

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 210211

Grade 22-3-11

Statistical Summary

Methods: 135

Labs Reporting: 87

Issue Date : 03/31/2021

Method Code	Analyte & Method Sample # 210211	# 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	1.001	0.2476	1.001		0.2808	0.1326	28.04%		0.1114	4.00%
001.99	Ammoniacal N, Other (%)	21	20	1.145	0.8259	0.9026		0.3994	0.1116	44.25%		0.0399	4.06%
005.00	Urea N, Urease (as N) (%)	4	4	20.38	0.5629	20.38		0.5629	0.3518	2.76%		0.3703	2.22%
005.10	Urea N, HPLC(asN),H2Omobilephase (%)	1		20.18									
005.20	Urea N, HPLC(asN),85%acetonitrilemobilephase (%)	2	2	20.68	0.4981								
005.99	Urea N, Other (%)	11	11	20.68	0.8654	20.68		0.9813	0.3698	4.75%		0.1683	2.20%
007.00	Urea, Urease (as Urea) (%)	1		20.27									
007.99	Urea, Other (%)	3	3	20.76	0.5697	20.76		0.5697	0.4111	2.74%		0.3633	2.19%
009.99	Ammoniacal Plus Nitrate N, Other (%)	1		22.30									
010.11	Total N, Modified Comprehensive (22%)	7	7	21.93	0.1614	21.92	0.7492	0.1579	0.0746	0.72%	0.49	0.0811	2.14%
010.12	Total N, Salicylic (22%)	3	3	22.41	1.077	22.41	0.7562	1.077	0.7774	4.81%	3.32	0.8503	2.11%
010.60	Total N, Combustion (22%)	54	53	21.75	0.5505	21.69	0.7469	0.3944	0.0677	1.82%	1.23	0.2515	2.15%
010.99	Total N, Other (22%)	16	16	21.62	0.7333	21.71	0.7471	0.5440	0.1700	2.51%	1.70	0.1448	2.15%
020.10	Total P2O5, Gravimetric Quinolinium MolybdoP (%)	2	2	3.558	0.1025								
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	14	13	3.620	0.2331	3.593		0.2034	0.0705	5.66%		0.0706	3.30%
020.40	Total P2O5, Automated (%)	2	2	3.633	0.0248								
020.50	Total P2O5, ICP (%)	21	21	3.493	0.4908	3.552		0.2193	0.0598	6.17%		0.0892	3.31%
020.99	Total P2O5, Other (%)	5	5	3.550	0.5213	3.550		0.5213	0.2914	14.68%		0.0477	3.31%
030.20	Citrate Insoluble P2O5, Spectrophotometric MolybdovanadoP (%)	1		0.0100									
030.40	Citrate Insoluble P2O5, Automated, test portion 963.03 A-B (%)	1		0.0300									
040.40	Indirect Available P2O5, Automated (3%)	1		3.590									
041.10	Direct Available P2O5, Gravimetric Quinolinium (3%)	3	3	2.942	1.165	2.942	0.6700	1.165	0.8410	39.61%	4.05	0.0803	3.40%
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext. (3%)	5	5	3.492	0.2028	3.492	0.6700	0.2028	0.1134	5.81%	0.71	0.0640	3.31%
041.20	Direct Available P2O5, Spectrophotometric (3%)	2	2	3.365	0.0071								
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (3%)	11	11	3.595	0.2871	3.577	0.6700	0.2822	0.1063	7.89%	0.98	0.1019	3.30%
041.40	Direct Available P2O5, Automated, Citrate-EDTA Ext. (3%)	1		3.665									
041.50	Direct Available P2O5, ICP (3%)	5	5	3.597	0.2183	3.597	0.6700	0.2183	0.1220	6.07%	0.76	0.1135	3.30%
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (3%)	9	9	3.528	0.1150	3.538	0.6700	0.1065	0.0444	3.01%	0.37	0.1122	3.31%
041.99	Direct Available P2O5, Other (3%)	14	14	3.476	0.3376	3.476	0.6700	0.3819	0.1276	10.99%	1.33	0.0971	3.32%
048.10	Water Soluble P2O5, Gravimetric Quinolinium (%)	1		3.365									
048.20	Water Soluble P2O5, Spectrophotometric (%)	2	2	3.250	0.0640								
048.99	Water Soluble P2O5, Other (%)	1		3.120									
050.00	Soluble K2O, STPB Oxalate (11%)	11	10	19.96	1.737	20.13	1.0844	1.148	0.4540	5.71%	2.47	0.3270	2.23%

Method Code	Analyte & Method Sample # 210211	# 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
050.30	Soluble K2O, AA (Oxalate) (11%)	4	4	20.81	0.5309	20.81	1.1085	0.5309	0.3318	2.55%	1.12	0.2960	2.19%
050.31	Soluble K2O, AA (Citrate) (11%)	1		19.26									
050.50	Soluble K2O, ICP (Oxalate) (11%)	7	7	20.53	1.288	20.53	1.0987	1.460	0.6900	7.11%	3.10	0.4886	2.21%
050.51	Soluble K2O, ICP (Citrate) (11%)	4	4	21.01	1.044	21.01	1.1155	1.044	0.6525	4.97%	2.18	0.2051	2.18%
050.52	Soluble K2O, ICP (Citrate-EDTA) (11%)	9	9	20.09	1.135	20.22	1.0879	0.9368	0.3903	4.63%	2.01	0.2467	2.22%
050.60	Soluble K2O, Flame Photometric (Oxalate) (11%)	3	3	17.28	5.049	17.28	0.9849	5.049	3.644	29.22%	11.95	0.2782	2.41%
050.61	Soluble K2O, Flame Photometric (Citrate) (11%)	1		20.10									
050.62	Soluble K2O, Flame Photometric (Citrate-EDTA) (11%)	5	5	20.52	1.085	20.52	1.0981	1.085	0.6064	5.29%	2.30	0.2520	2.21%
050.99	Soluble K2O, Other (11%)	39	38	19.34	2.312	19.82	1.0736	1.206	0.2445	6.09%	2.62	0.2813	2.25%
060.00	Water (Free), Vacuum Oven (%)	2	2	0.2550	0.1838								
060.99	Water (Free), Other (%)	1		0.7984									
101.00	Acid Soluble Ca, AA, inorganic 965.09 (%)	1		2.545									
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	5	5	3.073	1.292	3.073	0.3537	1.292	0.7222	42.04%	8.51	0.1300	3.38%
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (%)	1		2.605									
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	4	4	2.983	0.6003	2.983	0.3491	0.6003	0.3752	20.13%	4.01	0.1260	3.39%
101.99	Acid Soluble Ca, Other (%)	3	3	2.671	0.0839	2.671	0.3336	0.0839	0.0605	3.14%	0.59	0.0816	3.45%
121.00	Acid Soluble Mg, AA, inorganic 965.09 (%)	1		1.715									
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	5	5	1.700	0.1966	1.700	0.2850	0.1966	0.1099	11.56%	1.61	0.0880	3.69%
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (%)	1		1.630									
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	6	5	2.116	0.6807	1.908	0.2954	0.5025	0.2809	26.34%	3.96	0.0332	3.63%
121.99	Acid Soluble Mg, Other (%)	5	5	1.610	0.1012	1.610	0.2805	0.1012	0.0566	6.28%	0.84	0.0705	3.72%
143.99	Elemental S, Other (%)	3	3	1.038	0.2930	1.038		0.2930	0.2115	28.24%		0.0351	3.98%
145.99	Sulfate S, HCl soluble, Other (%)	1		0.1190									
148.00	Total S, Combustion (%)	1		3.625									
148.07	Total S, ICP, test portion as in 2017.02 (%)	5	5	1.478	0.2346	1.478	0.2739	0.2346	0.1312	15.87%	2.00	0.1196	3.77%
148.99	Total S, Other (%)	1		0.1550									
149.04	S - HNO3 soluble, ICP (%)	2	2	1.082	0.4149								
151.00	Acid Soluble As, AA, test portion 2006.03 modified w/dual acid (ppm)	1		0.2260									
151.30	Acid Soluble As, ICP (ppm)	5	4	0.2776	0.1328	0.2220		0.0539	0.0337	24.28%		0.0325	20.06%
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	3	2	0.9483	0.7289	0.9225		1.029	0.9094	111.53%		0.0550	16.19%
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	7	3	2.257	3.552	1.535		1.275	0.9205	83.11%		0.1810	15.00%
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	2	0	0.2000	0.2828								
151.99	Acid Soluble As, Other (ppm)	2	1	1.200	0.2828								
165.00	Acid Soluble B, Spectrophotometric (%)	1		0.0026									
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	2	1	0.0054	0.0066								
165.99	Acid Soluble B, Other (%)	5	3	0.0006	0.0006	0.0010	0.0032	0.0003	0.0002	31.22%	0.23	0.0001	11.31%
181.00	Acid Soluble Cd, AA, test portion 2006.03 modified w/dual acid (ppm)	1		3.490									
181.30	Acid Soluble Cd, ICP (ppm)	9	8	3.546	0.7648	3.443		0.8485	0.3750	24.64%		0.0911	13.28%
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	3	3	3.713	0.3272	3.713		0.3272	0.2361	8.81%		0.2000	13.13%
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	7	5	4.611	0.7241	4.623		0.8351	0.4668	18.06%		0.1653	12.70%
181.34	Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm)	2	2	3.771	0.7555								
181.99	Acid Soluble Cd, Other (ppm)	2	2	3.983	0.7531								
190.00	Water Soluble Cl, Titrimetric (%)	2	2	17.25	1.344								
191.30	Acid Soluble Cr, ICP (ppm)	8	8	37.65	7.581	37.65		8.597	3.799	22.83%		1.594	9.27%

