

# magruder fertilizer

## check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 210111

Gypsum 70

### Statistical Summary

# Methods: 118

# Labs Reporting: 79

Issue Date : 02/28/2021

Method Code	Analyte & Method Sample # 210111	# 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		0.0090									
010.12	Total N, Salicylic (%)	1		0.0073									
010.60	Total N, Combustion (%)	5	3	0.0526	0.0444	0.0510	0.4900	0.0436	0.0315	85.49%	0.21	0.0093	6.26%
010.99	Total N, Other (%)	1		0.0503									
020.50	Total P2O5, ICP (%)	6	5	0.0520	0.0322	0.0624		0.0220	0.0123	35.21%		0.0017	6.07%
020.99	Total P2O5, Other (%)	1		0.2007									
041.20	Direct Available P2O5, Spectrophotometric (%)	1		0.0155									
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (%)	3	3	0.0943	0.0836	0.0943	0.6700	0.0836	0.0604	88.67%	0.29	0.0040	5.71%
041.50	Direct Available P2O5, ICP (%)	1		0.1000									
050.51	Soluble K2O, ICP (Citrate) (%)	1		0.1350									
050.52	Soluble K2O, ICP (Citrate-EDTA) (%)	2	2	0.0808	0.0873								
050.99	Soluble K2O, Other (%)	7	6	0.1264	0.0401	0.1174	0.4100	0.0403	0.0206	34.31%	0.23	0.0052	5.52%
060.99	Water (Free), Other (%)	1		1.019									
101.00	Acid Soluble Ca, AA, inorganic 965.09 (17%)	4	4	16.97	0.7831	16.97	1.0000	0.7831	0.4894	4.61%	1.82	0.4550	2.61%
101.03	Acid Soluble Ca, AA, 965.09, test portion 2006.03A-C w/dual acid (17%)	2	2	17.28	0.5181								
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (17%)	15	15	17.62	2.032	17.75	1.0000	1.981	0.6394	11.16%	4.62	0.4537	2.59%
101.31	Acid Soluble Ca, ICP, test portion organic 965.09 (17%)	3	3	17.08	0.8089	17.08	1.0000	0.8089	0.5838	4.74%	1.88	0.4233	2.61%
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (17%)	5	5	14.47	3.887	14.47	0.9236	3.887	2.173	26.86%	9.81	0.3404	2.68%
101.33	Acid Soluble Ca, ICP, 2017.02 (17%)	19	18	17.42	3.391	17.36	1.0000	1.304	0.3843	7.51%	3.04	0.4366	2.60%
101.70	Acid Soluble Ca, Titrimetric (17%)	7	7	16.46	1.852	16.87	1.0000	0.9959	0.4705	5.90%	2.32	0.1595	2.61%
101.99	Acid Soluble Ca, Other (17%)	14	13	16.93	3.789	17.50	1.0000	1.644	0.5699	9.39%	3.83	0.4938	2.60%
121.00	Acid Soluble Mg, AA, inorganic 965.09 (0.3%)	7	7	0.2963	0.0390	0.2983	0.2149	0.0395	0.0186	13.23%	0.43	0.0163	4.80%
121.03	Acid Soluble Mg, AA, 965.09, test portion 2006.03A-C w/dual acid ... (0.3%)	2	2	0.3872	0.0102								
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.3%)	14	14	0.3639	0.0633	0.3625	0.2181	0.0686	0.0229	18.94%	0.73	0.0285	4.66%
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (0.3%)	5	5	0.3436	0.0444	0.3436	0.2172	0.0444	0.0248	12.93%	0.48	0.0083	4.70%
121.33	Acid Soluble Mg, ICP, 2017.02 (0.3%)	19	19	0.3805	0.0968	0.3648	0.2182	0.0465	0.0133	12.75%	0.50	0.0201	4.66%
121.70	Acid Soluble Mg, Titrimetric (EDTA) (0.3%)	1		0.2850									
121.99	Acid Soluble Mg, Other (0.3%)	14	13	0.3828	0.0774	0.3672	0.2184	0.0650	0.0225	17.70%	0.69	0.0380	4.65%
131.00	Water Soluble Mg, AA (%)	1		0.3000									
131.70	Water Soluble Mg, Titrimetric (EDTA) (%)	2	2	0.6660	0.5246								
143.00	Elemental S, Gravimetric Sulfur - carbon disulfide soluble sulfur (%)	1		0.4950									
143.99	Elemental S, Other (%)	6	5	13.70	2.322	13.87		2.554	1.428	18.42%		0.2647	2.69%
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	9	9	13.84	1.039	14.10		0.3956	0.1649	2.81%		0.1989	2.69%

Method Code	Analyte & Method Sample # 210111	# 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)	Howitz %RSD
145.99	Sulfate S, HCl soluble, Other (%)	7	7	13.77	0.4099	13.77		0.4648	0.2196	3.38%		0.2414	2.70%
146.00	Total S in Liquid, Gravimetric - sulfate, sulfite, thiosulfate, a... (14%)	1		14.00									
148.00	Total S, Combustion (14%)	5	5	14.59	0.6113	14.59	0.9295	0.6113	0.3417	4.19%	1.53	0.6100	2.67%
148.01	Total S, Gravimetric - sulfate and elemental (14%)	14	13	14.25	0.7801	14.42	0.9208	0.5598	0.1941	3.88%	1.42	0.1090	2.68%
148.07	Total S, ICP, test portion as in 2017.02 (14%)	18	17	13.26	1.230	13.26	0.8629	1.126	0.3415	8.50%	3.04	0.4131	2.71%
148.99	Total S, Other (14%)	13	12	13.18	1.193	13.53	0.8766	0.5593	0.2018	4.13%	1.49	0.1617	2.70%
149.04	S - HNO3 soluble, ICP (%)	3	3	11.46	1.315	11.46		1.315	0.9489	11.47%		0.3109	2.77%
149.99	S - HNO3 soluble, Other (%)	1		13.55									
151.00	Acid Soluble As, AA, test portion 2006.03 modified w/dual acid (ppm)	1		1.990									
151.30	Acid Soluble As, ICP (ppm)	4	4	2.417	0.3849	2.417		0.3849	0.2406	15.93%		0.0590	14.01%
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	2	2	2.045	0.2899								
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	6	5	3.444	3.258	2.133		0.6096	0.3408	28.59%		0.2501	14.27%
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	2	2	3.373	0.1651								
151.99	Acid Soluble As, Other (ppm)	4	4	1.593	0.9120	1.593		0.9120	0.5700	57.27%		0.1450	14.91%
165.00	Acid Soluble B, Spectrophotometric (%)	1		0.0040									
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	3	2	0.0095	0.0067	0.0092	0.0044	0.0094	0.0083	102.22%	5.00	0.0008	8.10%
165.99	Acid Soluble B, Other (%)	6	5	0.0383	0.0890	0.0458	0.0099	0.0974	0.0544	212.58%	22.99	0.0327	6.36%
171.10	Water Soluble B, Spectrophotometric (%)	1		0.1000									
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)	8	7	0.3417	0.2069	0.2920		0.1102	0.0521	37.76%		0.0272	19.25%
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	2	2	0.2250	0.0354								
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	6	3	1.262	1.849	0.3446		0.0154	0.0111	4.46%		0.1048	18.78%
181.34	Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm)	2	1	0.1323	0.1870								
181.99	Acid Soluble Cd, Other (ppm)	4	4	0.8464	0.7020	0.8464		0.7020	0.4387	82.94%		0.0423	16.40%
190.00	Water Soluble Cl, Titrimetric (%)	1		0.1000									
191.30	Acid Soluble Cr, ICP (ppm)	9	8	44.73	13.61	46.59		15.06	6.654	32.32%		1.651	8.97%
191.32	Acid Soluble Cr, ICP, 2006.03 (ppm)	2	2	45.21	7.478								
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	6	6	64.44	20.87	69.82		9.724	4.962	13.93%		4.148	8.44%
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	2	2	52.88	2.489								
191.99	Acid Soluble Cr, Other (ppm)	3	3	41.71	15.75	41.71		15.75	11.37	37.76%		1.933	9.12%
202.30	Acid Soluble Co, ICP (ppm)	7	7	20.03	13.09	20.03	7.0077	14.85	7.015	74.15%	4.94	0.8479	10.19%
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	2	2	23.49	4.791								
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	6	6	30.65	11.47	32.90	10.8688	7.347	3.749	22.33%	1.57	1.231	9.46%
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	2	2	27.55	8.740								
202.99	Acid Soluble Co, Other (ppm)	4	4	26.34	3.316	26.34	8.9007	3.316	2.073	12.59%	0.87	2.201	9.78%
221.00	Acid Soluble Cu, AA, inorganic 965.09 (%)	5	3	0.0041	0.0037	0.0018	0.0052	0.0013	0.0009	74.36%	0.59	0.0007	10.38%
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	4	1	0.0040	0.0046	0.0018	0.0052	0.0013	0.0016	74.36%	0.59	0.0005	10.38%
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	2	2	0.0011	0.0004								
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	7	5	0.0010	0.0007	0.0007	0.0051	0.0003	0.0002	47.65%	0.15	0.0000	11.94%
221.99	Acid Soluble Cu, Other (%)	7	6	0.0008	0.0003	0.0007	0.0051	0.0002	0.0001	32.55%	0.10	0.0001	11.96%
241.00	Acid Soluble Fe, AA, inorganic 965.09 (%)	3	3	0.5233	0.0318	0.5233	0.0573	0.0318	0.0229	6.07%	1.29	0.0233	4.41%
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	4	4	0.5880	0.0531	0.5880	0.0638	0.0531	0.0332	9.03%	1.94	0.0295	4.33%
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (%)	1		0.7000									
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	4	4	0.7822	0.0741	0.7822	0.0832	0.0741	0.0463	9.47%	2.07	0.0493	4.15%

