

# magruder fertilizer

## check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 171012

TSP, 0-45-0

### Statistical Summary

# Methods: 127

# Labs Reporting: 100

Issue Date : 12/31/2017

Method Code	Analyte & Method	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Analyte Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	IA %RSD	Average Range (R-bar)	Horwitz %RSD
010.60	Total Nitrogen, Combustion (%)	4	4	0.1290	0.0387	0.1290		0.0387	0.0242	29.96%		0.0115	5.44%
010.99	Total Nitrogen, Other (%)	1		0.0860									
020.10	Total Phosphorus as P2O5, Gravimetric Quinolinium ... (%)	9	9	45.82	0.9827	45.82		1.114	0.4643	2.43%		0.1889	2.25%
020.20	Total Phosphorus as P2O5, Spectrophotometric Molyb... (%)	17	16	46.06	0.8545	46.01		0.8573	0.2679	1.86%		0.3226	2.25%
020.30	Total Phosphorus as P2O5, Alkalimetric Quinolinium... (%)	1		46.66									
020.40	Total Phosphorus as P2O5, Automated (%)	4	4	46.40	0.3283	46.40		0.3283	0.2052	0.71%		0.4700	2.25%
020.50	Total Phosphorus as P2O5, ICP (%)	24	22	46.30	1.784	46.27		1.951	0.5199	4.22%		0.5570	2.25%
020.99	Total Phosphorus as P2O5, Other (%)	2	2	47.28	3.018								
030.20	Citrate Insoluble Phosphorus as P2O5, Spectrophoto... (%)	2	2	0.3645	0.1775								
030.40	Citrate Insoluble Phosphorus as P2O5, Automated, t... (%)	2	2	0.1725	0.0035								
040.20	Indirect Available Phosphorus as P2O5, Spectrophot... (45%)	2	2	45.79	0.0636								
040.40	Indirect Available Phosphorus as P2O5, Automated (45%)	2	2	46.00	0.3323								
040.99	Indirect Available Phosphorus as P2O5, Other (45%)	1		46.20									
041.10	Direct Available Phosphorus as P2O5, Gravimetric Q... (45%)	8	7	46.31	0.3719	46.31	0.9943	0.4190	0.1980	0.90%	1.07%	0.0490	2.25%
041.11	Direct Available Phosphorus as P2O5, Gravimetric Q... (45%)	3	3	46.50	0.8158	46.50	0.9943	0.8158	0.5888	1.75%	1.07%	0.1758	2.24%
041.20	Direct Available Phosphorus as P2O5, Spectrophotom... (45%)	2	2	45.15	0.0137								
041.21	Direct Available Phosphorus as P2O5, Spectrophotom... (45%)	4	4	44.65	1.325	44.65	0.9943	1.325	0.8282	2.97%	1.11%	0.4963	2.26%
041.40	Direct Available Phosphorus as P2O5, Automated (45%)	2	2	45.52	2.740								
041.50	Direct Available Phosphorus as P2O5, ICP (45%)	5	5	46.11	0.5837	46.11	0.9943	0.5837	0.3263	1.27%	1.08%	1.352	2.25%
041.51	Direct Available Phosphorus as P2O5, ICP, Citrate-... (45%)	8	7	45.92	0.6679	45.94	0.9943	0.7084	0.3347	1.54%	1.08%	0.6229	2.25%
041.60	Direct Available Phosphorus as P2O5, Citrate-EDTA ... (45%)	15	14	45.72	0.6875	45.72	0.9943	0.7797	0.2605	1.71%	1.09%	0.2346	2.25%
041.99	Direct Available Phosphorus as P2O5, Other (45%)	12	12	45.29	0.3280	45.26	0.9943	0.2905	0.1048	0.64%	1.10%	0.0842	2.25%
042.10	Water Soluble Orthophosphate as P2O5, Spectrophoto... (%)	1		38.86									
048.10	Water Soluble Phosphorus as P2O5, Gravimetric Quin... (%)	1		40.00									
048.20	Water Soluble Phosphorus as P2O5, Spectrophotometr... (%)	1		40.33									
048.40	Water Soluble Phosphorus as P2O5, Automated (%)	1		39.95									
048.50	Water Soluble Phosphorus as P2O5, ICP (%)	1		41.18									
050.31	Soluble Potassium as K2O, AA (Citrate) (%)	1		0.0650									
050.51	Soluble Potassium as K2O, ICP (Citrate) (%)	1		0.5350									
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (%)	1		0.2565									
050.99	Soluble Potassium as K2O, Other (%)	5	5	0.2327	0.0474	0.2327		0.0474	0.0265	20.38%		0.0087	4.98%

Method Code	Analyte & Method	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Analyte Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	IA %RSD	Average Range (R-bar)	Horwitz %RSD
060.00	Water (Free), Vacuum Oven (%)	3	3	4.470	4.147	4.470		4.147	2.993	92.79%		0.0670	3.19%
060.20	Water (Free), Karl Fischer (%)	1		2.680									
060.30	Water (Free), AFPC No. 2B (105°C oven for 2 hours,... (%)	2	2	2.350	0.9192								
060.99	Water (Free), Other (%)	2	2	2.005	0.1207								
101.00	Acid Soluble Calcium, AA, inorganic 965.09 (13.5%)	7	7	13.60	0.3830	13.66	0.8739	0.2965	0.1401	2.17%	3.20%	0.1914	2.70%
101.30	Acid Soluble Calcium, ICP, test portion inorganic ... (13.5%)	27	25	13.85	5.168	13.48	0.8739	0.9366	0.2342	6.95%	3.24%	0.2026	2.70%
101.32	Acid Soluble Calcium, ICP, test portion 2006.03A-C... (13.5%)	3	3	13.33	0.6176	13.33	0.8739	0.6176	0.4457	4.63%	3.28%	0.1833	2.71%
101.33	Acid Soluble Calcium, ICP, test portion 2006.03A-C... (13.5%)	13	12	13.38	0.5487	13.48	0.8739	0.3932	0.1419	2.92%	3.24%	0.2428	2.70%
101.70	Acid Soluble Calcium, Titrimetric (13.5%)	3	3	17.06	6.619	17.06	0.8739	6.619	4.777	38.80%	2.56%	0.1421	2.61%
101.99	Acid Soluble Calcium, Other (13.5%)	12	11	13.45	1.502	13.47	0.8739	1.047	0.3945	7.77%	3.24%	0.1733	2.70%
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (%)	2	2	0.8925	0.0672								
121.03	Acid Soluble Magnesium, AA, 965.09, test portion 2... (%)	1		0.9035									
121.30	Acid Soluble Magnesium, ICP, test portion inorganic... (%)	6	6	0.9259	0.0811	0.9259		0.0919	0.0469	9.93%		0.0258	4.05%
121.32	Acid Soluble Magnesium, ICP, test portion 2006.03A... (	2	2	0.8624	0.0175								
121.33	Acid Soluble Magnesium, ICP, test portion 2006.03A... (	6	5	0.8800	0.0617	0.8800		0.0617	0.0345	7.01%		0.0141	4.08%
121.70	Acid Soluble Magnesium, Titrimetric (EDTA) (%)	1		9.460									
121.99	Acid Soluble Magnesium, Other (%)	2	2	0.8133	0.0828								
143.99	Elemental Sulfur, Other (%)	2	2	1.116	0.0196								
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulfur - ... (%)	1		13.20									
145.99	Sulfate Sulfur, HCl soluble, Other (%)	1		3.405									
148.07	Total Sulfur, ICP, test portion as in 2006.03 modi... (%)	5	5	1.115	0.0676	1.115		0.0676	0.0378	6.06%		0.0310	3.93%
148.99	Total Sulfur, Other (%)	3	3	1.171	0.2068	1.171		0.2068	0.1493	17.66%		0.0257	3.91%
149.04	Sulfur - HNO3 soluble, ICP (%)	2	2	1.051	0.0438								
151.00	Acid Soluble Arsenic , AA, test portion as in 2006... (p	2	2	17.13	0.1061								
151.30	Acid Soluble Arsenic , ICP (ppm)	6	6	19.00	5.553	19.00		6.297	3.213	33.14%		1.070	10.27%
151.33	Acid Soluble Arsenic , ICP, 2006.03 modified w/9:3... (	6	6	21.15	1.749	21.15		1.984	1.012	9.38%		0.9426	10.11%
151.34	Acid Soluble Arsenic , ICP, EPA 3050B/6010C (ppm)	2	2	18.83	1.872								
151.99	Acid Soluble Arsenic , Other (ppm)	2	2	18.99	6.915								
165.30	Acid Soluble Boron , ICP, test portion in 982.01 (%)	3	3	0.0039	0.0029	0.0039		0.0029	0.0021	74.82%		0.0010	9.23%
165.99	Acid Soluble Boron , Other (%)	4	3	37.76	65.38	37.76		65.38	47.18	173.17%		17.83	2.32%
181.00	Acid Soluble Cadmium , AA, test portion as in 2006... (	3	3	89.18	2.660	89.18		2.660	1.920	2.98%		2.700	8.14%
181.30	Acid Soluble Cadmium , ICP (ppm)	12	12	71.49	21.70	73.01		20.87	7.532	28.59%		2.534	8.39%
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified w/9:3... (	8	8	91.56	4.505	90.63		2.596	1.147	2.86%		1.351	8.12%
181.34	Acid Soluble Cadmium , ICP, EPA 3050B/6010C (ppm)	2	2	83.33	3.724								
181.99	Acid Soluble Cadmium , Other (ppm)	4	4	71.17	26.58	71.17		26.58	16.61	37.34%		1.789	8.42%
191.00	Acid Soluble Chromium , AA, test portion as in 200... (l	2	2	380.9	47.27								
191.30	Acid Soluble Chromium , ICP (ppm)	10	9	393.9	153.2	387.6		99.26	41.36	25.60%		20.22	6.52%
191.33	Acid Soluble Chromium , ICP, 2006.03 modified w/9:... (	7	7	437.4	12.87	437.4		14.60	6.896	3.34%		9.709	6.41%
191.34	Acid Soluble Chromium , ICP, EPA 3050B/6010C (ppn	2	2	392.6	12.18								
191.99	Acid Soluble Chromium , Other (ppm)	4	4	445.6	110.8	445.6		110.8	69.25	24.87%		14.76	6.39%
202.30	Acid Soluble Cobalt , ICP (ppm)	5	5	6.314	0.9446	6.314		0.9446	0.5281	14.96%		0.2817	12.12%
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified w/9:3 ... (l	6	6	6.804	1.010	6.939		0.8137	0.4152	11.73%		0.7789	11.95%

