

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Methods: 138

Sample # 150311

Statistical Summary

Labs Reporting: 87

Grade 6-9-22

Issue Date : 04/30/2015

Method Code	Analyte & Method	# Tests Submitted	# Tests in Robust	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 (%)	14	14	4.749	0.1859	4.733		0.1708	0.0323	3.61%		0.0707	3.17%
001.99	Ammoniacal Nitrogen, Other (%)	11	10	4.910	0.5696	4.750		0.1721	0.0385	3.62%		0.0760	3.16%
007.00	Urea, Urease (%)	1		4.685									
009.10	Ammoniacal Plus Nitrate Nitrogen, Devarda (%)	5	5	4.883	0.1738	4.883		0.1738	0.0550	3.56%		0.0380	3.15%
010.11	Total Nitrogen, Modified Comprehensive (6%)	9	9	5.101	0.5863	4.789	0.5059	0.0440	0.0104	0.92%	5.28%	0.0422	3.16%
010.12	Total Nitrogen, Salicylic (6%)	4	4	5.473	1.019	5.473	0.5059	1.019	0.3604	18.63%	4.62%	0.1000	3.10%
010.60	Total Nitrogen, Combustion (6%)	54	52	4.792	0.1081	4.789	0.5059	0.0788	0.0077	1.65%	5.28%	0.0415	3.16%
010.99	Total Nitrogen, Other (6%)	4	4	5.220	0.7141	5.220	0.5059	0.7141	0.2525	13.68%	4.85%	0.1850	3.12%
020.10	Total Phosphorus as P2O5, Gravimetric Quinolinium ... (%)	7	6	10.22	5.288	8.086		0.1051	0.0304	1.30%		0.0272	2.92%
020.20	Total Phosphorus as P2O5, Spectrophotometric Molyb... (%)	20	19	8.117	0.2993	8.054		0.1710	0.0277	2.12%		0.0542	2.92%
020.40	Total Phosphorus as P2O5, Automated (%)	6	6	8.333	0.5333	8.154		0.1776	0.0513	2.18%		0.1000	2.92%
020.50	Total Phosphorus as P2O5, ICP (%)	14	14	8.085	0.2366	8.111		0.2219	0.0419	2.74%		0.2444	2.92%
020.99	Total Phosphorus as P2O5, Other (%)	4	4	10.54	7.174	10.54		7.174	2.536	68.08%		0.0650	2.81%
030.40	Citrate Insoluble Phosphorus as P2O5, Automated, t... (%)	1		0.0550									
040.20	Indirect Available Phosphorus as P2O5, Spectr... (9%)	2	2	8.035	0.0919								
040.40	Indirect Available Phosphorus as P2O5, Automated (9%)	1		7.905									
041.10	Direct Available Phosphorus as P2O5, Gravimet... (9%)	9	8	7.995	0.0451	7.998	0.6800	0.0451	0.0113	0.56%	4.25%	0.0707	2.93%
041.11	Direct Available Phosphorus as P2O5, Gravimet... (9%)	4	4	8.004	0.0269	8.004	0.6800	0.0269	0.0095	0.34%	4.25%	0.0175	2.92%
041.20	Direct Available Phosphorus as P2O5, Spectrop... (9%)	1		7.735									
041.21	Direct Available Phosphorus as P2O5, Spectrop... (9%)	1		8.140									
041.40	Direct Available Phosphorus as P2O5, Automated (9%)	1		8.725									
041.50	Direct Available Phosphorus as P2O5, ICP (9%)	7	7	8.119	0.2602	8.119	0.6800	0.2950	0.0788	3.63%	4.19%	0.2514	2.92%
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (9%)	5	5	8.098	0.3741	8.098	0.6800	0.3741	0.1183	4.62%	4.20%	0.0640	2.92%
041.60	Direct Available Phosphorus as P2O5, Citrate-... (9%)	13	12	8.082	0.1967	8.074	0.6800	0.2084	0.0425	2.58%	4.21%	0.0840	2.92%
041.99	Direct Available Phosphorus as P2O5, Other (9%)	3	3	7.570	0.5643	7.570	0.6800	0.5643	0.2304	7.45%	4.49%	0.2533	2.95%
048.20	Water Soluble Phosphorus as P2O5, Spectrophotometric (%)	2	2	6.098	0.3642								
048.40	Water Soluble Phosphorus as P2O5, Automated (%)	1		5.935									
050.00	Soluble Potassium as K2O, STPB Oxalate (22%)	12	11	21.10	0.6683	20.93	1.1148	0.2106	0.0449	1.01%	2.66%	0.1118	2.53%
050.10	Soluble Potassium as K2O, STPB Citrate (22%)	1		7.971									
050.30	Soluble Potassium as K2O, AA (22%)	6	6	21.88	3.182	20.84	1.1148	0.9695	0.2799	4.65%	2.68%	0.4083	2.53%
050.31	Soluble Potassium as K2O, AA (22%)	2	2	21.34	3.203								

Method Code	Analyte & Method	# Tests Submitted	# Tests in Robust	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
050.50	Soluble Potassium as K2O, ICP (22%)	10	10	21.20	0.8041	21.21	1.1148	0.6744	0.1508	3.18%	2.63%	0.3652	2.53%
050.51	Soluble Potassium as K2O, ICP (22%)	8	8	21.26	0.6411	21.26	1.1148	0.7163	0.1791	3.37%	2.62%	0.4214	2.52%
050.52	Soluble Potassium as K2O, ICP (22%)	6	6	20.83	0.6999	20.84	1.1148	0.7901	0.2281	3.79%	2.68%	0.2518	2.53%
050.60	Soluble Potassium as K2O, Flame Photometric (22%)	6	5	20.35	2.035	20.35	1.1148	2.035	0.6435	10.00%	2.74%	0.0680	2.54%
050.61	Soluble Potassium as K2O, Flame Photometric (22%)	6	6	21.11	0.6268	21.07	1.1148	0.6397	0.1847	3.04%	2.65%	0.2882	2.53%
050.62	Soluble Potassium as K2O, Flame Photometric (22%)	4	4	21.13	0.1667	21.13	1.1148	0.1667	0.0589	0.79%	2.64%	0.3425	2.53%
050.99	Soluble Potassium as K2O, Other (22%)	22	21	20.54	1.352	20.65	1.1148	1.160	0.1789	5.61%	2.70%	0.3766	2.54%
060.00	Water (%)	3	3	0.9166	0.1239	0.9166		0.1239	0.0506	13.52%		0.0235	4.05%
060.99	Water (%)	1		3.060									
101.30	Acid Soluble Calcium, ICP, test portion inorganic ... (%)	11	10	5.780	0.3446	5.830		0.2554	0.0571	4.38%		0.1373	3.07%
101.32	Acid Soluble Calcium, ICP, test portion 2006.03A-C (%)	1		5.672									
101.33	Acid Soluble Calcium, ICP, test portion 2006.03A-C... (%)	3	3	5.787	0.1923	5.787		0.1923	0.0785	3.32%		0.2054	3.07%
101.99	Acid Soluble Calcium, Other (%)	2	2	5.530	0.2616								
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (1.2%)	9	9	1.290	0.0575	1.290	0.2637	0.0652	0.0154	5.05%	10.22%	0.0309	3.85%
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1.2%)	32	32	1.264	0.0920	1.270	0.2637	0.0651	0.0081	5.13%	10.38%	0.0359	3.86%
121.32	Acid Soluble Magnesium, ICP, test portion 200... (1.2%)	1		1.225									
121.33	Acid Soluble Magnesium, ICP, test portion 200... (1.2%)	10	9	1.268	0.0819	1.292	0.2637	0.0445	0.0105	3.44%	10.21%	0.0165	3.85%
121.99	Acid Soluble Magnesium, Other (1.2%)	2	2	1.238	0.0248								
131.00	Water Soluble Magnesium, AA (%)	5	5	2.980	4.292	2.980		4.292	1.357	144.03%		0.0510	3.39%
131.30	Water Soluble Magnesium, ICP (%)	7	7	1.074	0.1747	1.092		0.1545	0.0413	14.15%		0.0286	3.95%
131.70	Water Soluble Magnesium, Titrimetric (%)	1		1.230									
143.00	Elemental Sulfur, Gravimetric Sulfur - carbon disu... (%)	2	2	10.47	0.4844								
143.99	Elemental Sulfur, Other (%)	4	4	10.25	0.4437	10.25		0.4437	0.1569	4.33%		0.2375	2.82%
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulfur - ... (%)	4	4	9.728	1.018	9.728		1.018	0.3600	10.47%		0.0950	2.84%
145.99	Sulfate Sulfur, HCl soluble, Other (%)	3	3	10.20	1.398	10.20		1.398	0.5706	13.70%		0.3600	2.82%
146.00	Total Sulfur in Liquid, Gravimetric - sulfate, sul... (%)	1		11.29									
146.99	Total Sulfur in Liquid, Other (%)	1		9.715									
148.00	Total Sulfur, Combustion (12%)	6	6	9.840	0.5973	9.721	0.7115	0.4230	0.1221	4.35%	3.66%	0.2100	2.84%
148.01	Total Sulfur, Gravimetric - sulfate and elem... (12%)	11	11	10.65	0.8239	10.33	0.7115	0.2217	0.0473	2.15%	3.44%	0.1109	2.81%
148.04	Total Sulfur, ICP, w/Br digestion (12%)	1		9.800									
148.07	Total Sulfur, ICP, test portion as in 2006.03... (12%)	8	8	10.28	0.7057	10.23	0.7115	0.3852	0.0963	3.76%	3.48%	0.3251	2.82%
148.99	Total Sulfur, Other (12%)	10	9	10.38	0.6555	10.29	0.7115	0.5222	0.1231	5.07%	3.46%	0.1294	2.82%
149.04	Sulfur - HNO3 soluble, ICP (%)	3	3	9.768	0.0569	9.768		0.0569	0.0232	0.58%		0.2500	2.84%
151.00	Acid Soluble Arsenic , AA, test portion as in 200... (ppm)	3	3	20.70	5.216	20.70		5.216	2.129	25.20%		0.7333	10.14%
151.30	Acid Soluble Arsenic , ICP (ppm)	10	10	21.74	7.336	24.28		2.943	0.6582	12.12%		1.161	9.90%
151.33	Acid Soluble Arsenic , ICP, 2006.03 modified w/9:... (ppm)	3	3	28.40	3.889	28.40		3.889	1.588	13.70%		1.210	9.67%
151.34	Acid Soluble Arsenic , ICP, EPA 3050B/6010C (ppm)	1		25.50									
151.99	Acid Soluble Arsenic , Other (ppm)	1		27.50									
165.00	Acid Soluble Boron , Spectrophotometric (0.45%)	10	10	0.3158	0.0651	0.3313	0.0544	0.0398	0.0089	12.02%	8.20%	0.0076	4.72%
165.30	Acid Soluble Boron , ICP, test portion in 982.01 (0.45%)	17	17	0.3480	0.0357	0.3479	0.0544	0.0319	0.0055	9.17%	7.81%	0.0152	4.69%
165.99	Acid Soluble Boron , Other (0.45%)	17	16	0.3494	0.0470	0.3424	0.0544	0.0310	0.0055	9.06%	7.94%	0.0104	4.70%
171.99	Water Soluble Boron , Other (%)	2	2	0.3503	0.0357								

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181.00	Acid Soluble Cadmium , AA, test portion as in 200...	3	3	14.48	5.923	14.48		5.922	2.418	40.89%		0.2333	10.70%
181.30	Acid Soluble Cadmium , ICP (ppm)	12	12	10.88	0.9331	11.03		0.7695	0.1571	6.98%		0.2425	11.15%
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified w/9:...	3	3	11.52	0.2182	11.52		0.2182	0.0891	1.89%		0.9375	11.07%
181.34	Acid Soluble Cadmium , ICP, EPA 3050B/6010C (ppm)	1		11.00									
181.99	Acid Soluble Cadmium , Other (ppm)	2	2	11.11	0.9758								
190.00	Water Soluble Chlorine, Titrimetric (18%)	18	18	16.33	1.381	16.16	1.0000	0.2956	0.0493	1.83%	3.09%	0.1344	2.63%
190.99	Water Soluble Chlorine, Other (18%)	4	4	12.31	8.130	12.31	1.0000	8.129	2.874	66.05%	4.06%	0.1050	2.74%
191.00	Acid Soluble Chromium , AA, test portion as in 20...	1		32.00									
191.30	Acid Soluble Chromium , ICP (ppm)	10	10	32.20	3.711	31.69		2.595	0.5803	8.19%		1.064	9.51%
191.33	Acid Soluble Chromium , ICP, 2006.03 modified w/9:...	3	3	37.81	1.617	37.81		1.617	0.6602	4.28%		2.847	9.26%
191.34	Acid Soluble Chromium , ICP, EPA 3050B/6010C (ppm)	1		45.00									
191.99	Acid Soluble Chromium , Other (ppm)	1		42.50									
202.30	Acid Soluble Cobalt , ICP (ppm)	10	10	4.063	1.049	4.083		0.9367	0.2095	22.94%		0.3410	12.94%
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified w/9:3:...	2	2	4.608	0.1533								
202.34	Acid Soluble Cobalt , ICP, EPA 3050B/6010C (ppm)	1		4.750									
221.00	Acid Soluble Copper , AA, inorganic 965.09 (%)	4	4	0.0502	0.0013	0.0502		0.0013	0.0005	2.65%		0.0017	6.27%
221.30	Acid Soluble Copper , ICP, test portion inorganic...	17	17	0.0529	0.0119	0.0505		0.0061	0.0011	12.14%		0.0038	6.27%
221.32	Acid Soluble Copper , ICP, test portion 2006.03A-C (%)	2	2	0.0544	0.0080								
221.33	Acid Soluble Copper , ICP, test portion 2006.03A-...	5	5	0.0481	0.0057	0.0481		0.0057	0.0018	11.90%		0.0046	6.32%
221.99	Acid Soluble Copper , Other (%)	3	3	0.0503	0.0035	0.0503		0.0035	0.0014	6.88%		0.0013	6.27%
241.00	Acid Soluble Iron , AA, inorganic 965.09 (0.1%)	12	12	0.4347	0.0742	0.4489	0.0491	0.0513	0.0105	11.42%	5.46%	0.0181	4.51%
241.03	Acid Soluble Iron , AA, 965.09, test portion ... (0.1%)	1		0.4800									
241.30	Acid Soluble Iron , ICP, test portion inorgan... (0.1%)	32	31	0.4320	0.0742	0.4457	0.0491	0.0424	0.0054	9.52%	5.50%	0.0162	4.52%
241.32	Acid Soluble Iron , ICP, test portion 2006.03A-C (0.1%)	1		0.4120									
241.33	Acid Soluble Iron , ICP, test portion 2006.03... (0.1%)	11	11	0.4342	0.0500	0.4370	0.0491	0.0523	0.0111	11.96%	5.61%	0.0132	4.53%
241.99	Acid Soluble Iron , Other (0.1%)	3	3	0.3730	0.0516	0.3730	0.0491	0.0516	0.0211	13.85%	6.58%	0.0127	4.64%
251.00	Acid Soluble Lead , AA, test portion as in 2006.0...	3	3	110.9	44.57	110.9		44.56	18.19	40.20%		3.033	7.88%
251.30	Acid Soluble Lead , ICP (ppm)	13	13	123.7	11.80	124.0		12.47	2.445	10.06%		6.809	7.74%
251.33	Acid Soluble Lead , ICP, 2006.03 modified w/9:3 H...	2	2	135.3	9.096								
251.34	Acid Soluble Lead , ICP, EPA 3050B/6010C (ppm)	1		124.5									
251.99	Acid Soluble Lead , Other (ppm)	2	2	123.7	1.626								
261.00	Acid Soluble Manganese , AA, Mn2+ only (0.05%)	2	2	0.0363	0.0011								
261.11	Acid Soluble Manganese , AA, total Mn (0.05%)	3	3	0.0315	0.0039	0.0315	0.0086	0.0039	0.0016	12.40%	13.69%	0.0010	6.73%
261.12	Acid Soluble Manganese , AA, inorganic 965.09 (0.05%)	6	6	0.0377	0.0052	0.0371	0.0086	0.0040	0.0011	10.72%	11.62%	0.0011	6.57%
261.15	Acid Soluble Manganese , AA, 965.09, test po... (0.05%)	1		0.0400									
261.30	Acid Soluble Manganese , ICP, test portion 9... (0.05%)	17	16	0.0360	0.0034	0.0360	0.0086	0.0038	0.0007	10.42%	11.98%	0.0024	6.60%
261.31	Acid Soluble Manganese , ICP, test portion 9... (0.05%)	4	4	0.0354	0.0034	0.0354	0.0086	0.0034	0.0012	9.66%	12.17%	0.0025	6.61%
261.32	Acid Soluble Manganese , ICP, test portion i... (0.05%)	9	8	0.0354	0.0030	0.0353	0.0086	0.0026	0.0007	7.40%	12.20%	0.0011	6.61%
261.34	Acid Soluble Manganese , ICP, test portion 2... (0.05%)	1		0.0365									
261.35	Acid Soluble Manganese , ICP, test portion 2... (0.05%)	9	8	0.0366	0.0058	0.0373	0.0086	0.0052	0.0013	13.87%	11.57%	0.0018	6.56%
261.99	Acid Soluble Manganese , Other (0.05%)	5	5	0.0365	0.0040	0.0365	0.0086	0.0040	0.0013	10.83%	11.82%	0.0025	6.58%
271.30	Water Soluble Manganese , ICP, Ext. 972.03 (%)	1		0.0185									

