

Method PT For All Labs

Magruder Fertilizer Proficiency Testing Program

Methods: 113

Sample # 230311

Regular PT Scheme

Labs Reporting: 73

Grade 22-0-12

Statistical Summary

Issue Date : 04/30/2023

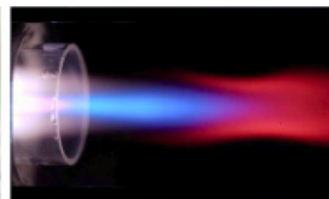
Method Code	Analyte & Method Sample # 230311	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Method Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	Method IA Ratio	Average Range (R-bar)	Hornitz %RSD
001.10	Ammoniacal N, Magnesium Oxide Method (%)	7	6	11.58	0.7325	11.85		0.3050	0.1556	2.57%		0.0700	2.76%
001.99	Ammoniacal N, Other (%)	18	18	11.57	0.8532	11.57		0.9581	0.2823	8.28%		0.1837	2.77%
002.20	Nitrate N, Jones Modified (%)	2	2	10.88	1.039								
002.99	Nitrate N, Other (%)	14	13	10.83	0.7149	10.82		0.8082	0.2802	7.47%		0.1038	2.79%
005.99	Urea N, Other (%)	1		0.1500									
009.10	Ammoniacal Plus Nitrate N, Devarda (%)	3	3	22.49	0.0794	22.49		0.0794	0.0573	0.35%		0.1267	2.11%
009.99	Ammoniacal Plus Nitrate N, Other (%)	1		22.60									
010.11	Total N, Modified Comprehensive (22%)	1		21.90									
010.12	Total N, Salicylic (22%)	5	5	22.05	0.2273	22.05	0.7507	0.2273	0.1271	1.03%	0.71	0.3767	2.13%
010.16	Total N, Raney (22%)	1		21.43									
010.60	Total N, Combustion (22%)	49	46	22.38	0.3824	22.37	0.7555	0.2812	0.0518	1.26%	0.87	0.1648	2.11%
010.99	Total N, Other (22%)	10	10	22.13	0.5176	22.21	0.7532	0.3613	0.1428	1.63%	1.12	0.1479	2.12%
020.50	Total P2O5, ICP (%)	7	7	0.1972	0.0973	0.1674		0.0262	0.0124	15.63%		0.0229	5.23%
020.99	Total P2O5, Other (%)	1		0.1600									
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext.	3	3	0.1902	0.0963	0.1902	0.6700	0.0963	0.0695	50.62%	0.33	0.0425	5.13%
041.50	Direct Available P2O5, ICP (%)	2	2	0.1730	0.0021								
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (%)	1		0.5150									
048.20	Water Soluble P2O5, Spectrophotometric (%)	1		0.1950									
048.99	Water Soluble P2O5, Other (%)	1		0.1350									
050.00	Soluble K2O, STPB Oxalate (12%)	9	9	12.96	0.2091	12.99	0.8295	0.1597	0.0665	1.23%	0.45	0.2350	2.72%
050.30	Soluble K2O, AA (Oxalate) (12%)	4	4	13.01	0.8544	13.01	0.8306	0.8544	0.5340	6.57%	2.40	0.1875	2.72%
050.32	Soluble K2O, AA (Citrate-EDTA) (12%)	1		12.12									
050.50	Soluble K2O, ICP (Oxalate) (12%)	9	9	13.22	1.100	13.13	0.8353	0.8896	0.3707	6.77%	2.48	0.2525	2.71%
050.51	Soluble K2O, ICP (Citrate) (12%)	4	4	13.43	0.5336	13.43	0.8472	0.5336	0.3335	3.97%	1.47	0.0195	2.71%
050.52	Soluble K2O, ICP (Citrate-EDTA) (12%)	13	13	12.71	0.4119	12.71	0.8184	0.4528	0.1570	3.56%	1.29	0.1486	2.73%
050.60	Soluble K2O, Flame Photometric (Oxalate) (12%)	1		12.78									
050.61	Soluble K2O, Flame Photometric (Citrate) (12%)	2	2	12.73	0.7071								
050.62	Soluble K2O, Flame Photometric (Citrate-EDTA) (12%)	2	2	13.52	0.3818								
050.99	Soluble K2O, Other (12%)	34	34	12.80	0.5356	12.78	0.8214	0.5391	0.1156	4.22%	1.53	0.3222	2.73%

Method Code	Analyte & Method Sample # 230311	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Method Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	Method IA Ratio	Average Range (R-bar)	Howitz %RSD
060.99	Water (Free), Other (%)	1		0.5986									
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	3	3	1.958	0.1427	1.958	0.2979	0.1427	0.1030	7.29%	1.12	0.0950	3.61%
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (%)	3	3	1.735	0.1517	1.735	0.2868	0.1517	0.1095	8.74%	1.23	0.0419	3.68%
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	5	5	1.864	0.1018	1.864	0.2932	0.1018	0.0569	5.46%	0.81	0.0343	3.64%
101.99	Acid Soluble Ca, Other (%)	1		2.015									
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	3	3	0.5177	0.1090	0.5177	0.2259	0.1090	0.0787	21.06%	1.12	0.0390	4.42%
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (%)	3	3	0.4916	0.0583	0.4916	0.2246	0.0583	0.0421	11.86%	0.61	0.0055	4.45%
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	6	5	0.5629	0.0763	0.5912	0.2296	0.0361	0.0202	6.10%	0.37	0.0338	4.33%
121.99	Acid Soluble Mg, Other (%)	3	3	0.4445	0.1333	0.4445	0.2222	0.1333	0.0962	30.00%	1.40	0.0333	4.52%
131.99	Water Soluble Mg, Other (%)	1		0.5600									
148.07	Total S, ICP, test portion as in 2017.02 (%)	6	6	4.854	0.4164	4.854	0.4427	0.4722	0.2410	9.73%	2.49	0.4369	3.15%
148.99	Total S, Other (%)	4	4	5.070	0.6038	5.070	0.4535	0.6038	0.3774	11.91%	3.10	0.0809	3.13%
149.04	S - HNO3 soluble, ICP (%)	3	3	4.851	0.0995	4.851		0.0994	0.0718	2.05%		0.1524	3.15%
151.00	Acid Soluble As, AA, test portion 2006.03 modified w/dual acid	1		0.2000									
151.30	Acid Soluble As, ICP (ppm)	3	2	0.7720	0.8550	1.158		0.7537	0.6662	65.09%		0.0381	15.65%
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	2	0	2.500	0.7071								
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	5	1	0.7163	0.5797	1.158		0.7537	0.9422	65.09%		0.0380	15.65%
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	2	0	0.2430	0.0806								
151.99	Acid Soluble As, Other (ppm)	2	1	0.6250	0.1768								
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	1		0.0100									
165.99	Acid Soluble B, Other (%)	6	2	0.0368	0.0732	0.0018	0.0033	0.0001	0.0001	4.04%	0.05	0.0000	10.40%
171.99	Water Soluble B, Other (%)	1		0.0106									
181.00	Acid Soluble Cd, AA, test portion 2006.03 modified w/dual acid	1		0.1000									
181.30	Acid Soluble Cd, ICP (ppm)	3	3	1.593	2.727	1.593		2.727	1.968	171.25%		2.351	14.91%
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	2	0	0.7500	0.3536								
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	5	1	0.2503	0.4243	1.593		2.727	3.409	171.25%		0.0007	14.91%
181.34	Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm)	2	0	0.1165	0.0233								
181.99	Acid Soluble Cd, Other (ppm)	2	0	0.2750	0.3182								
190.00	Water Soluble Cl, Titrimetric (9.5%)	16	16	9.402	0.2294	9.402	0.9452	0.2602	0.0813	2.77%	0.64	0.1166	2.85%
190.99	Water Soluble Cl, Other (9.5%)	9	9	9.427	0.5031	9.354	0.9404	0.2377	0.0990	2.54%	0.59	0.1148	2.86%
191.30	Acid Soluble Cr, ICP (ppm)	4	4	5.387	0.8607	5.387		0.8607	0.5380	15.98%		1.182	12.42%
191.32	Acid Soluble Cr, ICP, 2006.03 (ppm)	2	2	8.359	0.9062								
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	5	4	5.078	3.248	6.337		1.872	1.170	29.54%		0.4794	12.12%
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	2	1	2.346	3.118								
191.99	Acid Soluble Cr, Other (ppm)	2	1	11.93	11.41								
202.30	Acid Soluble Co, ICP (ppm)	2	2	0.2827	0.0222								
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	2	0	1.000	0.0000								
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	5	1	0.6887	1.050	0.2827	1.0848	0.0222	0.0278	7.85%	0.05	0.0080	19.35%
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	2	1	0.7445	0.8563								
202.99	Acid Soluble Co, Other (ppm)	2	1	16.79	22.79								