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202.34	Acid Soluble Cobalt , ICP, EPA 3050B/6010C (ppm)	2	2	6.665	1.698								
202.99	Acid Soluble Cobalt , Other (ppm)	4	4	5.138	1.421	5.138		1.421	0.8878	27.65%		0.1005	12.50%
221.00	Acid Soluble Copper , AA, inorganic 965.09 (%)	6	6	0.0076	0.0009	0.0076		0.0010	0.0005	13.42%		0.0001	8.34%
221.03	Acid Soluble Copper , AA, 965.09, test portion 200... (	1		0.0070									
221.30	Acid Soluble Copper , ICP, test portion inorganic ... (%)	14	12	0.0098	0.0051	0.0087		0.0022	0.0008	25.43%		0.0013	8.16%
221.32	Acid Soluble Copper , ICP, test portion 2006.03A-C (%)	2	2	0.0073	0.0012								
221.33	Acid Soluble Copper , ICP, test portion 2006.03A-C... (	6	6	0.0079	0.0010	0.0079		0.0011	0.0006	13.89%		0.0006	8.29%
221.99	Acid Soluble Copper , Other (%)	10	9	0.0077	0.0025	0.0078		0.0026	0.0011	32.98%		0.0000	8.31%
241.00	Acid Soluble Iron, AA, inorganic 965.09 (%)	3	3	0.7435	0.1333	0.7435		0.1333	0.0962	17.92%		0.0270	4.18%
241.03	Acid Soluble Iron, AA, 965.09, test portion 2006.0... (%)	1		0.8265									
241.30	Acid Soluble Iron, ICP, test portion inorganic 965... (%)	8	7	0.7963	0.0309	0.7963		0.0350	0.0165	4.40%		0.0237	4.14%
241.32	Acid Soluble Iron, ICP, test portion 2006.03A-C (%)	1		0.7986									
241.33	Acid Soluble Iron, ICP, test portion 2006.03A-C, w... (%)	6	6	0.8039	0.0194	0.7990		0.0093	0.0047	1.16%		0.0153	4.14%
241.99	Acid Soluble Iron, Other (%)	2	2	0.7527	0.0454								
251.00	Acid Soluble Lead , AA, test portion as in 2006.03... (p	2	2	3.978	0.0318								
251.30	Acid Soluble Lead , ICP (ppm)	9	8	3.986	1.980	3.976		2.225	0.9831	55.94%		0.2383	13.00%
251.33	Acid Soluble Lead , ICP, 2006.03 modified w/9:3 HN...	4	4	4.682	0.3313	4.682		0.3313	0.2070	7.08%		0.5440	12.68%
251.34	Acid Soluble Lead , ICP, EPA 3050B/6010C (ppm)	2	2	4.970	0.6580								
251.99	Acid Soluble Lead , Other (ppm)	3	3	5.486	1.586	5.486		1.586	1.145	28.91%		0.2010	12.38%
261.12	Acid Soluble Manganese , AA, inorganic 965.09 (%)	3	3	0.0170	0.0050	0.0170		0.0050	0.0036	29.41%		0.0007	7.39%
261.15	Acid Soluble Manganese , AA, 965.09, test portion ... (	1		0.0215									
261.30	Acid Soluble Manganese , ICP, test portion 972.02a (%)	4	4	0.0210	0.0009	0.0210		0.0009	0.0006	4.47%		0.0005	7.16%
261.31	Acid Soluble Manganese , ICP, test portion 972.02b (%)	1		0.0200									
261.32	Acid Soluble Manganese , ICP, test portion inorgan... (	2	2	74.02	104.6								
261.33	Acid Soluble Manganese , ICP, test portion organic... (	1		0.0213									
261.34	Acid Soluble Manganese , ICP, test portion 2006.03...	1		0.0187									
261.35	Acid Soluble Manganese , ICP, test portion 2006.03...	5	4	0.0204	0.0018	0.0204		0.0018	0.0012	9.05%		0.0008	7.19%
261.99	Acid Soluble Manganese , Other (%)	2	2	0.0196	0.0029								
281.30	Acid Soluble Mercury , ICP (ppm)	4	3	0.7518	1.254	0.7518		1.254	0.9052	166.82%		0.0743	16.70%
281.99	Acid Soluble Mercury , Other (ppm)	1		0.0100									
289.30	Acid Soluble Molybdenum , ICP (ppm)	10	9	10.99	4.431	11.13		3.179	1.325	28.56%		0.2484	11.13%
289.32	Acid Soluble Molybdenum , ICP, 2006.03 (ppm)	1		11.36									
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modified w/...	8	7	13.27	0.9139	13.26		0.5522	0.2609	4.17%		0.3964	10.84%
289.34	Acid Soluble Molybdenum , ICP, EPA 3050B/6010C (p	3	3	13.72	2.423	13.72		2.423	1.749	17.67%		3.023	10.79%
289.99	Acid Soluble Molybdenum , Other (ppm)	2	2	11.99	3.271								
291.00	Acid Soluble Nickel , AA, test portion as in 2006.... (pp	3	3	249.3	6.327	249.3		6.327	4.566	2.54%		3.100	6.97%
291.30	Acid Soluble Nickel , ICP (ppm)	12	11	206.9	56.50	214.5		43.49	16.39	20.28%		6.731	7.13%
291.33	Acid Soluble Nickel , ICP, 2006.03 modified w/9:3 ... (p	7	6	239.8	9.047	239.8		10.26	5.235	4.28%		3.402	7.01%
291.34	Acid Soluble Nickel , ICP, EPA 3050B/6010C (ppm)	3	3	242.8	29.93	242.8		29.93	21.60	12.33%		19.71	7.00%
291.99	Acid Soluble Nickel , Other (ppm)	5	5	350.3	349.3	350.3		349.3	195.3	99.70%		5.416	6.62%
301.30	Acid Soluble Selenium , ICP (ppm)	4	3	24.01	34.50	24.01		34.50	24.90	143.71%		6.057	9.91%
301.33	Acid Soluble Selenium , ICP, 2006.03 modified w/9:...	3	2	14.35	9.259	14.35		9.259	8.184	64.51%		0.9378	10.71%

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301.34	Acid Soluble Selenium , ICP, EPA 3050B/6010C (ppm	1		3.079									
301.99	Acid Soluble Selenium , Other (ppm)	4	4	4.216	4.157	4.216		4.157	2.598	98.58%		0.1865	12.88%
311.32	Sodium, ICP, 2006.03 test portion (%)	1		0.1512									
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl test .	2	2	0.1801	0.0155								
311.99	Sodium, Other (%)	3	3	0.1317	0.0362	0.1317		0.0362	0.0261	27.47%		0.0040	5.43%
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (%)	7	7	0.1018	0.0067	0.1016		0.0073	0.0035	7.21%		0.0028	5.64%
321.30	Acid Soluble Zinc , ICP, test portion inorganic 96... (%)	14	13	0.1720	0.2435	0.1048		0.0288	0.0100	27.46%		0.0049	5.62%
321.32	Acid Soluble Zinc , ICP, test portion 2006.03A-C (%)	3	3	0.2457	0.2132	0.2457		0.2132	0.1539	86.78%		0.3060	4.94%
321.33	Acid Soluble Zinc , ICP, test portion 2006.03A-C, ... (%)	7	7	0.1083	0.0178	0.1056		0.0134	0.0063	12.71%		0.0066	5.61%
321.99	Acid Soluble Zinc , Other (%)	8	8	0.0925	0.0290	0.0986		0.0164	0.0072	16.61%		0.0041	5.67%
325.00	Water Soluble Zinc , AA (%)	1		0.0280									
325.30	Water Soluble Zinc , ICP (%)	1		0.1150									

# magruder fertilizer

## check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 171012

TSP, 0-45-0

### Method Precision Report

Issue Date : 12/31/2017

Method Code	Analyte & Method	# Tests Submitted	# Tests Used in Precision Calcs	Mean	SD	Between Labs sL	Within Labs sr	Reproducibility SR	Between Labs %RSD	Within Labs %rsd	Reproducibility %RSD	sR/sr
020.10	Total Phosphorus as P2O5, Gravimetric Quinolinium MolybdoP (%)	9	9	45.82	0.9827	0.9708	0.2160	0.9945	2.12%	0.47%	2.17%	4.605
020.20	Total Phosphorus as P2O5, Spectrophotometric MolybdovanadoP (%)	17	15	46.14	0.8247	0.8006	0.2798	0.8481	1.74%	0.61%	1.84%	3.031
020.50	Total Phosphorus as P2O5, ICP (%)	24	21	46.43	1.728	1.694	0.4814	1.761	3.65%	1.04%	3.79%	3.658
041.60	Direct Available Phosphorus as P2O5, Citrate-EDTA Ext. (45%)	15	14	45.72	0.6875	0.6734	0.1964	0.7014	1.47%	0.43%	1.53%	3.572
041.99	Direct Available Phosphorus as P2O5, Other (45%)	12	11	45.22	0.2269	0.2216	0.0692	0.2321	0.49%	0.15%	0.51%	3.355
101.30	Acid Soluble Calcium, ICP, test portion inorganic 965.09 (13.5%)	27	24	12.95	2.597	2.594	0.1693	2.599	20.03%	1.31%	20.07%	15.35
101.33	Acid Soluble Calcium, ICP, test portion 2006.03A-C, w/dual acid (13.5%)	13	12	13.38	0.5487	0.5289	0.2066	0.5678	3.95%	1.54%	4.24%	2.748
101.99	Acid Soluble Calcium, Other (13.5%)	12	11	13.45	1.502	1.499	0.1524	1.506	11.14%	1.13%	11.20%	9.883
181.30	Acid Soluble Cadmium , ICP (ppm)	12	12	71.49	21.70	21.64	2.348	21.76	30.27%	3.28%	30.44%	9.270
191.30	Acid Soluble Chromium , ICP (ppm)	10	8	354.8	105.2	104.8	13.30	105.6	29.53%	3.75%	29.76%	7.942
221.30	Acid Soluble Copper , ICP, test portion inorganic 965.09 (%)	14	11	0.0085	0.0018	0.0018	0.0007	0.0019	20.84%	8.01%	22.32%	2.789
221.99	Acid Soluble Copper , Other (%)	10	8	0.0076	0.0026	0.0026	0.0000	0.0026	34.57%	0.47%	34.57%	74.31
251.30	Acid Soluble Lead , ICP (ppm)	9	8	3.986	1.980	1.974	0.2194	1.987	49.53%	5.50%	49.84%	9.053
289.30	Acid Soluble Molybdenum , ICP (ppm)	10	9	10.99	4.431	4.427	0.2597	4.435	40.30%	2.36%	40.37%	17.08
291.30	Acid Soluble Nickel , ICP (ppm)	12	10	221.0	33.37	33.00	7.056	33.75	14.93%	3.19%	15.27%	4.783
321.30	Acid Soluble Zinc , ICP, test portion inorganic 965.09 (%)	14	11	0.0966	0.0189	0.0188	0.0035	0.0191	19.44%	3.67%	19.78%	5.389

