

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Methods: 88

Sample # 160111

Statistical Summary

Labs Reporting: 72

Micro Mix

Issue Date : 02/29/2016

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
001.99	Ammoniacal Nitrogen, Other (%)	1		0.0800									
010.60	Total Nitrogen, Combustion (%)	4	4	0.1259	0.0622	0.1259		0.0622	0.0311	49.44%		0.0088	5.46%
020.20	Total Phosphorus as P2O5, Spectrophotometric Molyb... (%)	1		0.5750									
020.40	Total Phosphorus as P2O5, Automated (%)	1		1.740									
020.50	Total Phosphorus as P2O5, ICP (%)	2	2	0.3675	0.0743								
030.40	Citrate Insoluble Phosphorus as P2O5, Automated, t... (%)	1		0.6600									
040.40	Indirect Available Phosphorus as P2O5, Automated (%)	1		1.080									
041.51	Direct Available Phosphorus as P2O5, ICP, Citrate-... (%)	1		0.1000									
041.60	Direct Available Phosphorus as P2O5, Citrate-EDTA ... (%)	1		0.4660									
048.40	Water Soluble Phosphorus as P2O5, Automated (%)	1		0.0450									
050.50	Soluble Potassium as K2O, ICP (Oxalate) (%)	1		0.1550									
050.51	Soluble Potassium as K2O, ICP (Citrate) (%)	1		0.0900									
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (%)	1		0.1985									
050.99	Soluble Potassium as K2O, Other (%)	4	4	0.1975	0.0386	0.1975		0.0386	0.0193	19.56%		0.0100	5.11%
060.00	Water (Free), Vacuum Oven (%)	1		2.065									
060.30	Water (Free), AFPC No. 2B (105°C oven for 2 hours,... (%)	2	2	2.893	0.3217								
060.99	Water (Free), Other (%)	1		3.225									
101.00	Acid Soluble Calcium, AA, inorganic 965.09 (%)	2	2	2.342	0.0898								
101.30	Acid Soluble Calcium, ICP, test portion inorganic ... (%)	7	7	2.257	0.1720	2.257		0.1945	0.0735	8.62%		0.0750	3.54%
101.33	Acid Soluble Calcium, ICP, test portion 2006.03A-C... (%)	1		2.205									
101.99	Acid Soluble Calcium, Other (%)	1		2.270									
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (%)	3	3	0.6398	0.0357	0.6398		0.0357	0.0206	5.57%		0.0310	4.28%
121.30	Acid Soluble Magnesium, ICP, test portion inorgani... (%)	7	7	0.6872	0.0800	0.6872		0.0908	0.0343	13.21%		0.0281	4.23%
121.33	Acid Soluble Magnesium, ICP, test portion 2006.03A... (%)	1		0.7512									
121.99	Acid Soluble Magnesium, Other (%)	2	2	0.5583	0.0095								
143.99	Elemental Sulfur, Other (%)	1		0.2085									
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulfur - ... (%)	1		0.0700									
148.07	Total Sulfur, ICP, test portion as in 2006.03 modi... (%)	3	3	0.2627	0.0415	0.2627		0.0415	0.0240	15.80%		0.0107	4.89%
148.99	Total Sulfur, Other (%)	4	4	0.1548	0.1225	0.1548		0.1225	0.0613	79.19%		0.0115	5.30%
151.30	Acid Soluble Arsenic , ICP (ppm)	3	3	9.863	2.586	9.863		2.586	1.493	26.22%		0.2910	11.34%
151.33	Acid Soluble Arsenic , ICP, 2006.03 modified w/9:3... (ppm)	2	2	9.968	0.9444								

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
165.00	Acid Soluble Boron , Spectrophotometric (1.5%)	8	8	1.515	0.0912	1.515	0.2351	0.1035	0.0366	6.83%	7.76%	0.0438	3.76%
165.30	Acid Soluble Boron , ICP, test portion in 982.01 (1.5%)	21	20	1.561	0.1201	1.543	0.2351	0.0650	0.0145	4.21%	7.62%	0.0490	3.75%
165.99	Acid Soluble Boron , Other (1.5%)	24	23	1.553	0.1619	1.561	0.2351	0.1549	0.0323	9.92%	7.53%	0.0436	3.74%
171.10	Water Soluble Boron , Spectrophotometric (%)	1		1.610									
171.99	Water Soluble Boron , Other (%)	2	2	1.496	0.0506								
181.30	Acid Soluble Cadmium , ICP (ppm)	5	5	4.270	0.6292	4.270		0.6292	0.2814	14.74%		0.1534	12.86%
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified w/9:3... (ppm)	2	2	6.020	2.623								
190.99	Water Soluble Chlorine, Other (%)	1		0.0180									
191.30	Acid Soluble Chromium , ICP (ppm)	5	5	76.21	20.03	76.21		20.03	8.959	26.29%		1.916	8.33%
191.33	Acid Soluble Chromium , ICP, 2006.03 modified w/9:... (ppm)	2	2	71.04	17.03								
202.30	Acid Soluble Cobalt , ICP (ppm)	4	4	146.4	29.08	146.4		29.08	14.54	19.87%		3.506	7.55%
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified w/9:3 ... (ppm)	2	2	173.3	17.68								
221.00	Acid Soluble Copper , AA, inorganic 965.09 (3%)	12	12	3.698	0.5807	3.838	0.3992	0.2871	0.0829	7.48%	5.20%	0.0775	3.27%
221.03	Acid Soluble Copper , AA, 965.09, test portion 200... (3%)	2	2	3.855	0.0707								
221.30	Acid Soluble Copper , ICP, test portion inorganic ... (3%)	31	30	4.017	0.2754	3.999	0.3992	0.2723	0.0497	6.81%	4.99%	0.2061	3.25%
221.32	Acid Soluble Copper , ICP, test portion 2006.03A-C... (3%)	2	2	4.031	0.1846								
221.33	Acid Soluble Copper , ICP, test portion 2006.03A-C... (3%)	11	11	3.608	1.217	3.923	0.3992	0.3020	0.0911	7.70%	5.09%	0.0930	3.26%
221.99	Acid Soluble Copper , Other (3%)	10	10	3.848	0.5452	3.832	0.3992	0.5804	0.1835	15.15%	5.21%	0.1276	3.27%
241.00	Acid Soluble Iron, AA, inorganic 965.09 (18%)	11	11	17.47	3.912	18.40	1.0000	1.392	0.4196	7.56%	2.72%	0.3116	2.58%
241.02	Acid Soluble Iron, AA, 965.09, test portion 2006.0... (18%)	1		6.295									
241.03	Acid Soluble Iron, AA, 965.09, test portion 2006.0... (18%)	1		18.84									
241.30	Acid Soluble Iron, ICP, test portion inorganic 965... (18%)	32	31	17.67	2.765	18.02	1.0000	2.243	0.4029	12.45%	2.77%	0.4415	2.59%
241.32	Acid Soluble Iron, ICP, test portion 2006.03A-C (18%)	1		19.47									
241.33	Acid Soluble Iron, ICP, test portion 2006.03A-C, w... (18%)	12	12	18.83	1.218	18.86	1.0000	1.294	0.3735	6.86%	2.65%	0.2007	2.57%
241.70	Acid Soluble Iron, Titrimetric (18%)	1		19.40									
241.99	Acid Soluble Iron, Other (18%)	7	6	18.56	2.067	18.38	1.0000	1.890	0.7714	10.28%	2.72%	0.9850	2.58%
251.30	Acid Soluble Lead , ICP (ppm)	4	4	455.3	38.35	455.3		38.35	19.17	8.42%		7.302	6.37%
251.33	Acid Soluble Lead , ICP, 2006.03 modified w/9:3 HN... (ppm)	2	2	488.6	2.005								
261.00	Acid Soluble Manganese , AA, Mn2+ only (7.5%)	1		8.240									
261.11	Acid Soluble Manganese , AA, total Mn (7.5%)	4	4	6.936	0.9099	6.936	0.8299	0.9099	0.4550	13.12%	5.98%	0.1525	2.99%
261.12	Acid Soluble Manganese , AA, inorganic 965.09 (7.5%)	6	6	8.115	0.2624	8.115	0.8299	0.2976	0.1215	3.67%	5.11%	0.2700	2.92%
261.14	Acid Soluble Manganese , AA, 965.09, test portion ... (7.5%)	1		7.235									
261.15	Acid Soluble Manganese , AA, 965.09, test portion ... (7.5%)	2	2	8.410	0.7142								
261.30	Acid Soluble Manganese , ICP, test portion 972.02a... (7.5%)	20	20	8.435	0.8264	8.485	0.8299	0.7828	0.1750	9.23%	4.89%	0.3123	2.90%
261.31	Acid Soluble Manganese , ICP, test portion 972.02b... (7.5%)	4	4	8.404	0.4367	8.404	0.8299	0.4367	0.2183	5.20%	4.94%	0.2375	2.90%
261.32	Acid Soluble Manganese , ICP, test portion inorgan... (7.5%)	8	8	8.240	0.4839	8.240	0.8299	0.5487	0.1940	6.66%	5.04%	0.1305	2.91%
261.35	Acid Soluble Manganese , ICP, test portion 2006.03... (7.5%)	10	10	8.252	0.3818	8.226	0.8299	0.3702	0.1171	4.50%	5.04%	0.1755	2.91%
261.99	Acid Soluble Manganese , Other (7.5%)	7	7	8.628	0.6240	8.482	0.8299	0.3198	0.1209	3.77%	4.89%	0.4089	2.90%
271.30	Water Soluble Manganese , ICP, Ext. 972.03 (%)	2	2	8.490	0.2758								
289.00	Acid Soluble Molybdenum , AA, test portion in 2006... (200ppm)	2	2	245.3	79.55								
289.30	Acid Soluble Molybdenum , ICP (200ppm)	13	13	183.4	71.20	170.3	59.5686	37.25	10.33	21.87%	17.49%	27.86	7.38%
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modified w/... (200ppm)	5	5	227.9	52.07	227.9	59.5686	52.07	23.29	22.85%	13.07%	9.408	7.07%

