430	53	0.53	OK	0
010.60	Total N, Combustion (21%)	0452	20.98	0.1500	20.65	0.5601	0.1430	53	0.59	OK	0
010.60	Total N, Combustion (21%)	0049	21.01	0.3328	20.65	0.5601	0.1430	53	0.64	OK	0
010.60	Total N, Combustion (21%)	0405	21.02	0.0200	20.65	0.5601	0.1430	53	0.67	OK	0
010.60	Total N, Combustion (21%)	0220	21.12	0.0700	20.65	0.5601	0.1430	53	0.84	OK	0
010.60	Total N, Combustion (21%)	0325	21.12	0.2900	20.65	0.5601	0.1430	53	0.84	OK	0
010.60	Total N, Combustion (21%)	0177	21.20	0.0330	20.65	0.5601	0.1430	53	0.98	OK	0
010.60	Total N, Combustion (21%)	0023	21.20	0.0990	20.65	0.5601	0.1430	53	1.00	OK	0
010.60	Total N, Combustion (21%)	0354	21.25	0.1000	20.65	0.5601	0.1430	53	1.08	OK	0
010.60	Total N, Combustion (21%)	0423	21.28	0.1300	20.65	0.5601	0.1430	53	1.12	OK	0
010.60	Total N, Combustion (21%)	0527	21.52	0.0320	20.65	0.5601	0.1430	53	1.57	High	0
010.60	Total N, Combustion (21%)	0368	21.98	0.1970	20.65	0.5601	0.1430	53	2.38	High	0
010.60	Total N, Combustion (21%)	0255	22.27	0.0020	20.65	0.5601	0.1430	53	2.89	High	0
010.60	Total N, Combustion (21%)	0443	22.44	0.5500	20.65	0.5601	0.1430	53	3.19	High	0
010.99	Total N, Other (21%)	0577	20.38	0.3500	20.91	0.3643	0.1291	13	-1.46	OK	0
010.99	Total N, Other (21%)	0476	20.46	0.0814	20.91	0.3643	0.1291	13	-1.24	OK	0
010.99	Total N, Other (21%)	0524	20.50	0.1938	20.91	0.3643	0.1291	13	-1.11	OK	0
010.99	Total N, Other (21%)	0602	20.61	0.2200	20.91	0.3643	0.1291	13	-0.82	OK	0
010.99	Total N, Other (21%)	0575	20.97	0.1000	20.91	0.3643	0.1291	13	0.17	OK	0
010.99	Total N, Other (21%)	0394	20.98	0.0330	20.91	0.3643	0.1291	13	0.20	OK	0
010.99	Total N, Other (21%)	0556	21.00	0.2000	20.91	0.3643	0.1291	13	0.25	OK	0
010.99	Total N, Other (21%)	0538	21.01	0.0400	20.91	0.3643	0.1291	13	0.28	OK	0
010.99	Total N, Other (21%)	0513	21.03	0.0100	20.91	0.3643	0.1291	13	0.32	OK	0
010.99	Total N, Other (21%)	0563	21.11	0.1300	20.91	0.3643	0.1291	13	0.54	OK	0
010.99	Total N, Other (21%)	0518	21.13	0.2500	20.91	0.3643	0.1291	13	0.60	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	R-bar				
010.99	Total N, Other (21%)	0605	21.18	0.0600	20.91	0.3643	0.1291	13	0.75	OK	0
010.99	Total N, Other (21%)	0559	21.61	0.0100	20.91	0.3643	0.1291	13	1.92	OK	0
010.99	Total N, Other (21%)	0558	21.99	0.8700	20.91	0.3643	0.1291	13	2.96	High	1
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0481	6.795	0.0500	7.045	0.0989	0.0581	13	-2.53	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0231	6.925	0.0300	7.045	0.0989	0.0581	13	-1.22	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0510	6.976	0.0163	7.045	0.0989	0.0581	13	-0.71	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0405	6.980	0.0000	7.045	0.0989	0.0581	13	-0.66	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0324	7.020	0.1200	7.045	0.0989	0.0581	13	-0.26	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0602	7.030	0.1000	7.045	0.0989	0.0581	13	-0.16	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0394	7.052	0.0840	7.045	0.0989	0.0581	13	0.07	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0455	7.055	0.0100	7.045	0.0989	0.0581	13	0.10	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0356	7.073	0.0150	7.045	0.0989	0.0581	13	0.27	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0580	7.120	0.0600	7.045	0.0989	0.0581	13	0.75	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0292	7.125	0.0300	7.045	0.0989	0.0581	13	0.80	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0563	7.145	0.2300	7.045	0.0989	0.0581	13	1.01	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0561	7.195	0.0100	7.045	0.0989	0.0581	13	1.51	NA	0
020.40	Total P2O5, Automated (%)	0035	6.400	0.0000				1			0
020.50	Total P2O5, ICP (%)	0422	6.179	0.1123	7.028	0.3922	0.1441	20	-2.17	NA	0
020.50	Total P2O5, ICP (%)	0389	6.510	0.0200	7.028	0.3922	0.1441	20	-1.32	NA	0
020.50	Total P2O5, ICP (%)	0542	6.669	0.2080	7.028	0.3922	0.1441	20	-0.92	NA	0
020.50	Total P2O5, ICP (%)	0390	6.680	0.5600	7.028	0.3922	0.1441	20	-0.89	NA	0
020.50	Total P2O5, ICP (%)	0472	6.715	0.0100	7.028	0.3922	0.1441	20	-0.80	NA	0
020.50	Total P2O5, ICP (%)	0423	6.845	0.0300	7.028	0.3922	0.1441	20	-0.47	NA	0
020.50	Total P2O5, ICP (%)	0444	6.855	0.0700	7.028	0.3922	0.1441	20	-0.44	NA	0
020.50	Total P2O5, ICP (%)	0433	6.885	0.0700	7.028	0.3922	0.1441	20	-0.37	NA	0
020.50	Total P2O5, ICP (%)	0260	6.905	0.1300	7.028	0.3922	0.1441	20	-0.31	NA	0
020.50	Total P2O5, ICP (%)	0451	6.986	0.1960	7.028	0.3922	0.1441	20	-0.11	NA	0
020.50	Total P2O5, ICP (%)	0042	7.050	0.1000	7.028	0.3922	0.1441	20	0.06	NA	0
020.50	Total P2O5, ICP (%)	0524	7.069	0.2934	7.028	0.3922	0.1441	20	0.10	NA	0
020.50	Total P2O5, ICP (%)	0527	7.080	0.1022	7.028	0.3922	0.1441	20	0.13	NA	0
020.50	Total P2O5, ICP (%)	0307	7.205	0.1900	7.028	0.3922	0.1441	20	0.45	NA	0
020.50	Total P2O5, ICP (%)	0605	7.220	0.2400	7.028	0.3922	0.1441	20	0.49	NA	0
020.50	Total P2O5, ICP (%)	0234	7.310	0.0600	7.028	0.3922	0.1441	20	0.72	NA	0
020.50	Total P2O5, ICP (%)	0402	7.445	0.0970	7.028	0.3922	0.1441	20	1.06	NA	0
020.50	Total P2O5, ICP (%)	0169	7.465	0.0500	7.028	0.3922	0.1441	20	1.11	NA	0
020.50	Total P2O5, ICP (%)	0368	7.803	0.1658	7.028	0.3922	0.1441	20	1.98	NA	0
020.50	Total P2O5, ICP (%)	0255	8.106	0.1770	7.028	0.3922	0.1441	20	2.75	NA	0
020.50	Total P2O5, ICP (%)	0523	8.700	0.8000	7.028	0.3922	0.1441	20	4.26	NA	1
020.99	Total P2O5, Other (%)	0572	6.458	0.1180	7.273	0.9076	0.4512	7	-0.81	NA	0
020.99	Total P2O5, Other (%)	0476	6.741	0.0169	7.273	0.9076	0.4512	7	-0.53	NA	0
020.99	Total P2O5, Other (%)	0587	6.940	0.2600	7.273	0.9076	0.4512	7	-0.33	NA	0
020.99	Total P2O5, Other (%)	0559	6.965	0.0100	7.273	0.9076	0.4512	7	-0.31	NA	0
020.99	Total P2O5, Other (%)	0513	7.020	0.0200	7.273	0.9076	0.4512	7	-0.25	NA	0

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020.99	Total P2O5, Other (%)	0515	8.152	1.623	7.273	0.9076	0.4512	7	0.88	NA	0
020.99	Total P2O5, Other (%)	0443	10.98	1.110	7.273	0.9076	0.4512	7	3.69	NA	0
030.10	Citrate Insoluble P2O5, Gravimetric Quinolinium MolybdoP (%)	0444	6.760	0.0000				1			0
030.20	Citrate Insoluble P2O5, Spectrophotometric MolybdovanadoP (%)	0405	0.0100	0.0000				1			0