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281.00	Acid Soluble Mercury , AA (ppm)	3	3	4.901	8.313	4.901		8.313	3.394	169.62%		0.3407	12.59%
281.30	Acid Soluble Mercury , ICP (ppm)	1		0.0825									
289.30	Acid Soluble Molybdenum , ICP (ppm)	12	12	16.15	3.530	15.22		1.785	0.3644	11.73%		0.7353	10.62%
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modified w... (ppm)	3	3	20.84	6.805	20.84		6.805	2.778	32.65%		0.9380	10.13%
289.34	Acid Soluble Molybdenum , ICP, EPA 3050B/6010C (ppm)	1		17.80									
291.00	Acid Soluble Nickel , AA, test portion as in 2006... (ppm)	2	2	12.75	2.475								
291.30	Acid Soluble Nickel , ICP (ppm)	11	11	11.36	1.479	11.43		1.014	0.2161	8.87%		0.9618	11.09%
291.33	Acid Soluble Nickel , ICP, 2006.03 modified w/9:3... (ppm)	2	2	13.18	0.2408								
291.34	Acid Soluble Nickel , ICP, EPA 3050B/6010C (ppm)	1		16.50									
291.99	Acid Soluble Nickel , Other (ppm)	1		13.80									
301.00	Acid Soluble Selenium , AA, test portion as in 20... (ppm)	1		0.1965									
301.30	Acid Soluble Selenium , ICP (ppm)	3	2	0.0032	0.0024	0.0032		0.0024	0.0012	75.13%		0.0040	37.98%
311.30	Sodium, Flame Photometric (%)	2	2	0.5724	0.0388								
311.32	Sodium, ICP, 2006.03 test portion (%)	1		0.5855									
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl test ... (%)	3	3	0.5811	0.0080	0.5811		0.0080	0.0033	1.38%		0.0173	4.34%
311.99	Sodium, Other (%)	4	4	0.6223	0.0309	0.6223		0.0309	0.0109	4.96%		0.0190	4.30%
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (1.5%)	12	12	1.385	0.1594	1.391	0.1443	0.0999	0.0204	7.18%	5.19%	0.0463	3.81%
321.03	Acid Soluble Zinc , AA, 965.09, test portion... (1.5%)	1		1.320									
321.30	Acid Soluble Zinc , ICP, test portion inorga... (1.5%)	35	34	1.386	0.1360	1.393	0.1443	0.1009	0.0122	7.24%	5.18%	0.0520	3.81%
321.32	Acid Soluble Zinc , ICP, test portion 2006.03A-C (1.5%)	1		1.405									
321.33	Acid Soluble Zinc , ICP, test portion 2006.0... (1.5%)	10	10	1.395	0.1049	1.400	0.1443	0.1058	0.0236	7.55%	5.15%	0.0574	3.80%
321.99	Acid Soluble Zinc , Other (1.5%)	3	3	1.388	0.0580	1.388	0.1443	0.0580	0.0237	4.17%	5.20%	0.0900	3.81%
325.00	Water Soluble Zinc , AA (%)	1		1.035									

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 150311

Grade 6-9-22

Method Precision Report

Issue Date : 04/30/2015

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	14	13	4.714	0.1385	0.1311	0.0633	0.1456	2.78%	1.34%	3.09%	2.298
001.99	Ammoniacal Nitrogen, Other	11	8	4.721	0.1994	0.1943	0.0631	0.2043	4.12%	1.34%	4.33%	3.235
010.11	Total Nitrogen, Modified Comprehensive	9	9	5.101	0.5863	0.5855	0.0440	0.5871	11.48%	0.86%	11.51%	13.35
010.60	Total Nitrogen, Combustion	54	49	4.795	0.0865	0.0829	0.0346	0.0898	1.73%	0.72%	1.87%	2.598
020.10	Total Phosphorus as P2O5, Gravimetric Quinolinium MolybdoP	7	5	8.058	0.0788	0.0763	0.0279	0.0812	0.95%	0.35%	1.01%	2.908
020.20	Total Phosphorus as P2O5, Spectrophotometric MolybdovanadoP	20	18	8.061	0.1780	0.1739	0.0541	0.1821	2.16%	0.67%	2.26%	3.369
020.40	Total Phosphorus as P2O5, Automated	6	5	8.123	0.1541	0.1458	0.0704	0.1619	1.79%	0.87%	1.99%	2.301
020.50	Total Phosphorus as P2O5, ICP	14	14	8.085	0.2366	0.1786	0.2196	0.2830	2.21%	2.72%	3.50%	1.289
041.10	Direct Available Phosphorus as P2O5, Gravimetric Quinolinium	9	8	7.995	0.0451		0.0688			0.86%		
041.50	Direct Available Phosphorus as P2O5, ICP	7	7	8.119	0.2602	0.2028	0.2305	0.3070	2.50%	2.84%	3.78%	1.332
041.60	Direct Available Phosphorus as P2O5, Citrate-EDTA Ext.	13	12	8.082	0.1967	0.1890	0.0769	0.2041	2.34%	0.95%	2.53%	2.653
050.00	Soluble Potassium as K2O, STPB Oxalate	12	9	20.90	0.3264	0.3199	0.0916	0.3328	1.53%	0.44%	1.59%	3.633
050.30	Soluble Potassium as K2O, AA	6	5	20.60	0.7115	0.6995	0.1833	0.7232	3.40%	0.89%	3.51%	3.945
050.50	Soluble Potassium as K2O, ICP	10	10	21.20	0.8041	0.7593	0.3741	0.8465	3.58%	1.76%	3.99%	2.263
050.51	Soluble Potassium as K2O, ICP	8	8	21.26	0.6410	0.5867	0.3653	0.6911	2.76%	1.72%	3.25%	1.892
050.52	Soluble Potassium as K2O, ICP	6	6	20.83	0.6999	0.6828	0.2176	0.7166	3.28%	1.04%	3.44%	3.294
050.60	Soluble Potassium as K2O, Flame Photometric	6	5	20.35	2.035	2.034	0.0718	2.036	9.99%	0.35%	10.00%	28.34
050.61	Soluble Potassium as K2O, Flame Photometric	6	6	21.11	0.6268	0.5969	0.2705	0.6553	2.83%	1.28%	3.10%	2.423
050.99	Soluble Potassium as K2O, Other	22	20	20.56	1.383	1.367	0.2926	1.398	6.65%	1.42%	6.80%	4.778
101.30	Acid Soluble Calcium, ICP, test portion inorganic 965.09	11	9	5.873	0.1915	0.1778	0.1006	0.2043	3.03%	1.71%	3.48%	2.031
121.00	Acid Soluble Magnesium, AA, inorganic 965.09	9	9	1.290	0.0575	0.0543	0.0267	0.0605	4.21%	2.07%	4.69%	2.268
121.30	Acid Soluble Magnesium, ICP, test portion inorganic 965.09	32	30	1.267	0.0750	0.0718	0.0309	0.0781	5.66%	2.44%	6.17%	2.530
121.33	Acid Soluble Magnesium, ICP, test portion 2006.03A-C, w/dual aci	10	8	1.261	0.0850	0.0847	0.0099	0.0853	6.72%	0.78%	6.76%	8.638
131.30	Water Soluble Magnesium, ICP	7	7	1.074	0.1747	0.1733	0.0305	0.1760	16.13%	2.84%	16.38%	5.775
148.00	Total Sulfur, Combustion	6	6	9.840	0.5973	0.5858	0.1649	0.6086	5.95%	1.68%	6.19%	3.691
148.01	Total Sulfur, Gravimetric - sulfate and elemental	11	11	10.65	0.8238	0.8214	0.0898	0.8263	7.71%	0.84%	7.76%	9.202
148.07	Total Sulfur, ICP, test portion as in 2006.03 modified w/9:3 HNO3:	8	7	10.27	0.7622	0.7516	0.1791	0.7726	7.32%	1.74%	7.52%	4.314
148.99	Total Sulfur, Other	10	8	10.19	0.3803	0.3708	0.1194	0.3895	3.64%	1.17%	3.82%	3.263
151.30	Acid Soluble Arsenic , ICP	10	10	21.74	7.336	7.297	1.078	7.376	33.56%	4.96%	33.92%	6.842
165.00	Acid Soluble Boron , Spectrophotometric	10	8	0.3311	0.0462	0.0460	0.0052	0.0463	13.90%	1.58%	13.99%	8.841

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 %rstd	Reproducibility %RSD	sR/sr
165.30	Acid Soluble Boron , ICP, test portion in 982.01	17	16	0.3528	0.0304	0.0291	0.0124	0.0317	8.25%	3.52%	8.97%	2.549
165.99	Acid Soluble Boron , Other	17	14	0.3419	0.0240	0.0238	0.0044	0.0242	6.96%	1.30%	7.08%	5.445
181.30	Acid Soluble Cadmium , ICP	12	11	10.82	0.9569	0.9467	0.1975	0.9670	8.75%	1.82%	8.94%	4.897
190.00	Water Soluble Chlorine, Titrimetric	18	16	16.02	0.5878	0.5824	0.1118	0.5931	3.63%	0.70%	3.70%	5.303
191.30	Acid Soluble Chromium , ICP	10	9	31.73	3.604	3.571	0.6944	3.638	11.25%	2.19%	11.46%	5.238
202.30	Acid Soluble Cobalt , ICP	10	10	4.063	1.049	1.025	0.3141	1.072	25.22%	7.73%	26.38%	3.412
221.30	Acid Soluble Copper , ICP, test portion inorganic 965.09	17	16	0.0504	0.0061	0.0057	0.0033	0.0066	11.30%	6.49%	13.03%	2.009
241.00	Acid Soluble Iron , AA, inorganic 965.09	12	11	0.4511	0.0500	0.0491	0.0133	0.0508	10.88%	2.95%	11.27%	3.818
241.30	Acid Soluble Iron , ICP, test portion inorganic 965.09	32	28	0.4464	0.0391	0.0377	0.0144	0.0404	8.45%	3.22%	9.05%	2.812
241.33	Acid Soluble Iron , ICP, test portion 2006.03A-C, w/dual acid	11	11	0.4342	0.0499	0.0490	0.0136	0.0509	11.29%	3.14%	11.71%	3.734
251.30	Acid Soluble Lead , ICP	13	13	123.7	11.80	11.02	5.971	12.53	8.91%	4.83%	10.13%	2.099
261.12	Acid Soluble Manganese , AA, inorganic 965.09	6	6	0.0377	0.0052	0.0051	0.0011	0.0052	13.57%	2.83%	13.86%	4.904
261.30	Acid Soluble Manganese , ICP, test portion 972.02a	17	14	0.0361	0.0036	0.0034	0.0015	0.0037	9.45%	4.08%	10.30%	2.524
261.32	Acid Soluble Manganese , ICP, test portion inorganic 965.09	9	8	0.0354	0.0030	0.0029	0.0012	0.0031	8.09%	3.39%	8.77%	2.585
261.35	Acid Soluble Manganese , ICP, test portion 2006.03A-C, w/dual a	9	7	0.0354	0.0051	0.0050	0.0006	0.0051	14.21%	1.59%	14.30%	8.977
289.30	Acid Soluble Molybdenum , ICP	12	11	15.31	2.105	2.047	0.6947	2.162	13.37%	4.54%	14.12%	3.112
291.30	Acid Soluble Nickel , ICP	11	10	11.69	1.025	0.8138	0.8824	1.200	6.96%	7.55%	10.26%	1.360
321.00	Acid Soluble Zinc , AA, inorganic 965.09	12	11	1.419	0.1123	0.1082	0.0424	0.1162	7.62%	2.99%	8.19%	2.739
321.30	Acid Soluble Zinc , ICP, test portion inorganic 965.09	35	31	1.398	0.0973	0.0931	0.0401	0.1014	6.66%	2.86%	7.25%	2.531
321.33	Acid Soluble Zinc , ICP, test portion 2006.03A-C, w/dual acid	10	10	1.395	0.1049	0.0982	0.0524	0.1113	7.04%	3.76%	7.98%	2.123