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191.32	Acid Soluble Cr, ICP, 2006.03 (ppm)	3	3	44.16	5.451	44.16		5.451	3.934	12.34%		1.673	9.05%
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	6	6	48.62	3.860	48.62		4.378	2.234	9.00%		1.601	8.92%
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	2	2	46.99	6.459								
191.99	Acid Soluble Cr, Other (ppm)	2	2	46.50	0.7071								
202.30	Acid Soluble Co, ICP (ppm)	6	5	1.369	0.4128	1.443	1.4330	0.4148	0.2319	28.74%	0.67	0.0669	15.14%
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	1		1.500									
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	6	5	2.808	1.327	2.369	1.7107	0.8711	0.4870	36.77%	1.19	0.5163	14.05%
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	2	2	1.499	0.6484								
202.99	Acid Soluble Co, Other (ppm)	3	3	1.595	0.4083	1.595	1.4784	0.4083	0.2946	25.61%	0.64	0.0983	14.91%
221.00	Acid Soluble Cu, AA, inorganic 965.09 (%)	5	4	0.0014	0.0020	0.0005	0.0051	0.0002	0.0001	34.64%	0.08	0.0001	12.56%
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	4	2	5.864	11.67	11.72	1.0000	16.47	14.56	140.51%	38.38	3.676	2.76%
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	1		0.0001									
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	7	2	0.0007	0.0009	0.0007	0.0051	0.0004	0.0004	60.61%	0.19	0.0001	11.94%
221.99	Acid Soluble Cu, Other (%)	4	3	0.0002	0.0002	0.0003	0.0050	0.0002	0.0001	63.81%	0.09	0.0001	13.45%
241.00	Acid Soluble Fe, AA, inorganic 965.09 (%)	4	4	0.1308	0.0058	0.1308	0.0181	0.0058	0.0036	4.44%	0.75	0.0040	5.43%
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	5	5	0.1790	0.1125	0.1790	0.0229	0.1125	0.0629	62.85%	11.45	0.0712	5.18%
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (%)	1		0.1285									
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	5	5	0.1397	0.0297	0.1397	0.0190	0.0297	0.0166	21.28%	3.65	0.0047	5.38%
241.99	Acid Soluble Fe, Other (%)	4	4	0.1203	0.0109	0.1203	0.0170	0.0109	0.0068	9.06%	1.49	0.0027	5.50%
251.00	Acid Soluble Pb, AA, test portion 2006.03 modified w/dual acid (ppm)	1		2.000									
251.30	Acid Soluble Pb, ICP (ppm)	8	6	0.5224	0.7900	0.2056		0.1336	0.0682	64.95%		0.0322	20.30%
251.32	Acid Soluble Pb, ICP, 2006.03 (ppm)	2	2	0.7050	0.0636								
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	7	4	2.539	2.135	2.126		2.503	1.564	117.74%		0.9915	14.28%
251.34	Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm)	2	0	0.3500	0.4950								
251.99	Acid Soluble Pb, Other (ppm)	2	2	0.8250	0.6718								
261.11	Acid Soluble Mn, AA, total Mn (%)	1		0.0050									
261.12	Acid Soluble Mn, AA, inorganic 965.09 (%)	3	3	0.0025	0.0000	0.0025	0.0053	0.0000	0.0000	1.14%	0.01	0.0001	9.83%
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	3	2	8.954	15.50	13.43	1.0000	18.98	16.78	141.39%	44.23	1.850	2.71%
261.32	Acid Soluble Mn, ICP, test portion inorganic 965.09 (%)	1		0.2000									
261.34	Acid Soluble Mn, ICP, test portion 2006.03A-C (%)	1		0.0025									
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	4	3	0.0021	0.0015	0.0029	0.0053	0.0006	0.0004	19.54%	0.25	0.0002	9.66%
261.99	Acid Soluble Mn, Other (%)	3	3	0.0026	0.0002	0.0026	0.0053	0.0002	0.0001	5.84%	0.07	0.0004	9.79%
281.00	Acid Soluble Hg, AA (ppm)	1		0.0500									
281.30	Acid Soluble Hg, ICP (ppm)	5	1	0.1252	0.2139	0.0026		0.0002	0.0002	5.84%		0.0100	22.00%
281.99	Acid Soluble Hg, Other (ppm)	4	2	0.0114	0.0050	0.0128		0.0081	0.0072	63.78%		0.0167	22.00%
289.30	Acid Soluble Mo, ICP (ppm)	6	6	2.037	0.7722	2.037	1.6111	0.8757	0.4469	42.99%	1.27	0.0715	14.37%
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	1		2.600									
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	6	5	3.200	1.747	2.840	1.8519	1.686	0.9425	59.37%	2.12	0.1051	13.67%
289.34	Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm)	2	2	2.779	0.6314								
289.99	Acid Soluble Mo, Other (ppm)	2	2	2.715	0.8697								
291.30	Acid Soluble Ni, ICP (ppm)	8	7	12.49	3.511	12.51		4.300	2.031	34.36%		0.1125	10.94%
291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	2	2	18.36	4.543								
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	7	7	15.78	1.798	15.78		2.039	0.9635	12.92%		0.8599	10.56%
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	2	2	14.06	0.0697								

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291.99	Acid Soluble Ni, Other (ppm)	3	3	14.82	1.286	14.82		1.286	0.9280	8.68%		1.505	10.66%
301.30	Acid Soluble Se, ICP (ppm)	3	3	0.2173	0.1355	0.2173		0.1355	0.0978	62.36%		0.0380	20.13%
301.32	Acid Soluble Se, ICP, 2006.03 (ppm)	1		0.4000									
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	4	2	0.6866	0.7364	0.5075		0.0531	0.0469	10.46%		0.1041	17.72%
301.34	Acid Soluble Se, ICP, EPA 3050B/6010C (ppm)	2	0	0.7913	0.2952								
301.99	Acid Soluble Se, Other (ppm)	3	1	0.4667	0.5033	0.5075		0.0531	0.0663	10.46%		0.0000	17.72%
311.00	Sodium, AA (%)	1		0.4325									
311.33	Sodium, ICP, test portion as in 2017.02 (%)	4	4	0.4814	0.0804	0.4814	0.0531	0.0804	0.0503	16.71%	3.53	0.0161	4.46%
311.99	Sodium, Other (%)	3	3	0.4393	0.0241	0.4393	0.0489	0.0241	0.0174	5.48%	1.15	0.0116	4.53%
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	6	6	0.0068	0.0006	0.0068	0.0057	0.0007	0.0003	10.07%	0.28	0.0002	8.48%
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	7	5	0.0587	0.1307	0.0092	0.0059	0.0037	0.0021	40.31%	1.46	0.0027	8.10%
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	3	3	0.0064	0.0004	0.0064	0.0056	0.0004	0.0003	6.25%	0.17	0.0002	8.55%
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	8	8	0.0068	0.0024	0.0072	0.0057	0.0017	0.0008	24.04%	0.70	0.0007	8.41%
321.99	Acid Soluble Zn, Other (%)	6	5	10.22	25.03	0.0062	0.0056	0.0007	0.0004	10.75%	0.28	0.0004	8.59%

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

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STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 210211

Method Precision Report

Grade 22-3-11

Issue Date : 03/31/2021

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 (%)	7	7	1.001	0.2476	0.2309	0.1264	0.2632	23.06%	12.62%	26.28%	2.083
001.99	Ammoniacal N, Other (%)	21	19	0.9675	0.6004	0.5997	0.0409	0.6010	61.98%	4.22%	62.12%	14.71
005.99	Urea N, Other (%)	11	11	20.68	0.8654	0.8595	0.1417	0.8711	4.16%	0.69%	4.21%	6.147
010.11	Total N, Modified Comprehensive (22%)	7	7	21.93	0.1614	0.1526	0.0746	0.1698	0.70%	0.34%	0.77%	2.278
010.60	Total N, Combustion (22%)	54	51	21.67	0.3843	0.3462	0.2358	0.4189	1.60%	1.09%	1.93%	1.776
010.99	Total N, Other (22%)	16	15	21.77	0.4492	0.4434	0.1019	0.4550	2.04%	0.47%	2.09%	4.464
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	14	12	3.561	0.1753	0.1687	0.0672	0.1816	4.74%	1.89%	5.10%	2.702
020.50	Total P2O5, ICP (%)	21	19	3.582	0.2306	0.2240	0.0778	0.2371	6.25%	2.17%	6.62%	3.049
020.99	Total P2O5, Other (%)	5	5	3.550	0.5213	0.5201	0.0498	0.5225	14.65%	1.40%	14.72%	10.50
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext. (3%)	5	5	3.492	0.2028	0.2001	0.0473	0.2056	5.73%	1.36%	5.89%	4.344
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (3%)	11	11	3.595	0.2871	0.2794	0.0935	0.2946	7.77%	2.60%	8.20%	3.152
041.50	Direct Available P2O5, ICP (3%)	5	5	3.597	0.2183	0.2058	0.1028	0.2301	5.72%	2.86%	6.40%	2.237
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (3%)	9	9	3.528	0.1150	0.0871	0.1061	0.1373	2.47%	3.01%	3.89%	1.294
041.99	Direct Available P2O5, Other (3%)	14	13	3.467	0.3494	0.3465	0.0640	0.3523	9.99%	1.85%	10.16%	5.508
050.00	Soluble K2O, STPB Oxalate (11%)	11	9	20.32	0.8612	0.8369	0.2872	0.8848	4.12%	1.41%	4.36%	3.081
050.50	Soluble K2O, ICP (Oxalate) (11%)	7	7	20.53	1.288	1.232	0.5291	1.341	6.00%	2.58%	6.53%	2.535
050.52	Soluble K2O, ICP (Citrate-EDTA) (11%)	9	8	20.40	0.6801	0.6472	0.2955	0.7115	3.17%	1.45%	3.49%	2.408
050.99	Soluble K2O, Other (11%)	39	35	19.90	1.222	1.210	0.2468	1.235	6.08%	1.24%	6.20%	5.003
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	5	5	1.700	0.1966	0.1901	0.0707	0.2029	11.18%	4.16%	11.93%	2.869
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	6	5	1.908	0.5025	0.5021	0.0283	0.5029	26.32%	1.49%	26.36%	17.75
181.30	Acid Soluble Cd, ICP (ppm)	9	8	3.443	0.7482	0.7463	0.0762	0.7502	21.67%	2.21%	21.79%	9.847
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	7	5	4.623	0.8351	0.8268	0.1662	0.8433	17.88%	3.60%	18.24%	5.073
191.30	Acid Soluble Cr, ICP (ppm)	8	8	37.65	7.581	7.500	1.564	7.661	19.92%	4.15%	20.35%	4.898
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	6	6	48.62	3.860	3.713	1.492	4.002	7.64%	3.07%	8.23%	2.682
251.30	Acid Soluble Pb, ICP (ppm)	8	6	0.2056	0.1178	0.1164	0.0255	0.1192	56.60%	12.42%	57.94%	4.667
289.30	Acid Soluble Mo, ICP (ppm)	6	5	1.914	0.7954	0.7950	0.0348	0.7958	41.53%	1.82%	41.57%	22.90
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	6	5	2.840	1.686	1.685	0.0942	1.687	59.32%	3.32%	59.42%	17.90
291.30	Acid Soluble Ni, ICP (ppm)	8	7	12.51	3.791	3.791	0.1064	3.792	30.29%	0.85%	30.31%	35.65
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	7	7	15.78	1.798	1.727	0.7102	1.867	10.94%	4.50%	11.83%	2.629

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
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	6	6	0.0068	0.0006	0.0006	0.0002	0.0006	8.70%	2.51%	9.05%	3.600
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	8	7	0.0075	0.0012	0.0011	0.0005	0.0013	14.96%	7.27%	16.63%	2.287