040.20	Indirect Available P2O5, Spectrophotometric (7%)	0602	6.860	0.1000				1			0
040.99	Indirect Available P2O5, Other (7%)	0405	6.970	0.0000				1			0
041.10	Direct Available P2O5, Gravimetric Quinolinium (7%)	0494	6.945	0.2500	7.253	0.4543	0.1354	3	-0.68		0
041.10	Direct Available P2O5, Gravimetric Quinolinium (7%)	0177	7.040	0.0261	7.253	0.4543	0.1354	3	-0.47		0
041.10	Direct Available P2O5, Gravimetric Quinolinium (7%)	0102	7.775	0.1300	7.253	0.4543	0.1354	3	1.15		0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA	0055	5.765	0.0900	6.918	0.2480	0.0513	8	-4.25	Low	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA	0049	6.620	0.1000	6.918	0.2480	0.0513	8	-1.10	OK	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA	0513	6.925	0.0300	6.918	0.2480	0.0513	8	0.02	OK	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA	0405	6.935	0.0500	6.918	0.2480	0.0513	8	0.06	OK	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA	0485	7.050	0.0400	6.918	0.2480	0.0513	8	0.49	OK	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA	0220	7.060	0.0600	6.918	0.2480	0.0513	8	0.52	OK	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA	0073	7.105	0.0100	6.918	0.2480	0.0513	8	0.69	OK	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA	0185	7.105	0.0300	6.918	0.2480	0.0513	8	0.69	OK	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA	0095	6.005	0.4100	6.918	0.2480	0.0513	8	-3.37	Low	1
041.20	Direct Available P2O5, Spectrophotometric (7%)	0553	6.515	0.1900	6.918	0.2327	0.1200	5	-1.73		0
041.20	Direct Available P2O5, Spectrophotometric (7%)	0498	6.950	0.3000	6.918	0.2327	0.1200	5	0.14		0
041.20	Direct Available P2O5, Spectrophotometric (7%)	0027	6.995	0.0100	6.918	0.2327	0.1200	5	0.33		0
041.20	Direct Available P2O5, Spectrophotometric (7%)	0452	7.020	0.0200	6.918	0.2327	0.1200	5	0.44		0
041.20	Direct Available P2O5, Spectrophotometric (7%)	0558	7.110	0.0800	6.918	0.2327	0.1200	5	0.83		0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext.	0230	5.550	0.1000	6.551	0.7445	0.0619	9	-1.24	Low	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext.	0177	5.673	0.0049	6.551	0.7445	0.0619	9	-1.09	Low	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext.	0472	5.875	0.1700	6.551	0.7445	0.0619	9	-0.84	Low	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext.	0405	6.815	0.0100	6.551	0.7445	0.0619	9	0.33	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext.	0106	6.850	0.1800	6.551	0.7445	0.0619	9	0.37	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext.	0231	6.890	0.0400	6.551	0.7445	0.0619	9	0.42	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext.	0055	7.015	0.0300	6.551	0.7445	0.0619	9	0.58	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext.	0394	7.035	0.0120	6.551	0.7445	0.0619	9	0.60	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext.	0354	7.255	0.0100	6.551	0.7445	0.0619	9	0.87	High	0
041.40	Direct Available P2O5, Automated, Citrate-EDTA Ext. (7%)	0018	7.095	0.0100				2			0
041.40	Direct Available P2O5, Automated, Citrate-EDTA Ext. (7%)	0029	7.105	0.0300				2			0
041.50	Direct Available P2O5, ICP (7%)	0325	6.950	0.3000	7.185	0.2325	0.2167	3	-1.01		0
041.50	Direct Available P2O5, ICP (7%)	0605	7.190	0.0200	7.185	0.2325	0.2167	3	0.02		0
041.50	Direct Available P2O5, ICP (7%)	0131	7.415	0.3300	7.185	0.2325	0.2167	3	0.99		0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (7%)	0423	6.395	0.0500	7.102	0.2195	0.1477	10	-3.00	Low	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (7%)	0360	6.945	0.0300	7.102	0.2195	0.1477	10	-0.67	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (7%)	0117	6.976	0.0793	7.102	0.2195	0.1477	10	-0.53	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (7%)	0233	6.981	0.0480	7.102	0.2195	0.1477	10	-0.51	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (7%)	0025	6.995	0.2100	7.102	0.2195	0.1477	10	-0.45	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (7%)	0023	7.195	0.0500	7.102	0.2195	0.1477	10	0.39	OK	0

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041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (7%)	0043	7.225	0.0500	7.102	0.2195	0.1477	10	0.52	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (7%)	0136	7.250	0.1000	7.102	0.2195	0.1477	10	0.63	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (7%)	0040	7.300	0.4000	7.102	0.2195	0.1477	10	0.84	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (7%)	0494	7.380	0.4600	7.102	0.2195	0.1477	10	1.18	OK	0
041.99	Direct Available P2O5, Other (7%)	0575	6.915	0.0100	7.435	0.6468	0.0700	5	-0.80		0
041.99	Direct Available P2O5, Other (7%)	0549	7.195	0.0100	7.435	0.6468	0.0700	5	-0.37		0
041.99	Direct Available P2O5, Other (7%)	0518	7.250	0.2000	7.435	0.6468	0.0700	5	-0.29		0
041.99	Direct Available P2O5, Other (7%)	0538	7.250	0.0800	7.435	0.6468	0.0700	5	-0.29		0
041.99	Direct Available P2O5, Other (7%)	0533	8.565	0.0500	7.435	0.6468	0.0700	5	1.75		0
042.99	Water Soluble OrthoP As P2O5, Other (%)	0577	5.540	0.1400				1			0
048.20	Water Soluble P2O5, Spectrophotometric (%)	0472	4.675	0.0300				1			0
048.99	Water Soluble P2O5, Other (%)	0572	4.534	0.2290	5.558	1.055	0.1673	4	-0.97		0
048.99	Water Soluble P2O5, Other (%)	0513	5.100	0.0200	5.558	1.055	0.1673	4	-0.43		0
048.99	Water Soluble P2O5, Other (%)	0444	5.600	0.2200	5.558	1.055	0.1673	4	0.04		0
048.99	Water Soluble P2O5, Other (%)	0556	7.000	0.2000	5.558	1.055	0.1673	4	1.37		0
050.00	Soluble K2O, STPB Oxalate (14%)	0055	14.00	0.0300	14.87	0.5968	0.1011	9	-1.36	OK	0
050.00	Soluble K2O, STPB Oxalate (14%)	0231	14.34	0.0500	14.87	0.5968	0.1011	9	-0.83	OK	0
050.00	Soluble K2O, STPB Oxalate (14%)	0049	14.51	0.1700	14.87	0.5968	0.1011	9	-0.57	OK	0
050.00	Soluble K2O, STPB Oxalate (14%)	0494	14.73	0.2200	14.87	0.5968	0.1011	9	-0.22	OK	0
050.00	Soluble K2O, STPB Oxalate (14%)	0220	15.00	0.0500	14.87	0.5968	0.1011	9	0.19	OK	0
050.00	Soluble K2O, STPB Oxalate (14%)	0102	15.05	0.0900	14.87	0.5968	0.1011	9	0.27	OK	0
050.00	Soluble K2O, STPB Oxalate (14%)	0602	15.30	0.2000	14.87	0.5968	0.1011	9	0.66	OK	0
