

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Methods: 116

Sample # 181011

Statistical Summary

Labs Reporting: 99

Grade 0-45-45

Issue Date : 11/30/2018

Method Code	Analyte & Method Sample # 181011	# 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
001.99	Ammoniacal Nitrogen, Other (%)	1		0.0562									
010.60	Total Nitrogen, Combustion (%)	3	3	5.942	10.20	5.942	0.5194	10.20	7.359	171.62%	45.74	0.0243	3.06%
010.99	Total Nitrogen, Other (%)	1		0.0381									
020.10	Total Phosphorus as P2O5, Gravimetric Quinolinium ..	5	5	44.64	0.4001	44.64		0.4001	0.2237	0.90%		0.6440	2.26%
020.20	Total Phosphorus as P2O5, Spectrophotometric Molyb	19	18	44.80	0.4910	44.79		0.4348	0.1281	0.97%		0.1497	2.26%
020.40	Total Phosphorus as P2O5, Automated (%)	4	4	45.13	0.4783	45.13		0.4783	0.2989	1.06%		0.3975	2.25%
020.50	Total Phosphorus as P2O5, ICP (%)	26	25	44.86	2.027	44.94		1.614	0.4036	3.59%		0.5510	2.26%
020.99	Total Phosphorus as P2O5, Other (%)	3	3	46.63	3.789	46.63		3.789	2.735	8.13%		9.138	2.24%
030.20	Citrate Insoluble Phosphorus as P2O5, Spectrophoto..	1		0.0100									
040.20	Indirect Available Phosphorus as P2O5, Spectrophot...	2	2	44.51	0.0884								
040.99	Indirect Available Phosphorus as P2O5, Other (45%)	1		44.90									
041.10	Direct Available Phosphorus as P2O5, Gravimetric Q..	7	7	44.72	0.5671	44.86	0.9772	0.2738	0.1294	0.61%	0.65	0.2557	2.26%
041.11	Direct Available Phosphorus as P2O5, Gravimetric Q..	4	4	44.69	0.4507	44.69	0.9739	0.4507	0.2817	1.01%	1.08	0.2450	2.26%
041.21	Direct Available Phosphorus as P2O5, Spectrophotom	2	2	44.57	0.8803								
041.40	Direct Available Phosphorus as P2O5, Automated (45'	1		44.52									
041.50	Direct Available Phosphorus as P2O5, ICP (45%)	3	3	45.39	0.6101	45.39	0.9877	0.6101	0.4403	1.34%	1.44	0.4787	2.25%
041.51	Direct Available Phosphorus as P2O5, ICP, Citrate-....	9	9	44.82	0.8077	44.97	0.9794	0.5074	0.2114	1.13%	1.21	0.5982	2.26%
041.60	Direct Available Phosphorus as P2O5, Citrate-EDTA ..	13	13	44.66	1.018	44.73	0.9746	0.9048	0.3137	2.02%	2.16	0.3249	2.26%
041.99	Direct Available Phosphorus as P2O5, Other (45%)	12	11	45.35	0.5312	45.35	0.9869	0.6024	0.2270	1.33%	1.42	0.0664	2.25%
042.10	Water Soluble OrthoP as P2O5, Spectrophotometric (%)	1		43.45									
048.10	Water Soluble Phosphorus as P2O5, Gravimetric Quin	1		45.58									
048.20	Water Soluble Phosphorus as P2O5, Spectrophotome	1		45.19									
048.50	Water Soluble Phosphorus as P2O5, ICP (%)	1		45.72									
048.99	Water Soluble Phosphorus as P2O5, Other (%)	1		43.23									
050.00	Soluble Potassium as K2O, STPB Oxalate (45%)	14	14	45.00	0.4401	44.97	1.5945	0.4441	0.1484	0.99%	0.65	0.4486	2.26%
050.30	Soluble Potassium as K2O, AA (Oxalate) (45%)	5	5	45.27	1.944	45.27	1.5991	1.944	1.087	4.29%	2.83	0.4760	2.25%
050.31	Soluble Potassium as K2O, AA (Citrate) (45%)	2	2	42.85	4.313								
050.32	Soluble Potassium as K2O, AA (Citrate-EDTA) (45%)	1		45.93									
050.50	Soluble Potassium as K2O, ICP (Oxalate) (45%)	10	10	45.46	2.464	45.18	1.5977	0.6986	0.2762	1.55%	1.02	1.063	2.25%
050.51	Soluble Potassium as K2O, ICP (Citrate) (45%)	6	6	44.99	0.6071	45.13	1.5969	0.3229	0.1648	0.72%	0.47	0.2668	2.25%
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (45%)	11	11	44.58	3.228	45.06	1.5958	0.4685	0.1766	1.04%	0.68	0.5272	2.25%

Method Code	Analyte & Method Sample # 181011	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Method Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	Method IA Ratio	Average Range (R-bar)	Howitz %RSD
050.60	Soluble Potassium as K2O, Flame Photometric (Oxala	4	4	44.55	0.9970	44.55	1.5882	0.9970	0.6231	2.24%	1.46	0.4425	2.26%
050.61	Soluble Potassium as K2O, Flame Photometric (Citra..	3	3	44.89	0.4404	44.89	1.5934	0.4404	0.3178	0.98%	0.64	0.1500	2.26%
050.62	Soluble Potassium as K2O, Flame Photometric (Citra..	6	6	44.70	1.511	44.61	1.5892	1.502	0.7663	3.37%	2.20	0.3540	2.26%
050.99	Soluble Potassium as K2O, Other (45%)	38	36	44.53	1.317	44.69	1.5903	1.081	0.2252	2.42%	1.58	0.3923	2.26%
060.00	Water (Free), Vacuum Oven (%)	3	3	0.9482	0.5162	0.9482		0.5162	0.3725	54.44%		0.1566	4.03%
060.30	Water (Free), AFPC No. 2B (105°C oven for 2 hours...	1		1.650									
060.99	Water (Free), Other (%)	2	2	1.375	0.3604								
101.30	Acid Soluble Calcium, ICP, test portion inorganic ... (%)	3	3	0.0992	0.0956	0.0992	0.2050	0.0956	0.0690	96.37%	1.09	0.0097	5.66%
101.33	Acid Soluble Calcium, ICP, 2017.02 (%)	1		0.0000									
101.99	Acid Soluble Calcium, Other (%)	2	2	0.2398	0.3186								
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (%)	1		0.0000									
121.30	Acid Soluble Magnesium, ICP, test portion inorgani... (2	2	0.0294	0.0274								
121.33	Acid Soluble Magnesium, ICP, 2017.02 (%)	3	3	0.5719	0.9283	0.5719	0.2286	0.9283	0.6699	162.31%	9.46	0.0165	4.35%
121.99	Acid Soluble Magnesium, Other (%)	4	3	0.0198	0.0331	0.0198	0.2010	0.0331	0.0239	166.87%	0.38	0.0034	7.22%
143.99	Elemental Sulfur, Other (%)	2	2	0.1018	0.0166								
148.07	Total Sulfur, ICP, test portion as in 2017.02 (%)	3	2	0.1128	0.0243	0.1128	0.2056	0.0243	0.0215	21.56%	0.28	0.0137	5.55%
148.99	Total Sulfur, Other (%)	3	3	0.1107	0.0183	0.1107	0.2055	0.0183	0.0132	16.57%	0.21	0.0033	5.57%
149.04	Sulfur - HNO3 soluble, ICP (%)	1		0.1055									
151.00	Acid Soluble Arsenic , AA, test portion 2006.03 m... (p	3	3	0.7107	0.2358	0.7107		0.2358	0.1702	33.19%		0.0200	16.84%
151.30	Acid Soluble Arsenic , ICP (ppm)	2	2	0.3331	0.0652								
151.33	Acid Soluble Arsenic , ICP, 2017.02 (ppm)	1		0.3470									
151.34	Acid Soluble Arsenic , ICP, EPA 3050B/6010C (ppm)	2	1	0.7803									
151.99	Acid Soluble Arsenic , Other (ppm)	3	3	0.5822	0.1054	0.5822		0.1054	0.0761	18.11%		0.0150	17.35%
165.30	Acid Soluble Boron , ICP, test portion in 982.01 (%)	2	2	3.619	5.103								
165.99	Acid Soluble Boron , Other (%)	5	5	0.1339	0.2804	0.1339	0.0231	0.2804	0.1567	209.42%	28.30	0.0150	5.41%
181.00	Acid Soluble Cadmium , AA, test portion 2006.03 m...	2	2	0.0834	0.0377								
181.30	Acid Soluble Cadmium , ICP (ppm)	3	3	0.0476	0.0385	0.0476		0.0385	0.0278	80.98%		0.0026	25.30%
181.33	Acid Soluble Cadmium , ICP, 2017.02 (ppm)	2	1	0.0046									
181.34	Acid Soluble Cadmium , ICP, EPA 3050B/6010C (ppn	2	0	0.0000									
181.99	Acid Soluble Cadmium , Other (ppm)	2	2	0.2300	0.3111								
190.00	Water Soluble Chlorine, Titrimetric (%)	1		46.93									
191.00	Acid Soluble Chromium , AA, test portion 2006.03 ... (2	2	1.319	0.5749								
191.30	Acid Soluble Chromium , ICP (ppm)	4	4	9.281	7.783	9.281		7.783	4.864	83.86%		0.3300	11.44%
191.33	Acid Soluble Chromium , ICP, 2017.02 (ppm)	3	3	4.423	5.618	4.423		5.618	4.054	127.02%		5.223	12.79%
191.34	Acid Soluble Chromium , ICP, EPA 3050B/6010C (ppi	3	3	2.630	2.421	2.630		2.421	1.747	92.04%		2.133	13.83%
191.99	Acid Soluble Chromium , Other (ppm)	3	3	1.723	0.8868	1.723		0.8868	0.6400	51.46%		0.3087	14.74%
202.30	Acid Soluble Cobalt , ICP (ppm)	2	2	0.3540	0.3068								
202.33	Acid Soluble Cobalt , ICP, 2017.02 (ppm)	3	2	3.031	4.003	3.031	1.9092	4.003	3.539	132.09%	4.89	0.3060	13.54%
202.34	Acid Soluble Cobalt , ICP, EPA 3050B/6010C (ppm)	2	1	2.467									
202.99	Acid Soluble Cobalt , Other (ppm)	1		0.0100									
221.00	Acid Soluble Copper , AA, inorganic 965.09 (%)	1		0.0015									
221.30	Acid Soluble Copper , ICP, test portion inorganic... (%)	5	4	0.0364	0.0659	0.0364	0.0086	0.0659	0.0412	180.85%	17.76	0.0026	6.58%