Method Code	Analyte & Method Sample # 210111	# 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
241.99	Acid Soluble Fe, Other (%)	4	4	0.6495	0.0476	0.6495	0.0699	0.0476	0.0298	7.33%	1.59	0.0342	4.27%
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)	10	9	3.867	3.399	3.103		1.896	0.7898	61.09%		0.3366	13.49%
251.32	Acid Soluble Pb, ICP, 2006.03 (ppm)	2	2	2.450	1.131								
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	7	6	3.586	2.159	2.899		1.428	0.7288	49.26%		0.4246	13.63%
251.34	Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm)	2	1	2.329	2.304								
251.99	Acid Soluble Pb, Other (ppm)	3	2	2.900	1.311	3.600		0.7071	0.6250	19.64%		0.5000	13.19%
261.11	Acid Soluble Mn, AA, total Mn (%)	1		0.0075									
261.12	Acid Soluble Mn, AA, inorganic 965.09 (%)	2	2	0.0085	0.0000								
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	2	1	0.0083	0.0024								
261.32	Acid Soluble Mn, ICP, test portion inorganic 965.09 (%)	1		0.0300									
261.34	Acid Soluble Mn, ICP, test portion 2006.03A-C (%)	1		0.0080									
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	4	3	0.0264	0.0429	0.0352	0.0085	0.0480	0.0346	136.38%	13.12	0.0031	6.62%
261.99	Acid Soluble Mn, Other (%)	4	4	0.0078	0.0006	0.0078	0.0058	0.0006	0.0004	7.17%	0.23	0.0010	8.30%
281.00	Acid Soluble Hg, AA (ppm)	3	1	0.0841	0.1032	0.0078		0.0006	0.0007	7.17%		0.0018	33.19%
281.30	Acid Soluble Hg, ICP (ppm)	5	2	0.2754	0.3749	0.4356		0.5587	0.4938	128.27%		0.0147	18.13%
281.99	Acid Soluble Hg, Other (ppm)	5	5	0.0527	0.0854	0.0527		0.0854	0.0477	161.92%		0.0089	24.91%
289.00	Acid Soluble Mo, AA, test portion 2006.03 modified w/dual acid (ppm)	1		2.045									
289.30	Acid Soluble Mo, ICP (ppm)	4	4	6.865	5.762	6.865	3.0595	5.762	3.601	83.93%	4.39	3.063	11.97%
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	1		2.950									
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	7	5	3.847	0.8521	3.764	2.1292	0.7819	0.4371	20.77%	0.86	0.1746	13.10%
289.34	Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm)	2	1	0.7815	0.9638								
289.99	Acid Soluble Mo, Other (ppm)	2	2	6.953	4.310								
291.30	Acid Soluble Ni, ICP (ppm)	9	8	22.54	5.537	23.03		6.475	2.862	28.12%		0.4553	9.98%
291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	2	2	23.99	4.964								
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	7	7	28.68	5.640	30.19		2.269	1.072	7.52%		1.758	9.58%
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	2	2	21.19	9.430								
291.99	Acid Soluble Ni, Other (ppm)	5	5	31.31	16.44	31.31		16.44	9.191	52.51%		8.570	9.53%
301.30	Acid Soluble Se, ICP (ppm)	3	3	2.095	2.303	2.095		2.303	1.662	109.89%		0.1974	14.31%
301.32	Acid Soluble Se, ICP, 2006.03 (ppm)	1		0.9500									
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	3	1	0.4590	0.7941	2.095		2.303	2.878	109.89%		0.2311	14.31%
301.34	Acid Soluble Se, ICP, EPA 3050B/6010C (ppm)	2	1	1.202	1.559								
301.99	Acid Soluble Se, Other (ppm)	5	3	36.95	80.25	61.22		103.3	74.55	168.74%		2.502	8.61%
311.00	Sodium, AA (%)	1		0.0970									
311.33	Sodium, ICP, test portion as in 2017.02 (%)	4	4	0.0844	0.0303	0.0844	0.0134	0.0303	0.0190	35.95%	5.26	0.0075	5.80%
311.99	Sodium, Other (%)	1		0.0950									
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	5	3	0.0051	0.0032	0.0045	0.0054	0.0019	0.0013	41.85%	0.80	0.0008	9.04%
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	5	3	0.0370	0.0440	0.0334	0.0083	0.0525	0.0379	157.30%	14.67	0.0542	6.67%
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	3	3	0.0018	0.0003	0.0018	0.0052	0.0003	0.0002	18.16%	0.15	0.0001	10.33%
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	8	8	0.0023	0.0005	0.0023	0.0052	0.0006	0.0003	26.85%	0.27	0.0001	10.00%
321.99	Acid Soluble Zn, Other (%)	7	6	0.0025	0.0014	0.0020	0.0052	0.0007	0.0003	33.21%	0.29	0.0005	10.21%

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.

Horwitz %RSD	
Average Range (R-bar)	
Method IA Ratio	
Robust % RSD	
Robust Uncertainty (U)	
Robust sd	
IA at Method Value	
Assigned Value Robust Mean	
Raw SD	
Raw Mean	
# Tests in Robust Calculations	
# Tests Submitted	
Analyte & Method Sample # 210111	
Method Code	

# magruder fertilizer

## check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 210111

Method Precision Report

Gypsum 70

Issue Date : 02/28/2021

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 (%)	7	6	0.1174	0.0355	0.0353	0.0054	0.0357	30.08%	4.64%	30.43%	6.566
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (17%)	15	13	17.81	1.551	1.527	0.3798	1.574	8.58%	2.13%	8.84%	4.144
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (17%)	5	5	14.47	3.887	3.881	0.2941	3.892	26.82%	2.03%	26.90%	13.23
101.33	Acid Soluble Ca, ICP, 2017.02 (17%)	19	16	17.38	1.053	1.021	0.3608	1.083	5.87%	2.08%	6.23%	3.002
101.70	Acid Soluble Ca, Titrimetric (17%)	7	6	17.12	0.6362	0.6287	0.1381	0.6437	3.67%	0.81%	3.76%	4.662
101.99	Acid Soluble Ca, Other (17%)	14	11	17.97	1.634	1.607	0.4205	1.661	8.94%	2.34%	9.25%	3.950
121.00	Acid Soluble Mg, AA, inorganic 965.09 (0.3%)	7	6	0.3082	0.0252	0.0245	0.0083	0.0259	7.95%	2.70%	8.40%	3.112
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.3%)	14	14	0.3639	0.0633	0.0605	0.0260	0.0659	16.64%	7.14%	18.10%	2.536
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (0.3%)	5	5	0.3436	0.0444	0.0441	0.0075	0.0447	12.84%	2.19%	13.03%	5.935
121.33	Acid Soluble Mg, ICP, 2017.02 (0.3%)	19	18	0.3602	0.0409	0.0387	0.0188	0.0430	10.74%	5.23%	11.95%	2.285
121.99	Acid Soluble Mg, Other (0.3%)	14	13	0.3738	0.0725	0.0667	0.0403	0.0779	17.85%	10.77%	20.85%	1.936
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	9	8	14.17	0.2872	0.2654	0.1554	0.3075	1.87%	1.10%	2.17%	1.979
145.99	Sulfate S, HCl soluble, Other (%)	7	7	13.77	0.4099	0.3827	0.2078	0.4354	2.78%	1.51%	3.16%	2.096
148.00	Total S, Combustion (14%)	5	5	14.59	0.6113	0.3889	0.6669	0.7720	2.67%	4.57%	5.29%	1.158
148.01	Total S, Gravimetric - sulfate and elemental (14%)	14	13	14.42	0.4937	0.4889	0.0967	0.4984	3.39%	0.67%	3.46%	5.152
148.07	Total S, ICP, test portion as in 2017.02 (14%)	18	15	13.34	0.9996	0.9671	0.3577	1.031	7.25%	2.68%	7.73%	2.883
148.99	Total S, Other (14%)	13	12	13.47	0.6420	0.6338	0.1447	0.6501	4.71%	1.07%	4.83%	4.493
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	6	5	2.133	0.6096	0.5906	0.2135	0.6280	27.70%	10.01%	29.45%	2.942
181.30	Acid Soluble Cd, ICP (ppm)	8	6	0.2644	0.0704	0.0688	0.0213	0.0720	26.02%	8.05%	27.24%	3.382
191.30	Acid Soluble Cr, ICP (ppm)	9	8	46.59	13.28	13.24	1.457	13.32	28.41%	3.13%	28.58%	9.143
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	6	5	72.73	5.300	4.823	3.106	5.737	6.63%	4.27%	7.89%	1.847
202.30	Acid Soluble Co, ICP (ppm)	7	7	20.03	13.09	13.08	0.8367	13.11	65.32%	4.18%	65.45%	15.67
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	6	5	35.10	4.004	3.921	1.148	4.085	11.17%	3.27%	11.64%	3.558
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	7	5	0.0007	0.0003	0.0003	0.0000	0.0003	47.43%	6.39%	47.86%	7.492
221.99	Acid Soluble Cu, Other (%)	7	6	0.0007	0.0002	0.0002	0.0001	0.0002	28.25%	7.23%	29.16%	4.033
251.30	Acid Soluble Pb, ICP (ppm)	10	8	2.748	1.376	1.354	0.3465	1.398	49.29%	12.61%	50.88%	4.034
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	7	5	3.764	0.7819	0.7748	0.1491	0.7890	20.58%	3.96%	20.96%	5.292
291.30	Acid Soluble Ni, ICP (ppm)	9	8	23.03	5.710	5.703	0.4093	5.717	24.77%	1.78%	24.83%	13.97
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	7	6	30.76	1.450	1.065	1.390	1.752	3.46%	4.52%	5.69%	1.260

