

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Methods: 96

Sample # 170611

Statistical Summary

Labs Reporting: 90

Grade 2-15-15 w/PO3

Issue Date : 07/31/2017

Method Code	Analyte & Method	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Analyte Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	IA %RSD	Average Range (R-bar)	Horwitz %RSD
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	12	11	0.5455	0.0601	0.5436		0.0640	0.0241	11.77%		0.0309	4.38%
001.99	Ammoniacal Nitrogen, Other (%)	17	16	0.5108	0.0898	0.5107		0.1016	0.0317	19.88%		0.0161	4.43%
002.99	Nitrate Nitrogen, Other (%)	1		0.8050									
003.99	Water Insoluble Nitrogen, Other (%)	1		0.4700									
005.00	Urea Nitrogen, Urease (as N) (%)	5	5	1.679	0.1055	1.679		0.1055	0.0590	6.29%		0.0416	3.70%
005.99	Urea Nitrogen, Other (%)	9	9	1.693	0.1936	1.693		0.2195	0.0915	12.97%		0.0967	3.70%
007.00	Urea, Urease (as Urea) (%)	1		1.535									
007.99	Urea, Other (%)	2	2	1.515	0.0707								
010.11	Total Nitrogen, Modified Comprehensive (2%)	13	13	2.150	0.1309	2.144	0.4900	0.1340	0.0465	6.25%	11.43%	0.0454	3.57%
010.12	Total Nitrogen, Salicylic (2%)	3	3	2.088	0.1005	2.088	0.4900	0.1005	0.0726	4.81%	11.73%	0.0033	3.58%
010.17	Total Nitrogen, Comprehensive (2%)	1		1.720									
010.60	Total Nitrogen, Combustion (2%)	58	56	2.075	0.2639	2.082	0.4900	0.1762	0.0294	8.46%	11.77%	0.0389	3.58%
010.99	Total Nitrogen, Other (2%)	8	8	2.123	0.0672	2.126	0.4900	0.0689	0.0304	3.24%	11.52%	0.0635	3.57%
020.10	Total Phosphorus as P2O5, Gravimetric Quinolinium ... (%)	9	9	15.31	0.1820	15.30		0.1614	0.0673	1.05%		0.1356	2.65%
020.20	Total Phosphorus as P2O5, Spectrophotometric Molyb... (%)	18	17	14.48	0.8522	14.53		0.8285	0.2512	5.70%		0.0977	2.67%
020.40	Total Phosphorus as P2O5, Automated (%)	4	4	14.20	1.438	14.20		1.438	0.8990	10.13%		0.6200	2.68%
020.50	Total Phosphorus as P2O5, ICP (%)	19	18	15.60	0.6574	15.61		0.6334	0.1866	4.06%		0.2699	2.65%
020.99	Total Phosphorus as P2O5, Other (%)	10	9	14.84	0.8464	15.06		0.3109	0.1296	2.07%		0.1256	2.66%
041.10	Direct Available Phosphorus as P2O5, Gravimetric Q... (15.2%)	4	4	12.24	0.2475	12.24	0.6700	0.2475	0.1547	2.02%	2.74%	0.1474	2.74%
041.11	Direct Available Phosphorus as P2O5, Gravimetric Q... (15.2%)	5	5	12.50	0.2035	12.50	0.6700	0.2035	0.1138	1.63%	2.68%	0.1060	2.74%
041.20	Direct Available Phosphorus as P2O5, Spectrophotom... (15.2%)	1		11.80									
041.21	Direct Available Phosphorus as P2O5, Spectrophotom... (15.2%)	4	4	14.66	1.417	14.66	0.6700	1.417	0.8855	9.66%	2.29%	0.2150	2.67%
041.40	Direct Available Phosphorus as P2O5, Automated (15.2%)	2	2	13.71	1.566								
041.50	Direct Available Phosphorus as P2O5, ICP (15.2%)	8	8	15.04	0.2758	15.04	0.6700	0.3127	0.1382	2.08%	2.23%	0.1963	2.66%
041.51	Direct Available Phosphorus as P2O5, ICP, Citrate-... (15.2%)	6	6	15.12	0.1692	15.12	0.6700	0.1919	0.0979	1.27%	2.22%	0.1483	2.66%
041.60	Direct Available Phosphorus as P2O5, Citrate-EDTA ... (15.2%)	13	12	12.66	0.8388	12.48	0.6700	0.4152	0.1498	3.33%	2.68%	0.0749	2.74%
041.99	Direct Available Phosphorus as P2O5, Other (15.2%)	7	7	12.85	0.7794	12.59	0.6700	0.1635	0.0772	1.30%	2.66%	0.0629	2.73%
048.20	Water Soluble Phosphorus as P2O5, Spectrophotometr... (%)	2	2	13.38	1.177								
050.00	Soluble Potassium as K2O, STPB Oxalate (15%)	10	10	17.72	0.7038	17.79	0.9922	0.5708	0.2256	3.21%	2.79%	0.1441	2.59%
050.30	Soluble Potassium as K2O, AA (Oxalate) (15%)	8	8	18.14	3.181	17.53	0.9922	1.979	0.8744	11.29%	2.83%	0.2038	2.60%
050.31	Soluble Potassium as K2O, AA (Citrate) (15%)	1		13.34									

Method Code	Analyte & Method	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Analyte Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	IA %RSD	Average Range (R-bar)	Horwitz %RSD
050.32	Soluble Potassium as K2O, AA (Citrate-EDTA) (15%)	1		17.17									
050.50	Soluble Potassium as K2O, ICP (Oxalate) (15%)	7	6	17.36	1.019	17.60	0.9922	0.5353	0.2732	3.04%	2.82%	0.0700	2.60%
050.51	Soluble Potassium as K2O, ICP (Citrate) (15%)	5	5	17.55	0.4704	17.55	0.9922	0.4704	0.2629	2.68%	2.83%	0.3540	2.60%
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (15%)	11	11	17.37	0.5825	17.38	0.9922	0.6471	0.2439	3.72%	2.85%	0.2546	2.60%
050.60	Soluble Potassium as K2O, Flame Photometric (Oxala... (15%)	3	3	17.52	0.3368	17.52	0.9922	0.3368	0.2431	1.92%	2.83%	0.0533	2.60%
050.61	Soluble Potassium as K2O, Flame Photometric (Citra... (15%)	2	2	17.94	0.1273								
050.62	Soluble Potassium as K2O, Flame Photometric (Citra... (15%)	6	6	17.50	0.7890	17.50	0.9922	0.8811	0.4496	5.03%	2.83%	0.1130	2.60%
050.99	Soluble Potassium as K2O, Other (15%)	36	33	17.27	1.147	17.30	0.9922	1.139	0.2479	6.59%	2.87%	0.1888	2.60%
101.00	Acid Soluble Calcium, AA, inorganic 965.09 (%)	1		0.0015									
101.03	Acid Soluble Calcium, AA, 965.09, test portion 200... (%)	1		0.0019									
101.30	Acid Soluble Calcium, ICP, test portion inorganic ... (%)	1		0.0270									
101.99	Acid Soluble Calcium, Other (%)	1		0.0045									
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (%)	3	3	0.0292	0.0484	0.0292		0.0484	0.0349	165.95%		0.0034	6.81%
121.03	Acid Soluble Magnesium, AA, 965.09, test portion 2...	1		0.0009									
121.30	Acid Soluble Magnesium, ICP, test portion inorgani... (1		0.0110									
121.32	Acid Soluble Magnesium, ICP, test portion 2006.03A...	1		0.0007									
121.33	Acid Soluble Magnesium, ICP, test portion 2006.03A...	1		0.0010									
121.99	Acid Soluble Magnesium, Other (%)	2	2	0.0007	0.0002								
143.99	Elemental Sulfur, Other (%)	1		0.0025									
148.99	Total Sulfur, Other (%)	1		0.0285									
149.04	Sulfur - HNO3 soluble, ICP (%)	2	2	0.0019	0.0001								
151.00	Acid Soluble Arsenic , AA, test portion as in 2006... (p	1		2.165									
151.30	Acid Soluble Arsenic , ICP (ppm)	1		2.500									
151.33	Acid Soluble Arsenic , ICP, 2006.03 modified w/9:3... (1		3.216									
151.99	Acid Soluble Arsenic , Other (ppm)	1		3.100									
165.30	Acid Soluble Boron , ICP, test portion in 982.01 (%)	3	3	0.0066	0.0098	0.0066		0.0098	0.0071	148.42%		0.0021	8.51%
165.99	Acid Soluble Boron , Other (%)	1		0.0009									
181.30	Acid Soluble Cadmium , ICP (ppm)	3	3	0.2867	0.3043	0.2867		0.3043	0.2196	106.13%		0.0037	19.31%
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified w/9:3..	1		0.0425									
181.99	Acid Soluble Cadmium , Other (ppm)	1		0.0100									
191.30	Acid Soluble Chromium , ICP (ppm)	3	3	12.35	16.64	12.35		16.64	12.01	134.71%		0.3000	10.96%
191.33	Acid Soluble Chromium , ICP, 2006.03 modified w/9:...	1		0.3945									
202.30	Acid Soluble Cobalt , ICP (ppm)	3	3	6.421	10.68	6.421		10.68	7.706	166.30%		0.5702	12.09%
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified w/9:3 ... (t	1		0.0095									
221.00	Acid Soluble Copper , AA, inorganic 965.09 (%)	1		0.0020									
221.30	Acid Soluble Copper , ICP, test portion inorganic ... (%)	1		0.0015									
221.99	Acid Soluble Copper , Other (%)	1		0.0002									
241.00	Acid Soluble Iron, AA, inorganic 965.09 (0.1%)	6	6	0.0045	0.0052	0.0045	0.0051	0.0059	0.0030	130.19%	56.90%	0.0002	9.02%
241.03	Acid Soluble Iron, AA, 965.09, test portion 2006.0... (0.	1		0.0004									
241.20	Acid Soluble Iron , Colormetric (0.1%)	1		0.1300									
241.30	Acid Soluble Iron, ICP, test portion inorganic 965... (0.	8	6	0.0032	0.0037	0.0029	0.0051	0.0033	0.0017	114.96%	90.04%	0.0001	9.66%
241.32	Acid Soluble Iron, ICP, test portion 2006.03A-C (0.1%	1		0.0006									

