

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 210511

Gypsum 95

Statistical Summary

Methods: 111

Labs Reporting: 71

Issue Date : 06/30/2021

Method Code	Analyte & Method Sample # 210511	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Method Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	Method IA Ratio	Average Range (R-bar)	Horwitz %RSD
001.99	Ammoniacal N, Other (%)	1		0.0008									
005.99	Urea N, Other (%)	1		0.1003									
010.12	Total N, Salicylic (%)	1		0.0116									
010.60	Total N, Combustion (%)	4	2	0.0421	0.0406	0.0293	0.4900	0.0152	0.0134	51.98%	0.07	0.0005	6.81%
010.99	Total N, Other (%)	1		0.0573									
020.50	Total P2O5, ICP (%)	6	5	0.0791	0.0491	0.0949		0.0337	0.0188	35.48%		0.0212	5.70%
020.99	Total P2O5, Other (%)	1		0.0654									
041.20	Direct Available P2O5, Spectrophotometric (%)	1		0.0205									
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (%)	2	2	0.0323	0.0039								
041.50	Direct Available P2O5, ICP (%)	1		0.1000									
050.51	Soluble K2O, ICP (Citrate) (%)	1		0.0900									
050.52	Soluble K2O, ICP (Citrate-EDTA) (%)	2	2	0.0863	0.0704								
050.99	Soluble K2O, Other (%)	9	6	0.1312	0.1310	0.1051	0.4100	0.0588	0.0300	55.90%	0.33	0.0037	5.61%
060.99	Water (Free), Other (%)	1		10.91									
101.00	Acid Soluble Ca, AA, inorganic 965.09 (21%)	9	9	21.37	0.8109	21.32	1.0000	0.8143	0.3393	3.82%	1.90	0.1500	2.17%
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (21%)	17	16	21.65	1.377	21.68	1.0000	1.516	0.4739	6.99%	3.53	0.4781	2.15%
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (21%)	2	2	22.07	0.2793								
101.33	Acid Soluble Ca, ICP, 2017.02 (21%)	13	13	21.85	1.633	21.85	1.0000	1.852	0.6419	8.47%	4.31	0.8766	2.14%
101.70	Acid Soluble Ca, Titrimetric (21%)	2	2	21.54	0.0884								
101.99	Acid Soluble Ca, Other (21%)	15	15	21.52	1.154	21.52	1.0000	1.309	0.4223	6.08%	3.05	0.2511	2.16%
121.00	Acid Soluble Mg, AA, inorganic 965.09 (0.1%)	5	5	0.7591	0.4694	0.7591	0.2380	0.4694	0.2624	61.83%	4.60	0.0486	4.17%
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.1%)	14	14	0.7907	0.0800	0.7760	0.2388	0.0475	0.0159	6.12%	0.46	0.0315	4.16%
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (0.1%)	3	3	0.5810	0.3127	0.5810	0.2291	0.3127	0.2256	53.81%	3.18	0.0047	4.34%
121.33	Acid Soluble Mg, ICP, 2017.02 (0.1%)	11	11	0.7610	0.0589	0.7584	0.2379	0.0609	0.0229	8.03%	0.60	0.0165	4.17%
121.99	Acid Soluble Mg, Other (0.1%)	14	13	0.6887	0.1054	0.7184	0.2359	0.0601	0.0208	8.37%	0.59	0.0163	4.20%
131.00	Water Soluble Mg, AA (%)	1		0.3800									
131.30	Water Soluble Mg, ICP (%)	1		0.1070									
143.99	Elemental S, Other (%)	5	5	17.52	2.842	17.52		2.842	1.589	16.22%		0.2500	2.39%
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	12	12	15.52	3.375	16.37		0.7554	0.2726	4.61%		0.1033	2.47%
145.99	Sulfate S, HCl soluble, Other (%)	4	4	16.20	1.035	16.20		1.035	0.6470	6.39%		0.0975	2.48%
147.00	Total S in Urea/Formulations, Gravimetric (17%)	1		17.00									
148.00	Total S, Combustion (17%)	4	4	16.63	0.9023	16.63	1.0000	0.9023	0.5639	5.42%	2.10	0.7738	2.45%
148.01	Total S, Gravimetric - sulfate and elemental (17%)	15	14	15.86	3.037	16.65	1.0000	0.3610	0.1206	2.17%	0.84	0.2086	2.45%

Method Code	Analyte & Method Sample # 210511	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Method Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	Method IA Ratio	Average Range (R-bar)	Horwitz %RSD
148.07	Total S, ICP, test portion as in 2017.02 (17%)	11	11	16.27	1.389	16.38	1.0000	1.303	0.4913	7.96%	3.04	0.4196	2.47%
148.99	Total S, Other (17%)	14	13	16.08	1.298	16.42	1.0000	0.7854	0.2723	4.78%	1.83	0.1923	2.47%
149.03	S - HNO3 soluble, Spectrometric (%)	1		17.30									
149.04	S - HNO3 soluble, ICP (%)	3	3	14.40	2.654	14.40		2.654	1.916	18.43%		0.2554	2.63%
151.00	Acid Soluble As, AA, test portion 2006.03 modified w/dual acid (ppm)	1		1.050									
151.30	Acid Soluble As, ICP (ppm)	4	4	1.366	0.7305	1.366		0.7305	0.4565	53.49%		0.3347	15.26%
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	1		1.000									
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	4	2	3.079	4.647	1.157		0.1164	0.1029	10.06%		0.0543	15.65%
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	1		0.0215									
151.99	Acid Soluble As, Other (ppm)	5	3	0.9370	0.1121	0.8950		0.1361	0.0982	15.21%		0.0433	16.27%
165.00	Acid Soluble B, Spectrophotometric (%)	1		0.0020									
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	2	1	0.0052	0.0068								
165.99	Acid Soluble B, Other (%)	6	3	2.433	5.953	4.863	0.7324	8.420	6.076	173.14%	26.78	0.3434	3.15%
181.00	Acid Soluble Cd, AA, test portion 2006.03 modified w/dual acid (ppm)	1		0.5000									
181.30	Acid Soluble Cd, ICP (ppm)	5	4	0.6230	1.075	0.6538		1.238	0.7739	189.40%		0.2198	17.05%
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	1		0.1000									
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	4	1	1.508	2.374	0.6538		1.238	1.548	189.40%		0.0023	17.05%
181.34	Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm)	1		0.0000									
181.99	Acid Soluble Cd, Other (ppm)	5	1	0.3690	0.3976	0.6538		1.238	1.548	189.40%		0.0100	17.05%
190.00	Water Soluble Cl, Titrimetric (%)	1		0.1000									
191.30	Acid Soluble Cr, ICP (ppm)	6	5	5.797	2.729	4.807		1.398	0.7815	29.08%		0.1488	12.63%
191.32	Acid Soluble Cr, ICP, 2006.03 (ppm)	1		6.600									
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	4	4	7.358	1.731	7.358		1.731	1.082	23.52%		0.3919	11.85%
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	1		16.30									
191.99	Acid Soluble Cr, Other (ppm)	5	4	10.45	6.011	8.064		3.192	1.995	39.58%		0.5375	11.68%
202.30	Acid Soluble Co, ICP (ppm)	4	4	2.250	1.202	2.250	1.6750	1.202	0.7513	53.43%	1.67	0.6652	14.16%
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	2	2	1.348	0.0672								
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	3	2	2.807	1.906	1.711	1.5133	0.2356	0.2083	13.77%	0.36	0.1403	14.75%
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	1		1.531									
202.99	Acid Soluble Co, Other (ppm)	6	5	4.946	7.396	1.936	1.5807	0.6294	0.3519	32.52%	0.93	0.2042	14.48%
221.00	Acid Soluble Cu, AA, inorganic 965.09 (%)	1		0.0050									
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	5	2	0.4210	0.9246	1.043	0.1093	1.460	1.291	140.06%	31.14	0.2550	3.97%
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	5	3	0.0006	0.0011	0.0001	0.0050	0.0000	0.0000	24.74%	0.01	0.0000	15.63%
221.99	Acid Soluble Cu, Other (%)	6	4	0.0172	0.0406	0.0005	0.0051	0.0007	0.0005	137.68%	0.33	0.0001	12.46%
241.00	Acid Soluble Fe, AA, inorganic 965.09 (%)	4	4	0.1417	0.0388	0.1417	0.0192	0.0388	0.0242	27.38%	4.72	0.0058	5.37%
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	3	3	0.4223	0.4879	0.4223	0.0472	0.4879	0.3521	115.52%	24.07	0.5267	4.55%
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (%)	1		0.1665									
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	2	2	0.1759	0.0214								
241.99	Acid Soluble Fe, Other (%)	3	3	0.1873	0.0843	0.1873	0.0237	0.0843	0.0608	44.99%	8.27	0.0801	5.15%
251.00	Acid Soluble Pb, AA, test portion 2006.03 modified w/dual acid (ppm)	1		2.000									
251.30	Acid Soluble Pb, ICP (ppm)	4	4	0.6093	0.3709	0.6093		0.3709	0.2318	60.87%		0.0644	17.23%
251.32	Acid Soluble Pb, ICP, 2006.03 (ppm)	1		0.6500									
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	5	3	2.001	1.965	0.6680		0.2405	0.1736	36.01%		0.0186	17.00%
251.34	Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm)	1		5.208									