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221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	2	0	0.0053	0.0067								
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	3	0	0.0004	0.0005	0.2827	0.0333	0.0222		7.85%	1.55	0.0080	4.84%
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	6	2	0.0061	0.0147	0.0002	0.0050	0.0001	0.0001	47.14%	0.03	0.0000	15.05%
221.99	Acid Soluble Cu, Other (%)	6	3	0.0337	0.0790	0.0004	0.0050	0.0005	0.0004	121.39%	0.23	0.0001	12.90%
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	2	2	0.0158	0.0131								
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (%)	1		0.0085									
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	3	1	1.637	2.740	0.0158	0.0066	0.0131	0.0164	83.06%	4.64	0.0006	7.47%
241.99	Acid Soluble Fe, Other (%)	3	2	3.872	6.692	0.0087	0.0059	0.0018	0.0016	21.13%	0.73	0.0000	8.17%
251.00	Acid Soluble Pb, AA, test portion 2006.03 modified w/dual acid	1		0.5000									
251.30	Acid Soluble Pb, ICP (ppm)	4	3	0.7513	0.5203	0.4954		0.1143	0.0825	23.07%		0.0276	17.78%
251.32	Acid Soluble Pb, ICP, 2006.03 (ppm)	2	0	4.500	0.7071								
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	5	1	0.8849	1.234	0.4954		0.1143	0.1428	23.07%		0.0090	17.78%
251.34	Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm)	2	1	3.008	3.948								
251.99	Acid Soluble Pb, Other (ppm)	2	1	0.5125	0.0177								
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	1		0.0100									
261.34	Acid Soluble Mn, ICP, test portion 2006.03A-C (%)	1		0.0005									
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	3	2	1.107	1.917	0.0002	0.0050	0.0000	0.0000	0.00%	0.00	0.0000	14.41%
261.99	Acid Soluble Mn, Other (%)	3	1	3.667	6.350	0.0002	0.0050	0.0000	0.0000	0.00%	0.00	0.0000	14.41%
281.00	Acid Soluble Hg, AA (ppm)	2	0	0.5000	0.0000								
281.30	Acid Soluble Hg, ICP (ppm)	4	0	0.5400	0.9740	0.0002		0.0000		0.00%		0.0000	22.00%
281.99	Acid Soluble Hg, Other (ppm)	4	4	0.0415	0.0621	0.0415		0.0621	0.0388	149.48%		0.0214	22.00%
289.30	Acid Soluble Mo, ICP (ppm)	4	3	1.490	1.600	1.986	1.5959	1.536	1.108	77.31%	2.24	1.324	14.43%
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	2	0	1.500	0.7071								
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	5	1	0.6838	1.036	1.986	1.5959	1.536	1.920	77.31%	2.24	0.0115	14.43%
289.34	Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm)	2	1	2.214	2.879								
289.99	Acid Soluble Mo, Other (ppm)	1		2.560									
291.30	Acid Soluble Ni, ICP (ppm)	4	4	2.347	0.6620	2.347		0.6620	0.4138	28.21%		0.1625	14.07%
291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	2	1	5.000	0.0000								
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	5	3	2.566	1.494	3.426		0.4312	0.3112	12.59%		0.1422	13.29%
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	2	1	1.540	1.923								
291.99	Acid Soluble Ni, Other (ppm)	2	2	20.04	24.49								
301.30	Acid Soluble Se, ICP (ppm)	2	2	1.660	1.616								
301.32	Acid Soluble Se, ICP, 2006.03 (ppm)	1		10.00									
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	4	1	0.8713	0.9830	1.660		1.616	2.020	97.33%		0.0264	14.82%
301.34	Acid Soluble Se, ICP, EPA 3050B/6010C (ppm)	2	0	0.6630	0.6180								
301.99	Acid Soluble Se, Other (ppm)	3	1	1.137	1.556	1.660		1.616	2.020	97.33%		0.0264	14.82%
311.33	Sodium, ICP, test portion as in 2017.02 (%)	4	4	0.1016	0.0165	0.1016	0.0152	0.0165	0.0103	16.28%	2.54	0.0075	5.64%
311.99	Sodium, Other (%)	2	2	0.1550	0.0778								
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	4	3	0.0044	0.0038	0.0026	0.0053	0.0008	0.0006	32.44%	0.37	0.0006	9.82%
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	3	3	0.0020	0.0001	0.0020	0.0052	0.0001	0.0001	4.33%	0.04	0.0001	10.19%

Method Code	Analyte & Method Sample # 230311	# 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
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	6	4	0.0093	0.0190	0.0017	0.0052	0.0006	0.0004	36.40%	0.28	0.0002	10.42%
321.99	Acid Soluble Zn, Other (%)	7	5	0.0232	0.0525	0.0041	0.0054	0.0036	0.0020	89.42%	1.57	0.0013	9.15%
325.99	Water Soluble Zn, Other (%)	1		0.0000									
431.99	Soluble Si in nonliquids, Other (%)	1		0.0070									

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



Method PT For All Labs

Magruder Fertilizer Proficiency Testing Program

Sample # 230311

Regular PT Scheme

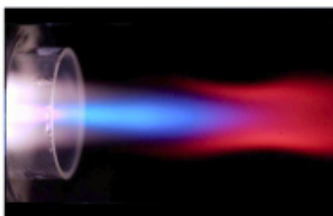
Grade 22-0-12

Method Precision Report

Issue Date : 04/30/2023

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	5	11.94	0.1662	0.1631	0.0452	0.1693	1.37%	0.38%	1.42%	3.748
001.99	Ammoniacal N, Other (%)	18	17	11.58	0.8775	0.8714	0.1462	0.8836	7.53%	1.26%	7.63%	6.044
002.99	Nitrate N, Other (%)	14	13	10.81	0.7369	0.7341	0.0907	0.7397	6.79%	0.84%	6.84%	8.152
010.60	Total N, Combustion (22%)	49	44	22.34	0.2896	0.2721	0.1403	0.3061	1.22%	0.63%	1.37%	2.182
010.99	Total N, Other (22%)	10	8	22.29	0.2847	0.2721	0.1180	0.2966	1.22%	0.53%	1.33%	2.513
020.50	Total P2O5, ICP (%)	7	5	0.1631	0.0177	0.0135	0.0162	0.0211	8.28%	9.96%	12.95%	1.300
050.00	Soluble K2O, STPB Oxalate (12%)	9	7	13.01	0.1221	0.0814	0.1287	0.1523	0.63%	0.99%	1.17%	1.183
050.50	Soluble K2O, ICP (Oxalate) (12%)	9	9	13.22	1.100	1.090	0.2089	1.110	8.24%	1.58%	8.40%	5.312
050.52	Soluble K2O, ICP (Citrate-EDTA) (12%)	13	12	12.72	0.4273	0.4220	0.0947	0.4325	3.32%	0.74%	3.40%	4.568
050.99	Soluble K2O, Other (12%)	34	33	12.78	0.5367	0.4933	0.2988	0.5768	3.86%	2.34%	4.51%	1.930
148.07	Total S, ICP, test portion as in 2017.02 (%)	6	5	4.759	0.3851	0.3542	0.2138	0.4137	7.44%	4.49%	8.69%	1.935
190.00	Water Soluble Cl, Titrimetric (9.5%)	16	15	9.384	0.2262	0.2193	0.0786	0.2330	2.34%	0.84%	2.48%	2.965
190.99	Water Soluble Cl, Other (9.5%)	9	7	9.270	0.2646	0.2601	0.0689	0.2691	2.81%	0.74%	2.90%	3.906
321.99	Acid Soluble Zn, Other (%)	7	5	0.0041	0.0036	0.0036	0.0008	0.0037	88.25%	20.36%	90.57%	4.449