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

# magruder fertilizer

## check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

# Methods: 127

Sample # 171012

Lab Values

# Labs Reporting: 100

TSP, 0-45-0

Issue Date : 12/31/2017

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
010.60	Total Nitrogen, Combustion (%)	0325	0.1000	0.0000	0.1290	0.0387	0.0115	4	-0.75	11%	0
010.60	Total Nitrogen, Combustion (%)	0354	0.1150	0.0080	0.1290	0.0387	0.0115	4	-0.36	5%	0
010.60	Total Nitrogen, Combustion (%)	0482	0.1150	0.0300	0.1290	0.0387	0.0115	4	-0.36	5%	0
010.60	Total Nitrogen, Combustion (%)	0472	0.1860	0.0080	0.1290	0.0387	0.0115	4	1.47	22%	0
010.99	Total Nitrogen, Other (%)	0524	0.0860	0.0014				1			0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0114	44.18	0.0000	45.82	1.114	0.1889	9	-1.36	2%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0500	44.30	0.0000	45.82	1.114	0.1889	9	-1.26	2%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0157	45.40	0.6000	45.82	1.114	0.1889	9	-0.35	0%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0481	46.09	0.6400	45.82	1.114	0.1889	9	0.22	0%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0090	46.21	0.0000	45.82	1.114	0.1889	9	0.32	0%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0493	46.25	0.1000	45.82	1.114	0.1889	9	0.36	0%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0049	46.46	0.1000	45.82	1.114	0.1889	9	0.53	1%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0105	46.74	0.0400	45.82	1.114	0.1889	9	0.76	1%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0444	46.76	0.2200	45.82	1.114	0.1889	9	0.78	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0506	44.90	1.600	46.01	0.8573	0.3226	16	-1.29	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0356	45.00	0.6900	46.01	0.8573	0.3226	16	-1.18	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0522	45.14	0.0100	46.01	0.8573	0.3226	16	-1.02	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0309	45.26	0.0300	46.01	0.8573	0.3226	16	-0.88	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0476	45.27	0.1755	46.01	0.8573	0.3226	16	-0.86	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0169	45.61	0.2200	46.01	0.8573	0.3226	16	-0.46	0%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0405	45.98	0.1130	46.01	0.8573	0.3226	16	-0.03	0%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0371	46.10	0.0000	46.01	0.8573	0.3226	16	0.11	0%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0541	46.19	0.2300	46.01	0.8573	0.3226	16	0.21	0%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0292	46.21	0.1100	46.01	0.8573	0.3226	16	0.23	0%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0220	46.33	0.4900	46.01	0.8573	0.3226	16	0.37	0%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0394	46.49	0.0300	46.01	0.8573	0.3226	16	0.56	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0534	46.53	0.1400	46.01	0.8573	0.3226	16	0.61	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0516	46.56	0.1200	46.01	0.8573	0.3226	16	0.64	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0324	47.60	1.200	46.01	0.8573	0.3226	16	1.86	2%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0510	47.80	0.0038	46.01	0.8573	0.3226	16	2.08	2%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0231	50.36	9.040	46.01	0.8573	0.3226	16	5.08	5%	1
020.30	Total Phosphorus as P2O5, Alkalimetric Quinol... (%)	0416	46.66	0.1200				1			0
020.40	Total Phosphorus as P2O5, Automated (%)	0096	45.94	0.1100	46.40	0.3283	0.4700	4	-1.42	1%	0

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020.40	Total Phosphorus as P2O5, Automated (%)	0404	46.41	0.0300	46.40	0.3283	0.4700	4	0.02	0%	0
020.40	Total Phosphorus as P2O5, Automated (%)	0035	46.61	1.690	46.40	0.3283	0.4700	4	0.62	0%	0
020.40	Total Phosphorus as P2O5, Automated (%)	0105	46.66	0.0500	46.40	0.3283	0.4700	4	0.78	0%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0234	43.32	0.1300	46.27	1.951	0.5570	22	-1.52	3%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0307	43.70	2.667	46.27	1.951	0.5570	22	-1.32	3%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0472	43.70	0.0600	46.27	1.951	0.5570	22	-1.32	3%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0523	43.75	0.1000	46.27	1.951	0.5570	22	-1.29	3%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0423	45.02	0.4600	46.27	1.951	0.5570	22	-0.64	1%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0524	45.46	0.0950	46.27	1.951	0.5570	22	-0.41	1%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0501	45.55	0.1000	46.27	1.951	0.5570	22	-0.37	1%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0433	45.80	0.3900	46.27	1.951	0.5570	22	-0.24	1%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0521	45.83	0.0000	46.27	1.951	0.5570	22	-0.22	0%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0444	45.84	0.1200	46.27	1.951	0.5570	22	-0.22	0%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0368	46.23	1.120	46.27	1.951	0.5570	22	-0.02	0%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0421	46.25	0.1000	46.27	1.951	0.5570	22	-0.01	0%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0527	46.39	0.0800	46.27	1.951	0.5570	22	0.06	0%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0157	46.50	0.6000	46.27	1.951	0.5570	22	0.12	0%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0042	46.93	0.9800	46.27	1.951	0.5570	22	0.34	1%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0542	47.28	0.3900	46.27	1.951	0.5570	22	0.51	1%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0482	47.60	1.800	46.27	1.951	0.5570	22	0.68	1%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0402	47.85	0.2100	46.27	1.951	0.5570	22	0.81	2%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0483	48.35	1.380	46.27	1.951	0.5570	22	1.07	2%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0291	48.44	0.0100	46.27	1.951	0.5570	22	1.11	2%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0451	48.98	0.3400	46.27	1.951	0.5570	22	1.39	3%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0255	49.89	1.122	46.27	1.951	0.5570	22	1.85	4%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0543	49.51	9.785	46.27	1.951	0.5570	22	1.66	3%	1
020.50	Total Phosphorus as P2O5, ICP (%)	0390	13.62	0.2300	46.27	1.951	0.5570	22	-16.74	35%	2
020.99	Total Phosphorus as P2O5, Other (%)	0443	45.15	2.150				2			0
020.99	Total Phosphorus as P2O5, Other (%)	0515	49.41	3.963				2			0
030.20	Citrate Insoluble Phosphorus as P2O5, Spectro... (%)	0405	0.2390	0.0240				2			0
030.20	Citrate Insoluble Phosphorus as P2O5, Spectro... (%)	0220	0.4900	0.0400				2			0
030.40	Citrate Insoluble Phosphorus as P2O5, Automat... (%)	0404	0.1700	0.0400				2			0
030.40	Citrate Insoluble Phosphorus as P2O5, Automat... (%)	0096	0.1750	0.0300				2			0
040.20	Indirect Available Phosphorus as P2O5, Spectr... (45%)	0405	45.75	0.0900				2			0
040.20	Indirect Available Phosphorus as P2O5, Spectr... (45%)	0220	45.84	0.4500				2			0
040.40	Indirect Available Phosphorus as P2O5, Automa... (45%)	0096	45.77	0.1500				2			0
040.40	Indirect Available Phosphorus as P2O5, Automa... (45%)	0404	46.24	0.0100				2			0
040.99	Indirect Available Phosphorus as P2O5, Other (45%)	0394	46.20	0.0000				1			0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (45%)	0102	45.90	0.0000	46.31	0.4190	0.0490	7	-0.89	0%	0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (45%)	0105	46.07	0.0500	46.31	0.4190	0.0490	7	-0.54	0%	0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (45%)	0055	46.14	0.0500	46.31	0.4190	0.0490	7	-0.38	0%	0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (45%)	0177	46.22	0.0672	46.31	0.4190	0.0490	7	-0.21	0%	0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (45%)	0041	46.24	0.0400	46.31	0.4190	0.0490	7	-0.16	0%	0

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041.10	Direct Available Phosphorus as P2O5, Gravimet... (45%)	0086	46.69	0.0357	46.31	0.4190	0.0490	7	0.82	0%	0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (45%)	0040	46.95	0.1000	46.31	0.4190	0.0490	7	1.37	1%	0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (45%)	0494	46.52	0.6700	46.31	0.4190	0.0490	7	0.44	0%	1
041.11	Direct Available Phosphorus as P2O5, Gravimet... (45%)	0105	45.98	0.2900	46.50	0.8158	0.1758	3	-0.64	1%	0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (45%)	0220	46.09	0.0300	46.50	0.8158	0.1758	3	-0.51	0%	0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (45%)	0485	47.44	0.2075	46.50	0.8158	0.1758	3	1.15	1%	0
041.20	Direct Available Phosphorus as P2O5, Spectrop... (45%)	0397	45.14	0.0753				2			0
041.20	Direct Available Phosphorus as P2O5, Spectrop... (45%)	0027	45.16	0.8900				2			0
041.21	Direct Available Phosphorus as P2O5, Spectrop... (45%)	0522	42.68*	0.0900	44.65	1.325	0.4963	4	-1.49	2%	0
041.21	Direct Available Phosphorus as P2O5, Spectrop... (45%)	0535	45.15	0.1000	44.65	1.325	0.4963	4	0.37	1%	0
041.21	Direct Available Phosphorus as P2O5, Spectrop... (45%)	0106	45.35	1.495	44.65	1.325	0.4963	4	0.53	1%	0
041.21	Direct Available Phosphorus as P2O5, Spectrop... (45%)	0544	45.44	0.3000	44.65	1.325	0.4963	4	0.59	1%	0
041.40	Direct Available Phosphorus as P2O5, Automate... (45%)	0095	43.59*	0.1100				2			0
041.40	Direct Available Phosphorus as P2O5, Automate... (45%)	0131	47.46	0.0200				2			0
041.50	Direct Available Phosphorus as P2O5, ICP (45%)	0043	45.26	0.1700	46.11	0.5837	1.352	5	-1.46	1%	0
041.50	Direct Available Phosphorus as P2O5, ICP (45%)	0325	45.90	2.000	46.11	0.5837	1.352	5	-0.36	0%	0
041.50	Direct Available Phosphorus as P2O5, ICP (45%)	0368	46.12	2.908	46.11	0.5837	1.352	5	0.02	0%	0
041.50	Direct Available Phosphorus as P2O5, ICP (45%)	0007	46.50	1.600	46.11	0.5837	1.352	5	0.67	0%	0
041.50	Direct Available Phosphorus as P2O5, ICP (45%)	0452	46.77	0.0800	46.11	0.5837	1.352	5	1.13	1%	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (45%)	0423	44.73	0.1000	45.94	0.7084	0.6229	7	-1.55	1%	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (45%)	0023	45.71	1.070	45.94	0.7084	0.6229	7	-0.30	0%	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (45%)	0117	45.75	0.2800	45.94	0.7084	0.6229	7	-0.24	0%	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (45%)	0360	45.86	0.6200	45.94	0.7084	0.6229	7	-0.10	0%	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (45%)	0494	46.03	1.340	45.94	0.7084	0.6229	7	0.11	0%	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (45%)	0377	46.63	0.1100	45.94	0.7084	0.6229	7	0.87	1%	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (45%)	0025	46.74	0.8400	45.94	0.7084	0.6229	7	1.02	1%	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (45%)	0233	44.52*	3.980	45.94	0.7084	0.6229	7	-1.81	2%	1
041.60	Direct Available Phosphorus as P2O5, Citrate-... (45%)	0230	44.65*	0.5000	45.72	0.7797	0.2346	14	-1.38	1%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (45%)	0177	45.10	0.0543	45.72	0.7797	0.2346	14	-0.81	1%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (45%)	0354	45.13	0.0930	45.72	0.7797	0.2346	14	-0.76	1%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (45%)	0397	45.14	0.0753	45.72	0.7797	0.2346	14	-0.75	1%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (45%)	0535	45.15	0.1000	45.72	0.7797	0.2346	14	-0.74	1%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (45%)	0472	45.30	0.5300	45.72	0.7797	0.2346	14	-0.55	0%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (45%)	0029	45.50	0.3400	45.72	0.7797	0.2346	14	-0.29	0%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (45%)	0073	45.78	0.2500	45.72	0.7797	0.2346	14	0.07	0%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (45%)	0105	45.87	0.1900	45.72	0.7797	0.2346	14	0.18	0%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (45%)	0231	46.17	0.1900	45.72	0.7797	0.2346	14	0.57	0%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (45%)	0486	46.35	0.3600	45.72	0.7797	0.2346	14	0.80	1%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (45%)	0072	46.61	0.2900	45.72	0.7797	0.2346	14	1.13	1%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (45%)	0034	46.67	0.2220	45.72	0.7797	0.2346	14	1.21	1%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (45%)	0136	46.76	0.0900	45.72	0.7797	0.2346	14	1.32	1%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (45%)	0055	44.46*	1.460	45.72	0.7797	0.2346	14	-1.62	1%	1
041.99	Direct Available Phosphorus as P2O5, Other (45%)	0519	44.88	0.0900	45.26	0.2905	0.0842	12	-1.31	0%	0