Method Code	Analyte & Method Sample # 210511	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Method Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	Method IA Ratio	Average Range (R-bar)	Horwitz %RSD
251.99	Acid Soluble Pb, Other (ppm)	6	6	1.667	1.736	1.250		0.8970	0.4577	71.75%		0.2633	15.47%
261.11	Acid Soluble Mn, AA, total Mn (%)	1		0.0050									
261.12	Acid Soluble Mn, AA, inorganic 965.09 (%)	1		0.0605									
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	2	1	0.0065	0.0050								
261.32	Acid Soluble Mn, ICP, test portion inorganic 965.09 (%)	1		0.0000									
261.34	Acid Soluble Mn, ICP, test portion 2006.03A-C (%)	1		0.0030									
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	2	2	0.0032	0.0002								
261.99	Acid Soluble Mn, Other (%)	3	2	0.0024	0.0007	0.0028	0.0053	0.0002	0.0002	7.71%	0.09	0.0000	9.71%
281.00	Acid Soluble Hg, AA (ppm)	1		0.0500									
281.30	Acid Soluble Hg, ICP (ppm)	4	0	0.1278	0.2482	0.0028		0.0002		7.71%		0.0000	22.00%
281.99	Acid Soluble Hg, Other (ppm)	5	2	4.505	9.782	11.00		15.55	13.75	141.37%		0.9003	11.15%
289.30	Acid Soluble Mo, ICP (ppm)	2	1	0.1414	0.2000								
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	1		0.5000									
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	4	1	1.432	2.387	11.00	4.3006	15.55	19.44	141.37%	8.43	0.0156	11.15%
289.34	Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm)	1		3.363									
289.99	Acid Soluble Mo, Other (ppm)	3	2	33.55	57.54	0.3300	1.0990	0.0283	0.0250	8.57%	0.06	0.0900	18.90%
291.30	Acid Soluble Ni, ICP (ppm)	5	5	2.188	0.7163	2.188		0.7163	0.4004	32.73%		0.0993	14.22%
291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	1		3.100									
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	5	3	3.568	1.322	2.613		0.2813	0.2030	10.76%		0.0252	13.84%
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	1		6.063									
291.99	Acid Soluble Ni, Other (ppm)	7	5	5.463	5.378	5.648		5.545	3.100	98.17%		1.168	12.33%
301.30	Acid Soluble Se, ICP (ppm)	2	2	0.6714	0.0345								
301.32	Acid Soluble Se, ICP, 2006.03 (ppm)	1		0.9000									
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	2	1	0.5822	0.8092								
301.34	Acid Soluble Se, ICP, EPA 3050B/6010C (ppm)	1		3.445									
301.99	Acid Soluble Se, Other (ppm)	5	2	0.7500	0.5590	1.125		0.5303	0.4688	47.14%		0.5900	15.72%
311.00	Sodium, AA (%)	1		0.0170									
311.33	Sodium, ICP, test portion as in 2017.02 (%)	3	2	0.0130	0.0040	0.0145	0.0065	0.0043	0.0038	29.45%	1.54	0.0007	7.56%
311.99	Sodium, Other (%)	2	2	0.0195	0.0149								
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	1		0.0020									
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	6	3	4.299	7.474	8.592	0.8642	9.185	6.629	106.91%	24.76	0.4892	2.89%
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	1		0.0010									
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	6	3	0.0039	0.0044	0.0036	0.0054	0.0047	0.0034	129.22%	2.03	0.0007	9.32%
321.99	Acid Soluble Zn, Other (%)	7	5	0.0153	0.0374	0.0010	0.0051	0.0006	0.0003	55.50%	0.26	0.0001	11.29%

The Method IA Ratio = 2.33 * Robust SD / IA at the Method Assigned Value. IA ratios of 1 and less indicate participant data dispersion is as good or less than the IA. Red indicates the IA ratio is significantly greater than 1, Orange indicates marginally greater than 1, Green indicates IA ratio is not significantly greater than 1 and Grey indicates < 6 labs reporting. The Horwitz %RSD is calculated using the Thompson Modification, Analyst,2000,125,385-386.

magruder fertilizer

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STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 210511

Method Precision Report

Gypsum 95

Issue Date : 06/30/2021

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
050.99	Soluble K2O, Other (%)	9	5	0.1027	0.0575	0.0575	0.0013	0.0575	56.04%	1.31%	56.06%	42.64
101.00	Acid Soluble Ca, AA, inorganic 965.09 (21%)	9	9	21.37	0.8109	0.8064	0.1216	0.8155	3.77%	0.57%	3.82%	6.707
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (21%)	17	16	21.64	1.421	1.389	0.4258	1.453	6.42%	1.97%	6.71%	3.412
101.33	Acid Soluble Ca, ICP, 2017.02 (21%)	13	13	21.85	1.633	1.488	0.9508	1.766	6.81%	4.35%	8.08%	1.857
101.99	Acid Soluble Ca, Other (21%)	15	14	21.51	1.196	1.187	0.2119	1.206	5.52%	0.99%	5.60%	5.690
121.00	Acid Soluble Mg, AA, inorganic 965.09 (0.1%)	5	5	0.7591	0.4694	0.4683	0.0460	0.4705	61.69%	6.06%	61.98%	10.23
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.1%)	14	12	0.7754	0.0456	0.0420	0.0252	0.0490	5.41%	3.25%	6.31%	1.942
121.33	Acid Soluble Mg, ICP, 2017.02 (0.1%)	11	11	0.7610	0.0589	0.0579	0.0151	0.0599	7.61%	1.99%	7.87%	3.956
121.99	Acid Soluble Mg, Other (0.1%)	14	11	0.7197	0.0447	0.0440	0.0111	0.0454	6.11%	1.54%	6.30%	4.092
143.99	Elemental S, Other (%)	5	5	17.52	2.842	2.837	0.2452	2.848	16.19%	1.40%	16.25%	11.61
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	12	11	16.48	0.5900	0.5859	0.0973	0.5940	3.56%	0.59%	3.60%	6.103
148.01	Total S, Gravimetric - sulfate and elemental (17%)	15	13	16.66	0.3450	0.3222	0.1743	0.3663	1.93%	1.05%	2.20%	2.102
148.07	Total S, ICP, test portion as in 2017.02 (17%)	11	10	16.57	1.000	0.9700	0.3461	1.030	5.85%	2.09%	6.21%	2.975
148.99	Total S, Other (17%)	14	13	16.34	0.8573	0.8440	0.2123	0.8703	5.16%	1.30%	5.33%	4.099
191.30	Acid Soluble Cr, ICP (ppm)	6	5	4.807	1.398	1.395	0.1378	1.401	29.01%	2.87%	29.15%	10.17
202.99	Acid Soluble Co, Other (ppm)	6	5	1.936	0.6294	0.6147	0.1913	0.6438	31.76%	9.88%	33.26%	3.365
251.99	Acid Soluble Pb, Other (ppm)	6	5	0.9810	0.4889	0.4715	0.1826	0.5056	48.06%	18.62%	51.54%	2.769
291.30	Acid Soluble Ni, ICP (ppm)	5	5	2.188	0.7163	0.7136	0.0884	0.7190	32.61%	4.04%	32.86%	8.138
321.99	Acid Soluble Zn, Other (%)	7	5	0.0010	0.0006	0.0006	0.0001	0.0006	55.37%	5.42%	55.64%	10.26

Notes: Precision data calculated when 5 or more Tests included.