050.00	Soluble K2O, STPB Oxalate (14%)	0405	15.32	0.0200	14.87	0.5968	0.1011	9	0.69	OK	0
050.00	Soluble K2O, STPB Oxalate (14%)	0114	15.63	0.0800	14.87	0.5968	0.1011	9	1.17	OK	0
050.30	Soluble K2O, AA (Oxalate) (14%)	0356	14.54	0.1110	15.23	1.141	0.4203	3	-0.60		0
050.30	Soluble K2O, AA (Oxalate) (14%)	0040	14.60	0.2000	15.23	1.141	0.4203	3	-0.55		0
050.30	Soluble K2O, AA (Oxalate) (14%)	0073	16.55	0.9500	15.23	1.141	0.4203	3	1.15		0
050.32	Soluble K2O, AA (Citrate-EDTA) (14%)	0472	13.98	0.0000				1			0
050.50	Soluble K2O, ICP (Oxalate) (14%)	0390	13.55	0.1000	14.63	0.6121	0.4683	10	-1.64	Low	0
050.50	Soluble K2O, ICP (Oxalate) (14%)	0106	14.01	0.4400	14.63	0.6121	0.4683	10	-0.94	OK	0
050.50	Soluble K2O, ICP (Oxalate) (14%)	0055	14.45	0.3000	14.63	0.6121	0.4683	10	-0.28	OK	0
050.50	Soluble K2O, ICP (Oxalate) (14%)	0307	14.50	0.6000	14.63	0.6121	0.4683	10	-0.20	OK	0
050.50	Soluble K2O, ICP (Oxalate) (14%)	0169	14.65	0.1000	14.63	0.6121	0.4683	10	0.03	OK	0
050.50	Soluble K2O, ICP (Oxalate) (14%)	0230	14.65	0.5000	14.63	0.6121	0.4683	10	0.03	OK	0
050.50	Soluble K2O, ICP (Oxalate) (14%)	0292	14.72	0.1700	14.63	0.6121	0.4683	10	0.13	OK	0
050.50	Soluble K2O, ICP (Oxalate) (14%)	0324	14.75	1.300	14.63	0.6121	0.4683	10	0.18	OK	0
050.50	Soluble K2O, ICP (Oxalate) (14%)	0444	15.33	1.040	14.63	0.6121	0.4683	10	1.06	OK	0
050.50	Soluble K2O, ICP (Oxalate) (14%)	0422	15.76	0.1326	14.63	0.6121	0.4683	10	1.72	High	0
050.51	Soluble K2O, ICP (Citrate) (14%)	0131	8.940	0.0200	12.72	3.286	0.0724	3	-1.15		0
050.51	Soluble K2O, ICP (Citrate) (14%)	0368	14.38	0.1472	12.72	3.286	0.0724	3	0.50		0
050.51	Soluble K2O, ICP (Citrate) (14%)	0452	14.86	0.0500	12.72	3.286	0.0724	3	0.65		0
050.52	Soluble K2O, ICP (Citrate-EDTA) (14%)	0043	13.99	0.1100	14.64	0.2891	0.2290	11	-2.12	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (14%)	0485	14.30	0.2000	14.64	0.2891	0.2290	11	-1.10	OK	0

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050.52	Soluble K2O, ICP (Citrate-EDTA) (14%)	0233	14.48	0.4200	14.64	0.2891	0.2290	11	-0.51	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (14%)	0136	14.60	0.0700	14.64	0.2891	0.2290	11	-0.14	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (14%)	0360	14.61	0.2900	14.64	0.2891	0.2290	11	-0.11	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (14%)	0423	14.64	0.1300	14.64	0.2891	0.2290	11	-0.01	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (14%)	0025	14.65	0.3000	14.64	0.2891	0.2290	11	0.04	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (14%)	0354	14.70	0.0000	14.64	0.2891	0.2290	11	0.20	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (14%)	0117	14.88	0.1186	14.64	0.2891	0.2290	11	0.79	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (14%)	0023	14.90	0.4000	14.64	0.2891	0.2290	11	0.85	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (14%)	0494	15.18	0.4800	14.64	0.2891	0.2290	11	1.75	OK	0
050.60	Soluble K2O, Flame Photometric (Oxalate) (14%)	0510	13.89	0.0100	14.37	0.7638	0.0800	3	-0.62		0
050.60	Soluble K2O, Flame Photometric (Oxalate) (14%)	0443	13.97	0.1700	14.37	0.7638	0.0800	3	-0.53		0
050.60	Soluble K2O, Flame Photometric (Oxalate) (14%)	0580	15.25	0.0600	14.37	0.7638	0.0800	3	1.15		0
050.61	Soluble K2O, Flame Photometric (Citrate) (14%)	0035	14.55	0.7000				1			0
050.62	Soluble K2O, Flame Photometric (Citrate-EDTA) (14%)	0018	14.55	0.1000	14.99	0.3017	0.2036	5	-1.44		0
050.62	Soluble K2O, Flame Photometric (Citrate-EDTA) (14%)	0095	14.97	0.8500	14.99	0.3017	0.2036	5	-0.07		0
050.62	Soluble K2O, Flame Photometric (Citrate-EDTA) (14%)	0513	14.98	0.0400	14.99	0.3017	0.2036	5	-0.02		0
050.62	Soluble K2O, Flame Photometric (Citrate-EDTA) (14%)	0394	15.03	0.0280	14.99	0.3017	0.2036	5	0.16		0
050.62	Soluble K2O, Flame Photometric (Citrate-EDTA) (14%)	0029	15.40	0.0000	14.99	0.3017	0.2036	5	1.37		0
050.99	Soluble K2O, Other (14%)	0515	11.80	1.369	14.62	0.6890	0.2851	33	-4.09	Low	0
050.99	Soluble K2O, Other (14%)	0451	13.58	0.6300	14.62	0.6890	0.2851	33	-1.51	Low	0
050.99	Soluble K2O, Other (14%)	0549	13.68	0.1300	14.62	0.6890	0.2851	33	-1.37	Low	0
050.99	Soluble K2O, Other (14%)	0533	13.98	0.1400	14.62	0.6890	0.2851	33	-0.92	OK	0
050.99	Soluble K2O, Other (14%)	0538	14.00	0.2000	14.62	0.6890	0.2851	33	-0.89	OK	0
050.99	Soluble K2O, Other (14%)	0556	14.00	0.2000	14.62	0.6890	0.2851	33	-0.89	OK	0
050.99	Soluble K2O, Other (14%)	0575	14.04	0.0300	14.62	0.6890	0.2851	33	-0.84	OK	0
050.99	Soluble K2O, Other (14%)	0559	14.13	0.0100	14.62	0.6890	0.2851	33	-0.71	OK	0
050.99	Soluble K2O, Other (14%)	0558	14.19	0.0400	14.62	0.6890	0.2851	33	-0.62	OK	0
050.99	Soluble K2O, Other (14%)	0481	14.20	0.4000	14.62	0.6890	0.2851	33	-0.60	OK	0
050.99	Soluble K2O, Other (14%)	0433	14.27	0.4200	14.62	0.6890	0.2851	33	-0.50	OK	0
050.99	Soluble K2O, Other (14%)	0587	14.30	0.1400	14.62	0.6890	0.2851	33	-0.46	OK	0
050.99	Soluble K2O, Other (14%)	0260	14.35	0.7000	14.62	0.6890	0.2851	33	-0.39	OK	0
050.99	Soluble K2O, Other (14%)	0605	14.38	0.1100	14.62	0.6890	0.2851	33	-0.35	OK	0
050.99	Soluble K2O, Other (14%)	0255	14.49	0.0840	14.62	0.6890	0.2851	33	-0.18	OK	0
050.99	Soluble K2O, Other (14%)	0325	14.50	0.0000	14.62	0.6890	0.2851	33	-0.17	OK	0
050.99	Soluble K2O, Other (14%)	0524	14.50	0.0664	14.62	0.6890	0.2851	33	-0.17	OK	0
050.99	Soluble K2O, Other (14%)	0476	14.51	0.2357	14.62	0.6890	0.2851	33	-0.16	OK	0
050.99	Soluble K2O, Other (14%)	0389	14.65	0.2200	14.62	0.6890	0.2851	33	0.05	OK	0
050.99	Soluble K2O, Other (14%)	0527	14.87	0.0170	14.62	0.6890	0.2851	33	0.36	OK	0
050.99	Soluble K2O, Other (14%)	0177	14.92	0.0653	14.62	0.6890	0.2851	33	0.44	OK	0
050.99	Soluble K2O, Other (14%)	0027	14.92	0.1600	14.62	0.6890	0.2851	33	0.44	OK	0
050.99	Soluble K2O, Other (14%)	0542	14.94	0.0820	14.62	0.6890	0.2851	33	0.47	OK	0
050.99	Soluble K2O, Other (14%)	0518	14.95	0.1300	14.62	0.6890	0.2851	33	0.48	OK	0
050.99	Soluble K2O, Other (14%)	0498	14.95	0.1000	14.62	0.6890	0.2851	33	0.48	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	R-bar				
050.99	Soluble K2O, Other (14%)	0042	15.05	0.3000	14.62	0.6890	0.2851	33	0.63	OK	0
050.99	Soluble K2O, Other (14%)	0602	15.25	0.1000	14.62	0.6890	0.2851	33	0.92	OK	0