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
289.34	Acid Soluble Molybdenum , ICP, EPA 3050B/6010C (200ppm)	1		232.1									
289.99	Acid Soluble Molybdenum , Other (200ppm)	4	4	187.7	75.81	187.7	59.5686	75.81	37.91	40.40%	15.87%	12.40	7.28%
291.30	Acid Soluble Nickel , ICP (ppm)	3	3	109.1	15.12	109.1		15.12	8.729	13.86%		7.078	7.90%
291.33	Acid Soluble Nickel , ICP, 2006.03 modified w/9:3 ... (ppm)	2	2	137.5	3.115								
291.34	Acid Soluble Nickel , ICP, EPA 3050B/6010C (ppm)	1		84.40									
301.33	Acid Soluble Selenium , ICP, 2006.03 modified w/9:3... (ppm)	2	2	39.59	7.189								
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl test ... (%)	3	3	0.5593	0.0159	0.5593		0.0159	0.0092	2.85%		0.0217	4.37%
311.99	Sodium, Other (%)	4	4	0.5663	0.0333	0.5663		0.0333	0.0166	5.87%		0.0305	4.36%
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (7%)	12	12	8.050	0.5391	8.080	0.8213	0.5400	0.1559	6.68%	5.08%	0.1867	2.92%
321.03	Acid Soluble Zinc , AA, 965.09, test portion 2006.... (7%)	1		8.180									
321.30	Acid Soluble Zinc , ICP, test portion inorganic 96... (7%)	35	34	8.253	0.5558	8.264	0.8213	0.5077	0.0871	6.14%	4.97%	0.1838	2.91%
321.32	Acid Soluble Zinc , ICP, test portion 2006.03A-C (7%)	2	2	7.948	1.580								
321.33	Acid Soluble Zinc , ICP, test portion 2006.03A-C, ... (7%)	12	12	7.925	0.5971	7.982	0.8213	0.5292	0.1528	6.63%	5.14%	0.2811	2.93%
321.99	Acid Soluble Zinc , Other (7%)	7	6	8.220	0.7250	8.220	0.8213	0.8222	0.3357	10.00%	5.00%	0.2843	2.91%
325.99	Water Soluble Zinc, Other (%)	1		7.085									

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STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 160111

Method Precision Report

Micro Mix

Issue Date : 02/29/2016

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
101.30	Acid Soluble Calcium, ICP, test portion inorganic 965.09 (%)	7	7	2.257	0.1720	0.1646	0.0704	0.1790	7.29%	3.12%	7.93%	2.543
121.30	Acid Soluble Magnesium, ICP, test portion inorganic 965.09 (%)	7	6	0.7072	0.0659	0.0650	0.0158	0.0668	9.19%	2.23%	9.45%	4.239
165.00	Acid Soluble Boron , Spectrophotometric (1.5%)	8	8	1.515	0.0912	0.0877	0.0357	0.0947	5.79%	2.35%	6.25%	2.653
165.30	Acid Soluble Boron , ICP, test portion in 982.01 (1.5%)	21	18	1.527	0.0614	0.0546	0.0397	0.0675	3.58%	2.60%	4.42%	1.701
165.99	Acid Soluble Boron , Other (1.5%)	24	22	1.557	0.1643	0.1622	0.0370	0.1664	10.42%	2.38%	10.69%	4.499
221.00	Acid Soluble Copper , AA, inorganic 965.09 (3%)	12	11	3.840	0.3206	0.3163	0.0735	0.3248	8.24%	1.91%	8.46%	4.418
221.30	Acid Soluble Copper , ICP, test portion inorganic 965.09 (3%)	31	29	4.022	0.2790	0.2528	0.1670	0.3030	6.28%	4.15%	7.53%	1.814
221.33	Acid Soluble Copper , ICP, test portion 2006.03A-C, w/dual acid (3%)	11	10	3.969	0.2318	0.2207	0.1002	0.2424	5.56%	2.53%	6.11%	2.418
221.99	Acid Soluble Copper , Other (3%)	10	10	3.848	0.5452	0.5385	0.1204	0.5518	13.99%	3.13%	14.34%	4.582
241.00	Acid Soluble Iron, AA, inorganic 965.09 (18%)	11	10	18.60	1.068	1.049	0.2866	1.087	5.64%	1.54%	5.84%	3.793
241.30	Acid Soluble Iron, ICP, test portion inorganic 965.09 (18%)	32	29	17.83	2.334	2.317	0.3976	2.351	12.99%	2.23%	13.18%	5.913
241.33	Acid Soluble Iron, ICP, test portion 2006.03A-C, w/dual acid (18%)	12	12	18.83	1.218	1.212	0.1748	1.225	6.44%	0.93%	6.50%	7.005
241.99	Acid Soluble Iron, Other (18%)	7	5	17.81	1.030	0.9808	0.4445	1.077	5.51%	2.50%	6.05%	2.423
261.12	Acid Soluble Manganese , AA, inorganic 965.09 (7.5%)	6	5	8.146	0.2812	0.2673	0.1239	0.2946	3.28%	1.52%	3.62%	2.378
261.30	Acid Soluble Manganese , ICP, test portion 972.02a (7.5%)	20	18	8.526	0.6687	0.6451	0.2487	0.6914	7.57%	2.92%	8.11%	2.780
261.32	Acid Soluble Manganese , ICP, test portion inorganic 965.09 (7.5%)	8	7	8.251	0.5215	0.5190	0.0719	0.5239	6.29%	0.87%	6.35%	7.287
261.35	Acid Soluble Manganese , ICP, test portion 2006.03A-C, w/dual acid (7.5%)	10	10	8.252	0.3818	0.3626	0.1691	0.4001	4.39%	2.05%	4.85%	2.366
261.99	Acid Soluble Manganese , Other (7.5%)	7	6	8.403	0.2043	0.1270	0.2264	0.2596	1.51%	2.69%	3.09%	1.147
289.30	Acid Soluble Molybdenum , ICP (200ppm)	13	11	162.7	30.19	26.09	21.47	33.79	16.03%	13.19%	20.76%	1.574
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (7%)	12	12	8.050	0.5391	0.5271	0.1599	0.5508	6.55%	1.99%	6.84%	3.444
321.30	Acid Soluble Zinc , ICP, test portion inorganic 965.09 (7%)	35	34	8.253	0.5558	0.5423	0.1720	0.5689	6.57%	2.08%	6.89%	3.309
321.33	Acid Soluble Zinc , ICP, test portion 2006.03A-C, w/dual acid (7%)	12	11	8.054	0.4133	0.3815	0.2249	0.4428	4.74%	2.79%	5.50%	1.969
321.99	Acid Soluble Zinc , Other (7%)	7	6	8.220	0.7250	0.7041	0.2447	0.7454	8.57%	2.98%	9.07%	3.046

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STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Methods: 88