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
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	8	8	0.0023	0.0005	0.0005	0.0001	0.0005	23.42%	4.94%	23.93%	4.843
321.99	Acid Soluble Zn, Other (%)	7	6	0.0020	0.0006	0.0005	0.0004	0.0007	25.95%	20.89%	33.31%	1.595

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 # 210111

Gypsum 70

Lab Values

# Methods: 118

# Labs Reporting: 79

Issue Date : 02/28/2021

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	0.0090	0.0000				1			0
010.12	Total N, Salicylic (%)	0568	0.0073	0.0042				1			0
010.60	Total N, Combustion (%)	0472	0.0165	0.0270	0.0510	0.0436	0.0093	3	-0.79		0
010.60	Total N, Combustion (%)	0354	0.0365	0.0010	0.0510	0.0436	0.0093	3	-0.33		0
010.60	Total N, Combustion (%)	0523	0.1000	0.0000	0.0510	0.0436	0.0093	3	1.12		0
010.60	Total N, Combustion (%)	0527	< 0.01		0.0510	0.0436	0.0093	3			5
010.60	Total N, Combustion (%)	0325	< 0.1		0.0510	0.0436	0.0093	3			5
010.99	Total N, Other (%)	0524	0.0503	0.0018				1			0
020.50	Total P2O5, ICP (%)	0524	0.0481	0.0060	0.0624	0.0220	0.0017	5	-0.57		0
020.50	Total P2O5, ICP (%)	0389	0.0500	0.0000	0.0624	0.0220	0.0017	5	-0.49		0
020.50	Total P2O5, ICP (%)	0472	0.0500	0.0000	0.0624	0.0220	0.0017	5	-0.49		0
020.50	Total P2O5, ICP (%)	0527	0.0637	0.0025	0.0624	0.0220	0.0017	5	0.05		0
020.50	Total P2O5, ICP (%)	0523	0.1000	0.0000	0.0624	0.0220	0.0017	5	1.50		0
020.50	Total P2O5, ICP (%)	0552	0.0000	0.0000	0.0624	0.0220	0.0017	5			4
020.99	Total P2O5, Other (%)	0515	0.2007	0.0055				1			0
041.20	Direct Available P2O5, Spectrophotometric (%)	0553	0.0155	0.0010				1			0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (%)	0568	0.0350	0.0100	0.0943	0.0836	0.0040	3	-0.71		0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (%)	0354	0.0580	0.0020	0.0943	0.0836	0.0040	3	-0.43		0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (%)	0472	0.1900	0.0000	0.0943	0.0836	0.0040	3	1.14		0
041.50	Direct Available P2O5, ICP (%)	0325	0.1000	0.0000				1			0
050.51	Soluble K2O, ICP (Citrate) (%)	0568	0.1350	0.0100				1			0
050.52	Soluble K2O, ICP (Citrate-EDTA) (%)	0354	0.0190	0.0000				2			0
050.52	Soluble K2O, ICP (Citrate-EDTA) (%)	0423	0.1425	0.0050				2			0
050.99	Soluble K2O, Other (%)	0553	0.0800	0.0020	0.1174	0.0403	0.0052	6	-0.83	OK	0
050.99	Soluble K2O, Other (%)	0325	0.1000	0.0000	0.1174	0.0403	0.0052	6	-0.38	OK	0
050.99	Soluble K2O, Other (%)	0523	0.1000	0.0000	0.1174	0.0403	0.0052	6	-0.38	OK	0
050.99	Soluble K2O, Other (%)	0524	0.1051	0.0088	0.1174	0.0403	0.0052	6	-0.27	OK	0
050.99	Soluble K2O, Other (%)	0563	0.1427	0.0159	0.1174	0.0403	0.0052	6	0.56	OK	0
050.99	Soluble K2O, Other (%)	0527	0.1767	0.0046	0.1174	0.0403	0.0052	6	1.31	OK	0
050.99	Soluble K2O, Other (%)	0552	0.1800	0.2200	0.1174	0.0403	0.0052	6	1.38	OK	1
060.99	Water (Free), Other (%)	0510	1.019	0.0244				1			0
101.00	Acid Soluble Ca, AA, inorganic 965.09 (17%)	0539	16.20	0.4000	16.97	0.7831	0.4550	4	-0.98		0
101.00	Acid Soluble Ca, AA, inorganic 965.09 (17%)	0535	16.40	0.2000	16.97	0.7831	0.4550	4	-0.73		0
101.00	Acid Soluble Ca, AA, inorganic 965.09 (17%)	0550	17.53	0.9200	16.97	0.7831	0.4550	4	0.72		0
101.00	Acid Soluble Ca, AA, inorganic 965.09 (17%)	0553	17.75	0.3000	16.97	0.7831	0.4550	4	1.00		0
101.03	Acid Soluble Ca, AA, 965.09, test portion 2006.03A-C w/dual acid (17%)	0546	16.91	0.3841				2			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				
101.03	Acid Soluble Ca, AA, 965.09, test portion 2006.03A-C w/dual acid (17%)	0534	17.65	0.2500				2			0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (17%)	0472	12.84	0.0700	17.75	1.981	0.4537	15	-2.48	Low	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (17%)	0568	15.00	0.0000	17.75	1.981	0.4537	15	-1.39	Low	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (17%)	0451	15.41	0.4800	17.75	1.981	0.4537	15	-1.18	Low	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (17%)	0073	15.76	0.5300	17.75	1.981	0.4537	15	-1.01	Low	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (17%)	0255	17.09	0.3050	17.75	1.981	0.4537	15	-0.33	OK	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (17%)	0234	17.29	0.2600	17.75	1.981	0.4537	15	-0.23	OK	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (17%)	0035	18.45	1.500	17.75	1.981	0.4537	15	0.35	OK	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (17%)	0377	18.49	0.1900	17.75	1.981	0.4537	15	0.37	OK	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (17%)	0096	18.56	0.4400	17.75	1.981	0.4537	15	0.41	OK	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (17%)	0360	18.57	0.0700	17.75	1.981	0.4537	15	0.41	OK	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (17%)	0354	18.90	0.2000	17.75	1.981	0.4537	15	0.58	High	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (17%)	0325	19.15	0.1000	17.75	1.981	0.4537	15	0.71	High	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (17%)	0450	19.23	0.7100	17.75	1.981	0.4537	15	0.74	High	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (17%)	0324	19.60	0.2000	17.75	1.981	0.4537	15	0.93	High	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (17%)	0444	19.99	1.750	17.75	1.981	0.4537	15	1.13	High	0
101.31	Acid Soluble Ca, ICP, test portion organic 965.09 (17%)	0023	16.50	0.2000	17.08	0.8089	0.4233	3	-0.71		0
101.31	Acid Soluble Ca, ICP, test portion organic 965.09 (17%)	0231	16.73	0.2700	17.08	0.8089	0.4233	3	-0.43		0
101.31	Acid Soluble Ca, ICP, test portion organic 965.09 (17%)	0422	18.00	0.8000	17.08	0.8089	0.4233	3	1.14		0
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (17%)	0521	10.21	0.0000	14.47	3.887	0.3404	5	-1.10		0
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (17%)	0095	11.15	0.2000	14.47	3.887	0.3404	5	-0.85		0
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (17%)	0423	14.45	0.5000	14.47	3.887	0.3404	5	-0.01		0
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (17%)	0220	17.23	0.3100	14.47	3.887	0.3404	5	0.71		0
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (17%)	0394	19.33	0.6920	14.47	3.887	0.3404	5	1.25		0
101.33	Acid Soluble Ca, ICP, 2017.02 (17%)	0025	7.235	0.3500	17.36	1.304	0.4366	18	-7.76	Low	0
101.33	Acid Soluble Ca, ICP, 2017.02 (17%)	0169	16.09	0.0200	17.36	1.304	0.4366	18	-0.97	Low	0
101.33	Acid Soluble Ca, ICP, 2017.02 (17%)	0040	16.33	0.2200	17.36	1.304	0.4366	18	-0.79	Low	0
101.33	Acid Soluble Ca, ICP, 2017.02 (17%)	0136	16.40	0.0000	17.36	1.304	0.4366	18	-0.73	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (17%)	0563	16.40	0.5589	17.36	1.304	0.4366	18	-0.73	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (17%)	0037	16.61	0.5671	17.36	1.304	0.4366	18	-0.57	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (17%)	0117	16.67	0.6003	17.36	1.304	0.4366	18	-0.52	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (17%)	0494	16.83	0.4189	17.36	1.304	0.4366	18	-0.40	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (17%)	0292	16.85	0.0100	17.36	1.304	0.4366	18	-0.39	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (17%)	0043	17.15	1.560	17.36	1.304	0.4366	18	-0.16	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (17%)	0034	17.59	0.5650	17.36	1.304	0.4366	18	0.18	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (17%)	0486	18.02	0.2600	17.36	1.304	0.4366	18	0.51	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (17%)	0055	18.03	0.0000	17.36	1.304	0.4366	18	0.52	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (17%)	0177	18.21	0.0378	17.36	1.304	0.4366	18	0.66	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (17%)	0368	18.41	0.1340	17.36	1.304	0.4366	18	0.81	High	0
101.33	Acid Soluble Ca, ICP, 2017.02 (17%)	0419	18.82	0.0300	17.36	1.304	0.4366	18	1.12	High	0
101.33	Acid Soluble Ca, ICP, 2017.02 (17%)	0527	19.73	0.3268	17.36	1.304	0.4366	18	1.82	High	0
101.33	Acid Soluble Ca, ICP, 2017.02 (17%)	0421	26.60	2.200	17.36	1.304	0.4366	18	7.09	High	0
101.33	Acid Soluble Ca, ICP, 2017.02 (17%)	0515	18.94	3.206	17.36	1.304	0.4366	18	1.21	High	1
101.70	Acid Soluble Ca, Titrimetric (17%)	0510	12.47	0.0520	16.87	0.9959	0.1595	7	-4.00	Low	0
101.70	Acid Soluble Ca, Titrimetric (17%)	0476	16.30	0.2543	16.87	0.9959	0.1595	7	-0.52	OK	0
101.70	Acid Soluble Ca, Titrimetric (17%)	0220	16.35	0.1400	16.87	0.9959	0.1595	7	-0.47	OK	0
101.70	Acid Soluble Ca, Titrimetric (17%)	0549	17.28	0.0900	16.87	0.9959	0.1595	7	0.37	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				
101.70	Acid Soluble Ca, Titrimetric (17%)	0532	17.40	0.1200	16.87	0.9959	0.1595	7	0.48	OK	0
101.70	Acid Soluble Ca, Titrimetric (17%)	0537	17.68	0.3200	16.87	0.9959	0.1595	7	0.73	OK	0
101.70	Acid Soluble Ca, Titrimetric (17%)	0529	17.71	0.1400	16.87	0.9959	0.1595	7	0.76	OK	0
101.99	Acid Soluble Ca, Other (17%)	0559	4.815	0.0100	17.50	1.644	0.4938	13	-7.72	Low	0