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221.32	Acid Soluble Copper , ICP, test portion 2006.03A-...	1		1.030									
221.33	Acid Soluble Copper , ICP, 2017.02 (%)	2	0	0.0000									
221.99	Acid Soluble Copper , Other (%)	3	2	0.0002	0.0001	0.0002	0.0050	0.0001	0.0001	47.14%	0.03	0.0000	15.05%
241.00	Acid Soluble Iron , AA, inorganic 965.09 (%)	2	2	0.0027	0.0003								
241.20	Acid Soluble Iron , Colormetric (%)	1		0.0005									
241.30	Acid Soluble Iron , ICP, test portion inorganic 96...	6	5	0.0124	0.0158	0.0124	0.0062	0.0158	0.0088	127.98%	5.91	0.0022	7.75%
241.33	Acid Soluble Iron , ICP, 2017.02 (%)	2	2	0.0043	0.0053								
241.99	Acid Soluble Iron , Other (%)	7	6	0.0017	0.0013	0.0017	0.0052	0.0015	0.0008	87.75%	0.67	0.0008	10.45%
251.00	Acid Soluble Lead , AA, test portion 2006.03 modi...	1		3.063									
251.30	Acid Soluble Lead , ICP (ppm)	4	3	0.0897	0.1389	0.0897		0.1389	0.1002	154.78%		0.0350	22.99%
251.33	Acid Soluble Lead , ICP, 2017.02 (ppm)	2	2	1.938	2.711								
251.34	Acid Soluble Lead , ICP, EPA 3050B/6010C (ppm)	2	0	0.0000									
251.99	Acid Soluble Lead , Other (ppm)	2	2	0.1625	0.1237								
261.30	Acid Soluble Manganese , ICP, test portion 972.02a ('	2	2	0.0051	0.0070								
261.32	Acid Soluble Manganese , ICP, test portion inorga...	1		0.0550									
261.35	Acid Soluble Manganese , ICP, 2017.02 (%)	2	0	0.0000									
261.99	Acid Soluble Manganese , Other (%)	4	2	0.0003	0.0002	0.0003	0.0050	0.0002	0.0002	90.00%	0.11	0.0004	13.74%
271.00	Water Soluble Manganese , AA (%)	1		0.0007									
281.00	Acid Soluble Mercury , AA (ppm)	1		0.0052									
281.30	Acid Soluble Mercury , ICP (ppm)	2	1	0.0215									
281.99	Acid Soluble Mercury , Other (ppm)	1		0.0100									
289.00	Acid Soluble Molybdenum , AA, test portion 2006.0...	1		2.490									
289.30	Acid Soluble Molybdenum , ICP (ppm)	6	5	1.503	0.2323	1.503	1.4508	0.2323	0.1299	15.46%	0.37	0.0485	15.05%
289.33	Acid Soluble Molybdenum , ICP, 2017.02 (ppm)	3	3	2.836	1.474	2.836	1.8507	1.474	1.064	52.00%	1.86	2.185	13.67%
289.34	Acid Soluble Molybdenum , ICP, EPA 3050B/6010C (i	2	2	1.413	0.6541								
289.99	Acid Soluble Molybdenum , Other (ppm)	3	3	1.455	0.1999	1.455	1.4366	0.1999	0.1442	13.73%	0.32	0.1289	15.12%
291.00	Acid Soluble Nickel , AA, test portion 2006.03 mo... (p	1		13.60									
291.30	Acid Soluble Nickel , ICP (ppm)	4	4	6.801	13.02	6.801		13.02	8.139	191.48%		0.1286	11.99%
291.33	Acid Soluble Nickel , ICP, 2017.02 (ppm)	3	2	3.170	4.050	3.170		4.050	3.580	127.77%		0.8500	13.45%
291.34	Acid Soluble Nickel , ICP, EPA 3050B/6010C (ppm)	2	1	2.058									
291.99	Acid Soluble Nickel , Other (ppm)	3	3	2.102	3.268	2.102		3.268	2.358	155.44%		0.0870	14.30%
301.30	Acid Soluble Selenium , ICP (ppm)	1		0.4550									
301.33	Acid Soluble Selenium , ICP, 2017.02 (ppm)	1		1.440									
301.34	Acid Soluble Selenium , ICP, EPA 3050B/6010C (ppr	2	1	0.6527									
301.99	Acid Soluble Selenium , Other (ppm)	3	3	0.3088	0.3059	0.3088		0.3059	0.2208	99.06%		0.0990	19.09%
311.33	Sodium, ICP, test portion as in 2017.02 (%)	2	2	0.0612	0.0089								
311.99	Sodium, Other (%)	4	4	0.3455	0.5315	0.3455	0.0396	0.5315	0.3322	153.82%	31.31	0.0058	4.69%
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (%)	3	2	0.0018	0.0010	0.0018	0.0052	0.0010	0.0009	56.57%	0.45	0.0003	10.40%
321.30	Acid Soluble Zinc , ICP, test portion inorganic 9...	6	5	0.0056	0.0053	0.0056	0.0056	0.0053	0.0030	96.12%	2.24	0.0029	8.74%
321.32	Acid Soluble Zinc , ICP, test portion 2006.03A-C (%)	1		2.425									
321.33	Acid Soluble Zinc , ICP, 2017.02 (%)	2	1	0.0006									
321.99	Acid Soluble Zinc , Other (%)	3	3	0.0004	0.0004	0.0004	0.0050	0.0004	0.0003	103.25%	0.18	0.0001	13.16%

Method Code	Analyte & Method Sample # 181011	# 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
325.00	Water Soluble Zinc , AA (%)	1		0.0007									

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.