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

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 210211

Grade 22-3-11

Lab Values

Methods: 135

Labs Reporting: 87

Issue Date : 03/31/2021

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 (%)	0117	0.6050	0.0500	1.001	0.2808	0.1114	7	-1.28	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0563	0.8250	0.0300	1.001	0.2808	0.1114	7	-0.57	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0309	0.9300	0.3000	1.001	0.2808	0.1114	7	-0.23	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0444	0.9700	0.0200	1.001	0.2808	0.1114	7	-0.10	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0136	1.130	0.3600	1.001	0.2808	0.1114	7	0.41	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0389	1.215	0.0100	1.001	0.2808	0.1114	7	0.69	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0230	1.335	0.0100	1.001	0.2808	0.1114	7	1.07	NA	0
001.99	Ammoniacal N, Other (%)	0368	0.0660	0.0023	0.9026	0.3994	0.0399	20	-2.09	NA	0
001.99	Ammoniacal N, Other (%)	0538	0.5800	0.0800	0.9026	0.3994	0.0399	20	-0.81	NA	0
001.99	Ammoniacal N, Other (%)	0540	0.6300	0.0000	0.9026	0.3994	0.0399	20	-0.68	NA	0
001.99	Ammoniacal N, Other (%)	0537	0.6350	0.0900	0.9026	0.3994	0.0399	20	-0.67	NA	0
001.99	Ammoniacal N, Other (%)	0451	0.6375	0.0210	0.9026	0.3994	0.0399	20	-0.66	NA	0
001.99	Ammoniacal N, Other (%)	0553	0.6440	0.0240	0.9026	0.3994	0.0399	20	-0.65	NA	0
001.99	Ammoniacal N, Other (%)	0562	0.7500	0.1000	0.9026	0.3994	0.0399	20	-0.38	NA	0
001.99	Ammoniacal N, Other (%)	0423	0.7550	0.0500	0.9026	0.3994	0.0399	20	-0.37	NA	0
001.99	Ammoniacal N, Other (%)	0532	0.7565	0.0090	0.9026	0.3994	0.0399	20	-0.37	NA	0
001.99	Ammoniacal N, Other (%)	0569	0.7900	0.1200	0.9026	0.3994	0.0399	20	-0.28	NA	0
001.99	Ammoniacal N, Other (%)	0546	0.8000	0.0200	0.9026	0.3994	0.0399	20	-0.26	NA	0
001.99	Ammoniacal N, Other (%)	0549	0.8050	0.1300	0.9026	0.3994	0.0399	20	-0.24	NA	0
001.99	Ammoniacal N, Other (%)	0394	0.9100	0.0120	0.9026	0.3994	0.0399	20	0.02	NA	0
001.99	Ammoniacal N, Other (%)	0524	0.9300	0.0200	0.9026	0.3994	0.0399	20	0.07	NA	0
001.99	Ammoniacal N, Other (%)	0096	0.9450	0.0100	0.9026	0.3994	0.0399	20	0.11	NA	0
001.99	Ammoniacal N, Other (%)	0510	1.174	0.0298	0.9026	0.3994	0.0399	20	0.68	NA	0
001.99	Ammoniacal N, Other (%)	0027	1.730	0.0200	0.9026	0.3994	0.0399	20	2.07	NA	0
001.99	Ammoniacal N, Other (%)	0559	2.405	0.0100	0.9026	0.3994	0.0399	20	3.76	NA	0
001.99	Ammoniacal N, Other (%)	0564	2.440	0.0400	0.9026	0.3994	0.0399	20	3.85	NA	0
001.99	Ammoniacal N, Other (%)	0220	3.485	0.0100	0.9026	0.3994	0.0399	20	6.47	NA	0
001.99	Ammoniacal N, Other (%)	0255	2.185	0.2100	0.9026	0.3994	0.0399	20	3.21	NA	1
005.00	Urea N, Urease (as N) (%)	0389	19.90	0.2000	20.38	0.5629	0.3703	4	-0.85		0
005.00	Urea N, Urease (as N) (%)	0136	20.16	0.9400	20.38	0.5629	0.3703	4	-0.38		0
005.00	Urea N, Urease (as N) (%)	0368	20.26	0.2413	20.38	0.5629	0.3703	4	-0.22		0
005.00	Urea N, Urease (as N) (%)	0569	21.19	0.1000	20.38	0.5629	0.3703	4	1.45		0
005.10	Urea N, HPLC(asN),H2Omobilephase (%)	0394	20.18	0.0000				1			0
005.20	Urea N, HPLC(asN),85%acetoneitrilemobilephase (%)	0451	20.33	0.1500				2			0
005.20	Urea N, HPLC(asN),85%acetoneitrilemobilephase (%)	0117	21.03	0.0121				2			0
005.99	Urea N, Other (%)	0559	19.26	0.0100	20.68	0.9813	0.1683	11	-1.36	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				
005.99	Urea N, Other (%)	0564	19.27	0.0500	20.68	0.9813	0.1683	11	-1.35	NA	0
005.99	Urea N, Other (%)	0524	20.22	0.3600	20.68	0.9813	0.1683	11	-0.44	NA	0
005.99	Urea N, Other (%)	0029	20.25	0.3400	20.68	0.9813	0.1683	11	-0.41	NA	0
005.99	Urea N, Other (%)	0546	20.65	0.2600	20.68	0.9813	0.1683	11	-0.03	NA	0
005.99	Urea N, Other (%)	0309	20.92	0.0800	20.68	0.9813	0.1683	11	0.23	NA	0
005.99	Urea N, Other (%)	0532	21.01	0.1910	20.68	0.9813	0.1683	11	0.31	NA	0
005.99	Urea N, Other (%)	0549	21.20	0.1300	20.68	0.9813	0.1683	11	0.49	NA	0
005.99	Urea N, Other (%)	0562	21.33	0.1500	20.68	0.9813	0.1683	11	0.61	NA	0
005.99	Urea N, Other (%)	0538	21.45	0.1900	20.68	0.9813	0.1683	11	0.73	NA	0
005.99	Urea N, Other (%)	0027	21.96	0.0900	20.68	0.9813	0.1683	11	1.21	NA	0
007.00	Urea, Urease (as Urea) (%)	0444	20.27	0.2800				1			0
007.99	Urea, Other (%)	0220	20.36	0.1300	20.76	0.5697	0.3633	3	-0.71		0
007.99	Urea, Other (%)	0356	20.51	0.8000	20.76	0.5697	0.3633	3	-0.44		0
007.99	Urea, Other (%)	0537	21.41	0.1600	20.76	0.5697	0.3633	3	1.14		0
009.99	Ammoniacal Plus Nitrate N, Other (%)	0518	22.30	0.2000				1			0
010.11	Total N, Modified Comprehensive (22%)	0540	21.79	0.0300	21.92	0.1579	0.0811	7	-0.75	OK	0
010.11	Total N, Modified Comprehensive (22%)	0539	21.85	0.0900	21.92	0.1579	0.0811	7	-0.40	OK	0
010.11	Total N, Modified Comprehensive (22%)	0309	21.85	0.2200	21.92	0.1579	0.0811	7	-0.37	OK	0
010.11	Total N, Modified Comprehensive (22%)	0535	21.85	0.1000	21.92	0.1579	0.0811	7	-0.37	OK	0
010.11	Total N, Modified Comprehensive (22%)	0551	21.85	0.1000	21.92	0.1579	0.0811	7	-0.37	OK	0
010.11	Total N, Modified Comprehensive (22%)	0546	22.08	0.0100	21.92	0.1579	0.0811	7	0.91	OK	0
010.11	Total N, Modified Comprehensive (22%)	0510	22.23	0.0176	21.92	0.1579	0.0811	7	1.78	OK	0
010.12	Total N, Salicylic (22%)	0117	21.30	0.2000	22.41	1.077	0.8503	3	-1.03		0
010.12	Total N, Salicylic (22%)	0563	22.49	0.8510	22.41	1.077	0.8503	3	0.07		0
010.12	Total N, Salicylic (22%)	0568	23.45	1.500	22.41	1.077	0.8503	3	0.96		0
010.60	Total N, Combustion (22%)	0325	20.70	0.0000	21.69	0.3944	0.2515	53	-2.50	Low	0
010.60	Total N, Combustion (22%)	0035	20.95	0.3000	21.69	0.3944	0.2515	53	-1.87	OK	0
010.60	Total N, Combustion (22%)	0561	21.03	0.2100	21.69	0.3944	0.2515	53	-1.68	OK	0
010.60	Total N, Combustion (22%)	0027	21.20	0.0000	21.69	0.3944	0.2515	53	-1.23	OK	0
010.60	Total N, Combustion (22%)	0444	21.24	0.2600	21.69	0.3944	0.2515	53	-1.13	OK	0
010.60	Total N, Combustion (22%)	0230	21.25	0.3000	21.69	0.3944	0.2515	53	-1.11	OK	0
010.60	Total N, Combustion (22%)	0534	21.28	0.1500	21.69	0.3944	0.2515	53	-1.04	OK	0
010.60	Total N, Combustion (22%)	0086	21.28	0.2160	21.69	0.3944	0.2515	53	-1.04	OK	0
010.60	Total N, Combustion (22%)	0423	21.29	0.0900	21.69	0.3944	0.2515	53	-1.02	OK	0
010.60	Total N, Combustion (22%)	0231	21.29	0.0300	21.69	0.3944	0.2515	53	-1.02	OK	0
010.60	Total N, Combustion (22%)	0157	21.30	0.4000	21.69	0.3944	0.2515	53	-0.98	OK	0
010.60	Total N, Combustion (22%)	0095	21.36	0.4000	21.69	0.3944	0.2515	53	-0.83	OK	0
010.60	Total N, Combustion (22%)	0292	21.38	0.0200	21.69	0.3944	0.2515	53	-0.78	OK	0
010.60	Total N, Combustion (22%)	0354	21.40	0.0000	21.69	0.3944	0.2515	53	-0.73	OK	0
010.60	Total N, Combustion (22%)	0368	21.42	0.2310	21.69	0.3944	0.2515	53	-0.67	OK	0
010.60	Total N, Combustion (22%)	0421	21.43	0.1800	21.69	0.3944	0.2515	53	-0.65	OK	0
010.60	Total N, Combustion (22%)	0389	21.46	0.9100	21.69	0.3944	0.2515	53	-0.59	OK	0
010.60	Total N, Combustion (22%)	0023	21.47	0.2270	21.69	0.3944	0.2515	53	-0.55	OK	0
010.60	Total N, Combustion (22%)	0042	21.50	0.4000	21.69	0.3944	0.2515	53	-0.47	OK	0
010.60	Total N, Combustion (22%)	0136	21.50	0.2000	21.69	0.3944	0.2515	53	-0.47	OK	0
010.60	Total N, Combustion (22%)	0451	21.57	0.4500	21.69	0.3944	0.2515	53	-0.31	OK	0
010.60	Total N, Combustion (22%)	0055	21.57	0.1400	21.69	0.3944	0.2515	53	-0.30	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 (22%)	0371	21.62	0.5500	21.69	0.3944	0.2515	53	-0.18	OK	0
010.60	Total N, Combustion (22%)	0096	21.64	0.0800	21.69	0.3944	0.2515	53	-0.12	OK	0
010.60	Total N, Combustion (22%)	0356	21.64	1.086	21.69	0.3944	0.2515	53	-0.12	OK	0
010.60	Total N, Combustion (22%)	0049	21.66	0.0600	21.69	0.3944	0.2515	53	-0.07	OK	0
010.60	Total N, Combustion (22%)	0422	21.70	0.0500	21.69	0.3944	0.2515	53	0.02	OK	0
010.60	Total N, Combustion (22%)	0486	21.73	0.0900	21.69	0.3944	0.2515	53	0.10	OK	0
010.60	Total N, Combustion (22%)	0527	21.74	0.1820	21.69	0.3944	0.2515	53	0.12	OK	0
010.60	Total N, Combustion (22%)	0324	21.75	0.5000	21.69	0.3944	0.2515	53	0.16	OK	0
010.60	Total N, Combustion (22%)	0450	21.75	0.7000	21.69	0.3944	0.2515	53	0.16	OK	0
010.60	Total N, Combustion (22%)	0234	21.82	0.4600	21.69	0.3944	0.2515	53	0.34	OK	0
010.60	Total N, Combustion (22%)	0169	21.87	0.3700	21.69	0.3944	0.2515	53	0.45	OK	0
010.60	Total N, Combustion (22%)	0177	21.88	0.2200	21.69	0.3944	0.2515	53	0.49	OK	0
010.60	Total N, Combustion (22%)	0494	21.89	0.0600	21.69	0.3944	0.2515	53	0.52	OK	0
010.60	Total N, Combustion (22%)	0043	21.91	0.1300	21.69	0.3944	0.2515	53	0.55	OK	0
010.60	Total N, Combustion (22%)	0472	21.91	0.0100	21.69	0.3944	0.2515	53	0.55	OK	0
010.60	Total N, Combustion (22%)	0452	21.92	0.1300	21.69	0.3944	0.2515	53	0.58	OK	0
010.60	Total N, Combustion (22%)	0523	21.92	0.0800	21.69	0.3944	0.2515	53	0.59	OK	0
010.60	Total N, Combustion (22%)	0291	21.95	0.0100	21.69	0.3944	0.2515	53	0.65	OK	0
010.60	Total N, Combustion (22%)	0390	21.95	0.0300	21.69	0.3944	0.2515	53	0.65	OK	0
010.60	Total N, Combustion (22%)	0040	21.95	0.3000	21.69	0.3944	0.2515	53	0.67	OK	0
010.60	Total N, Combustion (22%)	0405	21.98	0.1100	21.69	0.3944	0.2515	53	0.73	OK	0
010.60	Total N, Combustion (22%)	0029	21.99	0.4700	21.69	0.3944	0.2515	53	0.76	OK	0
010.60	Total N, Combustion (22%)	0220	22.09	0.0400	21.69	0.3944	0.2515	53	1.02	OK	0
010.60	Total N, Combustion (22%)	0443	22.12	0.1600	21.69	0.3944	0.2515	53	1.10	OK	0
010.60	Total N, Combustion (22%)	0260	22.13	0.6500	21.69	0.3944	0.2515	53	1.11	OK	0
010.60	Total N, Combustion (22%)	0114	22.16	0.0380	21.69	0.3944	0.2515	53	1.19	OK	0
010.60	Total N, Combustion (22%)	0073	22.24	0.0200	21.69	0.3944	0.2515	53	1.40	OK	0
010.60	Total N, Combustion (22%)	0547	22.27	0.0200	21.69	0.3944	0.2515	53	1.48	OK	0
010.60	Total N, Combustion (22%)	0543	22.41	0.8210	21.69	0.3944	0.2515	53	1.84	OK	0
010.60	Total N, Combustion (22%)	0307	22.54	0.7800	21.69	0.3944	0.2515	53	2.16	High	0
010.60	Total N, Combustion (22%)	0550	24.22	0.0100	21.69	0.3944	0.2515	53	6.41	High	0
010.60	Total N, Combustion (22%)	0255	23.26	1.262	21.69	0.3944	0.2515	53	3.99	High	1
010.99	Total N, Other (22%)	0394	19.40	0.4320	21.71	0.5440	0.1448	16	-4.24	Low	0
010.99	Total N, Other (22%)	0524	20.89	0.0552	21.71	0.5440	0.1448	16	-1.51	Low	0
010.99	Total N, Other (22%)	0522	21.15	0.0900	21.71	0.5440	0.1448	16	-1.03	OK	0
010.99	Total N, Other (22%)	0556	21.30	0.2000	21.71	0.5440	0.1448	16	-0.75	OK	0
010.99	Total N, Other (22%)	0513	21.46	0.0900	21.71	0.5440	0.1448	16	-0.47	OK	0
010.99	Total N, Other (22%)	0559	21.66	0.0200	21.71	0.5440	0.1448	16	-0.09	OK	0
010.99	Total N, Other (22%)	0564	21.74	0.0100	21.71	0.5440	0.1448	16	0.05	OK	0
010.99	Total N, Other (22%)	0532	21.77	0.1800	21.71	0.5440	0.1448	16	0.11	OK	0
010.99	Total N, Other (22%)	0476	21.80	0.0656	21.71	0.5440	0.1448	16	0.16	OK	0
010.99	Total N, Other (22%)	0551	21.80	0.2000	21.71	0.5440	0.1448	16	0.17	OK	0
010.99	Total N, Other (22%)	0529	21.82	0.0900	21.71	0.5440	0.1448	16	0.19	OK	0
010.99	Total N, Other (22%)	0538	22.03	0.1100	21.71	0.5440	0.1448	16	0.58	OK	0
010.99	Total N, Other (22%)	0562	22.03	0.1500	21.71	0.5440	0.1448	16	0.58	OK	0
010.99	Total N, Other (22%)	0537	22.05	0.2500	21.71	0.5440	0.1448	16	0.62	OK	0
010.99	Total N, Other (22%)	0563	22.46	0.1940	21.71	0.5440	0.1448	16	1.38	High	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				
010.99	Total N, Other (22%)	0545	22.57	0.1800	21.71	0.5440	0.1448	16	1.58	High	0
020.10	Total P2O5, Gravimetric Quinolinium MolybdoP (%)	0157	3.485	0.0900				2			0
020.10	Total P2O5, Gravimetric Quinolinium MolybdoP (%)	0444	3.630	0.0800				2			0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0534	3.205	0.0100	3.593	0.2034	0.0706	13	-1.91	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0405	3.410	0.0200	3.593	0.2034	0.0706	13	-0.90	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0476	3.444	0.0074	3.593	0.2034	0.0706	13	-0.73	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0561	3.475	0.1100	3.593	0.2034	0.0706	13	-0.58	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0510	3.483	0.0015	3.593	0.2034	0.0706	13	-0.54	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0371	3.515	0.1300	3.593	0.2034	0.0706	13	-0.38	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0394	3.537	0.0280	3.593	0.2034	0.0706	13	-0.28	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0177	3.667	0.1642	3.593	0.2034	0.0706	13	0.36	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0231	3.700	0.0000	3.593	0.2034	0.0706	13	0.53	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0300	3.730	0.0600	3.593	0.2034	0.0706	13	0.67	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0356	3.742	0.2170	3.593	0.2034	0.0706	13	0.73	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0292	3.820	0.0200	3.593	0.2034	0.0706	13	1.12	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0550	4.165	0.1500	3.593	0.2034	0.0706	13	2.81	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0324	3.790	0.5400	3.593	0.2034	0.0706	13	0.97	NA	1
020.40	Total P2O5, Automated (%)	0096	3.615	0.2100				2			0
020.40	Total P2O5, Automated (%)	0035	3.650	0.1000				2			0
020.50	Total P2O5, ICP (%)	0450	1.580	0.0000	3.552	0.2193	0.0892	21	-8.99	NA	0
020.50	Total P2O5, ICP (%)	0524	3.232	0.1042	3.552	0.2193	0.0892	21	-1.46	NA	0
020.50	Total P2O5, ICP (%)	0255	3.243	0.2610	3.552	0.2193	0.0892	21	-1.41	NA	0
020.50	Total P2O5, ICP (%)	0523	3.300	0.2000	3.552	0.2193	0.0892	21	-1.15	NA	0
020.50	Total P2O5, ICP (%)	0444	3.365	0.0300	3.552	0.2193	0.0892	21	-0.85	NA	0
020.50	Total P2O5, ICP (%)	0552	3.465	0.0900	3.552	0.2193	0.0892	21	-0.40	NA	0
020.50	Total P2O5, ICP (%)	0390	3.525	0.0100	3.552	0.2193	0.0892	21	-0.12	NA	0
020.50	Total P2O5, ICP (%)	0547	3.540	0.0200	3.552	0.2193	0.0892	21	-0.06	NA	0
020.50	Total P2O5, ICP (%)	0451	3.554	0.1510	3.552	0.2193	0.0892	21	0.01	NA	0
020.50	Total P2O5, ICP (%)	0546	3.558	0.1266	3.552	0.2193	0.0892	21	0.02	NA	0
020.50	Total P2O5, ICP (%)	0422	3.570	0.0600	3.552	0.2193	0.0892	21	0.08	NA	0
020.50	Total P2O5, ICP (%)	0389	3.575	0.0300	3.552	0.2193	0.0892	21	0.10	NA	0
020.50	Total P2O5, ICP (%)	0169	3.590	0.1000	3.552	0.2193	0.0892	21	0.17	NA	0
020.50	Total P2O5, ICP (%)	0472	3.620	0.0800	3.552	0.2193	0.0892	21	0.31	NA	0
020.50	Total P2O5, ICP (%)	0423	3.645	0.0300	3.552	0.2193	0.0892	21	0.42	NA	0
020.50	Total P2O5, ICP (%)	0368	3.650	0.0161	3.552	0.2193	0.0892	21	0.45	NA	0
020.50	Total P2O5, ICP (%)	0231	3.715	0.0100	3.552	0.2193	0.0892	21	0.74	NA	0
020.50	Total P2O5, ICP (%)	0543	3.716	0.3340	3.552	0.2193	0.0892	21	0.75	NA	0
020.50	Total P2O5, ICP (%)	0433	3.750	0.0200	3.552	0.2193	0.0892	21	0.90	NA	0
020.50	Total P2O5, ICP (%)	0260	4.000	0.2000	3.552	0.2193	0.0892	21	2.04	NA	0
020.50	Total P2O5, ICP (%)	0527	4.167	0.0013	3.552	0.2193	0.0892	21	2.80	NA	0
020.99	Total P2O5, Other (%)	0529	2.800	0.1400	3.550	0.5213	0.0477	5	-1.44		0
020.99	Total P2O5, Other (%)	0443	3.515	0.0700	3.550	0.5213	0.0477	5	-0.07		0
020.99	Total P2O5, Other (%)	0515	3.516	0.0083	3.550	0.5213	0.0477	5	-0.07		0
020.99	Total P2O5, Other (%)	0513	3.655	0.0100	3.550	0.5213	0.0477	5	0.20		0
020.99	Total P2O5, Other (%)	0564	4.265	0.0100	3.550	0.5213	0.0477	5	1.37		0
030.20	Citrate Insoluble P2O5, Spectrophotometric MolybdovanadoP (%)	0405	0.0100	0.0000				1			0
030.40	Citrate Insoluble P2O5, Automated, test portion 963.03 A-B (%)	0096	0.0300	0.0400				1			0