050.99	Soluble K2O, Other (14%)	0455	15.33	0.0100	14.62	0.6890	0.2851	33	1.03	OK	0
050.99	Soluble K2O, Other (14%)	0402	15.42	0.2490	14.62	0.6890	0.2851	33	1.16	OK	0
050.99	Soluble K2O, Other (14%)	0553	15.50	1.200	14.62	0.6890	0.2851	33	1.28	OK	0
050.99	Soluble K2O, Other (14%)	0234	15.92	0.2500	14.62	0.6890	0.2851	33	1.88	High	0
050.99	Soluble K2O, Other (14%)	0523	16.15	1.100	14.62	0.6890	0.2851	33	2.23	High	0
050.99	Soluble K2O, Other (14%)	0577	16.24	0.5200	14.62	0.6890	0.2851	33	2.36	High	0
050.99	Soluble K2O, Other (14%)	0563	15.73	4.760	14.62	0.6890	0.2851	33	1.61	High	1
060.99	Water (Free), Other (%)	0510	0.4207	0.0169				1			0
101.00	Acid Soluble Ca, AA, inorganic 965.09 (%)	0553	1.555	0.0300				1			0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0035	0.3645	0.0070	1.133	0.6661	0.0923	3	-1.15		0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0354	1.495	0.0500	1.133	0.6661	0.0923	3	0.54		0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0324	1.540	0.2200	1.133	0.6661	0.0923	3	0.61		0
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (%)	0423	1.574	0.0110				1			0
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0472	1.390	0.0000	1.609	0.2180	0.0092	3	-1.00		0
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0494	1.610	0.0187	1.609	0.2180	0.0092	3	0.01		0
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0527	1.826	0.0090	1.609	0.2180	0.0092	3	1.00		0
101.99	Acid Soluble Ca, Other (%)	0389	1.485	0.0300				2			0
101.99	Acid Soluble Ca, Other (%)	0572	2.086	0.1580				2			0
121.00	Acid Soluble Mg, AA, inorganic 965.09 (%)	0553	0.2535	0.0030				1			0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0035	0.0495	0.0010				2			0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0354	0.2600	0.0000				2			0
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (%)	0095	0.2590	0.0139				2			0
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (%)	0423	0.2590	0.0040				2			0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0472	0.2400	0.0000	0.2471	0.0102	0.0196	4	-0.69		0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0494	0.2411	0.0196	0.2471	0.0102	0.0196	4	-0.59		0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0527	0.2452	0.0028	0.2471	0.0102	0.0196	4	-0.18		0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0515	0.2620	0.0558	0.2471	0.0102	0.0196	4	1.46		0
121.99	Acid Soluble Mg, Other (%)	0524	0.2051	0.0035	0.2314	0.0162	0.0212	5	-1.62		0
121.99	Acid Soluble Mg, Other (%)	0572	0.2265	0.0370	0.2314	0.0162	0.0212	5	-0.30		0
121.99	Acid Soluble Mg, Other (%)	0515	0.2387	0.0224	0.2314	0.0162	0.0212	5	0.45		0
121.99	Acid Soluble Mg, Other (%)	0389	0.2420	0.0000	0.2314	0.0162	0.0212	5	0.66		0
121.99	Acid Soluble Mg, Other (%)	0307	0.2445	0.0430	0.2314	0.0162	0.0212	5	0.81		0
131.99	Water Soluble Mg, Other (%)	0572	0.1285	0.0250				1			0
143.99	Elemental S, Other (%)	0390	5.035	0.0300	5.506	0.4024	0.0464	5	-1.17		0
143.99	Elemental S, Other (%)	0255	5.186	0.0840	5.506	0.4024	0.0464	5	-0.80		0
143.99	Elemental S, Other (%)	0368	5.494	0.0281	5.506	0.4024	0.0464	5	-0.03		0
143.99	Elemental S, Other (%)	0389	5.885	0.0100	5.506	0.4024	0.0464	5	0.94		0
143.99	Elemental S, Other (%)	0325	5.930	0.0800	5.506	0.4024	0.0464	5	1.05		0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0498	4.750	0.1000	5.237	0.2066	0.0483	6	-2.10	NA	0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0405	5.125	0.0500	5.237	0.2066	0.0483	6	-0.48	NA	0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0073	5.285	0.0100	5.237	0.2066	0.0483	6	0.21	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	R-bar				
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0106	5.295	0.0300	5.237	0.2066	0.0483	6	0.25	NA	0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0027	5.365	0.0700	5.237	0.2066	0.0483	6	0.55	NA	0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0561	5.425	0.0300	5.237	0.2066	0.0483	6	0.81	NA	0
145.99	Sulfate S, HCl soluble, Other (%)	0559	4.895	0.0100	5.077	0.1776	0.0333	3	-1.02		0
145.99	Sulfate S, HCl soluble, Other (%)	0575	5.085	0.0100	5.077	0.1776	0.0333	3	0.05		0
145.99	Sulfate S, HCl soluble, Other (%)	0553	5.250	0.0800	5.077	0.1776	0.0333	3	0.98		0
148.00	Total S, Combustion (5.1%)	0049	4.950	0.0800	5.226	0.3319	0.1324	7	-0.75	OK	0
148.00	Total S, Combustion (5.1%)	0073	4.980	0.0400	5.226	0.3319	0.1324	7	-0.67	OK	0
148.00	Total S, Combustion (5.1%)	0131	4.995	0.0090	5.226	0.3319	0.1324	7	-0.63	OK	0
148.00	Total S, Combustion (5.1%)	0029	5.152	0.2370	5.226	0.3319	0.1324	7	-0.20	OK	0
148.00	Total S, Combustion (5.1%)	0136	5.300	0.2000	5.226	0.3319	0.1324	7	0.20	OK	0
148.00	Total S, Combustion (5.1%)	0451	5.481	0.2880	5.226	0.3319	0.1324	7	0.70	OK	0
148.00	Total S, Combustion (5.1%)	0114	5.730	0.0731	5.226	0.3319	0.1324	7	1.37	High	0
148.01	Total S, Gravimetric - sulfate and elemental (5.1%)	0485	5.150	0.0200	5.483	0.2258	0.0880	10	-1.37	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (5.1%)	0095	5.320	0.0200	5.483	0.2258	0.0880	10	-0.67	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (5.1%)	0029	5.370	0.0800	5.483	0.2258	0.0880	10	-0.47	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (5.1%)	0028	5.415	0.0500	5.483	0.2258	0.0880	10	-0.28	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (5.1%)	0055	5.415	0.1700	5.483	0.2258	0.0880	10	-0.28	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (5.1%)	0513	5.425	0.0300	5.483	0.2258	0.0880	10	-0.24	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (5.1%)	0157	5.555	0.0300	5.483	0.2258	0.0880	10	0.30	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (5.1%)	0230	5.645	0.0900	5.483	0.2258	0.0880	10	0.67	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (5.1%)	0220	5.750	0.0600	5.483	0.2258	0.0880	10	1.10	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (5.1%)	0324	5.785	0.3300	5.483	0.2258	0.0880	10	1.24	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (5.1%)	0580	5.335	0.5700	5.483	0.2258	0.0880	10	-0.61	OK	1
148.07	Total S, ICP, test portion as in 2017.02 (5.1%)	0563	4.703	0.0031	5.262	0.1911	0.1453	17	-2.93	Low	0