Method Code	Analyte & Method	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Analyte Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	IA %RSD	Average Range (R-bar)	Horwitz %RSD
241.33	Acid Soluble Iron, ICP, test portion 2006.03A-C, w...	2	2	0.0011	0.0001								
241.99	Acid Soluble Iron, Other (0.1%)	5	5	0.0011	0.0008	0.0011	0.0051	0.0008	0.0005	75.72%	233.64%	0.0001	11.15%
251.30	Acid Soluble Lead , ICP (ppm)	3	3	0.8052	0.9020	0.8052		0.9020	0.6509	112.01%		0.0114	16.53%
251.33	Acid Soluble Lead , ICP, 2006.03 modified w/9:3 HN...	1		0.0110									
251.99	Acid Soluble Lead , Other (ppm)	1		6.450									
261.30	Acid Soluble Manganese , ICP, test portion 972.02a (%)	1		0.0000									
281.30	Acid Soluble Mercury , ICP (ppm)	1		0.0030									
281.99	Acid Soluble Mercury , Other (ppm)	1		0.0200									
289.30	Acid Soluble Molybdenum , ICP (ppm)	3	3	1.450	1.782	1.450		1.782	1.286	122.89%		0.0790	15.13%
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modified w/..	1		0.4245									
291.30	Acid Soluble Nickel , ICP (ppm)	4	4	3.723	6.361	3.723		6.361	3.976	170.84%		0.2106	13.13%
291.33	Acid Soluble Nickel , ICP, 2006.03 modified w/9:3 ... (p	1		0.2800									
301.33	Acid Soluble Selenium , ICP, 2006.03 modified w/9:...	1		0.0425									
311.32	Sodium, ICP, 2006.03 test portion (%)	1		0.0915									
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl test .	2	2	0.0828	0.0039								
311.99	Sodium, Other (%)	2	2	0.1313	0.0725								
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.1%)	9	8	0.0029	0.0037	0.0027	0.0051	0.0037	0.0016	136.97%	94.46%	0.0002	9.74%
321.03	Acid Soluble Zinc , AA, 965.09, test portion 2006.... (0.	1		0.0003									
321.30	Acid Soluble Zinc , ICP, test portion inorganic 96... (0.1	7	5	0.0017	0.0010	0.0017	0.0051	0.0010	0.0006	62.00%	153.60%	0.0005	10.48%
321.32	Acid Soluble Zinc , ICP, test portion 2006.03A-C ... (0.	1		0.0006									
321.33	Acid Soluble Zinc , ICP, test portion 2006.03A-C, ... (0.	3	3	0.0006	0.0003	0.0006	0.0051	0.0003	0.0002	54.55%	463.61%	0.0002	12.38%
321.99	Acid Soluble Zinc , Other (0.1%)	5	5	0.0005	0.0005	0.0005	0.0051	0.0005	0.0003	84.71%	472.19%	0.0000	12.41%
325.00	Water Soluble Zinc , AA (%)	3	3	0.0004	0.0003	0.0004		0.0003	0.0002	82.84%		0.0000	13.07%

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Method Proficiency For All Labs (Lab Values)

Sample # 170611

Grade 2-15-15 w/PO3

Method Precision Report

Issue Date : 07/31/2017

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 Nitrogen, Magnesium Oxide Method (%)	12	10	0.5450	0.0633	0.0616	0.0207	0.0650	11.31%	3.80%	11.93%	3.135
001.99	Ammoniacal Nitrogen, Other (%)	17	15	0.5202	0.0844	0.0840	0.0114	0.0848	16.15%	2.19%	16.30%	7.453
005.99	Urea Nitrogen, Other (%)	9	8	1.721	0.1867	0.1790	0.0749	0.1941	10.41%	4.35%	11.28%	2.592
010.11	Total Nitrogen, Modified Comprehensive (2%)	13	13	2.150	0.1309	0.1270	0.0446	0.1346	5.91%	2.07%	6.26%	3.019
010.60	Total Nitrogen, Combustion (2%)	58	53	2.070	0.1887	0.1870	0.0349	0.1903	9.04%	1.69%	9.19%	5.453
010.99	Total Nitrogen, Other (2%)	8	8	2.123	0.0672	0.0504	0.0628	0.0805	2.38%	2.96%	3.79%	1.283
020.10	Total Phosphorus as P2O5, Gravimetric Quinolinium MolybdoP (%)	9	9	15.31	0.1820	0.1624	0.1162	0.1997	1.06%	0.76%	1.30%	1.718
020.20	Total Phosphorus as P2O5, Spectrophotometric MolybdovanadoP (%)	18	16	14.61	0.6782	0.6742	0.1037	0.6821	4.61%	0.71%	4.67%	6.580
020.50	Total Phosphorus as P2O5, ICP (%)	19	17	15.59	0.6771	0.6626	0.1973	0.6914	4.25%	1.27%	4.43%	3.504
020.99	Total Phosphorus as P2O5, Other (%)	10	8	15.11	0.2257	0.2111	0.1132	0.2395	1.40%	0.75%	1.58%	2.116
041.50	Direct Available Phosphorus as P2O5, ICP (15.2%)	8	8	15.04	0.2758	0.2481	0.1702	0.3009	1.65%	1.13%	2.00%	1.768
041.60	Direct Available Phosphorus as P2O5, Citrate-EDTA Ext. (15.2%)	13	10	12.42	0.3729	0.3715	0.0447	0.3742	2.99%	0.36%	3.01%	8.363
050.00	Soluble Potassium as K2O, STPB Oxalate (15%)	10	8	17.89	0.4793	0.4738	0.1023	0.4847	2.65%	0.57%	2.71%	4.740
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (15%)	11	10	17.36	0.6106	0.5995	0.1642	0.6216	3.45%	0.95%	3.58%	3.786
050.99	Soluble Potassium as K2O, Other (15%)	36	32	17.30	1.156	1.150	0.1770	1.163	6.65%	1.02%	6.72%	6.569
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.1%)	9	8	0.0029	0.0037	0.0037	0.0001	0.0037	127.21%	4.92%	127.30%	25.87

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

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STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Methods: 96