101.99	Acid Soluble Ca, Other (17%)	0552	15.53	1.220	17.50	1.644	0.4938	13	-1.20	Low	0
101.99	Acid Soluble Ca, Other (17%)	0558	16.05	0.1000	17.50	1.644	0.4938	13	-0.88	Low	0
101.99	Acid Soluble Ca, Other (17%)	0042	16.51	2.280	17.50	1.644	0.4938	13	-0.60	OK	0
101.99	Acid Soluble Ca, Other (17%)	0540	16.93	0.1600	17.50	1.644	0.4938	13	-0.35	OK	0
101.99	Acid Soluble Ca, Other (17%)	0506	17.71	0.0000	17.50	1.644	0.4938	13	0.13	OK	0
101.99	Acid Soluble Ca, Other (17%)	0444	17.75	1.030	17.50	1.644	0.4938	13	0.15	OK	0
101.99	Acid Soluble Ca, Other (17%)	0561	17.98	0.1500	17.50	1.644	0.4938	13	0.29	OK	0
101.99	Acid Soluble Ca, Other (17%)	0389	18.00	0.1900	17.50	1.644	0.4938	13	0.30	OK	0
101.99	Acid Soluble Ca, Other (17%)	0538	18.02	0.0700	17.50	1.644	0.4938	13	0.31	OK	0
101.99	Acid Soluble Ca, Other (17%)	0547	18.65	0.1000	17.50	1.644	0.4938	13	0.70	High	0
101.99	Acid Soluble Ca, Other (17%)	0231	19.40	0.0000	17.50	1.644	0.4938	13	1.16	High	0
101.99	Acid Soluble Ca, Other (17%)	0027	21.63	1.110	17.50	1.644	0.4938	13	2.51	High	0
101.99	Acid Soluble Ca, Other (17%)	0390	18.00	4.200	17.50	1.644	0.4938	13	0.30	OK	1
121.00	Acid Soluble Mg, AA, inorganic 965.09 (0.3%)	0537	0.2250	0.0500	0.2983	0.0395	0.0163	7	-1.68	OK	0
121.00	Acid Soluble Mg, AA, inorganic 965.09 (0.3%)	0535	0.2850	0.0100	0.2983	0.0395	0.0163	7	-0.30	OK	0
121.00	Acid Soluble Mg, AA, inorganic 965.09 (0.3%)	0539	0.2850	0.0100	0.2983	0.0395	0.0163	7	-0.30	OK	0
121.00	Acid Soluble Mg, AA, inorganic 965.09 (0.3%)	0040	0.2950	0.0100	0.2983	0.0395	0.0163	7	-0.08	OK	0
121.00	Acid Soluble Mg, AA, inorganic 965.09 (0.3%)	0309	0.3100	0.0200	0.2983	0.0395	0.0163	7	0.27	OK	0
121.00	Acid Soluble Mg, AA, inorganic 965.09 (0.3%)	0553	0.3255	0.0110	0.2983	0.0395	0.0163	7	0.62	OK	0
121.00	Acid Soluble Mg, AA, inorganic 965.09 (0.3%)	0550	0.3485	0.0030	0.2983	0.0395	0.0163	7	1.15	OK	0
121.03	Acid Soluble Mg, AA, 965.09, test portion 2006.03A-C w/dual acid ... (0.3%)	0534	0.3800	0.0000				2			0
121.03	Acid Soluble Mg, AA, 965.09, test portion 2006.03A-C w/dual acid ... (0.3%)	0546	0.3944	0.0040				2			0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.3%)	0377	0.2600	0.0200	0.3625	0.0686	0.0285	14	-1.49	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.3%)	0472	0.3000	0.0000	0.3625	0.0686	0.0285	14	-0.91	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.3%)	0444	0.3050	0.0500	0.3625	0.0686	0.0285	14	-0.84	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.3%)	0035	0.3195	0.0430	0.3625	0.0686	0.0285	14	-0.63	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.3%)	0231	0.3200	0.0000	0.3625	0.0686	0.0285	14	-0.62	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.3%)	0234	0.3300	0.0400	0.3625	0.0686	0.0285	14	-0.47	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.3%)	0354	0.3550	0.0100	0.3625	0.0686	0.0285	14	-0.11	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.3%)	0568	0.3650	0.0100	0.3625	0.0686	0.0285	14	0.04	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.3%)	0360	0.3815	0.0030	0.3625	0.0686	0.0285	14	0.28	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.3%)	0255	0.3935	0.0410	0.3625	0.0686	0.0285	14	0.45	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.3%)	0451	0.4022	0.0164	0.3625	0.0686	0.0285	14	0.58	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.3%)	0390	0.4355	0.0810	0.3625	0.0686	0.0285	14	1.06	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.3%)	0073	0.4420	0.0540	0.3625	0.0686	0.0285	14	1.16	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.3%)	0324	0.4850	0.0300	0.3625	0.0686	0.0285	14	1.78	OK	0
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (0.3%)	0292	0.3000	0.0000	0.3436	0.0444	0.0083	5	-0.98		0
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (0.3%)	0095	0.3150	0.0100	0.3436	0.0444	0.0083	5	-0.64		0
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (0.3%)	0394	0.3208	0.0057	0.3436	0.0444	0.0083	5	-0.51		0
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (0.3%)	0423	0.3820	0.0060	0.3436	0.0444	0.0083	5	0.87		0
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (0.3%)	0220	0.4000	0.0200	0.3436	0.0444	0.0083	5	1.27		0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.3%)	0023	0.2780	0.0000	0.3648	0.0465	0.0201	19	-1.87	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.3%)	0521	0.3080	0.0000	0.3648	0.0465	0.0201	19	-1.22	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				
121.33	Acid Soluble Mg, ICP, 2017.02 (0.3%)	0136	0.3100	0.0200	0.3648	0.0465	0.0201	19	-1.18	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.3%)	0561	0.3250	0.0100	0.3648	0.0465	0.0201	19	-0.85	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.3%)	0043	0.3350	0.0100	0.3648	0.0465	0.0201	19	-0.64	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.3%)	0368	0.3366	0.0535	0.3648	0.0465	0.0201	19	-0.61	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.3%)	0419	0.3400	0.0200	0.3648	0.0465	0.0201	19	-0.53	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.3%)	0515	0.3623	0.0367	0.3648	0.0465	0.0201	19	-0.05	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.3%)	0177	0.3632	0.0617	0.3648	0.0465	0.0201	19	-0.03	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.3%)	0055	0.3650	0.0300	0.3648	0.0465	0.0201	19	0.00	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.3%)	0486	0.3650	0.0100	0.3648	0.0465	0.0201	19	0.00	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.3%)	0025	0.3725	0.0030	0.3648	0.0465	0.0201	19	0.17	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.3%)	0169	0.3855	0.0450	0.3648	0.0465	0.0201	19	0.45	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.3%)	0494	0.3890	0.0220	0.3648	0.0465	0.0201	19	0.52	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.3%)	0037	0.3982	0.0043	0.3648	0.0465	0.0201	19	0.72	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.3%)	0563	0.4023	0.0055	0.3648	0.0465	0.0201	19	0.81	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.3%)	0117	0.4093	0.0089	0.3648	0.0465	0.0201	19	0.96	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.3%)	0527	0.4398	0.0106	0.3648	0.0465	0.0201	19	1.61	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.3%)	0421	0.7450	0.0300	0.3648	0.0465	0.0201	19	8.17	High	0
121.70	Acid Soluble Mg, Titrimetric (EDTA) (0.3%)	0532	0.2850	0.0500				1			0
121.99	Acid Soluble Mg, Other (0.3%)	0540	0.2900	0.0800	0.3672	0.0650	0.0380	13	-1.19	OK	0
121.99	Acid Soluble Mg, Other (0.3%)	0524	0.2932	0.0164	0.3672	0.0650	0.0380	13	-1.14	OK	0
121.99	Acid Soluble Mg, Other (0.3%)	0405	0.3350	0.0300	0.3672	0.0650	0.0380	13	-0.50	OK	0
121.99	Acid Soluble Mg, Other (0.3%)	0042	0.3400	0.0000	0.3672	0.0650	0.0380	13	-0.42	OK	0
121.99	Acid Soluble Mg, Other (0.3%)	0506	0.3435	0.0150	0.3672	0.0650	0.0380	13	-0.36	OK	0
121.99	Acid Soluble Mg, Other (0.3%)	0558	0.3450	0.0100	0.3672	0.0650	0.0380	13	-0.34	OK	0
121.99	Acid Soluble Mg, Other (0.3%)	0027	0.3485	0.0010	0.3672	0.0650	0.0380	13	-0.29	OK	0
121.99	Acid Soluble Mg, Other (0.3%)	0523	0.3500	0.1000	0.3672	0.0650	0.0380	13	-0.26	OK	0
121.99	Acid Soluble Mg, Other (0.3%)	0389	0.3600	0.0000	0.3672	0.0650	0.0380	13	-0.11	OK	0
121.99	Acid Soluble Mg, Other (0.3%)	0547	0.4050	0.0100	0.3672	0.0650	0.0380	13	0.58	OK	0
121.99	Acid Soluble Mg, Other (0.3%)	0516	0.4435	0.1090	0.3672	0.0650	0.0380	13	1.17	OK	0
121.99	Acid Soluble Mg, Other (0.3%)	0552	0.4550	0.1100	0.3672	0.0650	0.0380	13	1.35	OK	0
121.99	Acid Soluble Mg, Other (0.3%)	0515	0.5511	0.0121	0.3672	0.0650	0.0380	13	2.83	OK	0
121.99	Acid Soluble Mg, Other (0.3%)	0450	< 0.5		0.3672	0.0650	0.0380	13			5
131.00	Water Soluble Mg, AA (%)	0538	0.3000	0.0200				1			0
131.70	Water Soluble Mg, Titrimetric (EDTA) (%)	0549	0.2950	0.0500				2			0
131.70	Water Soluble Mg, Titrimetric (EDTA) (%)	0510	1.037	0.0506				2			0
143.00	Elemental S, Gravimetric Sulfur - carbon disulfide soluble sulfur (%)	0405	0.4950	0.0700				1			0
143.99	Elemental S, Other (%)	0472	9.445	0.0700	13.87	2.554	0.2647	5	-1.51		0
143.99	Elemental S, Other (%)	0368	14.15	0.0323	13.87	2.554	0.2647	5	0.10		0
143.99	Elemental S, Other (%)	0255	14.67	0.2910	13.87	2.554	0.2647	5	0.27		0
143.99	Elemental S, Other (%)	0389	15.17	0.1300	13.87	2.554	0.2647	5	0.44		0
143.99	Elemental S, Other (%)	0325	15.90	0.8000	13.87	2.554	0.2647	5	0.69		0
143.99	Elemental S, Other (%)	0390	12.85	2.900	13.87	2.554	0.2647	5	-0.35		1
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0444	11.16	0.4400	14.10	0.3956	0.1989	9	-6.85	NA	0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0564	13.58	0.0000	14.10	0.3956	0.1989	9	-1.20	NA	0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0538	13.99	0.2200	14.10	0.3956	0.1989	9	-0.25	NA	0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0549	14.11	0.1900	14.10	0.3956	0.1989	9	0.02	NA	0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0550	14.21	0.2700	14.10	0.3956	0.1989	9	0.25	NA	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				