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 210511

Gypsum 95

Lab Values

Methods: 111

Labs Reporting: 71

Issue Date : 06/30/2021

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
001.99	Ammoniacal N, Other (%)	0553	< 0.0008					0			5
005.99	Urea N, Other (%)	0524	0.1003	0.1394				1			0
010.12	Total N, Salicylic (%)	0568	0.0116	0.0101				1			0
010.60	Total N, Combustion (%)	0354	0.0185	0.0010				2			0
010.60	Total N, Combustion (%)	0389	0.0400	0.0000				2			0
010.60	Total N, Combustion (%)	0527	< 0.01					2			5
010.60	Total N, Combustion (%)	0325	< 0.1					2			5
010.99	Total N, Other (%)	0524	0.0573	0.0042				1			0
020.50	Total P2O5, ICP (%)	0423	0.0630	0.0040	0.0949	0.0337	0.0212	5	-0.83		0
020.50	Total P2O5, ICP (%)	0524	0.0738	0.0009	0.0949	0.0337	0.0212	5	-0.55		0
020.50	Total P2O5, ICP (%)	0389	0.0900	0.0000	0.0949	0.0337	0.0212	5	-0.13		0
020.50	Total P2O5, ICP (%)	0527	0.0976	0.0009	0.0949	0.0337	0.0212	5	0.07		0
020.50	Total P2O5, ICP (%)	0516	0.1500	0.1000	0.0949	0.0337	0.0212	5	1.43		0
020.50	Total P2O5, ICP (%)	0552	0.0000	0.0000	0.0949	0.0337	0.0212	5			4
020.99	Total P2O5, Other (%)	0515	0.0654	0.0021				1			0
041.20	Direct Available P2O5, Spectrophotometric (%)	0553	0.0205	0.0010				1			0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (%)	0354	0.0295	0.0050				2			0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (%)	0568	0.0350	0.0100				2			0
041.50	Direct Available P2O5, ICP (%)	0325	< 0.1					0			5
050.51	Soluble K2O, ICP (Citrate) (%)	0568	0.0900	0.0000				1			0
050.52	Soluble K2O, ICP (Citrate-EDTA) (%)	0354	0.0365	0.0010				2			0
050.52	Soluble K2O, ICP (Citrate-EDTA) (%)	0423	0.1360	0.0040				2			0
050.99	Soluble K2O, Other (%)	0553	0.0285	0.0030	0.1051	0.0588	0.0037	6	-1.16	OK	0
050.99	Soluble K2O, Other (%)	0389	0.0560	0.0020	0.1051	0.0588	0.0037	6	-0.74	OK	0
050.99	Soluble K2O, Other (%)	0563	0.1175	0.0141	0.1051	0.0588	0.0037	6	0.19	OK	0
050.99	Soluble K2O, Other (%)	0524	0.1219	0.0020	0.1051	0.0588	0.0037	6	0.25	OK	0
050.99	Soluble K2O, Other (%)	0527	0.1490	0.0011	0.1051	0.0588	0.0037	6	0.66	OK	0
050.99	Soluble K2O, Other (%)	0521	0.1579	0.0000	0.1051	0.0588	0.0037	6	0.80	OK	0
050.99	Soluble K2O, Other (%)	0516	0.4500	0.1000	0.1051	0.0588	0.0037	6	5.23	OK	1
050.99	Soluble K2O, Other (%)	0552	0.0000	0.0000	0.1051	0.0588	0.0037	6			4
050.99	Soluble K2O, Other (%)	0325	< 0.1		0.1051	0.0588	0.0037	6			5
060.99	Water (Free), Other (%)	0513	10.91	0.0700				1			0
101.00	Acid Soluble Ca, AA, inorganic 965.09 (21%)	0485	20.66	0.3300	21.32	0.8143	0.1500	9	-0.76	OK	0
101.00	Acid Soluble Ca, AA, inorganic 965.09 (21%)	0533	20.73	0.0600	21.32	0.8143	0.1500	9	-0.67	OK	0
101.00	Acid Soluble Ca, AA, inorganic 965.09 (21%)	0538	20.80	0.2000	21.32	0.8143	0.1500	9	-0.59	OK	0
101.00	Acid Soluble Ca, AA, inorganic 965.09 (21%)	0535	20.85	0.1000	21.32	0.8143	0.1500	9	-0.54	OK	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
101.00	Acid Soluble Ca, AA, inorganic 965.09 (21%)	0539	20.85	0.1000	21.32	0.8143	0.1500	9	-0.54	OK	0
101.00	Acid Soluble Ca, AA, inorganic 965.09 (21%)	0534	21.50	0.2000	21.32	0.8143	0.1500	9	0.20	OK	0
101.00	Acid Soluble Ca, AA, inorganic 965.09 (21%)	0513	21.68	0.0600	21.32	0.8143	0.1500	9	0.40	OK	0
101.00	Acid Soluble Ca, AA, inorganic 965.09 (21%)	0553	22.30	0.2000	21.32	0.8143	0.1500	9	1.11	OK	0
101.00	Acid Soluble Ca, AA, inorganic 965.09 (21%)	0157	22.95	0.1000	21.32	0.8143	0.1500	9	1.84	High	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (21%)	0073	18.85	0.8700	21.68	1.516	0.4781	16	-1.87	Low	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (21%)	0472	19.28	0.3100	21.68	1.516	0.4781	16	-1.59	Low	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (21%)	0102	19.78	0.0900	21.68	1.516	0.4781	16	-1.26	Low	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (21%)	0255	20.79	0.1000	21.68	1.516	0.4781	16	-0.59	OK	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (21%)	0444	21.18	1.270	21.68	1.516	0.4781	16	-0.34	OK	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (21%)	0451	21.56	0.3200	21.68	1.516	0.4781	16	-0.08	OK	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (21%)	0231	21.57	0.1000	21.68	1.516	0.4781	16	-0.07	OK	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (21%)	0234	21.75	0.0900	21.68	1.516	0.4781	16	0.04	OK	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (21%)	0324	21.90	0.8000	21.68	1.516	0.4781	16	0.14	OK	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (21%)	0157	22.00	0.2000	21.68	1.516	0.4781	16	0.21	OK	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (21%)	0354	22.00	0.4000	21.68	1.516	0.4781	16	0.21	OK	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (21%)	0377	22.40	0.3600	21.68	1.516	0.4781	16	0.47	OK	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (21%)	0049	22.68	0.7400	21.68	1.516	0.4781	16	0.66	OK	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (21%)	0433	23.42	0.2000	21.68	1.516	0.4781	16	1.15	High	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (21%)	0035	23.50	0.8000	21.68	1.516	0.4781	16	1.20	High	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (21%)	0325	23.60	1.000	21.68	1.516	0.4781	16	1.26	High	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (21%)	0568	21.85	4.100	21.68	1.516	0.4781	16	0.11	OK	1
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (21%)	0423	21.87	0.0600				2			0
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (21%)	0095	22.27	0.9100				2			0
101.33	Acid Soluble Ca, ICP, 2017.02 (21%)	0117	19.44	2.433	21.85	1.852	0.8766	13	-1.30	Low	0
101.33	Acid Soluble Ca, ICP, 2017.02 (21%)	0486	19.73	0.6000	21.85	1.852	0.8766	13	-1.15	Low	0
101.33	Acid Soluble Ca, ICP, 2017.02 (21%)	0040	20.20	3.170	21.85	1.852	0.8766	13	-0.90	Low	0
101.33	Acid Soluble Ca, ICP, 2017.02 (21%)	0106	20.95	0.0938	21.85	1.852	0.8766	13	-0.48	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (21%)	0177	21.00	0.0843	21.85	1.852	0.8766	13	-0.46	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (21%)	0292	21.28	0.0100	21.85	1.852	0.8766	13	-0.31	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (21%)	0043	21.83	1.220	21.85	1.852	0.8766	13	-0.01	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (21%)	0136	21.95	0.1000	21.85	1.852	0.8766	13	0.05	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (21%)	0034	22.67	2.160	21.85	1.852	0.8766	13	0.44	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (21%)	0055	22.81	0.7400	21.85	1.852	0.8766	13	0.52	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (21%)	0527	23.45	0.0722	21.85	1.852	0.8766	13	0.86	High	0
101.33	Acid Soluble Ca, ICP, 2017.02 (21%)	0169	24.35	0.0500	21.85	1.852	0.8766	13	1.35	High	0
101.33	Acid Soluble Ca, ICP, 2017.02 (21%)	0394	24.44	0.6630	21.85	1.852	0.8766	13	1.40	High	0
101.70	Acid Soluble Ca, Titrimetric (21%)	0200	21.48	0.0900				2			0
101.70	Acid Soluble Ca, Titrimetric (21%)	0544	21.60	0.0800				2			0
101.99	Acid Soluble Ca, Other (21%)	0506	19.65	0.2900	21.52	1.309	0.2511	15	-1.44	Low	0
101.99	Acid Soluble Ca, Other (21%)	0481	20.01	0.7100	21.52	1.309	0.2511	15	-1.16	Low	0
101.99	Acid Soluble Ca, Other (21%)	0523	20.15	0.5200	21.52	1.309	0.2511	15	-1.05	Low	0
101.99	Acid Soluble Ca, Other (21%)	0029	20.51	0.0600	21.52	1.309	0.2511	15	-0.78	Low	0
101.99	Acid Soluble Ca, Other (21%)	0027	20.65	0.2370	21.52	1.309	0.2511	15	-0.67	OK	0
101.99	Acid Soluble Ca, Other (21%)	0558	20.77	0.0200	21.52	1.309	0.2511	15	-0.58	OK	0
101.99	Acid Soluble Ca, Other (21%)	0450	21.28	0.0600	21.52	1.309	0.2511	15	-0.19	OK	0
101.99	Acid Soluble Ca, Other (21%)	0042	21.71	1.190	21.52	1.309	0.2511	15	0.14	OK	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
101.99	Acid Soluble Ca, Other (21%)	0561	22.09	0.0100	21.52	1.309	0.2511	15	0.43	OK	0
101.99	Acid Soluble Ca, Other (21%)	0552	22.44	0.5700	21.52	1.309	0.2511	15	0.70	OK	0
101.99	Acid Soluble Ca, Other (21%)	0389	22.55	0.1000	21.52	1.309	0.2511	15	0.78	High	0
101.99	Acid Soluble Ca, Other (21%)	0231	22.70	0.0000	21.52	1.309	0.2511	15	0.90	High	0
101.99	Acid Soluble Ca, Other (21%)	0405	22.70	0.0000	21.52	1.309	0.2511	15	0.90	High	0
101.99	Acid Soluble Ca, Other (21%)	0521	22.79	0.0000	21.52	1.309	0.2511	15	0.97	High	0
101.99	Acid Soluble Ca, Other (21%)	0547	22.90	0.0000	21.52	1.309	0.2511	15	1.05	High	0
121.00	Acid Soluble Mg, AA, inorganic 965.09 (0.1%)	0309	0.0750	0.0100	0.7591	0.4694	0.0486	5	-1.46		0
121.00	Acid Soluble Mg, AA, inorganic 965.09 (0.1%)	0485	0.7380	0.1180	0.7591	0.4694	0.0486	5	-0.04		0
121.00	Acid Soluble Mg, AA, inorganic 965.09 (0.1%)	0553	0.7875	0.0250	0.7591	0.4694	0.0486	5	0.06		0
121.00	Acid Soluble Mg, AA, inorganic 965.09 (0.1%)	0534	0.7950	0.0100	0.7591	0.4694	0.0486	5	0.08		0
121.00	Acid Soluble Mg, AA, inorganic 965.09 (0.1%)	0538	1.400	0.0800	0.7591	0.4694	0.0486	5	1.37		0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.1%)	0377	0.7000	0.0400	0.7760	0.0475	0.0315	14	-1.60	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.1%)	0568	0.7310	0.0120	0.7760	0.0475	0.0315	14	-0.95	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.1%)	0035	0.7400	0.1080	0.7760	0.0475	0.0315	14	-0.76	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.1%)	0433	0.7550	0.0100	0.7760	0.0475	0.0315	14	-0.44	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.1%)	0049	0.7600	0.0200	0.7760	0.0475	0.0315	14	-0.34	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.1%)	0451	0.7661	0.0342	0.7760	0.0475	0.0315	14	-0.21	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.1%)	0255	0.7665	0.0070	0.7760	0.0475	0.0315	14	-0.20	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.1%)	0231	0.7700	0.0200	0.7760	0.0475	0.0315	14	-0.13	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.1%)	0354	0.7700	0.0400	0.7760	0.0475	0.0315	14	-0.13	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.1%)	0234	0.7812	0.0094	0.7760	0.0475	0.0315	14	0.11	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.1%)	0324	0.7950	0.0900	0.7760	0.0475	0.0315	14	0.40	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.1%)	0472	0.8300	0.0000	0.7760	0.0475	0.0315	14	1.14	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.1%)	0102	0.8800	0.0400	0.7760	0.0475	0.0315	14	2.19	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.1%)	0444	1.025	0.0100	0.7760	0.0475	0.0315	14	5.24	High	0
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (0.1%)	0292	0.2200	0.0000	0.5810	0.3127	0.0047	3	-1.15		0
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (0.1%)	0423	0.7580	0.0040	0.5810	0.3127	0.0047	3	0.57		0