Sample # 170611

Lab Values

Labs Reporting: 90

Grade 2-15-15 w/PO3

Issue Date : 07/31/2017

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0309	0.4500	0.0400	0.5436	0.0640	0.0309	11	-1.46	9%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0117	0.4850	0.0100	0.5436	0.0640	0.0309	11	-0.92	5%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0486	0.4850	0.0100	0.5436	0.0640	0.0309	11	-0.92	5%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0389	0.5150	0.0100	0.5436	0.0640	0.0309	11	-0.45	3%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0230	0.5500	0.0400	0.5436	0.0640	0.0309	11	0.10	1%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0498	0.5500	0.1000	0.5436	0.0640	0.0309	11	0.10	1%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0090	0.5550	0.0500	0.5436	0.0640	0.0309	11	0.18	1%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0451	0.5550	0.0100	0.5436	0.0640	0.0309	11	0.18	1%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0535	0.5950	0.0300	0.5436	0.0640	0.0309	11	0.80	5%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0531	0.6000	0.0400	0.5436	0.0640	0.0309	11	0.88	5%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0526	0.6600	0.0000	0.5436	0.0640	0.0309	11	1.82	11%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0234	0.6950	0.2700	0.5436	0.0640	0.0309	11	2.37	14%	1
001.99	Ammoniacal Nitrogen, Other (%)	0533	0.3700	0.0800	0.5107	0.1016	0.0161	16	-1.39	14%	0
001.99	Ammoniacal Nitrogen, Other (%)	0524	0.3807	0.0168	0.5107	0.1016	0.0161	16	-1.28	13%	0
001.99	Ammoniacal Nitrogen, Other (%)	0423	0.4050	0.0100	0.5107	0.1016	0.0161	16	-1.04	10%	0
001.99	Ammoniacal Nitrogen, Other (%)	0368	0.4527	0.0006	0.5107	0.1016	0.0161	16	-0.57	6%	0
001.99	Ammoniacal Nitrogen, Other (%)	0231	0.4600	0.0200	0.5107	0.1016	0.0161	16	-0.50	5%	0
001.99	Ammoniacal Nitrogen, Other (%)	0481	0.4600	0.0000	0.5107	0.1016	0.0161	16	-0.50	5%	0
001.99	Ammoniacal Nitrogen, Other (%)	0027	0.4800	0.0000	0.5107	0.1016	0.0161	16	-0.30	3%	0
001.99	Ammoniacal Nitrogen, Other (%)	0096	0.5000	0.0000	0.5107	0.1016	0.0161	16	-0.11	1%	0
001.99	Ammoniacal Nitrogen, Other (%)	0537	0.5050	0.0300	0.5107	0.1016	0.0161	16	-0.06	1%	0
001.99	Ammoniacal Nitrogen, Other (%)	0522	0.5200	0.0000	0.5107	0.1016	0.0161	16	0.09	1%	0
001.99	Ammoniacal Nitrogen, Other (%)	0535	0.5600	0.0200	0.5107	0.1016	0.0161	16	0.49	5%	0
001.99	Ammoniacal Nitrogen, Other (%)	0532	0.5800	0.0200	0.5107	0.1016	0.0161	16	0.68	7%	0
001.99	Ammoniacal Nitrogen, Other (%)	0539	0.5900	0.0200	0.5107	0.1016	0.0161	16	0.78	8%	0
001.99	Ammoniacal Nitrogen, Other (%)	0540	0.6000	0.0000	0.5107	0.1016	0.0161	16	0.88	9%	0
001.99	Ammoniacal Nitrogen, Other (%)	0220	0.6450	0.0100	0.5107	0.1016	0.0161	16	1.32	13%	0
001.99	Ammoniacal Nitrogen, Other (%)	0530	0.6650	0.0300	0.5107	0.1016	0.0161	16	1.52	15%	0
001.99	Ammoniacal Nitrogen, Other (%)	0501	0.7450	0.0900	0.5107	0.1016	0.0161	16	2.31	23%	1
002.99	Nitrate Nitrogen, Other (%)	0530	0.8050	0.0500				1			0
003.99	Water Insoluble Nitrogen, Other (%)	0500	0.4700	0.0000				1			0
005.00	Urea Nitrogen, Urease (as N) (%)	0537	1.530	0.0400	1.679	0.1055	0.0416	5	-1.41	4%	0
005.00	Urea Nitrogen, Urease (as N) (%)	0498	1.650	0.1000	1.679	0.1055	0.0416	5	-0.28	1%	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
005.00	Urea Nitrogen, Urease (as N) (%)	0389	1.655	0.0100	1.679	0.1055	0.0416	5	-0.23	1%	0
005.00	Urea Nitrogen, Urease (as N) (%)	0230	1.765	0.0500	1.679	0.1055	0.0416	5	0.81	3%	0
005.00	Urea Nitrogen, Urease (as N) (%)	0368	1.795	0.0078	1.679	0.1055	0.0416	5	1.10	3%	0
005.99	Urea Nitrogen, Other (%)	0234	1.470	0.4000	1.693	0.2195	0.0967	9	-0.94	7%	0
005.99	Urea Nitrogen, Other (%)	0451	1.500	0.0400	1.693	0.2195	0.0967	9	-0.81	6%	0
005.99	Urea Nitrogen, Other (%)	0532	1.525	0.0300	1.693	0.2195	0.0967	9	-0.71	5%	0
005.99	Urea Nitrogen, Other (%)	0027	1.560	0.0200	1.693	0.2195	0.0967	9	-0.56	4%	0
005.99	Urea Nitrogen, Other (%)	0356	1.670	0.0400	1.693	0.2195	0.0967	9	-0.10	1%	0
005.99	Urea Nitrogen, Other (%)	0309	1.775	0.0100	1.693	0.2195	0.0967	9	0.35	2%	0
005.99	Urea Nitrogen, Other (%)	0524	1.825	0.2900	1.693	0.2195	0.0967	9	0.56	4%	0
005.99	Urea Nitrogen, Other (%)	0481	1.905	0.0100	1.693	0.2195	0.0967	9	0.89	6%	0
005.99	Urea Nitrogen, Other (%)	0533	2.005	0.0300	1.693	0.2195	0.0967	9	1.31	9%	0
007.00	Urea, Urease (as Urea) (%)	0486	1.535	0.1300				1			0
007.99	Urea, Other (%)	0531	1.465	0.0100				2			0
007.99	Urea, Other (%)	0220	1.565	0.0700				2			0
010.11	Total Nitrogen, Modified Comprehensive (2%)	0500	1.980	0.0000	2.144	0.1340	0.0454	13	-1.23	4%	0
010.11	Total Nitrogen, Modified Comprehensive (2%)	0538	1.980	0.0400	2.144	0.1340	0.0454	13	-1.23	4%	0
010.11	Total Nitrogen, Modified Comprehensive (2%)	0531	2.060	0.0200	2.144	0.1340	0.0454	13	-0.63	2%	0
010.11	Total Nitrogen, Modified Comprehensive (2%)	0371	2.075	0.0100	2.144	0.1340	0.0454	13	-0.52	2%	0
010.11	Total Nitrogen, Modified Comprehensive (2%)	0090	2.085	0.0900	2.144	0.1340	0.0454	13	-0.44	1%	0
010.11	Total Nitrogen, Modified Comprehensive (2%)	0105	2.100	0.0200	2.144	0.1340	0.0454	13	-0.33	1%	0
010.11	Total Nitrogen, Modified Comprehensive (2%)	0416	2.125	0.0100	2.144	0.1340	0.0454	13	-0.14	0%	0
010.11	Total Nitrogen, Modified Comprehensive (2%)	0114	2.140	0.0200	2.144	0.1340	0.0454	13	-0.03	0%	0
010.11	Total Nitrogen, Modified Comprehensive (2%)	0535	2.150	0.1000	2.144	0.1340	0.0454	13	0.04	0%	0
010.11	Total Nitrogen, Modified Comprehensive (2%)	0540	2.250	0.1000	2.144	0.1340	0.0454	13	0.79	2%	0
010.11	Total Nitrogen, Modified Comprehensive (2%)	0309	2.280	0.1400	2.144	0.1340	0.0454	13	1.01	3%	0
010.11	Total Nitrogen, Modified Comprehensive (2%)	0539	2.305	0.0100	2.144	0.1340	0.0454	13	1.20	4%	0
010.11	Total Nitrogen, Modified Comprehensive (2%)	0536	2.425	0.0300	2.144	0.1340	0.0454	13	2.09	7%	0
010.12	Total Nitrogen, Salicylic (2%)	0481	2.005	0.0100	2.088	0.1005	0.0033	3	-0.83	2%	0
010.12	Total Nitrogen, Salicylic (2%)	0185	2.060	0.0000	2.088	0.1005	0.0033	3	-0.28	1%	0
010.12	Total Nitrogen, Salicylic (2%)	0498	2.200	0.0000	2.088	0.1005	0.0033	3	1.11	3%	0
010.17	Total Nitrogen, Comprehensive (2%)	0526	1.720	0.0000				1			0
010.60	Total Nitrogen, Combustion (2%)	0541	1.035*	0.0100	2.082	0.1762	0.0389	56	-5.94	25%	0
010.60	Total Nitrogen, Combustion (2%)	0423	1.500*	0.1000	2.082	0.1762	0.0389	56	-3.30	14%	0
010.60	Total Nitrogen, Combustion (2%)	0018	1.665	0.0500	2.082	0.1762	0.0389	56	-2.37	10%	0
010.60	Total Nitrogen, Combustion (2%)	0523	1.700	0.0000	2.082	0.1762	0.0389	56	-2.17	9%	0
010.60	Total Nitrogen, Combustion (2%)	0106	1.730	0.0000	2.082	0.1762	0.0389	56	-2.00	8%	0
010.60	Total Nitrogen, Combustion (2%)	0095	1.820	0.0400	2.082	0.1762	0.0389	56	-1.49	6%	0
010.60	Total Nitrogen, Combustion (2%)	0421	1.855	0.0300	2.082	0.1762	0.0389	56	-1.29	5%	0
010.60	Total Nitrogen, Combustion (2%)	0389	1.870	0.1000	2.082	0.1762	0.0389	56	-1.20	5%	0
010.60	Total Nitrogen, Combustion (2%)	0043	1.875	0.0100	2.082	0.1762	0.0389	56	-1.17	5%	0
010.60	Total Nitrogen, Combustion (2%)	0055	1.885	0.0700	2.082	0.1762	0.0389	56	-1.12	5%	0
010.60	Total Nitrogen, Combustion (2%)	0042	1.925	0.1300	2.082	0.1762	0.0389	56	-0.89	4%	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
010.60	Total Nitrogen, Combustion (2%)	0527	1.948	0.0400	2.082	0.1762	0.0389	56	-0.76	3%	0
010.60	Total Nitrogen, Combustion (2%)	0231	1.955	0.0100	2.082	0.1762	0.0389	56	-0.72	3%	0
010.60	Total Nitrogen, Combustion (2%)	0543	1.969	0.0070	2.082	0.1762	0.0389	56	-0.64	3%	0
010.60	Total Nitrogen, Combustion (2%)	0041	1.970	0.0600	2.082	0.1762	0.0389	56	-0.64	3%	0
010.60	Total Nitrogen, Combustion (2%)	0072	1.970	0.1000	2.082	0.1762	0.0389	56	-0.64	3%	0