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0561	14.24	0.0400	14.10	0.3956	0.1989	9	0.33	NA	0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0405	14.36	0.1100	14.10	0.3956	0.1989	9	0.60	NA	0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0029	14.42	0.0600	14.10	0.3956	0.1989	9	0.75	NA	0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0027	14.47	0.4600	14.10	0.3956	0.1989	9	0.87	NA	0
145.99	Sulfate S, HCl soluble, Other (%)	0444	13.17	0.2200	13.77	0.4648	0.2414	7	-1.16	NA	0
145.99	Sulfate S, HCl soluble, Other (%)	0419	13.35	0.3600	13.77	0.4648	0.2414	7	-0.81	NA	0
145.99	Sulfate S, HCl soluble, Other (%)	0562	13.60	0.3000	13.77	0.4648	0.2414	7	-0.32	NA	0
145.99	Sulfate S, HCl soluble, Other (%)	0532	13.87	0.0700	13.77	0.4648	0.2414	7	0.19	NA	0
145.99	Sulfate S, HCl soluble, Other (%)	0537	13.98	0.5400	13.77	0.4648	0.2414	7	0.42	NA	0
145.99	Sulfate S, HCl soluble, Other (%)	0136	14.10	0.0000	13.77	0.4648	0.2414	7	0.65	NA	0
145.99	Sulfate S, HCl soluble, Other (%)	0553	14.30	0.2000	13.77	0.4648	0.2414	7	1.04	NA	0
146.00	Total S in Liquid, Gravimetric - sulfate, sulfite, thiosulfate, a... (14%)	0538	14.00	0.2200				1			0
148.00	Total S, Combustion (14%)	0049	13.76	0.0200	14.59	0.6113	0.6100	5	-1.36		0
148.00	Total S, Combustion (14%)	0114	14.44	0.1400	14.59	0.6113	0.6100	5	-0.24		0
148.00	Total S, Combustion (14%)	0136	14.50	1.800	14.59	0.6113	0.6100	5	-0.15		0
148.00	Total S, Combustion (14%)	0157	14.80	0.0000	14.59	0.6113	0.6100	5	0.35		0
148.00	Total S, Combustion (14%)	0451	15.45	1.090	14.59	0.6113	0.6100	5	1.40		0
148.01	Total S, Gravimetric - sulfate and elemental (14%)	0564	13.67	0.0400	14.42	0.5598	0.1090	13	-1.33	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (14%)	0549	13.77	0.0400	14.42	0.5598	0.1090	13	-1.15	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (14%)	0537	14.13	0.1200	14.42	0.5598	0.1090	13	-0.51	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (14%)	0073	14.14	0.0300	14.42	0.5598	0.1090	13	-0.50	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (14%)	0534	14.15	0.1000	14.42	0.5598	0.1090	13	-0.47	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (14%)	0444	14.16	0.3000	14.42	0.5598	0.1090	13	-0.46	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (14%)	0231	14.20	0.0000	14.42	0.5598	0.1090	13	-0.39	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (14%)	0029	14.42	0.0600	14.42	0.5598	0.1090	13	0.01	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (14%)	0476	14.71	0.1875	14.42	0.5598	0.1090	13	0.52	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (14%)	0405	14.85	0.1800	14.42	0.5598	0.1090	13	0.78	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (14%)	0561	14.96	0.0600	14.42	0.5598	0.1090	13	0.97	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (14%)	0055	15.00	0.2000	14.42	0.5598	0.1090	13	1.04	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (14%)	0324	15.25	0.1000	14.42	0.5598	0.1090	13	1.49	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (14%)	0485	12.10	3.246	14.42	0.5598	0.1090	13	-4.14	Low	1
148.07	Total S, ICP, test portion as in 2017.02 (14%)	0521	10.17	0.0000	13.26	1.126	0.4131	17	-2.74	Low	0
148.07	Total S, ICP, test portion as in 2017.02 (14%)	0023	11.90	0.0000	13.26	1.126	0.4131	17	-1.21	Low	0
148.07	Total S, ICP, test portion as in 2017.02 (14%)	0117	12.07	0.3606	13.26	1.126	0.4131	17	-1.06	Low	0
148.07	Total S, ICP, test portion as in 2017.02 (14%)	0494	12.48	0.7597	13.26	1.126	0.4131	17	-0.69	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (14%)	0040	12.65	0.3000	13.26	1.126	0.4131	17	-0.54	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (14%)	0546	12.73	0.2482	13.26	1.126	0.4131	17	-0.47	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (14%)	0563	12.75	0.3008	13.26	1.126	0.4131	17	-0.45	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (14%)	0444	13.18	0.0300	13.26	1.126	0.4131	17	-0.07	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (14%)	0037	13.25	0.1570	13.26	1.126	0.4131	17	0.00	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (14%)	0169	13.28	0.1100	13.26	1.126	0.4131	17	0.02	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (14%)	0177	13.30	0.0842	13.26	1.126	0.4131	17	0.04	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (14%)	0292	13.79	0.1100	13.26	1.126	0.4131	17	0.47	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (14%)	0394	14.34	0.5350	13.26	1.126	0.4131	17	0.96	High	0
148.07	Total S, ICP, test portion as in 2017.02 (14%)	0486	14.37	0.2000	13.26	1.126	0.4131	17	0.99	High	0
148.07	Total S, ICP, test portion as in 2017.02 (14%)	0043	14.40	1.560	13.26	1.126	0.4131	17	1.01	High	0
148.07	Total S, ICP, test portion as in 2017.02 (14%)	0421	14.40	2.000	13.26	1.126	0.4131	17	1.01	High	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				
148.07	Total S, ICP, test portion as in 2017.02 (14%)	0527	15.56	0.2680	13.26	1.126	0.4131	17	2.05	High	0
148.07	Total S, ICP, test portion as in 2017.02 (14%)	0515	14.15	3.895	13.26	1.126	0.4131	17	0.79	High	1
148.99	Total S, Other (14%)	0523	11.92	0.3100	13.53	0.5593	0.1617	12	-2.89	Low	0
148.99	Total S, Other (14%)	0539	12.85	0.1000	13.53	0.5593	0.1617	12	-1.22	OK	0
148.99	Total S, Other (14%)	0558	13.05	0.3000	13.53	0.5593	0.1617	12	-0.86	OK	0
148.99	Total S, Other (14%)	0535	13.15	0.1000	13.53	0.5593	0.1617	12	-0.68	OK	0
148.99	Total S, Other (14%)	0567	13.51	0.0200	13.53	0.5593	0.1617	12	-0.04	OK	0
148.99	Total S, Other (14%)	0559	13.53	0.0400	13.53	0.5593	0.1617	12	0.00	OK	0
148.99	Total S, Other (14%)	0506	13.60	0.0000	13.53	0.5593	0.1617	12	0.12	OK	0
148.99	Total S, Other (14%)	0422	13.90	0.3400	13.53	0.5593	0.1617	12	0.66	OK	0
148.99	Total S, Other (14%)	0532	13.92	0.0800	13.53	0.5593	0.1617	12	0.69	OK	0
148.99	Total S, Other (14%)	0540	14.00	0.1000	13.53	0.5593	0.1617	12	0.84	OK	0
148.99	Total S, Other (14%)	0562	14.08	0.3500	13.53	0.5593	0.1617	12	0.97	OK	0
148.99	Total S, Other (14%)	0354	14.10	0.2000	13.53	0.5593	0.1617	12	1.02	OK	0
148.99	Total S, Other (14%)	0516	9.780	1.680	13.53	0.5593	0.1617	12	-6.71	Low	1
149.04	S - HNO3 soluble, ICP (%)	0524	10.68	0.1628	11.46	1.315	0.3109	3	-0.59		0
149.04	S - HNO3 soluble, ICP (%)	0423	10.73	0.2500	11.46	1.315	0.3109	3	-0.56		0
149.04	S - HNO3 soluble, ICP (%)	0231	12.98	0.5200	11.46	1.315	0.3109	3	1.15		0
149.99	S - HNO3 soluble, Other (%)	0547	13.55	0.1000				1			0
151.00	Acid Soluble As, AA, test portion 2006.03 modified w/dual acid (ppm)	0534	1.990	0.0600				1			0
151.30	Acid Soluble As, ICP (ppm)	0255	1.999	0.1160	2.417	0.3849	0.0590	4	-1.09		0
151.30	Acid Soluble As, ICP (ppm)	0523	2.230	0.0270	2.417	0.3849	0.0590	4	-0.49		0
151.30	Acid Soluble As, ICP (ppm)	0524	2.560	0.0330	2.417	0.3849	0.0590	4	0.37		0
151.30	Acid Soluble As, ICP (ppm)	0476	2.880	0.0600	2.417	0.3849	0.0590	4	1.20		0
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	0529	1.840	0.0800				2			0
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	0220	2.250	0.3000				2			0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0515	1.365	0.5830	2.133	0.6096	0.2501	5	-1.10		0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0037	1.912	0.1830	2.133	0.6096	0.2501	5	-0.32		0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0527	2.113	0.1963	2.133	0.6096	0.2501	5	-0.03		0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0136	2.225	0.1100	2.133	0.6096	0.2501	5	0.13		0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0563	3.048	0.1781	2.133	0.6096	0.2501	5	1.31		0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0117	< 10		2.133	0.6096	0.2501	5			5
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	0515	3.257	0.9890				2			0
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	0368	3.490	0.2800				2			0
151.99	Acid Soluble As, Other (ppm)	0550	0.2350	0.1300	1.593	0.9120	0.1450	4	-1.49		0
151.99	Acid Soluble As, Other (ppm)	0506	1.935	0.4500	1.593	0.9120	0.1450	4	0.38		0
151.99	Acid Soluble As, Other (ppm)	0405	2.000	0.0000	1.593	0.9120	0.1450	4	0.45		0
151.99	Acid Soluble As, Other (ppm)	0220	2.200	0.0000	1.593	0.9120	0.1450	4	0.67		0
165.00	Acid Soluble B, Spectrophotometric (%)	0553	0.0040	0.0000				1			0
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	0389	0.0026	0.0005				2			0
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	0494	0.0159	0.0011				2			0
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	0354	< 0.01					2			5
165.99	Acid Soluble B, Other (%)	0515	0.0002	0.0000	0.0458	0.0974	0.0327	5	-0.41		0
165.99	Acid Soluble B, Other (%)	0423	0.0025	0.0010	0.0458	0.0974	0.0327	5	-0.39		0
165.99	Acid Soluble B, Other (%)	0524	0.0029	0.0013	0.0458	0.0974	0.0327	5	-0.39		0