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (0.1%)	0095	0.7650	0.0100	0.5810	0.3127	0.0047	3	0.59		0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.1%)	0561	0.6750	0.0100	0.7584	0.0609	0.0165	11	-1.28	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.1%)	0055	0.6950	0.0500	0.7584	0.0609	0.0165	11	-0.97	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.1%)	0177	0.7311	0.0233	0.7584	0.0609	0.0165	11	-0.42	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.1%)	0106	0.7335	0.0033	0.7584	0.0609	0.0165	11	-0.38	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.1%)	0486	0.7400	0.0000	0.7584	0.0609	0.0165	11	-0.28	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.1%)	0136	0.7550	0.0100	0.7584	0.0609	0.0165	11	-0.05	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.1%)	0043	0.7700	0.0200	0.7584	0.0609	0.0165	11	0.18	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.1%)	0394	0.7752	0.0243	0.7584	0.0609	0.0165	11	0.26	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.1%)	0117	0.7756	0.0157	0.7584	0.0609	0.0165	11	0.26	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.1%)	0563	0.8425	0.0234	0.7584	0.0609	0.0165	11	1.29	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.1%)	0527	0.8780	0.0011	0.7584	0.0609	0.0165	11	1.84	OK	0
121.99	Acid Soluble Mg, Other (0.1%)	0042	0.4300	0.0200	0.7184	0.0601	0.0163	13	-4.80	Low	0
121.99	Acid Soluble Mg, Other (0.1%)	0523	0.6600	0.0200	0.7184	0.0601	0.0163	13	-0.97	OK	0
121.99	Acid Soluble Mg, Other (0.1%)	0481	0.6750	0.0100	0.7184	0.0601	0.0163	13	-0.72	OK	0
121.99	Acid Soluble Mg, Other (0.1%)	0516	0.6800	0.0200	0.7184	0.0601	0.0163	13	-0.64	OK	0
121.99	Acid Soluble Mg, Other (0.1%)	0515	0.6858	0.0245	0.7184	0.0601	0.0163	13	-0.54	OK	0
121.99	Acid Soluble Mg, Other (0.1%)	0506	0.7050	0.0100	0.7184	0.0601	0.0163	13	-0.22	OK	0
121.99	Acid Soluble Mg, Other (0.1%)	0405	0.7200	0.0000	0.7184	0.0601	0.0163	13	0.03	OK	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
121.99	Acid Soluble Mg, Other (0.1%)	0521	0.7318	0.0000	0.7184	0.0601	0.0163	13	0.22	OK	0
121.99	Acid Soluble Mg, Other (0.1%)	0524	0.7329	0.0244	0.7184	0.0601	0.0163	13	0.24	OK	0
121.99	Acid Soluble Mg, Other (0.1%)	0558	0.7550	0.0100	0.7184	0.0601	0.0163	13	0.61	OK	0
121.99	Acid Soluble Mg, Other (0.1%)	0389	0.7615	0.0030	0.7184	0.0601	0.0163	13	0.72	OK	0
121.99	Acid Soluble Mg, Other (0.1%)	0552	0.7950	0.0500	0.7184	0.0601	0.0163	13	1.27	OK	0
121.99	Acid Soluble Mg, Other (0.1%)	0547	0.8100	0.0200	0.7184	0.0601	0.0163	13	1.52	OK	0
121.99	Acid Soluble Mg, Other (0.1%)	0450	< 0.5		0.7184	0.0601	0.0163	13			5
131.00	Water Soluble Mg, AA (%)	0556	0.3800	0.0200				1			0
131.30	Water Soluble Mg, ICP (%)	0027	0.1070	0.0060				1			0
143.99	Elemental S, Other (%)	0472	13.43	0.2200	17.52	2.842	0.2500	5	-1.44		0
143.99	Elemental S, Other (%)	0521	16.80	0.0000	17.52	2.842	0.2500	5	-0.25		0
143.99	Elemental S, Other (%)	0255	16.98	0.2300	17.52	2.842	0.2500	5	-0.19		0
143.99	Elemental S, Other (%)	0389	19.75	0.7000	17.52	2.842	0.2500	5	0.78		0
143.99	Elemental S, Other (%)	0325	20.65	0.1000	17.52	2.842	0.2500	5	1.10		0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0556	4.950	0.1000	16.37	0.7554	0.1033	12	-15.12	NA	0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0106	15.38	0.2300	16.37	0.7554	0.1033	12	-1.32	NA	0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0481	15.77	0.0200	16.37	0.7554	0.1033	12	-0.80	NA	0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0027	16.10	0.1900	16.37	0.7554	0.1033	12	-0.37	NA	0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0485	16.33	0.0100	16.37	0.7554	0.1033	12	-0.06	NA	0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0544	16.35	0.0400	16.37	0.7554	0.1033	12	-0.03	NA	0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0029	16.41	0.0400	16.37	0.7554	0.1033	12	0.05	NA	0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0564	16.59	0.0200	16.37	0.7554	0.1033	12	0.29	NA	0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0549	16.93	0.1600	16.37	0.7554	0.1033	12	0.74	NA	0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0538	17.00	0.0700	16.37	0.7554	0.1033	12	0.82	NA	0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0561	17.05	0.0800	16.37	0.7554	0.1033	12	0.90	NA	0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0200	17.35	0.2800	16.37	0.7554	0.1033	12	1.29	NA	0
145.99	Sulfate S, HCl soluble, Other (%)	0486	14.66	0.1400	16.20	1.035	0.0975	4	-1.48		0
145.99	Sulfate S, HCl soluble, Other (%)	0136	16.50	0.0000	16.20	1.035	0.0975	4	0.29		0
145.99	Sulfate S, HCl soluble, Other (%)	0569	16.78	0.1500	16.20	1.035	0.0975	4	0.56		0
145.99	Sulfate S, HCl soluble, Other (%)	0553	16.85	0.1000	16.20	1.035	0.0975	4	0.63		0
147.00	Total S in Urea/Formulations, Gravimetric (17%)	0538	17.00	0.1000				1			0
148.00	Total S, Combustion (17%)	0049	15.48	0.1200	16.63	0.9023	0.7738	4	-1.28		0
148.00	Total S, Combustion (17%)	0114	16.40	1.075	16.63	0.9023	0.7738	4	-0.26		0
148.00	Total S, Combustion (17%)	0451	17.10	1.800	16.63	0.9023	0.7738	4	0.52		0
148.00	Total S, Combustion (17%)	0136	17.55	0.1000	16.63	0.9023	0.7738	4	1.02		0
148.01	Total S, Gravimetric - sulfate and elemental (17%)	0231	16.00	0.0000	16.65	0.3610	0.2086	14	-1.81	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (17%)	0513	16.36	0.0800	16.65	0.3610	0.2086	14	-0.81	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (17%)	0534	16.41	0.0100	16.65	0.3610	0.2086	14	-0.68	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (17%)	0029	16.41	0.0400	16.65	0.3610	0.2086	14	-0.67	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (17%)	0157	16.45	0.3000	16.65	0.3610	0.2086	14	-0.56	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (17%)	0444	16.51	0.7700	16.65	0.3610	0.2086	14	-0.41	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (17%)	0485	16.55	0.3000	16.65	0.3610	0.2086	14	-0.28	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (17%)	0073	16.57	0.5600	16.65	0.3610	0.2086	14	-0.23	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (17%)	0564	16.73	0.0500	16.65	0.3610	0.2086	14	0.20	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (17%)	0324	16.75	0.5000	16.65	0.3610	0.2086	14	0.27	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (17%)	0220	17.03	0.0400	16.65	0.3610	0.2086	14	1.05	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (17%)	0549	17.05	0.1300	16.65	0.3610	0.2086	14	1.09	OK	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
148.01	Total S, Gravimetric - sulfate and elemental (17%)	0569	17.05	0.1300	16.65	0.3610	0.2086	14	1.09	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (17%)	0055	17.18	0.0100	16.65	0.3610	0.2086	14	1.45	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (17%)	0556	4.950	0.1000	16.65	0.3610	0.2086	14	-32.41	Low	2
148.07	Total S, ICP, test portion as in 2017.02 (17%)	0117	13.21	1.744	16.38	1.303	0.4196	11	-2.27	Low	0
148.07	Total S, ICP, test portion as in 2017.02 (17%)	0102	14.70	0.6000	16.38	1.303	0.4196	11	-1.20	Low	0
148.07	Total S, ICP, test portion as in 2017.02 (17%)	0233	15.84	0.0200	16.38	1.303	0.4196	11	-0.38	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (17%)	0040	15.85	0.3000	16.38	1.303	0.4196	11	-0.38	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (17%)	0177	16.02	0.1447	16.38	1.303	0.4196	11	-0.26	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (17%)	0444	16.51	0.0800	16.38	1.303	0.4196	11	0.10	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (17%)	0043	16.77	1.360	16.38	1.303	0.4196	11	0.28	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (17%)	0292	17.12	0.0100	16.38	1.303	0.4196	11	0.53	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (17%)	0394	17.13	0.0720	16.38	1.303	0.4196	11	0.54	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (17%)	0527	17.81	0.0355	16.38	1.303	0.4196	11	1.03	High	0
148.07	Total S, ICP, test portion as in 2017.02 (17%)	0169	17.98	0.2500	16.38	1.303	0.4196	11	1.15	High	0
148.99	Total S, Other (17%)	0523	14.29	0.6800	16.42	0.7854	0.1923	13	-2.71	Low	0
148.99	Total S, Other (17%)	0506	15.45	0.7000	16.42	0.7854	0.1923	13	-1.23	OK	0
148.99	Total S, Other (17%)	0450	15.66	0.1800	16.42	0.7854	0.1923	13	-0.96	OK	0
148.99	Total S, Other (17%)	0516	16.10	0.0000	16.42	0.7854	0.1923	13	-0.40	OK	0
148.99	Total S, Other (17%)	0035	16.15	0.1000	16.42	0.7854	0.1923	13	-0.34	OK	0
148.99	Total S, Other (17%)	0547	16.20	0.0000	16.42	0.7854	0.1923	13	-0.28	OK	0
148.99	Total S, Other (17%)	0354	16.25	0.1000	16.42	0.7854	0.1923	13	-0.21	OK	0
148.99	Total S, Other (17%)	0558	16.84	0.0800	16.42	0.7854	0.1923	13	0.54	OK	0
148.99	Total S, Other (17%)	0220	16.99	0.0400	16.42	0.7854	0.1923	13	0.73	OK	0
148.99	Total S, Other (17%)	0535	17.05	0.1000	16.42	0.7854	0.1923	13	0.81	OK	0
148.99	Total S, Other (17%)	0539	17.05	0.1000	16.42	0.7854	0.1923	13	0.81	OK	0
148.99	Total S, Other (17%)	0533	17.10	0.0500	16.42	0.7854	0.1923	13	0.86	OK	0
148.99	Total S, Other (17%)	0377	17.34	0.3700	16.42	0.7854	0.1923	13	1.17	OK	0
148.99	Total S, Other (17%)	0515	12.59	1.540	16.42	0.7854	0.1923	13	-4.87	Low	1
149.03	S - HNO3 soluble, Spectrometric (%)	0518	17.30	0.2000				1			0
149.04	S - HNO3 soluble, ICP (%)	0524	11.34	0.4663	14.40	2.654	0.2554	3	-1.15		0
149.04	S - HNO3 soluble, ICP (%)	0423	15.85	0.1000	14.40	2.654	0.2554	3	0.55		0
149.04	S - HNO3 soluble, ICP (%)	0231	16.02	0.2000	14.40	2.654	0.2554	3	0.61		0
151.00	Acid Soluble As, AA, test portion 2006.03 modified w/dual acid (ppm)	0534	1.050	0.0400				1			0
151.30	Acid Soluble As, ICP (ppm)	0450	0.9500	0.1000	1.366	0.7305	0.3347	4	-0.57		0
151.30	Acid Soluble As, ICP (ppm)	0523	1.020	0.0614	1.366	0.7305	0.3347	4	-0.47		0
151.30	Acid Soluble As, ICP (ppm)	0524	1.032	0.0035	1.366	0.7305	0.3347	4	-0.46		0
151.30	Acid Soluble As, ICP (ppm)	0255	2.460	1.174	1.366	0.7305	0.3347	4	1.50		0
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	0220	< 1					0			5
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0136	1.075	0.0500				2			0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0563	1.240	0.0585				2			0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0527	< 0.001					2			5
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0117	< 10					2			5
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	0515	0.0215	0.0430				0			4
151.99	Acid Soluble As, Other (ppm)	0481	0.7700	0.0200	0.8950	0.1361	0.0433	3	-0.92		0
151.99	Acid Soluble As, Other (ppm)	0572	0.8750	0.0300	0.8950	0.1361	0.0433	3	-0.15		0
151.99	Acid Soluble As, Other (ppm)	0506	1.040	0.0800	0.8950	0.1361	0.0433	3	1.07		0
151.99	Acid Soluble As, Other (ppm)	0220	< 1		0.8950	0.1361	0.0433	3			5