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040.40	Indirect Available P2O5, Automated (3%)	0096	3.590	0.2400				1			0
041.10	Direct Available P2O5, Gravimetric Quinolinium (3%)	0556	1.600	0.2000	2.942	1.165	0.0803	3	-1.15		0
041.10	Direct Available P2O5, Gravimetric Quinolinium (3%)	0086	3.532	0.0110	2.942	1.165	0.0803	3	0.51		0
041.10	Direct Available P2O5, Gravimetric Quinolinium (3%)	0049	3.695	0.0300	2.942	1.165	0.0803	3	0.65		0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext. (3%)	0055	3.245	0.0500	3.492	0.2028	0.0640	5	-1.22		0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext. (3%)	0405	3.365	0.0500	3.492	0.2028	0.0640	5	-0.63		0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext. (3%)	0220	3.515	0.0700	3.492	0.2028	0.0640	5	0.11		0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext. (3%)	0513	3.555	0.0500	3.492	0.2028	0.0640	5	0.31		0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext. (3%)	0073	3.780	0.1000	3.492	0.2028	0.0640	5	1.42		0
041.20	Direct Available P2O5, Spectrophotometric (3%)	0027	3.360	0.0400				2			0
041.20	Direct Available P2O5, Spectrophotometric (3%)	0553	3.370	0.0200				2			0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (3%)	0405	3.165	0.0300	3.577	0.2822	0.1019	11	-1.37	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (3%)	0230	3.345	0.1500	3.577	0.2822	0.1019	11	-0.77	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (3%)	0563	3.375	0.3100	3.577	0.2822	0.1019	11	-0.67	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (3%)	0472	3.425	0.0100	3.577	0.2822	0.1019	11	-0.50	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (3%)	0055	3.485	0.1100	3.577	0.2822	0.1019	11	-0.31	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (3%)	0394	3.613	0.1310	3.577	0.2822	0.1019	11	0.12	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (3%)	0568	3.640	0.1000	3.577	0.2822	0.1019	11	0.21	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (3%)	0231	3.665	0.1500	3.577	0.2822	0.1019	11	0.29	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (3%)	0300	3.730	0.0000	3.577	0.2822	0.1019	11	0.51	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (3%)	0522	3.905	0.0300	3.577	0.2822	0.1019	11	1.09	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (3%)	0354	4.200	0.1000	3.577	0.2822	0.1019	11	2.07	OK	0
041.40	Direct Available P2O5, Automated, Citrate-EDTA Ext. (3%)	0029	3.665	0.1700				1			0
041.50	Direct Available P2O5, ICP (3%)	0325	3.250	0.1000	3.597	0.2183	0.1135	5	-1.59		0
041.50	Direct Available P2O5, ICP (3%)	0421	3.555	0.2500	3.597	0.2183	0.1135	5	-0.19		0
041.50	Direct Available P2O5, ICP (3%)	0368	3.633	0.0275	3.597	0.2183	0.1135	5	0.17		0
041.50	Direct Available P2O5, ICP (3%)	0452	3.720	0.1800	3.597	0.2183	0.1135	5	0.56		0
041.50	Direct Available P2O5, ICP (3%)	0291	3.825	0.0100	3.597	0.2183	0.1135	5	1.05		0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (3%)	0423	3.290	0.1000	3.538	0.1065	0.1122	9	-2.15	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (3%)	0136	3.445	0.1900	3.538	0.1065	0.1122	9	-0.81	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (3%)	0486	3.445	0.0100	3.538	0.1065	0.1122	9	-0.81	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (3%)	0040	3.550	0.1000	3.538	0.1065	0.1122	9	0.10	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (3%)	0494	3.550	0.0400	3.538	0.1065	0.1122	9	0.10	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (3%)	0025	3.600	0.3400	3.538	0.1065	0.1122	9	0.54	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (3%)	0023	3.610	0.0600	3.538	0.1065	0.1122	9	0.62	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (3%)	0231	3.615	0.0100	3.538	0.1065	0.1122	9	0.67	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (3%)	0043	3.650	0.1600	3.538	0.1065	0.1122	9	0.97	OK	0
041.99	Direct Available P2O5, Other (3%)	0540	2.905	0.0300	3.476	0.3819	0.0971	14	-1.50	OK	0
041.99	Direct Available P2O5, Other (3%)	0532	3.210	0.0600	3.476	0.3819	0.0971	14	-0.70	OK	0
041.99	Direct Available P2O5, Other (3%)	0535	3.250	0.1000	3.476	0.3819	0.0971	14	-0.59	OK	0
041.99	Direct Available P2O5, Other (3%)	0539	3.250	0.1000	3.476	0.3819	0.0971	14	-0.59	OK	0
041.99	Direct Available P2O5, Other (3%)	0545	3.250	0.1000	3.476	0.3819	0.0971	14	-0.59	OK	0
041.99	Direct Available P2O5, Other (3%)	0551	3.300	0.1000	3.476	0.3819	0.0971	14	-0.46	OK	0
041.99	Direct Available P2O5, Other (3%)	0518	3.340	0.1200	3.476	0.3819	0.0971	14	-0.36	OK	0
041.99	Direct Available P2O5, Other (3%)	0405	3.400	0.0200	3.476	0.3819	0.0971	14	-0.20	OK	0
041.99	Direct Available P2O5, Other (3%)	0559	3.450	0.0200	3.476	0.3819	0.0971	14	-0.07	OK	0
041.99	Direct Available P2O5, Other (3%)	0562	3.600	0.3000	3.476	0.3819	0.0971	14	0.32	OK	0