010.60	Total Nitrogen, Combustion (2%)	0307	2.009	0.0170	2.082	0.1762	0.0389	56	-0.42	2%	0
010.60	Total Nitrogen, Combustion (2%)	0501	2.040	0.0200	2.082	0.1762	0.0389	56	-0.24	1%	0
010.60	Total Nitrogen, Combustion (2%)	0486	2.050	0.0400	2.082	0.1762	0.0389	56	-0.18	1%	0
010.60	Total Nitrogen, Combustion (2%)	0105	2.053	0.0680	2.082	0.1762	0.0389	56	-0.16	1%	0
010.60	Total Nitrogen, Combustion (2%)	0034	2.061	0.0090	2.082	0.1762	0.0389	56	-0.12	1%	0
010.60	Total Nitrogen, Combustion (2%)	0073	2.065	0.0500	2.082	0.1762	0.0389	56	-0.10	0%	0
010.60	Total Nitrogen, Combustion (2%)	0494	2.065	0.0500	2.082	0.1762	0.0389	56	-0.10	0%	0
010.60	Total Nitrogen, Combustion (2%)	0035	2.070	0.0400	2.082	0.1762	0.0389	56	-0.07	0%	0
010.60	Total Nitrogen, Combustion (2%)	0027	2.070	0.0200	2.082	0.1762	0.0389	56	-0.07	0%	0
010.60	Total Nitrogen, Combustion (2%)	0137	2.070	0.0600	2.082	0.1762	0.0389	56	-0.07	0%	0
010.60	Total Nitrogen, Combustion (2%)	0481	2.070	0.0200	2.082	0.1762	0.0389	56	-0.07	0%	0
010.60	Total Nitrogen, Combustion (2%)	0233	2.074	0.0010	2.082	0.1762	0.0389	56	-0.05	0%	0
010.60	Total Nitrogen, Combustion (2%)	0483	2.075	0.0300	2.082	0.1762	0.0389	56	-0.04	0%	0
010.60	Total Nitrogen, Combustion (2%)	0524	2.083	0.0068	2.082	0.1762	0.0389	56	0.00	0%	0
010.60	Total Nitrogen, Combustion (2%)	0292	2.090	0.0000	2.082	0.1762	0.0389	56	0.05	0%	0
010.60	Total Nitrogen, Combustion (2%)	0234	2.115	0.0100	2.082	0.1762	0.0389	56	0.19	1%	0
010.60	Total Nitrogen, Combustion (2%)	0451	2.122	0.0480	2.082	0.1762	0.0389	56	0.23	1%	0
010.60	Total Nitrogen, Combustion (2%)	0029	2.133	0.0300	2.082	0.1762	0.0389	56	0.29	1%	0
010.60	Total Nitrogen, Combustion (2%)	0354	2.140	0.0050	2.082	0.1762	0.0389	56	0.33	1%	0
010.60	Total Nitrogen, Combustion (2%)	0136	2.160	0.0600	2.082	0.1762	0.0389	56	0.44	2%	0
010.60	Total Nitrogen, Combustion (2%)	0049	2.170	0.0200	2.082	0.1762	0.0389	56	0.50	2%	0
010.60	Total Nitrogen, Combustion (2%)	0472	2.170	0.0400	2.082	0.1762	0.0389	56	0.50	2%	0
010.60	Total Nitrogen, Combustion (2%)	0086	2.171	0.0166	2.082	0.1762	0.0389	56	0.51	2%	0
010.60	Total Nitrogen, Combustion (2%)	0377	2.175	0.0500	2.082	0.1762	0.0389	56	0.53	2%	0
010.60	Total Nitrogen, Combustion (2%)	0131	2.180	0.0200	2.082	0.1762	0.0389	56	0.56	2%	0
010.60	Total Nitrogen, Combustion (2%)	0037	2.181	0.0750	2.082	0.1762	0.0389	56	0.56	2%	0
010.60	Total Nitrogen, Combustion (2%)	0157	2.195	0.0100	2.082	0.1762	0.0389	56	0.64	3%	0
010.60	Total Nitrogen, Combustion (2%)	0356	2.195	0.0100	2.082	0.1762	0.0389	56	0.64	3%	0
010.60	Total Nitrogen, Combustion (2%)	0534	2.200	0.0000	2.082	0.1762	0.0389	56	0.67	3%	0
010.60	Total Nitrogen, Combustion (2%)	0521	2.202	0.0000	2.082	0.1762	0.0389	56	0.68	3%	0
010.60	Total Nitrogen, Combustion (2%)	0324	2.205	0.0300	2.082	0.1762	0.0389	56	0.70	3%	0
010.60	Total Nitrogen, Combustion (2%)	0452	2.245	0.0100	2.082	0.1762	0.0389	56	0.93	4%	0
010.60	Total Nitrogen, Combustion (2%)	0040	2.250	0.1000	2.082	0.1762	0.0389	56	0.95	4%	0
010.60	Total Nitrogen, Combustion (2%)	0230	2.270	0.0600	2.082	0.1762	0.0389	56	1.07	5%	0
010.60	Total Nitrogen, Combustion (2%)	0291	2.315	0.0100	2.082	0.1762	0.0389	56	1.32	6%	0
010.60	Total Nitrogen, Combustion (2%)	0368	2.339	0.1180	2.082	0.1762	0.0389	56	1.46	6%	0
010.60	Total Nitrogen, Combustion (2%)	0325	2.345	0.0100	2.082	0.1762	0.0389	56	1.49	6%	0
010.60	Total Nitrogen, Combustion (2%)	0025	2.637	0.0350	2.082	0.1762	0.0389	56	3.15	13%	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
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010.60	Total Nitrogen, Combustion (2%)	0360	2.740	0.1200	2.082	0.1762	0.0389	56	3.73	16%	0
010.60	Total Nitrogen, Combustion (2%)	0007	2.750	0.1000	2.082	0.1762	0.0389	56	3.79	16%	0
010.60	Total Nitrogen, Combustion (2%)	0070	2.075	0.2700	2.082	0.1762	0.0389	56	-0.04	0%	1
010.60	Total Nitrogen, Combustion (2%)	0482	2.200	0.2000	2.082	0.1762	0.0389	56	0.67	3%	1
010.99	Total Nitrogen, Other (2%)	0508	1.998	0.0070	2.126	0.0689	0.0635	8	-1.71	3%	0
010.99	Total Nitrogen, Other (2%)	0476	2.076	0.0406	2.126	0.0689	0.0635	8	-0.66	1%	0
010.99	Total Nitrogen, Other (2%)	0493	2.100	0.1000	2.126	0.0689	0.0635	8	-0.35	1%	0
010.99	Total Nitrogen, Other (2%)	0522	2.115	0.0100	2.126	0.0689	0.0635	8	-0.15	0%	0
010.99	Total Nitrogen, Other (2%)	0513	2.145	0.0300	2.126	0.0689	0.0635	8	0.25	0%	0
010.99	Total Nitrogen, Other (2%)	0518	2.150	0.1000	2.126	0.0689	0.0635	8	0.32	1%	0
010.99	Total Nitrogen, Other (2%)	0220	2.200	0.0200	2.126	0.0689	0.0635	8	0.98	2%	0
010.99	Total Nitrogen, Other (2%)	0530	2.200	0.2000	2.126	0.0689	0.0635	8	0.98	2%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0494	15.03	0.2000	15.30	0.1614	0.1356	9	-1.56	1%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0105	15.20	0.1300	15.30	0.1614	0.1356	9	-0.61	0%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0493	15.20	0.1000	15.30	0.1614	0.1356	9	-0.58	0%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0500	15.25	0.1000	15.30	0.1614	0.1356	9	-0.30	0%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0049	15.32	0.1300	15.30	0.1614	0.1356	9	0.07	0%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0136	15.37	0.0200	15.30	0.1614	0.1356	9	0.39	0%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0090	15.39	0.0100	15.30	0.1614	0.1356	9	0.47	0%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0157	15.40	0.2000	15.30	0.1614	0.1356	9	0.56	0%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0114	15.69	0.3300	15.30	0.1614	0.1356	9	2.19	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0169	12.37	0.0600	14.53	0.8285	0.0977	17	-2.61	7%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0324	13.40	0.0000	14.53	0.8285	0.0977	17	-1.37	4%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0476	13.51	0.0412	14.53	0.8285	0.0977	17	-1.23	4%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0530	13.60	0.2000	14.53	0.8285	0.0977	17	-1.12	3%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0541	13.93	0.1600	14.53	0.8285	0.0977	17	-0.73	2%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0230	14.30	0.2000	14.53	0.8285	0.0977	17	-0.28	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0309	14.43	0.0100	14.53	0.8285	0.0977	17	-0.13	0%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0027	14.56	0.0000	14.53	0.8285	0.0977	17	0.03	0%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0416	14.71	0.0100	14.53	0.8285	0.0977	17	0.21	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0498	14.95	0.3000	14.53	0.8285	0.0977	17	0.50	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0534	15.00	0.0000	14.53	0.8285	0.0977	17	0.56	2%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0292	15.07	0.1000	14.53	0.8285	0.0977	17	0.65	2%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0220	15.17	0.0200	14.53	0.8285	0.0977	17	0.77	2%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0535	15.25	0.1000	14.53	0.8285	0.0977	17	0.87	2%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0231	15.26	0.0200	14.53	0.8285	0.0977	17	0.88	3%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0356	15.27	0.3400	14.53	0.8285	0.0977	17	0.89	3%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0481	15.35	0.1000	14.53	0.8285	0.0977	17	0.99	3%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0300	31.99	0.3600	14.53	0.8285	0.0977	17	21.07	60%	2
020.40	Total Phosphorus as P2O5, Automated (%)	0096	12.27	0.0100	14.20	1.438	0.6200	4	-1.35	7%	0
020.40	Total Phosphorus as P2O5, Automated (%)	0035	13.98	1.650	14.20	1.438	0.6200	4	-0.16	1%	0
020.40	Total Phosphorus as P2O5, Automated (%)	0105	15.08	0.0000	14.20	1.438	0.6200	4	0.61	3%	0
020.40	Total Phosphorus as P2O5, Automated (%)	0486	15.48	0.8200	14.20	1.438	0.6200	4	0.89	5%	0