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			Value	Range	Rob Mean	Rob SD	R-bar				
151.99	Acid Soluble As, Other (ppm)	0405	< 1		0.8950	0.1361	0.0433	3			5
165.00	Acid Soluble B, Spectrophotometric (%)	0553	0.0020	0.0000				1			0
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	0389	0.0005	0.0001				1			0
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	0354	< 0.01					1			5
165.99	Acid Soluble B, Other (%)	0524	0.0012	0.0000	4.863	8.420	0.3434	3	-0.47		0
165.99	Acid Soluble B, Other (%)	0563	0.0023	0.0001	4.863	8.420	0.3434	3	-0.47		0
165.99	Acid Soluble B, Other (%)	0423	14.59	1.030	4.863	8.420	0.3434	3	0.94		0
165.99	Acid Soluble B, Other (%)	0515	0.0000	0.0000	4.863	8.420	0.3434	3			4
165.99	Acid Soluble B, Other (%)	0552	0.0000	0.0000	4.863	8.420	0.3434	3			4
165.99	Acid Soluble B, Other (%)	0527	< 0.01		4.863	8.420	0.3434	3			5
181.00	Acid Soluble Cd, AA, test portion 2006.03 modified w/dual acid (ppm)	0534	< 0.5					0			5
181.30	Acid Soluble Cd, ICP (ppm)	0523	0.0169	0.0069	0.6538	1.238	0.2198	4	-0.51		0
181.30	Acid Soluble Cd, ICP (ppm)	0389	0.0300	0.0000	0.6538	1.238	0.2198	4	-0.50		0
181.30	Acid Soluble Cd, ICP (ppm)	0524	0.0573	0.0001	0.6538	1.238	0.2198	4	-0.48		0
181.30	Acid Soluble Cd, ICP (ppm)	0255	2.511	0.8720	0.6538	1.238	0.2198	4	1.50		0
181.30	Acid Soluble Cd, ICP (ppm)	0450	< 0.5		0.6538	1.238	0.2198	4			5
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	0220	< 0.1					0			5
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0563	0.0319	0.0023				1			0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0527	< 0.001					1			5
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0136	< 1					1			5
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0117	< 5					1			5
181.34	Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm)	0515	0.0000	0.0000				0			4
181.99	Acid Soluble Cd, Other (ppm)	0405	0.0150	0.0100				1			0
181.99	Acid Soluble Cd, Other (ppm)	0220	< 0.1					1			5
181.99	Acid Soluble Cd, Other (ppm)	0572	< 0.23					1			5
181.99	Acid Soluble Cd, Other (ppm)	0481	< 0.5					1			5
181.99	Acid Soluble Cd, Other (ppm)	0553	< 1					1			5
190.00	Water Soluble Cl, Titrimetric (%)	0553	< 0.1					0			5
191.30	Acid Soluble Cr, ICP (ppm)	0389	3.100	0.0000	4.807	1.398	0.1488	5	-1.07		0
191.30	Acid Soluble Cr, ICP (ppm)	0444	3.615	0.1900	4.807	1.398	0.1488	5	-0.74		0
191.30	Acid Soluble Cr, ICP (ppm)	0524	5.108	0.2938	4.807	1.398	0.1488	5	0.19		0
191.30	Acid Soluble Cr, ICP (ppm)	0450	6.000	0.0000	4.807	1.398	0.1488	5	0.75		0
191.30	Acid Soluble Cr, ICP (ppm)	0035	6.210	0.2600	4.807	1.398	0.1488	5	0.88		0
191.30	Acid Soluble Cr, ICP (ppm)	0523	10.75	1.267	4.807	1.398	0.1488	5	3.71		1
191.32	Acid Soluble Cr, ICP, 2006.03 (ppm)	0220	6.600	0.6000				1			0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0136	5.400	0.8000	7.358	1.731	0.3919	4	-1.13		0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0563	7.002	0.3574	7.358	1.731	0.3919	4	-0.21		0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0394	7.431	0.2410	7.358	1.731	0.3919	4	0.04		0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0527	9.599	0.1693	7.358	1.731	0.3919	4	1.29		0
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	0515	16.30	2.101				1			0
191.99	Acid Soluble Cr, Other (ppm)	0572	5.905	0.4500	8.064	3.192	0.5375	4	-0.68		0
191.99	Acid Soluble Cr, Other (ppm)	0405	6.500	1.000	8.064	3.192	0.5375	4	-0.49		0
191.99	Acid Soluble Cr, Other (ppm)	0220	7.050	0.1000	8.064	3.192	0.5375	4	-0.32		0
191.99	Acid Soluble Cr, Other (ppm)	0506	12.80	0.6000	8.064	3.192	0.5375	4	1.48		0
191.99	Acid Soluble Cr, Other (ppm)	0481	< 20		8.064	3.192	0.5375	4			5
202.30	Acid Soluble Co, ICP (ppm)	0389	0.6500	0.1000	2.250	1.202	0.6652	4	-1.33		0
202.30	Acid Soluble Co, ICP (ppm)	0524	2.252	0.1591	2.250	1.202	0.6652	4	0.00		0