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Methods: 138

Sample # 150311

Lab Values

Labs Reporting: 87

Grade 6-9-22

Issue Date : 04/30/2015

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 (%)	0389	4.500	0.0400	4.733	0.1708	0.0707	14	-1.36	2%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0368	4.560	0.0200	4.733	0.1708	0.0707	14	-1.01	2%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0230	4.595	0.2300	4.733	0.1708	0.0707	14	-0.81	1%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0231	4.615	0.0100	4.733	0.1708	0.0707	14	-0.69	1%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0169	4.635	0.0300	4.733	0.1708	0.0707	14	-0.57	1%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0416	4.670	0.0400	4.733	0.1708	0.0707	14	-0.37	1%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0500	4.730	0.0200	4.733	0.1708	0.0707	14	-0.02	0%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0090	4.760	0.0200	4.733	0.1708	0.0707	14	0.16	0%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0405	4.760	0.0200	4.733	0.1708	0.0707	14	0.16	0%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0481	4.760	0.1000	4.733	0.1708	0.0707	14	0.16	0%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0456	4.810	0.1800	4.733	0.1708	0.0707	14	0.45	1%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0444	4.890	0.0400	4.733	0.1708	0.0707	14	0.92	2%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0513	5.000	0.0400	4.733	0.1708	0.0707	14	1.56	3%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0498	5.200	0.2000	4.733	0.1708	0.0707	14	2.73	5%	0
001.99	Ammoniacal Nitrogen, Other (%)	0420	4.445	0.0300	4.750	0.1721	0.0760	10	-1.77	3%	0
001.99	Ammoniacal Nitrogen, Other (%)	0493	4.625	0.0500	4.750	0.1721	0.0760	10	-0.73	1%	0
001.99	Ammoniacal Nitrogen, Other (%)	0096	4.635	0.0300	4.750	0.1721	0.0760	10	-0.67	1%	0
001.99	Ammoniacal Nitrogen, Other (%)	0394	4.700	0.0000	4.750	0.1721	0.0760	10	-0.29	1%	0
001.99	Ammoniacal Nitrogen, Other (%)	0397	4.735	0.0300	4.750	0.1721	0.0760	10	-0.09	0%	0
001.99	Ammoniacal Nitrogen, Other (%)	0371	4.735	0.0100	4.750	0.1721	0.0760	10	-0.09	0%	0
001.99	Ammoniacal Nitrogen, Other (%)	0220	4.745	0.0300	4.750	0.1721	0.0760	10	-0.03	0%	0
001.99	Ammoniacal Nitrogen, Other (%)	0027	4.885	0.3100	4.750	0.1721	0.0760	10	0.79	1%	0
001.99	Ammoniacal Nitrogen, Other (%)	0506	5.150	0.2400	4.750	0.1721	0.0760	10	2.32	4%	0
001.99	Ammoniacal Nitrogen, Other (%)	0510	6.445	0.0300	4.750	0.1721	0.0760	10	9.85	18%	0
001.99	Ammoniacal Nitrogen, Other (%)	0487	6.050	0.7000	4.750	0.1721	0.0760	10	7.55	14%	1
007.00	Urea, Urease (as Urea) (%)	0444	4.685	0.0100			0.0100	1			
009.10	Ammoniacal Plus Nitrate Nitrogen, Devarda (%)	0397	4.725	0.0100	4.883	0.1738	0.0380	5	-0.91	2%	0
009.10	Ammoniacal Plus Nitrate Nitrogen, Devarda (%)	0090	4.780	0.0200	4.883	0.1738	0.0380	5	-0.59	1%	0
009.10	Ammoniacal Plus Nitrate Nitrogen, Devarda (%)	0169	4.810	0.0200	4.883	0.1738	0.0380	5	-0.42	1%	0
009.10	Ammoniacal Plus Nitrate Nitrogen, Devarda (%)	0444	4.940	0.1200	4.883	0.1738	0.0380	5	0.33	1%	0
009.10	Ammoniacal Plus Nitrate Nitrogen, Devarda (%)	0513	5.160	0.0200	4.883	0.1738	0.0380	5	1.59	3%	0
010.11	Total Nitrogen, Modified Comprehensive (6%)	0220	4.730	0.0000	4.789	0.0440	0.0422	9	-1.33	1%	0
010.11	Total Nitrogen, Modified Comprehensive (6%)	0114	4.755	0.0100	4.789	0.0440	0.0422	9	-0.76	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				
010.11	Total Nitrogen, Modified Comprehensive (6%)	0474	4.765	0.0100	4.789	0.0440	0.0422	9	-0.54	0%	0
010.11	Total Nitrogen, Modified Comprehensive (6%)	0371	4.775	0.0300	4.789	0.0440	0.0422	9	-0.31	0%	0
010.11	Total Nitrogen, Modified Comprehensive (6%)	0090	4.780	0.0200	4.789	0.0440	0.0422	9	-0.19	0%	0
010.11	Total Nitrogen, Modified Comprehensive (6%)	0105	4.785	0.1300	4.789	0.0440	0.0422	9	-0.08	0%	0
010.11	Total Nitrogen, Modified Comprehensive (6%)	0470	5.110	0.0200	4.789	0.0440	0.0422	9	7.31	3%	0
010.11	Total Nitrogen, Modified Comprehensive (6%)	0456	5.940	0.1200	4.789	0.0440	0.0422	9	26.19	12%	0
010.11	Total Nitrogen, Modified Comprehensive (6%)	0510	6.270	0.0400	4.789	0.0440	0.0422	9	33.70	15%	0
010.12	Total Nitrogen, Salicylic (6%)	0185	4.765	0.1300	5.473	1.019	0.1000	4	-0.69	6%	0
010.12	Total Nitrogen, Salicylic (6%)	0481	4.825	0.0700	5.473	1.019	0.1000	4	-0.64	6%	0
010.12	Total Nitrogen, Salicylic (6%)	0498	5.350	0.1000	5.473	1.019	0.1000	4	-0.12	1%	0
010.12	Total Nitrogen, Salicylic (6%)	0455	6.950	0.1000	5.473	1.019	0.1000	4	1.45	13%	0
010.60	Total Nitrogen, Combustion (6%)	0275	4.415	0.0900	4.789	0.0788	0.0415	52	-4.75	4%	0
010.60	Total Nitrogen, Combustion (6%)	0041	4.540	0.0800	4.789	0.0788	0.0415	52	-3.16	3%	0
010.60	Total Nitrogen, Combustion (6%)	0472	4.665	0.0300	4.789	0.0788	0.0415	52	-1.58	1%	0
010.60	Total Nitrogen, Combustion (6%)	0494	4.695	0.0500	4.789	0.0788	0.0415	52	-1.20	1%	0
010.60	Total Nitrogen, Combustion (6%)	0230	4.700	0.1400	4.789	0.0788	0.0415	52	-1.13	1%	0
010.60	Total Nitrogen, Combustion (6%)	0007	4.700	0.0000	4.789	0.0788	0.0415	52	-1.13	1%	0
010.60	Total Nitrogen, Combustion (6%)	0028	4.700	0.0200	4.789	0.0788	0.0415	52	-1.13	1%	0
010.60	Total Nitrogen, Combustion (6%)	0390	4.705	0.0300	4.789	0.0788	0.0415	52	-1.07	1%	0
010.60	Total Nitrogen, Combustion (6%)	0043	4.710	0.0800	4.789	0.0788	0.0415	52	-1.00	1%	0
010.60	Total Nitrogen, Combustion (6%)	0360	4.720	0.0200	4.789	0.0788	0.0415	52	-0.88	1%	0
010.60	Total Nitrogen, Combustion (6%)	0501	4.725	0.0300	4.789	0.0788	0.0415	52	-0.81	1%	0
010.60	Total Nitrogen, Combustion (6%)	0042	4.730	0.0600	4.789	0.0788	0.0415	52	-0.75	1%	0
010.60	Total Nitrogen, Combustion (6%)	0105	4.740	0.0800	4.789	0.0788	0.0415	52	-0.62	1%	0
010.60	Total Nitrogen, Combustion (6%)	0023	4.745	0.0326	4.789	0.0788	0.0415	52	-0.56	0%	0
010.60	Total Nitrogen, Combustion (6%)	0040	4.750	0.1000	4.789	0.0788	0.0415	52	-0.50	0%	0
010.60	Total Nitrogen, Combustion (6%)	0292	4.750	0.0200	4.789	0.0788	0.0415	52	-0.50	0%	0
010.60	Total Nitrogen, Combustion (6%)	0324	4.750	0.1000	4.789	0.0788	0.0415	52	-0.50	0%	0
010.60	Total Nitrogen, Combustion (6%)	0136	4.755	0.0700	4.789	0.0788	0.0415	52	-0.43	0%	0
010.60	Total Nitrogen, Combustion (6%)	0291	4.755	0.0100	4.789	0.0788	0.0415	52	-0.43	0%	0
010.60	Total Nitrogen, Combustion (6%)	0354	4.760	0.0010	4.789	0.0788	0.0415	52	-0.38	0%	0
010.60	Total Nitrogen, Combustion (6%)	0234	4.760	0.0200	4.789	0.0788	0.0415	52	-0.37	0%	0
010.60	Total Nitrogen, Combustion (6%)	0486	4.765	0.1100	4.789	0.0788	0.0415	52	-0.31	0%	0
010.60	Total Nitrogen, Combustion (6%)	0086	4.771	0.0152	4.789	0.0788	0.0415	52	-0.23	0%	0
010.60	Total Nitrogen, Combustion (6%)	0233	4.776	0.0010	4.789	0.0788	0.0415	52	-0.17	0%	0
010.60	Total Nitrogen, Combustion (6%)	0049	4.780	0.0400	4.789	0.0788	0.0415	52	-0.12	0%	0
010.60	Total Nitrogen, Combustion (6%)	0073	4.780	0.0200	4.789	0.0788	0.0415	52	-0.12	0%	0
010.60	Total Nitrogen, Combustion (6%)	0096	4.780	0.0200	4.789	0.0788	0.0415	52	-0.12	0%	0
010.60	Total Nitrogen, Combustion (6%)	0482	4.780	0.0200	4.789	0.0788	0.0415	52	-0.12	0%	0
010.60	Total Nitrogen, Combustion (6%)	0389	4.785	0.0300	4.789	0.0788	0.0415	52	-0.05	0%	0
010.60	Total Nitrogen, Combustion (6%)	0177	4.789	0.0210	4.789	0.0788	0.0415	52	-0.01	0%	0
010.60	Total Nitrogen, Combustion (6%)	0451	4.792	0.0050	4.789	0.0788	0.0415	52	0.03	0%	0
010.60	Total Nitrogen, Combustion (6%)	0325	4.800	0.0000	4.789	0.0788	0.0415	52	0.14	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				
010.60	Total Nitrogen, Combustion (6%)	0356	4.805	0.0700	4.789	0.0788	0.0415	52	0.20	0%	0
010.60	Total Nitrogen, Combustion (6%)	0307	4.820	0.0400	4.789	0.0788	0.0415	52	0.39	0%	0
010.60	Total Nitrogen, Combustion (6%)	0423	4.820	0.0600	4.789	0.0788	0.0415	52	0.39	0%	0
010.60	Total Nitrogen, Combustion (6%)	0452	4.830	0.0200	4.789	0.0788	0.0415	52	0.52	0%	0
010.60	Total Nitrogen, Combustion (6%)	0483	4.830	0.0400	4.789	0.0788	0.0415	52	0.52	0%	0
010.60	Total Nitrogen, Combustion (6%)	0405	4.835	0.0100	4.789	0.0788	0.0415	52	0.58	0%	0
010.60	Total Nitrogen, Combustion (6%)	0231	4.840	0.0200	4.789	0.0788	0.0415	52	0.64	1%	0
010.60	Total Nitrogen, Combustion (6%)	0157	4.855	0.0300	4.789	0.0788	0.0415	52	0.83	1%	0
010.60	Total Nitrogen, Combustion (6%)	0102	4.865	0.0100	4.789	0.0788	0.0415	52	0.96	1%	0
010.60	Total Nitrogen, Combustion (6%)	0368	4.865	0.0100	4.789	0.0788	0.0415	52	0.96	1%	0
010.60	Total Nitrogen, Combustion (6%)	0025	4.875	0.0430	4.789	0.0788	0.0415	52	1.08	1%	0
010.60	Total Nitrogen, Combustion (6%)	0029	4.878	0.1080	4.789	0.0788	0.0415	52	1.13	1%	0
010.60	Total Nitrogen, Combustion (6%)	0351	4.887	0.1110	4.789	0.0788	0.0415	52	1.24	1%	0
010.60	Total Nitrogen, Combustion (6%)	0095	4.895	0.0500	4.789	0.0788	0.0415	52	1.34	1%	0
010.60	Total Nitrogen, Combustion (6%)	0117	4.920	0.0200	4.789	0.0788	0.0415	52	1.66	1%	0
010.60	Total Nitrogen, Combustion (6%)	0443	4.960	0.0000	4.789	0.0788	0.0415	52	2.17	2%	0
010.60	Total Nitrogen, Combustion (6%)	0406	4.965	0.0300	4.789	0.0788	0.0415	52	2.23	2%	0
010.60	Total Nitrogen, Combustion (6%)	0055	4.980	0.0400	4.789	0.0788	0.0415	52	2.42	2%	0
010.60	Total Nitrogen, Combustion (6%)	0402	4.995	0.0100	4.789	0.0788	0.0415	52	2.61	2%	0
010.60	Total Nitrogen, Combustion (6%)	0444	5.085	0.0900	4.789	0.0788	0.0415	52	3.75	3%	0
010.60	Total Nitrogen, Combustion (6%)	0377	4.710	0.3000	4.789	0.0788	0.0415	52	-1.00	1%	1
010.60	Total Nitrogen, Combustion (6%)	0421	4.945	0.2700	4.789	0.0788	0.0415	52	1.98	2%	1
010.99	Total Nitrogen, Other (6%)	0493	4.700	0.1000	5.220	0.7141	0.1850	4	-0.73	5%	0
010.99	Total Nitrogen, Other (6%)	0420	4.780	0.1000	5.220	0.7141	0.1850	4	-0.62	4%	0
010.99	Total Nitrogen, Other (6%)	0506	5.150	0.2400	5.220	0.7141	0.1850	4	-0.10	1%	0
010.99	Total Nitrogen, Other (6%)	0487	6.250	0.3000	5.220	0.7141	0.1850	4	1.44	10%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0500	7.950	0.0200	8.086	0.1051	0.0272	6	-1.29	1%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0470	8.025	0.0100	8.086	0.1051	0.0272	6	-0.58	0%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0105	8.045	0.0100	8.086	0.1051	0.0272	6	-0.39	0%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0090	8.130	0.0600	8.086	0.1051	0.0272	6	0.42	0%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0513	8.140	0.0600	8.086	0.1051	0.0272	6	0.52	0%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0322	21.01	0.0030	8.086	0.1051	0.0272	6	122.91	80%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0444	8.100	0.2600	8.086	0.1051	0.0272	6	0.13	0%	1
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0420	7.805	0.1700	8.054	0.1710	0.0542	19	-1.46	2%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0027	7.815	0.0100	8.054	0.1710	0.0542	19	-1.40	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0405	7.890	0.1000	8.054	0.1710	0.0542	19	-0.96	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0506	7.925	0.0500	8.054	0.1710	0.0542	19	-0.75	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0481	7.935	0.0500	8.054	0.1710	0.0542	19	-0.70	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0169	7.945	0.1100	8.054	0.1710	0.0542	19	-0.64	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0513	7.970	0.0200	8.054	0.1710	0.0542	19	-0.49	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0474	7.995	0.0900	8.054	0.1710	0.0542	19	-0.34	0%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0371	8.000	0.0000	8.054	0.1710	0.0542	19	-0.32	0%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0394	8.000	0.0000	8.054	0.1710	0.0542	19	-0.32	0%	0

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			Value	Range	Rob Mean	Rob SD	R-bar				
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0231	8.110	0.0200	8.054	0.1710	0.0542	19	0.33	0%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0258	8.110	0.0200	8.054	0.1710	0.0542	19	0.33	0%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0415	8.150	0.1000	8.054	0.1710	0.0542	19	0.56	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0292	8.165	0.0100	8.054	0.1710	0.0542	19	0.65	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0042	8.235	0.0300	8.054	0.1710	0.0542	19	1.06	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0416	8.240	0.0400	8.054	0.1710	0.0542	19	1.09	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0356	8.400	0.1600	8.054	0.1710	0.0542	19	2.02	2%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0406	8.400	0.0400	8.054	0.1710	0.0542	19	2.02	2%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0510	9.125	0.0100	8.054	0.1710	0.0542	19	6.26	7%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0324	8.245	0.4500	8.054	0.1710	0.0542	19	1.12	1%	1
020.40	Total Phosphorus as P2O5, Automated (%)	0096	7.955	0.0100	8.154	0.1776	0.1000	6	-1.12	1%	0
020.40	Total Phosphorus as P2O5, Automated (%)	0470	8.065	0.0100	8.154	0.1776	0.1000	6	-0.50	1%	0
020.40	Total Phosphorus as P2O5, Automated (%)	0105	8.080	0.0000	8.154	0.1776	0.1000	6	-0.42	0%	0
020.40	Total Phosphorus as P2O5, Automated (%)	0028	8.145	0.0300	8.154	0.1776	0.1000	6	-0.05	0%	0
020.40	Total Phosphorus as P2O5, Automated (%)	0035	8.370	0.2200	8.154	0.1776	0.1000	6	1.21	1%	0
020.40	Total Phosphorus as P2O5, Automated (%)	0456	9.385	0.3300	8.154	0.1776	0.1000	6	6.93	8%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0444	7.645	0.2100	8.111	0.2219	0.2444	14	-2.10	3%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0472	7.780	0.0400	8.111	0.2219	0.2444	14	-1.49	2%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0157	7.785	0.2900	8.111	0.2219	0.2444	14	-1.47	2%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0390	7.845	0.7100	8.111	0.2219	0.2444	14	-1.20	2%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0389	7.970	0.0800	8.111	0.2219	0.2444	14	-0.63	1%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0482	8.115	0.2100	8.111	0.2219	0.2444	14	0.02	0%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0501	8.140	0.0800	8.111	0.2219	0.2444	14	0.13	0%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0368	8.205	0.2500	8.111	0.2219	0.2444	14	0.42	1%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0291	8.225	0.0100	8.111	0.2219	0.2444	14	0.51	1%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0234	8.235	0.0900	8.111	0.2219	0.2444	14	0.56	1%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0402	8.235	0.1900	8.111	0.2219	0.2444	14	0.56	1%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0307	8.272	0.3010	8.111	0.2219	0.2444	14	0.72	1%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0483	8.360	0.4600	8.111	0.2219	0.2444	14	1.12	2%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0451	8.380	0.5000	8.111	0.2219	0.2444	14	1.21	2%	0
020.99	Total Phosphorus as P2O5, Other (%)	0443	4.050	0.0000	10.54	7.174	0.0650	4	-0.90	31%	0
020.99	Total Phosphorus as P2O5, Other (%)	0487	7.900	0.0000	10.54	7.174	0.0650	4	-0.37	13%	0
020.99	Total Phosphorus as P2O5, Other (%)	0455	9.455	0.0900	10.54	7.174	0.0650	4	-0.15	5%	0
020.99	Total Phosphorus as P2O5, Other (%)	0371	20.75	0.1700	10.54	7.174	0.0650	4	1.42	48%	0
030.40	Citrate Insoluble Phosphorus as P2O5, Automat... (%)	0096	0.0550	0.0100			0.0100	1			
040.20	Indirect Available Phosphorus as P2O5, Spectr... (9%)	0513	7.970	0.0200	8.035	0.0919	0.1100	2	-0.71	0%	0
040.20	Indirect Available Phosphorus as P2O5, Spectr... (9%)	0498	8.100	0.2000	8.035	0.0919	0.1100	2	0.71	0%	0
040.40	Indirect Available Phosphorus as P2O5, Automa... (9%)	0096	7.905	0.0100			0.0100	1			
041.10	Direct Available Phosphorus as P2O5, Gravimet... (9%)	0493	7.925	0.0500	7.998	0.0451	0.0707	8	-1.62	0%	0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (9%)	0049	7.935	0.0100	7.998	0.0451	0.0707	8	-1.40	0%	0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (9%)	0086	7.993	0.0634	7.998	0.0451	0.0707	8	-0.12	0%	0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (9%)	0040	8.000	0.2000	7.998	0.0451	0.0707	8	0.04	0%	0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (9%)	0102	8.000	0.0000	7.998	0.0451	0.0707	8	0.04	0%	0