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020.50	Total Phosphorus as P2O5, ICP (%)	0543	14.34	0.5990	15.61	0.6334	0.2699	18	-2.00	4%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0472	14.45	0.0300	15.61	0.6334	0.2699	18	-1.83	4%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0423	15.07	0.1000	15.61	0.6334	0.2699	18	-0.84	2%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0157	15.20	0.0000	15.61	0.6334	0.2699	18	-0.64	1%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0433	15.24	0.0300	15.61	0.6334	0.2699	18	-0.58	1%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0368	15.35	0.2465	15.61	0.6334	0.2699	18	-0.40	1%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0389	15.40	0.2100	15.61	0.6334	0.2699	18	-0.33	1%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0501	15.45	0.2200	15.61	0.6334	0.2699	18	-0.24	0%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0523	15.55	0.3000	15.61	0.6334	0.2699	18	-0.09	0%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0452	15.64	0.0800	15.61	0.6334	0.2699	18	0.06	0%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0508	15.67	0.2400	15.61	0.6334	0.2699	18	0.10	0%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0482	15.70	1.200	15.61	0.6334	0.2699	18	0.15	0%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0483	15.73	0.4400	15.61	0.6334	0.2699	18	0.20	0%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0451	16.01	0.4400	15.61	0.6334	0.2699	18	0.64	1%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0521	16.18	0.0000	15.61	0.6334	0.2699	18	0.91	2%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0527	16.34	0.0300	15.61	0.6334	0.2699	18	1.15	2%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0524	16.51	0.4420	15.61	0.6334	0.2699	18	1.43	3%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0234	16.95	0.2500	15.61	0.6334	0.2699	18	2.12	4%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0042	15.38	1.430	15.61	0.6334	0.2699	18	-0.36	1%	1
020.99	Total Phosphorus as P2O5, Other (%)	0526	12.66	0.1900	15.06	0.3109	0.1256	9	-7.13	8%	0
020.99	Total Phosphorus as P2O5, Other (%)	0538	14.70	0.0500	15.06	0.3109	0.1256	9	-1.07	1%	0
020.99	Total Phosphorus as P2O5, Other (%)	0536	14.84	0.0400	15.06	0.3109	0.1256	9	-0.64	1%	0
020.99	Total Phosphorus as P2O5, Other (%)	0537	15.16	0.1000	15.06	0.3109	0.1256	9	0.31	0%	0
020.99	Total Phosphorus as P2O5, Other (%)	0531	15.17	0.0200	15.06	0.3109	0.1256	9	0.34	0%	0
020.99	Total Phosphorus as P2O5, Other (%)	0535	15.20	0.2000	15.06	0.3109	0.1256	9	0.43	0%	0
020.99	Total Phosphorus as P2O5, Other (%)	0518	15.22	0.3700	15.06	0.3109	0.1256	9	0.47	1%	0
020.99	Total Phosphorus as P2O5, Other (%)	0539	15.28	0.0600	15.06	0.3109	0.1256	9	0.67	1%	0
020.99	Total Phosphorus as P2O5, Other (%)	0540	15.35	0.1000	15.06	0.3109	0.1256	9	0.87	1%	0
020.99	Total Phosphorus as P2O5, Other (%)	0307	17.09	1.113	15.06	0.3109	0.1256	9	6.03	7%	1
041.10	Direct Available Phosphorus as P2O5, Gravimet... (15.2%)	0086	11.88	0.3994	12.24	0.2475	0.1474	4	-1.47	1%	0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (15.2%)	0105	12.30	0.0700	12.24	0.2475	0.1474	4	0.22	0%	0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (15.2%)	0055	12.39	0.1200	12.24	0.2475	0.1474	4	0.61	1%	0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (15.2%)	0040	12.40	0.0000	12.24	0.2475	0.1474	4	0.65	1%	0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (15.2%)	0513	12.30	0.0800	12.50	0.2035	0.1060	5	-0.97	1%	0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (15.2%)	0220	12.40	0.0900	12.50	0.2035	0.1060	5	-0.50	0%	0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (15.2%)	0493	12.45	0.1000	12.50	0.2035	0.1060	5	-0.23	0%	0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (15.2%)	0522	12.51	0.0900	12.50	0.2035	0.1060	5	0.04	0%	0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (15.2%)	0117	12.84	0.1700	12.50	0.2035	0.1060	5	1.66	1%	0
041.20	Direct Available Phosphorus as P2O5, Spectrop... (15.2%)	0027	11.80	0.0500				1			0
041.21	Direct Available Phosphorus as P2O5, Spectrop... (15.2%)	0535	12.55	0.1000	14.66	1.417	0.2150	4	-1.49	7%	0
041.21	Direct Available Phosphorus as P2O5, Spectrop... (15.2%)	0231	15.14	0.0700	14.66	1.417	0.2150	4	0.34	2%	0
041.21	Direct Available Phosphorus as P2O5, Spectrop... (15.2%)	0106	15.42	0.4300	14.66	1.417	0.2150	4	0.53	3%	0
041.21	Direct Available Phosphorus as P2O5, Spectrop... (15.2%)	0522	15.54	0.2600	14.66	1.417	0.2150	4	0.62	3%	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
041.40	Direct Available Phosphorus as P2O5, Automate... (15.2%)	0018	12.60	0.0000				2			0
041.40	Direct Available Phosphorus as P2O5, Automate... (15.2%)	0131	14.82	0.1700				2			0
041.50	Direct Available Phosphorus as P2O5, ICP (15.2%)	0137	14.60	0.0700	15.04	0.3127	0.1963	8	-1.31	1%	0
041.50	Direct Available Phosphorus as P2O5, ICP (15.2%)	0070	14.69	0.3400	15.04	0.3127	0.1963	8	-1.03	1%	0
041.50	Direct Available Phosphorus as P2O5, ICP (15.2%)	0043	14.98	0.0400	15.04	0.3127	0.1963	8	-0.19	0%	0
041.50	Direct Available Phosphorus as P2O5, ICP (15.2%)	0325	15.10	0.4000	15.04	0.3127	0.1963	8	0.16	0%	0
041.50	Direct Available Phosphorus as P2O5, ICP (15.2%)	0368	15.15	0.1100	15.04	0.3127	0.1963	8	0.31	0%	0
041.50	Direct Available Phosphorus as P2O5, ICP (15.2%)	0233	15.19	0.2800	15.04	0.3127	0.1963	8	0.43	0%	0
041.50	Direct Available Phosphorus as P2O5, ICP (15.2%)	0007	15.25	0.3000	15.04	0.3127	0.1963	8	0.60	1%	0
041.50	Direct Available Phosphorus as P2O5, ICP (15.2%)	0291	15.40	0.0300	15.04	0.3127	0.1963	8	1.03	1%	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (15.2%)	0072	14.88	0.0800	15.12	0.1919	0.1483	6	-1.10	1%	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (15.2%)	0040	15.00	0.0000	15.12	0.1919	0.1483	6	-0.55	0%	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (15.2%)	0360	15.05	0.3200	15.12	0.1919	0.1483	6	-0.31	0%	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (15.2%)	0377	15.19	0.2300	15.12	0.1919	0.1483	6	0.31	0%	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (15.2%)	0117	15.28	0.2300	15.12	0.1919	0.1483	6	0.73	1%	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (15.2%)	0025	15.32	0.0300	15.12	0.1919	0.1483	6	0.92	1%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (15.2%)	0029	11.87	0.0600	12.48	0.4152	0.0749	12	-1.47	2%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (15.2%)	0472	12.01	0.0400	12.48	0.4152	0.0749	12	-1.13	2%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (15.2%)	0105	12.33	0.1000	12.48	0.4152	0.0749	12	-0.36	1%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (15.2%)	0043	12.35	0.0100	12.48	0.4152	0.0749	12	-0.33	1%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (15.2%)	0037	12.38	0.0890	12.48	0.4152	0.0749	12	-0.24	0%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (15.2%)	0055	12.40	0.0700	12.48	0.4152	0.0749	12	-0.21	0%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (15.2%)	0136	12.49	0.0300	12.48	0.4152	0.0749	12	0.01	0%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (15.2%)	0535	12.50	0.0000	12.48	0.4152	0.0749	12	0.05	0%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (15.2%)	0034	12.57	0.3440	12.48	0.4152	0.0749	12	0.21	0%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (15.2%)	0072	12.68	0.0320	12.48	0.4152	0.0749	12	0.47	1%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (15.2%)	0230	13.25	0.1000	12.48	0.4152	0.0749	12	1.85	3%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (15.2%)	0354	15.09	0.0240	12.48	0.4152	0.0749	12	6.29	10%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (15.2%)	0073	13.64	0.6700	12.48	0.4152	0.0749	12	2.78	5%	1