148.07	Total S, ICP, test portion as in 2017.02 (5.1%)	0043	5.010	0.0800	5.262	0.1911	0.1453	17	-1.32	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (5.1%)	0472	5.085	0.0300	5.262	0.1911	0.1453	17	-0.93	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (5.1%)	0527	5.133	0.2500	5.262	0.1911	0.1453	17	-0.68	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (5.1%)	0260	5.165	0.2100	5.262	0.1911	0.1453	17	-0.51	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (5.1%)	0233	5.176	0.0180	5.262	0.1911	0.1453	17	-0.45	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (5.1%)	0177	5.189	0.1408	5.262	0.1911	0.1453	17	-0.38	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (5.1%)	0040	5.200	0.2000	5.262	0.1911	0.1453	17	-0.33	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (5.1%)	0292	5.245	0.0700	5.262	0.1911	0.1453	17	-0.09	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (5.1%)	0117	5.284	0.0800	5.262	0.1911	0.1453	17	0.11	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (5.1%)	0515	5.341	0.5826	5.262	0.1911	0.1453	17	0.41	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (5.1%)	0307	5.365	0.3500	5.262	0.1911	0.1453	17	0.54	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (5.1%)	0394	5.365	0.1300	5.262	0.1911	0.1453	17	0.54	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (5.1%)	0169	5.410	0.1000	5.262	0.1911	0.1453	17	0.77	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (5.1%)	0494	5.438	0.0554	5.262	0.1911	0.1453	17	0.92	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (5.1%)	0102	5.530	0.1000	5.262	0.1911	0.1453	17	1.40	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (5.1%)	0402	6.179	0.0700	5.262	0.1911	0.1453	17	4.80	High	0
148.07	Total S, ICP, test portion as in 2017.02 (5.1%)	0444	12.52	0.5500	5.262	0.1911	0.1453	17	37.94	High	2
148.99	Total S, Other (5.1%)	0572	4.834	0.0130	5.309	0.2760	0.0829	16	-1.72	Low	0

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148.99	Total S, Other (5.1%)	0558	5.089	0.0500	5.309	0.2760	0.0829	16	-0.80	OK	0
148.99	Total S, Other (5.1%)	0556	5.100	0.2000	5.309	0.2760	0.0829	16	-0.76	OK	0
148.99	Total S, Other (5.1%)	0575	5.125	0.0300	5.309	0.2760	0.0829	16	-0.67	OK	0
148.99	Total S, Other (5.1%)	0538	5.155	0.0300	5.309	0.2760	0.0829	16	-0.56	OK	0
148.99	Total S, Other (5.1%)	0577	5.175	0.1300	5.309	0.2760	0.0829	16	-0.49	OK	0
148.99	Total S, Other (5.1%)	0605	5.225	0.0700	5.309	0.2760	0.0829	16	-0.30	OK	0
148.99	Total S, Other (5.1%)	0023	5.240	0.0400	5.309	0.2760	0.0829	16	-0.25	OK	0
148.99	Total S, Other (5.1%)	0481	5.245	0.0500	5.309	0.2760	0.0829	16	-0.23	OK	0
148.99	Total S, Other (5.1%)	0354	5.260	0.1400	5.309	0.2760	0.0829	16	-0.18	OK	0
148.99	Total S, Other (5.1%)	0035	5.320	0.0000	5.309	0.2760	0.0829	16	0.04	OK	0
148.99	Total S, Other (5.1%)	0452	5.520	0.1600	5.309	0.2760	0.0829	16	0.76	OK	0
148.99	Total S, Other (5.1%)	0433	5.540	0.0400	5.309	0.2760	0.0829	16	0.84	OK	0
148.99	Total S, Other (5.1%)	0422	5.610	0.1630	5.309	0.2760	0.0829	16	1.09	OK	0
148.99	Total S, Other (5.1%)	0523	5.865	0.2100	5.309	0.2760	0.0829	16	2.01	High	0
148.99	Total S, Other (5.1%)	0220	5.940	0.0000	5.309	0.2760	0.0829	16	2.29	High	0
149.04	S - HNO3 soluble, ICP (%)	0588	4.930	0.1000	5.278	0.2816	0.0350	4	-1.24		0
149.04	S - HNO3 soluble, ICP (%)	0423	5.200	0.0200	5.278	0.2816	0.0350	4	-0.28		0
149.04	S - HNO3 soluble, ICP (%)	0524	5.393	0.0000	5.278	0.2816	0.0350	4	0.41		0
149.04	S - HNO3 soluble, ICP (%)	0231	5.590	0.0200	5.278	0.2816	0.0350	4	1.11		0
151.00	Acid Soluble As, AA, test portion 2006.03 modified w/dual acid	0498	1.000	0.0000				1			0
151.30	Acid Soluble As, ICP (ppm)	0575	1.130	0.0000	5.273	3.940	0.2015	3	-1.05		0
151.30	Acid Soluble As, ICP (ppm)	0524	5.717	0.1884	5.273	3.940	0.2015	3	0.11		0
151.30	Acid Soluble As, ICP (ppm)	0605	8.973	0.4160	5.273	3.940	0.2015	3	0.94		0
151.30	Acid Soluble As, ICP (ppm)	0255	0.0000	0.0000	5.273	3.940	0.2015	3			4
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0527	2.147	0.0023	6.655	4.093	2.518	4	-1.10		0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0136	4.230	0.0200	6.655	4.093	2.518	4	-0.59		0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0515	10.06	9.750	6.655	4.093	2.518	4	0.83		0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0563	10.19	0.3007	6.655	4.093	2.518	4	0.86		0
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	0515	7.533	6.802				2			0
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	0368	12.55	1.100				2			0
151.99	Acid Soluble As, Other (ppm)	0481	0.9700	0.0400	5.542	6.514	0.0207	3	-0.70		0
151.99	Acid Soluble As, Other (ppm)	0572	2.655	0.0220	5.542	6.514	0.0207	3	-0.44		0
151.99	Acid Soluble As, Other (ppm)	0405	13.00	0.0000	5.542	6.514	0.0207	3	1.15		0
165.00	Acid Soluble B, Spectrophotometric (%)	0553	0.0060	0.0000				1			0
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	0389	0.0054	0.0002				1			0
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	0354	< 0.01					1			5
165.99	Acid Soluble B, Other (%)	0515	0.0022	0.0011	0.0052	0.0031	0.0005	5	-0.86		0
165.99	Acid Soluble B, Other (%)	0524	0.0029	0.0002	0.0052	0.0031	0.0005	5	-0.65		0
165.99	Acid Soluble B, Other (%)	0527	0.0054	0.0002	0.0052	0.0031	0.0005	5	0.06		0
165.99	Acid Soluble B, Other (%)	0423	0.0055	0.0010	0.0052	0.0031	0.0005	5	0.09		0
165.99	Acid Soluble B, Other (%)	0472	0.0100	0.0000	0.0052	0.0031	0.0005	5	1.37		0
165.99	Acid Soluble B, Other (%)	0572	< 0.011		0.0052	0.0031	0.0005	5			5
171.99	Water Soluble B, Other (%)	0572	< 0.011					0			5

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181.00	Acid Soluble Cd, AA, test portion 2006.03 modified w/dual acid	0498	1.180	0.0000				1			0
181.30	Acid Soluble Cd, ICP (ppm)	0575	0.2600	0.0000	0.5874	0.2766	0.2739	6	-1.05	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0444	0.4750	0.0700	0.5874	0.2766	0.2739	6	-0.36	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0524	0.5389	0.0292	0.5874	0.2766	0.2739	6	-0.16	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0394	0.6080	0.0040	0.5874	0.2766	0.2739	6	0.07	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0389	0.6400	0.0400	0.5874	0.2766	0.2739	6	0.17	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0035	2.940	1.500	0.5874	0.2766	0.2739	6	7.58	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0255	4.184	5.062	0.5874	0.2766	0.2739	6	11.58	NA	1