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



Method PT For All Labs

Magruder Fertilizer Proficiency Testing Program

Methods: 113

Sample # 230311

Regular PT Scheme

Labs Reporting: 73

Grade 22-0-12

Lab Values

Issue Date : 04/30/2023

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0230	10.05	0.0600	11.85	0.3050	0.0700	6	-5.26	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0389	11.76	0.0000	11.85	0.3050	0.0700	6	-0.27	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0619	11.80	0.0000	11.85	0.3050	0.0700	6	-0.15	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0498	11.95	0.1000	11.85	0.3050	0.0700	6	0.28	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0451	12.06	0.0200	11.85	0.3050	0.0700	6	0.61	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0444	12.15	0.1000	11.85	0.3050	0.0700	6	0.87	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0481	11.26	0.5700	11.85	0.3050	0.0700	6	-1.75	NA	1
001.99	Ammoniacal N, Other (%)	0368	10.05	0.5870	11.57	0.9581	0.1837	18	-1.59	NA	0
001.99	Ammoniacal N, Other (%)	0584	10.38	0.1500	11.57	0.9581	0.1837	18	-1.25	NA	0
001.99	Ammoniacal N, Other (%)	0600	10.40	0.2000	11.57	0.9581	0.1837	18	-1.22	NA	0
001.99	Ammoniacal N, Other (%)	0562	10.42	0.0000	11.57	0.9581	0.1837	18	-1.20	NA	0
001.99	Ammoniacal N, Other (%)	0559	10.49	0.0100	11.57	0.9581	0.1837	18	-1.13	NA	0
001.99	Ammoniacal N, Other (%)	0563	11.18	0.0900	11.57	0.9581	0.1837	18	-0.41	NA	0
001.99	Ammoniacal N, Other (%)	0536	11.34	0.6800	11.57	0.9581	0.1837	18	-0.24	NA	0
001.99	Ammoniacal N, Other (%)	0572	11.80	0.2500	11.57	0.9581	0.1837	18	0.23	NA	0
001.99	Ammoniacal N, Other (%)	0619	11.80	0.0000	11.57	0.9581	0.1837	18	0.24	NA	0
001.99	Ammoniacal N, Other (%)	0587	11.93	0.0400	11.57	0.9581	0.1837	18	0.38	NA	0
001.99	Ammoniacal N, Other (%)	0419	12.17	0.3980	11.57	0.9581	0.1837	18	0.62	NA	0
001.99	Ammoniacal N, Other (%)	0255	12.21	0.2500	11.57	0.9581	0.1837	18	0.66	NA	0
001.99	Ammoniacal N, Other (%)	0300	12.25	0.0200	11.57	0.9581	0.1837	18	0.71	NA	0
001.99	Ammoniacal N, Other (%)	0524	12.29	0.0200	11.57	0.9581	0.1837	18	0.75	NA	0
001.99	Ammoniacal N, Other (%)	0027	12.36	0.0400	11.57	0.9581	0.1837	18	0.82	NA	0
001.99	Ammoniacal N, Other (%)	0405	12.37	0.1500	11.57	0.9581	0.1837	18	0.83	NA	0
001.99	Ammoniacal N, Other (%)	0394	12.38	0.0340	11.57	0.9581	0.1837	18	0.84	NA	0
001.99	Ammoniacal N, Other (%)	0510	12.40	0.0203	11.57	0.9581	0.1837	18	0.86	NA	0
002.20	Nitrate N, Jones Modified (%)	0029	10.15	0.1300				2			0
002.20	Nitrate N, Jones Modified (%)	0563	11.62	0.2100				2			0
002.99	Nitrate N, Other (%)	0029	9.445	0.0100	10.82	0.8082	0.1038	13	-1.70	NA	0
002.99	Nitrate N, Other (%)	0498	10.00	0.2000	10.82	0.8082	0.1038	13	-1.02	NA	0
002.99	Nitrate N, Other (%)	0444	10.25	0.1000	10.82	0.8082	0.1038	13	-0.71	NA	0
002.99	Nitrate N, Other (%)	0394	10.28	0.0210	10.82	0.8082	0.1038	13	-0.67	NA	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
002.99	Nitrate N, Other (%)	0027	10.30	0.0300	10.82	0.8082	0.1038	13	-0.65	NA	0
002.99	Nitrate N, Other (%)	0423	10.53	0.1600	10.82	0.8082	0.1038	13	-0.36	NA	0
002.99	Nitrate N, Other (%)	0587	10.65	0.0900	10.82	0.8082	0.1038	13	-0.22	NA	0
002.99	Nitrate N, Other (%)	0368	11.32	0.2680	10.82	0.8082	0.1038	13	0.61	NA	0
002.99	Nitrate N, Other (%)	0518	11.37	0.0700	10.82	0.8082	0.1038	13	0.67	NA	0
002.99	Nitrate N, Other (%)	0230	11.55	0.1000	10.82	0.8082	0.1038	13	0.90	NA	0
002.99	Nitrate N, Other (%)	0559	11.58	0.0100	10.82	0.8082	0.1038	13	0.93	NA	0
002.99	Nitrate N, Other (%)	0600	11.63	0.1500	10.82	0.8082	0.1038	13	0.99	NA	0
002.99	Nitrate N, Other (%)	0481	11.63	0.1400	10.82	0.8082	0.1038	13	1.00	NA	0
002.99	Nitrate N, Other (%)	0536	11.18	0.7600	10.82	0.8082	0.1038	13	0.44	NA	1
005.99	Urea N, Other (%)	0524	0.1500	0.0800				1			0
009.10	Ammoniacal Plus Nitrate N, Devarda (%)	0444	22.40	0.2000	22.49	0.0794	0.1267	3	-1.13		0
009.10	Ammoniacal Plus Nitrate N, Devarda (%)	0536	22.52	0.0800	22.49	0.0794	0.1267	3	0.38		0
009.10	Ammoniacal Plus Nitrate N, Devarda (%)	0619	22.55	0.1000	22.49	0.0794	0.1267	3	0.76		0
009.99	Ammoniacal Plus Nitrate N, Other (%)	0619	22.60	0.2000				1			0
010.11	Total N, Modified Comprehensive (22%)	0510	21.90	0.0659				1			0
010.12	Total N, Salicylic (22%)	0580	21.85	0.0000	22.05	0.2273	0.3767	5	-0.88		0
010.12	Total N, Salicylic (22%)	0498	21.95	0.3000	22.05	0.2273	0.3767	5	-0.44		0
010.12	Total N, Salicylic (22%)	0568	22.00	0.0000	22.05	0.2273	0.3767	5	-0.22		0
010.12	Total N, Salicylic (22%)	0572	22.01	0.2700	22.05	0.2273	0.3767	5	-0.19		0
010.12	Total N, Salicylic (22%)	0481	22.44	0.5600	22.05	0.2273	0.3767	5	1.72		0
010.16	Total N, Raney (22%)	0419	21.43	0.1540				1			0
010.60	Total N, Combustion (22%)	0035	21.50	0.4000	22.37	0.2812	0.1648	46	-3.08	Low	0
010.60	Total N, Combustion (22%)	0102	21.67	0.2900	22.37	0.2812	0.1648	46	-2.50	OK	0
010.60	Total N, Combustion (22%)	0423	21.96	0.0100	22.37	0.2812	0.1648	46	-1.47	OK	0
010.60	Total N, Combustion (22%)	0422	21.97	0.0100	22.37	0.2812	0.1648	46	-1.43	OK	0
010.60	Total N, Combustion (22%)	0073	22.00	0.1000	22.37	0.2812	0.1648	46	-1.31	OK	0
010.60	Total N, Combustion (22%)	0588	22.00	0.2000	22.37	0.2812	0.1648	46	-1.31	OK	0
010.60	Total N, Combustion (22%)	0324	22.05	0.1000	22.37	0.2812	0.1648	46	-1.13	OK	0
010.60	Total N, Combustion (22%)	0234	22.07	0.1800	22.37	0.2812	0.1648	46	-1.06	OK	0
010.60	Total N, Combustion (22%)	0086	22.10	0.2280	22.37	0.2812	0.1648	46	-0.96	OK	0
010.60	Total N, Combustion (22%)	0360	22.11	0.1700	22.37	0.2812	0.1648	46	-0.93	OK	0
010.60	Total N, Combustion (22%)	0230	22.20	0.0000	22.37	0.2812	0.1648	46	-0.59	OK	0
010.60	Total N, Combustion (22%)	0136	22.23	0.0800	22.37	0.2812	0.1648	46	-0.49	OK	0
010.60	Total N, Combustion (22%)	0025	22.24	0.5100	22.37	0.2812	0.1648	46	-0.47	OK	0
010.60	Total N, Combustion (22%)	0095	22.24	0.0100	22.37	0.2812	0.1648	46	-0.47	OK	0
010.60	Total N, Combustion (22%)	0523	22.26	0.0000	22.37	0.2812	0.1648	46	-0.37	OK	0
010.60	Total N, Combustion (22%)	0389	22.28	0.0300	22.37	0.2812	0.1648	46	-0.33	OK	0
010.60	Total N, Combustion (22%)	0612	22.29	0.2100	22.37	0.2812	0.1648	46	-0.29	OK	0
010.60	Total N, Combustion (22%)	0027	22.29	0.2800	22.37	0.2812	0.1648	46	-0.27	OK	0
010.60	Total N, Combustion (22%)	0521	22.32	0.4200	22.37	0.2812	0.1648	46	-0.17	OK	0
010.60	Total N, Combustion (22%)	0231	22.33	0.0100	22.37	0.2812	0.1648	46	-0.15	OK	0
010.60	Total N, Combustion (22%)	0534	22.35	0.1000	22.37	0.2812	0.1648	46	-0.06	OK	0