Sample # 160111

Lab Values

Labs Reporting: 72

Micro Mix

Issue Date : 02/29/2016

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				
001.99	Ammoniacal Nitrogen, Other (%)	0096	0.0800	0.0000			0.0000	1			0
010.60	Total Nitrogen, Combustion (%)	0389	0.0600	0.0200	0.1259	0.0622	0.0088	4	-1.06	26%	0
010.60	Total Nitrogen, Combustion (%)	0292	0.1050	0.0100	0.1259	0.0622	0.0088	4	-0.34	8%	0
010.60	Total Nitrogen, Combustion (%)	0482	0.1300	0.0000	0.1259	0.0622	0.0088	4	0.07	2%	0
010.60	Total Nitrogen, Combustion (%)	0354	0.2085	0.0050	0.1259	0.0622	0.0088	4	1.33	33%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0292	0.5750	0.0100			0.0100	1			0
020.40	Total Phosphorus as P2O5, Automated (%)	0096	1.740	0.0200			0.0200	1			0
020.50	Total Phosphorus as P2O5, ICP (%)	0389	0.3150	0.0100	0.3675	0.0742	0.0050	2	-0.71	7%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0511	0.4200	0.0000	0.3675	0.0742	0.0050	2	0.71	7%	0
030.40	Citrate Insoluble Phosphorus as P2O5, Automat... (%)	0096	0.6600	0.1200			0.1200	1			0
040.40	Indirect Available Phosphorus as P2O5, Automa... (%)	0096	1.080	0.1000			0.1000	1			0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (%)	0511	0.1000	0.0000			0.0000	1			0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (%)	0354	0.4660	0.0380			0.0380	1			0
048.40	Water Soluble Phosphorus as P2O5, Automated (%)	0096	0.0450	0.0100			0.0100	1			0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (%)	0292	0.1550	0.0100			0.0100	1			0
050.51	Soluble Potassium as K2O, ICP (Citrate) (%)	0511	0.0900	0.0000			0.0000	1			0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (%)	0354	0.1985	0.0190			0.0190	1			0
050.99	Soluble Potassium as K2O, Other (%)	0501	0.1600	0.0000	0.1975	0.0386	0.0100	4	-0.97	9%	0
050.99	Soluble Potassium as K2O, Other (%)	0096	0.1800	0.0000	0.1975	0.0386	0.0100	4	-0.45	4%	0
050.99	Soluble Potassium as K2O, Other (%)	0389	0.2000	0.0000	0.1975	0.0386	0.0100	4	0.06	1%	0
050.99	Soluble Potassium as K2O, Other (%)	0482	0.2500	0.0400	0.1975	0.0386	0.0100	4	1.36	13%	0
060.00	Water (Free), Vacuum Oven (%)	0096	2.065	0.0900			0.0900	1			0
060.30	Water (Free), AFPC No. 2B (105°C oven for 2 h... (%)	0055	2.665	0.3300	2.893	0.3217	0.1950	2	-0.71	4%	0
060.30	Water (Free), AFPC No. 2B (105°C oven for 2 h... (%)	0513	3.120	0.0600	2.893	0.3217	0.1950	2	0.71	4%	0
060.99	Water (Free), Other (%)	0513	3.225	0.1900			0.1900	1			0
101.00	Acid Soluble Calcium, AA, inorganic 965.09 (%)	0457	2.278	0.0980	2.342	0.0898	0.0840	2	-0.71	1%	0
101.00	Acid Soluble Calcium, AA, inorganic 965.09 (%)	0105	2.405	0.0700	2.342	0.0898	0.0840	2	0.71	1%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0035	2.110	0.2000	2.257	0.1945	0.0750	7	-0.71	3%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0354	2.148	0.0290	2.257	0.1945	0.0750	7	-0.53	2%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0102	2.151	0.0560	2.257	0.1945	0.0750	7	-0.51	2%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0482	2.165	0.0900	2.257	0.1945	0.0750	7	-0.44	2%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0096	2.225	0.1300	2.257	0.1945	0.0750	7	-0.15	1%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0511	2.450	0.0000	2.257	0.1945	0.0750	7	0.93	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				
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0041	2.550	0.0200	2.257	0.1945	0.0750	7	1.41	6%	0
101.33	Acid Soluble Calcium, ICP, test portion 2006.... (%)	0494	2.205	0.0847			0.0847	1			0
101.99	Acid Soluble Calcium, Other (%)	0501	2.270	0.1200			0.1200	1			0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (%)	0457	0.6185	0.0210	0.6398	0.0357	0.0310	3	-0.60	2%	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (%)	0043	0.6200	0.0400	0.6398	0.0357	0.0310	3	-0.56	2%	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (%)	0105	0.6810	0.0320	0.6398	0.0357	0.0310	3	1.15	3%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0035	0.5675	0.1050	0.6872	0.0908	0.0281	7	-1.23	9%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0096	0.6400	0.0400	0.6872	0.0908	0.0281	7	-0.49	3%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0482	0.6400	0.0000	0.6872	0.0908	0.0281	7	-0.49	3%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0354	0.6720	0.0220	0.6872	0.0908	0.0281	7	-0.16	1%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0041	0.7350	0.0300	0.6872	0.0908	0.0281	7	0.49	3%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0511	0.7600	0.0000	0.6872	0.0908	0.0281	7	0.75	5%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0102	0.7960	0.0000	0.6872	0.0908	0.0281	7	1.12	8%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (%)	0494	0.7512	0.0067			0.0067	1			0
121.99	Acid Soluble Magnesium, Other (%)	0389	0.5515	0.0070	0.5583	0.0095	0.0085	2	-0.71	1%	0
121.99	Acid Soluble Magnesium, Other (%)	0501	0.5650	0.0100	0.5583	0.0095	0.0085	2	0.71	1%	0
143.99	Elemental Sulfur, Other (%)	0389	0.2085	0.0010			0.0010	1			0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0511	0.0700	0.0000			0.0000	1			0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (%)	0102	0.2180	0.0220	0.2627	0.0415	0.0107	3	-1.08	9%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (%)	0494	0.2702	0.0101	0.2627	0.0415	0.0107	3	0.18	1%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (%)	0292	0.3000	0.0000	0.2627	0.0415	0.0107	3	0.90	7%	0
148.99	Total Sulfur, Other (%)	0354	0.0540	0.0160	0.1548	0.1225	0.0115	4	-0.82	33%	0
148.99	Total Sulfur, Other (%)	0096	0.0700	0.0000	0.1548	0.1225	0.0115	4	-0.69	27%	0
148.99	Total Sulfur, Other (%)	0501	0.1750	0.0100	0.1548	0.1225	0.0115	4	0.17	7%	0
148.99	Total Sulfur, Other (%)	0482	0.3200	0.0200	0.1548	0.1225	0.0115	4	1.35	53%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0096	7.050	0.5000	9.863	2.586	0.2910	3	-1.09	14%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0511	10.40	0.0000	9.863	2.586	0.2910	3	0.21	3%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0102	12.14	0.3730	9.863	2.586	0.2910	3	0.88	12%	0
151.33	Acid Soluble Arsenic , ICP, 2006.03 modified ... (ppm)	0037	9.300	0.2800	9.968	0.9444	0.3298	2	-0.71	3%	0
151.33	Acid Soluble Arsenic , ICP, 2006.03 modified ... (ppm)	0494	10.64	0.3795	9.968	0.9444	0.3298	2	0.71	3%	0
165.00	Acid Soluble Boron , Spectrophotometric (1.5%)	0498	1.405	0.0100	1.515	0.1035	0.0438	8	-1.00	4%	0
165.00	Acid Soluble Boron , Spectrophotometric (1.5%)	0037	1.418	0.0870	1.515	0.1035	0.0438	8	-0.89	3%	0
165.00	Acid Soluble Boron , Spectrophotometric (1.5%)	0220	1.445	0.0500	1.515	0.1035	0.0438	8	-0.64	2%	0
165.00	Acid Soluble Boron , Spectrophotometric (1.5%)	0506	1.465	0.0500	1.515	0.1035	0.0438	8	-0.46	2%	0
165.00	Acid Soluble Boron , Spectrophotometric (1.5%)	0397	1.569	0.0710	1.515	0.1035	0.0438	8	0.49	2%	0
165.00	Acid Soluble Boron , Spectrophotometric (1.5%)	0481	1.580	0.0200	1.515	0.1035	0.0438	8	0.59	2%	0
165.00	Acid Soluble Boron , Spectrophotometric (1.5%)	0055	1.612	0.0440	1.515	0.1035	0.0438	8	0.88	3%	0
165.00	Acid Soluble Boron , Spectrophotometric (1.5%)	0029	1.628	0.0180	1.515	0.1035	0.0438	8	1.03	4%	0
165.30	Acid Soluble Boron , ICP, test portion in 982... (1.5%)	0397	1.380	0.0180	1.543	0.0650	0.0490	20	-2.51	5%	0
165.30	Acid Soluble Boron , ICP, test portion in 982... (1.5%)	0324	1.410	0.1600	1.543	0.0650	0.0490	20	-2.05	4%	0
165.30	Acid Soluble Boron , ICP, test portion in 982... (1.5%)	0354	1.462	0.0300	1.543	0.0650	0.0490	20	-1.25	3%	0
165.30	Acid Soluble Boron , ICP, test portion in 982... (1.5%)	0371	1.465	0.0100	1.543	0.0650	0.0490	20	-1.20	3%	0
165.30	Acid Soluble Boron , ICP, test portion in 982... (1.5%)	0519	1.515	0.1100	1.543	0.0650	0.0490	20	-0.43	1%	0