181.30	Acid Soluble Cd, ICP (ppm)	0605	< 1.85		0.5874	0.2766	0.2739	6			5
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0494	0.7035	0.0130	0.7406	0.0490	0.0252	3	-0.76		0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0563	0.7222	0.0453	0.7406	0.0490	0.0252	3	-0.38		0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0527	0.7962	0.0172	0.7406	0.0490	0.0252	3	1.13		0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0136	< 1		0.7406	0.0490	0.0252	3			5
181.34	Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm)	0368	0.7000	0.0000				1			0
181.99	Acid Soluble Cd, Other (ppm)	0481	0.6950	0.0100				2			0
181.99	Acid Soluble Cd, Other (ppm)	0572	0.7080	0.0160				2			0
181.99	Acid Soluble Cd, Other (ppm)	0405	< 1					2			5
190.00	Water Soluble Cl, Titrimetric (%)	0220	0.2300	0.0000	0.5025	0.3465	0.0153	11	-0.74	Low	0
190.00	Water Soluble Cl, Titrimetric (%)	0029	0.2800	0.0080	0.5025	0.3465	0.0153	11	-0.60	Low	0
190.00	Water Soluble Cl, Titrimetric (%)	0605	0.2900	0.0400	0.5025	0.3465	0.0153	11	-0.57	Low	0
190.00	Water Soluble Cl, Titrimetric (%)	0553	0.3100	0.0000	0.5025	0.3465	0.0153	11	-0.52	Low	0
190.00	Water Soluble Cl, Titrimetric (%)	0444	0.3200	0.0000	0.5025	0.3465	0.0153	11	-0.49	Low	0
190.00	Water Soluble Cl, Titrimetric (%)	0572	0.3400	0.0400	0.5025	0.3465	0.0153	11	-0.44	Low	0
190.00	Water Soluble Cl, Titrimetric (%)	0455	0.3550	0.0100	0.5025	0.3465	0.0153	11	-0.40	Low	0
190.00	Water Soluble Cl, Titrimetric (%)	0561	0.5100	0.0400	0.5025	0.3465	0.0153	11	0.02	OK	0
190.00	Water Soluble Cl, Titrimetric (%)	0577	0.9050	0.0100	0.5025	0.3465	0.0153	11	1.09	High	0
190.00	Water Soluble Cl, Titrimetric (%)	0538	0.9650	0.0100	0.5025	0.3465	0.0153	11	1.25	High	0
190.00	Water Soluble Cl, Titrimetric (%)	0481	2.105	0.0100	0.5025	0.3465	0.0153	11	4.33	High	0
190.99	Water Soluble Cl, Other (%)	0029	0.4050	0.0100				2			0
190.99	Water Soluble Cl, Other (%)	0136	0.4350	0.1100				2			0
191.00	Acid Soluble Cr, AA, test portion 2006.03 modified w/dual acid	0498	14.70	0.4000				1			0
191.30	Acid Soluble Cr, ICP (ppm)	0444	10.61	0.2500	15.36	4.083	0.5436	7	-1.05	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0394	12.41	0.6370	15.36	4.083	0.5436	7	-0.65	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0524	12.71	0.1002	15.36	4.083	0.5436	7	-0.59	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0389	15.13	0.4300	15.36	4.083	0.5436	7	-0.05	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0035	18.10	1.600	15.36	4.083	0.5436	7	0.61	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0575	18.60	0.0000	15.36	4.083	0.5436	7	0.72	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0605	19.99	0.7880	15.36	4.083	0.5436	7	1.02	NA	0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0563	15.75	0.6713	21.78	8.350	4.163	5	-0.72		0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0136	17.04	0.0800	21.78	8.350	4.163	5	-0.57		0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0494	19.55	0.7000	21.78	8.350	4.163	5	-0.27		0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0527	20.18	0.0449	21.78	8.350	4.163	5	-0.19		0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0515	36.36	19.32	21.78	8.350	4.163	5	1.75		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	R-bar				
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	0368	14.75	1.700				2			0
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	0515	19.61	2.916				2			0
191.99	Acid Soluble Cr, Other (ppm)	0572	16.28	1.504				2			0
191.99	Acid Soluble Cr, Other (ppm)	0405	20.00	0.0000				2			0
191.99	Acid Soluble Cr, Other (ppm)	0481	< 20					2			5
202.30	Acid Soluble Co, ICP (ppm)	0389	0.7350	0.0500	1.446	1.026	0.0933	5	-0.69		0
202.30	Acid Soluble Co, ICP (ppm)	0575	0.7900	0.0000	1.446	1.026	0.0933	5	-0.64		0
202.30	Acid Soluble Co, ICP (ppm)	0524	1.131	0.0236	1.446	1.026	0.0933	5	-0.31		0
202.30	Acid Soluble Co, ICP (ppm)	0605	1.351	0.0230	1.446	1.026	0.0933	5	-0.09		0
202.30	Acid Soluble Co, ICP (ppm)	0035	3.225	0.3700	1.446	1.026	0.0933	5	1.73		0
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	0423	0.8575	0.0250				1			0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0527	0.7568	0.0366				2			0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0494	0.7685	0.0590				2			0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0136	< 2.5					2			5
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	0368	< 0.1					0			5
202.99	Acid Soluble Co, Other (ppm)	0572	0.6570	0.1220	9.467	14.96	3.764	3	-0.59		0
202.99	Acid Soluble Co, Other (ppm)	0405	1.000	0.0000	9.467	14.96	3.764	3	-0.57		0
202.99	Acid Soluble Co, Other (ppm)	0255	26.75	11.17	9.467	14.96	3.764	3	1.15		0
202.99	Acid Soluble Co, Other (ppm)	0481	< 20		9.467	14.96	3.764	3			5
221.00	Acid Soluble Cu, AA, inorganic 965.09 (%)	0485	0.0012	0.0000				1			0
221.00	Acid Soluble Cu, AA, inorganic 965.09 (%)	0553	< 0.005					1			5
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0255	0.0010	0.0000	0.0029	0.0023	0.0001	4	-0.83		0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0444	0.0010	0.0000	0.0029	0.0023	0.0001	4	-0.83		0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0035	0.0040	0.0000	0.0029	0.0023	0.0001	4	0.47		0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0402	0.0057	0.0003	0.0029	0.0023	0.0001	4	1.19		0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0354	< 0.01		0.0029	0.0023	0.0001	4			5
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	0095	0.0009	0.0000	0.0011	0.0003	0.0001	3	-0.66		0
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	0423	0.0010	0.0001	0.0011	0.0003	0.0001	3	-0.49		0