165.99	Acid Soluble B, Other (%)	0563	0.0035	0.0010	0.0458	0.0974	0.0327	5	-0.38		0
165.99	Acid Soluble B, Other (%)	0552	0.2200	0.1600	0.0458	0.0974	0.0327	5	1.56		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				
165.99	Acid Soluble B, Other (%)	0527	< 0.001		0.0458	0.0974	0.0327	5			5
171.10	Water Soluble B, Spectrophotometric (%)	0534	< 0.1					0			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)	0389	0.1800	0.0200	0.2920	0.1102	0.0272	7	-0.92	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0476	0.2050	0.0100	0.2920	0.1102	0.0272	7	-0.71	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0523	0.2560	0.0133	0.2920	0.1102	0.0272	7	-0.30	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0394	0.2645	0.0170	0.2920	0.1102	0.0272	7	-0.23	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0444	0.3050	0.0300	0.2920	0.1102	0.0272	7	0.11	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0524	0.3759	0.0598	0.2920	0.1102	0.0272	7	0.69	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0419	0.8300	0.0400	0.2920	0.1102	0.0272	7	4.41	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0255	0.3170	0.1880	0.2920	0.1102	0.0272	7	0.21	NA	1
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	0529	0.2000	0.0200				2			0
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	0220	0.2500	0.1000				2			0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0515	0.3349	0.2563	0.3446	0.0154	0.1048	3	-0.51		0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0527	0.3366	0.0426	0.3446	0.0154	0.1048	3	-0.42		0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0563	0.3623	0.0156	0.3446	0.0154	0.1048	3	0.93		0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0494	< 0.54		0.3446	0.0154	0.1048	3			5
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0136	< 1		0.3446	0.0154	0.1048	3			5
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0117	< 5		0.3446	0.0154	0.1048	3			5
181.34	Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm)	0368	0.2645	0.0790				1			0
181.34	Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm)	0515	0.0000	0.0000				1			4
181.99	Acid Soluble Cd, Other (ppm)	0220	0.2500	0.1000	0.8464	0.7020	0.0423	4	-0.85		0
181.99	Acid Soluble Cd, Other (ppm)	0405	0.3600	0.0000	0.8464	0.7020	0.0423	4	-0.69		0
181.99	Acid Soluble Cd, Other (ppm)	0506	1.001	0.0190	0.8464	0.7020	0.0423	4	0.22		0
181.99	Acid Soluble Cd, Other (ppm)	0550	1.775	0.0500	0.8464	0.7020	0.0423	4	1.32		0
190.00	Water Soluble Cl, Titrimetric (%)	0553	< 0.1					0			5
191.30	Acid Soluble Cr, ICP (ppm)	0389	27.25	0.6000	46.59	15.06	1.651	8	-1.17	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0476	29.72	2.440	46.59	15.06	1.651	8	-1.02	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0524	45.26	3.867	46.59	15.06	1.651	8	-0.08	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0444	46.02	0.9300	46.59	15.06	1.651	8	-0.03	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0394	47.60	0.0000	46.59	15.06	1.651	8	0.06	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0450	53.50	3.000	46.59	15.06	1.651	8	0.42	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0419	55.77	1.230	46.59	15.06	1.651	8	0.56	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0523	67.57	1.140	46.59	15.06	1.651	8	1.27	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0035	29.90	11.00	46.59	15.06	1.651	8	-1.01	NA	1
191.32	Acid Soluble Cr, ICP, 2006.03 (ppm)	0529	39.93	0.2100				2			0
191.32	Acid Soluble Cr, ICP, 2006.03 (ppm)	0220	50.50	15.00				2			0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0136	22.95	5.900	69.82	9.724	4.148	6	-4.29	NA	0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0037	67.15	2.266	69.82	9.724	4.148	6	-0.24	NA	0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0527	70.69	0.5860	69.82	9.724	4.148	6	0.08	NA	0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0494	70.82	3.900	69.82	9.724	4.148	6	0.09	NA	0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0515	73.79	5.429	69.82	9.724	4.148	6	0.36	NA	0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0563	81.23	6.806	69.82	9.724	4.148	6	1.05	NA	0
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	0368	51.12	6.310				2			0
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	0515	54.64	8.396				2			0
191.99	Acid Soluble Cr, Other (ppm)	0550	23.64	0.8000	41.71	15.75	1.933	3	-1.15		0
191.99	Acid Soluble Cr, Other (ppm)	0220	49.00	4.000	41.71	15.75	1.933	3	0.46		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				
191.99	Acid Soluble Cr, Other (ppm)	0405	52.50	1.000	41.71	15.75	1.933	3	0.68		0
202.30	Acid Soluble Co, ICP (ppm)	0550	1.825	0.0500	20.03	14.85	0.8479	7	-1.11	Low	0
202.30	Acid Soluble Co, ICP (ppm)	0389	10.95	0.9700	20.03	14.85	0.8479	7	-0.55	Low	0
202.30	Acid Soluble Co, ICP (ppm)	0035	12.30	2.200	20.03	14.85	0.8479	7	-0.47	Low	0
202.30	Acid Soluble Co, ICP (ppm)	0476	15.32	1.840	20.03	14.85	0.8479	7	-0.29	OK	0
202.30	Acid Soluble Co, ICP (ppm)	0524	31.68	0.0851	20.03	14.85	0.8479	7	0.71	High	0
202.30	Acid Soluble Co, ICP (ppm)	0419	32.69	0.0000	20.03	14.85	0.8479	7	0.77	High	0
202.30	Acid Soluble Co, ICP (ppm)	0523	35.42	0.7900	20.03	14.85	0.8479	7	0.94	High	0
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	0220	20.10	0.2000				2			0
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	0423	26.88	0.6500				2			0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0136	8.400	1.800	32.90	7.347	1.231	6	-2.97	Low	0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0527	29.98	0.0383	32.90	7.347	1.231	6	-0.35	OK	0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0037	32.38	2.111	32.90	7.347	1.231	6	-0.06	OK	0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0515	35.94	0.0674	32.90	7.347	1.231	6	0.37	OK	0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0494	36.98	0.4500	32.90	7.347	1.231	6	0.49	OK	0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0563	40.23	2.919	32.90	7.347	1.231	6	0.89	OK	0
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	0368	21.37	0.4300				2			0
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	0515	33.73	4.830				2			0
202.99	Acid Soluble Co, Other (ppm)	0220	22.10	0.4000	26.34	3.316	2.201	4	-1.28		0
202.99	Acid Soluble Co, Other (ppm)	0506	26.30	0.8000	26.34	3.316	2.201	4	-0.01		0
202.99	Acid Soluble Co, Other (ppm)	0405	26.75	1.500	26.34	3.316	2.201	4	0.12		0
202.99	Acid Soluble Co, Other (ppm)	0255	30.19	6.102	26.34	3.316	2.201	4	1.16		0
221.00	Acid Soluble Cu, AA, inorganic 965.09 (%)	0550	0.0003	0.0001	0.0018	0.0013	0.0007	3	-1.15		0
221.00	Acid Soluble Cu, AA, inorganic 965.09 (%)	0535	0.0025	0.0010	0.0018	0.0013	0.0007	3	0.56		0
221.00	Acid Soluble Cu, AA, inorganic 965.09 (%)	0539	0.0026	0.0009	0.0018	0.0013	0.0007	3	0.60		0
221.00	Acid Soluble Cu, AA, inorganic 965.09 (%)	0553	< 0.005		0.0018	0.0013	0.0007	3			5
221.00	Acid Soluble Cu, AA, inorganic 965.09 (%)	0534	< 0.01		0.0018	0.0013	0.0007	3			5
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0035	0.0009	0.0005				1			0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0255	0.0000	0.0000				1			4
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0552	0.0050	0.0100				1			4
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0354	< 0.01					1			5
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	0220	0.0008	0.0001				2			0
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	0394	0.0014	0.0001				2			0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0419	0.0002	0.0001	0.0007	0.0003	0.0000	5	-1.44		0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0368	0.0007	0.0001	0.0007	0.0003	0.0000	5	-0.13		0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0563	0.0008	0.0000	0.0007	0.0003	0.0000	5	0.26		0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0527	0.0009	0.0000	0.0007	0.0003	0.0000	5	0.52		0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0037	0.0010	0.0000	0.0007	0.0003	0.0000	5	0.79		0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0515	0.0012	0.0004	0.0007	0.0003	0.0000	5	1.31		1
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0136	< 0.0025		0.0007	0.0003	0.0000	5			5
221.99	Acid Soluble Cu, Other (%)	0389	0.0005	0.0001	0.0007	0.0002	0.0001	6	-0.96	OK	0
221.99	Acid Soluble Cu, Other (%)	0476	0.0005	0.0000	0.0007	0.0002	0.0001	6	-0.76	OK	0
221.99	Acid Soluble Cu, Other (%)	0220	0.0007	0.0000	0.0007	0.0002	0.0001	6	0.03	OK	0
221.99	Acid Soluble Cu, Other (%)	0405	0.0008	0.0001	0.0007	0.0002	0.0001	6	0.23	OK	0
221.99	Acid Soluble Cu, Other (%)	0524	0.0008	0.0001	0.0007	0.0002	0.0001	6	0.23	OK	0
221.99	Acid Soluble Cu, Other (%)	0523	0.0010	0.0000	0.0007	0.0002	0.0001	6	1.22	OK	0
221.99	Acid Soluble Cu, Other (%)	0515	0.0012	0.0004	0.0007	0.0002	0.0001	6	2.01	OK	1