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			Value	Range	Rob Mean	Rob SD	R-bar				
165.30	Acid Soluble Boron , ICP, test portion in 982... (1.5%)	0292	1.520	0.0200	1.543	0.0650	0.0490	20	-0.36	1%	0
165.30	Acid Soluble Boron , ICP, test portion in 982... (1.5%)	0394	1.527	0.0360	1.543	0.0650	0.0490	20	-0.25	1%	0
165.30	Acid Soluble Boron , ICP, test portion in 982... (1.5%)	0234	1.535	0.0100	1.543	0.0650	0.0490	20	-0.13	0%	0
165.30	Acid Soluble Boron , ICP, test portion in 982... (1.5%)	0485	1.535	0.0900	1.543	0.0650	0.0490	20	-0.13	0%	0
165.30	Acid Soluble Boron , ICP, test portion in 982... (1.5%)	0433	1.537	0.0570	1.543	0.0650	0.0490	20	-0.10	0%	0
165.30	Acid Soluble Boron , ICP, test portion in 982... (1.5%)	0402	1.550	0.0200	1.543	0.0650	0.0490	20	0.10	0%	0
165.30	Acid Soluble Boron , ICP, test portion in 982... (1.5%)	0040	1.553	0.0360	1.543	0.0650	0.0490	20	0.15	0%	0
165.30	Acid Soluble Boron , ICP, test portion in 982... (1.5%)	0494	1.563	0.0234	1.543	0.0650	0.0490	20	0.30	1%	0
165.30	Acid Soluble Boron , ICP, test portion in 982... (1.5%)	0090	1.570	0.0200	1.543	0.0650	0.0490	20	0.41	1%	0
165.30	Acid Soluble Boron , ICP, test portion in 982... (1.5%)	0023	1.579	0.0290	1.543	0.0650	0.0490	20	0.54	1%	0
165.30	Acid Soluble Boron , ICP, test portion in 982... (1.5%)	0307	1.592	0.0110	1.543	0.0650	0.0490	20	0.74	2%	0
165.30	Acid Soluble Boron , ICP, test portion in 982... (1.5%)	0377	1.595	0.0300	1.543	0.0650	0.0490	20	0.80	2%	0
165.30	Acid Soluble Boron , ICP, test portion in 982... (1.5%)	0389	1.595	0.0100	1.543	0.0650	0.0490	20	0.80	2%	0
165.30	Acid Soluble Boron , ICP, test portion in 982... (1.5%)	0211	1.820	0.2400	1.543	0.0650	0.0490	20	4.26	9%	0
165.30	Acid Soluble Boron , ICP, test portion in 982... (1.5%)	0444	1.910	0.0200	1.543	0.0650	0.0490	20	5.64	12%	0
165.30	Acid Soluble Boron , ICP, test portion in 982... (1.5%)	0406	1.680	0.3600	1.543	0.0650	0.0490	20	2.10	4%	1
165.99	Acid Soluble Boron , Other (1.5%)	0487	1.200*	0.0000	1.561	0.1549	0.0436	23	-2.33	12%	0
165.99	Acid Soluble Boron , Other (1.5%)	0457	1.223*	0.1210	1.561	0.1549	0.0436	23	-2.19	11%	0
165.99	Acid Soluble Boron , Other (1.5%)	0291	1.315	0.0100	1.561	0.1549	0.0436	23	-1.59	8%	0
165.99	Acid Soluble Boron , Other (1.5%)	0230	1.395	0.0300	1.561	0.1549	0.0436	23	-1.07	5%	0
165.99	Acid Soluble Boron , Other (1.5%)	0042	1.450	0.1000	1.561	0.1549	0.0436	23	-0.72	4%	0
165.99	Acid Soluble Boron , Other (1.5%)	0515	1.459	0.2198	1.561	0.1549	0.0436	23	-0.66	3%	0
165.99	Acid Soluble Boron , Other (1.5%)	0482	1.495	0.1100	1.561	0.1549	0.0436	23	-0.43	2%	0
165.99	Acid Soluble Boron , Other (1.5%)	0508	1.520	0.0200	1.561	0.1549	0.0436	23	-0.27	1%	0
165.99	Acid Soluble Boron , Other (1.5%)	0513	1.530	0.0200	1.561	0.1549	0.0436	23	-0.20	1%	0
165.99	Acid Soluble Boron , Other (1.5%)	0472	1.550	0.0000	1.561	0.1549	0.0436	23	-0.07	0%	0
165.99	Acid Soluble Boron , Other (1.5%)	0501	1.555	0.0100	1.561	0.1549	0.0436	23	-0.04	0%	0
165.99	Acid Soluble Boron , Other (1.5%)	0421	1.589	0.0090	1.561	0.1549	0.0436	23	0.18	1%	0
165.99	Acid Soluble Boron , Other (1.5%)	0095	1.605	0.0100	1.561	0.1549	0.0436	23	0.28	1%	0
165.99	Acid Soluble Boron , Other (1.5%)	0486	1.605	0.0100	1.561	0.1549	0.0436	23	0.28	1%	0
165.99	Acid Soluble Boron , Other (1.5%)	0043	1.610	0.0200	1.561	0.1549	0.0436	23	0.31	2%	0
165.99	Acid Soluble Boron , Other (1.5%)	0231	1.615	0.0700	1.561	0.1549	0.0436	23	0.35	2%	0
165.99	Acid Soluble Boron , Other (1.5%)	0360	1.615	0.0160	1.561	0.1549	0.0436	23	0.35	2%	0
165.99	Acid Soluble Boron , Other (1.5%)	0368	1.619	0.0349	1.561	0.1549	0.0436	23	0.37	2%	0
165.99	Acid Soluble Boron , Other (1.5%)	0452	1.675	0.0100	1.561	0.1549	0.0436	23	0.73	4%	0
165.99	Acid Soluble Boron , Other (1.5%)	0025	1.704	0.1020	1.561	0.1549	0.0436	23	0.92	5%	0
165.99	Acid Soluble Boron , Other (1.5%)	0169	1.760	0.0600	1.561	0.1549	0.0436	23	1.28	6%	0
165.99	Acid Soluble Boron , Other (1.5%)	0511	1.780	0.0000	1.561	0.1549	0.0436	23	1.41	7%	0
165.99	Acid Soluble Boron , Other (1.5%)	0483	1.840	0.0200	1.561	0.1549	0.0436	23	1.80	9%	0
165.99	Acid Soluble Boron , Other (1.5%)	0325	1.920	0.3600	1.561	0.1549	0.0436	23	2.32	11%	1
171.10	Water Soluble Boron , Spectrophotometric (%)	0117	1.610	0.0200			0.0200	1			0
171.99	Water Soluble Boron , Other (%)	0405	1.460	0.0200	1.496	0.0506	0.0165	2	-0.71	1%	0
171.99	Water Soluble Boron , Other (%)	0422	1.532	0.0130	1.496	0.0506	0.0165	2	0.71	1%	0