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			Value	Range	Rob Mean	Rob SD	R-bar				
202.30	Acid Soluble Co, ICP (ppm)	0450	2.550	0.1000	2.250	1.202	0.6652	4	0.25	0	
202.30	Acid Soluble Co, ICP (ppm)	0523	3.548	2.302	2.250	1.202	0.6652	4	1.08	0	
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	0220	1.300	0.0000				2		0	
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	0423	1.395	0.1700				2		0	
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0527	1.545	0.0114				2		0	
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0563	1.878	0.2692				2		0	
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0136	< 5					2		5	
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	0515	1.531	1.300				1		0	
202.99	Acid Soluble Co, Other (ppm)	0255	1.254	0.5310	1.936	0.6294	0.2042	5	-0.95	0	
202.99	Acid Soluble Co, Other (ppm)	0220	1.450	0.1000	1.936	0.6294	0.2042	5	-0.67	0	
202.99	Acid Soluble Co, Other (ppm)	0572	1.850	0.0400	1.936	0.6294	0.2042	5	-0.12	0	
202.99	Acid Soluble Co, Other (ppm)	0405	2.350	0.1000	1.936	0.6294	0.2042	5	0.57	0	
202.99	Acid Soluble Co, Other (ppm)	0553	2.775	0.2500	1.936	0.6294	0.2042	5	1.16	0	
202.99	Acid Soluble Co, Other (ppm)	0481	< 20		1.936	0.6294	0.2042	5		5	
221.00	Acid Soluble Cu, AA, inorganic 965.09 (%)	0553	< 0.005					0		5	
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0552	0.0100	0.0000				2		0	
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0444	2.075	0.5100				2		0	
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0255	0.0000	0.0000				2		4	
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0102	< 0.01					2		5	
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0354	< 0.01					2		5	
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0527	0.0001	0.0000	0.0001	0.0000	0.0000	3	-0.58	0	
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0563	0.0001	0.0000	0.0001	0.0000	0.0000	3	-0.58	0	
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0394	0.0002	0.0001	0.0001	0.0000	0.0000	3	1.15	0	
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0106	0.0003	0.0005	0.0001	0.0000	0.0000	3		4	
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0136	< 0.0025		0.0001	0.0000	0.0000	3		5	
221.99	Acid Soluble Cu, Other (%)	0405	0.0001	0.0000	0.0005	0.0007	0.0001	4	-0.50	0	
221.99	Acid Soluble Cu, Other (%)	0572	0.0001	0.0000	0.0005	0.0007	0.0001	4	-0.50	0	
221.99	Acid Soluble Cu, Other (%)	0524	0.0003	0.0000	0.0005	0.0007	0.0001	4	-0.26	0	
221.99	Acid Soluble Cu, Other (%)	0515	0.0016	0.0002	0.0005	0.0007	0.0001	4	1.26	0	
221.99	Acid Soluble Cu, Other (%)	0481	< 0.001		0.0005	0.0007	0.0001	4		5	
221.99	Acid Soluble Cu, Other (%)	0389	< 0.1		0.0005	0.0007	0.0001	4		5	
241.00	Acid Soluble Fe, AA, inorganic 965.09 (%)	0553	0.0835	0.0010	0.1417	0.0388	0.0058	4	-1.50	0	
241.00	Acid Soluble Fe, AA, inorganic 965.09 (%)	0538	0.1600	0.0200	0.1417	0.0388	0.0058	4	0.47	0	
241.00	Acid Soluble Fe, AA, inorganic 965.09 (%)	0535	0.1615	0.0010	0.1417	0.0388	0.0058	4	0.51	0	
241.00	Acid Soluble Fe, AA, inorganic 965.09 (%)	0539	0.1617	0.0010	0.1417	0.0388	0.0058	4	0.52	0	
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0035	0.1170	0.0000	0.4223	0.4879	0.5267	3	-0.63	0	
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0354	0.1650	0.0100	0.4223	0.4879	0.5267	3	-0.53	0	
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0552	0.9850	1.570	0.4223	0.4879	0.5267	3	1.15	0	
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (%)	0423	0.1665	0.0010				1		0	
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0563	0.1608	0.0025				2		0	
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0527	0.1910	0.0022				2		0	
241.99	Acid Soluble Fe, Other (%)	0389	0.1275	0.0010	0.1873	0.0843	0.0801	3	-0.71	0	
241.99	Acid Soluble Fe, Other (%)	0524	0.1507	0.0020	0.1873	0.0843	0.0801	3	-0.43	0	
241.99	Acid Soluble Fe, Other (%)	0515	0.2837	0.2373	0.1873	0.0843	0.0801	3	1.14	0	
251.00	Acid Soluble Pb, AA, test portion 2006.03 modified w/dual acid (ppm)	0534	< 2					0		5	
251.30	Acid Soluble Pb, ICP (ppm)	0389	0.2000	0.0000	0.6093	0.3709	0.0644	4	-1.10	0	
251.30	Acid Soluble Pb, ICP (ppm)	0255	0.3905	0.0950	0.6093	0.3709	0.0644	4	-0.59	0	