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 181011

Grade 0-45-45

Method Precision Report

Issue Date : 11/30/2018

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
020.20	Total Phosphorus as P2O5, Spectrophotometric MolybdovanadoP (%)	19	17	44.78	0.4983	0.4923	0.1090	0.5042	1.10%	0.24%	1.13%	4.624
020.50	Total Phosphorus as P2O5, ICP (%)	26	23	45.23	1.554	1.521	0.4480	1.586	3.36%	0.99%	3.51%	3.540
041.51	Direct Available Phosphorus as P2O5, ICP, Citrate-EDTA Ext. (45%)	9	8	45.07	0.3684	0.1137	0.4956	0.5084	0.25%	1.10%	1.13%	1.026
041.60	Direct Available Phosphorus as P2O5, Citrate-EDTA Ext. (45%)	13	12	44.86	0.7523	0.7225	0.2967	0.7810	1.61%	0.66%	1.74%	2.632
041.99	Direct Available Phosphorus as P2O5, Other (45%)	12	11	45.35	0.5312	0.5298	0.0539	0.5326	1.17%	0.12%	1.17%	9.882
050.00	Soluble Potassium as K2O, STPB Oxalate (45%)	14	13	44.93	0.3876	0.2949	0.3556	0.4620	0.66%	0.79%	1.03%	1.299
050.50	Soluble Potassium as K2O, ICP (Oxalate) (45%)	10	9	45.90	2.169	2.097	0.7840	2.238	4.57%	1.71%	4.88%	2.855
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (45%)	11	10	45.48	1.356	1.316	0.4650	1.396	2.89%	1.02%	3.07%	3.001
050.99	Soluble Potassium as K2O, Other (45%)	38	35	44.64	1.135	1.107	0.3542	1.162	2.48%	0.79%	2.60%	3.280

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

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Methods: 116

Sample # 181011

Lab Values

Labs Reporting: 99

Grade 0-45-45

Issue Date : 11/30/2018

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
001.99	Ammoniacal Nitrogen, Other (%)	0524	0.0562	0.0077				1			0
010.60	Total Nitrogen, Combustion (%)	0527	0.0260	0.0080	5.942	10.20	0.0243	3	-0.58		0
010.60	Total Nitrogen, Combustion (%)	0354	0.0825	0.0210	5.942	10.20	0.0243	3	-0.57		0
010.60	Total Nitrogen, Combustion (%)	0037	17.72	0.0440	5.942	10.20	0.0243	3	1.15		0
010.99	Total Nitrogen, Other (%)	0524	0.0381	0.0029				1			0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0049	44.03	0.4000	44.64	0.4001	0.6440	5	-1.53		0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0114	44.47	2.080	44.64	0.4001	0.6440	5	-0.43		0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0105	44.78	0.2600	44.64	0.4001	0.6440	5	0.34		0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0493	44.90	0.1000	44.64	0.4001	0.6440	5	0.64		0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0444	45.03	0.3800	44.64	0.4001	0.6440	5	0.97		0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0324	43.75	0.1000	44.79	0.4348	0.1497	18	-2.39	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0292	44.23	0.1500	44.79	0.4348	0.1497	18	-1.30	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0419	44.25	0.1000	44.79	0.4348	0.1497	18	-1.24	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0231	44.44	0.0800	44.79	0.4348	0.1497	18	-0.80	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0481	44.57	0.4100	44.79	0.4348	0.1497	18	-0.52	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0405	44.59	0.1000	44.79	0.4348	0.1497	18	-0.46	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0356	44.60	0.1600	44.79	0.4348	0.1497	18	-0.43	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0169	44.78	0.1800	44.79	0.4348	0.1497	18	-0.02	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0506	44.80	0.0000	44.79	0.4348	0.1497	18	0.03	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0493	44.85	0.1000	44.79	0.4348	0.1497	18	0.14	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0476	44.87	0.1115	44.79	0.4348	0.1497	18	0.18	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0394	44.90	0.0000	44.79	0.4348	0.1497	18	0.26	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0309	45.02	0.0600	44.79	0.4348	0.1497	18	0.53	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0371	45.05	0.3000	44.79	0.4348	0.1497	18	0.60	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0534	45.10	0.0000	44.79	0.4348	0.1497	18	0.72	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0522	45.15	0.7700	44.79	0.4348	0.1497	18	0.82	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0416	45.70	0.0200	44.79	0.4348	0.1497	18	2.10	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0510	45.77	0.0533	44.79	0.4348	0.1497	18	2.26	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0550	45.41	3.780	44.79	0.4348	0.1497	18	1.43	NA	1
020.40	Total Phosphorus as P2O5, Automated (%)	0096	44.63	0.0400	45.13	0.4783	0.3975	4	-1.04		0
020.40	Total Phosphorus as P2O5, Automated (%)	0105	44.83	0.2500	45.13	0.4783	0.3975	4	-0.63		0
020.40	Total Phosphorus as P2O5, Automated (%)	0456	45.40	0.2000	45.13	0.4783	0.3975	4	0.57		0
020.40	Total Phosphorus as P2O5, Automated (%)	0035	45.65	1.100	45.13	0.4783	0.3975	4	1.10		0

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020.50	Total Phosphorus as P2O5, ICP (%)	0389	38.79	0.9800	44.94	1.614	0.5510	25	-3.81	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0552	42.16	0.8000	44.94	1.614	0.5510	25	-1.72	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0472	42.24	0.4700	44.94	1.614	0.5510	25	-1.68	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0307	42.51	2.380	44.94	1.614	0.5510	25	-1.51	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0451	43.64	0.1400	44.94	1.614	0.5510	25	-0.81	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0543	43.81	1.917	44.94	1.614	0.5510	25	-0.70	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0234	44.00	1.000	44.94	1.614	0.5510	25	-0.58	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0483	44.34	0.6900	44.94	1.614	0.5510	25	-0.38	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0433	44.64	0.5200	44.94	1.614	0.5510	25	-0.19	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0547	44.90	0.0000	44.94	1.614	0.5510	25	-0.03	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0523	45.05	0.1000	44.94	1.614	0.5510	25	0.07	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0421	45.15	0.1000	44.94	1.614	0.5510	25	0.13	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0501	45.19	0.1300	44.94	1.614	0.5510	25	0.15	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0291	45.33	0.0200	44.94	1.614	0.5510	25	0.24	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0527	45.34	0.0394	44.94	1.614	0.5510	25	0.25	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0444	45.41	0.5500	44.94	1.614	0.5510	25	0.29	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0390	45.53	0.4200	44.94	1.614	0.5510	25	0.36	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0402	45.64	1.200	44.94	1.614	0.5510	25	0.43	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0516	45.79	0.4140	44.94	1.614	0.5510	25	0.53	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0368	45.97	0.4412	44.94	1.614	0.5510	25	0.64	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0255	46.22	0.5730	44.94	1.614	0.5510	25	0.79	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0546	46.23	0.4540	44.94	1.614	0.5510	25	0.80	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0482	46.55	0.1000	44.94	1.614	0.5510	25	1.00	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0042	48.09	0.2200	44.94	1.614	0.5510	25	1.95	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0524	49.01	0.1175	44.94	1.614	0.5510	25	2.52	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0422	50.37	4.630	44.94	1.614	0.5510	25	3.36	NA	1
020.99	Total Phosphorus as P2O5, Other (%)	0513	43.96	0.0400	46.63	3.789	9.138	3	-0.70		0
020.99	Total Phosphorus as P2O5, Other (%)	0443	44.96	0.1900	46.63	3.789	9.138	3	-0.44		0
020.99	Total Phosphorus as P2O5, Other (%)	0515	50.96	27.18	46.63	3.789	9.138	3	1.14		0
030.20	Citrate Insoluble Phosphorus as P2O5, Spectro... (%)	0405	0.0100	0.0000				1			0
040.20	Indirect Available Phosphorus as P2O5, Spectr... (45%)	0498	44.45	0.5000				2			0
040.20	Indirect Available Phosphorus as P2O5, Spectr... (45%)	0405	44.58	0.0900				2			0
040.99	Indirect Available Phosphorus as P2O5, Other (45%)	0394	44.90	0.0000				1			0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (45%)	0041	43.49	0.5400	44.86	0.2738	0.2557	7	-4.53	Low	0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (45%)	0102	44.60	0.0000	44.86	0.2738	0.2557	7	-0.86	OK	0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (45%)	0040	44.90	0.4000	44.86	0.2738	0.2557	7	0.13	OK	0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (45%)	0055	44.97	0.0200	44.86	0.2738	0.2557	7	0.36	OK	0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (45%)	0494	45.00	0.3400	44.86	0.2738	0.2557	7	0.46	OK	0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (45%)	0177	45.00	0.0070	44.86	0.2738	0.2557	7	0.46	OK	0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (45%)	0086	45.11	0.4832	44.86	0.2738	0.2557	7	0.81	OK	0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (45%)	0513	44.06	0.0700	44.69	0.4507	0.2450	4	-1.41		0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (45%)	0105	44.70	0.5800	44.69	0.4507	0.2450	4	0.02		0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (45%)	0220	44.96	0.0200	44.69	0.4507	0.2450	4	0.59		0