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041.99	Direct Available Phosphorus as P2O5, Other (45%)	0533	44.88	0.0700	45.26	0.2905	0.0842	12	-1.31	0%	0
041.99	Direct Available Phosphorus as P2O5, Other (45%)	0531	45.02	0.0800	45.26	0.2905	0.0842	12	-0.81	0%	0
041.99	Direct Available Phosphorus as P2O5, Other (45%)	0532	45.15	0.0400	45.26	0.2905	0.0842	12	-0.36	0%	0
041.99	Direct Available Phosphorus as P2O5, Other (45%)	0535	45.15	0.1000	45.26	0.2905	0.0842	12	-0.36	0%	0
041.99	Direct Available Phosphorus as P2O5, Other (45%)	0540	45.25	0.1000	45.26	0.2905	0.0842	12	-0.02	0%	0
041.99	Direct Available Phosphorus as P2O5, Other (45%)	0518	45.30	0.2000	45.26	0.2905	0.0842	12	0.15	0%	0
041.99	Direct Available Phosphorus as P2O5, Other (45%)	0538	45.36	0.0900	45.26	0.2905	0.0842	12	0.34	0%	0
041.99	Direct Available Phosphorus as P2O5, Other (45%)	0537	45.37	0.1100	45.26	0.2905	0.0842	12	0.38	0%	0
041.99	Direct Available Phosphorus as P2O5, Other (45%)	0536	45.48	0.0500	45.26	0.2905	0.0842	12	0.76	0%	0
041.99	Direct Available Phosphorus as P2O5, Other (45%)	0539	45.56	0.0400	45.26	0.2905	0.0842	12	1.05	0%	0
041.99	Direct Available Phosphorus as P2O5, Other (45%)	0105	46.07	0.0400	45.26	0.2905	0.0842	12	2.80	1%	0
042.10	Water Soluble Orthophosphate as P2O5, Spectro... (%)	0481	38.86	1.170				1			0
048.10	Water Soluble Phosphorus as P2O5, Gravimetric... (%)	0444	40.00	1.130				1			0
048.20	Water Soluble Phosphorus as P2O5, Spectrophot... (%)	0394	40.33	0.4200				1			0
048.40	Water Soluble Phosphorus as P2O5, Automated (%)	0096	39.95	0.0700				1			0
048.50	Water Soluble Phosphorus as P2O5, ICP (%)	0444	41.18	0.1500				1			0
050.31	Soluble Potassium as K2O, AA (Citrate) (%)	0472	0.0650	0.0300				1			0
050.51	Soluble Potassium as K2O, ICP (Citrate) (%)	0483	0.5350	0.0700				1			0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (%)	0354	0.2565	0.0010				1			0
050.99	Soluble Potassium as K2O, Other (%)	0096	0.1700	0.0000	0.2327	0.0474	0.0087	5	-1.32	13%	0
050.99	Soluble Potassium as K2O, Other (%)	0524	0.2133	0.0134	0.2327	0.0474	0.0087	5	-0.41	4%	0
050.99	Soluble Potassium as K2O, Other (%)	0521	0.2350	0.0000	0.2327	0.0474	0.0087	5	0.05	1%	0
050.99	Soluble Potassium as K2O, Other (%)	0482	0.2450	0.0300	0.2327	0.0474	0.0087	5	0.26	3%	0
050.99	Soluble Potassium as K2O, Other (%)	0325	0.3000	0.0000	0.2327	0.0474	0.0087	5	1.42	14%	0
060.00	Water (Free), Vacuum Oven (%)	0007	1.820	0.0800	4.470	4.147	0.0670	3	-0.64	30%	0
060.00	Water (Free), Vacuum Oven (%)	0096	2.340	0.0400	4.470	4.147	0.0670	3	-0.51	24%	0
060.00	Water (Free), Vacuum Oven (%)	0416	9.250	0.0810	4.470	4.147	0.0670	3	1.15	53%	0
060.20	Water (Free), Karl Fischer (%)	0518	2.680	0.1200				1			0
060.30	Water (Free), AFPC No. 2B (105°C oven for 2 h... (%)	0518	1.700	0.1400				2			0
060.30	Water (Free), AFPC No. 2B (105°C oven for 2 h... (%)	0055	3.000	0.2000				2			0
060.99	Water (Free), Other (%)	0510	1.919	0.0812				2			0
060.99	Water (Free), Other (%)	0055	2.090	0.2000				2			0
101.00	Acid Soluble Calcium, AA, inorganic 965.09 (13.5%)	0481	12.83	0.2500	13.66	0.2965	0.1914	7	-2.53	3%	0
101.00	Acid Soluble Calcium, AA, inorganic 965.09 (13.5%)	0157	13.45	0.1000	13.66	0.2965	0.1914	7	-0.63	1%	0
101.00	Acid Soluble Calcium, AA, inorganic 965.09 (13.5%)	0043	13.56	0.2600	13.66	0.2965	0.1914	7	-0.29	0%	0
101.00	Acid Soluble Calcium, AA, inorganic 965.09 (13.5%)	0485	13.73	0.1900	13.66	0.2965	0.1914	7	0.21	0%	0
101.00	Acid Soluble Calcium, AA, inorganic 965.09 (13.5%)	0500	13.85	0.0000	13.66	0.2965	0.1914	7	0.59	1%	0
101.00	Acid Soluble Calcium, AA, inorganic 965.09 (13.5%)	0040	13.86	0.2900	13.66	0.2965	0.1914	7	0.61	1%	0
101.00	Acid Soluble Calcium, AA, inorganic 965.09 (13.5%)	0029	13.94	0.2500	13.66	0.2965	0.1914	7	0.85	1%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (13.5%)	0404	1.345*	0.0100	13.48	0.9366	0.2026	25	-12.96	45%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (13.5%)	0230	11.45*	0.1000	13.48	0.9366	0.2026	25	-2.17	8%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (13.5%)	0324	12.15*	0.3000	13.48	0.9366	0.2026	25	-1.42	5%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (13.5%)	0354	12.92	0.2270	13.48	0.9366	0.2026	25	-0.60	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				
101.30	Acid Soluble Calcium, ICP, test portion inorg... (13.5%)	0102	12.93	0.1468	13.48	0.9366	0.2026	25	-0.59	2%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (13.5%)	0231	12.99	0.1400	13.48	0.9366	0.2026	25	-0.52	2%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (13.5%)	0157	13.00	0.4000	13.48	0.9366	0.2026	25	-0.51	2%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (13.5%)	0360	13.07	0.1000	13.48	0.9366	0.2026	25	-0.44	2%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (13.5%)	0444	13.09	0.0600	13.48	0.9366	0.2026	25	-0.42	1%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (13.5%)	0307	13.16	0.2240	13.48	0.9366	0.2026	25	-0.34	1%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (13.5%)	0255	13.22	0.5070	13.48	0.9366	0.2026	25	-0.28	1%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (13.5%)	0096	13.27	0.1600	13.48	0.9366	0.2026	25	-0.23	1%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (13.5%)	0041	13.30	0.0000	13.48	0.9366	0.2026	25	-0.19	1%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (13.5%)	0486	13.31	0.1600	13.48	0.9366	0.2026	25	-0.18	1%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (13.5%)	0377	13.39	0.2800	13.48	0.9366	0.2026	25	-0.10	0%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (13.5%)	0472	13.56	0.0900	13.48	0.9366	0.2026	25	0.08	0%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (13.5%)	0035	13.65	0.5000	13.48	0.9366	0.2026	25	0.18	1%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (13.5%)	0402	13.84	0.2100	13.48	0.9366	0.2026	25	0.38	1%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (13.5%)	0234	14.30	0.2000	13.48	0.9366	0.2026	25	0.87	3%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (13.5%)	0433	14.33	0.1000	13.48	0.9366	0.2026	25	0.91	3%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (13.5%)	0394	14.35	0.3000	13.48	0.9366	0.2026	25	0.93	3%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (13.5%)	0483	14.60	0.2000	13.48	0.9366	0.2026	25	1.19	4%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (13.5%)	0452	14.73	0.0300	13.48	0.9366	0.2026	25	1.33	5%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (13.5%)	0325	14.85	0.3000	13.48	0.9366	0.2026	25	1.46	5%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (13.5%)	0390	35.45	0.3200	13.48	0.9366	0.2026	25	23.46	81%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (13.5%)	0482	13.50	1.200	13.48	0.9366	0.2026	25	0.02	0%	1
101.30	Acid Soluble Calcium, ICP, test portion inorg... (13.5%)	0543	14.50	1.121	13.48	0.9366	0.2026	25	1.08	4%	1
101.32	Acid Soluble Calcium, ICP, test portion 2006... (13.5%)	0541	12.63	0.4100	13.33	0.6176	0.1833	3	-1.14	3%	0
101.32	Acid Soluble Calcium, ICP, test portion 2006... (13.5%)	0521	13.60	0.0000	13.33	0.6176	0.1833	3	0.43	1%	0
101.32	Acid Soluble Calcium, ICP, test portion 2006... (13.5%)	0423	13.77	0.1400	13.33	0.6176	0.1833	3	0.71	2%	0
101.33	Acid Soluble Calcium, ICP, test portion 2006... (13.5%)	0055	12.15*	0.1200	13.48	0.3932	0.2428	12	-3.37	5%	0
101.33	Acid Soluble Calcium, ICP, test portion 2006... (13.5%)	0177	12.45*	0.1383	13.48	0.3932	0.2428	12	-2.60	4%	0
101.33	Acid Soluble Calcium, ICP, test portion 2006... (13.5%)	0117	13.29	0.1200	13.48	0.3932	0.2428	12	-0.47	1%	0
101.33	Acid Soluble Calcium, ICP, test portion 2006... (13.5%)	0233	13.37	0.4000	13.48	0.3932	0.2428	12	-0.27	0%	0
101.33	Acid Soluble Calcium, ICP, test portion 2006... (13.5%)	0034	13.40	0.3000	13.48	0.3932	0.2428	12	-0.19	0%	0
101.33	Acid Soluble Calcium, ICP, test portion 2006... (13.5%)	0136	13.45	0.1500	13.48	0.3932	0.2428	12	-0.08	0%	0
101.33	Acid Soluble Calcium, ICP, test portion 2006... (13.5%)	0086	13.54	0.5090	13.48	0.3932	0.2428	12	0.16	0%	0
101.33	Acid Soluble Calcium, ICP, test portion 2006... (13.5%)	0421	13.55	0.3000	13.48	0.3932	0.2428	12	0.19	0%	0
101.33	Acid Soluble Calcium, ICP, test portion 2006... (13.5%)	0494	13.71	0.5413	13.48	0.3932	0.2428	12	0.60	1%	0
101.33	Acid Soluble Calcium, ICP, test portion 2006... (13.5%)	0527	13.76	0.0300	13.48	0.3932	0.2428	12	0.72	1%	0
101.33	Acid Soluble Calcium, ICP, test portion 2006... (13.5%)	0023	13.87	0.2380	13.48	0.3932	0.2428	12	1.01	1%	0
101.33	Acid Soluble Calcium, ICP, test portion 2006... (13.5%)	0397	14.00	0.0666	13.48	0.3932	0.2428	12	1.32	2%	0
101.33	Acid Soluble Calcium, ICP, test portion 2006... (13.5%)	0106	11.56*	1.880	13.48	0.3932	0.2428	12	-4.88	7%	1
101.70	Acid Soluble Calcium, Titrimetric (13.5%)	0522	12.42*	0.0800	17.06	6.619	0.1421	3	-0.70	14%	0
101.70	Acid Soluble Calcium, Titrimetric (13.5%)	0544	14.13	0.1500	17.06	6.619	0.1421	3	-0.44	9%	0
101.70	Acid Soluble Calcium, Titrimetric (13.5%)	0476	24.64	0.1962	17.06	6.619	0.1421	3	1.15	22%	0
101.99	Acid Soluble Calcium, Other (13.5%)	0476	10.29*	0.1004	13.47	1.047	0.1733	11	-3.04	12%	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
101.99	Acid Soluble Calcium, Other (13.5%)	0415	12.07*	0.2326	13.47	1.047	0.1733	11	-1.34	5%	0
101.99	Acid Soluble Calcium, Other (13.5%)	0368	12.82	0.0235	13.47	1.047	0.1733	11	-0.62	2%	0
101.99	Acid Soluble Calcium, Other (13.5%)	0501	13.35	0.3000	13.47	1.047	0.1733	11	-0.12	0%	0
101.99	Acid Soluble Calcium, Other (13.5%)	0027	13.41	0.2800	13.47	1.047	0.1733	11	-0.06	0%	0
101.99	Acid Soluble Calcium, Other (13.5%)	0519	13.61	0.0300	13.47	1.047	0.1733	11	0.13	0%	0
101.99	Acid Soluble Calcium, Other (13.5%)	0523	13.78	0.1300	13.47	1.047	0.1733	11	0.29	1%	0
101.99	Acid Soluble Calcium, Other (13.5%)	0371	14.00	0.4000	13.47	1.047	0.1733	11	0.51	2%	0
101.99	Acid Soluble Calcium, Other (13.5%)	0506	14.05	0.3000	13.47	1.047	0.1733	11	0.55	2%	0
101.99	Acid Soluble Calcium, Other (13.5%)	0291	14.16	0.0100	13.47	1.047	0.1733	11	0.65	3%	0
101.99	Acid Soluble Calcium, Other (13.5%)	0493	16.45	0.1000	13.47	1.047	0.1733	11	2.85	11%	0
101.99	Acid Soluble Calcium, Other (13.5%)	0042	12.97	0.8800	13.47	1.047	0.1733	11	-0.48	2%	1
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (%)	0043	0.8450	0.0100				2			0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (%)	0105	0.9400	0.0520				2			0
121.03	Acid Soluble Magnesium, AA, 965.09, test port... (%)	0105	0.9035	0.0570				1			0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0482	0.8550	0.0500	0.9259	0.0919	0.0258	6	-0.69	4%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0096	0.8590	0.0060	0.9259	0.0919	0.0258	6	-0.65	4%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0035	0.8815	0.0330	0.9259	0.0919	0.0258	6	-0.43	2%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0354	0.9050	0.0360	0.9259	0.0919	0.0258	6	-0.20	1%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0483	1.015	0.0100	0.9259	0.0919	0.0258	6	0.86	5%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0472	1.040	0.0200	0.9259	0.0919	0.0258	6	1.11	6%	0
121.32	Acid Soluble Magnesium, ICP, test portion 200... (%)	0404	0.8500	0.0200				2			0
121.32	Acid Soluble Magnesium, ICP, test portion 200... (%)	0521	0.8747	0.0000				2			0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (%)	0515	0.8062	0.0107	0.8800	0.0617	0.0141	5	-1.05	4%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (%)	0086	0.8340	0.0176	0.8800	0.0617	0.0141	5	-0.65	3%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (%)	0494	0.8765	0.0094	0.8800	0.0617	0.0141	5	-0.05	0%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (%)	0527	0.9415	0.0130	0.8800	0.0617	0.0141	5	0.87	3%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (%)	0117	0.9420	0.0196	0.8800	0.0617	0.0141	5	0.88	4%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (%)	0106	0.7135	0.1385	0.8800	0.0617	0.0141	5	-2.36	9%	1
121.70	Acid Soluble Magnesium, Titrimetric (EDTA) (%)	0522	9.460	0.2000				1			0
121.99	Acid Soluble Magnesium, Other (%)	0515	0.7548	0.0204				2			0
121.99	Acid Soluble Magnesium, Other (%)	0524	0.8719	0.0045				2			0
143.99	Elemental Sulfur, Other (%)	0086	1.102	0.0181				2			0
143.99	Elemental Sulfur, Other (%)	0472	1.130	0.0000				2			0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0522	13.20	0.0100				1			0
145.99	Sulfate Sulfur, HCl soluble, Other (%)	0404	3.405	0.1300				1			0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (%)	0494	1.071	0.0073	1.115	0.0676	0.0310	5	-0.66	2%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (%)	0117	1.075	0.0050	1.115	0.0676	0.0310	5	-0.61	2%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (%)	0515	1.078	0.0765	1.115	0.0676	0.0310	5	-0.56	2%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (%)	0527	1.124	0.0660	1.115	0.0676	0.0310	5	0.13	0%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (%)	0483	1.230	0.0000	1.115	0.0676	0.0310	5	1.69	5%	0
148.99	Total Sulfur, Other (%)	0096	1.050	0.0200	1.171	0.2068	0.0257	3	-0.59	5%	0
148.99	Total Sulfur, Other (%)	0354	1.054	0.0570	1.171	0.2068	0.0257	3	-0.57	5%	0
148.99	Total Sulfur, Other (%)	0482	1.410	0.0000	1.171	0.2068	0.0257	3	1.15	10%	0