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			Value	Range	Rob Mean	Rob SD	R-bar				
010.60	Total N, Combustion (22%)	0028	22.37	0.7400	22.37	0.2812	0.1648	46	0.01	OK	0
010.60	Total N, Combustion (22%)	0055	22.39	0.4100	22.37	0.2812	0.1648	46	0.06	OK	0
010.60	Total N, Combustion (22%)	0481	22.39	0.1100	22.37	0.2812	0.1648	46	0.06	OK	0
010.60	Total N, Combustion (22%)	0624	22.40	0.0550	22.37	0.2812	0.1648	46	0.10	OK	0
010.60	Total N, Combustion (22%)	0452	22.40	0.1000	22.37	0.2812	0.1648	46	0.12	OK	0
010.60	Total N, Combustion (22%)	0260	22.41	0.0600	22.37	0.2812	0.1648	46	0.15	OK	0
010.60	Total N, Combustion (22%)	0527	22.41	0.3590	22.37	0.2812	0.1648	46	0.17	OK	0
010.60	Total N, Combustion (22%)	0405	22.42	0.0700	22.37	0.2812	0.1648	46	0.17	OK	0
010.60	Total N, Combustion (22%)	0029	22.42	0.1000	22.37	0.2812	0.1648	46	0.19	OK	0
010.60	Total N, Combustion (22%)	0451	22.47	0.0900	22.37	0.2812	0.1648	46	0.35	OK	0
010.60	Total N, Combustion (22%)	0472	22.48	0.0100	22.37	0.2812	0.1648	46	0.38	OK	0
010.60	Total N, Combustion (22%)	0587	22.48	0.0500	22.37	0.2812	0.1648	46	0.38	OK	0
010.60	Total N, Combustion (22%)	0368	22.54	0.0510	22.37	0.2812	0.1648	46	0.61	OK	0
010.60	Total N, Combustion (22%)	0049	22.54	0.2200	22.37	0.2812	0.1648	46	0.61	OK	0
010.60	Total N, Combustion (22%)	0106	22.59	0.0300	22.37	0.2812	0.1648	46	0.77	OK	0
010.60	Total N, Combustion (22%)	0354	22.60	0.2000	22.37	0.2812	0.1648	46	0.83	OK	0
010.60	Total N, Combustion (22%)	0043	22.63	0.0300	22.37	0.2812	0.1648	46	0.92	OK	0
010.60	Total N, Combustion (22%)	0114	22.64	0.1200	22.37	0.2812	0.1648	46	0.97	OK	0
010.60	Total N, Combustion (22%)	0494	22.66	0.0200	22.37	0.2812	0.1648	46	1.04	OK	0
010.60	Total N, Combustion (22%)	0543	22.70	0.0900	22.37	0.2812	0.1648	46	1.17	OK	0
010.60	Total N, Combustion (22%)	0040	22.70	0.0000	22.37	0.2812	0.1648	46	1.18	OK	0
010.60	Total N, Combustion (22%)	0377	22.81	0.5200	22.37	0.2812	0.1648	46	1.57	OK	0
010.60	Total N, Combustion (22%)	0291	22.84	0.0100	22.37	0.2812	0.1648	46	1.66	OK	0
010.60	Total N, Combustion (22%)	0177	22.89	0.0030	22.37	0.2812	0.1648	46	1.84	OK	0
010.60	Total N, Combustion (22%)	0485	23.45	0.3000	22.37	0.2812	0.1648	46	3.85	High	0
010.60	Total N, Combustion (22%)	0421	21.76	1.120	22.37	0.2812	0.1648	46	-2.16	OK	1
010.60	Total N, Combustion (22%)	0023	22.01	1.183	22.37	0.2812	0.1648	46	-1.28	OK	1
010.60	Total N, Combustion (22%)	0255	23.68	1.106	22.37	0.2812	0.1648	46	4.67	High	1
010.99	Total N, Other (22%)	0563	20.85	0.0200	22.21	0.3613	0.1479	10	-3.51	Low	0
010.99	Total N, Other (22%)	0524	21.86	0.0079	22.21	0.3613	0.1479	10	-0.92	OK	0
010.99	Total N, Other (22%)	0562	22.00	0.2000	22.21	0.3613	0.1479	10	-0.55	OK	0
010.99	Total N, Other (22%)	0559	22.07	0.0100	22.21	0.3613	0.1479	10	-0.38	OK	0
010.99	Total N, Other (22%)	0536	22.14	0.5200	22.21	0.3613	0.1479	10	-0.19	OK	0
010.99	Total N, Other (22%)	0600	22.33	0.1500	22.21	0.3613	0.1479	10	0.29	OK	0
010.99	Total N, Other (22%)	0444	22.40	0.0000	22.21	0.3613	0.1479	10	0.48	OK	0
010.99	Total N, Other (22%)	0518	22.50	0.4000	22.21	0.3613	0.1479	10	0.74	OK	0
010.99	Total N, Other (22%)	0300	22.52	0.0100	22.21	0.3613	0.1479	10	0.78	OK	0
010.99	Total N, Other (22%)	0394	22.66	0.0130	22.21	0.3613	0.1479	10	1.15	OK	0
020.50	Total P2O5, ICP (%)	0588	0.1500	0.0800	0.1674	0.0262	0.0229	7	-0.60	NA	0
020.50	Total P2O5, ICP (%)	0300	0.1534	0.0012	0.1674	0.0262	0.0229	7	-0.48	NA	0
020.50	Total P2O5, ICP (%)	0612	0.1550	0.0500	0.1674	0.0262	0.0229	7	-0.43	NA	0
020.50	Total P2O5, ICP (%)	0422	0.1560	0.0042	0.1674	0.0262	0.0229	7	-0.39	NA	0
020.50	Total P2O5, ICP (%)	0524	0.1562	0.0056	0.1674	0.0262	0.0229	7	-0.39	NA	0