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			Value	Range	Rob Mean	Rob SD	R-bar				
181.30	Acid Soluble Cadmium , ICP (ppm)	0389	3.625	0.0500	4.270	0.6292	0.1534	5	-1.02	8%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0482	3.900	0.2000	4.270	0.6292	0.1534	5	-0.59	4%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0096	3.950	0.3000	4.270	0.6292	0.1534	5	-0.51	4%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0511	4.800	0.0000	4.270	0.6292	0.1534	5	0.84	6%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0102	5.075	0.2170	4.270	0.6292	0.1534	5	1.28	9%	0
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified ... (ppm)	0494	4.165	0.0362	6.020	2.623	0.0631	2	-0.71	15%	0
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified ... (ppm)	0037	7.875	0.0900	6.020	2.623	0.0631	2	0.71	15%	0
190.99	Water Soluble Chlorine, Other (%)	0511	0.0180	0.0000			0.0000	1			0
191.30	Acid Soluble Chromium , ICP (ppm)	0511	58.10	0.0000	76.21	20.03	1.916	5	-0.90	12%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0096	60.85	3.300	76.21	20.03	1.916	5	-0.77	10%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0389	71.25	3.100	76.21	20.03	1.916	5	-0.25	3%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0482	83.65	2.300	76.21	20.03	1.916	5	0.37	5%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0102	107.2	0.8780	76.21	20.03	1.916	5	1.55	20%	0
191.33	Acid Soluble Chromium , ICP, 2006.03 modified... (ppm)	0494	59.00	0.0838	71.04	17.03	0.5269	2	-0.71	8%	0
191.33	Acid Soluble Chromium , ICP, 2006.03 modified... (ppm)	0037	83.09	0.9700	71.04	17.03	0.5269	2	0.71	8%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0096	114.5	6.600	146.4	29.08	3.506	4	-1.10	11%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0482	134.0	2.000	146.4	29.08	3.506	4	-0.43	4%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0389	154.5	1.000	146.4	29.08	3.506	4	0.28	3%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0102	182.5	4.424	146.4	29.08	3.506	4	1.24	12%	0
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified w... (ppm)	0494	160.8	0.9450	173.3	17.68	3.603	2	-0.71	4%	0
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified w... (ppm)	0037	185.8	6.260	173.3	17.68	3.603	2	0.71	4%	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (3%)	0516	2.130*	0.0340	3.838	0.2871	0.0775	12	-5.95	22%	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (3%)	0500	3.005*	0.0300	3.838	0.2871	0.0775	12	-2.90	11%	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (3%)	0513	3.550	0.0600	3.838	0.2871	0.0775	12	-1.00	4%	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (3%)	0481	3.770	0.0600	3.838	0.2871	0.0775	12	-0.24	1%	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (3%)	0043	3.815	0.0700	3.838	0.2871	0.0775	12	-0.08	0%	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (3%)	0029	3.903	0.0020	3.838	0.2871	0.0775	12	0.23	1%	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (3%)	0498	3.950	0.1000	3.838	0.2871	0.0775	12	0.39	1%	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (3%)	0485	4.015	0.0300	3.838	0.2871	0.0775	12	0.62	2%	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (3%)	0169	4.020	0.1000	3.838	0.2871	0.0775	12	0.63	2%	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (3%)	0040	4.068	0.2327	3.838	0.2871	0.0775	12	0.80	3%	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (3%)	0105	4.069	0.1710	3.838	0.2871	0.0775	12	0.80	3%	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (3%)	0457	4.080	0.0400	3.838	0.2871	0.0775	12	0.84	3%	0
221.03	Acid Soluble Copper , AA, 965.09, test portio... (3%)	0023	3.805	0.1700	3.855	0.0707	0.1700	2	-0.71	1%	0
221.03	Acid Soluble Copper , AA, 965.09, test portio... (3%)	0117	3.905	0.1700	3.855	0.0707	0.1700	2	0.71	1%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (3%)	0324	3.600	0.5400	3.999	0.2723	0.2061	30	-1.47	5%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (3%)	0433	3.635	0.1500	3.999	0.2723	0.2061	30	-1.34	5%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (3%)	0420	3.745	0.0300	3.999	0.2723	0.2061	30	-0.93	3%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (3%)	0114	3.750	0.1000	3.999	0.2723	0.2061	30	-0.92	3%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (3%)	0360	3.750	0.2000	3.999	0.2723	0.2061	30	-0.92	3%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (3%)	0354	3.754	0.1600	3.999	0.2723	0.2061	30	-0.90	3%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (3%)	0041	3.765	0.1300	3.999	0.2723	0.2061	30	-0.86	3%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (3%)	0307	3.766	0.1770	3.999	0.2723	0.2061	30	-0.86	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				
221.30	Acid Soluble Copper , ICP, test portion inorg... (3%)	0157	3.810	0.0600	3.999	0.2723	0.2061	30	-0.70	2%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (3%)	0444	3.825	0.0100	3.999	0.2723	0.2061	30	-0.64	2%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (3%)	0406	3.880	0.7400	3.999	0.2723	0.2061	30	-0.44	1%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (3%)	0452	3.920	0.1000	3.999	0.2723	0.2061	30	-0.29	1%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (3%)	0095	3.945	0.1700	3.999	0.2723	0.2061	30	-0.20	1%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (3%)	0482	3.950	0.2000	3.999	0.2723	0.2061	30	-0.18	1%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (3%)	0073	3.965	0.4300	3.999	0.2723	0.2061	30	-0.13	0%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (3%)	0371	3.980	0.1400	3.999	0.2723	0.2061	30	-0.07	0%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (3%)	0402	4.030	0.1600	3.999	0.2723	0.2061	30	0.11	0%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (3%)	0231	4.040	0.0800	3.999	0.2723	0.2061	30	0.15	1%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (3%)	0035	4.050	0.2000	3.999	0.2723	0.2061	30	0.19	1%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (3%)	0472	4.075	0.0300	3.999	0.2723	0.2061	30	0.28	1%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (3%)	0090	4.090	0.1600	3.999	0.2723	0.2061	30	0.33	1%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (3%)	0325	4.100	0.3800	3.999	0.2723	0.2061	30	0.37	1%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (3%)	0368	4.114	0.5585	3.999	0.2723	0.2061	30	0.42	1%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (3%)	0377	4.245	0.3700	3.999	0.2723	0.2061	30	0.90	3%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (3%)	0096	4.261	0.1398	3.999	0.2723	0.2061	30	0.96	3%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (3%)	0055	4.349	0.0180	3.999	0.2723	0.2061	30	1.28	4%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (3%)	0131	4.365	0.3300	3.999	0.2723	0.2061	30	1.34	5%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (3%)	0102	4.514	0.2210	3.999	0.2723	0.2061	30	1.89	6%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (3%)	0234	4.590	0.1400	3.999	0.2723	0.2061	30	2.17	7%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (3%)	0483	4.650	0.0600	3.999	0.2723	0.2061	30	2.39	8%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (3%)	0230	4.740	2.240	3.999	0.2723	0.2061	30	2.72	9%	1
221.32	Acid Soluble Copper , ICP, test portion 2006.... (3%)	0292	3.900	0.0600	4.031	0.1846	0.0360	2	-0.71	2%	0
221.32	Acid Soluble Copper , ICP, test portion 2006.... (3%)	0394	4.161	0.0120	4.031	0.1846	0.0360	2	0.71	2%	0
221.33	Acid Soluble Copper , ICP, test portion 2006.... (3%)	0494	0.00040*	0.0000	3.923	0.3020	0.0930	11	-12.44	50%	0
221.33	Acid Soluble Copper , ICP, test portion 2006.... (3%)	0515	3.537*	0.0463	3.923	0.3020	0.0930	11	-1.22	5%	0
221.33	Acid Soluble Copper , ICP, test portion 2006.... (3%)	0519	3.790	0.1800	3.923	0.3020	0.0930	11	-0.42	2%	0
221.33	Acid Soluble Copper , ICP, test portion 2006.... (3%)	0037	3.815	0.1280	3.923	0.3020	0.0930	11	-0.34	1%	0
221.33	Acid Soluble Copper , ICP, test portion 2006.... (3%)	0421	3.859	0.2210	3.923	0.3020	0.0930	11	-0.21	1%	0
221.33	Acid Soluble Copper , ICP, test portion 2006.... (3%)	0405	3.885	0.0500	3.923	0.3020	0.0930	11	-0.12	0%	0
221.33	Acid Soluble Copper , ICP, test portion 2006.... (3%)	0177	4.025	0.0437	3.923	0.3020	0.0930	11	0.32	1%	0
221.33	Acid Soluble Copper , ICP, test portion 2006.... (3%)	0025	4.087	0.0140	3.923	0.3020	0.0930	11	0.52	2%	0
221.33	Acid Soluble Copper , ICP, test portion 2006.... (3%)	0422	4.210	0.0200	3.923	0.3020	0.0930	11	0.91	4%	0
221.33	Acid Soluble Copper , ICP, test portion 2006.... (3%)	0211	4.235	0.3100	3.923	0.3020	0.0930	11	0.99	4%	0
221.33	Acid Soluble Copper , ICP, test portion 2006.... (3%)	0486	4.245	0.0100	3.923	0.3020	0.0930	11	1.02	4%	0
221.99	Acid Soluble Copper , Other (3%)	0515	3.049*	0.1720	3.832	0.5804	0.1276	10	-1.29	10%	0
221.99	Acid Soluble Copper , Other (3%)	0501	3.325*	0.0100	3.832	0.5804	0.1276	10	-0.83	7%	0
221.99	Acid Soluble Copper , Other (3%)	0042	3.445*	0.3700	3.832	0.5804	0.1276	10	-0.64	5%	0
221.99	Acid Soluble Copper , Other (3%)	0291	3.700	0.0200	3.832	0.5804	0.1276	10	-0.22	2%	0
221.99	Acid Soluble Copper , Other (3%)	0506	3.715	0.0700	3.832	0.5804	0.1276	10	-0.19	2%	0
221.99	Acid Soluble Copper , Other (3%)	0027	3.778	0.0730	3.832	0.5804	0.1276	10	-0.09	1%	0