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149.04	Sulfur - HNO3 soluble, ICP (%)	0521	1.020	0.0000				2			0
149.04	Sulfur - HNO3 soluble, ICP (%)	0524	1.082	0.0005				2			0
151.00	Acid Soluble Arsenic , AA, test portion as in...	0481	17.05	0.3000				2			0
151.00	Acid Soluble Arsenic , AA, test portion as in...	0136	17.20	1.000				2			0
151.30	Acid Soluble Arsenic , ICP (ppm)	0255	11.77	0.1500	19.00	6.297	1.070	6	-1.02	19%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0096	13.30	0.4000	19.00	6.297	1.070	6	-0.81	15%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0394	17.80	0.6000	19.00	6.297	1.070	6	-0.17	3%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0541	22.74	1.520	19.00	6.297	1.070	6	0.53	10%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0368	23.90	1.000	19.00	6.297	1.070	6	0.69	13%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0501	24.48	2.750	19.00	6.297	1.070	6	0.77	14%	0
151.33	Acid Soluble Arsenic , ICP, 2006.03 modified ...	0117	19.57	0.2300	21.15	1.984	0.9426	6	-0.71	4%	0
151.33	Acid Soluble Arsenic , ICP, 2006.03 modified ...	0086	19.57	0.2860	21.15	1.984	0.9426	6	-0.71	4%	0
151.33	Acid Soluble Arsenic , ICP, 2006.03 modified ...	0527	20.27	0.0250	21.15	1.984	0.9426	6	-0.39	2%	0
151.33	Acid Soluble Arsenic , ICP, 2006.03 modified ...	0515	20.87	3.250	21.15	1.984	0.9426	6	-0.12	1%	0
151.33	Acid Soluble Arsenic , ICP, 2006.03 modified ...	0037	22.95	0.0030	21.15	1.984	0.9426	6	0.81	4%	0
151.33	Acid Soluble Arsenic , ICP, 2006.03 modified ...	0494	23.64	1.861	21.15	1.984	0.9426	6	1.12	6%	0
151.34	Acid Soluble Arsenic , ICP, EPA 3050B/6010C (ppm)	0515	17.50	0.2240				2			0
151.34	Acid Soluble Arsenic , ICP, EPA 3050B/6010C (ppm)	0230	20.15	6.100				2			0
151.99	Acid Soluble Arsenic , Other (ppm)	0476	14.10	0.1313				2			0
151.99	Acid Soluble Arsenic , Other (ppm)	0519	23.88	1.600				2			0
165.30	Acid Soluble Boron , ICP, test portion in 982... (%)	0106	0.0014	0.0009	0.0039	0.0029	0.0010	3	-0.87	32%	0
165.30	Acid Soluble Boron , ICP, test portion in 982... (%)	0521	0.0032	0.0000	0.0039	0.0029	0.0010	3	-0.23	8%	0
165.30	Acid Soluble Boron , ICP, test portion in 982... (%)	0354	0.0070	0.0020	0.0039	0.0029	0.0010	3	1.09	41%	0
165.99	Acid Soluble Boron , Other (%)	0524	0.0033	0.0001	37.76	65.38	17.83	3	-0.58	50%	0
165.99	Acid Soluble Boron , Other (%)	0527	0.0125	0.0010	37.76	65.38	17.83	3	-0.58	50%	0
165.99	Acid Soluble Boron , Other (%)	0483	113.3	53.50	37.76	65.38	17.83	3	1.15	100%	0
165.99	Acid Soluble Boron , Other (%)	0515	0.0000	0.0000	37.76	65.38	17.83	3			4
181.00	Acid Soluble Cadmium , AA, test portion as in...	0535	87.50	5.000	89.18	2.660	2.700	3	-0.63	1%	0
181.00	Acid Soluble Cadmium , AA, test portion as in...	0136	87.80	0.4000	89.18	2.660	2.700	3	-0.52	1%	0
181.00	Acid Soluble Cadmium , AA, test portion as in...	0481	92.25	2.700	89.18	2.660	2.700	3	1.15	2%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0027	23.40	0.1990	73.01	20.87	2.534	12	-2.38	34%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0255	47.20	0.5140	73.01	20.87	2.534	12	-1.24	18%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0096	48.70	0.2000	73.01	20.87	2.534	12	-1.16	17%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0444	65.88	5.230	73.01	20.87	2.534	12	-0.34	5%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0501	69.85	4.900	73.01	20.87	2.534	12	-0.15	2%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0541	79.87	2.270	73.01	20.87	2.534	12	0.33	5%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0368	80.25	0.5000	73.01	20.87	2.534	12	0.35	5%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0035	81.20	2.400	73.01	20.87	2.534	12	0.39	6%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0377	84.72	2.170	73.01	20.87	2.534	12	0.56	8%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0394	90.55	3.500	73.01	20.87	2.534	12	0.84	12%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0482	91.15	7.100	73.01	20.87	2.534	12	0.87	12%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0524	95.11	1.431	73.01	20.87	2.534	12	1.06	15%	0
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified ...	0494	87.20	0.4914	90.63	2.596	1.351	8	-1.21	2%	0