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041.99	Direct Available P2O5, Other (3%)	0549	3.805	0.0900	3.476	0.3819	0.0971	14	0.86	OK	0
041.99	Direct Available P2O5, Other (3%)	0569	3.860	0.1600	3.476	0.3819	0.0971	14	1.01	OK	0
041.99	Direct Available P2O5, Other (3%)	0538	3.995	0.0900	3.476	0.3819	0.0971	14	1.36	OK	0
041.99	Direct Available P2O5, Other (3%)	0537	4.055	0.0700	3.476	0.3819	0.0971	14	1.52	OK	0
048.10	Water Soluble P2O5, Gravimetric Quinolinium (%)	0444	3.365	0.0300				1			0
048.20	Water Soluble P2O5, Spectrophotometric (%)	0096	3.205	0.0300				2			0
048.20	Water Soluble P2O5, Spectrophotometric (%)	0394	3.296	0.0450				2			0
048.99	Water Soluble P2O5, Other (%)	0513	3.120	0.0400				1			0
050.00	Soluble K2O, STPB Oxalate (11%)	0114	15.36	0.7000	20.13	1.148	0.3270	10	-3.86	Low	0
050.00	Soluble K2O, STPB Oxalate (11%)	0073	18.87	0.0600	20.13	1.148	0.3270	10	-1.02	Low	0
050.00	Soluble K2O, STPB Oxalate (11%)	0561	19.15	0.1000	20.13	1.148	0.3270	10	-0.79	OK	0
050.00	Soluble K2O, STPB Oxalate (11%)	0049	19.96	0.3300	20.13	1.148	0.3270	10	-0.14	OK	0
050.00	Soluble K2O, STPB Oxalate (11%)	0055	20.03	0.6200	20.13	1.148	0.3270	10	-0.08	OK	0
050.00	Soluble K2O, STPB Oxalate (11%)	0220	20.74	0.3800	20.13	1.148	0.3270	10	0.50	OK	0
050.00	Soluble K2O, STPB Oxalate (11%)	0522	20.95	0.0300	20.13	1.148	0.3270	10	0.66	OK	0
050.00	Soluble K2O, STPB Oxalate (11%)	0444	20.95	0.0000	20.13	1.148	0.3270	10	0.67	OK	0
050.00	Soluble K2O, STPB Oxalate (11%)	0494	20.97	0.1500	20.13	1.148	0.3270	10	0.68	OK	0
050.00	Soluble K2O, STPB Oxalate (11%)	0230	21.25	0.9000	20.13	1.148	0.3270	10	0.91	High	0
050.00	Soluble K2O, STPB Oxalate (11%)	0550	21.35	2.730	20.13	1.148	0.3270	10	0.99	High	1
050.30	Soluble K2O, AA (Oxalate) (11%)	0356	20.11	0.0040	20.81	0.5309	0.2960	4	-1.33		0
050.30	Soluble K2O, AA (Oxalate) (11%)	0073	20.75	0.1800	20.81	0.5309	0.2960	4	-0.12		0
050.30	Soluble K2O, AA (Oxalate) (11%)	0040	21.05	0.1000	20.81	0.5309	0.2960	4	0.44		0
050.30	Soluble K2O, AA (Oxalate) (11%)	0157	21.35	0.9000	20.81	0.5309	0.2960	4	1.01		0
050.31	Soluble K2O, AA (Citrate) (11%)	0472	19.26	0.1100				1			0
050.50	Soluble K2O, ICP (Oxalate) (11%)	0390	18.35	0.1000	20.53	1.460	0.4886	7	-1.35	Low	0
050.50	Soluble K2O, ICP (Oxalate) (11%)	0324	19.70	1.600	20.53	1.460	0.4886	7	-0.52	OK	0
050.50	Soluble K2O, ICP (Oxalate) (11%)	0055	20.02	0.8400	20.53	1.460	0.4886	7	-0.32	OK	0
050.50	Soluble K2O, ICP (Oxalate) (11%)	0444	20.95	0.0000	20.53	1.460	0.4886	7	0.26	OK	0
050.50	Soluble K2O, ICP (Oxalate) (11%)	0169	21.12	0.0400	20.53	1.460	0.4886	7	0.36	OK	0
050.50	Soluble K2O, ICP (Oxalate) (11%)	0292	21.30	0.0400	20.53	1.460	0.4886	7	0.47	OK	0
050.50	Soluble K2O, ICP (Oxalate) (11%)	0422	22.30	0.8000	20.53	1.460	0.4886	7	1.09	High	0
050.51	Soluble K2O, ICP (Citrate) (11%)	0368	20.08	0.2504	21.01	1.044	0.2051	4	-0.89		0
050.51	Soluble K2O, ICP (Citrate) (11%)	0291	20.70	0.0100	21.01	1.044	0.2051	4	-0.31		0
050.51	Soluble K2O, ICP (Citrate) (11%)	0452	20.77	0.2400	21.01	1.044	0.2051	4	-0.23		0
050.51	Soluble K2O, ICP (Citrate) (11%)	0568	22.51	0.3200	21.01	1.044	0.2051	4	1.43		0
050.52	Soluble K2O, ICP (Citrate-EDTA) (11%)	0547	17.58	0.0000	20.22	0.9368	0.2467	9	-2.61	Low	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (11%)	0486	19.68	0.0200	20.22	0.9368	0.2467	9	-0.54	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (11%)	0423	20.00	0.2000	20.22	0.9368	0.2467	9	-0.22	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (11%)	0136	20.01	0.2100	20.22	0.9368	0.2467	9	-0.22	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (11%)	0043	20.04	0.7300	20.22	0.9368	0.2467	9	-0.19	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (11%)	0354	20.10	0.0000	20.22	0.9368	0.2467	9	-0.12	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (11%)	0025	20.50	0.2000	20.22	0.9368	0.2467	9	0.27	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (11%)	0494	21.38	0.8600	20.22	0.9368	0.2467	9	1.14	High	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (11%)	0023	21.50	0.0000	20.22	0.9368	0.2467	9	1.26	High	0
050.60	Soluble K2O, Flame Photometric (Oxalate) (11%)	0443	11.47	0.2900	17.28	5.049	0.2782	3	-1.15		0
050.60	Soluble K2O, Flame Photometric (Oxalate) (11%)	0510	19.86	0.3946	17.28	5.049	0.2782	3	0.51		0
050.60	Soluble K2O, Flame Photometric (Oxalate) (11%)	0169	20.53	0.1500	17.28	5.049	0.2782	3	0.64		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				
050.61	Soluble K2O, Flame Photometric (Citrate) (11%)	0035	20.10	0.4000				1			0
050.62	Soluble K2O, Flame Photometric (Citrate-EDTA) (11%)	0535	19.45	0.1000	20.52	1.085	0.2520	5	-0.98		0
050.62	Soluble K2O, Flame Photometric (Citrate-EDTA) (11%)	0539	19.46	0.1100	20.52	1.085	0.2520	5	-0.98		0
050.62	Soluble K2O, Flame Photometric (Citrate-EDTA) (11%)	0095	20.49	0.8100	20.52	1.085	0.2520	5	-0.03		0
050.62	Soluble K2O, Flame Photometric (Citrate-EDTA) (11%)	0029	21.36	0.1300	20.52	1.085	0.2520	5	0.77		0
050.62	Soluble K2O, Flame Photometric (Citrate-EDTA) (11%)	0513	21.84	0.1100	20.52	1.085	0.2520	5	1.22		0
050.99	Soluble K2O, Other (11%)	0540	10.95	0.1100	19.82	1.206	0.2813	38	-7.36	Low	0
050.99	Soluble K2O, Other (11%)	0532	11.58	0.0900	19.82	1.206	0.2813	38	-6.83	Low	0
050.99	Soluble K2O, Other (11%)	0450	16.40	0.2800	19.82	1.206	0.2813	38	-2.83	Low	0
050.99	Soluble K2O, Other (11%)	0523	17.45	0.5000	19.82	1.206	0.2813	38	-1.96	Low	0
050.99	Soluble K2O, Other (11%)	0556	17.80	0.4000	19.82	1.206	0.2813	38	-1.67	Low	0
050.99	Soluble K2O, Other (11%)	0545	18.40	0.2000	19.82	1.206	0.2813	38	-1.17	Low	0
050.99	Soluble K2O, Other (11%)	0551	18.80	0.2000	19.82	1.206	0.2813	38	-0.84	OK	0
050.99	Soluble K2O, Other (11%)	0255	19.14	1.733	19.82	1.206	0.2813	38	-0.56	OK	0
050.99	Soluble K2O, Other (11%)	0535	19.25	0.1000	19.82	1.206	0.2813	38	-0.47	OK	0
050.99	Soluble K2O, Other (11%)	0539	19.25	0.1000	19.82	1.206	0.2813	38	-0.47	OK	0
050.99	Soluble K2O, Other (11%)	0543	19.30	0.8900	19.82	1.206	0.2813	38	-0.42	OK	0
050.99	Soluble K2O, Other (11%)	0325	19.35	0.9000	19.82	1.206	0.2813	38	-0.39	OK	0
050.99	Soluble K2O, Other (11%)	0451	19.35	0.2400	19.82	1.206	0.2813	38	-0.39	OK	0
050.99	Soluble K2O, Other (11%)	0564	19.43	0.0500	19.82	1.206	0.2813	38	-0.32	OK	0
050.99	Soluble K2O, Other (11%)	0552	19.48	0.3200	19.82	1.206	0.2813	38	-0.28	OK	0
050.99	Soluble K2O, Other (11%)	0559	19.64	0.0100	19.82	1.206	0.2813	38	-0.15	OK	0
050.99	Soluble K2O, Other (11%)	0394	19.73	0.1050	19.82	1.206	0.2813	38	-0.07	OK	0
050.99	Soluble K2O, Other (11%)	0234	19.76	0.1900	19.82	1.206	0.2813	38	-0.05	OK	0
050.99	Soluble K2O, Other (11%)	0260	19.76	0.0450	19.82	1.206	0.2813	38	-0.04	OK	0
050.99	Soluble K2O, Other (11%)	0476	19.78	0.1108	19.82	1.206	0.2813	38	-0.03	OK	0
050.99	Soluble K2O, Other (11%)	0389	20.05	0.1500	19.82	1.206	0.2813	38	0.19	OK	0
050.99	Soluble K2O, Other (11%)	0537	20.08	0.4100	19.82	1.206	0.2813	38	0.21	OK	0
050.99	Soluble K2O, Other (11%)	0371	20.14	0.0400	19.82	1.206	0.2813	38	0.27	OK	0
050.99	Soluble K2O, Other (11%)	0518	20.15	0.0000	19.82	1.206	0.2813	38	0.28	OK	0
050.99	Soluble K2O, Other (11%)	0549	20.15	0.1000	19.82	1.206	0.2813	38	0.28	OK	0
050.99	Soluble K2O, Other (11%)	0553	20.15	0.1000	19.82	1.206	0.2813	38	0.28	OK	0
050.99	Soluble K2O, Other (11%)	0569	20.16	0.1000	19.82	1.206	0.2813	38	0.29	OK	0
050.99	Soluble K2O, Other (11%)	0433	20.22	0.0600	19.82	1.206	0.2813	38	0.33	OK	0
050.99	Soluble K2O, Other (11%)	0421	20.35	0.1000	19.82	1.206	0.2813	38	0.44	OK	0
050.99	Soluble K2O, Other (11%)	0177	20.66	0.0012	19.82	1.206	0.2813	38	0.70	OK	0
050.99	Soluble K2O, Other (11%)	0546	20.85	0.1772	19.82	1.206	0.2813	38	0.86	OK	0
050.99	Soluble K2O, Other (11%)	0562	20.90	0.5000	19.82	1.206	0.2813	38	0.90	High	0
050.99	Soluble K2O, Other (11%)	0538	21.18	0.8500	19.82	1.206	0.2813	38	1.13	High	0
050.99	Soluble K2O, Other (11%)	0527	21.26	0.2745	19.82	1.206	0.2813	38	1.19	High	0
050.99	Soluble K2O, Other (11%)	0524	21.40	0.5857	19.82	1.206	0.2813	38	1.32	High	0
050.99	Soluble K2O, Other (11%)	0300	21.91	0.0600	19.82	1.206	0.2813	38	1.74	High	0
050.99	Soluble K2O, Other (11%)	0563	21.93	0.2787	19.82	1.206	0.2813	38	1.75	High	0
050.99	Soluble K2O, Other (11%)	0027	22.20	0.3300	19.82	1.206	0.2813	38	1.97	High	0
050.99	Soluble K2O, Other (11%)	0515	16.10	2.381	19.82	1.206	0.2813	38	-3.08	Low	1
060.00	Water (Free), Vacuum Oven (%)	0513	0.1250	0.0100				2			0
060.00	Water (Free), Vacuum Oven (%)	0096	0.3850	0.1100				2			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				
060.99	Water (Free), Other (%)	0510	0.7984	0.0011				1			0
101.00	Acid Soluble Ca, AA, inorganic 965.09 (%)	0553	2.545	0.0100				1			0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0035	2.150	0.2400	3.073	1.292	0.1300	5	-0.71		0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0472	2.605	0.0300	3.073	1.292	0.1300	5	-0.36		0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0568	2.620	0.1600	3.073	1.292	0.1300	5	-0.35		0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0354	2.635	0.1900	3.073	1.292	0.1300	5	-0.34		0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0096	5.355	0.0300	3.073	1.292	0.1300	5	1.77		0
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (%)	0423	2.605	0.0500				1			0
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0494	2.585	0.0807	2.983	0.6003	0.1260	4	-0.66		0
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0563	2.688	0.1711	2.983	0.6003	0.1260	4	-0.49		0
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0527	2.783	0.0022	2.983	0.6003	0.1260	4	-0.33		0
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0421	3.875	0.2500	2.983	0.6003	0.1260	4	1.49		0
101.99	Acid Soluble Ca, Other (%)	0389	2.575	0.1100	2.671	0.0839	0.0816	3	-1.15		0
101.99	Acid Soluble Ca, Other (%)	0552	2.710	0.1000	2.671	0.0839	0.0816	3	0.46		0
101.99	Acid Soluble Ca, Other (%)	0368	2.729	0.0349	2.671	0.0839	0.0816	3	0.69		0
121.00	Acid Soluble Mg, AA, inorganic 965.09 (%)	0553	1.715	0.0100				1			0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0035	1.410	0.1600	1.700	0.1966	0.0880	5	-1.48		0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0568	1.665	0.0900	1.700	0.1966	0.0880	5	-0.18		0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0354	1.705	0.0900	1.700	0.1966	0.0880	5	0.03		0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0096	1.765	0.0900	1.700	0.1966	0.0880	5	0.33		0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0472	1.955	0.0100	1.700	0.1966	0.0880	5	1.30		0
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (%)	0423	1.630	0.0200				1			0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0515	1.554	0.0596	1.908	0.5025	0.0332	5	-0.61		0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0563	1.645	0.0574	1.908	0.5025	0.0332	5	-0.46		0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0494	1.699	0.0166	1.908	0.5025	0.0332	5	-0.36		0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0527	1.855	0.0023	1.908	0.5025	0.0332	5	-0.09		0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0169	2.785	0.0300	1.908	0.5025	0.0332	5	1.52		0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0421	3.160	0.2600	1.908	0.5025	0.0332	5	2.18		1
121.99	Acid Soluble Mg, Other (%)	0524	1.458	0.0175	1.610	0.1012	0.0705	5	-1.51		0
121.99	Acid Soluble Mg, Other (%)	0515	1.581	0.3003	1.610	0.1012	0.0705	5	-0.29		0
121.99	Acid Soluble Mg, Other (%)	0368	1.618	0.0049	1.610	0.1012	0.0705	5	0.08		0
121.99	Acid Soluble Mg, Other (%)	0552	1.670	0.0200	1.610	0.1012	0.0705	5	0.59		0
121.99	Acid Soluble Mg, Other (%)	0389	1.725	0.0100	1.610	0.1012	0.0705	5	1.13		0
143.99	Elemental S, Other (%)	0389	0.7550	0.0300	1.038	0.2930	0.0351	3	-0.96		0
143.99	Elemental S, Other (%)	0368	1.018	0.0753	1.038	0.2930	0.0351	3	-0.07		0
143.99	Elemental S, Other (%)	0472	1.340	0.0000	1.038	0.2930	0.0351	3	1.03		0
145.99	Sulfate S, HCl soluble, Other (%)	0553	0.1190	0.0020				1			0
148.00	Total S, Combustion (%)	0114	3.625	0.1300				1			0
148.07	Total S, ICP, test portion as in 2017.02 (%)	0421	1.295	0.4700	1.478	0.2346	0.1196	5	-0.78		0
148.07	Total S, ICP, test portion as in 2017.02 (%)	0515	1.323	0.0205	1.478	0.2346	0.1196	5	-0.66		0
148.07	Total S, ICP, test portion as in 2017.02 (%)	0494	1.433	0.0120	1.478	0.2346	0.1196	5	-0.19		0
148.07	Total S, ICP, test portion as in 2017.02 (%)	0563	1.462	0.0700	1.478	0.2346	0.1196	5	-0.07		0
148.07	Total S, ICP, test portion as in 2017.02 (%)	0527	1.878	0.0254	1.478	0.2346	0.1196	5	1.71		0
148.99	Total S, Other (%)	0354	0.1550	0.0300				1			0
149.04	S - HNO3 soluble, ICP (%)	0524	0.7883	0.0090				2			0
149.04	S - HNO3 soluble, ICP (%)	0423	1.375	0.0700				2			0
151.00	Acid Soluble As, AA, test portion 2006.03 modified w/dual acid (ppm)	0534	0.2260	0.0040				1			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				
151.30	Acid Soluble As, ICP (ppm)	0255	0.1745	0.0350	0.2220	0.0539	0.0325	4	-0.88		0
151.30	Acid Soluble As, ICP (ppm)	0476	0.1766	0.0553	0.2220	0.0539	0.0325	4	-0.84		0
151.30	Acid Soluble As, ICP (ppm)	0524	0.2629	0.0253	0.2220	0.0539	0.0325	4	0.76		0
151.30	Acid Soluble As, ICP (ppm)	0523	0.2742	0.0142	0.2220	0.0539	0.0325	4	0.97		0
151.30	Acid Soluble As, ICP (ppm)	0450	< 0.5		0.2220	0.0539	0.0325	4			5
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	0529	0.1950	0.0100				2			0
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	0220	1.650	0.1000				2			0
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	0096	< 1					2			5
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0563	0.3908	0.0128	1.535	1.275	0.1810	3	-0.73		0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0515	1.303	0.2903	1.535	1.275	0.1810	3	-0.15		0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0260	2.910	0.2400	1.535	1.275	0.1810	3	0.87		0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0527	< 0.0001		1.535	1.275	0.1810	3			5
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0494	< 0.193		1.535	1.275	0.1810	3			5
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0136	< 1		1.535	1.275	0.1810	3			5
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0117	< 10		1.535	1.275	0.1810	3			5
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	0515	0.0000	0.0000				0			4
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	0368	< 0.4					0			5
151.99	Acid Soluble As, Other (ppm)	0220	1.400	0.4000				1			0
151.99	Acid Soluble As, Other (ppm)	0405	< 1					1			5
165.00	Acid Soluble B, Spectrophotometric (%)	0553	0.0026	0.0001				1			0
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	0389	0.0007	0.0000				1			0
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	0354	< 0.01					1			5
165.99	Acid Soluble B, Other (%)	0527	0.0008	0.0001	0.0010	0.0003	0.0001	3	-0.80		0
165.99	Acid Soluble B, Other (%)	0524	0.0009	0.0000	0.0010	0.0003	0.0001	3	-0.32		0
165.99	Acid Soluble B, Other (%)	0563	0.0014	0.0001	0.0010	0.0003	0.0001	3	1.12		0
165.99	Acid Soluble B, Other (%)	0515	0.0000	0.0000	0.0010	0.0003	0.0001	3			4
165.99	Acid Soluble B, Other (%)	0552	0.0000	0.0000	0.0010	0.0003	0.0001	3			4
181.00	Acid Soluble Cd, AA, test portion 2006.03 modified w/dual acid (ppm)	0534	3.490	0.1400				1			0
181.30	Acid Soluble Cd, ICP (ppm)	0444	2.520	0.0800	3.443	0.8485	0.0911	8	-1.00	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0524	2.590	0.0683	3.443	0.8485	0.0911	8	-0.92	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0255	2.820	0.0270	3.443	0.8485	0.0911	8	-0.67	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0476	3.472	0.0834	3.443	0.8485	0.0911	8	0.03	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0389	3.570	0.0200	3.443	0.8485	0.0911	8	0.14	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0394	3.960	0.1600	3.443	0.8485	0.0911	8	0.56	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0035	4.015	0.0900	3.443	0.8485	0.0911	8	0.62	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0450	4.600	0.2000	3.443	0.8485	0.0911	8	1.25	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0523	4.369	0.8150	3.443	0.8485	0.0911	8	1.00	NA	1
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	0096	3.500	0.0000	3.713	0.3272	0.2000	3	-0.65		0
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	0220	3.550	0.5000	3.713	0.3272	0.2000	3	-0.50		0
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	0529	4.090	0.1000	3.713	0.3272	0.2000	3	1.15		0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0563	3.844	0.0244	4.623	0.8351	0.1653	5	-0.81		0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0494	4.092	0.4033	4.623	0.8351	0.1653	5	-0.56		0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0136	4.125	0.0700	4.623	0.8351	0.1653	5	-0.52		0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0527	5.434	0.3289	4.623	0.8351	0.1653	5	0.85		0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0260	5.620	0.0000	4.623	0.8351	0.1653	5	1.04		0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0515	4.159	3.011	4.623	0.8351	0.1653	5	-0.48		1
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0117	< 5		4.623	0.8351	0.1653	5			5