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			Value	Range	Rob Mean	Rob SD	R-bar				
041.10	Direct Available Phosphorus as P2O5, Gravimet... (9%)	0177	8.016	0.0024	7.998	0.0451	0.0707	8	0.40	0%	0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (9%)	0041	8.035	0.1100	7.998	0.0451	0.0707	8	0.82	0%	0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (9%)	0185	8.055	0.1300	7.998	0.0451	0.0707	8	1.26	0%	0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (9%)	0494	8.255	0.5100	7.998	0.0451	0.0707	8	5.70	2%	1
041.11	Direct Available Phosphorus as P2O5, Gravimet... (9%)	0105	7.975	0.0100	8.004	0.0269	0.0175	4	-1.07	0%	0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (9%)	0220	8.000	0.0200	8.004	0.0269	0.0175	4	-0.14	0%	0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (9%)	0485	8.000	0.0200	8.004	0.0269	0.0175	4	-0.14	0%	0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (9%)	0055	8.040	0.0200	8.004	0.0269	0.0175	4	1.35	0%	0
041.20	Direct Available Phosphorus as P2O5, Spectrop... (9%)	0027	7.735	0.3500			0.3500	1			
041.21	Direct Available Phosphorus as P2O5, Spectrop... (9%)	0055	8.140	0.0000			0.0000	1			
041.40	Direct Available Phosphorus as P2O5, Automate... (9%)	0095	8.725	0.0100			0.0100	1			
041.50	Direct Available Phosphorus as P2O5, ICP (9%)	0325	7.850	0.5000	8.119	0.2950	0.2514	7	-0.91	2%	0
041.50	Direct Available Phosphorus as P2O5, ICP (9%)	0043	7.860	0.0200	8.119	0.2950	0.2514	7	-0.88	2%	0
041.50	Direct Available Phosphorus as P2O5, ICP (9%)	0007	7.900	0.6000	8.119	0.2950	0.2514	7	-0.74	1%	0
041.50	Direct Available Phosphorus as P2O5, ICP (9%)	0368	8.160	0.2600	8.119	0.2950	0.2514	7	0.14	0%	0
041.50	Direct Available Phosphorus as P2O5, ICP (9%)	0452	8.180	0.0200	8.119	0.2950	0.2514	7	0.21	0%	0
041.50	Direct Available Phosphorus as P2O5, ICP (9%)	0025	8.380	0.2000	8.119	0.2950	0.2514	7	0.89	2%	0
041.50	Direct Available Phosphorus as P2O5, ICP (9%)	0023	8.500	0.1600	8.119	0.2950	0.2514	7	1.29	2%	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (9%)	0423	7.535	0.0300	8.098	0.3741	0.0640	5	-1.50	3%	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (9%)	0377	8.065	0.0100	8.098	0.3741	0.0640	5	-0.09	0%	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (9%)	0421	8.085	0.1300	8.098	0.3741	0.0640	5	-0.03	0%	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (9%)	0486	8.235	0.0700	8.098	0.3741	0.0640	5	0.37	1%	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (9%)	0360	8.570	0.0800	8.098	0.3741	0.0640	5	1.26	3%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (9%)	0472	7.760	0.0400	8.074	0.2084	0.0840	12	-1.51	2%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (9%)	0513	7.830	0.0400	8.074	0.2084	0.0840	12	-1.17	2%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (9%)	0177	7.953	0.0720	8.074	0.2084	0.0840	12	-0.58	1%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (9%)	0029	8.000	0.0200	8.074	0.2084	0.0840	12	-0.36	0%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (9%)	0043	8.015	0.0300	8.074	0.2084	0.0840	12	-0.28	0%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (9%)	0397	8.020	0.0200	8.074	0.2084	0.0840	12	-0.26	0%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (9%)	0136	8.060	0.1600	8.074	0.2084	0.0840	12	-0.07	0%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (9%)	0034	8.104	0.2544	8.074	0.2084	0.0840	12	0.14	0%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (9%)	0231	8.200	0.1400	8.074	0.2084	0.0840	12	0.60	1%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (9%)	0354	8.326	0.0820	8.074	0.2084	0.0840	12	1.21	2%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (9%)	0117	8.340	0.1200	8.074	0.2084	0.0840	12	1.27	2%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (9%)	0105	8.375	0.0300	8.074	0.2084	0.0840	12	1.44	2%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (9%)	0494	8.265	0.5900	8.074	0.2084	0.0840	12	0.92	1%	1
041.99	Direct Available Phosphorus as P2O5, Other (9%)	0506	6.970*	0.0600	7.570	0.5643	0.2533	3	-1.06	4%	0
041.99	Direct Available Phosphorus as P2O5, Other (9%)	0230	7.650	0.6000	7.570	0.5643	0.2533	3	0.14	1%	0
041.99	Direct Available Phosphorus as P2O5, Other (9%)	0105	8.090	0.1000	7.570	0.5643	0.2533	3	0.92	3%	0
048.20	Water Soluble Phosphorus as P2O5, Spectrophot... (%)	0405	5.840	0.0200	6.098	0.3642	0.0250	2	-0.71	2%	0
048.20	Water Soluble Phosphorus as P2O5, Spectrophot... (%)	0420	6.355	0.0300	6.098	0.3642	0.0250	2	0.71	2%	0
048.40	Water Soluble Phosphorus as P2O5, Automated (%)	0096	5.935	0.0500			0.0500	1			
050.00	Soluble Potassium as K2O, STPB Oxalate (22%)	0220	20.29	0.2800	20.93	0.2106	0.1118	11	-3.04	2%	0

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050.00	Soluble Potassium as K2O, STPB Oxalate (22%)	0090	20.77	0.0000	20.93	0.2106	0.1118	11	-0.76	0%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (22%)	0405	20.78	0.0200	20.93	0.2106	0.1118	11	-0.71	0%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (22%)	0416	20.83	0.0500	20.93	0.2106	0.1118	11	-0.50	0%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (22%)	0231	20.85	0.0000	20.93	0.2106	0.1118	11	-0.38	0%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (22%)	0258	20.86	0.1200	20.93	0.2106	0.1118	11	-0.33	0%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (22%)	0049	20.99	0.1500	20.93	0.2106	0.1118	11	0.26	0%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (22%)	0494	21.14	0.4100	20.93	0.2106	0.1118	11	0.97	0%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (22%)	0470	21.26	0.0200	20.93	0.2106	0.1118	11	1.57	1%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (22%)	0055	21.45	0.1800	20.93	0.2106	0.1118	11	2.47	1%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (22%)	0102	22.90	0.0000	20.93	0.2106	0.1118	11	9.35	5%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (22%)	0230	23.30	1.400	20.93	0.2106	0.1118	11	11.25	6%	1
050.10	Soluble Potassium as K2O, STPB Citrate (22%)	0322	7.971*	0.0220			0.0220	1			
050.30	Soluble Potassium as K2O, AA (Oxalate) (22%)	0157	19.65*	0.3000	20.84	0.9695	0.4083	6	-1.22	3%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (22%)	0356	20.43	0.2900	20.84	0.9695	0.4083	6	-0.42	1%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (22%)	0136	20.60	0.0800	20.84	0.9695	0.4083	6	-0.24	1%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (22%)	0040	20.70	0.2000	20.84	0.9695	0.4083	6	-0.14	0%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (22%)	0185	21.64	0.3400	20.84	0.9695	0.4083	6	0.83	2%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (22%)	0073	28.24	1.240	20.84	0.9695	0.4083	6	7.64	18%	0
050.31	Soluble Potassium as K2O, AA (Citrate) (22%)	0472	19.07*	0.4200	21.34	3.203	0.4100	2	-0.71	5%	0
050.31	Soluble Potassium as K2O, AA (Citrate) (22%)	0498	23.60	0.4000	21.34	3.203	0.4100	2	0.71	5%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (22%)	0292	19.72*	0.0800	21.21	0.6744	0.3652	10	-2.21	4%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (22%)	0444	20.39	0.0900	21.21	0.6744	0.3652	10	-1.23	2%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (22%)	0055	20.81	0.1400	21.21	0.6744	0.3652	10	-0.60	1%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (22%)	0157	21.10	0.2000	21.21	0.6744	0.3652	10	-0.17	0%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (22%)	0397	21.13	0.3500	21.21	0.6744	0.3652	10	-0.13	0%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (22%)	0452	21.29	0.0300	21.21	0.6744	0.3652	10	0.11	0%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (22%)	0390	21.44	0.2400	21.21	0.6744	0.3652	10	0.34	1%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (22%)	0324	21.60	1.200	21.21	0.6744	0.3652	10	0.58	1%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (22%)	0420	21.96	0.3220	21.21	0.6744	0.3652	10	1.12	2%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (22%)	0406	22.61	1.000	21.21	0.6744	0.3652	10	2.07	3%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (22%)	0025	20.25	0.5000	21.26	0.7163	0.4214	8	-1.41	2%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (22%)	0007	20.60	0.6000	21.26	0.7163	0.4214	8	-0.92	2%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (22%)	0043	20.93	0.0600	21.26	0.7163	0.4214	8	-0.46	1%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (22%)	0483	21.26	0.8400	21.26	0.7163	0.4214	8	0.00	0%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (22%)	0291	21.41	0.4500	21.26	0.7163	0.4214	8	0.20	0%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (22%)	0354	21.56	0.1410	21.26	0.7163	0.4214	8	0.41	1%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (22%)	0023	21.87	0.0100	21.26	0.7163	0.4214	8	0.84	1%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (22%)	0486	22.18	0.7700	21.26	0.7163	0.4214	8	1.28	2%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (22%)	0423	19.94	0.0900	20.84	0.7901	0.2518	6	-1.14	2%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (22%)	0485	20.12	0.6200	20.84	0.7901	0.2518	6	-0.91	2%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (22%)	0421	20.65	0.3000	20.84	0.7901	0.2518	6	-0.23	0%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (22%)	0377	21.35	0.2000	20.84	0.7901	0.2518	6	0.65	1%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (22%)	0360	21.39	0.1600	20.84	0.7901	0.2518	6	0.70	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				
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (22%)	0354	21.56	0.1410	20.84	0.7901	0.2518	6	0.91	2%	0
050.60	Soluble Potassium as K2O, Flame Photometric ... (22%)	0443	16.93*	0.0000	20.35	2.035	0.0680	5	-1.68	8%	0
050.60	Soluble Potassium as K2O, Flame Photometric ... (22%)	0105	20.60	0.1600	20.35	2.035	0.0680	5	0.12	1%	0
050.60	Soluble Potassium as K2O, Flame Photometric ... (22%)	0169	20.70	0.1600	20.35	2.035	0.0680	5	0.17	1%	0
050.60	Soluble Potassium as K2O, Flame Photometric ... (22%)	0470	21.20	0.0000	20.35	2.035	0.0680	5	0.42	2%	0
050.60	Soluble Potassium as K2O, Flame Photometric ... (22%)	0510	22.34	0.0200	20.35	2.035	0.0680	5	0.98	5%	0
050.60	Soluble Potassium as K2O, Flame Photometric ... (22%)	0041	21.94	1.260	20.35	2.035	0.0680	5	0.78	4%	1
050.61	Soluble Potassium as K2O, Flame Photometric ... (22%)	0042	20.42	0.2100	21.07	0.6397	0.2882	6	-1.03	2%	0
050.61	Soluble Potassium as K2O, Flame Photometric ... (22%)	0034	20.65	0.1789	21.07	0.6397	0.2882	6	-0.65	1%	0
050.61	Soluble Potassium as K2O, Flame Photometric ... (22%)	0456	20.81	0.7800	21.07	0.6397	0.2882	6	-0.41	1%	0
050.61	Soluble Potassium as K2O, Flame Photometric ... (22%)	0494	21.08	0.0700	21.07	0.6397	0.2882	6	0.00	0%	0
050.61	Soluble Potassium as K2O, Flame Photometric ... (22%)	0513	21.63	0.0600	21.07	0.6397	0.2882	6	0.87	1%	0
050.61	Soluble Potassium as K2O, Flame Photometric ... (22%)	0035	22.07	0.4300	21.07	0.6397	0.2882	6	1.55	2%	0
050.62	Soluble Potassium as K2O, Flame Photometric ... (22%)	0029	21.01	0.4100	21.13	0.1667	0.3425	4	-0.76	0%	0
050.62	Soluble Potassium as K2O, Flame Photometric ... (22%)	0105	21.01	0.0200	21.13	0.1667	0.3425	4	-0.73	0%	0
050.62	Soluble Potassium as K2O, Flame Photometric ... (22%)	0095	21.15	0.7800	21.13	0.1667	0.3425	4	0.11	0%	0
050.62	Soluble Potassium as K2O, Flame Photometric ... (22%)	0028	21.36	0.1600	21.13	0.1667	0.3425	4	1.37	1%	0
050.99	Soluble Potassium as K2O, Other (22%)	0389	17.54*	0.1600	20.65	1.160	0.3766	21	-2.69	8%	0
050.99	Soluble Potassium as K2O, Other (22%)	0506	18.25*	0.5000	20.65	1.160	0.3766	21	-2.07	6%	0
050.99	Soluble Potassium as K2O, Other (22%)	0501	18.35*	0.2200	20.65	1.160	0.3766	21	-1.99	6%	0
050.99	Soluble Potassium as K2O, Other (22%)	0234	19.41*	0.1200	20.65	1.160	0.3766	21	-1.07	3%	0
050.99	Soluble Potassium as K2O, Other (22%)	0481	19.60*	0.4000	20.65	1.160	0.3766	21	-0.91	3%	0
050.99	Soluble Potassium as K2O, Other (22%)	0402	19.96	0.3200	20.65	1.160	0.3766	21	-0.60	2%	0
050.99	Soluble Potassium as K2O, Other (22%)	0482	20.05	1.300	20.65	1.160	0.3766	21	-0.52	1%	0
050.99	Soluble Potassium as K2O, Other (22%)	0394	20.15	0.1000	20.65	1.160	0.3766	21	-0.44	1%	0
050.99	Soluble Potassium as K2O, Other (22%)	0027	20.61	0.4900	20.65	1.160	0.3766	21	-0.04	0%	0
050.99	Soluble Potassium as K2O, Other (22%)	0444	20.64	0.3600	20.65	1.160	0.3766	21	-0.01	0%	0
050.99	Soluble Potassium as K2O, Other (22%)	0043	20.85	0.2700	20.65	1.160	0.3766	21	0.16	0%	0
050.99	Soluble Potassium as K2O, Other (22%)	0177	20.88	0.0774	20.65	1.160	0.3766	21	0.19	1%	0
050.99	Soluble Potassium as K2O, Other (22%)	0105	20.89	0.2300	20.65	1.160	0.3766	21	0.20	1%	0
050.99	Soluble Potassium as K2O, Other (22%)	0500	21.30	0.2000	20.65	1.160	0.3766	21	0.56	2%	0
050.99	Soluble Potassium as K2O, Other (22%)	0096	21.31	0.5500	20.65	1.160	0.3766	21	0.56	2%	0
050.99	Soluble Potassium as K2O, Other (22%)	0325	21.45	0.1000	20.65	1.160	0.3766	21	0.69	2%	0
050.99	Soluble Potassium as K2O, Other (22%)	0368	21.55	0.3100	20.65	1.160	0.3766	21	0.77	2%	0
050.99	Soluble Potassium as K2O, Other (22%)	0451	21.65	1.190	20.65	1.160	0.3766	21	0.85	2%	0
050.99	Soluble Potassium as K2O, Other (22%)	0307	21.86	0.1720	20.65	1.160	0.3766	21	1.04	3%	0
050.99	Soluble Potassium as K2O, Other (22%)	0487	22.00	0.6000	20.65	1.160	0.3766	21	1.16	3%	0
050.99	Soluble Potassium as K2O, Other (22%)	0474	23.03	0.2400	20.65	1.160	0.3766	21	2.05	6%	0
050.99	Soluble Potassium as K2O, Other (22%)	0455	135.6	230.2	20.65	1.160	0.3766	21	99.13	278%	2
060.00	Water (Free), Vacuum Oven (%)	0456	0.7750	0.0300	0.9166	0.1239	0.0235	3	-1.14	8%	0
060.00	Water (Free), Vacuum Oven (%)	0096	0.9700	0.0400	0.9166	0.1239	0.0235	3	0.43	3%	0
060.00	Water (Free), Vacuum Oven (%)	0416	1.005	0.0004	0.9166	0.1239	0.0235	3	0.71	5%	0
060.99	Water (Free), Other (%)	0510	3.060	0.0600			0.0600	1			