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041.11	Direct Available Phosphorus as P2O5, Gravimet... (45%)	0185	45.06	0.3100	44.69	0.4507	0.2450	4	0.80		0
041.21	Direct Available Phosphorus as P2O5, Spectrop... (45%)	0106	43.95	1.090				2			0
041.21	Direct Available Phosphorus as P2O5, Spectrop... (45%)	0522	45.19	0.6000				2			0
041.40	Direct Available Phosphorus as P2O5, Automate... (45%)	0095	44.52	2.020				1			0
041.50	Direct Available Phosphorus as P2O5, ICP (45%)	0131	44.78	0.5660	45.39	0.6101	0.4787	3	-0.99		0
041.50	Direct Available Phosphorus as P2O5, ICP (45%)	0452	45.38	0.0700	45.39	0.6101	0.4787	3	-0.02		0
041.50	Direct Available Phosphorus as P2O5, ICP (45%)	0007	46.00	0.8000	45.39	0.6101	0.4787	3	1.01		0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (45%)	0377	42.88	1.510	44.97	0.5074	0.5982	9	-3.81	Low	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (45%)	0117	44.56	0.3340	44.97	0.5074	0.5982	9	-0.74	OK	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (45%)	0360	44.69	0.0200	44.97	0.5074	0.5982	9	-0.51	OK	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (45%)	0233	44.82	1.570	44.97	0.5074	0.5982	9	-0.28	OK	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (45%)	0023	45.10	0.4700	44.97	0.5074	0.5982	9	0.22	OK	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (45%)	0043	45.13	0.0500	44.97	0.5074	0.5982	9	0.28	OK	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (45%)	0486	45.25	0.0800	44.97	0.5074	0.5982	9	0.51	OK	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (45%)	0494	45.30	0.3500	44.97	0.5074	0.5982	9	0.59	OK	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (45%)	0025	45.70	1.000	44.97	0.5074	0.5982	9	1.33	OK	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (45%)	0472	42.26	0.0600	44.73	0.9048	0.3249	13	-2.73	Low	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (45%)	0230	43.35	0.7000	44.73	0.9048	0.3249	13	-1.52	Low	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (45%)	0394	44.25	0.1030	44.73	0.9048	0.3249	13	-0.52	OK	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (45%)	0177	44.52	0.2236	44.73	0.9048	0.3249	13	-0.24	OK	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (45%)	0105	44.57	0.4000	44.73	0.9048	0.3249	13	-0.17	OK	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (45%)	0037	44.67	0.6860	44.73	0.9048	0.3249	13	-0.07	OK	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (45%)	0136	44.68	0.1700	44.73	0.9048	0.3249	13	-0.06	OK	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (45%)	0231	44.68	0.2000	44.73	0.9048	0.3249	13	-0.05	OK	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (45%)	0354	44.90	0.2000	44.73	0.9048	0.3249	13	0.19	OK	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (45%)	0055	45.18	0.2100	44.73	0.9048	0.3249	13	0.49	OK	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (45%)	0034	45.44	0.1412	44.73	0.9048	0.3249	13	0.79	OK	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (45%)	0073	45.77	0.8100	44.73	0.9048	0.3249	13	1.15	High	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (45%)	0029	46.28	0.3200	44.73	0.9048	0.3249	13	1.71	High	0
041.99	Direct Available Phosphorus as P2O5, Other (45%)	0405	44.55	0.0700	45.35	0.6024	0.0664	11	-1.33	OK	0
041.99	Direct Available Phosphorus as P2O5, Other (45%)	0519	44.92	0.0300	45.35	0.6024	0.0664	11	-0.71	OK	0
041.99	Direct Available Phosphorus as P2O5, Other (45%)	0549	44.98	0.1500	45.35	0.6024	0.0664	11	-0.61	OK	0
041.99	Direct Available Phosphorus as P2O5, Other (45%)	0531	45.00	0.0300	45.35	0.6024	0.0664	11	-0.58	OK	0
041.99	Direct Available Phosphorus as P2O5, Other (45%)	0538	45.05	0.0700	45.35	0.6024	0.0664	11	-0.50	OK	0
041.99	Direct Available Phosphorus as P2O5, Other (45%)	0532	45.15	0.0600	45.35	0.6024	0.0664	11	-0.32	OK	0
041.99	Direct Available Phosphorus as P2O5, Other (45%)	0533	45.48	0.0200	45.35	0.6024	0.0664	11	0.22	OK	0
041.99	Direct Available Phosphorus as P2O5, Other (45%)	0539	45.49	0.0300	45.35	0.6024	0.0664	11	0.23	OK	0
041.99	Direct Available Phosphorus as P2O5, Other (45%)	0535	46.05	0.1000	45.35	0.6024	0.0664	11	1.17	OK	0
041.99	Direct Available Phosphorus as P2O5, Other (45%)	0540	46.05	0.1000	45.35	0.6024	0.0664	11	1.17	OK	0
041.99	Direct Available Phosphorus as P2O5, Other (45%)	0545	46.11	0.0700	45.35	0.6024	0.0664	11	1.26	OK	0
041.99	Direct Available Phosphorus as P2O5, Other (45%)	0537	45.22	0.6800	45.35	0.6024	0.0664	11	-0.21	OK	1
042.10	Water Soluble OrthoP as P2O5, Spectrophotomet... (%)	0553	43.45	0.4500				1			0
048.10	Water Soluble Phosphorus as P2O5, Gravimetric... (%)	0444	45.58	0.6100				1			0

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048.20	Water Soluble Phosphorus as P2O5, Spectrophot... (%)	0394	45.19	0.4270				1			0
048.50	Water Soluble Phosphorus as P2O5, ICP (%)	0444	45.72	0.0800				1			0
048.99	Water Soluble Phosphorus as P2O5, Other (%)	0513	43.23	0.0500				1			0
050.00	Soluble Potassium as K2O, STPB Oxalate (45%)	0220	44.55	0.1000	44.97	0.4441	0.4486	14	-0.95	OK	0
050.00	Soluble Potassium as K2O, STPB Oxalate (45%)	0049	44.59	0.3100	44.97	0.4441	0.4486	14	-0.87	OK	0
050.00	Soluble Potassium as K2O, STPB Oxalate (45%)	0230	44.60	1.000	44.97	0.4441	0.4486	14	-0.83	OK	0
050.00	Soluble Potassium as K2O, STPB Oxalate (45%)	0494	44.60	0.4200	44.97	0.4441	0.4486	14	-0.83	OK	0
050.00	Soluble Potassium as K2O, STPB Oxalate (45%)	0231	44.64	0.5400	44.97	0.4441	0.4486	14	-0.74	OK	0
050.00	Soluble Potassium as K2O, STPB Oxalate (45%)	0416	44.67	0.0600	44.97	0.4441	0.4486	14	-0.68	OK	0
050.00	Soluble Potassium as K2O, STPB Oxalate (45%)	0405	44.89	0.0300	44.97	0.4441	0.4486	14	-0.19	OK	0
050.00	Soluble Potassium as K2O, STPB Oxalate (45%)	0522	44.99	0.0100	44.97	0.4441	0.4486	14	0.03	OK	0
050.00	Soluble Potassium as K2O, STPB Oxalate (45%)	0544	45.03	0.0200	44.97	0.4441	0.4486	14	0.14	OK	0
050.00	Soluble Potassium as K2O, STPB Oxalate (45%)	0055	45.07	0.0100	44.97	0.4441	0.4486	14	0.21	OK	0
050.00	Soluble Potassium as K2O, STPB Oxalate (45%)	0102	45.30	0.8000	44.97	0.4441	0.4486	14	0.74	OK	0
050.00	Soluble Potassium as K2O, STPB Oxalate (45%)	0550	45.40	1.030	44.97	0.4441	0.4486	14	0.96	OK	0
050.00	Soluble Potassium as K2O, STPB Oxalate (45%)	0114	45.81	1.860	44.97	0.4441	0.4486	14	1.89	OK	0
050.00	Soluble Potassium as K2O, STPB Oxalate (45%)	0444	45.82	0.0900	44.97	0.4441	0.4486	14	1.90	OK	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (45%)	0040	43.95	0.7000	45.27	1.944	0.4760	5	-0.68		0
050.30	Soluble Potassium as K2O, AA (Oxalate) (45%)	0136	44.03	0.1500	45.27	1.944	0.4760	5	-0.64		0
050.30	Soluble Potassium as K2O, AA (Oxalate) (45%)	0309	44.33	0.0000	45.27	1.944	0.4760	5	-0.49		0
050.30	Soluble Potassium as K2O, AA (Oxalate) (45%)	0356	45.50	0.9100	45.27	1.944	0.4760	5	0.11		0
050.30	Soluble Potassium as K2O, AA (Oxalate) (45%)	0073	48.57	0.6200	45.27	1.944	0.4760	5	1.70		0
050.31	Soluble Potassium as K2O, AA (Citrate) (45%)	0472	39.80	0.6000				2			0
050.31	Soluble Potassium as K2O, AA (Citrate) (45%)	0498	45.90	0.8000				2			0
050.32	Soluble Potassium as K2O, AA (Citrate-EDTA) (45%)	0185	45.93	0.2100				1			0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (45%)	0390	41.55	4.260	45.18	0.6986	1.063	10	-4.84	Low	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (45%)	0419	43.10	0.4000	45.18	0.6986	1.063	10	-2.77	Low	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (45%)	0086	45.10	0.5582	45.18	0.6986	1.063	10	-0.11	OK	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (45%)	0055	45.13	0.0200	45.18	0.6986	1.063	10	-0.07	OK	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (45%)	0324	45.15	2.700	45.18	0.6986	1.063	10	-0.04	OK	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (45%)	0444	45.21	0.0200	45.18	0.6986	1.063	10	0.04	OK	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (45%)	0106	45.25	0.4000	45.18	0.6986	1.063	10	0.09	OK	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (45%)	0397	45.26	0.2846	45.18	0.6986	1.063	10	0.10	OK	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (45%)	0292	48.53	0.2600	45.18	0.6986	1.063	10	4.46	High	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (45%)	0422	50.35	1.730	45.18	0.6986	1.063	10	6.87	High	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (45%)	0483	43.79	0.3600	45.13	0.3229	0.2668	6	-3.69	OK	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (45%)	0291	45.00	0.0000	45.13	0.3229	0.2668	6	-0.36	OK	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (45%)	0452	45.17	0.0900	45.13	0.3229	0.2668	6	0.10	OK	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (45%)	0131	45.17	0.7510	45.13	0.3229	0.2668	6	0.10	OK	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (45%)	0547	45.35	0.1000	45.13	0.3229	0.2668	6	0.61	OK	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (45%)	0007	45.45	0.3000	45.13	0.3229	0.2668	6	0.88	OK	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (45%)	0543	35.66	1.567	45.06	0.4685	0.5272	11	-18.78	Low	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (45%)	0043	44.57	0.1400	45.06	0.4685	0.5272	11	-0.97	OK	0

