

# magruder fertilizer

## check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 200111

6-2-4 w/S & Humic Acids

Statistical Summary

# Methods: 133

# Labs Reporting: 97

Issue Date : 02/29/2020

Method Code	Analyte & Method Sample # 200111	# 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 (%)	7	7	5.850	1.446	6.346		0.1958	0.0925	3.09%		0.1114	3.03%
001.99	Ammoniacal N, Other (%)	35	35	6.468	0.3213	6.441		0.2636	0.0557	4.09%		0.0935	3.02%
010.11	Total N, Modified Comprehensive (6%)	4	4	6.422	0.4377	6.422	0.5284	0.4377	0.2736	6.82%	1.93	0.1684	3.02%
010.12	Total N, Salicylic (6%)	2	2	6.510	0.4384								
010.60	Total N, Combustion (6%)	58	57	7.091	0.2162	7.105	0.5411	0.1952	0.0323	2.75%	0.84	0.1130	2.98%
010.99	Total N, Other (6%)	11	11	6.799	0.3371	6.827	0.5365	0.3129	0.1179	4.58%	1.36	0.1240	3.00%
020.10	Total P2O5, Gravimetric Quinolinium MolybdoP (%)	3	3	3.957	0.0513	3.957		0.0513	0.0370	1.30%		0.0667	3.25%
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	18	17	4.363	1.411	4.191		0.8371	0.2538	19.97%		0.1009	3.22%
020.40	Total P2O5, Automated (%)	3	3	3.468	1.053	3.468		1.053	0.7603	30.37%		0.0900	3.32%
020.50	Total P2O5, ICP (%)	21	21	3.801	0.3179	3.810		0.3142	0.0857	8.25%		0.1137	3.27%
020.99	Total P2O5, Other (%)	6	5	3.211	1.045	3.211		1.045	0.5842	32.54%		0.0740	3.36%
030.40	Citrate Insoluble P2O5, Automated, test portion 963.03 A-B (%)	1		0.0400									
040.20	Indirect Available P2O5, Spectrophotometric (4%)	2	2	4.235	0.6647								
040.40	Indirect Available P2O5, Automated (4%)	1		3.965									
041.10	Direct Available P2O5, Gravimetric Quinolinium (2%)	3	3	3.917	0.0649	3.917	0.6700	0.0649	0.0469	1.66%	0.23	0.3038	3.26%
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext. (2%)	5	5	3.917	0.1314	3.917	0.6700	0.1314	0.0735	3.35%	0.46	0.1102	3.26%
041.20	Direct Available P2O5, Spectrophotometric (2%)	3	3	3.050	0.7415	3.050	0.6700	0.7415	0.5351	24.31%	2.58	0.2067	3.38%
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (2%)	6	6	4.753	1.248	4.753	0.6700	1.416	0.7224	29.79%	4.92	0.0533	3.16%
041.40	Direct Available P2O5, Automated, Citrate-EDTA Ext. (2%)	2	2	5.683	0.5823								
041.50	Direct Available P2O5, ICP (2%)	3	3	3.542	0.6035	3.542	0.6700	0.6035	0.4355	17.04%	2.10	0.5660	3.31%
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (2%)	10	10	3.785	0.1536	3.791	0.6700	0.1604	0.0634	4.23%	0.56	0.0637	3.27%
041.99	Direct Available P2O5, Other (2%)	11	10	2.651	0.5311	2.651	0.6700	0.6023	0.2381	22.72%	2.09	0.1020	3.45%
048.20	Water Soluble P2O5, Spectrophotometric (%)	1		3.320									
048.40	Water Soluble P2O5, Automated (%)	1		2.770									
048.50	Water Soluble P2O5, ICP (%)	1		2.915									
048.99	Water Soluble P2O5, Other (%)	2	2	2.658	0.5056								
050.00	Soluble K2O, STPB Oxalate (4%)	10	10	3.986	0.4884	3.958	0.4100	0.4644	0.1836	11.73%	2.64	0.1635	3.25%
050.30	Soluble K2O, AA (Oxalate) (4%)	6	6	3.896	0.2607	3.920	0.4100	0.2386	0.1218	6.09%	1.36	0.1480	3.26%
050.50	Soluble K2O, ICP (Oxalate) (4%)	8	8	4.075	0.2363	4.075	0.4115	0.2680	0.1184	6.58%	1.52	0.1075	3.24%
050.51	Soluble K2O, ICP (Citrate) (4%)	2	2	4.378	0.0318								
050.52	Soluble K2O, ICP (Citrate-EDTA) (4%)	12	12	4.032	0.2650	4.051	0.4110	0.2548	0.0919	6.29%	1.44	0.1092	3.24%
050.60	Soluble K2O, Flame Photometric (Oxalate) (4%)	2	2	3.425	0.4903								
050.61	Soluble K2O, Flame Photometric (Citrate) (4%)	3	3	3.878	0.1492	3.878	0.4100	0.1492	0.1077	3.85%	0.85	0.1233	3.26%

Method Code	Analyte & Method Sample # 200111	# 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
050.62	Soluble K2O, Flame Photometric (Citrate-EDTA) (4%)	4	4	4.131	0.0908	4.131	0.4126	0.0908	0.0568	2.20%	0.51	0.0980	3.23%
050.99	Soluble K2O, Other (4%)	47	47	3.975	0.1763	3.981	0.4100	0.1726	0.0315	4.34%	0.98	0.0912	3.25%
060.00	Water (Free), Vacuum Oven (%)	1		9.075									
060.99	Water (Free), Other (%)	1		8.409									
101.00	Acid Soluble Ca, AA, inorganic 965.09 (%)	1		0.4595									
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	5	5	0.3685	0.1272	0.3685	0.2184	0.1272	0.0711	34.51%	1.36	0.0140	4.65%
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (%)	1		0.2855									
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	4	4	0.3086	0.0478	0.3086	0.2154	0.0478	0.0299	15.48%	0.52	0.0022	4.77%
101.99	Acid Soluble Ca, Other (%)	2	2	0.6100	0.5091								
121.00	Acid Soluble Mg, AA, inorganic 965.09 (%)	1		0.1555									
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	6	6	0.1178	0.0076	0.1178	0.2059	0.0086	0.0044	7.30%	0.10	0.0054	5.52%
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (%)	1		0.1180									
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	5	5	0.1386	0.0368	0.1386	0.2069	0.0368	0.0206	26.59%	0.41	0.0162	5.39%
121.99	Acid Soluble Mg, Other (%)	5	5	0.1526	0.0769	0.1526	0.2076	0.0769	0.0430	50.42%	0.86	0.0160	5.31%
143.99	Elemental S, Other (%)	4	4	7.632	0.9441	7.632		0.9441	0.5901	12.37%		0.6905	2.95%
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	5	5	7.849	0.5755	7.849		0.5755	0.3217	7.33%		0.1951	2.93%
145.99	Sulfate S, HCl soluble, Other (%)	1		7.915									
148.00	Total S, Combustion (5%)	6	6	8.504	0.3792	8.468	0.6234	0.3414	0.1742	4.03%	1.28	0.1815	2.90%
148.01	Total S, Gravimetric - sulfate and elemental (5%)	10	10	7.656	1.384	7.875	0.5937	1.083	0.4281	13.75%	4.25	0.1186	2.93%
148.07	Total S, ICP, test portion as in 2017.02 (5%)	16	16	8.049	0.6746	8.095	0.6048	0.2296	0.0718	2.84%	0.88	0.3115	2.92%
148.99	Total S, Other (5%)	16	16	6.605	1.692	6.605	0.5303	1.919	0.5996	29.05%	8.43	0.1506	3.01%
149.04	S - HNO3 soluble, ICP (%)	5	5	7.939	0.1901	7.939		0.1901	0.1063	2.39%		0.4061	2.93%
151.00	Acid Soluble As, AA, test portion 2006.03 modified w/dual acid (ppm)	2	2	1.220	0.5370								
151.30	Acid Soluble As, ICP (ppm)	4	4	3.363	2.047	3.363		2.047	1.279	60.87%		1.221	13.33%
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	2	2	2.819	0.8040								
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	5	3	3.586	2.168	3.586		2.168	1.564	60.45%		0.5678	13.20%
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	1		0.8710									
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	1		0.0100									
165.99	Acid Soluble B, Other (%)	7	5	1.473	3.188	1.473	0.2240	3.188	1.782	216.41%	33.16	0.8703	3.77%
181.00	Acid Soluble Cd, AA, test portion 2006.03 modified w/dual acid (ppm)	3	3	10.23	2.677	10.23		2.677	1.932	26.17%		1.150	11.27%
181.30	Acid Soluble Cd, ICP (ppm)	9	9	9.075	3.772	9.537		1.494	0.6224	15.66%		0.6343	11.39%
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	2	2	10.49	0.0806								
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	5	5	10.18	2.263	10.18		2.263	1.265	22.22%		1.483	11.28%
181.34	Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm)	1		6.879									
181.99	Acid Soluble Cd, Other (ppm)	1		10.70									
191.00	Acid Soluble Cr, AA, test portion 2006.03 modified w/dual acid (ppm)	2	2	37.70	19.45								
191.30	Acid Soluble Cr, ICP (ppm)	7	7	35.79	15.99	37.54		13.85	6.543	36.89%		1.430	9.27%
191.32	Acid Soluble Cr, ICP, 2006.03 (ppm)	1		49.05									
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	4	4	47.78	3.441	47.78		3.441	2.151	7.20%		0.8711	8.94%
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	1		51.26									
191.99	Acid Soluble Cr, Other (ppm)	1		48.50									
202.30	Acid Soluble Co, ICP (ppm)	3	3	1.782	1.014	1.782	1.5345	1.014	0.7319	56.92%	1.54	0.1239	14.66%
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	2	2	2.303	0.2086								
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	4	2	1.674	0.0225	1.674	1.5021	0.0225	0.0198	1.34%	0.03	0.1948	14.80%