221.99	Acid Soluble Copper , Other (3%)	0389	4.010	0.0600	3.832	0.5804	0.1276	10	0.29	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				
221.99	Acid Soluble Copper , Other (3%)	0512	4.093	0.0410	3.832	0.5804	0.1276	10	0.43	3%	0
221.99	Acid Soluble Copper , Other (3%)	0487	4.500	0.2000	3.832	0.5804	0.1276	10	1.10	9%	0
221.99	Acid Soluble Copper , Other (3%)	0390	4.870	0.2600	3.832	0.5804	0.1276	10	1.71	14%	0
241.00	Acid Soluble Iron, AA, inorganic 965.09 (18%)	0516	6.074*	0.0980	18.40	1.392	0.3116	11	-8.48	33%	0
241.00	Acid Soluble Iron, AA, inorganic 965.09 (18%)	0500	16.36*	0.0100	18.40	1.392	0.3116	11	-1.40	6%	0
241.00	Acid Soluble Iron, AA, inorganic 965.09 (18%)	0169	17.89	0.4000	18.40	1.392	0.3116	11	-0.35	1%	0
241.00	Acid Soluble Iron, AA, inorganic 965.09 (18%)	0513	18.12	0.2600	18.40	1.392	0.3116	11	-0.19	1%	0
241.00	Acid Soluble Iron, AA, inorganic 965.09 (18%)	0481	18.40	0.0300	18.40	1.392	0.3116	11	0.00	0%	0
241.00	Acid Soluble Iron, AA, inorganic 965.09 (18%)	0498	18.60	0.8000	18.40	1.392	0.3116	11	0.14	1%	0
241.00	Acid Soluble Iron, AA, inorganic 965.09 (18%)	0040	18.81	0.5200	18.40	1.392	0.3116	11	0.29	1%	0
241.00	Acid Soluble Iron, AA, inorganic 965.09 (18%)	0485	18.91	0.2800	18.40	1.392	0.3116	11	0.35	1%	0
241.00	Acid Soluble Iron, AA, inorganic 965.09 (18%)	0043	18.92	0.3000	18.40	1.392	0.3116	11	0.36	1%	0
241.00	Acid Soluble Iron, AA, inorganic 965.09 (18%)	0029	19.74	0.1800	18.40	1.392	0.3116	11	0.92	4%	0
241.00	Acid Soluble Iron, AA, inorganic 965.09 (18%)	0457	20.31	0.5500	18.40	1.392	0.3116	11	1.31	5%	0
241.02	Acid Soluble Iron, AA, 965.09, test portion 2... (18%)	0292	6.295*	0.0300			0.0300	1			0
241.03	Acid Soluble Iron, AA, 965.09, test portion 2... (18%)	0117	18.84	0.5300			0.5300	1			0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (18%)	0114	9.570*	0.3000	18.02	2.243	0.4415	31	-3.77	23%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (18%)	0035	11.65*	1.300	18.02	2.243	0.4415	31	-2.84	18%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (18%)	0472	11.96*	0.3100	18.02	2.243	0.4415	31	-2.70	17%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (18%)	0131	14.51*	1.270	18.02	2.243	0.4415	31	-1.57	10%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (18%)	0090	14.82*	0.1300	18.02	2.243	0.4415	31	-1.43	9%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (18%)	0482	15.85*	0.7000	18.02	2.243	0.4415	31	-0.97	6%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (18%)	0230	15.85*	0.5000	18.02	2.243	0.4415	31	-0.97	6%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (18%)	0452	16.37*	0.0200	18.02	2.243	0.4415	31	-0.74	5%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (18%)	0291	17.20*	0.0300	18.02	2.243	0.4415	31	-0.37	2%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (18%)	0433	17.29*	0.5400	18.02	2.243	0.4415	31	-0.33	2%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (18%)	0519	17.74	0.4300	18.02	2.243	0.4415	31	-0.13	1%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (18%)	0368	17.89	0.2186	18.02	2.243	0.4415	31	-0.06	0%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (18%)	0234	18.06	0.0800	18.02	2.243	0.4415	31	0.02	0%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (18%)	0377	18.14	0.1800	18.02	2.243	0.4415	31	0.05	0%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (18%)	0444	18.21	0.0800	18.02	2.243	0.4415	31	0.08	1%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (18%)	0354	18.46	0.0030	18.02	2.243	0.4415	31	0.20	1%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (18%)	0406	18.53	0.2600	18.02	2.243	0.4415	31	0.23	1%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (18%)	0157	18.55	0.7000	18.02	2.243	0.4415	31	0.24	1%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (18%)	0402	18.56	0.0100	18.02	2.243	0.4415	31	0.24	1%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (18%)	0096	18.66	0.9000	18.02	2.243	0.4415	31	0.29	2%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (18%)	0420	18.86	0.3300	18.02	2.243	0.4415	31	0.37	2%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (18%)	0360	19.27	0.1100	18.02	2.243	0.4415	31	0.56	3%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (18%)	0371	19.35	0.3000	18.02	2.243	0.4415	31	0.59	4%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (18%)	0231	19.80	0.1300	18.02	2.243	0.4415	31	0.79	5%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (18%)	0041	19.82	0.2900	18.02	2.243	0.4415	31	0.80	5%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (18%)	0055	19.99	0.0500	18.02	2.243	0.4415	31	0.88	5%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (18%)	0324	20.05	0.5000	18.02	2.243	0.4415	31	0.91	6%	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				
241.30	Acid Soluble Iron, ICP, test portion inorgani... (18%)	0483	20.35	0.1000	18.02	2.243	0.4415	31	1.04	6%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (18%)	0073	20.52	0.9000	18.02	2.243	0.4415	31	1.11	7%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (18%)	0102	20.89	1.715	18.02	2.243	0.4415	31	1.28	8%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (18%)	0390	20.95	1.300	18.02	2.243	0.4415	31	1.31	8%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (18%)	0325	21.20	3.800	18.02	2.243	0.4415	31	1.42	9%	1
241.32	Acid Soluble Iron, ICP, test portion 2006.03A... (18%)	0394	19.47	0.9900			0.9900	1			0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (18%)	0422	16.50*	0.2000	18.86	1.294	0.2007	12	-1.83	6%	0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (18%)	0486	17.27*	0.0100	18.86	1.294	0.2007	12	-1.23	4%	0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (18%)	0023	18.23	0.2200	18.86	1.294	0.2007	12	-0.49	2%	0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (18%)	0405	18.45	0.3000	18.86	1.294	0.2007	12	-0.32	1%	0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (18%)	0494	18.47	0.4292	18.86	1.294	0.2007	12	-0.30	1%	0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (18%)	0397	18.74	0.2700	18.86	1.294	0.2007	12	-0.10	0%	0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (18%)	0421	18.78	0.4480	18.86	1.294	0.2007	12	-0.07	0%	0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (18%)	0177	18.91	0.1030	18.86	1.294	0.2007	12	0.03	0%	0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (18%)	0025	19.72	0.0300	18.86	1.294	0.2007	12	0.66	2%	0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (18%)	0037	20.01	0.2800	18.86	1.294	0.2007	12	0.89	3%	0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (18%)	0211	20.07	0.0700	18.86	1.294	0.2007	12	0.93	3%	0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (18%)	0515	20.85	0.0487	18.86	1.294	0.2007	12	1.54	5%	0
241.70	Acid Soluble Iron, Titrimetric (18%)	0220	19.40	0.0100			0.0100	1			0
241.99	Acid Soluble Iron, Other (18%)	0487	16.85*	1.100	18.38	1.890	0.9850	6	-0.75	4%	0
241.99	Acid Soluble Iron, Other (18%)	0389	16.90*	0.8000	18.38	1.890	0.9850	6	-0.72	4%	0
241.99	Acid Soluble Iron, Other (18%)	0506	17.85	0.1000	18.38	1.890	0.9850	6	-0.26	1%	0
241.99	Acid Soluble Iron, Other (18%)	0508	18.08	0.3100	18.38	1.890	0.9850	6	-0.15	1%	0
241.99	Acid Soluble Iron, Other (18%)	0027	19.37	0.1400	18.38	1.890	0.9850	6	0.49	3%	0
241.99	Acid Soluble Iron, Other (18%)	0515	22.34	3.460	18.38	1.890	0.9850	6	1.94	11%	0
241.99	Acid Soluble Iron, Other (18%)	0042	18,840	289.0	18.38	1.890	0.9850	6	9221.28	51214%	2
251.30	Acid Soluble Lead , ICP (ppm)	0482	404.0	22.00	455.3	38.35	7.302	4	-1.34	6%	0
251.30	Acid Soluble Lead , ICP (ppm)	0096	457.5	0.5000	455.3	38.35	7.302	4	0.06	0%	0
251.30	Acid Soluble Lead , ICP (ppm)	0389	463.0	6.000	455.3	38.35	7.302	4	0.20	1%	0
251.30	Acid Soluble Lead , ICP (ppm)	0102	496.7	0.7080	455.3	38.35	7.302	4	1.08	5%	0
251.33	Acid Soluble Lead , ICP, 2006.03 modified w/9... (ppm)	0037	487.2	19.02	488.6	2.005	18.50	2	-0.71	0%	0
251.33	Acid Soluble Lead , ICP, 2006.03 modified w/9... (ppm)	0494	490.1	17.97	488.6	2.005	18.50	2	0.71	0%	0
261.00	Acid Soluble Manganese , AA, Mn2+ only (7.5%)	0043	8.240	0.0400			0.0400	1			0
261.11	Acid Soluble Manganese , AA, total Mn (7.5%)	0500	5.620*	0.0000	6.936	0.9099	0.1525	4	-1.45	9%	0
261.11	Acid Soluble Manganese , AA, total Mn (7.5%)	0498	7.035*	0.0900	6.936	0.9099	0.1525	4	0.11	1%	0
261.11	Acid Soluble Manganese , AA, total Mn (7.5%)	0516	7.530	0.5000	6.936	0.9099	0.1525	4	0.65	4%	0
261.11	Acid Soluble Manganese , AA, total Mn (7.5%)	0481	7.560	0.0200	6.936	0.9099	0.1525	4	0.69	4%	0
261.12	Acid Soluble Manganese , AA, inorganic 965.09... (7.5%)	0513	7.700	0.1000	8.115	0.2976	0.2700	6	-1.29	3%	0
261.12	Acid Soluble Manganese , AA, inorganic 965.09... (7.5%)	0029	7.963	0.8390	8.115	0.2976	0.2700	6	-0.47	1%	0
261.12	Acid Soluble Manganese , AA, inorganic 965.09... (7.5%)	0040	8.093	0.2540	8.115	0.2976	0.2700	6	-0.07	0%	0
261.12	Acid Soluble Manganese , AA, inorganic 965.09... (7.5%)	0485	8.180	0.0800	8.115	0.2976	0.2700	6	0.20	0%	0
261.12	Acid Soluble Manganese , AA, inorganic 965.09... (7.5%)	0457	8.323	0.0950	8.115	0.2976	0.2700	6	0.64	1%	0
261.12	Acid Soluble Manganese , AA, inorganic 965.09... (7.5%)	0105	8.433	0.2520	8.115	0.2976	0.2700	6	0.99	2%	0