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050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (45%)	0494	44.74	0.3700	45.06	0.4685	0.5272	11	-0.64	OK	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (45%)	0117	44.91	0.0520	45.06	0.4685	0.5272	11	-0.28	OK	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (45%)	0360	44.99	0.4200	45.06	0.4685	0.5272	11	-0.13	OK	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (45%)	0354	45.05	0.1000	45.06	0.4685	0.5272	11	-0.01	OK	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (45%)	0486	45.19	0.0500	45.06	0.4685	0.5272	11	0.26	OK	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (45%)	0377	45.23	0.2600	45.06	0.4685	0.5272	11	0.35	OK	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (45%)	0025	45.25	1.100	45.06	0.4685	0.5272	11	0.39	OK	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (45%)	0023	45.58	0.1000	45.06	0.4685	0.5272	11	1.05	OK	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (45%)	0233	49.25	1.640	45.06	0.4685	0.5272	11	8.38	High	0
050.60	Soluble Potassium as K2O, Flame Photometric ... (45%)	0510	43.37	0.6101	44.55	0.9970	0.4425	4	-1.18		0
050.60	Soluble Potassium as K2O, Flame Photometric ... (45%)	0169	44.46	0.1200	44.55	0.9970	0.4425	4	-0.09		0
050.60	Soluble Potassium as K2O, Flame Photometric ... (45%)	0105	44.55	0.4200	44.55	0.9970	0.4425	4	0.00		0
050.60	Soluble Potassium as K2O, Flame Photometric ... (45%)	0443	45.81	0.6200	44.55	0.9970	0.4425	4	1.27		0
050.61	Soluble Potassium as K2O, Flame Photometric ... (45%)	0456	44.40	0.2000	44.89	0.4404	0.1500	3	-1.12		0
050.61	Soluble Potassium as K2O, Flame Photometric ... (45%)	0535	45.03	0.1500	44.89	0.4404	0.1500	3	0.30		0
050.61	Soluble Potassium as K2O, Flame Photometric ... (45%)	0035	45.25	0.1000	44.89	0.4404	0.1500	3	0.81		0
050.62	Soluble Potassium as K2O, Flame Photometric ... (45%)	0095	43.16	1.100	44.61	1.502	0.3540	6	-0.86	OK	0
050.62	Soluble Potassium as K2O, Flame Photometric ... (45%)	0513	43.54	0.1100	44.61	1.502	0.3540	6	-0.64	OK	0
050.62	Soluble Potassium as K2O, Flame Photometric ... (45%)	0105	44.32	0.1200	44.61	1.502	0.3540	6	-0.17	OK	0
050.62	Soluble Potassium as K2O, Flame Photometric ... (45%)	0034	44.60	0.1440	44.61	1.502	0.3540	6	-0.01	OK	0
050.62	Soluble Potassium as K2O, Flame Photometric ... (45%)	0037	45.20	0.0300	44.61	1.502	0.3540	6	0.35	OK	0
050.62	Soluble Potassium as K2O, Flame Photometric ... (45%)	0029	47.40	0.6200	44.61	1.502	0.3540	6	1.65	High	0
050.99	Soluble Potassium as K2O, Other (45%)	0255	40.47	1.709	44.69	1.081	0.3923	36	-3.91	Low	0
050.99	Soluble Potassium as K2O, Other (45%)	0552	41.61	0.9700	44.69	1.081	0.3923	36	-2.85	Low	0
050.99	Soluble Potassium as K2O, Other (45%)	0553	41.66	0.7800	44.69	1.081	0.3923	36	-2.80	Low	0
050.99	Soluble Potassium as K2O, Other (45%)	0451	42.83	0.1800	44.69	1.081	0.3923	36	-1.72	Low	0
050.99	Soluble Potassium as K2O, Other (45%)	0234	42.95	0.5000	44.69	1.081	0.3923	36	-1.61	Low	0
050.99	Soluble Potassium as K2O, Other (45%)	0481	43.16	0.5600	44.69	1.081	0.3923	36	-1.42	OK	0
050.99	Soluble Potassium as K2O, Other (45%)	0421	43.55	0.1000	44.69	1.081	0.3923	36	-1.05	OK	0
050.99	Soluble Potassium as K2O, Other (45%)	0433	43.73	0.7000	44.69	1.081	0.3923	36	-0.89	OK	0
050.99	Soluble Potassium as K2O, Other (45%)	0307	43.82	1.410	44.69	1.081	0.3923	36	-0.81	OK	0
050.99	Soluble Potassium as K2O, Other (45%)	0545	43.91	0.0000	44.69	1.081	0.3923	36	-0.72	OK	0
050.99	Soluble Potassium as K2O, Other (45%)	0482	44.15	0.7000	44.69	1.081	0.3923	36	-0.50	OK	0
050.99	Soluble Potassium as K2O, Other (45%)	0506	44.40	0.6000	44.69	1.081	0.3923	36	-0.27	OK	0
050.99	Soluble Potassium as K2O, Other (45%)	0523	44.60	0.2000	44.69	1.081	0.3923	36	-0.08	OK	0
050.99	Soluble Potassium as K2O, Other (45%)	0476	44.79	0.0023	44.69	1.081	0.3923	36	0.09	OK	0
050.99	Soluble Potassium as K2O, Other (45%)	0519	44.87	0.0600	44.69	1.081	0.3923	36	0.17	OK	0
050.99	Soluble Potassium as K2O, Other (45%)	0536	44.98	0.1500	44.69	1.081	0.3923	36	0.26	OK	0
050.99	Soluble Potassium as K2O, Other (45%)	0531	45.01	0.0300	44.69	1.081	0.3923	36	0.29	OK	0
050.99	Soluble Potassium as K2O, Other (45%)	0549	45.03	0.0700	44.69	1.081	0.3923	36	0.31	OK	0
050.99	Soluble Potassium as K2O, Other (45%)	0535	45.05	0.1000	44.69	1.081	0.3923	36	0.33	OK	0
050.99	Soluble Potassium as K2O, Other (45%)	0533	45.09	0.1400	44.69	1.081	0.3923	36	0.37	OK	0
050.99	Soluble Potassium as K2O, Other (45%)	0540	45.10	0.2000	44.69	1.081	0.3923	36	0.38	OK	0