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202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	2	1	1.978									
202.99	Acid Soluble Co, Other (ppm)	2	2	3.199	1.412								
221.00	Acid Soluble Cu, AA, inorganic 965.09 (%)	2	2	0.0045	0.0034								
221.01	Acid Soluble Cu, AA, organic 965.09 (%)	1		0.0010									
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	5	3	0.0240	0.0398	0.0240	0.0074	0.0398	0.0287	165.64%	12.53	0.0068	7.01%
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	1		0.0009									
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	6	6	0.0013	0.0004	0.0012	0.0051	0.0003	0.0002	26.43%	0.15	0.0002	10.94%
221.99	Acid Soluble Cu, Other (%)	5	4	0.0152	0.0282	0.0152	0.0065	0.0282	0.0176	185.14%	10.07	0.0018	7.51%
241.00	Acid Soluble Fe, AA, inorganic 965.09 (%)	1		0.1389									
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	6	6	0.2654	0.0363	0.2635	0.0314	0.0367	0.0187	13.92%	2.73	0.0408	4.89%
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (%)	1		0.2700									
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	4	4	0.2781	0.0405	0.2781	0.0328	0.0405	0.0253	14.58%	2.88	0.0114	4.85%
241.99	Acid Soluble Fe, Other (%)	4	4	0.2370	0.0286	0.2370	0.0287	0.0286	0.0179	12.06%	2.32	0.0243	4.97%
251.00	Acid Soluble Pb, AA, test portion 2006.03 modified w/dual acid (ppm)	2	1	15.50									
251.30	Acid Soluble Pb, ICP (ppm)	8	8	6.319	3.092	6.559		2.933	1.296	44.72%		0.5296	12.05%
251.32	Acid Soluble Pb, ICP, 2006.03 (ppm)	1		8.700									
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	5	5	10.37	7.068	10.37		7.068	3.951	68.13%		0.5698	11.25%
251.34	Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm)	1		5.796									
261.12	Acid Soluble Mn, AA, inorganic 965.09 (%)	1		0.0029									
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	3	2	0.0034	0.0002	0.0034	0.0053	0.0002	0.0002	7.23%	0.11	0.0002	9.40%
261.32	Acid Soluble Mn, ICP, test portion inorganic 965.09 (%)	1		0.4100									
261.34	Acid Soluble Mn, ICP, test portion 2006.03A-C (%)	1		0.0032									
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	4	4	0.0105	0.0146	0.0105	0.0061	0.0146	0.0091	138.81%	5.62	0.0009	7.94%
261.99	Acid Soluble Mn, Other (%)	4	4	0.0033	0.0011	0.0033	0.0053	0.0011	0.0007	33.41%	0.49	0.0008	9.44%
281.00	Acid Soluble Hg, AA (ppm)	1		1.870									
281.30	Acid Soluble Hg, ICP (ppm)	4	1	0.0355		0.0033		0.0011	0.0014	33.41%		0.0030	37.76%
281.99	Acid Soluble Hg, Other (ppm)	1		10.80									
289.00	Acid Soluble Mo, AA, test portion 2006.03 modified w/dual acid (ppm)	1		4.250									
289.30	Acid Soluble Mo, ICP (ppm)	5	5	10.83	13.32	10.83	4.2481	13.32	7.449	123.07%	7.31	2.692	11.18%
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	1		2.450									
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	5	5	3.014	0.2089	3.014	1.9042	0.2089	0.1168	6.93%	0.26	1.140	13.55%
289.34	Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm)	2	2	3.778	0.1952								
291.00	Acid Soluble Ni, AA, test portion 2006.03 modified w/dual acid (ppm)	3	2	19.53	2.086	19.53		2.086	1.844	10.68%		1.050	10.23%
291.30	Acid Soluble Ni, ICP (ppm)	7	7	22.94	6.772	21.89		5.043	2.382	23.03%		1.633	10.05%
291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	1		22.60									
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	5	5	17.49	9.800	17.49		9.800	5.478	56.05%		0.1815	10.40%
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	2	2	12.70	17.96								
291.99	Acid Soluble Ni, Other (ppm)	2	2	19.85	3.034								
301.00	Acid Soluble Se, AA, test portion 2006.03 modified w/dual acid (ppm)	1		0.0800									
301.30	Acid Soluble Se, ICP (ppm)	2	2	1.714	0.7697								
301.32	Acid Soluble Se, ICP, 2006.03 (ppm)	1		0.6000									
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	2	0	0.0000									
301.34	Acid Soluble Se, ICP, EPA 3050B/6010C (ppm)	1		0.0000									
301.99	Acid Soluble Se, Other (ppm)	1		7.146									

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311.32	Sodium, ICP, 2006.03 test portion (%)	1		0.0920									
311.33	Sodium, ICP, test portion as in 2017.02 (%)	4	4	0.0910	0.0074	0.0910	0.0141	0.0073	0.0046	8.08%	1.21	0.0027	5.74%
311.99	Sodium, Other (%)	2	2	0.1150	0.0212								
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	2	2	0.0186	0.0001								
321.01	Acid Soluble Zn, AA, organic 965.09 (%)	1		0.0145									
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	9	8	0.0139	0.0056	0.0146	0.0065	0.0045	0.0020	31.01%	1.64	0.0024	7.55%
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	2	2	0.0145	0.0042								
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	7	6	0.0145	0.0065	0.0163	0.0066	0.0007	0.0003	4.10%	0.23	0.0001	7.43%
321.99	Acid Soluble Zn, Other (%)	7	6	0.0304	0.0341	0.0175	0.0067	0.0033	0.0017	18.60%	1.12	0.0017	7.35%
441.00	Humic Acids, Gravimetry, Ash-free, alkali dissolved, acid precipit... (20%)	18	17	21.86	2.466	21.44		1.664	0.5045	7.76%		0.2082	2.52%
441.99	Humic Acids, Other (20%)	8	7	22.27	2.872	22.27		3.257	1.539	14.62%		0.5657	2.51%
451.00	Hydrophobic Fulvic Acids, Gravimetry, acid dissolved binds hydrop... (%)	1		2.005									

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.

# magruder fertilizer

## check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 200111

### Method Precision Report

6-2-4 w/S & Humic Acids

Issue Date : 02/29/2020

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 (%)	35	34	6.429	0.2259	0.2191	0.0778	0.2325	3.41%	1.21%	3.62%	2.989
010.60	Total N, Combustion (6%)	58	54	7.110	0.1814	0.1655	0.1050	0.1960	2.33%	1.48%	2.76%	1.866
010.99	Total N, Other (6%)	11	10	6.874	0.2401	0.2315	0.0902	0.2484	3.37%	1.31%	3.61%	2.756
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	18	16	4.113	0.9949	0.9927	0.0938	0.9971	24.13%	2.28%	24.24%	10.63
020.50	Total P2O5, ICP (%)	21	19	3.864	0.2571	0.2518	0.0734	0.2622	6.52%	1.90%	6.79%	3.571
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (2%)	10	10	3.785	0.1536	0.1481	0.0576	0.1589	3.91%	1.52%	4.20%	2.757
041.99	Direct Available P2O5, Other (2%)	11	9	2.635	0.5608	0.5590	0.0637	0.5626	21.21%	2.42%	21.35%	8.828
050.00	Soluble K2O, STPB Oxalate (4%)	10	10	3.986	0.4884	0.4765	0.1515	0.5001	11.95%	3.80%	12.54%	3.300
050.50	Soluble K2O, ICP (Oxalate) (4%)	8	8	4.075	0.2363	0.2274	0.0907	0.2449	5.58%	2.23%	6.01%	2.700
050.52	Soluble K2O, ICP (Citrate-EDTA) (4%)	12	12	4.032	0.2650	0.2581	0.0850	0.2717	6.40%	2.11%	6.74%	3.198
050.99	Soluble K2O, Other (4%)	47	44	3.993	0.1629	0.1524	0.0814	0.1728	3.82%	2.04%	4.33%	2.121
148.01	Total S, Gravimetric - sulfate and elemental (5%)	10	10	7.656	1.384	1.383	0.0954	1.386	18.06%	1.25%	18.10%	14.53
148.07	Total S, ICP, test portion as in 2017.02 (5%)	16	14	8.181	0.4721	0.4529	0.1884	0.4905	5.54%	2.30%	6.00%	2.603
148.99	Total S, Other (5%)	16	16	6.605	1.692	1.689	0.1390	1.695	25.57%	2.11%	25.66%	12.19
251.30	Acid Soluble Pb, ICP (ppm)	8	8	6.319	3.092	3.072	0.4923	3.112	48.63%	7.79%	49.25%	6.321
441.00	Humic Acids, Gravimetry, Ash-free, alkali dissolved, acid precipitated (20%)	18	16	21.40	1.633	1.630	0.1565	1.637	7.62%	0.73%	7.65%	10.46

Notes: Precision data calculated when 8 or more Tests included.