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			Value	Range	Rob Mean	Rob SD	R-bar				
020.50	Total P2O5, ICP (%)	0527	0.1947	0.0094	0.1674	0.0262	0.0229	7	0.94	NA	0
020.50	Total P2O5, ICP (%)	0472	0.4150	0.0100	0.1674	0.0262	0.0229	7	8.55	NA	0
020.99	Total P2O5, Other (%)	0572	0.1600	0.0000				1			0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (%)	0354	0.1205	0.0050	0.1902	0.0963	0.0425	3	-0.72		0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (%)	0568	0.1500	0.0000	0.1902	0.0963	0.0425	3	-0.42		0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (%)	0472	0.3000	0.0800	0.1902	0.0963	0.0425	3	1.14		0
041.50	Direct Available P2O5, ICP (%)	0421	0.1715	0.0030				2			0
041.50	Direct Available P2O5, ICP (%)	0624	0.1745	0.0010				2			0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (%)	0494	0.5150	0.6900				1			0
048.20	Water Soluble P2O5, Spectrophotometric (%)	0472	0.1950	0.0900				1			0
048.99	Water Soluble P2O5, Other (%)	0572	0.1350	0.0100				1			0
050.00	Soluble K2O, STPB Oxalate (12%)	0114	12.48	0.2400	12.99	0.1597	0.2350	9	-2.93	OK	0
050.00	Soluble K2O, STPB Oxalate (12%)	0619	12.80	0.0000	12.99	0.1597	0.2350	9	-1.08	OK	0
050.00	Soluble K2O, STPB Oxalate (12%)	0049	12.96	0.3700	12.99	0.1597	0.2350	9	-0.18	OK	0
050.00	Soluble K2O, STPB Oxalate (12%)	0231	12.97	0.1400	12.99	0.1597	0.2350	9	-0.09	OK	0
050.00	Soluble K2O, STPB Oxalate (12%)	0444	12.98	0.0300	12.99	0.1597	0.2350	9	-0.07	OK	0
050.00	Soluble K2O, STPB Oxalate (12%)	0102	13.08	0.1100	12.99	0.1597	0.2350	9	0.51	OK	0
050.00	Soluble K2O, STPB Oxalate (12%)	0494	13.08	0.6400	12.99	0.1597	0.2350	9	0.54	OK	0
050.00	Soluble K2O, STPB Oxalate (12%)	0055	13.10	0.2000	12.99	0.1597	0.2350	9	0.66	OK	0
050.00	Soluble K2O, STPB Oxalate (12%)	0405	13.18	0.1500	12.99	0.1597	0.2350	9	1.09	OK	0
050.30	Soluble K2O, AA (Oxalate) (12%)	0580	11.91	0.2600	13.01	0.8544	0.1875	4	-1.29		0
050.30	Soluble K2O, AA (Oxalate) (12%)	0040	13.05	0.1000	13.01	0.8544	0.1875	4	0.04		0
050.30	Soluble K2O, AA (Oxalate) (12%)	0157	13.10	0.2000	13.01	0.8544	0.1875	4	0.10		0
050.30	Soluble K2O, AA (Oxalate) (12%)	0073	14.00	0.1900	13.01	0.8544	0.1875	4	1.15		0
050.32	Soluble K2O, AA (Citrate-EDTA) (12%)	0472	12.12	0.0300				1			0
050.50	Soluble K2O, ICP (Oxalate) (12%)	0230	11.50	0.0000	13.13	0.8896	0.2525	9	-1.69	Low	0
050.50	Soluble K2O, ICP (Oxalate) (12%)	0619	12.40	0.0000	13.13	0.8896	0.2525	9	-0.76	OK	0
050.50	Soluble K2O, ICP (Oxalate) (12%)	0117	12.79	0.0400	13.13	0.8896	0.2525	9	-0.36	OK	0
050.50	Soluble K2O, ICP (Oxalate) (12%)	0106	12.99	0.1100	13.13	0.8896	0.2525	9	-0.15	OK	0
050.50	Soluble K2O, ICP (Oxalate) (12%)	0055	13.12	0.0700	13.13	0.8896	0.2525	9	-0.02	OK	0
050.50	Soluble K2O, ICP (Oxalate) (12%)	0444	13.21	0.0600	13.13	0.8896	0.2525	9	0.08	OK	0
050.50	Soluble K2O, ICP (Oxalate) (12%)	0324	13.60	0.0000	13.13	0.8896	0.2525	9	0.48	OK	0
050.50	Soluble K2O, ICP (Oxalate) (12%)	0086	13.83	0.6328	13.13	0.8896	0.2525	9	0.72	OK	0
050.50	Soluble K2O, ICP (Oxalate) (12%)	0422	15.52	0.6023	13.13	0.8896	0.2525	9	2.47	High	0
050.51	Soluble K2O, ICP (Citrate) (12%)	0452	12.85	0.0400	13.43	0.5336	0.0195	4	-1.09		0
050.51	Soluble K2O, ICP (Citrate) (12%)	0368	13.12	0.0086	13.43	0.5336	0.0195	4	-0.57		0
050.51	Soluble K2O, ICP (Citrate) (12%)	0291	13.75	0.0100	13.43	0.5336	0.0195	4	0.59		0
050.51	Soluble K2O, ICP (Citrate) (12%)	0568	14.00	0.0000	13.43	0.5336	0.0195	4	1.07		0
050.52	Soluble K2O, ICP (Citrate-EDTA) (12%)	0072	12.00	0.1000	12.71	0.4528	0.1486	13	-1.57	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (12%)	0543	12.01	0.0990	12.71	0.4528	0.1486	13	-1.55	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (12%)	0377	12.48	0.1300	12.71	0.4528	0.1486	13	-0.52	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (12%)	0117	12.55	0.4455	12.71	0.4528	0.1486	13	-0.36	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (12%)	0136	12.64	0.1700	12.71	0.4528	0.1486	13	-0.16	OK	0