041.99	Direct Available Phosphorus as P2O5, Other (15.2%)	0538	12.40	0.0400	12.59	0.1635	0.0629	7	-1.07	1%	0
041.99	Direct Available Phosphorus as P2O5, Other (15.2%)	0531	12.51	0.0200	12.59	0.1635	0.0629	7	-0.47	0%	0
041.99	Direct Available Phosphorus as P2O5, Other (15.2%)	0535	12.55	0.1000	12.59	0.1635	0.0629	7	-0.24	0%	0
041.99	Direct Available Phosphorus as P2O5, Other (15.2%)	0540	12.55	0.1000	12.59	0.1635	0.0629	7	-0.24	0%	0
041.99	Direct Available Phosphorus as P2O5, Other (15.2%)	0539	12.59	0.0200	12.59	0.1635	0.0629	7	-0.02	0%	0
041.99	Direct Available Phosphorus as P2O5, Other (15.2%)	0532	12.72	0.0800	12.59	0.1635	0.0629	7	0.70	0%	0
041.99	Direct Available Phosphorus as P2O5, Other (15.2%)	0533	14.60	0.0800	12.59	0.1635	0.0629	7	11.09	8%	0
048.20	Water Soluble Phosphorus as P2O5, Spectrophot... (%)	0535	12.55	0.1000				2			0
048.20	Water Soluble Phosphorus as P2O5, Spectrophot... (%)	0309	14.22	0.0300				2			0
050.00	Soluble Potassium as K2O, STPB Oxalate (15%)	0114	16.12*	0.1000	17.79	0.5708	0.1441	10	-2.73	5%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (15%)	0220	17.37	0.1000	17.79	0.5708	0.1441	10	-0.69	1%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (15%)	0072	17.41	0.0110	17.79	0.5708	0.1441	10	-0.62	1%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (15%)	0416	17.61	0.0100	17.79	0.5708	0.1441	10	-0.31	1%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (15%)	0231	17.64	0.0600	17.79	0.5708	0.1441	10	-0.25	0%	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
050.00	Soluble Potassium as K2O, STPB Oxalate (15%)	0049	17.95	0.2700	17.79	0.5708	0.1441	10	0.25	0%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (15%)	0494	17.95	0.4700	17.79	0.5708	0.1441	10	0.25	0%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (15%)	0522	18.09	0.2100	17.79	0.5708	0.1441	10	0.47	1%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (15%)	0090	18.35	0.0200	17.79	0.5708	0.1441	10	0.91	2%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (15%)	0055	18.74	0.1900	17.79	0.5708	0.1441	10	1.53	3%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (15%)	0534	14.90*	0.0000	17.53	1.979	0.2038	8	-1.22	8%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (15%)	0309	15.58*	0.1000	17.53	1.979	0.2038	8	-0.90	6%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (15%)	0356	17.54	0.4500	17.53	1.979	0.2038	8	0.00	0%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (15%)	0040	17.55	0.3000	17.53	1.979	0.2038	8	0.01	0%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (15%)	0073	17.61	0.1600	17.53	1.979	0.2038	8	0.04	0%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (15%)	0136	17.72	0.0500	17.53	1.979	0.2038	8	0.09	1%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (15%)	0157	18.85	0.3000	17.53	1.979	0.2038	8	0.61	4%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (15%)	0428	25.36	0.2707	17.53	1.979	0.2038	8	3.62	22%	0
050.31	Soluble Potassium as K2O, AA (Citrate) (15%)	0472	13.34*	0.1300				1			0
050.32	Soluble Potassium as K2O, AA (Citrate-EDTA) (15%)	0185	17.17	0.1400				1			0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (15%)	0230	15.35*	0.1000	17.60	0.5353	0.0700	6	-3.75	6%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (15%)	0106	17.40	0.0900	17.60	0.5353	0.0700	6	-0.35	1%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (15%)	0292	17.52	0.0200	17.60	0.5353	0.0700	6	-0.14	0%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (15%)	0055	17.88	0.0600	17.60	0.5353	0.0700	6	0.46	1%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (15%)	0157	17.95	0.1000	17.60	0.5353	0.0700	6	0.58	1%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (15%)	0452	18.08	0.0500	17.60	0.5353	0.0700	6	0.78	1%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (15%)	0324	19.30	0.8000	17.60	0.5353	0.0700	6	2.82	5%	1
050.51	Soluble Potassium as K2O, ICP (Citrate) (15%)	0483	16.87	0.7300	17.55	0.4704	0.3540	5	-1.46	2%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (15%)	0043	17.34	0.1300	17.55	0.4704	0.3540	5	-0.46	1%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (15%)	0070	17.60	0.4000	17.55	0.4704	0.3540	5	0.10	0%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (15%)	0007	17.95	0.5000	17.55	0.4704	0.3540	5	0.85	1%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (15%)	0291	18.01	0.0100	17.55	0.4704	0.3540	5	0.97	1%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (15%)	0543	16.34*	0.0260	17.38	0.6471	0.2546	11	-1.50	3%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (15%)	0486	16.56	0.3500	17.38	0.6471	0.2546	11	-1.19	2%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (15%)	0354	16.71	0.1130	17.38	0.6471	0.2546	11	-0.97	2%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (15%)	0233	17.33	0.3700	17.38	0.6471	0.2546	11	-0.08	0%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (15%)	0423	17.56	0.9020	17.38	0.6471	0.2546	11	0.26	1%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (15%)	0377	17.56	0.1600	17.38	0.6471	0.2546	11	0.26	1%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (15%)	0025	17.70	0.1500	17.38	0.6471	0.2546	11	0.45	1%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (15%)	0137	17.70	0.0400	17.38	0.6471	0.2546	11	0.46	1%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (15%)	0360	17.73	0.2300	17.38	0.6471	0.2546	11	0.50	1%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (15%)	0117	17.76	0.4000	17.38	0.6471	0.2546	11	0.55	1%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (15%)	0072	18.19	0.0600	17.38	0.6471	0.2546	11	1.17	2%	0
050.60	Soluble Potassium as K2O, Flame Photometric ... (15%)	0041	17.14	0.0300	17.52	0.3368	0.0533	3	-1.14	1%	0
050.60	Soluble Potassium as K2O, Flame Photometric ... (15%)	0105	17.67	0.0900	17.52	0.3368	0.0533	3	0.43	0%	0
050.60	Soluble Potassium as K2O, Flame Photometric ... (15%)	0169	17.76	0.0400	17.52	0.3368	0.0533	3	0.71	1%	0
050.61	Soluble Potassium as K2O, Flame Photometric ... (15%)	0535	17.85	0.1000				2			0
050.61	Soluble Potassium as K2O, Flame Photometric ... (15%)	0035	18.03	0.1800				2			0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
050.62	Soluble Potassium as K2O, Flame Photometric (... (15%)	0513	16.15*	0.0500	17.50	0.8811	0.1130	6	-1.37	4%	0
050.62	Soluble Potassium as K2O, Flame Photometric (... (15%)	0034	17.30	0.2820	17.50	0.8811	0.1130	6	-0.21	1%	0
050.62	Soluble Potassium as K2O, Flame Photometric (... (15%)	0029	17.47	0.0400	17.50	0.8811	0.1130	6	-0.03	0%	0
050.62	Soluble Potassium as K2O, Flame Photometric (... (15%)	0037	17.75	0.0460	17.50	0.8811	0.1130	6	0.25	1%	0
050.62	Soluble Potassium as K2O, Flame Photometric (... (15%)	0105	17.76	0.1600	17.50	0.8811	0.1130	6	0.26	1%	0
050.62	Soluble Potassium as K2O, Flame Photometric (... (15%)	0018	18.55	0.1000	17.50	0.8811	0.1130	6	1.06	3%	0
050.99	Soluble Potassium as K2O, Other (15%)	0537	14.95*	0.3000	17.30	1.139	0.1888	33	-2.06	7%	0
050.99	Soluble Potassium as K2O, Other (15%)	0518	15.08*	0.0000	17.30	1.139	0.1888	33	-1.95	6%	0
050.99	Soluble Potassium as K2O, Other (15%)	0532	15.11*	0.0600	17.30	1.139	0.1888	33	-1.92	6%	0