# magruder fertilizer

## check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 200111  
6-2-4 w/S & Humic Acids

Lab Values

# Methods: 133

# Labs Reporting: 97

Issue Date : 02/29/2020

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0309	2.580	0.4000	6.346	0.1958	0.1114	7	-17.39	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0456	6.175	0.0500	6.346	0.1958	0.1114	7	-0.79	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0481	6.320	0.0400	6.346	0.1958	0.1114	7	-0.12	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0136	6.430	0.0200	6.346	0.1958	0.1114	7	0.39	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0486	6.465	0.1700	6.346	0.1958	0.1114	7	0.55	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0444	6.485	0.0900	6.346	0.1958	0.1114	7	0.64	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0451	6.495	0.0100	6.346	0.1958	0.1114	7	0.69	NA	0
001.99	Ammoniacal N, Other (%)	0538	6.035	0.1300	6.441	0.2636	0.0935	35	-1.54	NA	0
001.99	Ammoniacal N, Other (%)	0535	6.050	0.1000	6.441	0.2636	0.0935	35	-1.48	NA	0
001.99	Ammoniacal N, Other (%)	0532	6.115	0.0500	6.441	0.2636	0.0935	35	-1.24	NA	0
001.99	Ammoniacal N, Other (%)	0423	6.135	0.1500	6.441	0.2636	0.0935	35	-1.16	NA	0
001.99	Ammoniacal N, Other (%)	0420	6.150	0.0600	6.441	0.2636	0.0935	35	-1.10	NA	0
001.99	Ammoniacal N, Other (%)	0536	6.150	0.1000	6.441	0.2636	0.0935	35	-1.10	NA	0
001.99	Ammoniacal N, Other (%)	0556	6.175	0.1500	6.441	0.2636	0.0935	35	-1.01	NA	0
001.99	Ammoniacal N, Other (%)	0527	6.180	0.0200	6.441	0.2636	0.0935	35	-0.99	NA	0
001.99	Ammoniacal N, Other (%)	0559	6.195	0.0100	6.441	0.2636	0.0935	35	-0.93	NA	0
001.99	Ammoniacal N, Other (%)	0540	6.265	0.1500	6.441	0.2636	0.0935	35	-0.67	NA	0
001.99	Ammoniacal N, Other (%)	0513	6.310	0.0600	6.441	0.2636	0.0935	35	-0.50	NA	0
001.99	Ammoniacal N, Other (%)	0220	6.325	0.2300	6.441	0.2636	0.0935	35	-0.44	NA	0
001.99	Ammoniacal N, Other (%)	0545	6.350	0.0200	6.441	0.2636	0.0935	35	-0.34	NA	0
001.99	Ammoniacal N, Other (%)	0546	6.350	0.0000	6.441	0.2636	0.0935	35	-0.34	NA	0
001.99	Ammoniacal N, Other (%)	0537	6.400	0.1200	6.441	0.2636	0.0935	35	-0.15	NA	0
001.99	Ammoniacal N, Other (%)	0562	6.405	0.1900	6.441	0.2636	0.0935	35	-0.14	NA	0
001.99	Ammoniacal N, Other (%)	0493	6.450	0.1000	6.441	0.2636	0.0935	35	0.03	NA	0
001.99	Ammoniacal N, Other (%)	0027	6.469	0.2580	6.441	0.2636	0.0935	35	0.11	NA	0
001.99	Ammoniacal N, Other (%)	0524	6.490	0.1400	6.441	0.2636	0.0935	35	0.19	NA	0
001.99	Ammoniacal N, Other (%)	0476	6.517	0.0275	6.441	0.2636	0.0935	35	0.29	NA	0
001.99	Ammoniacal N, Other (%)	0371	6.520	0.0800	6.441	0.2636	0.0935	35	0.30	NA	0
001.99	Ammoniacal N, Other (%)	0558	6.525	0.0900	6.441	0.2636	0.0935	35	0.32	NA	0
001.99	Ammoniacal N, Other (%)	0549	6.550	0.1000	6.441	0.2636	0.0935	35	0.41	NA	0
001.99	Ammoniacal N, Other (%)	0520	6.575	0.1500	6.441	0.2636	0.0935	35	0.51	NA	0
001.99	Ammoniacal N, Other (%)	0405	6.580	0.0000	6.441	0.2636	0.0935	35	0.53	NA	0
001.99	Ammoniacal N, Other (%)	0096	6.585	0.0900	6.441	0.2636	0.0935	35	0.55	NA	0
001.99	Ammoniacal N, Other (%)	0522	6.635	0.1100	6.441	0.2636	0.0935	35	0.74	NA	0
001.99	Ammoniacal N, Other (%)	0368	6.667	0.0060	6.441	0.2636	0.0935	35	0.86	NA	0
001.99	Ammoniacal N, Other (%)	0029	6.680	0.1400	6.441	0.2636	0.0935	35	0.91	NA	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
001.99	Ammoniacal N, Other (%)	0544	6.710	0.0400	6.441	0.2636	0.0935	35	1.02	NA	0
001.99	Ammoniacal N, Other (%)	0550	6.720	0.0200	6.441	0.2636	0.0935	35	1.06	NA	0
001.99	Ammoniacal N, Other (%)	0255	6.735	0.0700	6.441	0.2636	0.0935	35	1.12	NA	0
001.99	Ammoniacal N, Other (%)	0564	6.790	0.0400	6.441	0.2636	0.0935	35	1.32	NA	0
001.99	Ammoniacal N, Other (%)	0565	6.795	0.0300	6.441	0.2636	0.0935	35	1.34	NA	0
001.99	Ammoniacal N, Other (%)	0553	7.800	0.2400	6.441	0.2636	0.0935	35	5.16	NA	0
010.11	Total N, Modified Comprehensive (6%)	0535	6.150	0.1000	6.422	0.4377	0.1684	4	-0.62		0
010.11	Total N, Modified Comprehensive (6%)	0456	6.175	0.0500	6.422	0.4377	0.1684	4	-0.56		0
010.11	Total N, Modified Comprehensive (6%)	0540	6.290	0.0800	6.422	0.4377	0.1684	4	-0.30		0
010.11	Total N, Modified Comprehensive (6%)	0510	7.072	0.4436	6.422	0.4377	0.1684	4	1.49		0
010.12	Total N, Salicylic (6%)	0498	6.200	0.0000				2			0
010.12	Total N, Salicylic (6%)	0481	6.820	0.0600				2			0
010.60	Total N, Combustion (6%)	0534	6.415	0.0300	7.105	0.1952	0.1130	57	-3.54	Low	0
010.60	Total N, Combustion (6%)	0452	6.515	0.1300	7.105	0.1952	0.1130	57	-3.03	Low	0
010.60	Total N, Combustion (6%)	0230	6.700	0.2000	7.105	0.1952	0.1130	57	-2.08	OK	0
010.60	Total N, Combustion (6%)	0072	6.720	0.2600	7.105	0.1952	0.1130	57	-1.98	OK	0
010.60	Total N, Combustion (6%)	0420	6.775	0.0500	7.105	0.1952	0.1130	57	-1.69	OK	0
010.60	Total N, Combustion (6%)	0034	6.776	0.2150	7.105	0.1952	0.1130	57	-1.69	OK	0
010.60	Total N, Combustion (6%)	0493	6.800	0.1000	7.105	0.1952	0.1130	57	-1.57	OK	0
010.60	Total N, Combustion (6%)	0027	6.835	0.1500	7.105	0.1952	0.1130	57	-1.39	OK	0
010.60	Total N, Combustion (6%)	0486	6.885	0.0900	7.105	0.1952	0.1130	57	-1.13	OK	0
010.60	Total N, Combustion (6%)	0521	6.913	0.0000	7.105	0.1952	0.1130	57	-0.99	OK	0
010.60	Total N, Combustion (6%)	0220	6.915	0.1500	7.105	0.1952	0.1130	57	-0.98	OK	0
010.60	Total N, Combustion (6%)	0095	6.935	0.0500	7.105	0.1952	0.1130	57	-0.87	OK	0
010.60	Total N, Combustion (6%)	0550	6.940	0.0400	7.105	0.1952	0.1130	57	-0.85	OK	0
010.60	Total N, Combustion (6%)	0354	6.940	0.0800	7.105	0.1952	0.1130	57	-0.85	OK	0
010.60	Total N, Combustion (6%)	0356	6.954	0.0160	7.105	0.1952	0.1130	57	-0.78	OK	0
010.60	Total N, Combustion (6%)	0025	6.993	0.0490	7.105	0.1952	0.1130	57	-0.58	OK	0
010.60	Total N, Combustion (6%)	0234	6.995	0.0100	7.105	0.1952	0.1130	57	-0.57	OK	0
010.60	Total N, Combustion (6%)	0501	7.005	0.0100	7.105	0.1952	0.1130	57	-0.51	OK	0
010.60	Total N, Combustion (6%)	0291	7.045	0.0100	7.105	0.1952	0.1130	57	-0.31	OK	0
010.60	Total N, Combustion (6%)	0029	7.051	0.0010	7.105	0.1952	0.1130	57	-0.28	OK	0
010.60	Total N, Combustion (6%)	0360	7.065	0.2100	7.105	0.1952	0.1130	57	-0.21	OK	0
010.60	Total N, Combustion (6%)	0481	7.085	0.0100	7.105	0.1952	0.1130	57	-0.10	OK	0
010.60	Total N, Combustion (6%)	0527	7.086	0.0530	7.105	0.1952	0.1130	57	-0.10	OK	0
010.60	Total N, Combustion (6%)	0405	7.090	0.0000	7.105	0.1952	0.1130	57	-0.08	OK	0
010.60	Total N, Combustion (6%)	0451	7.121	0.1020	7.105	0.1952	0.1130	57	0.08	OK	0
010.60	Total N, Combustion (6%)	0292	7.125	0.0300	7.105	0.1952	0.1130	57	0.10	OK	0
010.60	Total N, Combustion (6%)	0423	7.140	0.1000	7.105	0.1952	0.1130	57	0.18	OK	0
010.60	Total N, Combustion (6%)	0041	7.141	0.0430	7.105	0.1952	0.1130	57	0.18	OK	0
010.60	Total N, Combustion (6%)	0035	7.145	0.3700	7.105	0.1952	0.1130	57	0.20	OK	0
010.60	Total N, Combustion (6%)	0114	7.150	0.2400	7.105	0.1952	0.1130	57	0.23	OK	0
010.60	Total N, Combustion (6%)	0157	7.150	0.0200	7.105	0.1952	0.1130	57	0.23	OK	0
010.60	Total N, Combustion (6%)	0450	7.150	0.3000	7.105	0.1952	0.1130	57	0.23	OK	0
010.60	Total N, Combustion (6%)	0043	7.165	0.1100	7.105	0.1952	0.1130	57	0.30	OK	0
010.60	Total N, Combustion (6%)	0324	7.175	0.0900	7.105	0.1952	0.1130	57	0.36	OK	0
010.60	Total N, Combustion (6%)	0368	7.178	0.0470	7.105	0.1952	0.1130	57	0.37	OK	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
010.60	Total N, Combustion (6%)	0494	7.180	0.1400	7.105	0.1952	0.1130	57	0.38	OK	0
010.60	Total N, Combustion (6%)	0561	7.195	0.0700	7.105	0.1952	0.1130	57	0.46	OK	0
010.60	Total N, Combustion (6%)	0231	7.200	0.0000	7.105	0.1952	0.1130	57	0.48	OK	0
010.60	Total N, Combustion (6%)	0422	7.210	0.0200	7.105	0.1952	0.1130	57	0.54	OK	0
010.60	Total N, Combustion (6%)	0255	7.214	0.2540	7.105	0.1952	0.1130	57	0.56	OK	0
010.60	Total N, Combustion (6%)	0421	7.225	0.0300	7.105	0.1952	0.1130	57	0.61	OK	0
010.60	Total N, Combustion (6%)	0086	7.226	0.1126	7.105	0.1952	0.1130	57	0.62	OK	0
010.60	Total N, Combustion (6%)	0177	7.230	0.0060	7.105	0.1952	0.1130	57	0.64	OK	0
010.60	Total N, Combustion (6%)	0136	7.235	0.2700	7.105	0.1952	0.1130	57	0.66	OK	0
010.60	Total N, Combustion (6%)	0547	7.240	0.1000	7.105	0.1952	0.1130	57	0.69	OK	0
010.60	Total N, Combustion (6%)	0525	7.245	0.2100	7.105	0.1952	0.1130	57	0.71	OK	0
010.60	Total N, Combustion (6%)	0377	7.260	0.0600	7.105	0.1952	0.1130	57	0.79	OK	0
010.60	Total N, Combustion (6%)	0055	7.272	0.2480	7.105	0.1952	0.1130	57	0.85	OK	0
010.60	Total N, Combustion (6%)	0073	7.275	0.0100	7.105	0.1952	0.1130	57	0.87	OK	0
010.60	Total N, Combustion (6%)	0049	7.290	0.0400	7.105	0.1952	0.1130	57	0.95	OK	0
010.60	Total N, Combustion (6%)	0516	7.300	0.4000	7.105	0.1952	0.1130	57	1.00	OK	0
010.60	Total N, Combustion (6%)	0402	7.326	0.0330	7.105	0.1952	0.1130	57	1.13	OK	0
010.60	Total N, Combustion (6%)	0096	7.335	0.0100	7.105	0.1952	0.1130	57	1.18	OK	0
010.60	Total N, Combustion (6%)	0023	7.350	0.1000	7.105	0.1952	0.1130	57	1.25	OK	0
010.60	Total N, Combustion (6%)	0040	7.350	0.5000	7.105	0.1952	0.1130	57	1.25	OK	0
010.60	Total N, Combustion (6%)	0325	7.435	0.1700	7.105	0.1952	0.1130	57	1.69	OK	0
010.60	Total N, Combustion (6%)	0102	7.535	0.2900	7.105	0.1952	0.1130	57	2.20	OK	0
010.60	Total N, Combustion (6%)	0485	6.607	0.5500	7.105	0.1952	0.1130	57	-2.55	OK	1
010.99	Total N, Other (6%)	0560	6.050	0.3000	6.827	0.3129	0.1240	11	-2.32	Low	0
010.99	Total N, Other (6%)	0558	6.525	0.0900	6.827	0.3129	0.1240	11	-0.90	OK	0
010.99	Total N, Other (6%)	0520	6.625	0.2500	6.827	0.3129	0.1240	11	-0.60	OK	0
010.99	Total N, Other (6%)	0562	6.645	0.2100	6.827	0.3129	0.1240	11	-0.55	OK	0
010.99	Total N, Other (6%)	0564	6.785	0.0300	6.827	0.3129	0.1240	11	-0.13	OK	0
010.99	Total N, Other (6%)	0565	6.800	0.1000	6.827	0.3129	0.1240	11	-0.08	OK	0
010.99	Total N, Other (6%)	0493	6.950	0.1000	6.827	0.3129	0.1240	11	0.37	OK	0
010.99	Total N, Other (6%)	0420	6.975	0.1100	6.827	0.3129	0.1240	11	0.44	OK	0
010.99	Total N, Other (6%)	0524	7.017	0.1135	6.827	0.3129	0.1240	11	0.57	OK	0
010.99	Total N, Other (6%)	0559	7.150	0.0200	6.827	0.3129	0.1240	11	0.97	OK	0
010.99	Total N, Other (6%)	0371	7.270	0.0400	6.827	0.3129	0.1240	11	1.32	OK	0
020.10	Total P2O5, Gravimetric Quinolinium MolybdoP (%)	0049	3.900	0.0200	3.957	0.0513	0.0667	3	-1.10		0
020.10	Total P2O5, Gravimetric Quinolinium MolybdoP (%)	0114	3.970	0.1400	3.957	0.0513	0.0667	3	0.26		0
020.10	Total P2O5, Gravimetric Quinolinium MolybdoP (%)	0493	4.000	0.0400	3.957	0.0513	0.0667	3	0.84		0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0558	2.050	0.0200	4.191	0.8371	0.1009	17	-2.56	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0476	2.701	0.0401	4.191	0.8371	0.1009	17	-1.78	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0309	3.510	0.1600	4.191	0.8371	0.1009	17	-0.81	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0450	3.695	0.2500	4.191	0.8371	0.1009	17	-0.59	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0371	3.815	0.1100	4.191	0.8371	0.1009	17	-0.45	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0420	3.915	0.1900	4.191	0.8371	0.1009	17	-0.33	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0177	4.002	0.1305	4.191	0.8371	0.1009	17	-0.23	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0419	4.040	0.0600	4.191	0.8371	0.1009	17	-0.18	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0510	4.058	0.2673	4.191	0.8371	0.1009	17	-0.16	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0481	4.210	0.0200	4.191	0.8371	0.1009	17	0.02	NA	0



Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0550	4.290	0.0600	4.191	0.8371	0.1009	17	0.12	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0027	4.385	0.1900	4.191	0.8371	0.1009	17	0.23	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0522	4.713	0.0150	4.191	0.8371	0.1009	17	0.62	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0231	4.775	0.0500	4.191	0.8371	0.1009	17	0.70	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0356	5.081	0.0120	4.191	0.8371	0.1009	17	1.06	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0405	6.575	0.0900	4.191	0.8371	0.1009	17	2.85	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0292	8.365	0.0500	4.191	0.8371	0.1009	17	4.99	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0324	4.200	0.6000	4.191	0.8371	0.1009	17	0.01	NA	1
020.40	Total P2O5, Automated (%)	0456	2.255	0.0900	3.468	1.053	0.0900	3	-1.15		0
020.40	Total P2O5, Automated (%)	0096	4.000	0.1000	3.468	1.053	0.0900	3	0.50		0
020.40	Total P2O5, Automated (%)	0035	4.150	0.0800	3.468	1.053	0.0900	3	0.65		0
020.50	Total P2O5, ICP (%)	0255	3.046	0.4440	3.810	0.3142	0.1137	21	-2.43	NA	0
020.50	Total P2O5, ICP (%)	0422	3.369	0.4420	3.810	0.3142	0.1137	21	-1.40	NA	0
020.50	Total P2O5, ICP (%)	0501	3.390	0.0400	3.810	0.3142	0.1137	21	-1.34	NA	0
020.50	Total P2O5, ICP (%)	0524	3.390	0.2727	3.810	0.3142	0.1137	21	-1.34	NA	0
020.50	Total P2O5, ICP (%)	0389	3.465	0.0300	3.810	0.3142	0.1137	21	-1.10	NA	0
020.50	Total P2O5, ICP (%)	0546	3.724	0.1140	3.810	0.3142	0.1137	21	-0.27	NA	0
020.50	Total P2O5, ICP (%)	0157	3.765	0.0300	3.810	0.3142	0.1137	21	-0.14	NA	0
020.50	Total P2O5, ICP (%)	0423	3.790	0.1200	3.810	0.3142	0.1137	21	-0.06	NA	0
020.50	Total P2O5, ICP (%)	0525	3.800	0.1600	3.810	0.3142	0.1137	21	-0.03	NA	0
020.50	Total P2O5, ICP (%)	0451	3.830	0.0400	3.810	0.3142	0.1137	21	0.06	NA	0
020.50	Total P2O5, ICP (%)	0516	3.850	0.1000	3.810	0.3142	0.1137	21	0.13	NA	0
020.50	Total P2O5, ICP (%)	0521	3.878	0.0000	3.810	0.3142	0.1137	21	0.22	NA	0
020.50	Total P2O5, ICP (%)	0234	3.890	0.0800	3.810	0.3142	0.1137	21	0.26	NA	0
020.50	Total P2O5, ICP (%)	0552	3.905	0.0500	3.810	0.3142	0.1137	21	0.30	NA	0
020.50	Total P2O5, ICP (%)	0433	3.925	0.1900	3.810	0.3142	0.1137	21	0.37	NA	0
020.50	Total P2O5, ICP (%)	0527	4.028	0.0059	3.810	0.3142	0.1137	21	0.70	NA	0
020.50	Total P2O5, ICP (%)	0402	4.065	0.0700	3.810	0.3142	0.1137	21	0.81	NA	0
020.50	Total P2O5, ICP (%)	0444	4.075	0.0500	3.810	0.3142	0.1137	21	0.84	NA	0
020.50	Total P2O5, ICP (%)	0291	4.095	0.0100	3.810	0.3142	0.1137	21	0.91	NA	0
020.50	Total P2O5, ICP (%)	0231	4.150	0.0600	3.810	0.3142	0.1137	21	1.08	NA	0
020.50	Total P2O5, ICP (%)	0452	4.400	0.0800	3.810	0.3142	0.1137	21	1.88	NA	0
020.99	Total P2O5, Other (%)	0565	2.065	0.0300	3.211	1.045	0.0740	5	-0.96		0
020.99	Total P2O5, Other (%)	0564	2.070	0.0800	3.211	1.045	0.0740	5	-0.95		0
020.99	Total P2O5, Other (%)	0520	3.895	0.0300	3.211	1.045	0.0740	5	0.57		0
020.99	Total P2O5, Other (%)	0513	4.010	0.0200	3.211	1.045	0.0740	5	0.67		0
020.99	Total P2O5, Other (%)	0562	4.015	0.2100	3.211	1.045	0.0740	5	0.67		0
020.99	Total P2O5, Other (%)	0515	2.821	1.142	3.211	1.045	0.0740	5	-0.33		1
030.40	Citrate Insoluble P2O5, Automated, test portion 963.03 A-B (%)	0096	0.0400	0.0000				1			0
040.20	Indirect Available P2O5, Spectrophotometric (4%)	0547	3.765	0.1300				2			0
040.20	Indirect Available P2O5, Spectrophotometric (4%)	0561	4.705	0.0100				2			0
040.40	Indirect Available P2O5, Automated (4%)	0096	3.965	0.0900				1			0
041.10	Direct Available P2O5, Gravimetric Quinolinium (2%)	0102	3.850	0.1000	3.917	0.0649	0.3038	3	-1.03		0
041.10	Direct Available P2O5, Gravimetric Quinolinium (2%)	0494	3.920	0.7600	3.917	0.0649	0.3038	3	0.05		0
041.10	Direct Available P2O5, Gravimetric Quinolinium (2%)	0086	3.980	0.0515	3.917	0.0649	0.3038	3	0.97		0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext. (2%)	0220	3.760	0.1000	3.917	0.1314	0.1102	5	-1.19		0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext. (2%)	0073	3.825	0.2900	3.917	0.1314	0.1102	5	-0.70		0

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041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext. (2%)	0513	3.910	0.0200	3.917	0.1314	0.1102	5	-0.05		0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext. (2%)	0485	4.005	0.0111	3.917	0.1314	0.1102	5	0.67		0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext. (2%)	0055	4.085	0.1300	3.917	0.1314	0.1102	5	1.28		0
041.20	Direct Available P2O5, Spectrophotometric (2%)	0553	2.395	0.0100	3.050	0.7415	0.2067	3	-0.88		0
041.20	Direct Available P2O5, Spectrophotometric (2%)	0498	2.900	0.2000	3.050	0.7415	0.2067	3	-0.20		0
041.20	Direct Available P2O5, Spectrophotometric (2%)	0027	3.855	0.4100	3.050	0.7415	0.2067	3	1.09		0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (2%)	0231	3.780	0.0600	4.753	1.416	0.0533	6	-0.61	Low	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (2%)	0544	3.920	0.0400	4.753	1.416	0.0533	6	-0.52	Low	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (2%)	0354	4.065	0.0500	4.753	1.416	0.0533	6	-0.43	Low	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (2%)	0522	4.085	0.0400	4.753	1.416	0.0533	6	-0.42	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (2%)	0055	5.985	0.1100	4.753	1.416	0.0533	6	0.78	High	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (2%)	0405	6.680	0.0200	4.753	1.416	0.0533	6	1.21	High	0
041.40	Direct Available P2O5, Automated, Citrate-EDTA Ext. (2%)	0029	5.272	0.0570				2			0
041.40	Direct Available P2O5, Automated, Citrate-EDTA Ext. (2%)	0095	6.095	0.1500				2			0
041.50	Direct Available P2O5, ICP (2%)	0325	2.850	1.500	3.542	0.6035	0.5660	3	-1.15		0
041.50	Direct Available P2O5, ICP (2%)	0231	3.815	0.1900	3.542	0.6035	0.5660	3	0.45		0
041.50	Direct Available P2O5, ICP (2%)	0421	3.960	0.0080	3.542	0.6035	0.5660	3	0.69		0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (2%)	0423	3.490	0.0800	3.791	0.1604	0.0637	10	-1.75	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (2%)	0360	3.605	0.0700	3.791	0.1604	0.0637	10	-1.08	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (2%)	0040	3.700	0.0000	3.791	0.1604	0.0637	10	-0.53	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (2%)	0136	3.745	0.0700	3.791	0.1604	0.0637	10	-0.27	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (2%)	0025	3.815	0.0100	3.791	0.1604	0.0637	10	0.14	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (2%)	0117	3.824	0.0274	3.791	0.1604	0.0637	10	0.19	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (2%)	0377	3.825	0.1500	3.791	0.1604	0.0637	10	0.20	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (2%)	0494	3.945	0.1300	3.791	0.1604	0.0637	10	0.89	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (2%)	0023	3.950	0.1000	3.791	0.1604	0.0637	10	0.92	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (2%)	0043	3.950	0.0000	3.791	0.1604	0.0637	10	0.92	OK	0
041.99	Direct Available P2O5, Other (2%)	0536	2.020	0.0200	2.651	0.6023	0.1020	10	-0.97	OK	0
041.99	Direct Available P2O5, Other (2%)	0559	2.095	0.0100	2.651	0.6023	0.1020	10	-0.86	OK	0
041.99	Direct Available P2O5, Other (2%)	0560	2.150	0.1000	2.651	0.6023	0.1020	10	-0.77	OK	0
041.99	Direct Available P2O5, Other (2%)	0532	2.210	0.0800	2.651	0.6023	0.1020	10	-0.68	OK	0
041.99	Direct Available P2O5, Other (2%)	0540	2.495	0.0900	2.651	0.6023	0.1020	10	-0.24	OK	0
041.99	Direct Available P2O5, Other (2%)	0537	2.795	0.3100	2.651	0.6023	0.1020	10	0.22	OK	0
041.99	Direct Available P2O5, Other (2%)	0535	2.950	0.1000	2.651	0.6023	0.1020	10	0.46	OK	0
041.99	Direct Available P2O5, Other (2%)	0538	3.010	0.1400	2.651	0.6023	0.1020	10	0.55	OK	0
041.99	Direct Available P2O5, Other (2%)	0562	3.285	0.1300	2.651	0.6023	0.1020	10	0.98	OK	0
041.99	Direct Available P2O5, Other (2%)	0545	3.500	0.0400	2.651	0.6023	0.1020	10	1.31	High	0
041.99	Direct Available P2O5, Other (2%)	0230	5.010	0.5800	2.651	0.6023	0.1020	10	3.64	High	1
048.20	Water Soluble P2O5, Spectrophotometric (%)	0420	3.320	0.0200				1			0
048.40	Water Soluble P2O5, Automated (%)	0096	2.770	0.0800				1			0
048.50	Water Soluble P2O5, ICP (%)	0444	2.915	0.0900				1			0
048.99	Water Soluble P2O5, Other (%)	0556	2.300	0.2000				2			0
048.99	Water Soluble P2O5, Other (%)	0562	3.015	0.1900				2			0
050.00	Soluble K2O, STPB Oxalate (4%)	0405	3.210	0.0600	3.958	0.4644	0.1635	10	-1.50	Low	0
050.00	Soluble K2O, STPB Oxalate (4%)	0522	3.628	0.0250	3.958	0.4644	0.1635	10	-0.66	OK	0
050.00	Soluble K2O, STPB Oxalate (4%)	0544	3.650	0.0600	3.958	0.4644	0.1635	10	-0.62	OK	0
050.00	Soluble K2O, STPB Oxalate (4%)	0114	3.870	0.4600	3.958	0.4644	0.1635	10	-0.18	OK	0