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181.33	Acid Soluble Cadmium , ICP, 2006.03 modified ... (ppm)	0086	88.51	4.137	90.63	2.596	1.351	8	-0.75	1%	0
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified ... (ppm)	0515	89.64	1.438	90.63	2.596	1.351	8	-0.35	1%	0
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified ... (ppm)	0117	90.31	0.2900	90.63	2.596	1.351	8	-0.12	0%	0
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified ... (ppm)	0233	91.13	0.9700	90.63	2.596	1.351	8	0.17	0%	0
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified ... (ppm)	0037	91.26	0.4510	90.63	2.596	1.351	8	0.22	0%	0
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified ... (ppm)	0404	92.50	3.000	90.63	2.596	1.351	8	0.66	1%	0
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified ... (ppm)	0527	101.9	0.0330	90.63	2.596	1.351	8	3.98	6%	0
181.34	Acid Soluble Cadmium , ICP, EPA 3050B/6010C (ppm)	0230	80.70	8.600				2			0
181.34	Acid Soluble Cadmium , ICP, EPA 3050B/6010C (ppm)	0515	85.97	0.2100				2			0
181.99	Acid Soluble Cadmium , Other (ppm)	0506	40.85	0.7000	71.17	26.58	1.789	4	-1.14	21%	0
181.99	Acid Soluble Cadmium , Other (ppm)	0476	59.14	0.1648	71.17	26.58	1.789	4	-0.45	8%	0
181.99	Acid Soluble Cadmium , Other (ppm)	0220	83.45	0.9000	71.17	26.58	1.789	4	0.46	9%	0
181.99	Acid Soluble Cadmium , Other (ppm)	0519	101.2	5.390	71.17	26.58	1.789	4	1.13	21%	0
191.00	Acid Soluble Chromium , AA, test portion as i... (ppm)	0535	347.5	5.000				2			0
191.00	Acid Soluble Chromium , AA, test portion as i... (ppm)	0481	414.4	11.90				2			0
191.30	Acid Soluble Chromium , ICP (ppm)	0027	125.0	1.983	387.6	99.26	20.22	9	-2.44	34%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0444	286.0	8.000	387.6	99.26	20.22	9	-0.95	13%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0394	356.5	11.00	387.6	99.26	20.22	9	-0.29	4%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0482	381.0	42.00	387.6	99.26	20.22	9	-0.06	1%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0368	400.5	3.000	387.6	99.26	20.22	9	0.12	2%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0377	419.3	6.010	387.6	99.26	20.22	9	0.29	4%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0541	430.5	27.00	387.6	99.26	20.22	9	0.40	6%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0096	439.8	10.10	387.6	99.26	20.22	9	0.48	7%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0501	707.0	72.86	387.6	99.26	20.22	9	2.97	41%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0035	297.0	152.0	387.6	99.26	20.22	9	-0.84	12%	1
191.33	Acid Soluble Chromium , ICP, 2006.03 modified... (ppm)	0086	418.4	18.46	437.4	14.60	9.709	7	-1.18	2%	0
191.33	Acid Soluble Chromium , ICP, 2006.03 modified... (ppm)	0527	427.0	2.419	437.4	14.60	9.709	7	-0.65	1%	0
191.33	Acid Soluble Chromium , ICP, 2006.03 modified... (ppm)	0494	431.2	5.877	437.4	14.60	9.709	7	-0.39	1%	0
191.33	Acid Soluble Chromium , ICP, 2006.03 modified... (ppm)	0117	436.8	10.00	437.4	14.60	9.709	7	-0.04	0%	0
191.33	Acid Soluble Chromium , ICP, 2006.03 modified... (ppm)	0037	445.1	2.011	437.4	14.60	9.709	7	0.48	1%	0
191.33	Acid Soluble Chromium , ICP, 2006.03 modified... (ppm)	0515	449.0	20.20	437.4	14.60	9.709	7	0.72	1%	0
191.33	Acid Soluble Chromium , ICP, 2006.03 modified... (ppm)	0404	454.5	9.000	437.4	14.60	9.709	7	1.06	2%	0
191.34	Acid Soluble Chromium , ICP, EPA 3050B/6010C (ppm)	0230	384.0	40.00				2			0
191.34	Acid Soluble Chromium , ICP, EPA 3050B/6010C (ppm)	0515	401.2	5.243				2			0
191.99	Acid Soluble Chromium , Other (ppm)	0476	291.7	1.321	445.6	110.8	14.76	4	-1.39	17%	0
191.99	Acid Soluble Chromium , Other (ppm)	0220	444.5	7.000	445.6	110.8	14.76	4	-0.01	0%	0
191.99	Acid Soluble Chromium , Other (ppm)	0519	499.1	6.730	445.6	110.8	14.76	4	0.48	6%	0
191.99	Acid Soluble Chromium , Other (ppm)	0506	547.0	44.00	445.6	110.8	14.76	4	0.92	11%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0377	5.480	0.1200	6.314	0.9446	0.2817	5	-0.88	7%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0482	5.500	0.4000	6.314	0.9446	0.2817	5	-0.86	6%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0368	6.300	0.2000	6.314	0.9446	0.2817	5	-0.01	0%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0035	6.500	0.4000	6.314	0.9446	0.2817	5	0.20	1%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0524	7.789	0.2886	6.314	0.9446	0.2817	5	1.56	12%	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				
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified w... (ppm)	0515	4.908	2.184	6.939	0.8137	0.7789	6	-2.22	15%	0
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified w... (ppm)	0527	6.676	0.0030	6.939	0.8137	0.7789	6	-0.29	2%	0
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified w... (ppm)	0086	6.941	1.217	6.939	0.8137	0.7789	6	0.00	0%	0
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified w... (ppm)	0117	7.074	0.0570	6.939	0.8137	0.7789	6	0.15	1%	0
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified w... (ppm)	0037	7.399	0.2660	6.939	0.8137	0.7789	6	0.50	3%	0
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified w... (ppm)	0494	7.825	0.9463	6.939	0.8137	0.7789	6	0.97	6%	0
202.34	Acid Soluble Cobalt , ICP, EPA 3050B/6010C (ppm)	0515	5.464	0.1280				2			0
202.34	Acid Soluble Cobalt , ICP, EPA 3050B/6010C (ppm)	0501	7.865	0.7300				2			0
202.99	Acid Soluble Cobalt , Other (ppm)	0255	3.661	0.0900	5.138	1.421	0.1005	4	-1.04	14%	0
202.99	Acid Soluble Cobalt , Other (ppm)	0476	4.250	0.0318	5.138	1.421	0.1005	4	-0.63	9%	0
202.99	Acid Soluble Cobalt , Other (ppm)	0519	5.940	0.0800	5.138	1.421	0.1005	4	0.56	8%	0
202.99	Acid Soluble Cobalt , Other (ppm)	0220	6.700	0.2000	5.138	1.421	0.1005	4	1.10	15%	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (%)	0531	0.0060	0.0000	0.0076	0.0010	0.0001	6	-1.39	10%	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (%)	0105	0.0070	0.0000	0.0076	0.0010	0.0001	6	-0.52	4%	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (%)	0029	0.0078	0.0003	0.0076	0.0010	0.0001	6	0.14	1%	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (%)	0481	0.0081	0.0000	0.0076	0.0010	0.0001	6	0.44	3%	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (%)	0535	0.0083	0.0002	0.0076	0.0010	0.0001	6	0.62	5%	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (%)	0043	0.0084	0.0001	0.0076	0.0010	0.0001	6	0.66	5%	0
221.03	Acid Soluble Copper , AA, 965.09, test portio... (%)	0105	0.0070	0.0020				1			0
221.30	Acid Soluble Copper , ICP, test portion inorg... (%)	0096	0.0062	0.0004	0.0087	0.0022	0.0013	12	-1.14	14%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (%)	0444	0.0067	0.0001	0.0087	0.0022	0.0013	12	-0.94	12%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (%)	0230	0.0069	0.0006	0.0087	0.0022	0.0013	12	-0.82	10%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (%)	0377	0.0076	0.0007	0.0087	0.0022	0.0013	12	-0.53	7%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (%)	0041	0.0080	0.0000	0.0087	0.0022	0.0013	12	-0.33	4%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (%)	0541	0.0080	0.0000	0.0087	0.0022	0.0013	12	-0.33	4%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (%)	0035	0.0084	0.0003	0.0087	0.0022	0.0013	12	-0.17	2%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (%)	0433	0.0090	0.0000	0.0087	0.0022	0.0013	12	0.12	2%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (%)	0472	0.0100	0.0000	0.0087	0.0022	0.0013	12	0.57	7%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (%)	0482	0.0100	0.0000	0.0087	0.0022	0.0013	12	0.57	7%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (%)	0354	0.0125	0.0030	0.0087	0.0022	0.0013	12	1.70	22%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (%)	0402	0.0250	0.0100	0.0087	0.0022	0.0013	12	7.33	93%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (%)	0483	85.85	1.100	0.0087	0.0022	0.0013	12	38658.96	491584%	2
221.30	Acid Soluble Copper , ICP, test portion inorg... (%)	0255	0.0000	0.0000	0.0087	0.0022	0.0013	12			4
221.32	Acid Soluble Copper , ICP, test portion 2006.... (%)	0521	0.0064	0.0000				2			0
221.32	Acid Soluble Copper , ICP, test portion 2006.... (%)	0394	0.0082	0.0003				2			0
221.33	Acid Soluble Copper , ICP, test portion 2006.... (%)	0106	0.0063	0.0020	0.0079	0.0011	0.0006	6	-1.31	10%	0
221.33	Acid Soluble Copper , ICP, test portion 2006.... (%)	0527	0.0075	0.0010	0.0079	0.0011	0.0006	6	-0.34	3%	0
221.33	Acid Soluble Copper , ICP, test portion 2006.... (%)	0515	0.0080	0.0001	0.0079	0.0011	0.0006	6	0.03	0%	0
221.33	Acid Soluble Copper , ICP, test portion 2006.... (%)	0086	0.0082	0.0002	0.0079	0.0011	0.0006	6	0.23	2%	0
221.33	Acid Soluble Copper , ICP, test portion 2006.... (%)	0494	0.0084	0.0001	0.0079	0.0011	0.0006	6	0.35	3%	0