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				
241.00	Acid Soluble Fe, AA, inorganic 965.09 (%)	0535	0.5050	0.0100	0.5233	0.0318	0.0233	3	-0.58		0
241.00	Acid Soluble Fe, AA, inorganic 965.09 (%)	0539	0.5050	0.0100	0.5233	0.0318	0.0233	3	-0.58		0
241.00	Acid Soluble Fe, AA, inorganic 965.09 (%)	0553	0.5600	0.0500	0.5233	0.0318	0.0233	3	1.15		0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0472	0.5200	0.0000	0.5880	0.0531	0.0295	4	-1.28		0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0035	0.5720	0.0180	0.5880	0.0531	0.0295	4	-0.30		0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0354	0.6250	0.0300	0.5880	0.0531	0.0295	4	0.70		0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0552	0.6350	0.0700	0.5880	0.0531	0.0295	4	0.89		0
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (%)	0423	0.7000	0.0080				1			0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0494	0.7022	0.0597	0.7822	0.0741	0.0493	4	-1.08		0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0515	0.7376	0.0958	0.7822	0.0741	0.0493	4	-0.60		0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0527	0.8328	0.0309	0.7822	0.0741	0.0493	4	0.68		0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0563	0.8565	0.0109	0.7822	0.0741	0.0493	4	1.00		0
241.99	Acid Soluble Fe, Other (%)	0515	0.5853	0.0793	0.6495	0.0476	0.0342	4	-1.35		0
241.99	Acid Soluble Fe, Other (%)	0523	0.6415	0.0090	0.6495	0.0476	0.0342	4	-0.17		0
241.99	Acid Soluble Fe, Other (%)	0389	0.6850	0.0100	0.6495	0.0476	0.0342	4	0.75		0
241.99	Acid Soluble Fe, Other (%)	0524	0.6862	0.0386	0.6495	0.0476	0.0342	4	0.77		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)	0476	1.040	0.0800	3.103	1.896	0.3366	9	-1.00	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0389	1.785	0.1300	3.103	1.896	0.3366	9	-0.64	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0444	1.995	0.3500	3.103	1.896	0.3366	9	-0.54	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0524	2.230	0.1334	3.103	1.896	0.3366	9	-0.42	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0450	2.550	0.5000	3.103	1.896	0.3366	9	-0.27	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0523	2.965	0.8860	3.103	1.896	0.3366	9	-0.07	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0394	4.070	0.0000	3.103	1.896	0.3366	9	0.47	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0035	5.345	0.8500	3.103	1.896	0.3366	9	1.09	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0419	12.85	0.1000	3.103	1.896	0.3366	9	4.75	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0255	3.838	3.142	3.103	1.896	0.3366	9	0.36	NA	1
251.32	Acid Soluble Pb, ICP, 2006.03 (ppm)	0529	1.650	0.0600				2			0
251.32	Acid Soluble Pb, ICP, 2006.03 (ppm)	0220	3.250	0.1000				2			0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0037	1.548	0.0850	2.899	1.428	0.4246	6	-0.84	NA	0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0515	1.787	1.433	2.899	1.428	0.4246	6	-0.69	NA	0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0136	2.690	0.4600	2.899	1.428	0.4246	6	-0.13	NA	0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0563	2.952	0.0102	2.899	1.428	0.4246	6	0.03	NA	0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0527	3.378	0.0191	2.899	1.428	0.4246	6	0.30	NA	0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0494	7.750	0.5400	2.899	1.428	0.4246	6	3.03	NA	0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0117	< 5		2.899	1.428	0.4246	6			5
251.34	Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm)	0515	3.958	3.474				1			0
251.34	Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm)	0368	< 0.7					1			5
251.99	Acid Soluble Pb, Other (ppm)	0405	3.100	0.8000				2			0
251.99	Acid Soluble Pb, Other (ppm)	0220	4.100	0.2000				2			0
251.99	Acid Soluble Pb, Other (ppm)	0550	< 1.5					2			5
261.11	Acid Soluble Mn, AA, total Mn (%)	0553	0.0075	0.0010				1			0
261.12	Acid Soluble Mn, AA, inorganic 965.09 (%)	0535	0.0085	0.0010				2			0
261.12	Acid Soluble Mn, AA, inorganic 965.09 (%)	0539	0.0086	0.0009				2			0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0035	0.0066	0.0006				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	0.0300	0.0600				0			4