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			Value	Range	Rob Mean	Rob SD	R-bar				
261.14	Acid Soluble Manganese , AA, 965.09, test por... (7.5%)	0292	7.235*	0.0100			0.0100	1			0
261.15	Acid Soluble Manganese , AA, 965.09, test por... (7.5%)	0117	7.905	0.1900	8.410	0.7142	0.1500	2	-0.71	3%	0
261.15	Acid Soluble Manganese , AA, 965.09, test por... (7.5%)	0211	8.915	0.1100	8.410	0.7142	0.1500	2	0.71	3%	0
261.30	Acid Soluble Manganese , ICP, test portion 97... (7.5%)	0234	6.220*	0.4400	8.485	0.7828	0.3123	20	-2.89	13%	0
261.30	Acid Soluble Manganese , ICP, test portion 97... (7.5%)	0433	7.390*	0.0400	8.485	0.7828	0.3123	20	-1.40	6%	0
261.30	Acid Soluble Manganese , ICP, test portion 97... (7.5%)	0420	7.545	0.0500	8.485	0.7828	0.3123	20	-1.20	6%	0
261.30	Acid Soluble Manganese , ICP, test portion 97... (7.5%)	0114	7.830	0.1000	8.485	0.7828	0.3123	20	-0.84	4%	0
261.30	Acid Soluble Manganese , ICP, test portion 97... (7.5%)	0307	7.951	0.3150	8.485	0.7828	0.3123	20	-0.68	3%	0
261.30	Acid Soluble Manganese , ICP, test portion 97... (7.5%)	0368	7.953	0.1170	8.485	0.7828	0.3123	20	-0.68	3%	0
261.30	Acid Soluble Manganese , ICP, test portion 97... (7.5%)	0157	8.070	0.6400	8.485	0.7828	0.3123	20	-0.53	2%	0
261.30	Acid Soluble Manganese , ICP, test portion 97... (7.5%)	0096	8.181	0.4072	8.485	0.7828	0.3123	20	-0.39	2%	0
261.30	Acid Soluble Manganese , ICP, test portion 97... (7.5%)	0354	8.408	0.0150	8.485	0.7828	0.3123	20	-0.10	0%	0
261.30	Acid Soluble Manganese , ICP, test portion 97... (7.5%)	0377	8.420	0.3600	8.485	0.7828	0.3123	20	-0.08	0%	0
261.30	Acid Soluble Manganese , ICP, test portion 97... (7.5%)	0090	8.495	0.1500	8.485	0.7828	0.3123	20	0.01	0%	0
261.30	Acid Soluble Manganese , ICP, test portion 97... (7.5%)	0452	8.805	0.0500	8.485	0.7828	0.3123	20	0.41	2%	0
261.30	Acid Soluble Manganese , ICP, test portion 97... (7.5%)	0291	8.875	0.0500	8.485	0.7828	0.3123	20	0.50	2%	0
261.30	Acid Soluble Manganese , ICP, test portion 97... (7.5%)	0472	8.945	0.0300	8.485	0.7828	0.3123	20	0.59	3%	0
261.30	Acid Soluble Manganese , ICP, test portion 97... (7.5%)	0325	9.000	1.180	8.485	0.7828	0.3123	20	0.66	3%	0
261.30	Acid Soluble Manganese , ICP, test portion 97... (7.5%)	0035	9.060	0.5400	8.485	0.7828	0.3123	20	0.74	3%	0
261.30	Acid Soluble Manganese , ICP, test portion 97... (7.5%)	0102	9.079	0.7920	8.485	0.7828	0.3123	20	0.76	4%	0
261.30	Acid Soluble Manganese , ICP, test portion 97... (7.5%)	0390	9.310	0.5200	8.485	0.7828	0.3123	20	1.05	5%	0
261.30	Acid Soluble Manganese , ICP, test portion 97... (7.5%)	0041	9.405	0.0300	8.485	0.7828	0.3123	20	1.18	5%	0
261.30	Acid Soluble Manganese , ICP, test portion 97... (7.5%)	0131	9.750	0.4200	8.485	0.7828	0.3123	20	1.62	7%	0
261.31	Acid Soluble Manganese , ICP, test portion 97... (7.5%)	0230	7.985	0.1900	8.404	0.4367	0.2375	4	-0.96	2%	0
261.31	Acid Soluble Manganese , ICP, test portion 97... (7.5%)	0360	8.260	0.2200	8.404	0.4367	0.2375	4	-0.33	1%	0
261.31	Acid Soluble Manganese , ICP, test portion 97... (7.5%)	0324	8.355	0.3300	8.404	0.4367	0.2375	4	-0.11	0%	0
261.31	Acid Soluble Manganese , ICP, test portion 97... (7.5%)	0482	9.015	0.2100	8.404	0.4367	0.2375	4	1.40	4%	0
261.32	Acid Soluble Manganese , ICP, test portion in... (7.5%)	0444	7.535	0.0700	8.240	0.5487	0.1305	8	-1.21	4%	0
261.32	Acid Soluble Manganese , ICP, test portion in... (7.5%)	0402	7.675	0.0900	8.240	0.5487	0.1305	8	-0.97	3%	0
261.32	Acid Soluble Manganese , ICP, test portion in... (7.5%)	0519	8.110	0.0800	8.240	0.5487	0.1305	8	-0.22	1%	0
261.32	Acid Soluble Manganese , ICP, test portion in... (7.5%)	0073	8.160	0.3800	8.240	0.5487	0.1305	8	-0.14	0%	0
261.32	Acid Soluble Manganese , ICP, test portion in... (7.5%)	0231	8.295	0.0900	8.240	0.5487	0.1305	8	0.09	0%	0
261.32	Acid Soluble Manganese , ICP, test portion in... (7.5%)	0371	8.455	0.1100	8.240	0.5487	0.1305	8	0.37	1%	0
261.32	Acid Soluble Manganese , ICP, test portion in... (7.5%)	0055	8.743	0.1740	8.240	0.5487	0.1305	8	0.86	3%	0
261.32	Acid Soluble Manganese , ICP, test portion in... (7.5%)	0483	8.945	0.0500	8.240	0.5487	0.1305	8	1.21	4%	0
261.35	Acid Soluble Manganese , ICP, test portion 20... (7.5%)	0023	7.685	0.3700	8.226	0.3702	0.1755	10	-1.39	3%	0
261.35	Acid Soluble Manganese , ICP, test portion 20... (7.5%)	0405	7.865	0.0700	8.226	0.3702	0.1755	10	-0.93	2%	0
261.35	Acid Soluble Manganese , ICP, test portion 20... (7.5%)	0486	8.045	0.2300	8.226	0.3702	0.1755	10	-0.47	1%	0
261.35	Acid Soluble Manganese , ICP, test portion 20... (7.5%)	0421	8.167	0.2170	8.226	0.3702	0.1755	10	-0.15	0%	0
261.35	Acid Soluble Manganese , ICP, test portion 20... (7.5%)	0397	8.189	0.0800	8.226	0.3702	0.1755	10	-0.09	0%	0
261.35	Acid Soluble Manganese , ICP, test portion 20... (7.5%)	0494	8.242	0.1024	8.226	0.3702	0.1755	10	0.04	0%	0
261.35	Acid Soluble Manganese , ICP, test portion 20... (7.5%)	0025	8.280	0.0040	8.226	0.3702	0.1755	10	0.14	0%	0
261.35	Acid Soluble Manganese , ICP, test portion 20... (7.5%)	0177	8.368	0.0961	8.226	0.3702	0.1755	10	0.37	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				
261.35	Acid Soluble Manganese , ICP, test portion 20... (7.5%)	0422	8.635	0.5500	8.226	0.3702	0.1755	10	1.05	2%	0
261.35	Acid Soluble Manganese , ICP, test portion 20... (7.5%)	0515	9.043	0.0354	8.226	0.3702	0.1755	10	2.10	5%	0
261.99	Acid Soluble Manganese , Other (7.5%)	0042	8.115	0.6100	8.482	0.3198	0.4089	7	-1.07	2%	0
261.99	Acid Soluble Manganese , Other (7.5%)	0506	8.250	0.3000	8.482	0.3198	0.4089	7	-0.68	1%	0
261.99	Acid Soluble Manganese , Other (7.5%)	0389	8.335	0.1100	8.482	0.3198	0.4089	7	-0.43	1%	0
261.99	Acid Soluble Manganese , Other (7.5%)	0512	8.493	0.3110	8.482	0.3198	0.4089	7	0.03	0%	0
261.99	Acid Soluble Manganese , Other (7.5%)	0027	8.573	0.2010	8.482	0.3198	0.4089	7	0.26	1%	0
261.99	Acid Soluble Manganese , Other (7.5%)	0501	8.650	0.0600	8.482	0.3198	0.4089	7	0.49	1%	0
261.99	Acid Soluble Manganese , Other (7.5%)	0515	9.978	1.271	8.482	0.3198	0.4089	7	4.37	9%	0
271.30	Water Soluble Manganese , ICP, Ext. 972.03 (%)	0394	8.295	0.4300	8.490	0.2758	0.5300	2	-0.71	1%	0
271.30	Water Soluble Manganese , ICP, Ext. 972.03 (%)	0406	8.685	0.6300	8.490	0.2758	0.5300	2	0.71	1%	0
289.00	Acid Soluble Molybdenum , AA, test portion in... (200ppm)	0498	189.0	6.000	245.3	79.55	3.500	2	-0.71	11%	0
289.00	Acid Soluble Molybdenum , AA, test portion in... (200ppm)	0500	301.5	1.000	245.3	79.55	3.500	2	0.71	11%	0
289.30	Acid Soluble Molybdenum , ICP (200ppm)	0234	110.5*	5.000	170.3	37.25	27.86	13	-1.61	18%	0
289.30	Acid Soluble Molybdenum , ICP (200ppm)	0397	125.0*	18.00	170.3	37.25	27.86	13	-1.22	13%	0
289.30	Acid Soluble Molybdenum , ICP (200ppm)	0291	146.5	5.000	170.3	37.25	27.86	13	-0.64	7%	0
289.30	Acid Soluble Molybdenum , ICP (200ppm)	0325	154.0	12.00	170.3	37.25	27.86	13	-0.44	5%	0
289.30	Acid Soluble Molybdenum , ICP (200ppm)	0433	155.0	10.00	170.3	37.25	27.86	13	-0.41	4%	0
289.30	Acid Soluble Molybdenum , ICP (200ppm)	0368	169.1	37.73	170.3	37.25	27.86	13	-0.03	0%	0
289.30	Acid Soluble Molybdenum , ICP (200ppm)	0452	169.2	1.500	170.3	37.25	27.86	13	-0.03	0%	0
289.30	Acid Soluble Molybdenum , ICP (200ppm)	0095	175.5	81.00	170.3	37.25	27.86	13	0.14	2%	0
289.30	Acid Soluble Molybdenum , ICP (200ppm)	0096	180.0	14.40	170.3	37.25	27.86	13	0.26	3%	0
289.30	Acid Soluble Molybdenum , ICP (200ppm)	0377	182.4	20.60	170.3	37.25	27.86	13	0.33	4%	0
289.30	Acid Soluble Molybdenum , ICP (200ppm)	0230	193.5	107.0	170.3	37.25	27.86	13	0.62	7%	0
289.30	Acid Soluble Molybdenum , ICP (200ppm)	0519	223.0	30.00	170.3	37.25	27.86	13	1.42	15%	0
289.30	Acid Soluble Molybdenum , ICP (200ppm)	0444	400.0	20.00	170.3	37.25	27.86	13	6.17	67%	0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modifi... (200ppm)	0037	161.5	5.000	227.9	52.07	9.408	5	-1.28	15%	0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modifi... (200ppm)	0405	204.5	3.000	227.9	52.07	9.408	5	-0.45	5%	0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modifi... (200ppm)	0515	211.7	30.54	227.9	52.07	9.408	5	-0.31	4%	0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modifi... (200ppm)	0292	279.8	2.500	227.9	52.07	9.408	5	1.00	11%	0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modifi... (200ppm)	0211	282.0	6.000	227.9	52.07	9.408	5	1.04	12%	0
289.34	Acid Soluble Molybdenum , ICP, EPA 3050B/6010... (200ppm)	0515	232.1	23.19			23.19	1			0
289.99	Acid Soluble Molybdenum , Other (200ppm)	0027	115.0*	10.00	187.7	75.81	12.40	4	-0.96	19%	0
289.99	Acid Soluble Molybdenum , Other (200ppm)	0506	132.5*	5.000	187.7	75.81	12.40	4	-0.73	15%	0
289.99	Acid Soluble Molybdenum , Other (200ppm)	0042	232.1	18.60	187.7	75.81	12.40	4	0.59	12%	0
289.99	Acid Soluble Molybdenum , Other (200ppm)	0481	271.0	16.00	187.7	75.81	12.40	4	1.10	22%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0482	91.90	2.200	109.1	15.12	7.078	3	-1.14	8%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0096	114.9	5.000	109.1	15.12	7.078	3	0.39	3%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0102	120.4	14.03	109.1	15.12	7.078	3	0.75	5%	0