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050.00	Soluble K2O, STPB Oxalate (4%)	0220	3.890	0.1000	3.958	0.4644	0.1635	10	-0.14	OK	0
050.00	Soluble K2O, STPB Oxalate (4%)	0049	3.900	0.1800	3.958	0.4644	0.1635	10	-0.12	OK	0
050.00	Soluble K2O, STPB Oxalate (4%)	0494	4.060	0.2800	3.958	0.4644	0.1635	10	0.20	OK	0
050.00	Soluble K2O, STPB Oxalate (4%)	0550	4.220	0.0000	3.958	0.4644	0.1635	10	0.52	OK	0
050.00	Soluble K2O, STPB Oxalate (4%)	0102	4.450	0.3000	3.958	0.4644	0.1635	10	0.98	High	0
050.00	Soluble K2O, STPB Oxalate (4%)	0055	4.985	0.1700	3.958	0.4644	0.1635	10	2.06	High	0
050.30	Soluble K2O, AA (Oxalate) (4%)	0309	3.420	0.2200	3.920	0.2386	0.1480	6	-1.87	Low	0
050.30	Soluble K2O, AA (Oxalate) (4%)	0040	3.800	0.0000	3.920	0.2386	0.1480	6	-0.45	OK	0
050.30	Soluble K2O, AA (Oxalate) (4%)	0356	3.938	0.1080	3.920	0.2386	0.1480	6	0.07	OK	0
050.30	Soluble K2O, AA (Oxalate) (4%)	0420	4.005	0.1100	3.920	0.2386	0.1480	6	0.32	OK	0
050.30	Soluble K2O, AA (Oxalate) (4%)	0073	4.085	0.0300	3.920	0.2386	0.1480	6	0.62	OK	0
050.30	Soluble K2O, AA (Oxalate) (4%)	0157	4.130	0.4200	3.920	0.2386	0.1480	6	0.78	OK	0
050.50	Soluble K2O, ICP (Oxalate) (4%)	0422	3.690	0.1600	4.075	0.2680	0.1075	8	-1.31	OK	0
050.50	Soluble K2O, ICP (Oxalate) (4%)	0055	3.840	0.0200	4.075	0.2680	0.1075	8	-0.80	OK	0
050.50	Soluble K2O, ICP (Oxalate) (4%)	0292	3.995	0.1900	4.075	0.2680	0.1075	8	-0.27	OK	0
050.50	Soluble K2O, ICP (Oxalate) (4%)	0231	4.050	0.0000	4.075	0.2680	0.1075	8	-0.09	OK	0
050.50	Soluble K2O, ICP (Oxalate) (4%)	0444	4.145	0.0500	4.075	0.2680	0.1075	8	0.24	OK	0
050.50	Soluble K2O, ICP (Oxalate) (4%)	0157	4.165	0.1100	4.075	0.2680	0.1075	8	0.31	OK	0
050.50	Soluble K2O, ICP (Oxalate) (4%)	0324	4.295	0.1500	4.075	0.2680	0.1075	8	0.75	OK	0
050.50	Soluble K2O, ICP (Oxalate) (4%)	0230	4.420	0.1800	4.075	0.2680	0.1075	8	1.18	OK	0
050.51	Soluble K2O, ICP (Citrate) (4%)	0291	4.355	0.0100				2			0
050.51	Soluble K2O, ICP (Citrate) (4%)	0452	4.400	0.1000				2			0
050.52	Soluble K2O, ICP (Citrate-EDTA) (4%)	0136	3.445	0.1900	4.051	0.2548	0.1092	12	-2.38	Low	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (4%)	0485	3.708	0.0530	4.051	0.2548	0.1092	12	-1.35	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (4%)	0360	3.895	0.1500	4.051	0.2548	0.1092	12	-0.61	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (4%)	0486	3.905	0.1100	4.051	0.2548	0.1092	12	-0.57	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (4%)	0025	4.050	0.0600	4.051	0.2548	0.1092	12	0.00	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (4%)	0423	4.050	0.1600	4.051	0.2548	0.1092	12	0.00	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (4%)	0377	4.135	0.0700	4.051	0.2548	0.1092	12	0.33	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (4%)	0117	4.136	0.0268	4.051	0.2548	0.1092	12	0.33	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (4%)	0023	4.150	0.1000	4.051	0.2548	0.1092	12	0.39	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (4%)	0494	4.195	0.0900	4.051	0.2548	0.1092	12	0.57	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (4%)	0354	4.290	0.1800	4.051	0.2548	0.1092	12	0.94	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (4%)	0043	4.430	0.1200	4.051	0.2548	0.1092	12	1.49	OK	0
050.60	Soluble K2O, Flame Photometric (Oxalate) (4%)	0476	3.079	0.1079				2			0
050.60	Soluble K2O, Flame Photometric (Oxalate) (4%)	0510	3.772	0.0089				2			0
050.61	Soluble K2O, Flame Photometric (Citrate) (4%)	0456	3.780	0.2000	3.878	0.1492	0.1233	3	-0.66		0
050.61	Soluble K2O, Flame Photometric (Citrate) (4%)	0035	3.805	0.0700	3.878	0.1492	0.1233	3	-0.49		0
050.61	Soluble K2O, Flame Photometric (Citrate) (4%)	0535	4.050	0.1000	3.878	0.1492	0.1233	3	1.15		0
050.62	Soluble K2O, Flame Photometric (Citrate-EDTA) (4%)	0535	4.050	0.1000	4.131	0.0908	0.0980	4	-0.89		0
050.62	Soluble K2O, Flame Photometric (Citrate-EDTA) (4%)	0029	4.057	0.2020	4.131	0.0908	0.0980	4	-0.81		0
050.62	Soluble K2O, Flame Photometric (Citrate-EDTA) (4%)	0513	4.185	0.0500	4.131	0.0908	0.0980	4	0.60		0
050.62	Soluble K2O, Flame Photometric (Citrate-EDTA) (4%)	0095	4.230	0.0400	4.131	0.0908	0.0980	4	1.10		0
050.99	Soluble K2O, Other (4%)	0545	3.510	0.0200	3.981	0.1726	0.0912	47	-2.73	Low	0
050.99	Soluble K2O, Other (4%)	0518	3.600	0.0000	3.981	0.1726	0.0912	47	-2.20	OK	0
050.99	Soluble K2O, Other (4%)	0516	3.650	0.1000	3.981	0.1726	0.0912	47	-1.92	OK	0
050.99	Soluble K2O, Other (4%)	0371	3.740	0.0000	3.981	0.1726	0.0912	47	-1.39	OK	0