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	0394	0.0015	0.0001	0.0011	0.0003	0.0001	3	1.15		0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0527	0.0008	0.0000	0.0028	0.0038	0.0004	5	-0.45		0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0043	0.0010	0.0000	0.0028	0.0038	0.0004	5	-0.41		0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0136	0.0010	0.0000	0.0028	0.0038	0.0004	5	-0.41		0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0515	0.0015	0.0010	0.0028	0.0038	0.0004	5	-0.29		0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0494	0.0095	0.0009	0.0028	0.0038	0.0004	5	1.56		0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0106	0.0001	0.0001	0.0028	0.0038	0.0004	5			4
221.99	Acid Soluble Cu, Other (%)	0368	0.0007	0.0002	0.0011	0.0005	0.0001	8	-0.70	OK	0
221.99	Acid Soluble Cu, Other (%)	0524	0.0008	0.0001	0.0011	0.0005	0.0001	8	-0.61	OK	0
221.99	Acid Soluble Cu, Other (%)	0389	0.0008	0.0000	0.0011	0.0005	0.0001	8	-0.53	OK	0
221.99	Acid Soluble Cu, Other (%)	0405	0.0009	0.0000	0.0011	0.0005	0.0001	8	-0.35	OK	0
221.99	Acid Soluble Cu, Other (%)	0481	0.0010	0.0000	0.0011	0.0005	0.0001	8	-0.17	OK	0
221.99	Acid Soluble Cu, Other (%)	0572	0.0010	0.0000	0.0011	0.0005	0.0001	8	-0.17	OK	0
221.99	Acid Soluble Cu, Other (%)	0515	0.0018	0.0001	0.0011	0.0005	0.0001	8	1.16	OK	0
221.99	Acid Soluble Cu, Other (%)	0575	0.0025	0.0000	0.0011	0.0005	0.0001	8	2.49	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	R-bar				
221.99	Acid Soluble Cu, Other (%)	0605	9.519	1.158	0.0011	0.0005	0.0001	8	16891.94	High	2
241.00	Acid Soluble Fe, AA, inorganic 965.09 (%)	0553	0.0475	0.0010				1			0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0035	0.0545	0.0010				1			0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0354	< 0.01					1			5
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (%)	0095	0.0559	0.0025				2			0
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (%)	0423	0.0565	0.0010				2			0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0472	0.0500	0.0000	0.1740	0.2229	0.0271	4	-0.56		0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0527	0.0527	0.0006	0.1740	0.2229	0.0271	4	-0.54		0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0515	0.0857	0.0786	0.1740	0.2229	0.0271	4	-0.40		0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0494	0.5075	0.0290	0.1740	0.2229	0.0271	4	1.50		0
241.99	Acid Soluble Fe, Other (%)	0572	0.0450	0.0060	0.0478	0.0021	0.0029	4	-1.33		0
241.99	Acid Soluble Fe, Other (%)	0524	0.0475	0.0024	0.0478	0.0021	0.0029	4	-0.13		0
241.99	Acid Soluble Fe, Other (%)	0515	0.0487	0.0030	0.0478	0.0021	0.0029	4	0.45		0
241.99	Acid Soluble Fe, Other (%)	0389	0.0499	0.0003	0.0478	0.0021	0.0029	4	1.01		0
251.00	Acid Soluble Pb, AA, test portion 2006.03 modified w/dual acid	0498	< 0.5					0			5
251.30	Acid Soluble Pb, ICP (ppm)	0575	1.130	0.0000	2.183	0.8396	0.0622	5	-1.09		0
251.30	Acid Soluble Pb, ICP (ppm)	0444	1.475	0.1700	2.183	0.8396	0.0622	5	-0.74		0
251.30	Acid Soluble Pb, ICP (ppm)	0524	2.461	0.0771	2.183	0.8396	0.0622	5	0.29		0
251.30	Acid Soluble Pb, ICP (ppm)	0389	2.800	0.0600	2.183	0.8396	0.0622	5	0.64		0
251.30	Acid Soluble Pb, ICP (ppm)	0394	3.050	0.0040	2.183	0.8396	0.0622	5	0.90		0
251.30	Acid Soluble Pb, ICP (ppm)	0255	0.0000	0.0000	2.183	0.8396	0.0622	5			4
251.30	Acid Soluble Pb, ICP (ppm)	0035	< 0.005		2.183	0.8396	0.0622	5			5
251.30	Acid Soluble Pb, ICP (ppm)	0605	< 5		2.183	0.8396	0.0622	5			5
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0563	1.653	0.0967	2.246	0.6754	0.4906	4	-0.88		0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0527	1.999	0.1661	2.246	0.6754	0.4906	4	-0.37		0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0515	2.118	0.9297	2.246	0.6754	0.4906	4	-0.19		0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0494	3.215	0.7700	2.246	0.6754	0.4906	4	1.43		0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0136	< 3		2.246	0.6754	0.4906	4			5
251.34	Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm)	0368	< 0.6					0			5
251.99	Acid Soluble Pb, Other (ppm)	0481	1.510	0.1200				2			0
251.99	Acid Soluble Pb, Other (ppm)	0572	1.988	0.1390				2			0
251.99	Acid Soluble Pb, Other (ppm)	0405	< 4					2			5
261.00	Acid Soluble Mn, AA, Mn2+ only (%)	0553	0.0030	0.0000				1			0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0035	0.0030	0.0000				1			0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0354	< 0.01					1			5
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0527	0.0031	0.0001				2			0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0494	0.0275	0.0046				2			0
261.99	Acid Soluble Mn, Other (%)	0524	0.0029	0.0001	0.0030	0.0001	0.0000	3	-1.06		0
261.99	Acid Soluble Mn, Other (%)	0572	0.0030	0.0000	0.0030	0.0001	0.0000	3	0.13		0
261.99	Acid Soluble Mn, Other (%)	0389	0.0031	0.0000	0.0030	0.0001	0.0000	3	0.93		0
281.00	Acid Soluble Hg, AA (ppm)	0481	< 0.5					0			5
281.00	Acid Soluble Hg, AA (ppm)	0498	< 0.5					0			5
281.30	Acid Soluble Hg, ICP (ppm)	0527	< 0.001					0			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	R-bar				
281.30	Acid Soluble Hg, ICP (ppm)	0575	< 0.1					0			5
281.30	Acid Soluble Hg, ICP (ppm)	0605	< 1.25					0			5
281.99	Acid Soluble Hg, Other (ppm)	0368	0.0016	0.0002	0.0022	0.0007	0.0008	3	-0.80		0
281.99	Acid Soluble Hg, Other (ppm)	0524	0.0020	0.0001	0.0022	0.0007	0.0008	3	-0.32		0
281.99	Acid Soluble Hg, Other (ppm)	0035	0.0030	0.0020	0.0022	0.0007	0.0008	3	1.12		0
281.99	Acid Soluble Hg, Other (ppm)	0572	< 0.009		0.0022	0.0007	0.0008	3			5
281.99	Acid Soluble Hg, Other (ppm)	0405	< 2		0.0022	0.0007	0.0008	3			5
289.30	Acid Soluble Mo, ICP (ppm)	0524	0.5774	0.0464	0.8158	0.2165	0.0155	3	-1.10		0
289.30	Acid Soluble Mo, ICP (ppm)	0575	0.8700	0.0000	0.8158	0.2165	0.0155	3	0.25		0
289.30	Acid Soluble Mo, ICP (ppm)	0234	1.000	0.0000	0.8158	0.2165	0.0155	3	0.85		0
289.30	Acid Soluble Mo, ICP (ppm)	0255	0.1700	0.3400	0.8158	0.2165	0.0155	3			4
289.30	Acid Soluble Mo, ICP (ppm)	0035	< 0.002		0.8158	0.2165	0.0155	3			5
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0106	1.000	0.0000	6.062	9.507	0.5572	4	-0.53		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0494	1.454	1.653	6.062	9.507	0.5572	4	-0.48		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0527	1.474	0.4211	6.062	9.507	0.5572	4	-0.48		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0515	20.32	0.1545	6.062	9.507	0.5572	4	1.50		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0136	< 2.5		6.062	9.507	0.5572	4			5