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251.30	Acid Soluble Pb, ICP (ppm)	0524	0.9219	0.1478	0.6093	0.3709	0.0644	4	0.84		0
251.30	Acid Soluble Pb, ICP (ppm)	0523	0.9249	0.0148	0.6093	0.3709	0.0644	4	0.85		0
251.32	Acid Soluble Pb, ICP, 2006.03 (ppm)	0220	0.6500	0.1000				1			0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0394	0.3935	0.0210	0.6680	0.2405	0.0186	3	-1.14		0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0563	0.7684	0.0320	0.6680	0.2405	0.0186	3	0.42		0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0527	0.8420	0.0027	0.6680	0.2405	0.0186	3	0.72		0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0136	< 3		0.6680	0.2405	0.0186	3			5
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0117	< 5		0.6680	0.2405	0.0186	3			5
251.34	Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm)	0515	5.208	1.701				1			0
251.99	Acid Soluble Pb, Other (ppm)	0481	0.6450	0.0500	1.250	0.8970	0.2633	6	-0.60	NA	0
251.99	Acid Soluble Pb, Other (ppm)	0572	0.7650	0.0300	1.250	0.8970	0.2633	6	-0.48	NA	0
251.99	Acid Soluble Pb, Other (ppm)	0405	0.8000	0.0000	1.250	0.8970	0.2633	6	-0.45	NA	0
251.99	Acid Soluble Pb, Other (ppm)	0220	0.8500	0.3000	1.250	0.8970	0.2633	6	-0.40	NA	0
251.99	Acid Soluble Pb, Other (ppm)	0506	1.845	0.4900	1.250	0.8970	0.2633	6	0.59	NA	0
251.99	Acid Soluble Pb, Other (ppm)	0553	5.095	0.7100	1.250	0.8970	0.2633	6	3.82	NA	0
261.11	Acid Soluble Mn, AA, total Mn (%)	0553	< 0.005					0			5
261.12	Acid Soluble Mn, AA, inorganic 965.09 (%)	0538	0.0605	0.0050				1			0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0035	0.0030	0.0001				1			0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0354	< 0.01					1			5
261.32	Acid Soluble Mn, ICP, test portion inorganic 965.09 (%)	0552	0.0000	0.0000				0			4
261.34	Acid Soluble Mn, ICP, test portion 2006.03A-C (%)	0423	0.0030	0.0000				1			0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0563	0.0031	0.0001				2			0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0527	0.0034	0.0001				2			0
261.99	Acid Soluble Mn, Other (%)	0389	0.0026	0.0000				2			0
261.99	Acid Soluble Mn, Other (%)	0524	0.0029	0.0000				2			0
261.99	Acid Soluble Mn, Other (%)	0515	0.0016	0.0032				2			4
281.00	Acid Soluble Hg, AA (ppm)	0534	< 0.05					0			5
281.30	Acid Soluble Hg, ICP (ppm)	0515	0.0000	0.0000				0			4
281.30	Acid Soluble Hg, ICP (ppm)	0527	< 0.001					0			5
281.30	Acid Soluble Hg, ICP (ppm)	0563	< 0.01					0			5
281.30	Acid Soluble Hg, ICP (ppm)	0450	< 0.5					0			5
281.99	Acid Soluble Hg, Other (ppm)	0524	0.0037	0.0006				2			0
281.99	Acid Soluble Hg, Other (ppm)	0035	22.00	1.800				2			0
281.99	Acid Soluble Hg, Other (ppm)	0220	< 0.01					2			5
281.99	Acid Soluble Hg, Other (ppm)	0405	< 0.01					2			5
281.99	Acid Soluble Hg, Other (ppm)	0481	< 0.5					2			5
289.30	Acid Soluble Mo, ICP (ppm)	0524	0.2829	0.0647				1			0
289.30	Acid Soluble Mo, ICP (ppm)	0255	0.0000	0.0000				1			4
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	0220	0.5000	0.0000				1			0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0563	0.2275	0.0156				1			0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0106	0.5000	1.000				1			4
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0527	< 0.001					1			5
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0136	< 5					1			5
289.34	Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm)	0515	3.363	2.796				1			0
289.99	Acid Soluble Mo, Other (ppm)	0405	0.3100	0.0800				2			0
289.99	Acid Soluble Mo, Other (ppm)	0220	0.3500	0.1000				2			0
289.99	Acid Soluble Mo, Other (ppm)	0481	< 100					2			5