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050.52	Soluble K2O, ICP (Citrate-EDTA) (12%)	0423	12.73	0.1500	12.71	0.4528	0.1486	13	0.03	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (12%)	0043	12.73	0.0000	12.71	0.4528	0.1486	13	0.05	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (12%)	0023	12.75	0.1190	12.71	0.4528	0.1486	13	0.09	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (12%)	0485	12.75	0.3000	12.71	0.4528	0.1486	13	0.09	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (12%)	0354	12.85	0.1000	12.71	0.4528	0.1486	13	0.31	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (12%)	0025	13.05	0.1000	12.71	0.4528	0.1486	13	0.75	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (12%)	0360	13.26	0.0200	12.71	0.4528	0.1486	13	1.22	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (12%)	0494	13.43	0.0500	12.71	0.4528	0.1486	13	1.58	OK	0
050.60	Soluble K2O, Flame Photometric (Oxalate) (12%)	0510	12.78	0.0480				1			0
050.61	Soluble K2O, Flame Photometric (Citrate) (12%)	0584	12.23	0.1500				2			0
050.61	Soluble K2O, Flame Photometric (Citrate) (12%)	0035	13.23	0.2500				2			0
050.62	Soluble K2O, Flame Photometric (Citrate-EDTA) (12%)	0029	13.25	0.1300				2			0
050.62	Soluble K2O, Flame Photometric (Citrate-EDTA) (12%)	0095	13.79	0.5500				2			0
050.99	Soluble K2O, Other (12%)	0588	11.70	0.2000	12.78	0.5391	0.3222	34	-2.01	Low	0
050.99	Soluble K2O, Other (12%)	0600	12.03	0.1500	12.78	0.5391	0.3222	34	-1.41	OK	0
050.99	Soluble K2O, Other (12%)	0559	12.08	0.0100	12.78	0.5391	0.3222	34	-1.32	OK	0
050.99	Soluble K2O, Other (12%)	0562	12.08	0.0200	12.78	0.5391	0.3222	34	-1.31	OK	0
050.99	Soluble K2O, Other (12%)	0563	12.10	1.060	12.78	0.5391	0.3222	34	-1.27	OK	0
050.99	Soluble K2O, Other (12%)	0300	12.25	0.0200	12.78	0.5391	0.3222	34	-0.99	OK	0
050.99	Soluble K2O, Other (12%)	0255	12.32	0.0240	12.78	0.5391	0.3222	34	-0.87	OK	0
050.99	Soluble K2O, Other (12%)	0518	12.40	0.9600	12.78	0.5391	0.3222	34	-0.71	OK	0
050.99	Soluble K2O, Other (12%)	0536	12.47	0.1200	12.78	0.5391	0.3222	34	-0.58	OK	0
050.99	Soluble K2O, Other (12%)	0389	12.54	0.1000	12.78	0.5391	0.3222	34	-0.45	OK	0
050.99	Soluble K2O, Other (12%)	0157	12.60	0.4000	12.78	0.5391	0.3222	34	-0.34	OK	0
050.99	Soluble K2O, Other (12%)	0451	12.61	0.3800	12.78	0.5391	0.3222	34	-0.32	OK	0
050.99	Soluble K2O, Other (12%)	0498	12.65	0.1000	12.78	0.5391	0.3222	34	-0.25	OK	0
050.99	Soluble K2O, Other (12%)	0394	12.70	0.0100	12.78	0.5391	0.3222	34	-0.17	OK	0
050.99	Soluble K2O, Other (12%)	0524	12.70	0.5481	12.78	0.5391	0.3222	34	-0.16	OK	0
050.99	Soluble K2O, Other (12%)	0177	12.75	0.0011	12.78	0.5391	0.3222	34	-0.07	OK	0
050.99	Soluble K2O, Other (12%)	0433	12.76	0.2000	12.78	0.5391	0.3222	34	-0.05	OK	0
050.99	Soluble K2O, Other (12%)	0624	12.76	0.0241	12.78	0.5391	0.3222	34	-0.04	OK	0
050.99	Soluble K2O, Other (12%)	0534	12.80	0.6000	12.78	0.5391	0.3222	34	0.03	OK	0
050.99	Soluble K2O, Other (12%)	0619	12.80	0.0000	12.78	0.5391	0.3222	34	0.03	OK	0
050.99	Soluble K2O, Other (12%)	0481	12.85	0.0400	12.78	0.5391	0.3222	34	0.12	OK	0
050.99	Soluble K2O, Other (12%)	0419	12.88	0.4700	12.78	0.5391	0.3222	34	0.17	OK	0
050.99	Soluble K2O, Other (12%)	0527	12.92	0.0531	12.78	0.5391	0.3222	34	0.24	OK	0
050.99	Soluble K2O, Other (12%)	0234	12.94	0.0100	12.78	0.5391	0.3222	34	0.28	OK	0
050.99	Soluble K2O, Other (12%)	0521	13.08	0.5500	12.78	0.5391	0.3222	34	0.54	OK	0
050.99	Soluble K2O, Other (12%)	0587	13.15	0.0100	12.78	0.5391	0.3222	34	0.67	OK	0
050.99	Soluble K2O, Other (12%)	0421	13.20	0.0170	12.78	0.5391	0.3222	34	0.78	OK	0
050.99	Soluble K2O, Other (12%)	0515	13.29	1.226	12.78	0.5391	0.3222	34	0.94	OK	0
050.99	Soluble K2O, Other (12%)	0572	13.40	0.2400	12.78	0.5391	0.3222	34	1.14	OK	0
050.99	Soluble K2O, Other (12%)	0042	13.41	0.5000	12.78	0.5391	0.3222	34	1.16	OK	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
050.99	Soluble K2O, Other (12%)	0260	13.43	0.4400	12.78	0.5391	0.3222	34	1.20	OK	0
050.99	Soluble K2O, Other (12%)	0612	13.69	0.4100	12.78	0.5391	0.3222	34	1.67	High	0
050.99	Soluble K2O, Other (12%)	0027	13.74	0.7400	12.78	0.5391	0.3222	34	1.77	High	0
050.99	Soluble K2O, Other (12%)	0523	14.10	1.000	12.78	0.5391	0.3222	34	2.44	High	0
060.99	Water (Free), Other (%)	0510	0.5986	0.0149				1			0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0568	1.850	0.0000	1.958	0.1427	0.0950	3	-0.76		0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0035	1.905	0.0900	1.958	0.1427	0.0950	3	-0.37		0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0354	2.120	0.1000	1.958	0.1427	0.0950	3	1.13		0
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (%)	0300	1.637	0.0727	1.735	0.1517	0.0419	3	-0.65		0
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (%)	0423	1.659	0.0110	1.735	0.1517	0.0419	3	-0.51		0
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (%)	0095	1.910	0.0000	1.735	0.1517	0.0419	3	1.15		0
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0624	1.740	0.0090	1.864	0.1018	0.0343	5	-1.22		0
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0527	1.793	0.0106	1.864	0.1018	0.0343	5	-0.70		0
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0472	1.860	0.0000	1.864	0.1018	0.0343	5	-0.04		0
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0494	1.943	0.0274	1.864	0.1018	0.0343	5	0.78		0
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0260	1.985	0.0900	1.864	0.1018	0.0343	5	1.19		0
101.99	Acid Soluble Ca, Other (%)	0572	2.015	0.0700				1			0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0568	0.3940	0.0000	0.5177	0.1090	0.0390	3	-1.13		0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0035	0.5590	0.0180	0.5177	0.1090	0.0390	3	0.38		0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0354	0.6000	0.0600	0.5177	0.1090	0.0390	3	0.76		0
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (%)	0423	0.4245	0.0030	0.4916	0.0583	0.0055	3	-1.15		0
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (%)	0300	0.5204	0.0079	0.4916	0.0583	0.0055	3	0.49		0
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (%)	0095	0.5300	0.0000	0.4916	0.0583	0.0055	3	0.66		0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0624	0.5435	0.0050	0.5912	0.0361	0.0338	5	-1.15		0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0527	0.5754	0.0184	0.5912	0.0361	0.0338	5	-0.38		0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0260	0.5825	0.1050	0.5912	0.0361	0.0338	5	-0.21		0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0472	0.6250	0.0100	0.5912	0.0361	0.0338	5	0.82		0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0494	0.6295	0.0304	0.5912	0.0361	0.0338	5	0.93		0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0515	0.4218	0.3273	0.5912	0.0361	0.0338	5	-4.10		1
121.99	Acid Soluble Mg, Other (%)	0515	0.2933	0.0849	0.4445	0.1333	0.0333	3	-1.13		0
121.99	Acid Soluble Mg, Other (%)	0524	0.4953	0.0050	0.4445	0.1333	0.0333	3	0.38		0
121.99	Acid Soluble Mg, Other (%)	0572	0.5450	0.0100	0.4445	0.1333	0.0333	3	0.75		0
131.99	Water Soluble Mg, Other (%)	0572	0.5600	0.0600				1			0
148.07	Total S, ICP, test portion as in 2017.02 (%)	0624	4.401	0.0310	4.854	0.4722	0.4369	6	-0.86	Low	0
148.07	Total S, ICP, test portion as in 2017.02 (%)	0472	4.505	0.0100	4.854	0.4722	0.4369	6	-0.66	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (%)	0260	4.660	0.6400	4.854	0.4722	0.4369	6	-0.37	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (%)	0494	4.851	0.0185	4.854	0.4722	0.4369	6	-0.01	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (%)	0515	5.332	1.707	4.854	0.4722	0.4369	6	0.90	High	0
148.07	Total S, ICP, test portion as in 2017.02 (%)	0527	5.377	0.2146	4.854	0.4722	0.4369	6	0.99	High	0
148.99	Total S, Other (%)	0300	4.639	0.0375	5.070	0.6038	0.0809	4	-0.71		0
148.99	Total S, Other (%)	0572	4.740	0.0200	5.070	0.6038	0.0809	4	-0.55		0
148.99	Total S, Other (%)	0354	4.945	0.0100	5.070	0.6038	0.0809	4	-0.21		0
148.99	Total S, Other (%)	0422	5.955	0.2560	5.070	0.6038	0.0809	4	1.47		0

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			Value	Range	Rob Mean	Rob SD	R-bar				
149.04	S - HNO3 soluble, ICP (%)	0423	4.757	0.0780	4.851	0.0994	0.1524	3	-0.94		0
149.04	S - HNO3 soluble, ICP (%)	0524	4.840	0.0492	4.851	0.0994	0.1524	3	-0.11		0
149.04	S - HNO3 soluble, ICP (%)	0588	4.955	0.3300	4.851	0.0994	0.1524	3	1.05		0
151.00	Acid Soluble As, AA, test portion 2006.03 modified w/dual acid	0498	< 0.2					0			5
151.30	Acid Soluble As, ICP (ppm)	0524	0.6251	0.0381				2			0
151.30	Acid Soluble As, ICP (ppm)	0523	1.691	0.0380				2			0
151.30	Acid Soluble As, ICP (ppm)	0255	0.0000	0.0000				2			4
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	0300	< 2					0			5
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	0405	< 3					0			5
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0563	0.9115	0.0470				1			0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0527	< 0.0001					1			5
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0515	< 0.25					1			5
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0136	< 1					1			5
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0494	< 1.42					1			5
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	0515	< 0.186					0			5
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	0368	< 0.3					0			5
151.99	Acid Soluble As, Other (ppm)	0572	0.7500	0.1600				1			0
151.99	Acid Soluble As, Other (ppm)	0481	< 0.5					1			5
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	0354	< 0.01					0			5
165.99	Acid Soluble B, Other (%)	0524	0.0017	0.0000				2			0
165.99	Acid Soluble B, Other (%)	0624	0.0018	0.0000				2			0
165.99	Acid Soluble B, Other (%)	0300	< 0.01					2			5
165.99	Acid Soluble B, Other (%)	0527	< 0.01					2			5
165.99	Acid Soluble B, Other (%)	0572	< 0.0111					2			5
165.99	Acid Soluble B, Other (%)	0515	< 0.186					2			5
171.99	Water Soluble B, Other (%)	0572	< 0.0106					0			5
181.00	Acid Soluble Cd, AA, test portion 2006.03 modified w/dual acid	0498	< 0.1					0			5
181.30	Acid Soluble Cd, ICP (ppm)	0524	0.0045	0.0007	1.593	2.727	2.351	3	-0.58		0
181.30	Acid Soluble Cd, ICP (ppm)	0523	0.0315	0.0150	1.593	2.727	2.351	3	-0.57		0
181.30	Acid Soluble Cd, ICP (ppm)	0255	4.742	7.036	1.593	2.727	2.351	3	1.15		0
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	0300	< 0.5					0			5
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	0405	< 1					0			5
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0563	0.0165	0.0050				1			0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0527	< 0.0001					1			5
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0515	< 0.065					1			5
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0494	< 0.17					1			5
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0136	< 1					1			5
181.34	Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm)	0368	< 0.1					0			5
181.34	Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm)	0515	< 0.133					0			5
181.99	Acid Soluble Cd, Other (ppm)	0572	< 0.05					0			5
181.99	Acid Soluble Cd, Other (ppm)	0481	< 0.5					0			5
190.00	Water Soluble Cl, Titrimetric (9.5%)	0422	9.080	0.0068	9.402	0.2602	0.1166	16	-1.24	OK	0
190.00	Water Soluble Cl, Titrimetric (9.5%)	0029	9.108	0.1150	9.402	0.2602	0.1166	16	-1.13	OK	0