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050.99	Soluble Potassium as K2O, Other (45%)	0524	45.11	0.8219	44.69	1.081	0.3923	36	0.39	OK	0
050.99	Soluble Potassium as K2O, Other (45%)	0368	45.14	1.065	44.69	1.081	0.3923	36	0.42	OK	0
050.99	Soluble Potassium as K2O, Other (45%)	0389	45.18	0.2800	44.69	1.081	0.3923	36	0.45	OK	0
050.99	Soluble Potassium as K2O, Other (45%)	0538	45.25	0.1000	44.69	1.081	0.3923	36	0.52	OK	0
050.99	Soluble Potassium as K2O, Other (45%)	0177	45.28	0.1540	44.69	1.081	0.3923	36	0.54	OK	0
050.99	Soluble Potassium as K2O, Other (45%)	0537	45.30	0.2500	44.69	1.081	0.3923	36	0.56	OK	0
050.99	Soluble Potassium as K2O, Other (45%)	0493	45.30	0.1000	44.69	1.081	0.3923	36	0.56	OK	0
050.99	Soluble Potassium as K2O, Other (45%)	0539	45.32	0.0000	44.69	1.081	0.3923	36	0.58	OK	0
050.99	Soluble Potassium as K2O, Other (45%)	0501	45.36	0.2800	44.69	1.081	0.3923	36	0.62	OK	0
050.99	Soluble Potassium as K2O, Other (45%)	0532	45.36	0.0800	44.69	1.081	0.3923	36	0.62	OK	0
050.99	Soluble Potassium as K2O, Other (45%)	0516	45.47	0.5760	44.69	1.081	0.3923	36	0.73	OK	0
050.99	Soluble Potassium as K2O, Other (45%)	0527	45.68	0.0483	44.69	1.081	0.3923	36	0.92	OK	0
050.99	Soluble Potassium as K2O, Other (45%)	0042	46.10	0.8000	44.69	1.081	0.3923	36	1.30	OK	0
050.99	Soluble Potassium as K2O, Other (45%)	0371	46.15	0.1000	44.69	1.081	0.3923	36	1.35	OK	0
050.99	Soluble Potassium as K2O, Other (45%)	0546	46.28	0.3080	44.69	1.081	0.3923	36	1.47	OK	0
050.99	Soluble Potassium as K2O, Other (45%)	0402	41.79	2.410	44.69	1.081	0.3923	36	-2.69	Low	1
050.99	Soluble Potassium as K2O, Other (45%)	0096	44.36	2.420	44.69	1.081	0.3923	36	-0.31	OK	1
060.00	Water (Free), Vacuum Oven (%)	0007	0.4000	0.3200	0.9482	0.5162	0.1566	3	-1.06		0
060.00	Water (Free), Vacuum Oven (%)	0416	1.020	0.0998	0.9482	0.5162	0.1566	3	0.14		0
060.00	Water (Free), Vacuum Oven (%)	0456	1.425	0.0500	0.9482	0.5162	0.1566	3	0.92		0
060.30	Water (Free), AFPC No. 2B (105°C oven for 2 h... (%)	0055	1.650	0.1000				1			0
060.99	Water (Free), Other (%)	0510	1.120	0.0098				2			0
060.99	Water (Free), Other (%)	0513	1.630	0.0200				2			0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0096	0.0180	0.0060	0.0992	0.0956	0.0097	3	-0.85		0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0354	0.0750	0.0100	0.0992	0.0956	0.0097	3	-0.25		0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0483	0.2045	0.0130	0.0992	0.0956	0.0097	3	1.10		0
101.33	Acid Soluble Calcium, ICP, 2017.02 (%)	0527	0.0000	0.0000				0			4
101.99	Acid Soluble Calcium, Other (%)	0389	0.0145	0.0030				2			0
101.99	Acid Soluble Calcium, Other (%)	0552	0.4650	0.0100				2			0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (%)	0516	0.0000	0.0000				0			4
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0354	0.0100	0.0000				2			0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0483	0.0488	0.0002				2			0
121.33	Acid Soluble Magnesium, ICP, 2017.02 (%)	0527	0.0004	0.0001	0.5719	0.9283	0.0165	3	-0.62		0
121.33	Acid Soluble Magnesium, ICP, 2017.02 (%)	0515	0.0724	0.0094	0.5719	0.9283	0.0165	3	-0.54		0
121.33	Acid Soluble Magnesium, ICP, 2017.02 (%)	0037	1.643	0.0400	0.5719	0.9283	0.0165	3	1.15		0
121.99	Acid Soluble Magnesium, Other (%)	0524	0.0007	0.0000	0.0198	0.0331	0.0034	3	-0.58		0
121.99	Acid Soluble Magnesium, Other (%)	0389	0.0008	0.0001	0.0198	0.0331	0.0034	3	-0.58		0
121.99	Acid Soluble Magnesium, Other (%)	0515	0.0580	0.0102	0.0198	0.0331	0.0034	3	1.15		0
121.99	Acid Soluble Magnesium, Other (%)	0552	0.0150	0.0300	0.0198	0.0331	0.0034	3			4
143.99	Elemental Sulfur, Other (%)	0472	0.0900	0.0000				2			0
143.99	Elemental Sulfur, Other (%)	0389	0.1135	0.0050				2			0
148.07	Total Sulfur, ICP, test portion as in 2017.02 (%)	0515	0.0956	0.0254				2			0
148.07	Total Sulfur, ICP, test portion as in 2017.02 (%)	0483	0.1300	0.0020				2			0

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148.07	Total Sulfur, ICP, test portion as in 2017.02 (%)	0527	0.0000	0.0000				2			4
148.99	Total Sulfur, Other (%)	0354	0.0900	0.0000	0.1107	0.0183	0.0033	3	-1.13		0
148.99	Total Sulfur, Other (%)	0096	0.1170	0.0000	0.1107	0.0183	0.0033	3	0.35		0
148.99	Total Sulfur, Other (%)	0482	0.1250	0.0100	0.1107	0.0183	0.0033	3	0.78		0
149.04	Sulfur - HNO3 soluble, ICP (%)	0524	0.1055	0.0006				1			0
151.00	Acid Soluble Arsenic , AA, test portion 2006... (ppm)	0136	0.4400	0.0200	0.7107	0.2358	0.0200	3	-1.15		0
151.00	Acid Soluble Arsenic , AA, test portion 2006... (ppm)	0498	0.8200	0.0400	0.7107	0.2358	0.0200	3	0.46		0
151.00	Acid Soluble Arsenic , AA, test portion 2006... (ppm)	0550	0.8720	0.0000	0.7107	0.2358	0.0200	3	0.68		0
151.30	Acid Soluble Arsenic , ICP (ppm)	0255	0.2870	0.0440				2			0
151.30	Acid Soluble Arsenic , ICP (ppm)	0524	0.3793	0.0685				2			0
151.33	Acid Soluble Arsenic , ICP, 2017.02 (ppm)	0527	0.3470	0.1045				1			0
151.34	Acid Soluble Arsenic , ICP, EPA 3050B/6010C (ppm)	0515	0.7803	0.2796				1			0
151.34	Acid Soluble Arsenic , ICP, EPA 3050B/6010C (ppm)	0368	0.0000	0.0000				1			4
151.99	Acid Soluble Arsenic , Other (ppm)	0476	0.4967	0.0249	0.5822	0.1054	0.0150	3	-0.81		0
151.99	Acid Soluble Arsenic , Other (ppm)	0519	0.5500	0.0200	0.5822	0.1054	0.0150	3	-0.31		0
151.99	Acid Soluble Arsenic , Other (ppm)	0220	0.7000	0.0000	0.5822	0.1054	0.0150	3	1.12		0
165.30	Acid Soluble Boron , ICP, test portion in 98... (%)	0354	0.0100	0.0000				2			0
165.30	Acid Soluble Boron , ICP, test portion in 98... (%)	0389	7.227	0.0660				2			0
165.99	Acid Soluble Boron , Other (%)	0515	0.0006	0.0002	0.1339	0.2804	0.0150	5	-0.48		0
165.99	Acid Soluble Boron , Other (%)	0524	0.0010	0.0000	0.1339	0.2804	0.0150	5	-0.47		0
165.99	Acid Soluble Boron , Other (%)	0483	0.0034	0.0015	0.1339	0.2804	0.0150	5	-0.47		0
165.99	Acid Soluble Boron , Other (%)	0527	0.0295	0.0032	0.1339	0.2804	0.0150	5	-0.37		0
165.99	Acid Soluble Boron , Other (%)	0552	0.6350	0.0700	0.1339	0.2804	0.0150	5	1.79		0
181.00	Acid Soluble Cadmium , AA, test portion 2006... (ppm)	0550	0.0567	0.0534				2			0
181.00	Acid Soluble Cadmium , AA, test portion 2006... (ppm)	0136	0.1100	0.0200				2			0
181.30	Acid Soluble Cadmium , ICP (ppm)	0524	0.0032	0.0028	0.0476	0.0385	0.0026	3	-1.15		0
181.30	Acid Soluble Cadmium , ICP (ppm)	0389	0.0670	0.0040	0.0476	0.0385	0.0026	3	0.50		0
181.30	Acid Soluble Cadmium , ICP (ppm)	0394	0.0725	0.0010	0.0476	0.0385	0.0026	3	0.65		0
181.33	Acid Soluble Cadmium , ICP, 2017.02 (ppm)	0527	0.0046	0.0032				1			0
181.33	Acid Soluble Cadmium , ICP, 2017.02 (ppm)	0515	0.0000	0.0000				1			4
181.34	Acid Soluble Cadmium , ICP, EPA 3050B/6010C (ppm)	0368	0.0000	0.0000				0			4
181.34	Acid Soluble Cadmium , ICP, EPA 3050B/6010C (ppm)	0515	0.0000	0.0000				0			4
181.99	Acid Soluble Cadmium , Other (ppm)	0519	0.0100	0.0000				2			0
181.99	Acid Soluble Cadmium , Other (ppm)	0220	0.4500	0.3000				2			0
190.00	Water Soluble Chlorine, Titrimetric (%)	0524	46.93	0.6396				1			0
191.00	Acid Soluble Chromium , AA, test portion 200... (ppm)	0550	0.9120	0.5960				2			0
191.00	Acid Soluble Chromium , AA, test portion 200... (ppm)	0498	1.725	0.1500				2			0
191.30	Acid Soluble Chromium , ICP (ppm)	0394	0.5850	0.0100	9.281	7.783	0.3300	4	-1.12		0
191.30	Acid Soluble Chromium , ICP (ppm)	0482	6.650	0.1000	9.281	7.783	0.3300	4	-0.34		0
191.30	Acid Soluble Chromium , ICP (ppm)	0389	10.76	1.210	9.281	7.783	0.3300	4	0.19		0
191.30	Acid Soluble Chromium , ICP (ppm)	0444	19.13	0.0000	9.281	7.783	0.3300	4	1.27		0
191.33	Acid Soluble Chromium , ICP, 2017.02 (ppm)	0527	0.4879	0.0627	4.423	5.618	5.223	3	-0.70		0
191.33	Acid Soluble Chromium , ICP, 2017.02 (ppm)	0037	1.924	0.0900	4.423	5.618	5.223	3	-0.44		0