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050.99	Soluble K2O, Other (4%)	0556	3.750	0.2000	3.981	0.1726	0.0912	47	-1.34	OK	0
050.99	Soluble K2O, Other (4%)	0565	3.770	0.0200	3.981	0.1726	0.0912	47	-1.22	OK	0
050.99	Soluble K2O, Other (4%)	0564	3.770	0.0800	3.981	0.1726	0.0912	47	-1.22	OK	0
050.99	Soluble K2O, Other (4%)	0537	3.775	0.3500	3.981	0.1726	0.0912	47	-1.19	OK	0
050.99	Soluble K2O, Other (4%)	0562	3.780	0.1400	3.981	0.1726	0.0912	47	-1.16	OK	0
050.99	Soluble K2O, Other (4%)	0524	3.844	0.3534	3.981	0.1726	0.0912	47	-0.79	OK	0
050.99	Soluble K2O, Other (4%)	0481	3.860	0.0600	3.981	0.1726	0.0912	47	-0.70	OK	0
050.99	Soluble K2O, Other (4%)	0325	3.900	0.2000	3.981	0.1726	0.0912	47	-0.47	OK	0
050.99	Soluble K2O, Other (4%)	0553	3.905	0.0300	3.981	0.1726	0.0912	47	-0.44	OK	0
050.99	Soluble K2O, Other (4%)	0255	3.910	0.1090	3.981	0.1726	0.0912	47	-0.41	OK	0
050.99	Soluble K2O, Other (4%)	0547	3.910	0.0200	3.981	0.1726	0.0912	47	-0.41	OK	0
050.99	Soluble K2O, Other (4%)	0402	3.930	0.0400	3.981	0.1726	0.0912	47	-0.29	OK	0
050.99	Soluble K2O, Other (4%)	0558	3.940	0.0400	3.981	0.1726	0.0912	47	-0.24	OK	0
050.99	Soluble K2O, Other (4%)	0560	3.950	0.3000	3.981	0.1726	0.0912	47	-0.18	OK	0
050.99	Soluble K2O, Other (4%)	0535	3.950	0.1000	3.981	0.1726	0.0912	47	-0.18	OK	0
050.99	Soluble K2O, Other (4%)	0549	3.950	0.1000	3.981	0.1726	0.0912	47	-0.18	OK	0
050.99	Soluble K2O, Other (4%)	0521	3.964	0.0000	3.981	0.1726	0.0912	47	-0.10	OK	0
050.99	Soluble K2O, Other (4%)	0546	3.975	0.0730	3.981	0.1726	0.0912	47	-0.04	OK	0
050.99	Soluble K2O, Other (4%)	0540	3.975	0.0500	3.981	0.1726	0.0912	47	-0.03	OK	0
050.99	Soluble K2O, Other (4%)	0451	3.980	0.0400	3.981	0.1726	0.0912	47	0.00	OK	0
050.99	Soluble K2O, Other (4%)	0536	3.985	0.0700	3.981	0.1726	0.0912	47	0.03	OK	0
050.99	Soluble K2O, Other (4%)	0096	3.995	0.2100	3.981	0.1726	0.0912	47	0.08	OK	0
050.99	Soluble K2O, Other (4%)	0538	4.000	0.1000	3.981	0.1726	0.0912	47	0.11	OK	0
050.99	Soluble K2O, Other (4%)	0421	4.013	0.0326	3.981	0.1726	0.0912	47	0.19	OK	0
050.99	Soluble K2O, Other (4%)	0527	4.025	0.0132	3.981	0.1726	0.0912	47	0.26	OK	0
050.99	Soluble K2O, Other (4%)	0433	4.030	0.0200	3.981	0.1726	0.0912	47	0.29	OK	0
050.99	Soluble K2O, Other (4%)	0551	4.030	0.0400	3.981	0.1726	0.0912	47	0.29	OK	0
050.99	Soluble K2O, Other (4%)	0531	4.040	0.0400	3.981	0.1726	0.0912	47	0.34	OK	0
050.99	Soluble K2O, Other (4%)	0389	4.040	0.0000	3.981	0.1726	0.0912	47	0.34	OK	0
050.99	Soluble K2O, Other (4%)	0525	4.060	0.2200	3.981	0.1726	0.0912	47	0.46	OK	0
050.99	Soluble K2O, Other (4%)	0419	4.090	0.0200	3.981	0.1726	0.0912	47	0.63	OK	0
050.99	Soluble K2O, Other (4%)	0559	4.095	0.0100	3.981	0.1726	0.0912	47	0.66	OK	0
050.99	Soluble K2O, Other (4%)	0552	4.095	0.0500	3.981	0.1726	0.0912	47	0.66	OK	0
050.99	Soluble K2O, Other (4%)	0234	4.100	0.0200	3.981	0.1726	0.0912	47	0.69	OK	0
050.99	Soluble K2O, Other (4%)	0493	4.150	0.1000	3.981	0.1726	0.0912	47	0.98	OK	0
050.99	Soluble K2O, Other (4%)	0532	4.160	0.0400	3.981	0.1726	0.0912	47	1.04	OK	0
050.99	Soluble K2O, Other (4%)	0177	4.165	0.0952	3.981	0.1726	0.0912	47	1.07	OK	0
050.99	Soluble K2O, Other (4%)	0515	4.171	0.3314	3.981	0.1726	0.0912	47	1.10	OK	0
050.99	Soluble K2O, Other (4%)	0501	4.195	0.0500	3.981	0.1726	0.0912	47	1.24	OK	0
050.99	Soluble K2O, Other (4%)	0520	4.240	0.2600	3.981	0.1726	0.0912	47	1.50	OK	0
050.99	Soluble K2O, Other (4%)	0027	4.260	0.0000	3.981	0.1726	0.0912	47	1.62	OK	0
050.99	Soluble K2O, Other (4%)	0450	4.270	0.1000	3.981	0.1726	0.0912	47	1.68	OK	0
050.99	Soluble K2O, Other (4%)	0561	4.340	0.0400	3.981	0.1726	0.0912	47	2.08	OK	0
060.00	Water (Free), Vacuum Oven (%)	0096	9.075	0.3700				1			0
060.99	Water (Free), Other (%)	0510	8.409	0.0973				1			0
101.00	Acid Soluble Ca, AA, inorganic 965.09 (%)	0553	0.4595	0.0350				1			0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0035	0.2990	0.0100	0.3685	0.1272	0.0140	5	-0.55		0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0420	0.3076	0.0080	0.3685	0.1272	0.0140	5	-0.48		0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0096	0.3095	0.0010	0.3685	0.1272	0.0140	5	-0.46		0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0451	0.3315	0.0210	0.3685	0.1272	0.0140	5	-0.29		0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0354	0.5950	0.0300	0.3685	0.1272	0.0140	5	1.78		0
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (%)	0423	0.2855	0.0110				1			0
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0136	0.2655	0.0010	0.3086	0.0478	0.0022	4	-0.90		0
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0494	0.2868	0.0002	0.3086	0.0478	0.0022	4	-0.46		0
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0527	0.3063	0.0058	0.3086	0.0478	0.0022	4	-0.05		0
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0421	0.3758	0.0017	0.3086	0.0478	0.0022	4	1.41		0
101.99	Acid Soluble Ca, Other (%)	0389	0.2500	0.0000				2			0
101.99	Acid Soluble Ca, Other (%)	0552	0.9700	0.2400				2			0
121.00	Acid Soluble Mg, AA, inorganic 965.09 (%)	0553	0.1555	0.0150				1			0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0096	0.1100	0.0000	0.1178	0.0086	0.0054	6	-0.81	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0420	0.1111	0.0001	0.1178	0.0086	0.0054	6	-0.70	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0354	0.1150	0.0100	0.1178	0.0086	0.0054	6	-0.29	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0444	0.1200	0.0000	0.1178	0.0086	0.0054	6	0.22	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0035	0.1205	0.0070	0.1178	0.0086	0.0054	6	0.28	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0451	0.1305	0.0150	0.1178	0.0086	0.0054	6	1.31	OK	0
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (%)	0423	0.1180	0.0060				1			0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0136	0.0990	0.0020	0.1386	0.0368	0.0162	5	-1.07		0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0494	0.1215	0.0097	0.1386	0.0368	0.0162	5	-0.46		0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0527	0.1360	0.0035	0.1386	0.0368	0.0162	5	-0.07		0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0515	0.1381	0.0628	0.1386	0.0368	0.0162	5	-0.01		0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0421	0.1983	0.0029	0.1386	0.0368	0.0162	5	1.62		0
121.99	Acid Soluble Mg, Other (%)	0524	0.0993	0.0002	0.1526	0.0769	0.0160	5	-0.69		0
121.99	Acid Soluble Mg, Other (%)	0389	0.1000	0.0000	0.1526	0.0769	0.0160	5	-0.68		0
121.99	Acid Soluble Mg, Other (%)	0516	0.1300	0.0000	0.1526	0.0769	0.0160	5	-0.29		0
121.99	Acid Soluble Mg, Other (%)	0515	0.1485	0.0096	0.1526	0.0769	0.0160	5	-0.05		0
121.99	Acid Soluble Mg, Other (%)	0552	0.2850	0.0700	0.1526	0.0769	0.0160	5	1.72		0
143.99	Elemental S, Other (%)	0255	6.286	0.8220	7.632	0.9441	0.6905	4	-1.43		0
143.99	Elemental S, Other (%)	0389	7.750	1.900	7.632	0.9441	0.6905	4	0.13		0
143.99	Elemental S, Other (%)	0481	8.025	0.0300	7.632	0.9441	0.6905	4	0.42		0
143.99	Elemental S, Other (%)	0291	8.465	0.0100	7.632	0.9441	0.6905	4	0.88		0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0498	6.900	0.2000	7.849	0.5755	0.1951	5	-1.65		0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0561	7.805	0.0300	7.849	0.5755	0.1951	5	-0.08		0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0544	7.970	0.0000	7.849	0.5755	0.1951	5	0.21		0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0485	8.171	0.1456	7.849	0.5755	0.1951	5	0.56		0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0550	8.400	0.6000	7.849	0.5755	0.1951	5	0.96		0
145.99	Sulfate S, HCl soluble, Other (%)	0444	7.915	0.1100				1			0
148.00	Total S, Combustion (5%)	0029	8.125	0.0000	8.468	0.3414	0.1815	6	-0.89	OK	0
148.00	Total S, Combustion (5%)	0025	8.242	0.1290	8.468	0.3414	0.1815	6	-0.59	OK	0
148.00	Total S, Combustion (5%)	0114	8.370	0.2400	8.468	0.3414	0.1815	6	-0.25	OK	0
148.00	Total S, Combustion (5%)	0157	8.525	0.5500	8.468	0.3414	0.1815	6	0.15	OK	0
148.00	Total S, Combustion (5%)	0136	8.565	0.0700	8.468	0.3414	0.1815	6	0.25	OK	0
148.00	Total S, Combustion (5%)	0451	9.200	0.1000	8.468	0.3414	0.1815	6	1.91	High	0
148.01	Total S, Gravimetric - sulfate and elemental (5%)	0532	5.040	0.1600	7.875	1.083	0.1186	10	-2.43	Low	0
148.01	Total S, Gravimetric - sulfate and elemental (5%)	0534	5.275	0.0500	7.875	1.083	0.1186	10	-2.23	Low	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
148.01	Total S, Gravimetric - sulfate and elemental (5%)	0029	7.405	0.0500	7.875	1.083	0.1186	10	-0.40	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (5%)	0157	8.115	0.1300	7.875	1.083	0.1186	10	0.21	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (5%)	0073	8.170	0.0200	7.875	1.083	0.1186	10	0.25	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (5%)	0485	8.171	0.1456	7.875	1.083	0.1186	10	0.25	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (5%)	0324	8.320	0.2200	7.875	1.083	0.1186	10	0.38	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (5%)	0230	8.460	0.2000	7.875	1.083	0.1186	10	0.50	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (5%)	0055	8.475	0.0700	7.875	1.083	0.1186	10	0.52	High	0
148.01	Total S, Gravimetric - sulfate and elemental (5%)	0405	9.130	0.1400	7.875	1.083	0.1186	10	1.08	High	0
148.07	Total S, ICP, test portion as in 2017.02 (5%)	0515	6.131	1.013	8.095	0.2296	0.3115	16	-8.55	Low	0
148.07	Total S, ICP, test portion as in 2017.02 (5%)	0023	7.450	0.1000	8.095	0.2296	0.3115	16	-2.81	Low	0
148.07	Total S, ICP, test portion as in 2017.02 (5%)	0546	7.837	0.4481	8.095	0.2296	0.3115	16	-1.13	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (5%)	0525	7.980	0.2600	8.095	0.2296	0.3115	16	-0.50	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (5%)	0444	8.000	0.0200	8.095	0.2296	0.3115	16	-0.41	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (5%)	0292	8.040	0.0800	8.095	0.2296	0.3115	16	-0.24	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (5%)	0117	8.064	0.3481	8.095	0.2296	0.3115	16	-0.14	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (5%)	0102	8.120	1.420	8.095	0.2296	0.3115	16	0.11	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (5%)	0421	8.127	0.0166	8.095	0.2296	0.3115	16	0.14	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (5%)	0527	8.127	0.1009	8.095	0.2296	0.3115	16	0.14	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (5%)	0177	8.131	0.0286	8.095	0.2296	0.3115	16	0.16	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (5%)	0402	8.220	0.0200	8.095	0.2296	0.3115	16	0.54	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (5%)	0040	8.250	0.1000	8.095	0.2296	0.3115	16	0.67	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (5%)	0494	8.329	0.7190	8.095	0.2296	0.3115	16	1.02	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (5%)	0043	8.355	0.1300	8.095	0.2296	0.3115	16	1.13	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (5%)	0486	9.620	0.1800	8.095	0.2296	0.3115	16	6.64	High	0
148.99	Total S, Other (5%)	0450	3.980	0.0800	6.605	1.919	0.1506	16	-1.37	Low	0
148.99	Total S, Other (5%)	0560	4.975	0.2500	6.605	1.919	0.1506	16	-0.85	Low	0
148.99	Total S, Other (5%)	0559	5.090	0.0200	6.605	1.919	0.1506	16	-0.79	Low	0
148.99	Total S, Other (5%)	0553	5.190	0.4400	6.605	1.919	0.1506	16	-0.74	Low	0
148.99	Total S, Other (5%)	0562	5.305	0.1900	6.605	1.919	0.1506	16	-0.68	Low	0
148.99	Total S, Other (5%)	0558	5.585	0.0300	6.605	1.919	0.1506	16	-0.53	Low	0
148.99	Total S, Other (5%)	0565	5.615	0.0300	6.605	1.919	0.1506	16	-0.52	Low	0
148.99	Total S, Other (5%)	0520	5.675	0.1500	6.605	1.919	0.1506	16	-0.48	Low	0
148.99	Total S, Other (5%)	0564	5.760	0.0800	6.605	1.919	0.1506	16	-0.44	Low	0
148.99	Total S, Other (5%)	0516	7.450	0.1000	6.605	1.919	0.1506	16	0.44	High	0
148.99	Total S, Other (5%)	0433	8.050	0.2800	6.605	1.919	0.1506	16	0.75	High	0
148.99	Total S, Other (5%)	0371	8.100	0.1400	6.605	1.919	0.1506	16	0.78	High	0
148.99	Total S, Other (5%)	0096	8.285	0.3900	6.605	1.919	0.1506	16	0.88	High	0
148.99	Total S, Other (5%)	0354	8.350	0.0800	6.605	1.919	0.1506	16	0.91	High	0
148.99	Total S, Other (5%)	0220	8.945	0.1500	6.605	1.919	0.1506	16	1.22	High	0
148.99	Total S, Other (5%)	0452	9.330	0.0000	6.605	1.919	0.1506	16	1.42	High	0
149.04	S - HNO3 soluble, ICP (%)	0501	7.675	0.2900	7.939	0.1901	0.4061	5	-1.39		0
149.04	S - HNO3 soluble, ICP (%)	0419	7.860	0.0800	7.939	0.1901	0.4061	5	-0.41		0
149.04	S - HNO3 soluble, ICP (%)	0423	7.915	0.0900	7.939	0.1901	0.4061	5	-0.13		0
149.04	S - HNO3 soluble, ICP (%)	0524	8.099	1.571	7.939	0.1901	0.4061	5	0.84		0
149.04	S - HNO3 soluble, ICP (%)	0521	8.145	0.0000	7.939	0.1901	0.4061	5	1.08		0
151.00	Acid Soluble As, AA, test portion 2006.03 modified w/dual acid (ppm)	0550	0.8405	0.0070				2			0
151.00	Acid Soluble As, AA, test portion 2006.03 modified w/dual acid (ppm)	0498	1.600	0.0000				2			0