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				
181.34	Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm)	0515	3.237	1.957				2			0
181.34	Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm)	0368	4.305	0.0500				2			0
181.99	Acid Soluble Cd, Other (ppm)	0220	3.450	0.1000				2			0
181.99	Acid Soluble Cd, Other (ppm)	0405	4.515	0.0900				2			0
190.00	Water Soluble Cl, Titrimetric (%)	0513	16.30	0.1000				2			0
190.00	Water Soluble Cl, Titrimetric (%)	0553	18.20	0.2000				2			0
191.30	Acid Soluble Cr, ICP (ppm)	0444	29.48	0.0400	37.65	8.597	1.594	8	-0.87	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0524	29.67	0.1421	37.65	8.597	1.594	8	-0.85	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0476	32.70	0.4202	37.65	8.597	1.594	8	-0.53	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0035	36.85	4.700	37.65	8.597	1.594	8	-0.09	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0394	37.55	2.700	37.65	8.597	1.594	8	-0.01	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0389	37.62	0.4300	37.65	8.597	1.594	8	0.00	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0523	47.36	2.320	37.65	8.597	1.594	8	1.03	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0450	50.00	2.000	37.65	8.597	1.594	8	1.31	NA	0
191.32	Acid Soluble Cr, ICP, 2006.03 (ppm)	0529	37.93	0.3200	44.16	5.451	1.673	3	-1.14		0
191.32	Acid Soluble Cr, ICP, 2006.03 (ppm)	0220	46.50	1.000	44.16	5.451	1.673	3	0.43		0
191.32	Acid Soluble Cr, ICP, 2006.03 (ppm)	0096	48.05	3.700	44.16	5.451	1.673	3	0.71		0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0136	43.55	2.570	48.62	4.378	1.601	6	-1.03	NA	0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0494	46.03	0.0500	48.62	4.378	1.601	6	-0.53	NA	0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0515	46.49	2.993	48.62	4.378	1.601	6	-0.43	NA	0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0260	50.11	0.3000	48.62	4.378	1.601	6	0.30	NA	0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0563	52.28	3.302	48.62	4.378	1.601	6	0.74	NA	0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0527	53.30	0.3909	48.62	4.378	1.601	6	0.95	NA	0
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	0368	42.42	1.200				2			0
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	0515	51.55	16.51				2			0
191.99	Acid Soluble Cr, Other (ppm)	0405	46.00	0.0000				2			0
191.99	Acid Soluble Cr, Other (ppm)	0220	47.00	0.0000				2			0
202.30	Acid Soluble Co, ICP (ppm)	0476	1.045	0.1610	1.443	0.4148	0.0669	5	-0.84		0
202.30	Acid Soluble Co, ICP (ppm)	0389	1.230	0.0000	1.443	0.4148	0.0669	5	-0.45		0
202.30	Acid Soluble Co, ICP (ppm)	0035	1.270	0.0000	1.443	0.4148	0.0669	5	-0.36		0
202.30	Acid Soluble Co, ICP (ppm)	0524	1.566	0.0976	1.443	0.4148	0.0669	5	0.26		0
202.30	Acid Soluble Co, ICP (ppm)	0523	2.106	0.0760	1.443	0.4148	0.0669	5	1.39		0
202.30	Acid Soluble Co, ICP (ppm)	0096	< 1		1.443	0.4148	0.0669	5			5
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	0220	1.500	0.2000				1			0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0515	1.920	2.516	2.369	0.8711	0.5163	5	-0.45		0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0494	1.955	0.0200	2.369	0.8711	0.5163	5	-0.41		0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0563	1.995	0.0062	2.369	0.8711	0.5163	5	-0.37		0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0527	2.050	0.0089	2.369	0.8711	0.5163	5	-0.32		0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0260	3.925	0.0300	2.369	0.8711	0.5163	5	1.56		0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0136	< 5		2.369	0.8711	0.5163	5			5
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	0368	1.040	0.1000				2			0
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	0515	1.957	1.480				2			0
202.99	Acid Soluble Co, Other (ppm)	0255	1.184	0.0950	1.595	0.4083	0.0983	3	-1.01		0
202.99	Acid Soluble Co, Other (ppm)	0220	1.600	0.2000	1.595	0.4083	0.0983	3	0.01		0
202.99	Acid Soluble Co, Other (ppm)	0405	2.000	0.0000	1.595	0.4083	0.0983	3	0.99		0
221.00	Acid Soluble Cu, AA, inorganic 965.09 (%)	0550	0.0003	0.0001	0.0005	0.0002	0.0001	4	-1.44		0
221.00	Acid Soluble Cu, AA, inorganic 965.09 (%)	0535	0.0006	0.0001	0.0005	0.0002	0.0001	4	0.29		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				
221.00	Acid Soluble Cu, AA, inorganic 965.09 (%)	0538	0.0006	0.0001	0.0005	0.0002	0.0001	4	0.29		0
221.00	Acid Soluble Cu, AA, inorganic 965.09 (%)	0539	0.0007	0.0001	0.0005	0.0002	0.0001	4	0.87		0
221.00	Acid Soluble Cu, AA, inorganic 965.09 (%)	0553	< 0.005		0.0005	0.0002	0.0001	4			5
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0552	0.0755	0.0110				2			0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0096	23.37	7.340				2			0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0255	0.0005	0.0010				2			4
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0354	< 0.01					2			5
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	0394	0.0001	0.0000				1			0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0515	0.0004	0.0002				2			0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0043	0.0010	0.0000				2			0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0543	0.0005	0.0010				2			4
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0527	< 0.0001					2			5
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0563	< 0.0001					2			5
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0494	< 0.0002					2			5
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0136	< 0.0025					2			5
221.99	Acid Soluble Cu, Other (%)	0368	0.0002	0.0000	0.0003	0.0002	0.0001	3	-0.58		0
221.99	Acid Soluble Cu, Other (%)	0405	0.0002	0.0000	0.0003	0.0002	0.0001	3	-0.58		0
221.99	Acid Soluble Cu, Other (%)	0515	0.0006	0.0003	0.0003	0.0002	0.0001	3	1.15		0
221.99	Acid Soluble Cu, Other (%)	0524	0.0000	0.0000	0.0003	0.0002	0.0001	3			4
241.00	Acid Soluble Fe, AA, inorganic 965.09 (%)	0538	0.1250	0.0100	0.1308	0.0058	0.0040	4	-0.99		0
241.00	Acid Soluble Fe, AA, inorganic 965.09 (%)	0553	0.1265	0.0030	0.1308	0.0058	0.0040	4	-0.73		0
241.00	Acid Soluble Fe, AA, inorganic 965.09 (%)	0535	0.1355	0.0010	0.1308	0.0058	0.0040	4	0.82		0
241.00	Acid Soluble Fe, AA, inorganic 965.09 (%)	0539	0.1360	0.0020	0.1308	0.0058	0.0040	4	0.90		0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0035	0.1200	0.0060	0.1790	0.1125	0.0712	5	-0.52		0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0354	0.1300	0.0000	0.1790	0.1125	0.0712	5	-0.44		0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0472	0.1300	0.0000	0.1790	0.1125	0.0712	5	-0.44		0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0096	0.1350	0.0100	0.1790	0.1125	0.0712	5	-0.39		0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0552	0.3800	0.3400	0.1790	0.1125	0.0712	5	1.79		0
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (%)	0423	0.1285	0.0010				1			0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0546	0.1173	0.0018	0.1397	0.0297	0.0047	5	-0.75		0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0563	0.1233	0.0006	0.1397	0.0297	0.0047	5	-0.55		0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0494	0.1293	0.0133	0.1397	0.0297	0.0047	5	-0.35		0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0515	0.1376	0.0050	0.1397	0.0297	0.0047	5	-0.07		0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0527	0.1912	0.0028	0.1397	0.0297	0.0047	5	1.73		0
241.99	Acid Soluble Fe, Other (%)	0524	0.1051	0.0009	0.1203	0.0109	0.0027	4	-1.40		0
241.99	Acid Soluble Fe, Other (%)	0389	0.1200	0.0000	0.1203	0.0109	0.0027	4	-0.03		0
241.99	Acid Soluble Fe, Other (%)	0368	0.1271	0.0012	0.1203	0.0109	0.0027	4	0.62		0
241.99	Acid Soluble Fe, Other (%)	0515	0.1291	0.0088	0.1203	0.0109	0.0027	4	0.81		0
251.00	Acid Soluble Pb, AA, test portion 2006.03 modified w/dual acid (ppm)	0534	< 2					0			5
251.30	Acid Soluble Pb, ICP (ppm)	0389	0.0350	0.0100	0.2056	0.1336	0.0322	6	-1.14	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0394	0.1650	0.0300	0.2056	0.1336	0.0322	6	-0.27	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0255	0.1755	0.0170	0.2056	0.1336	0.0322	6	-0.20	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0476	0.2286	0.0358	0.2056	0.1336	0.0322	6	0.15	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0524	0.2334	0.0603	0.2056	0.1336	0.0322	6	0.18	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0523	0.3964	0.0402	0.2056	0.1336	0.0322	6	1.27	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0035	2.445	0.5100	0.2056	0.1336	0.0322	6	14.93	NA	1
251.30	Acid Soluble Pb, ICP (ppm)	0450	< 0.5		0.2056	0.1336	0.0322	6			5