221.33	Acid Soluble Copper , ICP, test portion 2006.... (%)	0117	0.0092	0.0002	0.0079	0.0011	0.0006	6	1.04	8%	0
221.99	Acid Soluble Copper , Other (%)	0027	0.0030	0.0000	0.0078	0.0026	0.0000	9	-1.72	31%	0
221.99	Acid Soluble Copper , Other (%)	0476	0.0045	0.0000	0.0078	0.0026	0.0000	9	-1.18	21%	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
221.99	Acid Soluble Copper , Other (%)	0220	0.0075	0.0001	0.0078	0.0026	0.0000	9	-0.11	2%	0
221.99	Acid Soluble Copper , Other (%)	0524	0.0078	0.0000	0.0078	0.0026	0.0000	9	0.02	0%	0
221.99	Acid Soluble Copper , Other (%)	0368	0.0081	0.0001	0.0078	0.0026	0.0000	9	0.11	2%	0
221.99	Acid Soluble Copper , Other (%)	0515	0.0081	0.0002	0.0078	0.0026	0.0000	9	0.12	2%	0
221.99	Acid Soluble Copper , Other (%)	0501	0.0100	0.0000	0.0078	0.0026	0.0000	9	0.81	14%	0
221.99	Acid Soluble Copper , Other (%)	0506	0.0100	0.0000	0.0078	0.0026	0.0000	9	0.81	14%	0
221.99	Acid Soluble Copper , Other (%)	0519	0.0100	0.0000	0.0078	0.0026	0.0000	9	0.81	14%	0
221.99	Acid Soluble Copper , Other (%)	0537	0.0159	0.0033	0.0078	0.0026	0.0000	9	2.92	52%	1
241.00	Acid Soluble Iron, AA, inorganic 965.09 (%)	0531	0.6175	0.0350	0.7435	0.1333	0.0270	3	-0.95	8%	0
241.00	Acid Soluble Iron, AA, inorganic 965.09 (%)	0535	0.7300	0.0200	0.7435	0.1333	0.0270	3	-0.10	1%	0
241.00	Acid Soluble Iron, AA, inorganic 965.09 (%)	0105	0.8830	0.0260	0.7435	0.1333	0.0270	3	1.05	9%	0
241.03	Acid Soluble Iron, AA, 965.09, test portion 2... (%)	0105	0.8265	0.0050				1			0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (%)	0096	0.7550	0.0000	0.7963	0.0350	0.0237	7	-1.07	3%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (%)	0472	0.7650	0.0100	0.7963	0.0350	0.0237	7	-0.81	2%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (%)	0402	0.7750	0.0100	0.7963	0.0350	0.0237	7	-0.55	1%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (%)	0354	0.8085	0.0070	0.7963	0.0350	0.0237	7	0.32	1%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (%)	0035	0.8155	0.0090	0.7963	0.0350	0.0237	7	0.50	1%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (%)	0404	0.8200	0.1000	0.7963	0.0350	0.0237	7	0.61	1%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (%)	0482	0.8350	0.0300	0.7963	0.0350	0.0237	7	1.00	2%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (%)	0483	8,720	420.0	0.7963	0.0350	0.0237	7	225239.59	547492%	2
241.32	Acid Soluble Iron, ICP, test portion 2006.03A... (%)	0521	0.7986	0.0000				1			0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (%)	0515	0.7916	0.0285	0.7990	0.0093	0.0153	6	-0.71	0%	0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (%)	0086	0.7928	0.0244	0.7990	0.0093	0.0153	6	-0.59	0%	0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (%)	0494	0.7934	0.0045	0.7990	0.0093	0.0153	6	-0.54	0%	0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (%)	0117	0.8006	0.0138	0.7990	0.0093	0.0153	6	0.16	0%	0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (%)	0106	0.8027	0.0157	0.7990	0.0093	0.0153	6	0.35	0%	0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (%)	0527	0.8425	0.0050	0.7990	0.0093	0.0153	6	4.18	3%	0
241.99	Acid Soluble Iron, Other (%)	0515	0.7206	0.0082				2			0
241.99	Acid Soluble Iron, Other (%)	0524	0.7849	0.0017				2			0
251.00	Acid Soluble Lead , AA, test portion as in 20... (ppm)	0481	3.955	0.0700				2			0
251.00	Acid Soluble Lead , AA, test portion as in 20... (ppm)	0136	4.000	0.0000				2			0
251.30	Acid Soluble Lead , ICP (ppm)	0255	1.005	0.0200	3.976	2.225	0.2383	8	-1.22	37%	0
251.30	Acid Soluble Lead , ICP (ppm)	0404	2.800	0.2000	3.976	2.225	0.2383	8	-0.48	15%	0
251.30	Acid Soluble Lead , ICP (ppm)	0096	3.250	0.3000	3.976	2.225	0.2383	8	-0.30	9%	0
251.30	Acid Soluble Lead , ICP (ppm)	0501	3.395	0.1900	3.976	2.225	0.2383	8	-0.24	7%	0
251.30	Acid Soluble Lead , ICP (ppm)	0444	3.430	0.6800	3.976	2.225	0.2383	8	-0.22	7%	0
251.30	Acid Soluble Lead , ICP (ppm)	0524	4.648	0.0160	3.976	2.225	0.2383	8	0.28	8%	0
251.30	Acid Soluble Lead , ICP (ppm)	0541	5.970	0.3400	3.976	2.225	0.2383	8	0.82	25%	0
251.30	Acid Soluble Lead , ICP (ppm)	0394	7.390	0.1600	3.976	2.225	0.2383	8	1.40	43%	0
251.30	Acid Soluble Lead , ICP (ppm)	0368	0.0000	0.0000	3.976	2.225	0.2383	8			4
251.33	Acid Soluble Lead , ICP, 2006.03 modified w/9... (ppm)	0515	4.379	1.642	4.682	0.3313	0.5440	4	-0.91	3%	0
251.33	Acid Soluble Lead , ICP, 2006.03 modified w/9... (ppm)	0086	4.486	0.4508	4.682	0.3313	0.5440	4	-0.59	2%	0
251.33	Acid Soluble Lead , ICP, 2006.03 modified w/9... (ppm)	0494	4.736	0.0667	4.682	0.3313	0.5440	4	0.16	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				
251.33	Acid Soluble Lead , ICP, 2006.03 modified w/9... (ppm)	0527	5.125	0.0160	4.682	0.3313	0.5440	4	1.34	5%	0
251.34	Acid Soluble Lead , ICP, EPA 3050B/6010C (ppm)	0515	4.505	0.0650				2			0
251.34	Acid Soluble Lead , ICP, EPA 3050B/6010C (ppm)	0230	5.435	1.630				2			0
251.99	Acid Soluble Lead , Other (ppm)	0519	3.670	0.1000	5.486	1.586	0.2010	3	-1.14	17%	0
251.99	Acid Soluble Lead , Other (ppm)	0476	6.188	0.1031	5.486	1.586	0.2010	3	0.44	6%	0
251.99	Acid Soluble Lead , Other (ppm)	0220	6.600	0.4000	5.486	1.586	0.2010	3	0.70	10%	0
261.12	Acid Soluble Manganese , AA, inorganic 965.09 (%)	0531	0.0129	0.0001	0.0170	0.0050	0.0007	3	-0.82	12%	0
261.12	Acid Soluble Manganese , AA, inorganic 965.09 (%)	0535	0.0155	0.0010	0.0170	0.0050	0.0007	3	-0.29	4%	0
261.12	Acid Soluble Manganese , AA, inorganic 965.09 (%)	0105	0.0225	0.0010	0.0170	0.0050	0.0007	3	1.11	16%	0
261.15	Acid Soluble Manganese , AA, 965.09, test por... (%)	0105	0.0215	0.0010				1			0
261.30	Acid Soluble Manganese , ICP, test portion 97... (%)	0472	0.0200	0.0000	0.0210	0.0009	0.0005	4	-1.04	2%	0
261.30	Acid Soluble Manganese , ICP, test portion 97... (%)	0354	0.0205	0.0010	0.0210	0.0009	0.0005	4	-0.51	1%	0
261.30	Acid Soluble Manganese , ICP, test portion 97... (%)	0096	0.0213	0.0007	0.0210	0.0009	0.0005	4	0.29	1%	0
261.30	Acid Soluble Manganese , ICP, test portion 97... (%)	0035	0.0222	0.0003	0.0210	0.0009	0.0005	4	1.25	3%	0
261.31	Acid Soluble Manganese , ICP, test portion 97... (%)	0482	0.0200	0.0000				1			0
261.32	Acid Soluble Manganese , ICP, test portion in... (%)	0402	0.0300	0.0000				2			0
261.32	Acid Soluble Manganese , ICP, test portion in... (%)	0483	148.0	22.00				2			0
261.33	Acid Soluble Manganese , ICP, test portion or... (%)	0086	0.0213	0.0008				1			0
261.34	Acid Soluble Manganese , ICP, test portion 20... (%)	0521	0.0187	0.0000				1			0
261.35	Acid Soluble Manganese , ICP, test portion 20... (%)	0106	0.0177	0.0017	0.0204	0.0018	0.0008	4	-1.47	7%	0
261.35	Acid Soluble Manganese , ICP, test portion 20... (%)	0117	0.0210	0.0003	0.0204	0.0018	0.0008	4	0.33	1%	0
261.35	Acid Soluble Manganese , ICP, test portion 20... (%)	0527	0.0210	0.0000	0.0204	0.0018	0.0008	4	0.35	2%	0
261.35	Acid Soluble Manganese , ICP, test portion 20... (%)	0494	0.0218	0.0010	0.0204	0.0018	0.0008	4	0.79	4%	0
261.35	Acid Soluble Manganese , ICP, test portion 20... (%)	0515	0.0041	0.0082	0.0204	0.0018	0.0008	4			4
261.99	Acid Soluble Manganese , Other (%)	0515	0.0176	0.0018				2			0
261.99	Acid Soluble Manganese , Other (%)	0524	0.0217	0.0001				2			0
281.30	Acid Soluble Mercury , ICP (ppm)	0527	0.0125	0.0010	0.7518	1.254	0.0743	3	-0.59	49%	0
281.30	Acid Soluble Mercury , ICP (ppm)	0394	0.0430	0.0220	0.7518	1.254	0.0743	3	-0.57	47%	0
281.30	Acid Soluble Mercury , ICP (ppm)	0541	2.200	0.2000	0.7518	1.254	0.0743	3	1.15	96%	0
281.30	Acid Soluble Mercury , ICP (ppm)	0515	0.0000	0.0000	0.7518	1.254	0.0743	3			4
281.99	Acid Soluble Mercury , Other (ppm)	0519	0.0100	0.0000				1			0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0377	2.150	0.3600	11.13	3.179	0.2484	9	-2.61	40%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0096	8.600	0.0000	11.13	3.179	0.2484	9	-0.74	11%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0521	10.00	0.0000	11.13	3.179	0.2484	9	-0.33	5%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0433	10.26	0.1100	11.13	3.179	0.2484	9	-0.25	4%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0255	11.07	0.2350	11.13	3.179	0.2484	9	-0.02	0%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0035	11.70	0.8000	11.13	3.179	0.2484	9	0.16	3%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0524	12.50	0.1304	11.13	3.179	0.2484	9	0.40	6%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0541	13.80	0.0000	11.13	3.179	0.2484	9	0.77	12%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0368	18.80	0.6000	11.13	3.179	0.2484	9	2.23	34%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0519	30.00	2.000	11.13	3.179	0.2484	9	5.48	85%	1
289.32	Acid Soluble Molybdenum , ICP, 2006.03 (ppm)	0394	11.36	0.7900				1			0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modifi... (ppm)	0086	11.73	0.2650	13.26	0.5522	0.3964	7	-2.50	6%	0



Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modifi... (ppm)	0494	13.06	0.9128	13.26	0.5522	0.3964	7	-0.32	1%	0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modifi... (ppm)	0117	13.12	0.2400	13.26	0.5522	0.3964	7	-0.22	1%	0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modifi... (ppm)	0037	13.27	0.0740	13.26	0.5522	0.3964	7	0.03	0%	0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modifi... (ppm)	0233	13.33	0.0900	13.26	0.5522	0.3964	7	0.11	0%	0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modifi... (ppm)	0106	13.50	1.000	13.26	0.5522	0.3964	7	0.40	1%	0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modifi... (ppm)	0527	14.86	0.1930	13.26	0.5522	0.3964	7	2.62	6%	0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modifi... (ppm)	0515	11.65	2.455	13.26	0.5522	0.3964	7	-2.63	6%	1
289.34	Acid Soluble Molybdenum , ICP, EPA 3050B/6010... (ppm)	0230	11.10	2.810	13.72	2.423	3.023	3	-1.08	10%	0
289.34	Acid Soluble Molybdenum , ICP, EPA 3050B/6010... (ppm)	0515	14.18	4.908	13.72	2.423	3.023	3	0.19	2%	0
289.34	Acid Soluble Molybdenum , ICP, EPA 3050B/6010... (ppm)	0501	15.88	1.350	13.72	2.423	3.023	3	0.89	8%	0
289.99	Acid Soluble Molybdenum , Other (ppm)	0476	9.675	0.0379				2			0
289.99	Acid Soluble Molybdenum , Other (ppm)	0220	14.30	0.2000				2			0
291.00	Acid Soluble Nickel , AA, test portion as in ... (ppm)	0535	242.5	5.000	249.3	6.327	3.100	3	-1.08	1%	0
291.00	Acid Soluble Nickel , AA, test portion as in ... (ppm)	0481	250.5	0.3000	249.3	6.327	3.100	3	0.18	0%	0
291.00	Acid Soluble Nickel , AA, test portion as in ... (ppm)	0136	255.0	4.000	249.3	6.327	3.100	3	0.90	1%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0027	65.80	1.487	214.5	43.49	6.731	11	-3.42	35%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0444	162.0	6.000	214.5	43.49	6.731	11	-1.21	12%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0521	188.7	0.0000	214.5	43.49	6.731	11	-0.59	6%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0394	191.5	5.000	214.5	43.49	6.731	11	-0.53	5%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0482	195.0	20.00	214.5	43.49	6.731	11	-0.45	5%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0368	230.5	19.00	214.5	43.49	6.731	11	0.37	4%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0541	242.5	1.000	214.5	43.49	6.731	11	0.64	7%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0404	245.0	10.00	214.5	43.49	6.731	11	0.70	7%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0096	249.2	1.600	214.5	43.49	6.731	11	0.80	8%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0377	249.6	1.770	214.5	43.49	6.731	11	0.81	8%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0524	255.8	8.188	214.5	43.49	6.731	11	0.95	10%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0035	300.5	185.0	214.5	43.49	6.731	11	1.98	20%	1
291.33	Acid Soluble Nickel , ICP, 2006.03 modified w... (ppm)	0494	231.2	0.9144	239.8	10.26	3.402	6	-0.75	2%	0
291.33	Acid Soluble Nickel , ICP, 2006.03 modified w... (ppm)	0527	231.7	0.8170	239.8	10.26	3.402	6	-0.70	2%	0
291.33	Acid Soluble Nickel , ICP, 2006.03 modified w... (ppm)	0233	234.4	6.700	239.8	10.26	3.402	6	-0.48	1%	0
291.33	Acid Soluble Nickel , ICP, 2006.03 modified w... (ppm)	0037	241.6	1.664	239.8	10.26	3.402	6	0.15	0%	0
291.33	Acid Soluble Nickel , ICP, 2006.03 modified w... (ppm)	0117	246.6	4.500	239.8	10.26	3.402	6	0.58	1%	0
291.33	Acid Soluble Nickel , ICP, 2006.03 modified w... (ppm)	0515	253.6	5.814	239.8	10.26	3.402	6	1.20	3%	0
291.33	Acid Soluble Nickel , ICP, 2006.03 modified w... (ppm)	0086	222.7	21.40	239.8	10.26	3.402	6	-1.49	4%	1
291.34	Acid Soluble Nickel , ICP, EPA 3050B/6010C (ppm)	0230	220.5	29.00	242.8	29.93	19.71	3	-0.74	5%	0
291.34	Acid Soluble Nickel , ICP, EPA 3050B/6010C (ppm)	0515	231.0	3.752	242.8	29.93	19.71	3	-0.39	2%	0
291.34	Acid Soluble Nickel , ICP, EPA 3050B/6010C (ppm)	0501	276.8	26.39	242.8	29.93	19.71	3	1.14	7%	0
291.99	Acid Soluble Nickel , Other (ppm)	0476	121.0	0.1792	350.3	349.3	5.416	5	-0.66	33%	0
291.99	Acid Soluble Nickel , Other (ppm)	0255	127.7	0.7030	350.3	349.3	5.416	5	-0.64	32%	0
291.99	Acid Soluble Nickel , Other (ppm)	0220	241.5	1.000	350.3	349.3	5.416	5	-0.31	16%	0
291.99	Acid Soluble Nickel , Other (ppm)	0519	301.5	5.200	350.3	349.3	5.416	5	-0.14	7%	0
291.99	Acid Soluble Nickel , Other (ppm)	0506	960.0	20.00	350.3	349.3	5.416	5	1.75	87%	0
301.30	Acid Soluble Selenium , ICP (ppm)	0524	1.130	0.1800	24.01	34.50	6.057	3	-0.66	48%	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
301.30	Acid Soluble Selenium , ICP (ppm)	0501	7.200	0.6000	24.01	34.50	6.057	3	-0.49	35%	0
301.30	Acid Soluble Selenium , ICP (ppm)	0541	63.70	17.39	24.01	34.50	6.057	3	1.15	83%	0
301.30	Acid Soluble Selenium , ICP (ppm)	0368	0.0000	0.0000	24.01	34.50	6.057	3			4
301.33	Acid Soluble Selenium , ICP, 2006.03 modified... (ppm)	0527	7.805	0.2820				2			0
301.33	Acid Soluble Selenium , ICP, 2006.03 modified... (ppm)	0494	20.90	1.594				2			0
301.33	Acid Soluble Selenium , ICP, 2006.03 modified... (ppm)	0515	0.0000	0.0000				2			4
301.34	Acid Soluble Selenium , ICP, EPA 3050B/6010C (ppm)	0515	3.079	0.0760				1			0
301.99	Acid Soluble Selenium , Other (ppm)	0519	0.0100	0.0000	4.216	4.157	0.1865	4	-1.01	50%	0
301.99	Acid Soluble Selenium , Other (ppm)	0220	2.200	0.2000	4.216	4.157	0.1865	4	-0.49	24%	0
301.99	Acid Soluble Selenium , Other (ppm)	0255	5.014	0.1490	4.216	4.157	0.1865	4	0.19	9%	0
301.99	Acid Soluble Selenium , Other (ppm)	0476	9.642	0.3970	4.216	4.157	0.1865	4	1.31	64%	0
311.32	Sodium, ICP, 2006.03 test portion (%)	0521	0.1512	0.0000				1			0
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)	0086	0.1692	0.0073				2			0
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)	0035	0.1910	0.0780				2			0
311.99	Sodium, Other (%)	0354	0.0900	0.0020	0.1317	0.0362	0.0040	3	-1.15	16%	0
311.99	Sodium, Other (%)	0482	0.1500	0.0000	0.1317	0.0362	0.0040	3	0.51	7%	0
311.99	Sodium, Other (%)	0096	0.1550	0.0100	0.1317	0.0362	0.0040	3	0.65	9%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (%)	0531	0.0940	0.0020	0.1016	0.0073	0.0028	7	-0.94	4%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (%)	0535	0.0955	0.0030	0.1016	0.0073	0.0028	7	-0.76	3%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (%)	0533	0.0975	0.0010	0.1016	0.0073	0.0028	7	-0.51	2%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (%)	0043	0.1035	0.0010	0.1016	0.0073	0.0028	7	0.23	1%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (%)	0428	0.1039	0.0067	0.1016	0.0073	0.0028	7	0.27	1%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (%)	0105	0.1045	0.0050	0.1016	0.0073	0.0028	7	0.35	1%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (%)	0029	0.1136	0.0012	0.1016	0.0073	0.0028	7	1.48	6%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (%)	0255	0.0580	0.0000	0.1048	0.0288	0.0049	13	-1.63	22%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (%)	0444	0.0720	0.0037	0.1048	0.0288	0.0049	13	-1.14	16%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (%)	0390	0.0797	0.0021	0.1048	0.0288	0.0049	13	-0.87	12%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (%)	0230	0.0925	0.0106	0.1048	0.0288	0.0049	13	-0.43	6%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (%)	0472	0.1000	0.0000	0.1048	0.0288	0.0049	13	-0.17	2%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (%)	0433	0.1035	0.0030	0.1048	0.0288	0.0049	13	-0.04	1%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (%)	0096	0.1073	0.0046	0.1048	0.0288	0.0049	13	0.09	1%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (%)	0482	0.1100	0.0000	0.1048	0.0288	0.0049	13	0.18	3%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (%)	0354	0.1110	0.0040	0.1048	0.0288	0.0049	13	0.22	3%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (%)	0377	0.1136	0.0001	0.1048	0.0288	0.0049	13	0.31	4%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (%)	0041	0.1150	0.0100	0.1048	0.0288	0.0049	13	0.36	5%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (%)	0035	0.1990	0.0260	0.1048	0.0288	0.0049	13	3.28	45%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (%)	0404	0.9750	0.0000	0.1048	0.0288	0.0049	13	30.25	415%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (%)	0483	1,165	30.00	0.1048	0.0288	0.0049	13	40493.94	555983%	2
321.32	Acid Soluble Zinc , ICP, test portion 2006.03... (%)	0521	0.0971	0.0000	0.2457	0.2132	0.3060	3	-0.70	30%	0
321.32	Acid Soluble Zinc , ICP, test portion 2006.03... (%)	0394	0.1500	0.0980	0.2457	0.2132	0.3060	3	-0.45	19%	0
321.32	Acid Soluble Zinc , ICP, test portion 2006.03... (%)	0541	0.4900	0.8200	0.2457	0.2132	0.3060	3	1.15	50%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.03... (%)	0106	0.0935	0.0099	0.1056	0.0134	0.0066	7	-0.82	6%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.03... (%)	0527	0.0970	0.0020	0.1056	0.0134	0.0066	7	-0.58	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				
321.33	Acid Soluble Zinc , ICP, test portion 2006.03... (%)	0117	0.0983	0.0016	0.1056	0.0134	0.0066	7	-0.49	3%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.03... (%)	0086	0.1025	0.0035	0.1056	0.0134	0.0066	7	-0.21	1%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.03... (%)	0494	0.1045	0.0024	0.1056	0.0134	0.0066	7	-0.07	1%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.03... (%)	0515	0.1178	0.0098	0.1056	0.0134	0.0066	7	0.82	6%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.03... (%)	0233	0.1445	0.0169	0.1056	0.0134	0.0066	7	2.62	18%	0
321.99	Acid Soluble Zinc , Other (%)	0027	0.0255	0.0010	0.0986	0.0164	0.0041	8	-4.08	37%	0
321.99	Acid Soluble Zinc , Other (%)	0519	0.0850	0.0100	0.0986	0.0164	0.0041	8	-0.76	7%	0
321.99	Acid Soluble Zinc , Other (%)	0501	0.0950	0.0100	0.0986	0.0164	0.0041	8	-0.20	2%	0
321.99	Acid Soluble Zinc , Other (%)	0368	0.0961	0.0020	0.0986	0.0164	0.0041	8	-0.14	1%	0
321.99	Acid Soluble Zinc , Other (%)	0220	0.1025	0.0010	0.0986	0.0164	0.0041	8	0.22	2%	0
321.99	Acid Soluble Zinc , Other (%)	0515	0.1081	0.0083	0.0986	0.0164	0.0041	8	0.53	5%	0
321.99	Acid Soluble Zinc , Other (%)	0524	0.1081	0.0007	0.0986	0.0164	0.0041	8	0.53	5%	0
321.99	Acid Soluble Zinc , Other (%)	0506	0.1200	0.0000	0.0986	0.0164	0.0041	8	1.20	11%	0
325.00	Water Soluble Zinc , AA (%)	0537	0.0280	0.0019				1			0
325.30	Water Soluble Zinc , ICP (%)	0402	0.1150	0.0100				1			0

Interpreting Z Scores: Red indicates a normally distributed Z value >3 or <-3 (requires action), Orange = Z between 2 and 3 or -2 and -3 (warning) and Green = Z < 2 and >-2 (OK at 95%). Flags indicate data usage: 0 = Used, 1 = rejected for duplicates too far apart, 2 = rejected as extreme outlier and a 4 flag indicates rejected due to 0 value submitted. A 9 flag indicates a data problem - scores not calculated. Robust statistics not used if < 6 labs used in calculations, in this case the Z Scores are included for information only (Grey). An offset lab value with an asterix 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.