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... (%)	0035	4.945	0.3700	5.830	0.2554	0.1373	10	-3.47	8%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0354	5.616	0.1490	5.830	0.2554	0.1373	10	-0.84	2%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0482	5.635	0.3100	5.830	0.2554	0.1373	10	-0.77	2%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0049	5.750	0.0200	5.830	0.2554	0.1373	10	-0.32	1%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0472	5.818	0.0550	5.830	0.2554	0.1373	10	-0.05	0%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0102	5.845	0.0700	5.830	0.2554	0.1373	10	0.06	0%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0420	5.924	0.0589	5.830	0.2554	0.1373	10	0.37	1%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0494	6.026	0.0619	5.830	0.2554	0.1373	10	0.77	2%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0041	6.095	0.0700	5.830	0.2554	0.1373	10	1.04	2%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0307	6.149	0.2080	5.830	0.2554	0.1373	10	1.25	3%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0096	6.680	1.000	5.830	0.2554	0.1373	10	3.33	7%	1
101.32	Acid Soluble Calcium, ICP, test portion 2006.... (%)	0423	5.672	0.0040			0.0040	1			
101.33	Acid Soluble Calcium, ICP, test portion 2006.... (%)	0117	5.575	0.2100	5.787	0.1923	0.2054	3	-1.10	2%	0
101.33	Acid Soluble Calcium, ICP, test portion 2006.... (%)	0494	5.837	0.2261	5.787	0.1923	0.2054	3	0.26	0%	0
101.33	Acid Soluble Calcium, ICP, test portion 2006.... (%)	0421	5.950	0.1800	5.787	0.1923	0.2054	3	0.85	1%	0
101.99	Acid Soluble Calcium, Other (%)	0389	5.345	0.4100	5.530	0.2616	0.2300	2	-0.71	2%	0
101.99	Acid Soluble Calcium, Other (%)	0474	5.715	0.0500	5.530	0.2616	0.2300	2	0.71	2%	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 ... (1.2%)	0029	1.219	0.0100	1.290	0.0652	0.0309	9	-1.09	3%	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 ... (1.2%)	0258	1.230	0.0000	1.290	0.0652	0.0309	9	-0.92	2%	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 ... (1.2%)	0105	1.243	0.0510	1.290	0.0652	0.0309	9	-0.73	2%	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 ... (1.2%)	0040	1.265	0.0700	1.290	0.0652	0.0309	9	-0.38	1%	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 ... (1.2%)	0043	1.269	0.0170	1.290	0.0652	0.0309	9	-0.33	1%	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 ... (1.2%)	0485	1.310	0.0400	1.290	0.0652	0.0309	9	0.31	1%	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 ... (1.2%)	0169	1.355	0.0500	1.290	0.0652	0.0309	9	1.00	3%	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 ... (1.2%)	0028	1.360	0.0200	1.290	0.0652	0.0309	9	1.07	3%	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 ... (1.2%)	0513	1.360	0.0200	1.290	0.0652	0.0309	9	1.07	3%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1.2%)	0230	0.9995*	0.0010	1.270	0.0651	0.0359	32	-4.15	11%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1.2%)	0482	1.105	0.0300	1.270	0.0651	0.0359	32	-2.53	6%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1.2%)	0474	1.120	0.1200	1.270	0.0651	0.0359	32	-2.30	6%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1.2%)	0035	1.145	0.0100	1.270	0.0651	0.0359	32	-1.92	5%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1.2%)	0090	1.185	0.0300	1.270	0.0651	0.0359	32	-1.30	3%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1.2%)	0102	1.185	0.0100	1.270	0.0651	0.0359	32	-1.30	3%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1.2%)	0394	1.200	0.0000	1.270	0.0651	0.0359	32	-1.07	3%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1.2%)	0231	1.225	0.0100	1.270	0.0651	0.0359	32	-0.69	2%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1.2%)	0444	1.235	0.0700	1.270	0.0651	0.0359	32	-0.54	1%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1.2%)	0095	1.240	0.0600	1.270	0.0651	0.0359	32	-0.46	1%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1.2%)	0157	1.240	0.0400	1.270	0.0651	0.0359	32	-0.46	1%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1.2%)	0501	1.240	0.0600	1.270	0.0651	0.0359	32	-0.46	1%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1.2%)	0114	1.250	0.0000	1.270	0.0651	0.0359	32	-0.31	1%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1.2%)	0354	1.255	0.0370	1.270	0.0651	0.0359	32	-0.24	1%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1.2%)	0055	1.260	0.0200	1.270	0.0651	0.0359	32	-0.15	0%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1.2%)	0360	1.275	0.0100	1.270	0.0651	0.0359	32	0.08	0%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1.2%)	0390	1.275	0.0700	1.270	0.0651	0.0359	32	0.08	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				
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1.2%)	0023	1.276	0.0430	1.270	0.0651	0.0359	32	0.09	0%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1.2%)	0049	1.290	0.0200	1.270	0.0651	0.0359	32	0.31	1%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1.2%)	0234	1.290	0.0200	1.270	0.0651	0.0359	32	0.31	1%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1.2%)	0096	1.295	0.0500	1.270	0.0651	0.0359	32	0.39	1%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1.2%)	0307	1.301	0.0360	1.270	0.0651	0.0359	32	0.48	1%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1.2%)	0324	1.310	0.0600	1.270	0.0651	0.0359	32	0.62	2%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1.2%)	0368	1.310	0.0000	1.270	0.0651	0.0359	32	0.62	2%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1.2%)	0420	1.313	0.0140	1.270	0.0651	0.0359	32	0.66	2%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1.2%)	0494	1.323	0.0056	1.270	0.0651	0.0359	32	0.82	2%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1.2%)	0433	1.329	0.0120	1.270	0.0651	0.0359	32	0.91	2%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1.2%)	0291	1.335	0.0100	1.270	0.0651	0.0359	32	1.00	3%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1.2%)	0041	1.355	0.0500	1.270	0.0651	0.0359	32	1.31	3%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1.2%)	0371	1.390	0.0600	1.270	0.0651	0.0359	32	1.84	5%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1.2%)	0483	1.435	0.1300	1.270	0.0651	0.0359	32	2.54	7%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1.2%)	0472	1.450	0.0600	1.270	0.0651	0.0359	32	2.77	7%	0
121.32	Acid Soluble Magnesium, ICP, test portion 200... (1.2%)	0423	1.225	0.0100			0.0100	1			
121.33	Acid Soluble Magnesium, ICP, test portion 200... (1.2%)	0397	1.125	0.0100	1.292	0.0445	0.0165	9	-3.74	6%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (1.2%)	0486	1.135	0.0100	1.292	0.0445	0.0165	9	-3.52	6%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (1.2%)	0025	1.265	0.0100	1.292	0.0445	0.0165	9	-0.60	1%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (1.2%)	0034	1.274	0.0120	1.292	0.0445	0.0165	9	-0.39	1%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (1.2%)	0177	1.303	0.0128	1.292	0.0445	0.0165	9	0.26	0%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (1.2%)	0117	1.310	0.0000	1.292	0.0445	0.0165	9	0.41	1%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (1.2%)	0037	1.320	0.0500	1.292	0.0445	0.0165	9	0.64	1%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (1.2%)	0220	1.330	0.0200	1.292	0.0445	0.0165	9	0.86	1%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (1.2%)	0494	1.345	0.0235	1.292	0.0445	0.0165	9	1.21	2%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (1.2%)	0421	1.310	0.1000	1.292	0.0445	0.0165	9	0.41	1%	1
121.99	Acid Soluble Magnesium, Other (1.2%)	0506	1.220	0.0800	1.238	0.0247	0.0550	2	-0.71	1%	0
121.99	Acid Soluble Magnesium, Other (1.2%)	0389	1.255	0.0300	1.238	0.0247	0.0550	2	0.71	1%	0
131.00	Water Soluble Magnesium, AA (%)	0498	0.7500	0.1000	2.980	4.292	0.0510	5	-0.52	37%	0
131.00	Water Soluble Magnesium, AA (%)	0029	1.114	0.0250	2.980	4.292	0.0510	5	-0.43	31%	0
131.00	Water Soluble Magnesium, AA (%)	0513	1.190	0.0200	2.980	4.292	0.0510	5	-0.42	30%	0
131.00	Water Soluble Magnesium, AA (%)	0485	1.195	0.0100	2.980	4.292	0.0510	5	-0.42	30%	0
131.00	Water Soluble Magnesium, AA (%)	0481	10.65	0.1000	2.980	4.292	0.0510	5	1.79	129%	0
131.30	Water Soluble Magnesium, ICP (%)	0444	0.7350	0.0900	1.092	0.1545	0.0286	7	-2.31	16%	0
131.30	Water Soluble Magnesium, ICP (%)	0394	0.9900	0.0200	1.092	0.1545	0.0286	7	-0.66	5%	0
131.30	Water Soluble Magnesium, ICP (%)	0025	1.070	0.0600	1.092	0.1545	0.0286	7	-0.14	1%	0
131.30	Water Soluble Magnesium, ICP (%)	0368	1.080	0.0000	1.092	0.1545	0.0286	7	-0.08	1%	0
131.30	Water Soluble Magnesium, ICP (%)	0220	1.200	0.0000	1.092	0.1545	0.0286	7	0.70	5%	0
131.30	Water Soluble Magnesium, ICP (%)	0230	1.200	0.0000	1.092	0.1545	0.0286	7	0.70	5%	0
131.30	Water Soluble Magnesium, ICP (%)	0027	1.245	0.0300	1.092	0.1545	0.0286	7	0.99	7%	0
131.70	Water Soluble Magnesium, Titrimetric (EDTA) (%)	0510	1.230	0.0000			0.0000	1			
143.00	Elemental Sulfur, Gravimetric Sulfur - carbon... (%)	0025	10.13	0.0400	10.47	0.4844	0.0750	2	-0.71	2%	0
143.00	Elemental Sulfur, Gravimetric Sulfur - carbon... (%)	0055	10.82	0.1100	10.47	0.4844	0.0750	2	0.71	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				
143.99	Elemental Sulfur, Other (%)	0390	9.850	0.7000	10.25	0.4437	0.2375	4	-0.90	2%	0
143.99	Elemental Sulfur, Other (%)	0472	9.990	0.1400	10.25	0.4437	0.2375	4	-0.58	1%	0
143.99	Elemental Sulfur, Other (%)	0389	10.31	0.0500	10.25	0.4437	0.2375	4	0.13	0%	0
143.99	Elemental Sulfur, Other (%)	0291	10.85	0.0600	10.25	0.4437	0.2375	4	1.36	3%	0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0510	8.230	0.0000	9.728	1.018	0.0950	4	-1.47	8%	0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0027	9.945	0.1500	9.728	1.018	0.0950	4	0.21	1%	0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0043	10.34	0.0300	9.728	1.018	0.0950	4	0.60	3%	0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0397	10.40	0.2000	9.728	1.018	0.0950	4	0.66	3%	0
145.99	Sulfate Sulfur, HCl soluble, Other (%)	0444	8.855	0.2500	10.20	1.398	0.3600	3	-0.96	7%	0
145.99	Sulfate Sulfur, HCl soluble, Other (%)	0368	10.10	0.4600	10.20	1.398	0.3600	3	-0.07	0%	0
145.99	Sulfate Sulfur, HCl soluble, Other (%)	0169	11.65	0.3700	10.20	1.398	0.3600	3	1.03	7%	0
146.00	Total Sulfur in Liquid, Gravimetric - sulfate... (%)	0292	11.29	0.1200			0.1200	1			
146.99	Total Sulfur in Liquid, Other (%)	0483	9.715	0.3100			0.3100	1			
148.00	Total Sulfur, Combustion (12%)	0157	9.315*	0.2100	9.721	0.4230	0.2100	6	-0.96	2%	0
148.00	Total Sulfur, Combustion (12%)	0451	9.430*	0.0800	9.721	0.4230	0.2100	6	-0.69	1%	0
148.00	Total Sulfur, Combustion (12%)	0360	9.500*	0.2600	9.721	0.4230	0.2100	6	-0.52	1%	0
148.00	Total Sulfur, Combustion (12%)	0136	9.750	0.1600	9.721	0.4230	0.2100	6	0.07	0%	0
148.00	Total Sulfur, Combustion (12%)	0029	10.15	0.1500	9.721	0.4230	0.2100	6	1.00	2%	0
148.00	Total Sulfur, Combustion (12%)	0049	10.90	0.4000	9.721	0.4230	0.2100	6	2.79	6%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (12%)	0481	9.915	0.1300	10.33	0.2217	0.1109	11	-1.89	2%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (12%)	0324	10.15	0.1000	10.33	0.2217	0.1109	11	-0.83	1%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (12%)	0485	10.20	0.1500	10.33	0.2217	0.1109	11	-0.62	1%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (12%)	0102	10.24	0.0500	10.33	0.2217	0.1109	11	-0.44	0%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (12%)	0029	10.25	0.0600	10.33	0.2217	0.1109	11	-0.37	0%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (12%)	0028	10.26	0.0900	10.33	0.2217	0.1109	11	-0.35	0%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (12%)	0157	10.40	0.0000	10.33	0.2217	0.1109	11	0.30	0%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (12%)	0095	10.45	0.1700	10.33	0.2217	0.1109	11	0.51	1%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (12%)	0040	10.80	0.2000	10.33	0.2217	0.1109	11	2.11	2%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (12%)	0230	12.20	0.2000	10.33	0.2217	0.1109	11	8.42	9%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (12%)	0513	12.32	0.0700	10.33	0.2217	0.1109	11	8.94	10%	0
148.04	Total Sulfur, ICP, w/Br digestion (12%)	0394	9.800	0.4000			0.4000	1			
148.07	Total Sulfur, ICP, test portion as in 2006.03... (12%)	0117	9.165*	0.2100	10.23	0.3852	0.3251	8	-2.78	5%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (12%)	0444	9.770	0.2600	10.23	0.3852	0.3251	8	-1.21	2%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (12%)	0023	10.17	0.3590	10.23	0.3852	0.3251	8	-0.17	0%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (12%)	0102	10.20	0.0700	10.23	0.3852	0.3251	8	-0.10	0%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (12%)	0494	10.31	1.018	10.23	0.3852	0.3251	8	0.19	0%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (12%)	0177	10.44	0.0641	10.23	0.3852	0.3251	8	0.54	1%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (12%)	0037	10.50	0.3700	10.23	0.3852	0.3251	8	0.68	1%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (12%)	0486	11.66	0.2500	10.23	0.3852	0.3251	8	3.69	7%	0
148.99	Total Sulfur, Other (12%)	0354	9.698	0.1880	10.29	0.5222	0.1294	9	-1.14	3%	0
148.99	Total Sulfur, Other (12%)	0513	9.830	0.0200	10.29	0.5222	0.1294	9	-0.88	2%	0
148.99	Total Sulfur, Other (12%)	0351	9.946	0.1007	10.29	0.5222	0.1294	9	-0.66	2%	0
148.99	Total Sulfur, Other (12%)	0096	10.10	0.2200	10.29	0.5222	0.1294	9	-0.37	1%	0

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			Value	Range	Rob Mean	Rob SD	R-bar				
148.99	Total Sulfur, Other (12%)	0482	10.25	0.1000	10.29	0.5222	0.1294	9	-0.08	0%	0
148.99	Total Sulfur, Other (12%)	0506	10.31	0.1900	10.29	0.5222	0.1294	9	0.03	0%	0
148.99	Total Sulfur, Other (12%)	0307	10.62	0.2960	10.29	0.5222	0.1294	9	0.63	2%	0
148.99	Total Sulfur, Other (12%)	0035	10.80	0.0000	10.29	0.5222	0.1294	9	0.97	2%	0
148.99	Total Sulfur, Other (12%)	0220	11.85	0.0500	10.29	0.5222	0.1294	9	2.98	8%	0
148.99	Total Sulfur, Other (12%)	0474	12.59	2.150	10.29	0.5222	0.1294	9	4.39	11%	1
149.04	Sulfur - HNO3 soluble, ICP (%)	0423	9.705	0.0500	9.768	0.0569	0.2500	3	-1.11	0%	0
149.04	Sulfur - HNO3 soluble, ICP (%)	0501	9.785	0.1300	9.768	0.0569	0.2500	3	0.29	0%	0
149.04	Sulfur - HNO3 soluble, ICP (%)	0009	9.815	0.5700	9.768	0.0569	0.2500	3	0.82	0%	0
151.00	Acid Soluble Arsenic , AA, test portion as i... (ppm)	0498	15.15	1.100	20.70	5.216	0.7333	3	-1.06	13%	0
151.00	Acid Soluble Arsenic , AA, test portion as i... (ppm)	0481	21.45	0.1000	20.70	5.216	0.7333	3	0.14	2%	0
151.00	Acid Soluble Arsenic , AA, test portion as i... (ppm)	0136	25.50	1.000	20.70	5.216	0.7333	3	0.92	12%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0096	7.450	0.7000	24.28	2.943	1.161	10	-5.72	35%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0474	9.250	2.900	24.28	2.943	1.161	10	-5.11	31%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0394	20.50	0.4000	24.28	2.943	1.161	10	-1.28	8%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0368	23.90	0.2000	24.28	2.943	1.161	10	-0.13	1%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0102	24.89	1.300	24.28	2.943	1.161	10	0.21	1%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0230	24.90	1.000	24.28	2.943	1.161	10	0.21	1%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0095	25.50	3.000	24.28	2.943	1.161	10	0.42	3%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0389	26.45	0.7000	24.28	2.943	1.161	10	0.74	4%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0049	26.98	0.0100	24.28	2.943	1.161	10	0.92	6%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0009	27.60	1.400	24.28	2.943	1.161	10	1.13	7%	0
151.33	Acid Soluble Arsenic , ICP, 2006.03 modified... (ppm)	0220	25.50	0.6000	28.40	3.889	1.210	3	-0.75	5%	0
151.33	Acid Soluble Arsenic , ICP, 2006.03 modified... (ppm)	0037	26.88	0.2400	28.40	3.889	1.210	3	-0.39	3%	0
151.33	Acid Soluble Arsenic , ICP, 2006.03 modified... (ppm)	0494	32.82	2.789	28.40	3.889	1.210	3	1.14	8%	0
151.34	Acid Soluble Arsenic , ICP, EPA 3050B/6010C (ppm)	0220	25.50	0.6000			0.6000	1			
151.99	Acid Soluble Arsenic , Other (ppm)	0220	27.50	1.000			1.000	1			
165.00	Acid Soluble Boron , Spectrophotometric (0.45%)	0055	0.1715*	0.0010	0.3313	0.0398	0.0076	10	-4.01	24%	0
165.00	Acid Soluble Boron , Spectrophotometric (0.45%)	0258	0.2385*	0.0050	0.3313	0.0398	0.0076	10	-2.33	14%	0
165.00	Acid Soluble Boron , Spectrophotometric (0.45%)	0506	0.3000	0.0000	0.3313	0.0398	0.0076	10	-0.79	5%	0
165.00	Acid Soluble Boron , Spectrophotometric (0.45%)	0029	0.3160	0.0120	0.3313	0.0398	0.0076	10	-0.38	2%	0
165.00	Acid Soluble Boron , Spectrophotometric (0.45%)	0481	0.3350	0.0100	0.3313	0.0398	0.0076	10	0.09	1%	0
165.00	Acid Soluble Boron , Spectrophotometric (0.45%)	0037	0.3380	0.0240	0.3313	0.0398	0.0076	10	0.17	1%	0
165.00	Acid Soluble Boron , Spectrophotometric (0.45%)	0028	0.3525	0.0050	0.3313	0.0398	0.0076	10	0.53	3%	0
165.00	Acid Soluble Boron , Spectrophotometric (0.45%)	0513	0.3585	0.0030	0.3313	0.0398	0.0076	10	0.68	4%	0
165.00	Acid Soluble Boron , Spectrophotometric (0.45%)	0220	0.3630	0.0060	0.3313	0.0398	0.0076	10	0.80	5%	0
165.00	Acid Soluble Boron , Spectrophotometric (0.45%)	0498	0.3850	0.0100	0.3313	0.0398	0.0076	10	1.35	8%	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.45%)	0324	0.2700*	0.0580	0.3479	0.0319	0.0152	17	-2.44	11%	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.45%)	0397	0.3000	0.0020	0.3479	0.0319	0.0152	17	-1.50	7%	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.45%)	0354	0.3180	0.0080	0.3479	0.0319	0.0152	17	-0.94	4%	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.45%)	0494	0.3311	0.0136	0.3479	0.0319	0.0152	17	-0.53	2%	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.45%)	0023	0.3335	0.0030	0.3479	0.0319	0.0152	17	-0.45	2%	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.45%)	0394	0.3350	0.0100	0.3479	0.0319	0.0152	17	-0.40	2%	0