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			Value	Range	Rob Mean	Rob SD	R-bar				
251.32	Acid Soluble Pb, ICP, 2006.03 (ppm)	0529	0.6600	0.0400				2			0
251.32	Acid Soluble Pb, ICP, 2006.03 (ppm)	0220	0.7500	0.3000				2			0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0563	0.3463	0.0369	2.126	2.503	0.9915	4	-0.60		0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0527	0.4066	0.0144	2.126	2.503	0.9915	4	-0.58		0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0260	2.065	0.1900	2.126	2.503	0.9915	4	-0.02		0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0515	5.684	3.725	2.126	2.503	0.9915	4	1.21		0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0494	< 1.27		2.126	2.503	0.9915	4			5
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0136	< 3		2.126	2.503	0.9915	4			5
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0117	< 5		2.126	2.503	0.9915	4			5
251.34	Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm)	0515	0.0000	0.0000				0			4
251.34	Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm)	0368	< 0.7					0			5
251.99	Acid Soluble Pb, Other (ppm)	0405	0.3500	0.1000				2			0
251.99	Acid Soluble Pb, Other (ppm)	0220	1.300	0.4000				2			0
261.11	Acid Soluble Mn, AA, total Mn (%)	0553	< 0.005					0			5
261.12	Acid Soluble Mn, AA, inorganic 965.09 (%)	0539	0.0025	0.0002	0.0025	0.0000	0.0001	3	-1.15		0
261.12	Acid Soluble Mn, AA, inorganic 965.09 (%)	0535	0.0026	0.0001	0.0025	0.0000	0.0001	3	0.58		0
261.12	Acid Soluble Mn, AA, inorganic 965.09 (%)	0538	0.0026	0.0001	0.0025	0.0000	0.0001	3	0.58		0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0035	0.0032	0.0002				2			0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0096	26.85	3.700				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	0.2000	0.0000				1			0
261.34	Acid Soluble Mn, ICP, test portion 2006.03A-C (%)	0423	0.0025	0.0010				1			0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0494	0.0023	0.0003	0.0029	0.0006	0.0002	3	-1.08		0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0563	0.0030	0.0001	0.0029	0.0006	0.0002	3	0.18		0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0527	0.0034	0.0001	0.0029	0.0006	0.0002	3	0.90		0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0515	0.0000	0.0000	0.0029	0.0006	0.0002	3			4
261.99	Acid Soluble Mn, Other (%)	0389	0.0025	0.0001	0.0026	0.0002	0.0004	3	-1.09		0
261.99	Acid Soluble Mn, Other (%)	0515	0.0027	0.0005	0.0026	0.0002	0.0004	3	0.22		0
261.99	Acid Soluble Mn, Other (%)	0524	0.0028	0.0007	0.0026	0.0002	0.0004	3	0.87		0
281.00	Acid Soluble Hg, AA (ppm)	0534	< 0.05					0			5
281.30	Acid Soluble Hg, ICP (ppm)	0529	0.1050	0.0100				1			0
281.30	Acid Soluble Hg, ICP (ppm)	0515	0.0000	0.0000				1			4
281.30	Acid Soluble Hg, ICP (ppm)	0527	< 0.001					1			5
281.30	Acid Soluble Hg, ICP (ppm)	0563	< 0.02					1			5
281.30	Acid Soluble Hg, ICP (ppm)	0450	< 0.5					1			5
281.99	Acid Soluble Hg, Other (ppm)	0035	0.0070	0.0000				2			0
281.99	Acid Soluble Hg, Other (ppm)	0524	0.0185	0.0334				2			0
281.99	Acid Soluble Hg, Other (ppm)	0368	< 0.01					2			5
281.99	Acid Soluble Hg, Other (ppm)	0405	< 0.01					2			5
289.30	Acid Soluble Mo, ICP (ppm)	0255	0.7495	0.0050	2.037	0.8757	0.0715	6	-1.31	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0476	1.725	0.0022	2.037	0.8757	0.0715	6	-0.32	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0524	1.996	0.0230	2.037	0.8757	0.0715	6	-0.04	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0450	2.150	0.1000	2.037	0.8757	0.0715	6	0.11	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0035	2.650	0.2600	2.037	0.8757	0.0715	6	0.62	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0523	2.952	0.0390	2.037	0.8757	0.0715	6	0.93	OK	0
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	0220	2.600	0.2000				1			0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0515	0.8561	0.1279	2.840	1.686	0.1051	5	-1.03		0