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190.00	Water Soluble Cl, Titrimetric (9.5%)	0394	9.150	0.0200	9.402	0.2602	0.1166	16	-0.97	OK	0
190.00	Water Soluble Cl, Titrimetric (9.5%)	0572	9.150	0.1400	9.402	0.2602	0.1166	16	-0.97	OK	0
190.00	Water Soluble Cl, Titrimetric (9.5%)	0523	9.160	0.1600	9.402	0.2602	0.1166	16	-0.93	OK	0
190.00	Water Soluble Cl, Titrimetric (9.5%)	0619	9.250	0.1000	9.402	0.2602	0.1166	16	-0.58	OK	0
190.00	Water Soluble Cl, Titrimetric (9.5%)	0444	9.410	0.0000	9.402	0.2602	0.1166	16	0.03	OK	0
190.00	Water Soluble Cl, Titrimetric (9.5%)	0562	9.415	0.0100	9.402	0.2602	0.1166	16	0.05	OK	0
190.00	Water Soluble Cl, Titrimetric (9.5%)	0600	9.450	0.2000	9.402	0.2602	0.1166	16	0.19	OK	0
190.00	Water Soluble Cl, Titrimetric (9.5%)	0534	9.460	0.0000	9.402	0.2602	0.1166	16	0.22	OK	0
190.00	Water Soluble Cl, Titrimetric (9.5%)	0028	9.505	0.0700	9.402	0.2602	0.1166	16	0.40	OK	0
190.00	Water Soluble Cl, Titrimetric (9.5%)	0055	9.545	0.0300	9.402	0.2602	0.1166	16	0.55	OK	0
190.00	Water Soluble Cl, Titrimetric (9.5%)	0536	9.560	0.2400	9.402	0.2602	0.1166	16	0.61	OK	0
190.00	Water Soluble Cl, Titrimetric (9.5%)	0117	9.663	0.4170	9.402	0.2602	0.1166	16	1.01	OK	0
190.00	Water Soluble Cl, Titrimetric (9.5%)	0494	9.739	0.1130	9.402	0.2602	0.1166	16	1.29	OK	0
190.00	Water Soluble Cl, Titrimetric (9.5%)	0230	9.785	0.0100	9.402	0.2602	0.1166	16	1.47	OK	0
190.99	Water Soluble Cl, Other (9.5%)	0029	8.745	0.0100	9.354	0.2377	0.1148	9	-2.37	OK	0
190.99	Water Soluble Cl, Other (9.5%)	0023	9.208	0.0680	9.354	0.2377	0.1148	9	-0.57	OK	0
190.99	Water Soluble Cl, Other (9.5%)	0389	9.250	0.1800	9.354	0.2377	0.1148	9	-0.40	OK	0
190.99	Water Soluble Cl, Other (9.5%)	0619	9.300	0.0000	9.354	0.2377	0.1148	9	-0.21	OK	0
190.99	Water Soluble Cl, Other (9.5%)	0580	9.335	0.3300	9.354	0.2377	0.1148	9	-0.07	OK	0
190.99	Water Soluble Cl, Other (9.5%)	0027	9.350	0.0600	9.354	0.2377	0.1148	9	-0.02	OK	0
190.99	Water Soluble Cl, Other (9.5%)	0559	9.445	0.0100	9.354	0.2377	0.1148	9	0.35	OK	0
190.99	Water Soluble Cl, Other (9.5%)	0136	9.590	0.1600	9.354	0.2377	0.1148	9	0.92	OK	0
190.99	Water Soluble Cl, Other (9.5%)	0481	10.62	0.1000	9.354	0.2377	0.1148	9	4.92	High	0
191.30	Acid Soluble Cr, ICP (ppm)	0035	4.870	3.060	5.387	0.8607	1.182	4	-0.60		0
191.30	Acid Soluble Cr, ICP (ppm)	0524	4.879	0.0806	5.387	0.8607	1.182	4	-0.59		0
191.30	Acid Soluble Cr, ICP (ppm)	0394	5.134	0.4520	5.387	0.8607	1.182	4	-0.29		0
191.30	Acid Soluble Cr, ICP (ppm)	0523	6.665	1.134	5.387	0.8607	1.182	4	1.48		0
191.32	Acid Soluble Cr, ICP, 2006.03 (ppm)	0300	7.719	0.1790				2			0
191.32	Acid Soluble Cr, ICP, 2006.03 (ppm)	0405	9.000	0.0000				2			0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0136	3.600	0.7600	6.337	1.872	0.4794	4	-1.46		0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0527	6.778	0.3175	6.337	1.872	0.4794	4	0.24		0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0563	7.175	0.4900	6.337	1.872	0.4794	4	0.45		0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0494	7.795	0.3500	6.337	1.872	0.4794	4	0.78		0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0515	< 0.044		6.337	1.872	0.4794	4			5
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	0368	4.550	0.7000				1			0
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	0515	< 0.141					1			5
191.99	Acid Soluble Cr, Other (ppm)	0572	3.860	0.6000				1			0
191.99	Acid Soluble Cr, Other (ppm)	0481	< 20					1			5
202.30	Acid Soluble Co, ICP (ppm)	0523	0.2670	0.0080				2			0
202.30	Acid Soluble Co, ICP (ppm)	0524	0.2984	0.0396				2			0
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	0300	< 1					0			5
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	0405	< 1					0			5
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0563	0.1985	0.0390				1			0

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202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0527	< 0.0001					1			5
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0515	< 0.045					1			5
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0494	< 0.7					1			5
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0136	< 2.5					1			5
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	0368	1.350	0.5000				1			0
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	0515	< 0.139					1			5
202.99	Acid Soluble Co, Other (ppm)	0255	32.90	10.60				1			0
202.99	Acid Soluble Co, Other (ppm)	0572	< 0.67					1			5
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0255	0.0005	0.0010				0			4
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0354	< 0.01					0			5
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	0394	< 0.0001					0			5
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	0405	< 0.0002					0			5
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	0300	< 0.001					0			5
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0527	0.0001	0.0000				2			0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0624	0.0002	0.0000				2			0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0106	0.0000	0.0000				2			4
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0563	< 0.0001					2			5
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0136	< 0.0002					2			5
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0515	< 0.036					2			5
221.99	Acid Soluble Cu, Other (%)	0524	0.0001	0.0000	0.0004	0.0005	0.0001	3	-0.51		0
221.99	Acid Soluble Cu, Other (%)	0368	0.0002	0.0001	0.0004	0.0005	0.0001	3	-0.43		0
221.99	Acid Soluble Cu, Other (%)	0523	0.0010	0.0000	0.0004	0.0005	0.0001	3	0.94		0
221.99	Acid Soluble Cu, Other (%)	0572	0.0050	0.0100	0.0004	0.0005	0.0001	3			4
221.99	Acid Soluble Cu, Other (%)	0481	< 0.001		0.0004	0.0005	0.0001	3			5
221.99	Acid Soluble Cu, Other (%)	0515	< 0.195		0.0004	0.0005	0.0001	3			5
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0035	0.0065	0.0006				2			0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0354	0.0250	0.0100				2			0
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (%)	0300	0.0085	0.0005				1			0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0624	0.0105	0.0010				1			0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0527	< 0.1					1			5
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0515	< 4.8					1			5
241.99	Acid Soluble Fe, Other (%)	0524	0.0074	0.0000				2			0
241.99	Acid Soluble Fe, Other (%)	0572	0.0100	0.0000				2			0
241.99	Acid Soluble Fe, Other (%)	0515	< 11.6					2			5
251.00	Acid Soluble Pb, AA, test portion 2006.03 modified w/dual acid	0498	< 0.5					0			5
251.30	Acid Soluble Pb, ICP (ppm)	0394	0.4095	0.0110	0.4954	0.1143	0.0276	3	-0.75		0
251.30	Acid Soluble Pb, ICP (ppm)	0523	0.4515	0.0090	0.4954	0.1143	0.0276	3	-0.38		0
251.30	Acid Soluble Pb, ICP (ppm)	0524	0.6251	0.0627	0.4954	0.1143	0.0276	3	1.14		0
251.30	Acid Soluble Pb, ICP (ppm)	0255	1.519	3.038	0.4954	0.1143	0.0276	3			4
251.32	Acid Soluble Pb, ICP, 2006.03 (ppm)	0405	< 4					0			5
251.32	Acid Soluble Pb, ICP, 2006.03 (ppm)	0300	< 5					0			5
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0563	0.4135	0.0310				1			0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0527	< 0.0001					1			5