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			Value	Range	Rob Mean	Rob SD	R-bar				
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.45%)	0090	0.3365	0.0070	0.3479	0.0319	0.0152	17	-0.36	2%	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.45%)	0389	0.3375	0.0430	0.3479	0.0319	0.0152	17	-0.32	1%	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.45%)	0307	0.3420	0.0120	0.3479	0.0319	0.0152	17	-0.18	1%	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.45%)	0485	0.3520	0.0180	0.3479	0.0319	0.0152	17	0.13	1%	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.45%)	0234	0.3600	0.0400	0.3479	0.0319	0.0152	17	0.38	2%	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.45%)	0444	0.3650	0.0100	0.3479	0.0319	0.0152	17	0.54	2%	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.45%)	0486	0.3700	0.0200	0.3479	0.0319	0.0152	17	0.69	3%	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.45%)	0433	0.3715	0.0007	0.3479	0.0319	0.0152	17	0.74	3%	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.45%)	0117	0.3785	0.0030	0.3479	0.0319	0.0152	17	0.96	4%	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.45%)	0231	0.3900	0.0000	0.3479	0.0319	0.0152	17	1.32	6%	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.45%)	0371	0.4250	0.0100	0.3479	0.0319	0.0152	17	2.42	11%	0
165.99	Acid Soluble Boron , Other (0.45%)	0230	0.3030	0.0620	0.3424	0.0310	0.0104	16	-1.27	6%	0
165.99	Acid Soluble Boron , Other (0.45%)	0291	0.3050	0.0100	0.3424	0.0310	0.0104	16	-1.21	5%	0
165.99	Acid Soluble Boron , Other (0.45%)	0423	0.3070	0.0020	0.3424	0.0310	0.0104	16	-1.14	5%	0
165.99	Acid Soluble Boron , Other (0.45%)	0513	0.3175	0.0050	0.3424	0.0310	0.0104	16	-0.80	4%	0
165.99	Acid Soluble Boron , Other (0.45%)	0472	0.3200	0.0000	0.3424	0.0310	0.0104	16	-0.72	3%	0
165.99	Acid Soluble Boron , Other (0.45%)	0009	0.3300	0.0000	0.3424	0.0310	0.0104	16	-0.40	2%	0
165.99	Acid Soluble Boron , Other (0.45%)	0501	0.3300	0.0000	0.3424	0.0310	0.0104	16	-0.40	2%	0
165.99	Acid Soluble Boron , Other (0.45%)	0040	0.3480	0.0040	0.3424	0.0310	0.0104	16	0.18	1%	0
165.99	Acid Soluble Boron , Other (0.45%)	0421	0.3500	0.0000	0.3424	0.0310	0.0104	16	0.24	1%	0
165.99	Acid Soluble Boron , Other (0.45%)	0482	0.3500	0.0000	0.3424	0.0310	0.0104	16	0.24	1%	0
165.99	Acid Soluble Boron , Other (0.45%)	0049	0.3550	0.0100	0.3424	0.0310	0.0104	16	0.41	2%	0
165.99	Acid Soluble Boron , Other (0.45%)	0095	0.3550	0.0100	0.3424	0.0310	0.0104	16	0.41	2%	0
165.99	Acid Soluble Boron , Other (0.45%)	0368	0.3650	0.0100	0.3424	0.0310	0.0104	16	0.73	3%	0
165.99	Acid Soluble Boron , Other (0.45%)	0360	0.3745	0.0030	0.3424	0.0310	0.0104	16	1.03	5%	0
165.99	Acid Soluble Boron , Other (0.45%)	0043	0.3800	0.0100	0.3424	0.0310	0.0104	16	1.21	5%	0
165.99	Acid Soluble Boron , Other (0.45%)	0042	0.5000	0.0400	0.3424	0.0310	0.0104	16	5.08	23%	0
165.99	Acid Soluble Boron , Other (0.45%)	0483	3,815	130.0	0.3424	0.0310	0.0104	16	122993.48	556990%	2
171.99	Water Soluble Boron , Other (%)	0444	0.3250	0.0500	0.3503	0.0357	0.0325	2	-0.71	4%	0
171.99	Water Soluble Boron , Other (%)	0027	0.3755	0.0150	0.3503	0.0357	0.0325	2	0.71	4%	0
181.00	Acid Soluble Cadmium , AA, test portion as i... (ppm)	0481	10.60	0.4000	14.48	5.922	0.2333	3	-0.66	13%	0
181.00	Acid Soluble Cadmium , AA, test portion as i... (ppm)	0136	11.55	0.1000	14.48	5.922	0.2333	3	-0.50	10%	0
181.00	Acid Soluble Cadmium , AA, test portion as i... (ppm)	0498	21.30	0.2000	14.48	5.922	0.2333	3	1.15	24%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0035	9.230	0.1200	11.03	0.7695	0.2425	12	-2.34	8%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0230	9.305	0.0700	11.03	0.7695	0.2425	12	-2.24	8%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0096	10.05	0.3000	11.03	0.7695	0.2425	12	-1.28	4%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0444	10.49	0.5900	11.03	0.7695	0.2425	12	-0.71	2%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0394	10.70	0.6000	11.03	0.7695	0.2425	12	-0.43	2%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0009	11.10	0.2000	11.03	0.7695	0.2425	12	0.09	0%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0102	11.40	0.0200	11.03	0.7695	0.2425	12	0.48	2%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0389	11.50	1.000	11.03	0.7695	0.2425	12	0.61	2%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0368	11.50	0.0000	11.03	0.7695	0.2425	12	0.61	2%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0474	11.58	0.0100	11.03	0.7695	0.2425	12	0.71	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				
181.30	Acid Soluble Cadmium , ICP (ppm)	0482	11.70	0.0000	11.03	0.7695	0.2425	12	0.87	3%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0095	12.00	0.0000	11.03	0.7695	0.2425	12	1.26	4%	0
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified... (ppm)	0037	11.28	0.6800	11.52	0.2182	0.9375	3	-1.12	1%	0
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified... (ppm)	0494	11.59	2.133	11.52	0.2182	0.9375	3	0.31	0%	0
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified... (ppm)	0220	11.70	0.0000	11.52	0.2182	0.9375	3	0.81	1%	0
181.34	Acid Soluble Cadmium , ICP, EPA 3050B/6010C (ppm)	0220	11.00	0.2000			0.2000	1			
181.99	Acid Soluble Cadmium , Other (ppm)	0487	10.42	0.2400	11.11	0.9758	0.4200	2	-0.71	3%	0
181.99	Acid Soluble Cadmium , Other (ppm)	0506	11.80	0.6000	11.11	0.9758	0.4200	2	0.71	3%	0
190.00	Water Soluble Chlorine, Titrimetric (18%)	0506	14.00*	0.2000	16.16	0.2956	0.1344	18	-7.31	7%	0
190.00	Water Soluble Chlorine, Titrimetric (18%)	0444	15.70	0.4000	16.16	0.2956	0.1344	18	-1.56	1%	0
190.00	Water Soluble Chlorine, Titrimetric (18%)	0055	15.79	0.0200	16.16	0.2956	0.1344	18	-1.26	1%	0
190.00	Water Soluble Chlorine, Titrimetric (18%)	0397	15.90	0.0000	16.16	0.2956	0.1344	18	-0.89	1%	0
190.00	Water Soluble Chlorine, Titrimetric (18%)	0043	16.02	0.0800	16.16	0.2956	0.1344	18	-0.48	0%	0
190.00	Water Soluble Chlorine, Titrimetric (18%)	0220	16.04	0.0200	16.16	0.2956	0.1344	18	-0.41	0%	0
190.00	Water Soluble Chlorine, Titrimetric (18%)	0102	16.10	0.0600	16.16	0.2956	0.1344	18	-0.21	0%	0
190.00	Water Soluble Chlorine, Titrimetric (18%)	0027	16.15	0.5000	16.16	0.2956	0.1344	18	-0.04	0%	0
190.00	Water Soluble Chlorine, Titrimetric (18%)	0481	16.16	0.2100	16.16	0.2956	0.1344	18	-0.02	0%	0
190.00	Water Soluble Chlorine, Titrimetric (18%)	0494	16.19	0.3300	16.16	0.2956	0.1344	18	0.08	0%	0
190.00	Water Soluble Chlorine, Titrimetric (18%)	0394	16.20	0.0000	16.16	0.2956	0.1344	18	0.13	0%	0
190.00	Water Soluble Chlorine, Titrimetric (18%)	0105	16.25	0.0500	16.16	0.2956	0.1344	18	0.28	0%	0
190.00	Water Soluble Chlorine, Titrimetric (18%)	0028	16.26	0.0200	16.16	0.2956	0.1344	18	0.33	0%	0
190.00	Water Soluble Chlorine, Titrimetric (18%)	0485	16.41	0.0600	16.16	0.2956	0.1344	18	0.84	1%	0
190.00	Water Soluble Chlorine, Titrimetric (18%)	0029	16.43	0.0500	16.16	0.2956	0.1344	18	0.89	1%	0
190.00	Water Soluble Chlorine, Titrimetric (18%)	0513	16.48	0.0700	16.16	0.2956	0.1344	18	1.06	1%	0
190.00	Water Soluble Chlorine, Titrimetric (18%)	0389	16.49	0.1500	16.16	0.2956	0.1344	18	1.09	1%	0
190.00	Water Soluble Chlorine, Titrimetric (18%)	0498	21.40	0.2000	16.16	0.2956	0.1344	18	17.72	16%	0
190.99	Water Soluble Chlorine, Other (18%)	0368	0.1200*	0.0200	12.31	8.129	0.1050	4	-1.50	50%	0
190.99	Water Soluble Chlorine, Other (18%)	0029	16.04	0.1500	12.31	8.129	0.1050	4	0.46	15%	0
190.99	Water Soluble Chlorine, Other (18%)	0389	16.38	0.2400	12.31	8.129	0.1050	4	0.50	17%	0
190.99	Water Soluble Chlorine, Other (18%)	0455	16.70	0.0100	12.31	8.129	0.1050	4	0.54	18%	0
191.00	Acid Soluble Chromium , AA, test portion as ... (ppm)	0481	32.00	0.0000			0.0000	1			
191.30	Acid Soluble Chromium , ICP (ppm)	0474	26.00	0.0000	31.69	2.595	1.064	10	-2.19	9%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0368	29.60	1.200	31.69	2.595	1.064	10	-0.80	3%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0027	30.50	1.000	31.69	2.595	1.064	10	-0.46	2%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0394	30.50	0.4000	31.69	2.595	1.064	10	-0.46	2%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0482	30.90	1.000	31.69	2.595	1.064	10	-0.30	1%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0230	31.45	0.7000	31.69	2.595	1.064	10	-0.09	0%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0102	32.59	0.1400	31.69	2.595	1.064	10	0.35	1%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0035	35.30	0.4000	31.69	2.595	1.064	10	1.39	6%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0096	36.45	3.700	31.69	2.595	1.064	10	1.83	8%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0009	38.75	2.100	31.69	2.595	1.064	10	2.72	11%	0
191.33	Acid Soluble Chromium , ICP, 2006.03 modifie... (ppm)	0037	36.63	1.790	37.81	1.617	2.847	3	-0.73	2%	0
191.33	Acid Soluble Chromium , ICP, 2006.03 modifie... (ppm)	0494	37.15	6.252	37.81	1.617	2.847	3	-0.41	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				
191.33	Acid Soluble Chromium , ICP, 2006.03 modifie... (ppm)	0220	39.65	0.5000	37.81	1.617	2.847	3	1.14	2%	0
191.34	Acid Soluble Chromium , ICP, EPA 3050B/6010C... (ppm)	0220	45.00	6.000			6.000	1			
191.99	Acid Soluble Chromium , Other (ppm)	0506	42.50	1.000			1.000	1			
202.30	Acid Soluble Cobalt , ICP (ppm)	0474	2.000	0.0000	4.083	0.9367	0.3410	10	-2.22	26%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0102	3.345	0.1500	4.083	0.9367	0.3410	10	-0.79	9%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0035	3.445	0.3700	4.083	0.9367	0.3410	10	-0.68	8%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0368	3.750	0.1000	4.083	0.9367	0.3410	10	-0.36	4%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0230	3.875	0.4900	4.083	0.9367	0.3410	10	-0.22	3%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0482	4.100	0.2000	4.083	0.9367	0.3410	10	0.02	0%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0095	4.500	1.000	4.083	0.9367	0.3410	10	0.44	5%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0009	4.900	0.6000	4.083	0.9367	0.3410	10	0.87	10%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0096	4.935	0.1100	4.083	0.9367	0.3410	10	0.91	10%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0494	5.782	0.3901	4.083	0.9367	0.3410	10	1.81	21%	0
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified ... (ppm)	0220	4.500	0.4000	4.608	0.1533	0.2264	2	-0.71	1%	0
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified ... (ppm)	0494	4.717	0.0527	4.608	0.1533	0.2264	2	0.71	1%	0
202.34	Acid Soluble Cobalt , ICP, EPA 3050B/6010C (ppm)	0220	4.750	0.3000			0.3000	1			
221.00	Acid Soluble Copper , AA, inorganic 965.09 (%)	0498	0.0490	0.0020	0.0502	0.0013	0.0017	4	-0.92	1%	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (%)	0105	0.0492	0.0021	0.0502	0.0013	0.0017	4	-0.81	1%	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (%)	0043	0.0513	0.0015	0.0502	0.0013	0.0017	4	0.77	1%	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (%)	0481	0.0515	0.0010	0.0502	0.0013	0.0017	4	0.96	1%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0230	0.0408	0.0035	0.0505	0.0061	0.0038	17	-1.59	10%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0324	0.0438	0.0042	0.0505	0.0061	0.0038	17	-1.09	7%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0035	0.0443	0.0038	0.0505	0.0061	0.0038	17	-1.01	6%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0009	0.0460	0.0060	0.0505	0.0061	0.0038	17	-0.74	4%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0444	0.0475	0.0010	0.0505	0.0061	0.0038	17	-0.49	3%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0096	0.0482	0.0034	0.0505	0.0061	0.0038	17	-0.38	2%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0307	0.0485	0.0010	0.0505	0.0061	0.0038	17	-0.33	2%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0433	0.0493	0.0003	0.0505	0.0061	0.0038	17	-0.21	1%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0041	0.0500	0.0000	0.0505	0.0061	0.0038	17	-0.08	1%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0095	0.0500	0.0000	0.0505	0.0061	0.0038	17	-0.08	1%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0402	0.0500	0.0000	0.0505	0.0061	0.0038	17	-0.08	1%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0494	0.0532	0.0035	0.0505	0.0061	0.0038	17	0.43	3%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0472	0.0550	0.0100	0.0505	0.0061	0.0038	17	0.73	4%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0482	0.0550	0.0100	0.0505	0.0061	0.0038	17	0.73	4%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0102	0.0600	0.0000	0.0505	0.0061	0.0038	17	1.55	9%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0027	0.0650	0.0060	0.0505	0.0061	0.0038	17	2.36	14%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0394	0.0930	0.0120	0.0505	0.0061	0.0038	17	6.93	42%	0
221.32	Acid Soluble Copper , ICP, test portion 2006... (%)	0474	0.0487	0.0056	0.0544	0.0080	0.0038	2	-0.71	5%	0
221.32	Acid Soluble Copper , ICP, test portion 2006... (%)	0423	0.0600	0.0020	0.0544	0.0080	0.0038	2	0.71	5%	0
221.33	Acid Soluble Copper , ICP, test portion 2006... (%)	0397	0.0403	0.0013	0.0481	0.0057	0.0046	5	-1.37	8%	0
221.33	Acid Soluble Copper , ICP, test portion 2006... (%)	0117	0.0448	0.0010	0.0481	0.0057	0.0046	5	-0.57	3%	0
221.33	Acid Soluble Copper , ICP, test portion 2006... (%)	0220	0.0490	0.0060	0.0481	0.0057	0.0046	5	0.16	1%	0
221.33	Acid Soluble Copper , ICP, test portion 2006... (%)	0494	0.0513	0.0045	0.0481	0.0057	0.0046	5	0.56	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				
221.33	Acid Soluble Copper , ICP, test portion 2006... (%)	0421	0.0550	0.0100	0.0481	0.0057	0.0046	5	1.21	7%	0
221.99	Acid Soluble Copper , Other (%)	0389	0.0470	0.0020	0.0503	0.0035	0.0013	3	-0.95	3%	0
221.99	Acid Soluble Copper , Other (%)	0506	0.0500	0.0000	0.0503	0.0035	0.0013	3	-0.09	0%	0