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151.30	Acid Soluble As, ICP (ppm)	0524	1.608	0.5950	3.363	2.047	1.221	4	-0.86		0
151.30	Acid Soluble As, ICP (ppm)	0096	2.350	0.1000	3.363	2.047	1.221	4	-0.49		0
151.30	Acid Soluble As, ICP (ppm)	0501	3.226	0.1520	3.363	2.047	1.221	4	-0.07		0
151.30	Acid Soluble As, ICP (ppm)	0255	6.269	4.036	3.363	2.047	1.221	4	1.42		0
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	0220	2.250	0.1000				2			0
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	0521	3.387	0.0000				2			0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0136	2.330	0.0800	3.586	2.168	0.5678	3	-0.58		0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0527	2.339	0.0372	3.586	2.168	0.5678	3	-0.58		0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0494	6.089	1.586	3.586	2.168	0.5678	3	1.15		0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0515	2.424	4.848	3.586	2.168	0.5678	3			4
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0117	< 10		3.586	2.168	0.5678	3			5
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	0515	0.8710	1.742				0			4
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	0354	< 0.01					0			5
165.99	Acid Soluble B, Other (%)	0516	0.0015	0.0010	1.473	3.188	0.8703	5	-0.40		0
165.99	Acid Soluble B, Other (%)	0524	0.0019	0.0001	1.473	3.188	0.8703	5	-0.40		0
165.99	Acid Soluble B, Other (%)	0423	0.0032	0.0002	1.473	3.188	0.8703	5	-0.40		0
165.99	Acid Soluble B, Other (%)	0552	0.1850	0.0900	1.473	3.188	0.8703	5	-0.35		0
165.99	Acid Soluble B, Other (%)	0515	7.175	4.260	1.473	3.188	0.8703	5	1.56		0
165.99	Acid Soluble B, Other (%)	0421	< 0.001		1.473	3.188	0.8703	5			5
165.99	Acid Soluble B, Other (%)	0527	< 0.01		1.473	3.188	0.8703	5			5
181.00	Acid Soluble Cd, AA, test portion 2006.03 modified w/dual acid (ppm)	0535	8.000	2.000	10.23	2.677	1.150	3	-0.83		0
181.00	Acid Soluble Cd, AA, test portion 2006.03 modified w/dual acid (ppm)	0550	9.495	0.4500	10.23	2.677	1.150	3	-0.28		0
181.00	Acid Soluble Cd, AA, test portion 2006.03 modified w/dual acid (ppm)	0498	13.20	1.000	10.23	2.677	1.150	3	1.11		0
181.30	Acid Soluble Cd, ICP (ppm)	0389	0.2750	0.0100	9.537	1.494	0.6343	9	-5.72	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0524	8.377	0.0356	9.537	1.494	0.6343	9	-0.72	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0444	9.040	0.1800	9.537	1.494	0.6343	9	-0.31	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0419	9.140	0.7400	9.537	1.494	0.6343	9	-0.25	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0096	9.450	0.1000	9.537	1.494	0.6343	9	-0.05	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0501	9.652	0.3840	9.537	1.494	0.6343	9	0.07	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0035	10.45	0.9000	9.537	1.494	0.6343	9	0.56	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0450	10.65	0.9000	9.537	1.494	0.6343	9	0.69	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0255	14.64	2.459	9.537	1.494	0.6343	9	3.16	NA	0
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	0521	10.44	0.0000				2			0
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	0220	10.55	0.1000				2			0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0515	6.179	5.508	10.18	2.263	1.483	5	-1.77		0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0117	10.85	0.1860	10.18	2.263	1.483	5	0.29		0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0136	10.89	1.170	10.18	2.263	1.483	5	0.31		0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0527	11.34	0.4449	10.18	2.263	1.483	5	0.51		0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0494	11.66	0.1067	10.18	2.263	1.483	5	0.65		0
181.34	Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm)	0515	6.879	9.820				1			0
181.99	Acid Soluble Cd, Other (ppm)	0220	10.70	1.000				1			0
191.00	Acid Soluble Cr, AA, test portion 2006.03 modified w/dual acid (ppm)	0550	23.95	4.230				2			0
191.00	Acid Soluble Cr, AA, test portion 2006.03 modified w/dual acid (ppm)	0498	51.45	0.5000				2			0
191.30	Acid Soluble Cr, ICP (ppm)	0389	4.495	0.7700	37.54	13.85	1.430	7	-2.16	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0524	24.40	0.1400	37.54	13.85	1.430	7	-0.86	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0444	39.09	0.6000	37.54	13.85	1.430	7	0.10	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0450	43.00	4.000	37.54	13.85	1.430	7	0.36	NA	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
191.30	Acid Soluble Cr, ICP (ppm)	0419	44.25	1.900	37.54	13.85	1.430	7	0.44	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0096	45.50	0.8000	37.54	13.85	1.430	7	0.52	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0035	49.80	1.800	37.54	13.85	1.430	7	0.80	NA	0
191.32	Acid Soluble Cr, ICP, 2006.03 (ppm)	0220	49.05	0.1000				1			0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0136	43.40	0.2000	47.78	3.441	0.8711	4	-1.27		0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0527	46.70	1.292	47.78	3.441	0.8711	4	-0.31		0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0515	50.07	0.8421	47.78	3.441	0.8711	4	0.67		0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0494	50.93	1.151	47.78	3.441	0.8711	4	0.92		0
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	0515	51.26	8.414				1			0
191.99	Acid Soluble Cr, Other (ppm)	0220	48.50	3.000				1			0
202.30	Acid Soluble Co, ICP (ppm)	0389	0.8550	0.0100	1.782	1.014	0.1239	3	-0.91		0
202.30	Acid Soluble Co, ICP (ppm)	0524	1.625	0.1518	1.782	1.014	0.1239	3	-0.15		0
202.30	Acid Soluble Co, ICP (ppm)	0035	2.865	0.2100	1.782	1.014	0.1239	3	1.07		0
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	0423	2.155	0.0900				2			0
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	0220	2.450	0.1000				2			0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0527	1.658	0.0277				2			0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0546	1.690	0.3618				2			0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0515	2.661	5.322				2			4
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0550	< 0.09					2			5
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	0501	1.978	0.0240				1			0
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	0515	0.3881	0.7762				1			4
202.99	Acid Soluble Co, Other (ppm)	0220	2.200	0.2000				2			0
202.99	Acid Soluble Co, Other (ppm)	0255	4.197	6.880				2			0
221.00	Acid Soluble Cu, AA, inorganic 965.09 (%)	0535	0.0021	0.0002				2			0
221.00	Acid Soluble Cu, AA, inorganic 965.09 (%)	0550	0.0069	0.0002				2			0
221.01	Acid Soluble Cu, AA, organic 965.09 (%)	0498	0.0010	0.0000				1			0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0255	0.0010	0.0000	0.0240	0.0398	0.0068	3	-0.58		0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0035	0.0011	0.0004	0.0240	0.0398	0.0068	3	-0.58		0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0552	0.0700	0.0200	0.0240	0.0398	0.0068	3	1.15		0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0450	0.0000	0.0000	0.0240	0.0398	0.0068	3			4
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0354	< 0.01		0.0240	0.0398	0.0068	3			5
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	0095	0.0009	0.0000				1			0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0136	0.0009	0.0000	0.0012	0.0003	0.0002	6	-0.94	OK	0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0494	0.0011	0.0002	0.0012	0.0003	0.0002	6	-0.40	OK	0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0527	0.0012	0.0001	0.0012	0.0003	0.0002	6	-0.27	OK	0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0546	0.0012	0.0002	0.0012	0.0003	0.0002	6	-0.13	OK	0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0515	0.0014	0.0006	0.0012	0.0003	0.0002	6	0.41	OK	0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0043	0.0020	0.0000	0.0012	0.0003	0.0002	6	2.03	OK	0
221.99	Acid Soluble Cu, Other (%)	0524	0.0007	0.0001	0.0152	0.0282	0.0018	4	-0.52		0
221.99	Acid Soluble Cu, Other (%)	0389	0.0009	0.0000	0.0152	0.0282	0.0018	4	-0.51		0
221.99	Acid Soluble Cu, Other (%)	0515	0.0019	0.0001	0.0152	0.0282	0.0018	4	-0.47		0
221.99	Acid Soluble Cu, Other (%)	0562	0.0575	0.0070	0.0152	0.0282	0.0018	4	1.50		0
221.99	Acid Soluble Cu, Other (%)	0516	0.0000	0.0000	0.0152	0.0282	0.0018	4			4
241.00	Acid Soluble Fe, AA, inorganic 965.09 (%)	0535	0.1389	0.0037				1			0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0096	0.2300	0.0200	0.2635	0.0367	0.0408	6	-0.81	Low	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0354	0.2450	0.0100	0.2635	0.0367	0.0408	6	-0.45	OK	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0444	0.2450	0.0100	0.2635	0.0367	0.0408	6	-0.45	OK	0



Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0035	0.2595	0.0370	0.2635	0.0367	0.0408	6	-0.10	OK	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0451	0.2830	0.0480	0.2635	0.0367	0.0408	6	0.47	OK	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0552	0.3300	0.1200	0.2635	0.0367	0.0408	6	1.62	High	0
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (%)	0423	0.2700	0.0020				1			0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0136	0.2275	0.0050	0.2781	0.0405	0.0114	4	-1.25		0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0527	0.2774	0.0017	0.2781	0.0405	0.0114	4	-0.02		0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0494	0.2808	0.0235	0.2781	0.0405	0.0114	4	0.07		0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0515	0.3267	0.0152	0.2781	0.0405	0.0114	4	1.20		0
241.99	Acid Soluble Fe, Other (%)	0524	0.2044	0.0268	0.2370	0.0286	0.0243	4	-1.14		0
241.99	Acid Soluble Fe, Other (%)	0389	0.2240	0.0000	0.2370	0.0286	0.0243	4	-0.45		0
241.99	Acid Soluble Fe, Other (%)	0516	0.2500	0.0000	0.2370	0.0286	0.0243	4	0.46		0
241.99	Acid Soluble Fe, Other (%)	0515	0.2694	0.0702	0.2370	0.0286	0.0243	4	1.14		0
251.00	Acid Soluble Pb, AA, test portion 2006.03 modified w/dual acid (ppm)	0535	15.50	3.000				1			0
251.00	Acid Soluble Pb, AA, test portion 2006.03 modified w/dual acid (ppm)	0550	< 1.5					1			5
251.30	Acid Soluble Pb, ICP (ppm)	0389	0.2405	0.0650	6.559	2.933	0.5296	8	-1.97	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0444	4.705	1.310	6.559	2.933	0.5296	8	-0.58	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0524	5.552	0.1596	6.559	2.933	0.5296	8	-0.31	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0096	6.350	0.1000	6.559	2.933	0.5296	8	-0.07	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0035	6.685	1.030	6.559	2.933	0.5296	8	0.04	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0450	8.000	0.8000	6.559	2.933	0.5296	8	0.45	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0501	8.189	0.1380	6.559	2.933	0.5296	8	0.51	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0255	10.83	0.6340	6.559	2.933	0.5296	8	1.33	NA	0
251.32	Acid Soluble Pb, ICP, 2006.03 (ppm)	0220	8.700	0.4000				1			0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0117	6.669	0.6760	10.37	7.068	0.5698	5	-0.52		0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0494	6.993	1.355	10.37	7.068	0.5698	5	-0.48		0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0136	7.375	0.6700	10.37	7.068	0.5698	5	-0.42		0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0527	7.841	0.1178	10.37	7.068	0.5698	5	-0.36		0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0515	22.99	0.0305	10.37	7.068	0.5698	5	1.79		0
251.34	Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm)	0515	5.796	6.911				1			0
261.12	Acid Soluble Mn, AA, inorganic 965.09 (%)	0535	0.0029	0.0003				1			0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0096	0.0033	0.0001				2			0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0035	0.0036	0.0002				2			0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0354	< 0.01					2			5
261.32	Acid Soluble Mn, ICP, test portion inorganic 965.09 (%)	0552	0.4100	0.6200				1			0
261.34	Acid Soluble Mn, ICP, test portion 2006.03A-C (%)	0423	0.0032	0.0002				1			0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0136	0.0030	0.0001	0.0105	0.0146	0.0009	4	-0.52		0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0494	0.0034	0.0001	0.0105	0.0146	0.0009	4	-0.49		0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0527	0.0034	0.0001	0.0105	0.0146	0.0009	4	-0.49		0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0515	0.0324	0.0032	0.0105	0.0146	0.0009	4	1.50		0
261.99	Acid Soluble Mn, Other (%)	0516	0.0025	0.0010	0.0033	0.0011	0.0008	4	-0.74		0
261.99	Acid Soluble Mn, Other (%)	0389	0.0028	0.0001	0.0033	0.0011	0.0008	4	-0.52		0
261.99	Acid Soluble Mn, Other (%)	0524	0.0031	0.0002	0.0033	0.0011	0.0008	4	-0.20		0
261.99	Acid Soluble Mn, Other (%)	0515	0.0050	0.0019	0.0033	0.0011	0.0008	4	1.46		0
281.00	Acid Soluble Hg, AA (ppm)	0550	1.870	1.640				1			0
281.30	Acid Soluble Hg, ICP (ppm)	0501	0.0355	0.0030				1			0
281.30	Acid Soluble Hg, ICP (ppm)	0515	0.0000	0.0000				1			4
281.30	Acid Soluble Hg, ICP (ppm)	0450	0.0150	0.0300				1			4