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			Value	Range	Rob Mean	Rob SD	R-bar				
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0563	2.223	0.0516	2.840	1.686	0.1051	5	-0.32		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0494	2.470	0.0866	2.840	1.686	0.1051	5	-0.19		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0260	3.205	0.0100	2.840	1.686	0.1051	5	0.19		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0527	5.444	0.2494	2.840	1.686	0.1051	5	1.35		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0136	< 5		2.840	1.686	0.1051	5			5
289.34	Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm)	0515	2.332	1.258				2			0
289.34	Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm)	0368	3.225	0.2100				2			0
289.99	Acid Soluble Mo, Other (ppm)	0220	2.100	0.0000				2			0
289.99	Acid Soluble Mo, Other (ppm)	0405	3.330	0.1800				2			0
291.30	Acid Soluble Ni, ICP (ppm)	0476	8.034	0.1067	12.51	4.300	0.1125	7	-0.94	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0444	9.405	0.1100	12.51	4.300	0.1125	7	-0.65	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0524	9.878	0.0008	12.51	4.300	0.1125	7	-0.55	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0035	12.05	0.3000	12.51	4.300	0.1125	7	-0.10	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0523	14.43	0.0700	12.51	4.300	0.1125	7	0.40	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0450	15.00	0.0000	12.51	4.300	0.1125	7	0.52	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0096	18.80	0.2000	12.51	4.300	0.1125	7	1.32	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0394	12.35	0.9000	12.51	4.300	0.1125	7	-0.03	NA	1
291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	0220	15.15	0.1000				2			0
291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	0529	21.58	0.7900				2			0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0136	13.57	1.350	15.78	2.039	0.8599	7	-0.98	NA	0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0563	14.10	0.8919	15.78	2.039	0.8599	7	-0.74	NA	0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0515	14.39	0.1225	15.78	2.039	0.8599	7	-0.62	NA	0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0494	15.73	0.8500	15.78	2.039	0.8599	7	-0.02	NA	0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0260	17.35	0.5900	15.78	2.039	0.8599	7	0.69	NA	0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0117	17.35	1.780	15.78	2.039	0.8599	7	0.70	NA	0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0527	17.98	0.4351	15.78	2.039	0.8599	7	0.97	NA	0
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	0515	14.01	0.7470				2			0
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	0368	14.11	0.2300				2			0
291.99	Acid Soluble Ni, Other (ppm)	0255	13.45	4.114	14.82	1.286	1.505	3	-1.06		0
291.99	Acid Soluble Ni, Other (ppm)	0405	15.00	0.0000	14.82	1.286	1.505	3	0.14		0
291.99	Acid Soluble Ni, Other (ppm)	0220	16.00	0.4000	14.82	1.286	1.505	3	0.92		0
301.30	Acid Soluble Se, ICP (ppm)	0524	0.0628	0.0161	0.2173	0.1355	0.0380	3	-1.14		0
301.30	Acid Soluble Se, ICP (ppm)	0523	0.2734	0.0560	0.2173	0.1355	0.0380	3	0.41		0
301.30	Acid Soluble Se, ICP (ppm)	0476	0.3158	0.0419	0.2173	0.1355	0.0380	3	0.73		0
301.32	Acid Soluble Se, ICP, 2006.03 (ppm)	0220	0.4000	0.0000				1			0
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0563	0.4700	0.0061				2			0
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0494	0.5450	0.2020				2			0
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0515	1.731	3.461				2			4
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0527	< 0.001					2			5
301.34	Acid Soluble Se, ICP, EPA 3050B/6010C (ppm)	0515	0.5825	1.165				0			4
301.34	Acid Soluble Se, ICP, EPA 3050B/6010C (ppm)	0368	< 1					0			5
301.99	Acid Soluble Se, Other (ppm)	0220	0.4000	0.0000				1			0
301.99	Acid Soluble Se, Other (ppm)	0255	0.0000	0.0000				1			4
301.99	Acid Soluble Se, Other (ppm)	0405	< 1					1			5
311.00	Sodium, AA (%)	0553	0.4325	0.0350				1			0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0035	0.3935	0.0370	0.4814	0.0804	0.0161	4	-1.09		0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0423	0.4680	0.0120	0.4814	0.0804	0.0161	4	-0.17		0

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311.33	Sodium, ICP, test portion as in 2017.02 (%)	0563	0.4754	0.0138	0.4814	0.0804	0.0161	4	-0.07		0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0527	0.5885	0.0014	0.4814	0.0804	0.0161	4	1.33		0
311.99	Sodium, Other (%)	0368	0.4129	0.0047	0.4393	0.0241	0.0116	3	-1.10		0
311.99	Sodium, Other (%)	0354	0.4450	0.0100	0.4393	0.0241	0.0116	3	0.24		0
311.99	Sodium, Other (%)	0096	0.4600	0.0200	0.4393	0.0241	0.0116	3	0.86		0
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	0534	0.0058	0.0002	0.0068	0.0007	0.0002	6	-1.29	OK	0
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	0550	0.0064	0.0005	0.0068	0.0007	0.0002	6	-0.58	OK	0
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	0538	0.0070	0.0001	0.0068	0.0007	0.0002	6	0.21	OK	0
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	0553	0.0070	0.0000	0.0068	0.0007	0.0002	6	0.27	OK	0
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	0535	0.0073	0.0002	0.0068	0.0007	0.0002	6	0.66	OK	0
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	0539	0.0074	0.0001	0.0068	0.0007	0.0002	6	0.73	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0234	0.0052	0.0004	0.0092	0.0037	0.0027	5	-0.94		0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0035	0.0072	0.0000	0.0092	0.0037	0.0027	5	-0.47		0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0255	0.0085	0.0030	0.0092	0.0037	0.0027	5	-0.16		0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0096	0.0100	0.0000	0.0092	0.0037	0.0027	5	0.19		0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0472	0.0150	0.0100	0.0092	0.0037	0.0027	5	1.37		0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0552	0.3550	0.4100	0.0092	0.0037	0.0027	5	81.58		1
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0354	< 0.01		0.0092	0.0037	0.0027	5			5
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0423	0.0060	0.0000	0.0064	0.0004	0.0002	3	-1.00		0
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0220	0.0064	0.0006	0.0064	0.0004	0.0002	3	0.00		0
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0394	0.0068	0.0000	0.0064	0.0004	0.0002	3	1.00		0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0260	0.0016	0.0006	0.0072	0.0017	0.0007	8	-2.95	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0136	0.0060	0.0006	0.0072	0.0017	0.0007	8	-0.61	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0494	0.0065	0.0006	0.0072	0.0017	0.0007	8	-0.35	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0527	0.0072	0.0001	0.0072	0.0017	0.0007	8	0.00	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0515	0.0073	0.0011	0.0072	0.0017	0.0007	8	0.05	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0563	0.0078	0.0005	0.0072	0.0017	0.0007	8	0.32	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0043	0.0085	0.0010	0.0072	0.0017	0.0007	8	0.72	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0543	0.0095	0.0010	0.0072	0.0017	0.0007	8	1.25	OK	0
321.99	Acid Soluble Zn, Other (%)	0476	0.0053	0.0001	0.0062	0.0007	0.0004	5	-1.27		0
321.99	Acid Soluble Zn, Other (%)	0389	0.0058	0.0002	0.0062	0.0007	0.0004	5	-0.55		0
321.99	Acid Soluble Zn, Other (%)	0524	0.0066	0.0011	0.0062	0.0007	0.0004	5	0.43		0
321.99	Acid Soluble Zn, Other (%)	0368	0.0068	0.0001	0.0062	0.0007	0.0004	5	0.69		0
321.99	Acid Soluble Zn, Other (%)	0405	0.0068	0.0003	0.0062	0.0007	0.0004	5	0.69		0
321.99	Acid Soluble Zn, Other (%)	0515	61.31	1.463	0.0062	0.0007	0.0004	5	80040.29		2

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