221.99	Acid Soluble Copper , Other (%)	0487	0.0539	0.0018	0.0503	0.0035	0.0013	3	1.04	4%	0
241.00	Acid Soluble Iron , AA, inorganic 965.09 (0.1%)	0356	0.2540*	0.0420	0.4489	0.0513	0.0181	12	-3.80	22%	0
241.00	Acid Soluble Iron , AA, inorganic 965.09 (0.1%)	0498	0.3450*	0.0300	0.4489	0.0513	0.0181	12	-2.03	12%	0
241.00	Acid Soluble Iron , AA, inorganic 965.09 (0.1%)	0481	0.3850*	0.0100	0.4489	0.0513	0.0181	12	-1.25	7%	0
241.00	Acid Soluble Iron , AA, inorganic 965.09 (0.1%)	0169	0.4250	0.0100	0.4489	0.0513	0.0181	12	-0.47	3%	0
241.00	Acid Soluble Iron , AA, inorganic 965.09 (0.1%)	0043	0.4460	0.0300	0.4489	0.0513	0.0181	12	-0.06	0%	0
241.00	Acid Soluble Iron , AA, inorganic 965.09 (0.1%)	0513	0.4550	0.0100	0.4489	0.0513	0.0181	12	0.12	1%	0
241.00	Acid Soluble Iron , AA, inorganic 965.09 (0.1%)	0258	0.4600	0.0200	0.4489	0.0513	0.0181	12	0.22	1%	0
241.00	Acid Soluble Iron , AA, inorganic 965.09 (0.1%)	0040	0.4700	0.0200	0.4489	0.0513	0.0181	12	0.41	2%	0
241.00	Acid Soluble Iron , AA, inorganic 965.09 (0.1%)	0028	0.4750	0.0300	0.4489	0.0513	0.0181	12	0.51	3%	0
241.00	Acid Soluble Iron , AA, inorganic 965.09 (0.1%)	0485	0.4905	0.0050	0.4489	0.0513	0.0181	12	0.81	5%	0
241.00	Acid Soluble Iron , AA, inorganic 965.09 (0.1%)	0105	0.4960	0.0020	0.4489	0.0513	0.0181	12	0.92	5%	0
241.00	Acid Soluble Iron , AA, inorganic 965.09 (0.1%)	0029	0.5146	0.0084	0.4489	0.0513	0.0181	12	1.28	7%	0
241.03	Acid Soluble Iron , AA, 965.09, test portion ... (0.1%)	0136	0.4800	0.0000			0.0000	1			
241.30	Acid Soluble Iron , ICP, test portion inorgan... (0.1%)	0501	0.1550*	0.0100	0.4457	0.0424	0.0162	31	-6.85	33%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (0.1%)	0474	0.2400*	0.0400	0.4457	0.0424	0.0162	31	-4.85	23%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (0.1%)	0420	0.3270*	0.0060	0.4457	0.0424	0.0162	31	-2.80	13%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (0.1%)	0090	0.4005	0.0190	0.4457	0.0424	0.0162	31	-1.07	5%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (0.1%)	0035	0.4050	0.0020	0.4457	0.0424	0.0162	31	-0.96	5%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (0.1%)	0472	0.4050	0.0100	0.4457	0.0424	0.0162	31	-0.96	5%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (0.1%)	0095	0.4100	0.0400	0.4457	0.0424	0.0162	31	-0.84	4%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (0.1%)	0371	0.4100	0.0600	0.4457	0.0424	0.0162	31	-0.84	4%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (0.1%)	0102	0.4200	0.0000	0.4457	0.0424	0.0162	31	-0.61	3%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (0.1%)	0394	0.4200	0.0200	0.4457	0.0424	0.0162	31	-0.61	3%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (0.1%)	0368	0.4300	0.0000	0.4457	0.0424	0.0162	31	-0.37	2%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (0.1%)	0041	0.4350	0.0100	0.4457	0.0424	0.0162	31	-0.25	1%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (0.1%)	0402	0.4350	0.0100	0.4457	0.0424	0.0162	31	-0.25	1%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (0.1%)	0354	0.4355	0.0090	0.4457	0.0424	0.0162	31	-0.24	1%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (0.1%)	0230	0.4480	0.0020	0.4457	0.0424	0.0162	31	0.05	0%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (0.1%)	0157	0.4495	0.0030	0.4457	0.0424	0.0162	31	0.09	0%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (0.1%)	0114	0.4500	0.0200	0.4457	0.0424	0.0162	31	0.10	0%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (0.1%)	0231	0.4500	0.0000	0.4457	0.0424	0.0162	31	0.10	0%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (0.1%)	0291	0.4550	0.0100	0.4457	0.0424	0.0162	31	0.22	1%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (0.1%)	0433	0.4566	0.0047	0.4457	0.0424	0.0162	31	0.26	1%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (0.1%)	0360	0.4700	0.0000	0.4457	0.0424	0.0162	31	0.57	3%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (0.1%)	0096	0.4750	0.0100	0.4457	0.0424	0.0162	31	0.69	3%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (0.1%)	0444	0.4800	0.0000	0.4457	0.0424	0.0162	31	0.81	4%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (0.1%)	0494	0.4815	0.0198	0.4457	0.0424	0.0162	31	0.84	4%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (0.1%)	0049	0.4850	0.0100	0.4457	0.0424	0.0162	31	0.93	4%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (0.1%)	0482	0.4850	0.0100	0.4457	0.0424	0.0162	31	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				
241.30	Acid Soluble Iron , ICP, test portion inorgan... (0.1%)	0390	0.4870	0.0420	0.4457	0.0424	0.0162	31	0.97	5%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (0.1%)	0055	0.4890	0.0380	0.4457	0.0424	0.0162	31	1.02	5%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (0.1%)	0324	0.4975	0.0710	0.4457	0.0424	0.0162	31	1.22	6%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (0.1%)	0234	0.5000	0.0000	0.4457	0.0424	0.0162	31	1.28	6%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (0.1%)	0027	0.5055	0.0270	0.4457	0.0424	0.0162	31	1.41	7%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (0.1%)	0483	4,880	260.0	0.4457	0.0424	0.0162	31	114995.29	547403%	2
241.32	Acid Soluble Iron , ICP, test portion 2006.03... (0.1%)	0423	0.4120	0.0020			0.0020	1			
241.33	Acid Soluble Iron , ICP, test portion 2006.03... (0.1%)	0023	0.3595*	0.0070	0.4370	0.0523	0.0132	11	-1.48	9%	0
241.33	Acid Soluble Iron , ICP, test portion 2006.03... (0.1%)	0397	0.3820*	0.0100	0.4370	0.0523	0.0132	11	-1.05	6%	0
241.33	Acid Soluble Iron , ICP, test portion 2006.03... (0.1%)	0177	0.3823*	0.0014	0.4370	0.0523	0.0132	11	-1.05	6%	0
241.33	Acid Soluble Iron , ICP, test portion 2006.03... (0.1%)	0486	0.3900*	0.0000	0.4370	0.0523	0.0132	11	-0.90	5%	0
241.33	Acid Soluble Iron , ICP, test portion 2006.03... (0.1%)	0117	0.4080	0.0060	0.4370	0.0523	0.0132	11	-0.55	3%	0
241.33	Acid Soluble Iron , ICP, test portion 2006.03... (0.1%)	0037	0.4595	0.0070	0.4370	0.0523	0.0132	11	0.43	3%	0
241.33	Acid Soluble Iron , ICP, test portion 2006.03... (0.1%)	0025	0.4625	0.0210	0.4370	0.0523	0.0132	11	0.49	3%	0
241.33	Acid Soluble Iron , ICP, test portion 2006.03... (0.1%)	0421	0.4700	0.0400	0.4370	0.0523	0.0132	11	0.63	4%	0
241.33	Acid Soluble Iron , ICP, test portion 2006.03... (0.1%)	0034	0.4845	0.0010	0.4370	0.0523	0.0132	11	0.91	5%	0
241.33	Acid Soluble Iron , ICP, test portion 2006.03... (0.1%)	0220	0.4850	0.0100	0.4370	0.0523	0.0132	11	0.92	5%	0
241.33	Acid Soluble Iron , ICP, test portion 2006.03... (0.1%)	0494	0.4932	0.0413	0.4370	0.0523	0.0132	11	1.08	6%	0
241.99	Acid Soluble Iron , Other (0.1%)	0042	0.3150*	0.0100	0.3730	0.0516	0.0127	3	-1.12	8%	0
241.99	Acid Soluble Iron , Other (0.1%)	0506	0.3900*	0.0200	0.3730	0.0516	0.0127	3	0.33	2%	0
241.99	Acid Soluble Iron , Other (0.1%)	0389	0.4140	0.0080	0.3730	0.0516	0.0127	3	0.79	5%	0
251.00	Acid Soluble Lead , AA, test portion as in 2... (ppm)	0498	59.55	1.100	110.9	44.56	3.033	3	-1.15	23%	0
251.00	Acid Soluble Lead , AA, test portion as in 2... (ppm)	0136	133.0	0.0000	110.9	44.56	3.033	3	0.50	10%	0
251.00	Acid Soluble Lead , AA, test portion as in 2... (ppm)	0481	140.0	8.000	110.9	44.56	3.033	3	0.65	13%	0
251.30	Acid Soluble Lead , ICP (ppm)	0444	105.5	5.000	124.0	12.47	6.809	13	-1.48	7%	0
251.30	Acid Soluble Lead , ICP (ppm)	0394	107.0	8.000	124.0	12.47	6.809	13	-1.36	7%	0
251.30	Acid Soluble Lead , ICP (ppm)	0096	112.0	9.800	124.0	12.47	6.809	13	-0.96	5%	0
251.30	Acid Soluble Lead , ICP (ppm)	0474	117.6	15.50	124.0	12.47	6.809	13	-0.52	3%	0
251.30	Acid Soluble Lead , ICP (ppm)	0035	118.0	10.00	124.0	12.47	6.809	13	-0.48	2%	0
251.30	Acid Soluble Lead , ICP (ppm)	0230	118.5	1.000	124.0	12.47	6.809	13	-0.44	2%	0
251.30	Acid Soluble Lead , ICP (ppm)	0482	124.5	1.000	124.0	12.47	6.809	13	0.04	0%	0
251.30	Acid Soluble Lead , ICP (ppm)	0049	126.7	1.450	124.0	12.47	6.809	13	0.22	1%	0
251.30	Acid Soluble Lead , ICP (ppm)	0095	130.5	7.000	124.0	12.47	6.809	13	0.52	3%	0
251.30	Acid Soluble Lead , ICP (ppm)	0009	131.6	6.600	124.0	12.47	6.809	13	0.61	3%	0
251.30	Acid Soluble Lead , ICP (ppm)	0102	136.1	0.1700	124.0	12.47	6.809	13	0.98	5%	0
251.30	Acid Soluble Lead , ICP (ppm)	0389	138.5	7.000	124.0	12.47	6.809	13	1.16	6%	0
251.30	Acid Soluble Lead , ICP (ppm)	0368	142.0	16.00	124.0	12.47	6.809	13	1.45	7%	0
251.33	Acid Soluble Lead , ICP, 2006.03 modified w/... (ppm)	0037	128.8	5.900	135.3	9.096	5.503	2	-0.71	2%	0
251.33	Acid Soluble Lead , ICP, 2006.03 modified w/... (ppm)	0494	141.7	5.107	135.3	9.096	5.503	2	0.71	2%	0
251.34	Acid Soluble Lead , ICP, EPA 3050B/6010C (ppm)	0220	124.5	1.000			1.000	1			
251.99	Acid Soluble Lead , Other (ppm)	0506	122.5	5.000	123.7	1.626	4.100	2	-0.71	0%	0
251.99	Acid Soluble Lead , Other (ppm)	0487	124.8	3.200	123.7	1.626	4.100	2	0.71	0%	0
261.00	Acid Soluble Manganese , AA, Mn2+ only (0.05%)	0258	0.0355	0.0030	0.0363	0.0011	0.0020	2	-0.71	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				
261.00	Acid Soluble Manganese , AA, Mn2+ only (0.05%)	0043	0.0370	0.0010	0.0363	0.0011	0.0020	2	0.71	1%	0
261.11	Acid Soluble Manganese , AA, total Mn (0.05%)	0481	0.0290	0.0000	0.0315	0.0039	0.0010	3	-0.64	4%	0
261.11	Acid Soluble Manganese , AA, total Mn (0.05%)	0498	0.0295	0.0010	0.0315	0.0039	0.0010	3	-0.51	3%	0
261.11	Acid Soluble Manganese , AA, total Mn (0.05%)	0513	0.0360	0.0020	0.0315	0.0039	0.0010	3	1.15	7%	0
261.12	Acid Soluble Manganese , AA, inorganic 965.0... (0.05%)	0356	0.0309	0.0002	0.0371	0.0040	0.0011	6	-1.56	8%	0
261.12	Acid Soluble Manganese , AA, inorganic 965.0... (0.05%)	0040	0.0355	0.0010	0.0371	0.0040	0.0011	6	-0.41	2%	0
261.12	Acid Soluble Manganese , AA, inorganic 965.0... (0.05%)	0105	0.0365	0.0006	0.0371	0.0040	0.0011	6	-0.15	1%	0
261.12	Acid Soluble Manganese , AA, inorganic 965.0... (0.05%)	0485	0.0371	0.0018	0.0371	0.0040	0.0011	6	0.00	0%	0
261.12	Acid Soluble Manganese , AA, inorganic 965.0... (0.05%)	0028	0.0400	0.0000	0.0371	0.0040	0.0011	6	0.72	4%	0
261.12	Acid Soluble Manganese , AA, inorganic 965.0... (0.05%)	0029	0.0464	0.0030	0.0371	0.0040	0.0011	6	2.33	13%	0
261.15	Acid Soluble Manganese , AA, 965.09, test po... (0.05%)	0136	0.0400	0.0000			0.0000	1			
261.30	Acid Soluble Manganese , ICP, test portion 9... (0.05%)	0474	0.0301	0.0005	0.0360	0.0038	0.0024	16	-1.59	8%	0
261.30	Acid Soluble Manganese , ICP, test portion 9... (0.05%)	0035	0.0325	0.0001	0.0360	0.0038	0.0024	16	-0.95	5%	0
261.30	Acid Soluble Manganese , ICP, test portion 9... (0.05%)	0394	0.0325	0.0010	0.0360	0.0038	0.0024	16	-0.93	5%	0
261.30	Acid Soluble Manganese , ICP, test portion 9... (0.05%)	0420	0.0325	0.0010	0.0360	0.0038	0.0024	16	-0.93	5%	0
261.30	Acid Soluble Manganese , ICP, test portion 9... (0.05%)	0009	0.0330	0.0000	0.0360	0.0038	0.0024	16	-0.80	4%	0
261.30	Acid Soluble Manganese , ICP, test portion 9... (0.05%)	0291	0.0350	0.0100	0.0360	0.0038	0.0024	16	-0.27	1%	0
261.30	Acid Soluble Manganese , ICP, test portion 9... (0.05%)	0354	0.0350	0.0020	0.0360	0.0038	0.0024	16	-0.27	1%	0
261.30	Acid Soluble Manganese , ICP, test portion 9... (0.05%)	0472	0.0350	0.0100	0.0360	0.0038	0.0024	16	-0.27	1%	0
261.30	Acid Soluble Manganese , ICP, test portion 9... (0.05%)	0090	0.0355	0.0050	0.0360	0.0038	0.0024	16	-0.13	1%	0
261.30	Acid Soluble Manganese , ICP, test portion 9... (0.05%)	0096	0.0375	0.0000	0.0360	0.0038	0.0024	16	0.40	2%	0
261.30	Acid Soluble Manganese , ICP, test portion 9... (0.05%)	0114	0.0375	0.0050	0.0360	0.0038	0.0024	16	0.40	2%	0
261.30	Acid Soluble Manganese , ICP, test portion 9... (0.05%)	0390	0.0392	0.0015	0.0360	0.0038	0.0024	16	0.84	4%	0
261.30	Acid Soluble Manganese , ICP, test portion 9... (0.05%)	0041	0.0400	0.0000	0.0360	0.0038	0.0024	16	1.07	6%	0
261.30	Acid Soluble Manganese , ICP, test portion 9... (0.05%)	0102	0.0400	0.0000	0.0360	0.0038	0.0024	16	1.07	6%	0
261.30	Acid Soluble Manganese , ICP, test portion 9... (0.05%)	0368	0.0400	0.0000	0.0360	0.0038	0.0024	16	1.07	6%	0
261.30	Acid Soluble Manganese , ICP, test portion 9... (0.05%)	0433	0.0406	0.0015	0.0360	0.0038	0.0024	16	1.21	6%	0
261.30	Acid Soluble Manganese , ICP, test portion 9... (0.05%)	0483	244.5	43.00	0.0360	0.0038	0.0024	16	65172.67	339519%	2
261.31	Acid Soluble Manganese , ICP, test portion 9... (0.05%)	0230	0.0317	0.0000	0.0354	0.0034	0.0025	4	-1.09	5%	0
261.31	Acid Soluble Manganese , ICP, test portion 9... (0.05%)	0234	0.0350	0.0100	0.0354	0.0034	0.0025	4	-0.12	1%	0
261.31	Acid Soluble Manganese , ICP, test portion 9... (0.05%)	0360	0.0350	0.0000	0.0354	0.0034	0.0025	4	-0.12	1%	0
261.31	Acid Soluble Manganese , ICP, test portion 9... (0.05%)	0482	0.0400	0.0000	0.0354	0.0034	0.0025	4	1.34	6%	0
261.32	Acid Soluble Manganese , ICP, test portion i... (0.05%)	0501	0.0300	0.0000	0.0353	0.0026	0.0011	8	-2.04	8%	0
261.32	Acid Soluble Manganese , ICP, test portion i... (0.05%)	0027	0.0340	0.0020	0.0353	0.0026	0.0011	8	-0.51	2%	0
261.32	Acid Soluble Manganese , ICP, test portion i... (0.05%)	0049	0.0345	0.0010	0.0353	0.0026	0.0011	8	-0.32	1%	0
261.32	Acid Soluble Manganese , ICP, test portion i... (0.05%)	0444	0.0345	0.0030	0.0353	0.0026	0.0011	8	-0.32	1%	0
261.32	Acid Soluble Manganese , ICP, test portion i... (0.05%)	0055	0.0350	0.0000	0.0353	0.0026	0.0011	8	-0.13	0%	0
261.32	Acid Soluble Manganese , ICP, test portion i... (0.05%)	0494	0.0374	0.0001	0.0353	0.0026	0.0011	8	0.77	3%	0
261.32	Acid Soluble Manganese , ICP, test portion i... (0.05%)	0324	0.0375	0.0030	0.0353	0.0026	0.0011	8	0.82	3%	0
261.32	Acid Soluble Manganese , ICP, test portion i... (0.05%)	0402	0.0400	0.0000	0.0353	0.0026	0.0011	8	1.78	7%	0
261.32	Acid Soluble Manganese , ICP, test portion i... (0.05%)	0231	0.3800	0.0200	0.0353	0.0026	0.0011	8	131.79	488%	2
261.34	Acid Soluble Manganese , ICP, test portion 2... (0.05%)	0423	0.0365	0.0010			0.0010	1			