291.33	Acid Soluble Nickel , ICP, 2006.03 modified w... (ppm)	0494	135.3	1.390	137.5	3.115	5.995	2	-0.71	1%	0
291.33	Acid Soluble Nickel , ICP, 2006.03 modified w... (ppm)	0037	139.8	10.60	137.5	3.115	5.995	2	0.71	1%	0
291.34	Acid Soluble Nickel , ICP, EPA 3050B/6010C (ppm)	0501	84.40	0.2000			0.2000	1			0
301.33	Acid Soluble Selenium , ICP, 2006.03 modified... (ppm)	0494	34.51	0.2767	39.59	7.189	1.090	2	-0.71	6%	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				
301.33	Acid Soluble Selenium , ICP, 2006.03 modified...	0037	44.68	1.903	39.59	7.189	1.090	2	0.71	6%	0
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)	0494	0.5479	0.0092	0.5593	0.0159	0.0217	3	-0.72	1%	0
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)	0035	0.5525	0.0350	0.5593	0.0159	0.0217	3	-0.43	1%	0
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)	0102	0.5775	0.0210	0.5593	0.0159	0.0217	3	1.14	2%	0
311.99	Sodium, Other (%)	0501	0.5250	0.0300	0.5663	0.0333	0.0305	4	-1.24	4%	0
311.99	Sodium, Other (%)	0354	0.5550	0.0020	0.5663	0.0333	0.0305	4	-0.34	1%	0
311.99	Sodium, Other (%)	0482	0.5850	0.0300	0.5663	0.0333	0.0305	4	0.56	2%	0
311.99	Sodium, Other (%)	0096	0.6000	0.0600	0.5663	0.0333	0.0305	4	1.01	3%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (7%)	0500	6.910*	0.0200	8.080	0.5400	0.1867	12	-2.17	7%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (7%)	0498	7.280*	0.0800	8.080	0.5400	0.1867	12	-1.48	5%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (7%)	0481	7.920	0.3000	8.080	0.5400	0.1867	12	-0.30	1%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (7%)	0043	7.925	0.1500	8.080	0.5400	0.1867	12	-0.29	1%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (7%)	0029	7.938	0.1240	8.080	0.5400	0.1867	12	-0.26	1%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (7%)	0513	7.945	0.1900	8.080	0.5400	0.1867	12	-0.25	1%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (7%)	0169	8.110	0.3000	8.080	0.5400	0.1867	12	0.06	0%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (7%)	0105	8.339	0.1730	8.080	0.5400	0.1867	12	0.48	2%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (7%)	0040	8.352	0.4610	8.080	0.5400	0.1867	12	0.50	2%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (7%)	0485	8.425	0.3100	8.080	0.5400	0.1867	12	0.64	2%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (7%)	0457	8.680	0.0120	8.080	0.5400	0.1867	12	1.11	4%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (7%)	0516	8.780	0.1200	8.080	0.5400	0.1867	12	1.30	4%	0
321.03	Acid Soluble Zinc , AA, 965.09, test portion ... (7%)	0117	8.180	1.040			1.040	1			0
321.30	Acid Soluble Zinc , ICP, test portion inorgan...	0292	6.905*	0.2300	8.264	0.5077	0.1838	34	-2.68	8%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan...	0420	7.025*	0.0100	8.264	0.5077	0.1838	34	-2.44	7%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan...	0433	7.610	0.1400	8.264	0.5077	0.1838	34	-1.29	4%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan...	0324	7.675	0.1500	8.264	0.5077	0.1838	34	-1.16	4%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan...	0482	7.720	0.4400	8.264	0.5077	0.1838	34	-1.07	3%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan...	0307	7.771	0.0470	8.264	0.5077	0.1838	34	-0.97	3%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan...	0444	7.810	0.0600	8.264	0.5077	0.1838	34	-0.89	3%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan...	0114	7.830	0.1000	8.264	0.5077	0.1838	34	-0.86	3%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan...	0230	7.870	0.4800	8.264	0.5077	0.1838	34	-0.78	2%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan...	0090	7.965	0.0900	8.264	0.5077	0.1838	34	-0.59	2%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan...	0360	8.040	0.0800	8.264	0.5077	0.1838	34	-0.44	1%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan...	0157	8.090	0.1400	8.264	0.5077	0.1838	34	-0.34	1%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan...	0406	8.130	0.0800	8.264	0.5077	0.1838	34	-0.26	1%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan...	0519	8.180	0.0400	8.264	0.5077	0.1838	34	-0.17	1%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan...	0390	8.190	0.1800	8.264	0.5077	0.1838	34	-0.15	0%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan...	0231	8.270	0.0200	8.264	0.5077	0.1838	34	0.01	0%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan...	0234	8.280	0.0400	8.264	0.5077	0.1838	34	0.03	0%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan...	0371	8.310	0.2600	8.264	0.5077	0.1838	34	0.09	0%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan...	0472	8.335	0.4300	8.264	0.5077	0.1838	34	0.14	0%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan...	0041	8.340	0.0200	8.264	0.5077	0.1838	34	0.15	0%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan...	0354	8.344	0.2340	8.264	0.5077	0.1838	34	0.16	0%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan...	0096	8.359	0.1994	8.264	0.5077	0.1838	34	0.19	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				
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (7%)	0095	8.480	0.0200	8.264	0.5077	0.1838	34	0.42	1%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (7%)	0402	8.510	0.1200	8.264	0.5077	0.1838	34	0.48	1%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (7%)	0377	8.510	0.4000	8.264	0.5077	0.1838	34	0.48	1%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (7%)	0291	8.535	0.0300	8.264	0.5077	0.1838	34	0.53	2%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (7%)	0452	8.560	0.0800	8.264	0.5077	0.1838	34	0.58	2%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (7%)	0073	8.575	0.2300	8.264	0.5077	0.1838	34	0.61	2%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (7%)	0483	8.635	0.0500	8.264	0.5077	0.1838	34	0.73	2%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (7%)	0131	8.955	0.4300	8.264	0.5077	0.1838	34	1.36	4%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (7%)	0325	9.055	0.5500	8.264	0.5077	0.1838	34	1.56	5%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (7%)	0035	9.085	0.4700	8.264	0.5077	0.1838	34	1.62	5%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (7%)	0055	9.107	0.0860	8.264	0.5077	0.1838	34	1.66	5%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (7%)	0102	9.557	0.3140	8.264	0.5077	0.1838	34	2.55	8%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (7%)	0368	8.406	1.460	8.264	0.5077	0.1838	34	0.28	1%	1
321.32	Acid Soluble Zinc , ICP, test portion 2006.03... (7%)	0292	6.830*	0.0800	7.948	1.580	0.1350	2	-0.71	7%	0
321.32	Acid Soluble Zinc , ICP, test portion 2006.03... (7%)	0394	9.065	0.1900	7.948	1.580	0.1350	2	0.71	7%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.03... (7%)	0422	6.500*	0.7200	7.982	0.5292	0.2811	12	-2.80	9%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.03... (7%)	0515	7.398	0.5513	7.982	0.5292	0.2811	12	-1.10	4%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.03... (7%)	0023	7.500	0.1800	7.982	0.5292	0.2811	12	-0.91	3%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.03... (7%)	0486	7.670	0.1000	7.982	0.5292	0.2811	12	-0.59	2%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.03... (7%)	0405	7.875	0.0700	7.982	0.5292	0.2811	12	-0.20	1%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.03... (7%)	0177	7.971	0.0746	7.982	0.5292	0.2811	12	-0.02	0%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.03... (7%)	0397	8.000	0.0480	7.982	0.5292	0.2811	12	0.03	0%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.03... (7%)	0421	8.301	0.5430	7.982	0.5292	0.2811	12	0.60	2%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.03... (7%)	0211	8.370	0.2000	7.982	0.5292	0.2811	12	0.73	2%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.03... (7%)	0037	8.410	0.0000	7.982	0.5292	0.2811	12	0.81	3%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.03... (7%)	0494	8.544	0.5563	7.982	0.5292	0.2811	12	1.06	4%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.03... (7%)	0025	8.558	0.3300	7.982	0.5292	0.2811	12	1.09	4%	0
321.99	Acid Soluble Zinc , Other (7%)	0506	7.480	0.1400	8.220	0.8222	0.2843	6	-0.83	5%	0
321.99	Acid Soluble Zinc , Other (7%)	0042	7.575	0.6100	8.220	0.8222	0.2843	6	-0.73	4%	0
321.99	Acid Soluble Zinc , Other (7%)	0512	7.972	0.3190	8.220	0.8222	0.2843	6	-0.28	2%	0
321.99	Acid Soluble Zinc , Other (7%)	0389	8.360	0.0800	8.220	0.8222	0.2843	6	0.16	1%	0
321.99	Acid Soluble Zinc , Other (7%)	0027	8.486	0.4570	8.220	0.8222	0.2843	6	0.30	2%	0
321.99	Acid Soluble Zinc , Other (7%)	0487	9.450	0.1000	8.220	0.8222	0.2843	6	1.38	7%	0
321.99	Acid Soluble Zinc , Other (7%)	0515	8.554	2.733	8.220	0.8222	0.2843	6	0.38	2%	1
325.99	Water Soluble Zinc, Other (%)	0518	7.085	0.0900			0.0900	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 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 astrix 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.