050.99	Soluble Potassium as K2O, Other (15%)	0531	15.56*	0.0200	17.30	1.139	0.1888	33	-1.53	5%	0
050.99	Soluble Potassium as K2O, Other (15%)	0526	15.59*	0.1800	17.30	1.139	0.1888	33	-1.50	5%	0
050.99	Soluble Potassium as K2O, Other (15%)	0501	15.88*	0.0200	17.30	1.139	0.1888	33	-1.25	4%	0
050.99	Soluble Potassium as K2O, Other (15%)	0521	16.23*	0.0000	17.30	1.139	0.1888	33	-0.94	3%	0
050.99	Soluble Potassium as K2O, Other (15%)	0541	16.46*	0.5500	17.30	1.139	0.1888	33	-0.74	2%	0
050.99	Soluble Potassium as K2O, Other (15%)	0042	16.46*	0.7200	17.30	1.139	0.1888	33	-0.74	2%	0
050.99	Soluble Potassium as K2O, Other (15%)	0476	16.58	0.1650	17.30	1.139	0.1888	33	-0.63	2%	0
050.99	Soluble Potassium as K2O, Other (15%)	0500	16.60	0.0000	17.30	1.139	0.1888	33	-0.61	2%	0
050.99	Soluble Potassium as K2O, Other (15%)	0389	17.48	0.0500	17.30	1.139	0.1888	33	0.15	1%	0
050.99	Soluble Potassium as K2O, Other (15%)	0493	17.60	0.1000	17.30	1.139	0.1888	33	0.26	1%	0
050.99	Soluble Potassium as K2O, Other (15%)	0433	17.66	0.0700	17.30	1.139	0.1888	33	0.31	1%	0
050.99	Soluble Potassium as K2O, Other (15%)	0538	17.70	0.0800	17.30	1.139	0.1888	33	0.35	1%	0
050.99	Soluble Potassium as K2O, Other (15%)	0498	17.70	0.2000	17.30	1.139	0.1888	33	0.35	1%	0
050.99	Soluble Potassium as K2O, Other (15%)	0043	17.73	0.0900	17.30	1.139	0.1888	33	0.37	1%	0
050.99	Soluble Potassium as K2O, Other (15%)	0523	17.75	0.3000	17.30	1.139	0.1888	33	0.39	1%	0
050.99	Soluble Potassium as K2O, Other (15%)	0535	17.75	0.1000	17.30	1.139	0.1888	33	0.39	1%	0
050.99	Soluble Potassium as K2O, Other (15%)	0096	17.78	0.5900	17.30	1.139	0.1888	33	0.42	1%	0
050.99	Soluble Potassium as K2O, Other (15%)	0307	17.80	0.3200	17.30	1.139	0.1888	33	0.44	1%	0
050.99	Soluble Potassium as K2O, Other (15%)	0371	17.80	0.6000	17.30	1.139	0.1888	33	0.44	1%	0
050.99	Soluble Potassium as K2O, Other (15%)	0234	17.81	0.0200	17.30	1.139	0.1888	33	0.45	1%	0
050.99	Soluble Potassium as K2O, Other (15%)	0368	17.89	0.0043	17.30	1.139	0.1888	33	0.51	2%	0
050.99	Soluble Potassium as K2O, Other (15%)	0540	17.90	0.2000	17.30	1.139	0.1888	33	0.53	2%	0
050.99	Soluble Potassium as K2O, Other (15%)	0527	17.91	0.0700	17.30	1.139	0.1888	33	0.53	2%	0
050.99	Soluble Potassium as K2O, Other (15%)	0539	17.95	0.1000	17.30	1.139	0.1888	33	0.57	2%	0
050.99	Soluble Potassium as K2O, Other (15%)	0451	17.98	0.1500	17.30	1.139	0.1888	33	0.59	2%	0
050.99	Soluble Potassium as K2O, Other (15%)	0325	18.00	0.2000	17.30	1.139	0.1888	33	0.61	2%	0
050.99	Soluble Potassium as K2O, Other (15%)	0536	18.30	0.5300	17.30	1.139	0.1888	33	0.87	3%	0
050.99	Soluble Potassium as K2O, Other (15%)	0027	18.48	0.0100	17.30	1.139	0.1888	33	1.03	3%	0
050.99	Soluble Potassium as K2O, Other (15%)	0300	18.80	0.0200	17.30	1.139	0.1888	33	1.32	4%	0
050.99	Soluble Potassium as K2O, Other (15%)	0524	19.79	0.4098	17.30	1.139	0.1888	33	2.18	7%	0
050.99	Soluble Potassium as K2O, Other (15%)	0533	15.05*	1.190	17.30	1.139	0.1888	33	-1.98	7%	1
050.99	Soluble Potassium as K2O, Other (15%)	0482	17.60	1.200	17.30	1.139	0.1888	33	0.26	1%	1
050.99	Soluble Potassium as K2O, Other (15%)	0530	37.05	0.5000	17.30	1.139	0.1888	33	17.33	57%	2
101.00	Acid Soluble Calcium, AA, inorganic 965.09 (%)	0105	0.0015	0.0000				1			0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
101.03	Acid Soluble Calcium, AA, 965.09, test portio... (%)	0105	0.0019	0.0010				1			0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0354	0.0270	0.0040				1			0
101.99	Acid Soluble Calcium, Other (%)	0389	0.0045	0.0010				1			0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (%)	0105	0.0005	0.0001	0.0292	0.0484	0.0034	3	-0.59	49%	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (%)	0530	0.0020	0.0000	0.0292	0.0484	0.0034	3	-0.56	47%	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (%)	0309	0.0850	0.0100	0.0292	0.0484	0.0034	3	1.15	96%	0
121.03	Acid Soluble Magnesium, AA, 965.09, test port... (%)	0105	0.0009	0.0009				1			0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0354	0.0110	0.0000				1			0
121.32	Acid Soluble Magnesium, ICP, test portion 200... (%)	0521	0.0007	0.0000				1			0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (%)	0527	0.0010	0.0000				1			0
121.99	Acid Soluble Magnesium, Other (%)	0524	0.0005	0.0000				2			0
121.99	Acid Soluble Magnesium, Other (%)	0389	0.0008	0.0002				2			0
143.99	Elemental Sulfur, Other (%)	0389	0.0025	0.0010				1			0
148.99	Total Sulfur, Other (%)	0354	0.0285	0.0030				1			0
149.04	Sulfur - HNO3 soluble, ICP (%)	0521	0.0018	0.0000				2			0
149.04	Sulfur - HNO3 soluble, ICP (%)	0524	0.0020	0.0000				2			0
151.00	Acid Soluble Arsenic , AA, test portion as in... (ppm)	0498	2.165	0.0700				1			0
151.30	Acid Soluble Arsenic , ICP (ppm)	0220	2.500	0.6000				1			0
151.33	Acid Soluble Arsenic , ICP, 2006.03 modified ... (ppm)	0527	3.216	0.0200				1			0
151.99	Acid Soluble Arsenic , Other (ppm)	0530	3.100	1.000				1			0
165.30	Acid Soluble Boron , ICP, test portion in 982... (%)	0389	0.0008	0.0002	0.0066	0.0098	0.0021	3	-0.59	44%	0
165.30	Acid Soluble Boron , ICP, test portion in 982... (%)	0521	0.0011	0.0000	0.0066	0.0098	0.0021	3	-0.56	42%	0
165.30	Acid Soluble Boron , ICP, test portion in 982... (%)	0354	0.0180	0.0060	0.0066	0.0098	0.0021	3	1.15	86%	0
165.99	Acid Soluble Boron , Other (%)	0524	0.0009	0.0000				1			0
181.30	Acid Soluble Cadmium , ICP (ppm)	0524	0.0352	0.0010	0.2867	0.3043	0.0037	3	-0.83	44%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0220	0.2000	0.0000	0.2867	0.3043	0.0037	3	-0.29	15%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0389	0.6250	0.0100	0.2867	0.3043	0.0037	3	1.11	59%	0
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified ... (ppm)	0527	0.0425	0.0010				1			0
181.99	Acid Soluble Cadmium , Other (ppm)	0530	0.0100	0.0000				1			0
191.30	Acid Soluble Chromium , ICP (ppm)	0482	2.200	0.0000	12.35	16.64	0.3000	3	-0.61	41%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0220	3.300	0.0000	12.35	16.64	0.3000	3	-0.54	37%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0389	31.55	0.9000	12.35	16.64	0.3000	3	1.15	78%	0
191.33	Acid Soluble Chromium , ICP, 2006.03 modified... (ppm)	0527	0.3945	0.0410				1			0
202.30	Acid Soluble Cobalt , ICP (ppm)	0524	0.2120	0.0107	6.421	10.68	0.5702	3	-0.58	48%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0220	0.3000	0.2000	6.421	10.68	0.5702	3	-0.57	48%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0389	18.75	1.500	6.421	10.68	0.5702	3	1.15	96%	0
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified w... (ppm)	0527	0.0095	0.0010				1			0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (%)	0530	0.0020	0.0000				1			0
221.30	Acid Soluble Copper , ICP, test portion inorg... (%)	0354	0.0015	0.0010				1			0
221.99	Acid Soluble Copper , Other (%)	0389	0.0002	0.0001				1			0
241.00	Acid Soluble Iron, AA, inorganic 965.09 (0.1%)	0105	0.0008	0.0007	0.0045	0.0059	0.0002	6	-0.57	42%	0
241.00	Acid Soluble Iron, AA, inorganic 965.09 (0.1%)	0535	0.0010	0.0001	0.0045	0.0059	0.0002	6	-0.54	39%	0
241.00	Acid Soluble Iron, AA, inorganic 965.09 (0.1%)	0531	0.0012	0.0001	0.0045	0.0059	0.0002	6	-0.51	37%	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
241.00	Acid Soluble Iron, AA, inorganic 965.09 (0.1%)	0040	0.0020	0.0000	0.0045	0.0059	0.0002	6	-0.38	28%	0
241.00	Acid Soluble Iron, AA, inorganic 965.09 (0.1%)	0530	0.0100	0.0000	0.0045	0.0059	0.0002	6	0.83	61%	0