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281.30	Acid Soluble Hg, ICP (ppm)	0527	< 0.0001					1			5
281.99	Acid Soluble Hg, Other (ppm)	0220	10.80	3.000				1			0
289.00	Acid Soluble Mo, AA, test portion 2006.03 modified w/dual acid (ppm)	0550	4.250	1.580				1			0
289.30	Acid Soluble Mo, ICP (ppm)	0035	1.790	0.3200	10.83	13.32	2.692	5	-0.68		0
289.30	Acid Soluble Mo, ICP (ppm)	0255	2.212	1.858	10.83	13.32	2.692	5	-0.65		0
289.30	Acid Soluble Mo, ICP (ppm)	0524	2.633	0.2844	10.83	13.32	2.692	5	-0.61		0
289.30	Acid Soluble Mo, ICP (ppm)	0516	15.00	10.00	10.83	13.32	2.692	5	0.31		0
289.30	Acid Soluble Mo, ICP (ppm)	0234	32.50	1.000	10.83	13.32	2.692	5	1.63		0
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	0220	2.450	0.7000				1			0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0515	2.815	5.339	3.014	0.2089	1.140	5	-0.95		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0546	2.826	0.1241	3.014	0.2089	1.140	5	-0.90		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0423	2.975	0.0900	3.014	0.2089	1.140	5	-0.19		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0494	3.168	0.1378	3.014	0.2089	1.140	5	0.74		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0527	3.286	0.0104	3.014	0.2089	1.140	5	1.30		0
289.34	Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm)	0501	3.640	0.0530				2			0
289.34	Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm)	0515	3.916	4.203				2			0
291.00	Acid Soluble Ni, AA, test portion 2006.03 modified w/dual acid (ppm)	0498	18.05	0.1000				2			0
291.00	Acid Soluble Ni, AA, test portion 2006.03 modified w/dual acid (ppm)	0535	21.00	2.000				2			0
291.00	Acid Soluble Ni, AA, test portion 2006.03 modified w/dual acid (ppm)	0550	< 0.6					2			5
291.30	Acid Soluble Ni, ICP (ppm)	0524	16.31	0.3039	21.89	5.043	1.633	7	-1.00	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0444	17.23	0.0900	21.89	5.043	1.633	7	-0.84	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0419	21.65	2.300	21.89	5.043	1.633	7	-0.04	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0035	21.80	1.200	21.89	5.043	1.633	7	-0.02	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0450	22.00	6.000	21.89	5.043	1.633	7	0.02	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0096	24.80	1.400	21.89	5.043	1.633	7	0.52	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0389	36.77	0.1400	21.89	5.043	1.633	7	2.67	NA	0
291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	0220	22.60	0.2000				1			0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0515	0.0023	0.0003	17.49	9.800	0.1815	5	-1.78		0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0136	21.10	0.2000	17.49	9.800	0.1815	5	0.37		0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0527	21.18	0.3811	17.49	9.800	0.1815	5	0.38		0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0117	22.53	0.1430	17.49	9.800	0.1815	5	0.51		0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0494	22.62	0.1833	17.49	9.800	0.1815	5	0.52		0
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	0515	0.0027	0.0004				2			0
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	0501	25.40	0.0090				2			0
291.99	Acid Soluble Ni, Other (ppm)	0255	17.71	10.52				2			0
291.99	Acid Soluble Ni, Other (ppm)	0220	22.00	2.000				2			0
301.00	Acid Soluble Se, AA, test portion 2006.03 modified w/dual acid (ppm)	0550	< 0.08					0			5
301.30	Acid Soluble Se, ICP (ppm)	0524	1.170	0.7600				2			0
301.30	Acid Soluble Se, ICP (ppm)	0501	2.259	0.3550				2			0
301.32	Acid Soluble Se, ICP, 2006.03 (ppm)	0220	0.6000	0.0000				1			0
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0515	0.0000	0.0000				0			4
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	0.0000	0.0000				0			4
301.99	Acid Soluble Se, Other (ppm)	0255	7.146	5.803				1			0
311.32	Sodium, ICP, 2006.03 test portion (%)	0521	0.0920	0.0000				1			0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0423	0.0805	0.0010	0.0910	0.0073	0.0027	4	-1.43		0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0494	0.0915	0.0065	0.0910	0.0073	0.0027	4	0.06		0

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311.33	Sodium, ICP, test portion as in 2017.02 (%)	0035	0.0955	0.0030	0.0910	0.0073	0.0027	4	0.61		0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0527	0.0966	0.0004	0.0910	0.0073	0.0027	4	0.76		0
311.99	Sodium, Other (%)	0096	0.1000	0.0000				2			0
311.99	Sodium, Other (%)	0354	0.1300	0.0400				2			0
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	0535	0.0185	0.0010				2			0
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	0550	0.0187	0.0006				2			0
321.01	Acid Soluble Zn, AA, organic 965.09 (%)	0498	0.0145	0.0030				1			0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0096	0.0019	0.0000	0.0146	0.0045	0.0024	8	-2.57	Low	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0354	0.0100	0.0000	0.0146	0.0045	0.0024	8	-0.93	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0255	0.0140	0.0040	0.0146	0.0045	0.0024	8	-0.13	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0234	0.0150	0.0100	0.0146	0.0045	0.0024	8	0.08	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0450	0.0152	0.0013	0.0146	0.0045	0.0024	8	0.11	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0035	0.0175	0.0014	0.0146	0.0045	0.0024	8	0.58	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0451	0.0180	0.0014	0.0146	0.0045	0.0024	8	0.68	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0444	0.0195	0.0010	0.0146	0.0045	0.0024	8	0.98	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0552	0.1100	0.0600	0.0146	0.0045	0.0024	8	19.24	High	1
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0423	0.0115	0.0010				2			0
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0095	0.0175	0.0005				2			0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0494	0.0017	0.0001	0.0163	0.0007	0.0001	6	-19.55	Low	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0421	0.0162	0.0001	0.0163	0.0007	0.0001	6	-0.23	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0527	0.0162	0.0000	0.0163	0.0007	0.0001	6	-0.17	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0515	0.0164	0.0002	0.0163	0.0007	0.0001	6	0.10	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0136	0.0166	0.0001	0.0163	0.0007	0.0001	6	0.30	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0043	0.0200	0.0000	0.0163	0.0007	0.0001	6	4.90	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0546	0.0149	0.0009	0.0163	0.0007	0.0001	6	-1.97	OK	1
321.99	Acid Soluble Zn, Other (%)	0389	0.0144	0.0002	0.0175	0.0033	0.0017	6	-0.84	OK	0
321.99	Acid Soluble Zn, Other (%)	0419	0.0155	0.0010	0.0175	0.0033	0.0017	6	-0.54	OK	0
321.99	Acid Soluble Zn, Other (%)	0524	0.0162	0.0002	0.0175	0.0033	0.0017	6	-0.35	OK	0
321.99	Acid Soluble Zn, Other (%)	0515	0.0174	0.0028	0.0175	0.0033	0.0017	6	-0.02	OK	0
321.99	Acid Soluble Zn, Other (%)	0501	0.0190	0.0000	0.0175	0.0033	0.0017	6	0.42	OK	0
321.99	Acid Soluble Zn, Other (%)	0562	0.1000	0.0060	0.0175	0.0033	0.0017	6	22.61	High	0
321.99	Acid Soluble Zn, Other (%)	0516	0.0000	0.0000	0.0175	0.0033	0.0017	6			4
441.00	Humic Acids, Gravimetry,Ash-free, alkali dissolved, acid precipit... (20%)	0533	20.09	0.0800	21.44	1.664	0.2082	17	-0.81	NA	0
441.00	Humic Acids, Gravimetry,Ash-free, alkali dissolved, acid precipit... (20%)	0531	20.21	0.0100	21.44	1.664	0.2082	17	-0.74	NA	0
441.00	Humic Acids, Gravimetry,Ash-free, alkali dissolved, acid precipit... (20%)	0535	20.25	0.1000	21.44	1.664	0.2082	17	-0.71	NA	0
441.00	Humic Acids, Gravimetry,Ash-free, alkali dissolved, acid precipit... (20%)	0551	20.25	0.0400	21.44	1.664	0.2082	17	-0.71	NA	0
441.00	Humic Acids, Gravimetry,Ash-free, alkali dissolved, acid precipit... (20%)	0536	20.39	0.1100	21.44	1.664	0.2082	17	-0.63	NA	0
441.00	Humic Acids, Gravimetry,Ash-free, alkali dissolved, acid precipit... (20%)	0537	20.42	0.2800	21.44	1.664	0.2082	17	-0.61	NA	0
441.00	Humic Acids, Gravimetry,Ash-free, alkali dissolved, acid precipit... (20%)	0518	20.53	0.0500	21.44	1.664	0.2082	17	-0.55	NA	0
441.00	Humic Acids, Gravimetry,Ash-free, alkali dissolved, acid precipit... (20%)	0538	20.60	0.0000	21.44	1.664	0.2082	17	-0.50	NA	0
441.00	Humic Acids, Gravimetry,Ash-free, alkali dissolved, acid precipit... (20%)	0549	20.60	0.2000	21.44	1.664	0.2082	17	-0.50	NA	0
441.00	Humic Acids, Gravimetry,Ash-free, alkali dissolved, acid precipit... (20%)	0540	20.68	0.1500	21.44	1.664	0.2082	17	-0.46	NA	0
441.00	Humic Acids, Gravimetry,Ash-free, alkali dissolved, acid precipit... (20%)	0532	20.90	0.4000	21.44	1.664	0.2082	17	-0.32	NA	0
441.00	Humic Acids, Gravimetry,Ash-free, alkali dissolved, acid precipit... (20%)	0550	21.99	0.0800	21.44	1.664	0.2082	17	0.33	NA	0
441.00	Humic Acids, Gravimetry,Ash-free, alkali dissolved, acid precipit... (20%)	0527	22.78	0.3300	21.44	1.664	0.2082	17	0.80	NA	0
441.00	Humic Acids, Gravimetry,Ash-free, alkali dissolved, acid precipit... (20%)	0556	22.95	0.5000	21.44	1.664	0.2082	17	0.91	NA	0
441.00	Humic Acids, Gravimetry,Ash-free, alkali dissolved, acid precipit... (20%)	0501	24.46	0.1900	21.44	1.664	0.2082	17	1.81	NA	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
441.00	Humic Acids, Gravimetry,Ash-free, alkali dissolved, acid precipit... (20%)	0220	25.33	0.2200	21.44	1.664	0.2082	17	2.34	NA	0
441.00	Humic Acids, Gravimetry,Ash-free, alkali dissolved, acid precipit... (20%)	0136	29.20	0.8000	21.44	1.664	0.2082	17	4.67	NA	0
441.00	Humic Acids, Gravimetry,Ash-free, alkali dissolved, acid precipit... (20%)	0444	40.43	5.930	21.44	1.664	0.2082	17	11.41	NA	1
441.99	Humic Acids, Other (20%)	0560	20.06	0.1800	22.27	3.257	0.5657	7	-0.61	NA	0
441.99	Humic Acids, Other (20%)	0562	20.38	0.4500	22.27	3.257	0.5657	7	-0.53	NA	0
441.99	Humic Acids, Other (20%)	0565	20.82	0.0700	22.27	3.257	0.5657	7	-0.40	NA	0
441.99	Humic Acids, Other (20%)	0564	20.85	0.1000	22.27	3.257	0.5657	7	-0.39	NA	0
441.99	Humic Acids, Other (20%)	0559	20.93	0.0600	22.27	3.257	0.5657	7	-0.37	NA	0
441.99	Humic Acids, Other (20%)	0325	25.90	1.800	22.27	3.257	0.5657	7	1.01	NA	0
441.99	Humic Acids, Other (20%)	0498	26.95	1.300	22.27	3.257	0.5657	7	1.30	NA	0
441.99	Humic Acids, Other (20%)	0444	40.43	5.930	22.27	3.257	0.5657	7	5.04	NA	1
451.00	Hydrophobic Fulvic Acids, Gravimetry, acid dissolved binds hydrop... (%)	0220	2.005	0.1500				1			0

Interpreting Z Scores: Red indicates a normally distributed Z value >3 or <-3 (requires action), Orange = Z between 2 and 3 or -2 and -3 (warning) and Green = Z < 2 and >-2 (OK at 95%).  
Flags indicate data usage: 0 = Used, 1 = rejected for duplicates too far apart, 2 = rejected as extreme outlier, 3 = removed from stats, 4 = rejected due to 0s submitted and 5 = LOD. A 9 flag indicates a data problem - scores not calculated. Robust statistics not used if < 6 labs used in calculations, in this case the Z Scores are grey and included for information only. IA Status describes where your result is relative to the Assigned Value ± IA. Red indicates Higher or Lower, Green indicates within the IA range. 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.