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0515	< 0.101					1			5
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0494	< 0.91					1			5
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0136	< 3					1			5
251.34	Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm)	0368	5.800	1.800				1			0
251.34	Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm)	0515	< 0.216					1			5
251.99	Acid Soluble Pb, Other (ppm)	0572	0.5250	0.0700				1			0
251.99	Acid Soluble Pb, Other (ppm)	0481	< 0.5					1			5
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0354	< 0.01					0			5
261.34	Acid Soluble Mn, ICP, test portion 2006.03A-C (%)	0300	< 0.0005					0			5
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0527	0.0002	0.0000				2			0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0624	0.0002	0.0000				2			0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0515	< 3.32					2			5
261.99	Acid Soluble Mn, Other (%)	0524	0.0003	0.0000				1			0
261.99	Acid Soluble Mn, Other (%)	0572	< 0.001					1			5
261.99	Acid Soluble Mn, Other (%)	0515	< 11					1			5
281.00	Acid Soluble Hg, AA (ppm)	0481	< 0.5					0			5
281.00	Acid Soluble Hg, AA (ppm)	0498	< 0.5					0			5
281.30	Acid Soluble Hg, ICP (ppm)	0527	< 0.01					0			5
281.30	Acid Soluble Hg, ICP (ppm)	0563	< 0.05					0			5
281.30	Acid Soluble Hg, ICP (ppm)	0515	< 0.1					0			5
281.30	Acid Soluble Hg, ICP (ppm)	0405	< 2					0			5
281.99	Acid Soluble Hg, Other (ppm)	0368	0.0076	0.0035	0.0415	0.0621	0.0214	4	-0.55		0
281.99	Acid Soluble Hg, Other (ppm)	0524	0.0105	0.0022	0.0415	0.0621	0.0214	4	-0.50		0
281.99	Acid Soluble Hg, Other (ppm)	0035	0.0135	0.0050	0.0415	0.0621	0.0214	4	-0.45		0
281.99	Acid Soluble Hg, Other (ppm)	0572	0.1346	0.0748	0.0415	0.0621	0.0214	4	1.50		0
289.30	Acid Soluble Mo, ICP (ppm)	0524	0.3995	0.0115	1.986	1.536	1.324	3	-1.03		0
289.30	Acid Soluble Mo, ICP (ppm)	0049	2.095	0.0700	1.986	1.536	1.324	3	0.07		0
289.30	Acid Soluble Mo, ICP (ppm)	0523	3.465	3.890	1.986	1.536	1.324	3	0.96		0
289.30	Acid Soluble Mo, ICP (ppm)	0255	0.0000	0.0000	1.986	1.536	1.324	3			4
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	0405	< 1					0			5
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	0300	< 2					0			5
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0563	0.3620	0.0280				1			0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0106	0.5000	1.000				1			4
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0527	< 0.001					1			5
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0515	< 0.056					1			5
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0136	< 2.5					1			5
289.34	Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm)	0368	4.250	0.3000				1			0
289.34	Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm)	0515	< 0.178					1			5
289.99	Acid Soluble Mo, Other (ppm)	0572	< 2.56					0			5
291.30	Acid Soluble Ni, ICP (ppm)	0035	1.515	0.0700	2.347	0.6620	0.1625	4	-1.26		0
291.30	Acid Soluble Ni, ICP (ppm)	0394	2.144	0.3460	2.347	0.6620	0.1625	4	-0.31		0
291.30	Acid Soluble Ni, ICP (ppm)	0524	2.711	0.0559	2.347	0.6620	0.1625	4	0.55		0
291.30	Acid Soluble Ni, ICP (ppm)	0523	3.017	0.1780	2.347	0.6620	0.1625	4	1.01		0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	0405	5.000	0.0000				1			0
291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	0300	< 5					1			5
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0494	3.065	0.2100	3.426	0.4312	0.1422	3	-0.84		0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0563	3.310	0.0800	3.426	0.4312	0.1422	3	-0.27		0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0527	3.904	0.1366	3.426	0.4312	0.1422	3	1.11		0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0515	< 0.049		3.426	0.4312	0.1422	3			5
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0136	< 2.5		3.426	0.4312	0.1422	3			5
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	0368	2.900	1.600				1			0
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	0515	< 0.18					1			5
291.99	Acid Soluble Ni, Other (ppm)	0572	2.725	0.1700				2			0
291.99	Acid Soluble Ni, Other (ppm)	0255	37.36	15.00				2			0
301.30	Acid Soluble Se, ICP (ppm)	0524	0.5176	0.0264				2			0
301.30	Acid Soluble Se, ICP (ppm)	0523	2.803	0.1840				2			0
301.32	Acid Soluble Se, ICP, 2006.03 (ppm)	0405	< 10					0			5
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0563	2.205	0.0900				1			0
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0527	< 0.01					1			5
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0515	< 0.27					1			5
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0494	< 1					1			5
301.34	Acid Soluble Se, ICP, EPA 3050B/6010C (ppm)	0515	< 0.226					0			5
301.34	Acid Soluble Se, ICP, EPA 3050B/6010C (ppm)	0368	< 1.1					0			5
301.99	Acid Soluble Se, Other (ppm)	0572	2.910	0.1000				1			0
301.99	Acid Soluble Se, Other (ppm)	0255	0.0000	0.0000				1			4
301.99	Acid Soluble Se, Other (ppm)	0481	< 0.5					1			5
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0423	0.0795	0.0030	0.1016	0.0165	0.0075	4	-1.34		0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0035	0.1005	0.0150	0.1016	0.0165	0.0075	4	-0.07		0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0494	0.1079	0.0095	0.1016	0.0165	0.0075	4	0.38		0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0527	0.1187	0.0024	0.1016	0.0165	0.0075	4	1.03		0
311.99	Sodium, Other (%)	0572	0.1000	0.0000				2			0
311.99	Sodium, Other (%)	0354	0.2100	0.0600				2			0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0049	0.0019	0.0000	0.0026	0.0008	0.0006	3	-0.80		0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0035	0.0023	0.0002	0.0026	0.0008	0.0006	3	-0.32		0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0255	0.0035	0.0010	0.0026	0.0008	0.0006	3	1.12		0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0354	< 0.01		0.0026	0.0008	0.0006	3			5
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0300	0.0019	0.0000	0.0020	0.0001	0.0001	3	-1.15		0
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0394	0.0021	0.0001	0.0020	0.0001	0.0001	3	0.58		0
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0405	0.0021	0.0001	0.0020	0.0001	0.0001	3	0.58		0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0106	0.0009	0.0003	0.0017	0.0006	0.0002	4	-1.18		0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0136	0.0017	0.0000	0.0017	0.0006	0.0002	4	-0.03		0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0624	0.0021	0.0000	0.0017	0.0006	0.0002	4	0.51		0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0043	0.0023	0.0001	0.0017	0.0006	0.0002	4	0.71		0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0527	< 0.001		0.0017	0.0006	0.0002	4			5
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0515	< 0.048		0.0017	0.0006	0.0002	4			5
321.99	Acid Soluble Zn, Other (%)	0481	0.0010	0.0000	0.0041	0.0036	0.0013	5	-0.74		0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
321.99	Acid Soluble Zn, Other (%)	0027	0.0021	0.0000	0.0041	0.0036	0.0013	5	-0.47		0
321.99	Acid Soluble Zn, Other (%)	0524	0.0023	0.0001	0.0041	0.0036	0.0013	5	-0.44		0
321.99	Acid Soluble Zn, Other (%)	0523	0.0050	0.0020	0.0041	0.0036	0.0013	5	0.22		0
321.99	Acid Soluble Zn, Other (%)	0368	0.0101	0.0017	0.0041	0.0036	0.0013	5	1.43		0
321.99	Acid Soluble Zn, Other (%)	0572	0.0000	0.0000	0.0041	0.0036	0.0013	5			4
321.99	Acid Soluble Zn, Other (%)	0515	< 0.142		0.0041	0.0036	0.0013	5			5
325.99	Water Soluble Zn, Other (%)	0572	0.0000	0.0000				0			4
431.99	Soluble Si in nonliquids, Other (%)	0572	< 0.007					0			5

Interpreting Z Scores and Flags:

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

Notes:

Robust statistics not used if < 6 labs used in calculations, in this case Values and Z Scores are grayed out and should be interpreted with extreme caution. IA Status describes where your result is relative to the Assigned Value ± IA. Red indicates Higher or Lower and Green indicates within the IA range about the Robust mean. Method codes in light green indicate a guaranteed analyte. Individual lab values may be below detection limits but are reported solely for the purpose of this Proficiency Testing program.