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
291.30	Acid Soluble Ni, ICP (ppm)	0389	1.350	0.1000	2.188	0.7163	0.0993	5	-1.17		0
291.30	Acid Soluble Ni, ICP (ppm)	0444	1.620	0.0800	2.188	0.7163	0.0993	5	-0.79		0
291.30	Acid Soluble Ni, ICP (ppm)	0524	2.200	0.0622	2.188	0.7163	0.0993	5	0.02		0
291.30	Acid Soluble Ni, ICP (ppm)	0523	2.721	0.0141	2.188	0.7163	0.0993	5	0.74		0
291.30	Acid Soluble Ni, ICP (ppm)	0035	3.050	0.2400	2.188	0.7163	0.0993	5	1.20		0
291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	0220	3.100	0.4000				1			0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0394	2.298	0.0130	2.613	0.2813	0.0252	3	-1.12		0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0563	2.706	0.0391	2.613	0.2813	0.0252	3	0.33		0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0527	2.837	0.0234	2.613	0.2813	0.0252	3	0.79		0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0117	< 5		2.613	0.2813	0.0252	3			5
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0136	< 5		2.613	0.2813	0.0252	3			5
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	0515	6.063	2.837				1			0
291.99	Acid Soluble Ni, Other (ppm)	0405	2.500	1.000	5.648	5.545	1.168	5	-0.50		0
291.99	Acid Soluble Ni, Other (ppm)	0572	2.510	0.1400	5.648	5.545	1.168	5	-0.49		0
291.99	Acid Soluble Ni, Other (ppm)	0220	3.200	0.2000	5.648	5.545	1.168	5	-0.39		0
291.99	Acid Soluble Ni, Other (ppm)	0553	4.580	0.4000	5.648	5.545	1.168	5	-0.17		0
291.99	Acid Soluble Ni, Other (ppm)	0506	15.45	4.100	5.648	5.545	1.168	5	1.54		0
291.99	Acid Soluble Ni, Other (ppm)	0255	0.0000	0.0000	5.648	5.545	1.168	5			4
291.99	Acid Soluble Ni, Other (ppm)	0481	< 10		5.648	5.545	1.168	5			5
301.30	Acid Soluble Se, ICP (ppm)	0524	0.6470	0.1511				2			0
301.30	Acid Soluble Se, ICP (ppm)	0523	0.6958	0.0323				2			0
301.32	Acid Soluble Se, ICP, 2006.03 (ppm)	0220	0.9000	0.0000				1			0
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0563	1.154	0.0724				1			0
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0527	< 0.01					1			5
301.34	Acid Soluble Se, ICP, EPA 3050B/6010C (ppm)	0515	3.445	1.653				1			0
301.99	Acid Soluble Se, Other (ppm)	0220	0.7500	0.1000				2			0
301.99	Acid Soluble Se, Other (ppm)	0572	1.500	1.080				2			0
301.99	Acid Soluble Se, Other (ppm)	0255	0.0000	0.0000				2			4
301.99	Acid Soluble Se, Other (ppm)	0481	< 0.5					2			5
301.99	Acid Soluble Se, Other (ppm)	0405	< 1					2			5
311.00	Sodium, AA (%)	0553	0.0170	0.0020				1			0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0423	0.0115	0.0010				2			0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0527	0.0176	0.0003				2			0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0563	< 0.01					2			5
311.99	Sodium, Other (%)	0572	0.0090	0.0004				2			0
311.99	Sodium, Other (%)	0354	0.0300	0.0200				2			0
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	0553	< 0.002					0			5
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0552	0.3350	0.3100	8.592	9.185	0.4892	3	-0.73		0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0444	6.955	0.5300	8.592	9.185	0.4892	3	-0.14		0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0072	18.48	0.6275	8.592	9.185	0.4892	3	0.87		0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0255	0.0005	0.0010	8.592	9.185	0.4892	3			4
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0102	< 0.01		8.592	9.185	0.4892	3			5
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0354	< 0.01		8.592	9.185	0.4892	3			5
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0423	0.0010	0.0000				1			0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0394	0.0006	0.0000	0.0036	0.0047	0.0007	3	-0.52		0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0563	0.0013	0.0001	0.0036	0.0047	0.0007	3	-0.41		0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0043	0.0090	0.0020	0.0036	0.0047	0.0007	3	0.93		0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0106	0.0000	0.0000	0.0036	0.0047	0.0007	3			4
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0136	< 0.0025		0.0036	0.0047	0.0007	3			5
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0527	< 0.01		0.0036	0.0047	0.0007	3			5
321.99	Acid Soluble Zn, Other (%)	0572	0.0007	0.0001	0.0010	0.0006	0.0001	5	-0.56		0
321.99	Acid Soluble Zn, Other (%)	0405	0.0007	0.0000	0.0010	0.0006	0.0001	5	-0.48		0
321.99	Acid Soluble Zn, Other (%)	0515	0.0009	0.0001	0.0010	0.0006	0.0001	5	-0.25		0
321.99	Acid Soluble Zn, Other (%)	0524	0.0009	0.0001	0.0010	0.0006	0.0001	5	-0.25		0
321.99	Acid Soluble Zn, Other (%)	0506	0.0020	0.0000	0.0010	0.0006	0.0001	5	1.54		0
321.99	Acid Soluble Zn, Other (%)	0481	< 0.002		0.0010	0.0006	0.0001	5			5
321.99	Acid Soluble Zn, Other (%)	0389	< 0.1		0.0010	0.0006	0.0001	5			5

Interpreting Z Scores: Red indicates a normally distributed Z value >3 or <-3 (requires action), Orange = Z between 2 and 3 or -2 and -3 (warning) and Green = Z < 2 and >-2 (OK at 95%).
Flags indicate data usage: 0 = Used, 1 = rejected for duplicates too far apart, 2 = rejected as extreme outlier, 3 = removed from stats, 4 = rejected due to 0s submitted and 5 = LOD. A 9 flag indicates a data problem - scores not calculated. Robust statistics not used if < 6 labs used in calculations, in this case the Z Scores are grey and included for information only. IA Status describes where your result is relative to the Assigned Value ± IA. Red indicates Higher or Lower, Green indicates within the IA range. Method codes in light green indicate a guaranteed analyte. Individual lab values may be below detection limits but are reported solely for the purpose of this Proficiency Testing program.