261.35	Acid Soluble Manganese , ICP, test portion 2... (0.05%)	0397	0.0260*	0.0000	0.0373	0.0052	0.0018	8	-2.18	15%	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 2... (0.05%)	0117	0.0326	0.0005	0.0373	0.0052	0.0018	8	-0.92	6%	0
261.35	Acid Soluble Manganese , ICP, test portion 2... (0.05%)	0023	0.0335	0.0010	0.0373	0.0052	0.0018	8	-0.73	5%	0
261.35	Acid Soluble Manganese , ICP, test portion 2... (0.05%)	0037	0.0385	0.0010	0.0373	0.0052	0.0018	8	0.24	2%	0
261.35	Acid Soluble Manganese , ICP, test portion 2... (0.05%)	0220	0.0385	0.0010	0.0373	0.0052	0.0018	8	0.24	2%	0
261.35	Acid Soluble Manganese , ICP, test portion 2... (0.05%)	0494	0.0390	0.0011	0.0373	0.0052	0.0018	8	0.32	2%	0
261.35	Acid Soluble Manganese , ICP, test portion 2... (0.05%)	0421	0.0400	0.0000	0.0373	0.0052	0.0018	8	0.53	4%	0
261.35	Acid Soluble Manganese , ICP, test portion 2... (0.05%)	0486	0.0450	0.0100	0.0373	0.0052	0.0018	8	1.49	10%	0
261.35	Acid Soluble Manganese , ICP, test portion 2... (0.05%)	0025	0.3645	0.0310	0.0373	0.0052	0.0018	8	63.28	439%	1
261.99	Acid Soluble Manganese , Other (0.05%)	0389	0.0315	0.0003	0.0365	0.0040	0.0025	5	-1.28	7%	0
261.99	Acid Soluble Manganese , Other (0.05%)	0042	0.0350	0.0020	0.0365	0.0040	0.0025	5	-0.38	2%	0
261.99	Acid Soluble Manganese , Other (0.05%)	0506	0.0350	0.0100	0.0365	0.0040	0.0025	5	-0.38	2%	0
261.99	Acid Soluble Manganese , Other (0.05%)	0095	0.0400	0.0000	0.0365	0.0040	0.0025	5	0.89	5%	0
261.99	Acid Soluble Manganese , Other (0.05%)	0220	0.0410	0.0000	0.0365	0.0040	0.0025	5	1.14	6%	0
271.30	Water Soluble Manganese , ICP, Ext. 972.03 (%)	0444	0.0185	0.0010			0.0010	1			
281.00	Acid Soluble Mercury , AA (ppm)	0230	0.1007	0.0087	4.901	8.313	0.3407	3	-0.58	49%	0
281.00	Acid Soluble Mercury , AA (ppm)	0117	0.1020	0.0135	4.901	8.313	0.3407	3	-0.58	49%	0
281.00	Acid Soluble Mercury , AA (ppm)	0506	14.50	1.000	4.901	8.313	0.3407	3	1.15	98%	0
281.30	Acid Soluble Mercury , ICP (ppm)	0394	0.0825	0.0010			0.0010	1			
289.30	Acid Soluble Molybdenum , ICP (ppm)	0474	12.30	0.4000	15.22	1.785	0.7353	12	-1.64	10%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0096	13.90	0.6000	15.22	1.785	0.7353	12	-0.74	4%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0494	13.99	0.2240	15.22	1.785	0.7353	12	-0.69	4%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0394	14.00	0.0000	15.22	1.785	0.7353	12	-0.68	4%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0230	14.15	1.500	15.22	1.785	0.7353	12	-0.60	4%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0368	14.45	1.300	15.22	1.785	0.7353	12	-0.43	3%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0102	15.41	0.2400	15.22	1.785	0.7353	12	0.11	1%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0009	15.50	1.200	15.22	1.785	0.7353	12	0.16	1%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0220	17.20	0.6000	15.22	1.785	0.7353	12	1.11	7%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0035	18.55	0.5000	15.22	1.785	0.7353	12	1.87	11%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0095	19.00	2.000	15.22	1.785	0.7353	12	2.12	12%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0433	25.37	0.2600	15.22	1.785	0.7353	12	5.69	33%	0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modif... (ppm)	0037	16.76	0.3660	20.84	6.805	0.9380	3	-0.60	10%	0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modif... (ppm)	0494	17.07	1.248	20.84	6.805	0.9380	3	-0.55	9%	0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modif... (ppm)	0117	28.70	1.200	20.84	6.805	0.9380	3	1.15	19%	0
289.34	Acid Soluble Molybdenum , ICP, EPA 3050B/601... (ppm)	0220	17.80	1.600			1.600	1			
291.00	Acid Soluble Nickel , AA, test portion as in... (ppm)	0481	11.00	2.000	12.75	2.475	1.500	2	-0.71	7%	0
291.00	Acid Soluble Nickel , AA, test portion as in... (ppm)	0136	14.50	1.000	12.75	2.475	1.500	2	0.71	7%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0474	8.000	0.0000	11.43	1.014	0.9618	11	-3.38	15%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0482	10.50	1.400	11.43	1.014	0.9618	11	-0.92	4%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0394	10.65	1.300	11.43	1.014	0.9618	11	-0.77	3%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0368	11.05	2.300	11.43	1.014	0.9618	11	-0.38	2%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0230	11.20	1.000	11.43	1.014	0.9618	11	-0.23	1%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0049	11.28	0.3300	11.43	1.014	0.9618	11	-0.15	1%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0102	11.77	0.2500	11.43	1.014	0.9618	11	0.33	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				
291.30	Acid Soluble Nickel , ICP (ppm)	0096	12.00	0.4000	11.43	1.014	0.9618	11	0.56	2%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0035	12.05	0.9000	11.43	1.014	0.9618	11	0.61	3%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0009	12.45	0.7000	11.43	1.014	0.9618	11	1.01	4%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0095	14.00	2.000	11.43	1.014	0.9618	11	2.53	11%	0
291.33	Acid Soluble Nickel , ICP, 2006.03 modified ... (ppm)	0037	13.01	1.030	13.18	0.2408	0.8975	2	-0.71	1%	0
291.33	Acid Soluble Nickel , ICP, 2006.03 modified ... (ppm)	0494	13.35	0.7650	13.18	0.2408	0.8975	2	0.71	1%	0
291.34	Acid Soluble Nickel , ICP, EPA 3050B/6010C (ppm)	0220	16.50	0.6000			0.6000	1			
291.99	Acid Soluble Nickel , Other (ppm)	0506	13.80	0.6000			0.6000	1			
301.00	Acid Soluble Selenium , AA, test portion as ... (ppm)	0025	0.1965	0.0390			0.0390	1			
301.30	Acid Soluble Selenium , ICP (ppm)	0230	0.0015	0.0010	0.0032	0.0024	0.0040	2	-0.71	27%	0
301.30	Acid Soluble Selenium , ICP (ppm)	0394	0.0049	0.0070	0.0032	0.0024	0.0040	2	0.71	27%	0
301.30	Acid Soluble Selenium , ICP (ppm)	0009	0.0000	0.0000	0.0032	0.0024	0.0040	2	-1.33	50%	4
311.30	Sodium, Flame Photometric (%)	0510	0.5450	0.0100	0.5724	0.0388	0.0081	2	-0.71	2%	0
311.30	Sodium, Flame Photometric (%)	0494	0.5999	0.0061	0.5724	0.0388	0.0081	2	0.71	2%	0
311.32	Sodium, ICP, 2006.03 test portion (%)	0035	0.5855	0.0590			0.0590	1			
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)	0494	0.5744	0.0478	0.5811	0.0080	0.0173	3	-0.84	1%	0
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)	0423	0.5790	0.0040	0.5811	0.0080	0.0173	3	-0.27	0%	0
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)	0102	0.5900	0.0000	0.5811	0.0080	0.0173	3	1.11	1%	0
311.99	Sodium, Other (%)	0482	0.5850	0.0300	0.6223	0.0309	0.0190	4	-1.21	3%	0
311.99	Sodium, Other (%)	0096	0.6100	0.0200	0.6223	0.0309	0.0190	4	-0.40	1%	0
311.99	Sodium, Other (%)	0474	0.6400	0.0000	0.6223	0.0309	0.0190	4	0.57	1%	0
311.99	Sodium, Other (%)	0354	0.6540	0.0260	0.6223	0.0309	0.0190	4	1.03	3%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (1.5%)	0498	1.010*	0.0200	1.391	0.0999	0.0463	12	-3.82	14%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (1.5%)	0043	1.310	0.0400	1.391	0.0999	0.0463	12	-0.81	3%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (1.5%)	0029	1.311	0.0600	1.391	0.0999	0.0463	12	-0.80	3%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (1.5%)	0040	1.325	0.0160	1.391	0.0999	0.0463	12	-0.66	2%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (1.5%)	0258	1.355	0.0700	1.391	0.0999	0.0463	12	-0.36	1%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (1.5%)	0513	1.375	0.0300	1.391	0.0999	0.0463	12	-0.16	1%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (1.5%)	0485	1.395	0.0100	1.391	0.0999	0.0463	12	0.04	0%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (1.5%)	0105	1.430	0.0840	1.391	0.0999	0.0463	12	0.39	1%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (1.5%)	0028	1.450	0.0400	1.391	0.0999	0.0463	12	0.59	2%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (1.5%)	0169	1.465	0.0500	1.391	0.0999	0.0463	12	0.74	3%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (1.5%)	0428	1.498	0.1306	1.391	0.0999	0.0463	12	1.07	4%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (1.5%)	0356	1.698	0.0050	1.391	0.0999	0.0463	12	3.07	11%	0
321.03	Acid Soluble Zinc , AA, 965.09, test portion... (1.5%)	0136	1.320	0.0000			0.0000	1			
321.30	Acid Soluble Zinc , ICP, test portion inorga... (1.5%)	0501	0.8350*	0.0700	1.393	0.1009	0.0520	34	-5.53	20%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (1.5%)	0394	1.250	0.1000	1.393	0.1009	0.0520	34	-1.41	5%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (1.5%)	0474	1.260	0.0000	1.393	0.1009	0.0520	34	-1.32	5%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (1.5%)	0090	1.265	0.0700	1.393	0.1009	0.0520	34	-1.27	5%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (1.5%)	0420	1.270	0.0400	1.393	0.1009	0.0520	34	-1.22	4%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (1.5%)	0157	1.295	0.0300	1.393	0.1009	0.0520	34	-0.97	4%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (1.5%)	0402	1.315	0.0100	1.393	0.1009	0.0520	34	-0.77	3%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (1.5%)	0433	1.325	0.0020	1.393	0.1009	0.0520	34	-0.67	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				
321.30	Acid Soluble Zinc , ICP, test portion inorga... (1.5%)	0444	1.330	0.0200	1.393	0.1009	0.0520	34	-0.62	2%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (1.5%)	0095	1.340	0.0600	1.393	0.1009	0.0520	34	-0.52	2%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (1.5%)	0307	1.344	0.0060	1.393	0.1009	0.0520	34	-0.48	2%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (1.5%)	0230	1.345	0.0500	1.393	0.1009	0.0520	34	-0.47	2%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (1.5%)	0055	1.353	0.0450	1.393	0.1009	0.0520	34	-0.40	1%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (1.5%)	0472	1.360	0.0200	1.393	0.1009	0.0520	34	-0.32	1%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (1.5%)	0041	1.365	0.0300	1.393	0.1009	0.0520	34	-0.28	1%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (1.5%)	0114	1.385	0.0500	1.393	0.1009	0.0520	34	-0.08	0%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (1.5%)	0234	1.385	0.0300	1.393	0.1009	0.0520	34	-0.08	0%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (1.5%)	0049	1.395	0.0500	1.393	0.1009	0.0520	34	0.02	0%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (1.5%)	0482	1.395	0.0300	1.393	0.1009	0.0520	34	0.02	0%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (1.5%)	0292	1.405	0.0100	1.393	0.1009	0.0520	34	0.12	0%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (1.5%)	0390	1.405	0.0300	1.393	0.1009	0.0520	34	0.12	0%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (1.5%)	0324	1.415	0.2100	1.393	0.1009	0.0520	34	0.22	1%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (1.5%)	0009	1.425	0.0500	1.393	0.1009	0.0520	34	0.32	1%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (1.5%)	0368	1.430	0.0400	1.393	0.1009	0.0520	34	0.37	1%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (1.5%)	0494	1.451	0.0228	1.393	0.1009	0.0520	34	0.57	2%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (1.5%)	0231	1.460	0.0200	1.393	0.1009	0.0520	34	0.67	2%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (1.5%)	0035	1.485	0.0100	1.393	0.1009	0.0520	34	0.91	3%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (1.5%)	0360	1.500	0.0000	1.393	0.1009	0.0520	34	1.06	4%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (1.5%)	0027	1.517	0.2460	1.393	0.1009	0.0520	34	1.23	4%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (1.5%)	0371	1.520	0.1600	1.393	0.1009	0.0520	34	1.26	5%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (1.5%)	0291	1.525	0.0300	1.393	0.1009	0.0520	34	1.31	5%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (1.5%)	0354	1.564	0.0190	1.393	0.1009	0.0520	34	1.69	6%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (1.5%)	0096	1.598	0.1773	1.393	0.1009	0.0520	34	2.04	7%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (1.5%)	0102	1.605	0.0300	1.393	0.1009	0.0520	34	2.10	8%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (1.5%)	0483	14,650	700.0	1.393	0.1009	0.0520	34	145183.63	525885%	2
321.32	Acid Soluble Zinc , ICP, test portion 2006.0... (1.5%)	0423	1.405	0.0100			0.0100	1			
321.33	Acid Soluble Zinc , ICP, test portion 2006.0... (1.5%)	0117	1.185*	0.0900	1.400	0.1058	0.0574	10	-2.03	8%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.0... (1.5%)	0220	1.290	0.0200	1.400	0.1058	0.0574	10	-1.04	4%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.0... (1.5%)	0397	1.333	0.0020	1.400	0.1058	0.0574	10	-0.64	2%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.0... (1.5%)	0037	1.367	0.0960	1.400	0.1058	0.0574	10	-0.31	1%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.0... (1.5%)	0023	1.398	0.0980	1.400	0.1058	0.0574	10	-0.02	0%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.0... (1.5%)	0177	1.400	0.0183	1.400	0.1058	0.0574	10	-0.01	0%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.0... (1.5%)	0421	1.470	0.1000	1.400	0.1058	0.0574	10	0.66	2%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.0... (1.5%)	0034	1.498	0.0000	1.400	0.1058	0.0574	10	0.92	3%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.0... (1.5%)	0494	1.500	0.0198	1.400	0.1058	0.0574	10	0.94	4%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.0... (1.5%)	0486	1.505	0.1300	1.400	0.1058	0.0574	10	0.99	4%	0
321.99	Acid Soluble Zinc , Other (1.5%)	0506	1.350	0.1800	1.388	0.0580	0.0900	3	-0.66	1%	0
321.99	Acid Soluble Zinc , Other (1.5%)	0389	1.360	0.0400	1.388	0.0580	0.0900	3	-0.49	1%	0
321.99	Acid Soluble Zinc , Other (1.5%)	0042	1.455	0.0500	1.388	0.0580	0.0900	3	1.15	2%	0
325.00	Water Soluble Zinc , AA (%)	0481	1.035	0.1100			0.1100	1			

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

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				

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 reporting, 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.