241.00	Acid Soluble Iron, AA, inorganic 965.09 (0.1%)	0043	0.0123	0.0003	0.0045	0.0059	0.0002	6	1.17	86%	0
241.03	Acid Soluble Iron, AA, 965.09, test portion 2... (0.1%)	0105	0.0004	0.0003				1			0
241.20	Acid Soluble Iron , Colormetric (0.1%)	0518	0.1300	0.0200				1			0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (0.1%)	0360	0.0006	0.0001	0.0029	0.0033	0.0001	6	-0.63	40%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (0.1%)	0324	0.0011	0.0000	0.0029	0.0033	0.0001	6	-0.48	31%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (0.1%)	0541	0.0011	0.0000	0.0029	0.0033	0.0001	6	-0.48	31%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (0.1%)	0035	0.0016	0.0004	0.0029	0.0033	0.0001	6	-0.34	22%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (0.1%)	0354	0.0050	0.0000	0.0029	0.0033	0.0001	6	0.58	38%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (0.1%)	0234	0.0100	0.0000	0.0029	0.0033	0.0001	6	1.94	125%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (0.1%)	0157	0.0015	0.0010	0.0029	0.0033	0.0001	6	-0.37	24%	1
241.30	Acid Soluble Iron, ICP, test portion inorgani... (0.1%)	0114	0.0000	0.0000	0.0029	0.0033	0.0001	6			4
241.32	Acid Soluble Iron, ICP, test portion 2006.03A... (0.1%)	0521	0.0006	0.0000				1			0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (0.1%)	0486	0.0010	0.0000				2			0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (0.1%)	0055	0.0011	0.0010				2			0
241.99	Acid Soluble Iron, Other (0.1%)	0524	0.0003	0.0000	0.0011	0.0008	0.0001	5	-0.96	36%	0
241.99	Acid Soluble Iron, Other (0.1%)	0389	0.0006	0.0000	0.0011	0.0008	0.0001	5	-0.60	23%	0
241.99	Acid Soluble Iron, Other (0.1%)	0368	0.0009	0.0004	0.0011	0.0008	0.0001	5	-0.24	9%	0
241.99	Acid Soluble Iron, Other (0.1%)	0042	0.0013	0.0001	0.0011	0.0008	0.0001	5	0.18	7%	0
241.99	Acid Soluble Iron, Other (0.1%)	0476	0.0025	0.0001	0.0011	0.0008	0.0001	5	1.62	61%	0
251.30	Acid Soluble Lead , ICP (ppm)	0524	0.0407	0.0042	0.8052	0.9020	0.0114	3	-0.85	47%	0
251.30	Acid Soluble Lead , ICP (ppm)	0220	0.5750	0.0300	0.8052	0.9020	0.0114	3	-0.26	14%	0
251.30	Acid Soluble Lead , ICP (ppm)	0389	1.800	0.0000	0.8052	0.9020	0.0114	3	1.10	62%	0
251.33	Acid Soluble Lead , ICP, 2006.03 modified w/9... (ppm)	0527	0.0110	0.0020				1			0
251.99	Acid Soluble Lead , Other (ppm)	0530	6.450	0.9000				1			0
261.30	Acid Soluble Manganese , ICP, test portion 97... (%)	0354	0.0000	0.0000				0			4
281.30	Acid Soluble Mercury , ICP (ppm)	0527	0.0030	0.0040				1			0
281.99	Acid Soluble Mercury , Other (ppm)	0530	0.0200	0.0000				1			0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0524	0.2711	0.0369	1.450	1.782	0.0790	3	-0.66	41%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0521	0.5791	0.0000	1.450	1.782	0.0790	3	-0.49	30%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0389	3.500	0.2000	1.450	1.782	0.0790	3	1.15	71%	0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modifi... (ppm)	0527	0.4245	0.0190				1			0
291.30	Acid Soluble Nickel , ICP (ppm)	0524	0.2620	0.0425	3.723	6.361	0.2106	4	-0.54	46%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0521	0.3319	0.0000	3.723	6.361	0.2106	4	-0.53	46%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0220	1.050	0.3000	3.723	6.361	0.2106	4	-0.42	36%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0389	13.25	0.5000	3.723	6.361	0.2106	4	1.50	128%	0
291.33	Acid Soluble Nickel , ICP, 2006.03 modified w... (ppm)	0527	0.2800	0.0040				1			0
301.33	Acid Soluble Selenium , ICP, 2006.03 modified... (ppm)	0527	0.0425	0.0130				1			0
311.32	Sodium, ICP, 2006.03 test portion (%)	0521	0.0915	0.0000				1			0
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)	0527	0.0800	0.0000				2			0
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)	0423	0.0855	0.0010				2			0
311.99	Sodium, Other (%)	0482	0.0800	0.0000				2			0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
311.99	Sodium, Other (%)	0354	0.1825	0.0490				2			0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.1%)	0535	0.0003	0.0001	0.0027	0.0037	0.0002	8	-0.61	45%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.1%)	0105	0.0004	0.0000	0.0027	0.0037	0.0002	8	-0.57	43%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.1%)	0531	0.0008	0.0001	0.0027	0.0037	0.0002	8	-0.48	36%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.1%)	0040	0.0009	0.0003	0.0027	0.0037	0.0002	8	-0.46	34%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.1%)	0540	0.0011	0.0002	0.0027	0.0037	0.0002	8	-0.40	30%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.1%)	0533	0.0026	0.0003	0.0027	0.0037	0.0002	8	-0.04	3%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.1%)	0043	0.0075	0.0003	0.0027	0.0037	0.0002	8	1.18	88%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.1%)	0530	0.0100	0.0000	0.0027	0.0037	0.0002	8	1.81	135%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.1%)	0428	0.1343	0.0137	0.0027	0.0037	0.0002	8	32.54	2437%	1
321.03	Acid Soluble Zinc , AA, 965.09, test portion ... (0.1%)	0105	0.0003	0.0003				1			0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (0.1%)	0360	0.0004	0.0002	0.0017	0.0010	0.0005	5	-1.07	38%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (0.1%)	0324	0.0011	0.0010	0.0017	0.0010	0.0005	5	-0.47	17%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (0.1%)	0035	0.0017	0.0001	0.0017	0.0010	0.0005	5	-0.01	0%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (0.1%)	0354	0.0020	0.0000	0.0017	0.0010	0.0005	5	0.29	10%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (0.1%)	0541	0.0032	0.0011	0.0017	0.0010	0.0005	5	1.26	45%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (0.1%)	0114	0.0000	0.0000	0.0017	0.0010	0.0005	5			4
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (0.1%)	0157	0.0000	0.0000	0.0017	0.0010	0.0005	5			4
321.32	Acid Soluble Zinc , ICP, test portion 2006.03... (0.1%)	0521	0.0006	0.0000				1			0
321.33	Acid Soluble Zinc , ICP, test portion 2006.03... (0.1%)	0055	0.0003	0.0001	0.0006	0.0003	0.0002	3	-1.00	27%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.03... (0.1%)	0072	0.0006	0.0001	0.0006	0.0003	0.0002	3	0.00	0%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.03... (0.1%)	0220	0.0009	0.0003	0.0006	0.0003	0.0002	3	1.00	27%	0
321.99	Acid Soluble Zinc , Other (0.1%)	0524	0.0003	0.0001	0.0005	0.0005	0.0000	5	-0.63	27%	0
321.99	Acid Soluble Zinc , Other (0.1%)	0389	0.0003	0.0000	0.0005	0.0005	0.0000	5	-0.52	22%	0
321.99	Acid Soluble Zinc , Other (0.1%)	0368	0.0004	0.0000	0.0005	0.0005	0.0000	5	-0.31	13%	0
321.99	Acid Soluble Zinc , Other (0.1%)	0476	0.0004	0.0000	0.0005	0.0005	0.0000	5	-0.31	13%	0
321.99	Acid Soluble Zinc , Other (0.1%)	0042	0.0014	0.0001	0.0005	0.0005	0.0000	5	1.77	75%	0
325.00	Water Soluble Zinc , AA (%)	0535	0.0002	0.0000	0.0004	0.0003	0.0000	3	-0.58	24%	0
325.00	Water Soluble Zinc , AA (%)	0539	0.0002	0.0000	0.0004	0.0003	0.0000	3	-0.58	24%	0
325.00	Water Soluble Zinc , AA (%)	0540	0.0008	0.0001	0.0004	0.0003	0.0000	3	1.15	48%	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 and a 4 flag indicates rejected due to 0 value submitted. Robust statistics not used if < 6 labs used in calculations, in this case the Z Scores are included for information only (Grey). An offset lab value with an asterisk indicates that the value is lower than the Analyte value less the IA. Method or Analyte 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.