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191.33	Acid Soluble Chromium , ICP, 2017.02 (ppm)	0515	10.86	15.52	4.423	5.618	5.223	3	1.15		0
191.34	Acid Soluble Chromium , ICP, EPA 3050B/6010C... (ppm)	0368	0.4500	0.3000	2.630	2.421	2.133	3	-0.90		0
191.34	Acid Soluble Chromium , ICP, EPA 3050B/6010C... (ppm)	0230	2.205	0.0900	2.630	2.421	2.133	3	-0.18		0
191.34	Acid Soluble Chromium , ICP, EPA 3050B/6010C... (ppm)	0515	5.235	6.010	2.630	2.421	2.133	3	1.08		0
191.99	Acid Soluble Chromium , Other (ppm)	0519	1.195	0.0100	1.723	0.8868	0.3087	3	-0.60		0
191.99	Acid Soluble Chromium , Other (ppm)	0476	1.228	0.0502	1.723	0.8868	0.3087	3	-0.56		0
191.99	Acid Soluble Chromium , Other (ppm)	0506	2.747	0.8660	1.723	0.8868	0.3087	3	1.15		0
202.30	Acid Soluble Cobalt , ICP (ppm)	0389	0.1370	0.0380				2			0
202.30	Acid Soluble Cobalt , ICP (ppm)	0524	0.5710	0.0453				2			0
202.33	Acid Soluble Cobalt , ICP, 2017.02 (ppm)	0550	0.2000	0.1000				2			0
202.33	Acid Soluble Cobalt , ICP, 2017.02 (ppm)	0515	5.862	0.5120				2			0
202.33	Acid Soluble Cobalt , ICP, 2017.02 (ppm)	0527	0.0000	0.0000				2			4
202.34	Acid Soluble Cobalt , ICP, EPA 3050B/6010C (ppm)	0515	2.467	0.6860				1			0
202.34	Acid Soluble Cobalt , ICP, EPA 3050B/6010C (ppm)	0368	0.0000	0.0000				1			4
202.99	Acid Soluble Cobalt , Other (ppm)	0519	0.0100	0.0000				1			0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (%)	0550	0.0015	0.0019				1			0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0041	0.0003	0.0001	0.0364	0.0659	0.0026	4	-0.55		0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0035	0.0005	0.0001	0.0364	0.0659	0.0026	4	-0.55		0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0354	0.0100	0.0000	0.0364	0.0659	0.0026	4	-0.40		0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0552	0.1350	0.0100	0.0364	0.0659	0.0026	4	1.50		0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0255	0.0005	0.0010	0.0364	0.0659	0.0026	4			4
221.32	Acid Soluble Copper , ICP, test portion 2006... (%)	0394	1.030	0.4200				1			0
221.33	Acid Soluble Copper , ICP, 2017.02 (%)	0515	0.0000	0.0000				0			4
221.33	Acid Soluble Copper , ICP, 2017.02 (%)	0527	0.0000	0.0000				0			4
221.99	Acid Soluble Copper , Other (%)	0519	0.0001	0.0000				2			0
221.99	Acid Soluble Copper , Other (%)	0368	0.0002	0.0000				2			0
221.99	Acid Soluble Copper , Other (%)	0515	0.0000	0.0000				2			4
241.00	Acid Soluble Iron , AA, inorganic 965.09 (%)	0533	0.0025	0.0001				2			0
241.00	Acid Soluble Iron , AA, inorganic 965.09 (%)	0550	0.0029	0.0021				2			0
241.20	Acid Soluble Iron , Colormetric (%)	0493	0.0005	0.0001				1			0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (%)	0255	0.0015	0.0010	0.0124	0.0158	0.0022	5	-0.60		0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (%)	0035	0.0033	0.0019	0.0124	0.0158	0.0022	5	-0.50		0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (%)	0041	0.0070	0.0080	0.0124	0.0158	0.0022	5	-0.30		0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (%)	0354	0.0100	0.0000	0.0124	0.0158	0.0022	5	-0.13		0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (%)	0234	0.0400	0.0000	0.0124	0.0158	0.0022	5	1.53		0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (%)	0552	0.0700	0.0800	0.0124	0.0158	0.0022	5	3.18		1
241.33	Acid Soluble Iron , ICP, 2017.02 (%)	0527	0.0006	0.0003				2			0
241.33	Acid Soluble Iron , ICP, 2017.02 (%)	0515	0.0081	0.0103				2			0
241.99	Acid Soluble Iron , Other (%)	0519	0.0001	0.0000	0.0017	0.0015	0.0008	6	-0.96	OK	0
241.99	Acid Soluble Iron , Other (%)	0524	0.0007	0.0001	0.0017	0.0015	0.0008	6	-0.63	OK	0
241.99	Acid Soluble Iron , Other (%)	0476	0.0012	0.0001	0.0017	0.0015	0.0008	6	-0.33	OK	0
241.99	Acid Soluble Iron , Other (%)	0515	0.0019	0.0017	0.0017	0.0015	0.0008	6	0.10	OK	0
241.99	Acid Soluble Iron , Other (%)	0481	0.0030	0.0000	0.0017	0.0015	0.0008	6	0.79	OK	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
241.99	Acid Soluble Iron , Other (%)	0368	0.0034	0.0030	0.0017	0.0015	0.0008	6	1.03	OK	0
241.99	Acid Soluble Iron , Other (%)	0389	6.729	0.5540	0.0017	0.0015	0.0008	6	4036.82	High	2
251.00	Acid Soluble Lead , AA, test portion 2006.03... (ppm)	0550	3.063	4.760				1			0
251.30	Acid Soluble Lead , ICP (ppm)	0524	0.0057	0.0001	0.0897	0.1389	0.0350	3	-0.61		0
251.30	Acid Soluble Lead , ICP (ppm)	0389	0.0135	0.0050	0.0897	0.1389	0.0350	3	-0.55		0
251.30	Acid Soluble Lead , ICP (ppm)	0405	0.2500	0.1000	0.0897	0.1389	0.0350	3	1.15		0
251.30	Acid Soluble Lead , ICP (ppm)	0394	0.0000	0.0000	0.0897	0.1389	0.0350	3			4
251.33	Acid Soluble Lead , ICP, 2017.02 (ppm)	0527	0.0212	0.0057				2			0
251.33	Acid Soluble Lead , ICP, 2017.02 (ppm)	0515	3.854	1.405				2			0
251.34	Acid Soluble Lead , ICP, EPA 3050B/6010C (ppm)	0515	0.0000	0.0000				0			4
251.34	Acid Soluble Lead , ICP, EPA 3050B/6010C (ppm)	0368	1.300	2.600				0			4
251.99	Acid Soluble Lead , Other (ppm)	0519	0.0750	0.0100				2			0
251.99	Acid Soluble Lead , Other (ppm)	0220	0.2500	0.1000				2			0
261.30	Acid Soluble Manganese , ICP, test portion 9... (%)	0041	0.0002	0.0001				2			0
261.30	Acid Soluble Manganese , ICP, test portion 9... (%)	0354	0.0100	0.0000				2			0
261.32	Acid Soluble Manganese , ICP, test portion i... (%)	0552	0.0550	0.0300				1			0
261.35	Acid Soluble Manganese , ICP, 2017.02 (%)	0515	0.0000	0.0000				0			4
261.35	Acid Soluble Manganese , ICP, 2017.02 (%)	0527	0.0000	0.0000				0			4
261.99	Acid Soluble Manganese , Other (%)	0519	0.0001	0.0000				2			0
261.99	Acid Soluble Manganese , Other (%)	0368	0.0005	0.0007				2			0
261.99	Acid Soluble Manganese , Other (%)	0255	0.0000	0.0000				2			4
261.99	Acid Soluble Manganese , Other (%)	0515	0.0000	0.0000				2			4
271.00	Water Soluble Manganese , AA (%)	0553	0.0007	0.0000				1			0
281.00	Acid Soluble Mercury , AA (ppm)	0550	0.0052	0.0028				1			0