289.34	Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm)	0368	0.0000	0.0000				0			4
289.99	Acid Soluble Mo, Other (ppm)	0405	< 1					0			5
289.99	Acid Soluble Mo, Other (ppm)	0572	< 2.55					0			5
289.99	Acid Soluble Mo, Other (ppm)	0481	< 100					0			5
291.30	Acid Soluble Ni, ICP (ppm)	0394	2.564	0.0390	3.162	0.6589	0.0738	6	-0.81	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0485	2.660	0.0800	3.162	0.6589	0.0738	6	-0.68	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0524	2.947	0.1787	3.162	0.6589	0.0738	6	-0.29	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0575	3.290	0.0000	3.162	0.6589	0.0738	6	0.17	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0389	3.360	0.0110	3.162	0.6589	0.0738	6	0.27	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0605	4.203	0.1340	3.162	0.6589	0.0738	6	1.41	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0035	5.710	2.020	3.162	0.6589	0.0738	6	3.44	NA	1
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0136	3.720	0.0600	4.336	0.6337	0.0530	4	-0.97		0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0563	3.859	0.0202	4.336	0.6337	0.0530	4	-0.75		0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0527	4.880	0.0616	4.336	0.6337	0.0530	4	0.86		0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0494	4.885	0.0700	4.336	0.6337	0.0530	4	0.87		0
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	0515	0.4972	0.1189				1			0
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	0368	< 0.2					1			5
291.99	Acid Soluble Ni, Other (ppm)	0572	3.434	0.4360	16.62	21.92	5.295	3	-0.60		0
291.99	Acid Soluble Ni, Other (ppm)	0405	4.500	1.000	16.62	21.92	5.295	3	-0.55		0
291.99	Acid Soluble Ni, Other (ppm)	0255	41.92	14.45	16.62	21.92	5.295	3	1.15		0
291.99	Acid Soluble Ni, Other (ppm)	0481	< 10		16.62	21.92	5.295	3			5
301.00	Acid Soluble Se, AA, test portion 2006.03 modified w/dual acid	0498	< 0.5					0			5
301.30	Acid Soluble Se, ICP (ppm)	0575	1.500	0.0000				2			0
301.30	Acid Soluble Se, ICP (ppm)	0524	5.392	0.2520				2			0
301.30	Acid Soluble Se, ICP (ppm)	0605	< 1.65					2			5
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0527	7.933	0.2847				1			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	R-bar				
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0494	< 0.96					1			5
301.34	Acid Soluble Se, ICP, EPA 3050B/6010C (ppm)	0515	1.044	0.3190				1			0
301.34	Acid Soluble Se, ICP, EPA 3050B/6010C (ppm)	0368	< 1.1					1			5
301.99	Acid Soluble Se, Other (ppm)	0572	11.00	1.410				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	0.0755	0.0030				1			0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0035	0.0855	0.0030	0.0870	0.0015	0.0023	3	-1.01		0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0527	0.0871	0.0029	0.0870	0.0015	0.0023	3	0.02		0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0423	0.0885	0.0010	0.0870	0.0015	0.0023	3	0.99		0
311.99	Sodium, Other (%)	0572	0.0815	0.0170				2			0
311.99	Sodium, Other (%)	0354	0.1050	0.0100				2			0
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	0553	0.0080	0.0000				2			0
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	0485	0.0086	0.0004				2			0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0234	0.0007	0.0004	0.0079	0.0058	0.0009	5	-1.09		0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0035	0.0035	0.0010	0.0079	0.0058	0.0009	5	-0.67		0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0444	0.0095	0.0010	0.0079	0.0058	0.0009	5	0.24		0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0255	0.0110	0.0020	0.0079	0.0058	0.0009	5	0.46		0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0402	0.0150	0.0001	0.0079	0.0058	0.0009	5	1.06		0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0354	< 0.01		0.0079	0.0058	0.0009	5			5
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0394	0.0090	0.0000				2			0
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0095	0.0136	0.0026				2			0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0043	0.0009	0.0000	0.0080	0.0040	0.0008	8	-1.64	Low	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0106	0.0045	0.0016	0.0080	0.0040	0.0008	8	-0.81	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0563	0.0075	0.0010	0.0080	0.0040	0.0008	8	-0.12	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0515	0.0080	0.0000	0.0080	0.0040	0.0008	8	0.00	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0136	0.0088	0.0001	0.0080	0.0040	0.0008	8	0.17	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0233	0.0093	0.0011	0.0080	0.0040	0.0008	8	0.29	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0472	0.0100	0.0000	0.0080	0.0040	0.0008	8	0.46	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0494	0.0939	0.0029	0.0080	0.0040	0.0008	8	19.80	High	0
321.99	Acid Soluble Zn, Other (%)	0368	0.0046	0.0066	0.0080	0.0018	0.0013	8	-1.73	OK	0
321.99	Acid Soluble Zn, Other (%)	0572	0.0060	0.0000	0.0080	0.0018	0.0013	8	-1.02	OK	0
321.99	Acid Soluble Zn, Other (%)	0481	0.0075	0.0010	0.0080	0.0018	0.0013	8	-0.25	OK	0
321.99	Acid Soluble Zn, Other (%)	0524	0.0087	0.0006	0.0080	0.0018	0.0013	8	0.36	OK	0
321.99	Acid Soluble Zn, Other (%)	0389	0.0089	0.0001	0.0080	0.0018	0.0013	8	0.43	OK	0
321.99	Acid Soluble Zn, Other (%)	0515	0.0089	0.0012	0.0080	0.0018	0.0013	8	0.46	OK	0
321.99	Acid Soluble Zn, Other (%)	0575	0.0090	0.0000	0.0080	0.0018	0.0013	8	0.51	OK	0
321.99	Acid Soluble Zn, Other (%)	0405	0.0098	0.0005	0.0080	0.0018	0.0013	8	0.89	OK	0
321.99	Acid Soluble Zn, Other (%)	0605	87.42	1.547	0.0080	0.0018	0.0013	8	44449.70	High	2
325.30	Water Soluble Zn, ICP (%)	0444	0.0015	0.0010				1			0
325.99	Water Soluble Zn, Other (%)	0572	0.0010	0.0000				1			0
431.99	Soluble Si in nonliquids, Other (%)	0572	0.0105	0.0030				1			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	R-bar				

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 $\pm$ 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.