281.30	Acid Soluble Mercury , ICP (ppm)	0527	0.0215	0.0033				1			0
281.30	Acid Soluble Mercury , ICP (ppm)	0515	0.0000	0.0000				1			4
281.99	Acid Soluble Mercury , Other (ppm)	0519	0.0100	0.0000				1			0
289.00	Acid Soluble Molybdenum , AA, test portion 2... (ppm)	0550	2.490	0.0000				1			0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0389	1.316	0.0870	1.503	0.2323	0.0485	5	-0.70		0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0433	1.345	0.0300	1.503	0.2323	0.0485	5	-0.59		0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0524	1.457	0.0556	1.503	0.2323	0.0485	5	-0.17		0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0096	1.500	0.0000	1.503	0.2323	0.0485	5	-0.01		0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0405	1.895	0.0700	1.503	0.2323	0.0485	5	1.47		0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0255	1.439	0.8770	1.503	0.2323	0.0485	5	-0.24		1
289.33	Acid Soluble Molybdenum , ICP, 2017.02 (ppm)	0037	1.746	0.0360	2.836	1.474	2.185	3	-0.74		0
289.33	Acid Soluble Molybdenum , ICP, 2017.02 (ppm)	0527	2.247	0.6938	2.836	1.474	2.185	3	-0.40		0
289.33	Acid Soluble Molybdenum , ICP, 2017.02 (ppm)	0515	4.513	5.826	2.836	1.474	2.185	3	1.14		0
289.34	Acid Soluble Molybdenum , ICP, EPA 3050B/601... (ppm)	0368	0.9500	0.1000				2			0
289.34	Acid Soluble Molybdenum , ICP, EPA 3050B/601... (ppm)	0230	1.875	0.0500				2			0
289.99	Acid Soluble Molybdenum , Other (ppm)	0519	1.240	0.0400	1.455	0.1999	0.1289	3	-1.08		0
289.99	Acid Soluble Molybdenum , Other (ppm)	0476	1.491	0.0667	1.455	0.1999	0.1289	3	0.18		0
289.99	Acid Soluble Molybdenum , Other (ppm)	0546	1.635	0.2800	1.455	0.1999	0.1289	3	0.90		0
291.00	Acid Soluble Nickel , AA, test portion 2006.... (ppm)	0550	13.60	0.0000				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				
291.30	Acid Soluble Nickel , ICP (ppm)	0524	0.0611	0.0884	6.801	13.02	0.1286	4	-0.52		0
291.30	Acid Soluble Nickel , ICP (ppm)	0389	0.1370	0.0160	6.801	13.02	0.1286	4	-0.51		0
291.30	Acid Soluble Nickel , ICP (ppm)	0394	0.6750	0.1500	6.801	13.02	0.1286	4	-0.47		0
291.30	Acid Soluble Nickel , ICP (ppm)	0444	26.33	0.2600	6.801	13.02	0.1286	4	1.50		0
291.33	Acid Soluble Nickel , ICP, 2017.02 (ppm)	0037	0.3060	0.1540				2			0
291.33	Acid Soluble Nickel , ICP, 2017.02 (ppm)	0515	6.034	1.546				2			0
291.33	Acid Soluble Nickel , ICP, 2017.02 (ppm)	0527	0.0000	0.0000				2			4
291.34	Acid Soluble Nickel , ICP, EPA 3050B/6010C (ppm)	0515	2.058	0.3210				1			0
291.34	Acid Soluble Nickel , ICP, EPA 3050B/6010C (ppm)	0368	0.0000	0.0000				1			4
291.99	Acid Soluble Nickel , Other (ppm)	0519	0.1450	0.0100	2.102	3.268	0.0870	3	-0.60		0
291.99	Acid Soluble Nickel , Other (ppm)	0476	0.2871	0.1011	2.102	3.268	0.0870	3	-0.56		0
291.99	Acid Soluble Nickel , Other (ppm)	0506	5.875	0.1500	2.102	3.268	0.0870	3	1.15		0
301.30	Acid Soluble Selenium , ICP (ppm)	0524	0.4550	0.1900				1			0
301.33	Acid Soluble Selenium , ICP, 2017.02 (ppm)	0527	1.440	0.0912				1			0
301.34	Acid Soluble Selenium , ICP, EPA 3050B/6010C... (ppm)	0515	0.6527	0.7307				1			0
301.34	Acid Soluble Selenium , ICP, EPA 3050B/6010C... (ppm)	0368	1.500	3.000				1			4
301.99	Acid Soluble Selenium , Other (ppm)	0519	0.1150	0.0100	0.3088	0.3059	0.0990	3	-0.63		0
301.99	Acid Soluble Selenium , Other (ppm)	0220	0.1500	0.1000	0.3088	0.3059	0.0990	3	-0.52		0
301.99	Acid Soluble Selenium , Other (ppm)	0255	0.6615	0.1870	0.3088	0.3059	0.0990	3	1.15		0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0527	0.0549	0.0016				2			0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0035	0.0675	0.0090				2			0
311.99	Sodium, Other (%)	0482	0.0600	0.0000	0.3455	0.5315	0.0058	4	-0.54		0
311.99	Sodium, Other (%)	0096	0.0700	0.0000	0.3455	0.5315	0.0058	4	-0.52		0
311.99	Sodium, Other (%)	0354	0.1100	0.0000	0.3455	0.5315	0.0058	4	-0.44		0
311.99	Sodium, Other (%)	0524	1.142	0.0231	0.3455	0.5315	0.0058	4	1.50		0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (%)	0550	0.0011	0.0005				2			0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (%)	0533	0.0025	0.0001				2			0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (%)	0516	0.0000	0.0000				2			4
321.30	Acid Soluble Zinc , ICP, test portion inorga... (%)	0096	0.0010	0.0001	0.0056	0.0053	0.0029	5	-0.75		0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (%)	0035	0.0013	0.0014	0.0056	0.0053	0.0029	5	-0.70		0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (%)	0255	0.0030	0.0040	0.0056	0.0053	0.0029	5	-0.42		0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (%)	0354	0.0100	0.0000	0.0056	0.0053	0.0029	5	0.73		0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (%)	0041	0.0125	0.0090	0.0056	0.0053	0.0029	5	1.14		0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (%)	0552	0.0150	0.0300	0.0056	0.0053	0.0029	5			4
321.32	Acid Soluble Zinc , ICP, test portion 2006.0... (%)	0394	2.425	0.7300				1			0
321.33	Acid Soluble Zinc , ICP, 2017.02 (%)	0515	0.0006	0.0003				1			0
321.33	Acid Soluble Zinc , ICP, 2017.02 (%)	0527	0.0000	0.0000				1			4
321.99	Acid Soluble Zinc , Other (%)	0515	0.0001	0.0000	0.0004	0.0004	0.0001	3	-0.70		0
321.99	Acid Soluble Zinc , Other (%)	0368	0.0002	0.0002	0.0004	0.0004	0.0001	3	-0.44		0
321.99	Acid Soluble Zinc , Other (%)	0519	0.0008	0.0000	0.0004	0.0004	0.0001	3	1.14		0
325.00	Water Soluble Zinc , AA (%)	0553	0.0007	0.0000				1			0

Interpreting Z Scores: Red indicates a normally distributed Z value >3 or <-3 (requires action), Orange = Z between 2 and 3 or -2 and -3 (warning) and Green = Z < 2 and >-2 (OK at 95%). Flags indicate data usage: 0 = Used, 1 = rejected for duplicates too far apart, 2 = rejected as extreme outlier, 3 = removed from stats, 4 = rejected due to 0s submitted and 5

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				

= 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.