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261.34	Acid Soluble Mn, ICP, test portion 2006.03A-C (%)	0423	0.0080	0.0000				1			0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0494	0.0056	0.0001	0.0352	0.0480	0.0031	3	-0.62		0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0527	0.0095	0.0001	0.0352	0.0480	0.0031	3	-0.54		0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0563	0.0905	0.0090	0.0352	0.0480	0.0031	3	1.15		0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0515	0.0000	0.0000	0.0352	0.0480	0.0031	3			4
261.99	Acid Soluble Mn, Other (%)	0515	0.0072	0.0016	0.0078	0.0006	0.0010	4	-1.13		0
261.99	Acid Soluble Mn, Other (%)	0524	0.0076	0.0006	0.0078	0.0006	0.0010	4	-0.42		0
261.99	Acid Soluble Mn, Other (%)	0389	0.0081	0.0009	0.0078	0.0006	0.0010	4	0.38		0
261.99	Acid Soluble Mn, Other (%)	0523	0.0085	0.0010	0.0078	0.0006	0.0010	4	1.18		0
281.00	Acid Soluble Hg, AA (ppm)	0550	0.0022	0.0018				1			0
281.00	Acid Soluble Hg, AA (ppm)	0534	< 0.05					1			5
281.00	Acid Soluble Hg, AA (ppm)	0117	< 0.2					1			5
281.30	Acid Soluble Hg, ICP (ppm)	0563	0.0405	0.0146				2			0
281.30	Acid Soluble Hg, ICP (ppm)	0515	0.8306	0.0148				2			0
281.30	Acid Soluble Hg, ICP (ppm)	0527	< 0.001					2			5
281.30	Acid Soluble Hg, ICP (ppm)	0529	< 0.005					2			5
281.30	Acid Soluble Hg, ICP (ppm)	0450	< 0.5					2			5
281.99	Acid Soluble Hg, Other (ppm)	0368	0.0082	0.0005	0.0527	0.0854	0.0089	5	-0.52		0
281.99	Acid Soluble Hg, Other (ppm)	0035	0.0110	0.0020	0.0527	0.0854	0.0089	5	-0.49		0
281.99	Acid Soluble Hg, Other (ppm)	0524	0.0145	0.0021	0.0527	0.0854	0.0089	5	-0.45		0
281.99	Acid Soluble Hg, Other (ppm)	0405	0.0250	0.0100	0.0527	0.0854	0.0089	5	-0.32		0
281.99	Acid Soluble Hg, Other (ppm)	0220	0.2050	0.0300	0.0527	0.0854	0.0089	5	1.78		0
289.00	Acid Soluble Mo, AA, test portion 2006.03 modified w/dual acid (ppm)	0550	2.045	1.370				1			0
289.30	Acid Soluble Mo, ICP (ppm)	0476	1.415	0.1900	6.865	5.762	3.063	4	-0.95		0
289.30	Acid Soluble Mo, ICP (ppm)	0524	3.381	0.0943	6.865	5.762	3.063	4	-0.60		0
289.30	Acid Soluble Mo, ICP (ppm)	0419	8.345	1.610	6.865	5.762	3.063	4	0.26		0
289.30	Acid Soluble Mo, ICP (ppm)	0255	14.32	10.36	6.865	5.762	3.063	4	1.29		0
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	0220	2.950	0.5000				1			0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0423	2.730	0.0800	3.764	0.7819	0.1746	5	-1.15		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0494	3.158	0.2567	3.764	0.7819	0.1746	5	-0.68		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0037	4.088	0.1150	3.764	0.7819	0.1746	5	0.36		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0563	4.282	0.3656	3.764	0.7819	0.1746	5	0.58		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0527	4.562	0.0556	3.764	0.7819	0.1746	5	0.89		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0515	3.107	2.283	3.764	0.7819	0.1746	5	-0.73		1
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0136	< 5		3.764	0.7819	0.1746	5			5
289.34	Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm)	0515	1.463	0.7320				1			0
289.34	Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm)	0368	< 0.1					1			5
289.99	Acid Soluble Mo, Other (ppm)	0405	3.905	0.2100				2			0
289.99	Acid Soluble Mo, Other (ppm)	0506	10.00	0.0000				2			0
291.30	Acid Soluble Ni, ICP (ppm)	0476	14.77	0.7600	23.03	6.475	0.4553	8	-1.17	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0389	16.52	0.0400	23.03	6.475	0.4553	8	-0.92	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0444	20.70	0.2100	23.03	6.475	0.4553	8	-0.33	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0394	21.60	0.0000	23.03	6.475	0.4553	8	-0.20	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0524	23.55	0.3122	23.03	6.475	0.4553	8	0.07	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0523	28.41	0.4500	23.03	6.475	0.4553	8	0.76	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0450	28.50	1.000	23.03	6.475	0.4553	8	0.77	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0419	30.18	0.8700	23.03	6.475	0.4553	8	1.01	NA	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				
291.30	Acid Soluble Ni, ICP (ppm)	0035	18.65	5.700	23.03	6.475	0.4553	8	-0.62	NA	1
291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	0529	20.48	0.4000				2			0
291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	0220	27.50	5.000				2			0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0136	16.25	3.500	30.19	2.269	1.758	7	-5.55	NA	0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0515	28.99	0.0660	30.19	2.269	1.758	7	-0.48	NA	0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0037	29.89	0.6910	30.19	2.269	1.758	7	-0.12	NA	0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0117	30.03	2.623	30.19	2.269	1.758	7	-0.06	NA	0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0494	30.88	1.967	30.19	2.269	1.758	7	0.28	NA	0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0563	31.72	3.460	30.19	2.269	1.758	7	0.61	NA	0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0527	33.02	0.0007	30.19	2.269	1.758	7	1.13	NA	0
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	0515	14.52	24.33				2			0
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	0368	27.86	3.510				2			0
291.99	Acid Soluble Ni, Other (ppm)	0550	17.41	0.4000	31.31	16.44	8.570	5	-0.85		0
291.99	Acid Soluble Ni, Other (ppm)	0506	24.85	1.900	31.31	16.44	8.570	5	-0.39		0
291.99	Acid Soluble Ni, Other (ppm)	0220	26.50	3.000	31.31	16.44	8.570	5	-0.29		0
291.99	Acid Soluble Ni, Other (ppm)	0405	28.00	0.0000	31.31	16.44	8.570	5	-0.20		0
291.99	Acid Soluble Ni, Other (ppm)	0255	59.81	37.55	31.31	16.44	8.570	5	1.73		0
301.30	Acid Soluble Se, ICP (ppm)	0524	0.6395	0.0330	2.095	2.303	0.1974	3	-0.63		0
301.30	Acid Soluble Se, ICP (ppm)	0523	0.8965	0.0392	2.095	2.303	0.1974	3	-0.52		0
301.30	Acid Soluble Se, ICP (ppm)	0476	4.750	0.5200	2.095	2.303	0.1974	3	1.15		0
301.32	Acid Soluble Se, ICP, 2006.03 (ppm)	0220	0.9500	0.1000				1			0
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0563	1.376	0.2311				1			0
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0515	0.0000	0.0000				1			4
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0527	< 0.001					1			5
301.34	Acid Soluble Se, ICP, EPA 3050B/6010C (ppm)	0515	2.305	1.705				1			0
301.34	Acid Soluble Se, ICP, EPA 3050B/6010C (ppm)	0368	< 0.1					1			5
301.99	Acid Soluble Se, Other (ppm)	0220	0.9000	0.0000	61.22	103.3	2.502	3	-0.58		0
301.99	Acid Soluble Se, Other (ppm)	0255	2.262	0.5060	61.22	103.3	2.502	3	-0.57		0
301.99	Acid Soluble Se, Other (ppm)	0506	180.5	7.000	61.22	103.3	2.502	3	1.15		0
301.99	Acid Soluble Se, Other (ppm)	0550	< 0.08		61.22	103.3	2.502	3			5
301.99	Acid Soluble Se, Other (ppm)	0405	< 1		61.22	103.3	2.502	3			5
311.00	Sodium, AA (%)	0553	0.0970	0.0040				1			0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0423	0.0620	0.0020	0.0844	0.0303	0.0075	4	-0.74		0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0035	0.0660	0.0160	0.0844	0.0303	0.0075	4	-0.61		0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0527	0.0814	0.0001	0.0844	0.0303	0.0075	4	-0.10		0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0563	0.1281	0.0120	0.0844	0.0303	0.0075	4	1.44		0
311.99	Sodium, Other (%)	0354	0.0950	0.0100				1			0
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	0550	0.0023	0.0002	0.0045	0.0019	0.0008	3	-1.15		0
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	0535	0.0055	0.0010	0.0045	0.0019	0.0008	3	0.56		0
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	0539	0.0056	0.0011	0.0045	0.0019	0.0008	3	0.59		0
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	0553	< 0.002		0.0045	0.0019	0.0008	3			5
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	0534	< 0.01		0.0045	0.0019	0.0008	3			5
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0035	0.0018	0.0005	0.0334	0.0525	0.0542	3	-0.60		0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0234	0.0044	0.0022	0.0334	0.0525	0.0542	3	-0.55		0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0255	0.0940	0.1600	0.0334	0.0525	0.0542	3	1.15		0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0552	0.0750	0.1500	0.0334	0.0525	0.0542	3			4
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0354	< 0.01		0.0334	0.0525	0.0542	3			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				
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0220	0.0015	0.0001	0.0018	0.0003	0.0001	3	-1.15		0
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0423	0.0020	0.0000	0.0018	0.0003	0.0001	3	0.50		0
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0394	0.0021	0.0001	0.0018	0.0003	0.0001	3	0.65		0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0136	0.0017	0.0001	0.0023	0.0006	0.0001	8	-0.92	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0368	0.0017	0.0001	0.0023	0.0006	0.0001	8	-0.92	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0515	0.0019	0.0002	0.0023	0.0006	0.0001	8	-0.55	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0563	0.0022	0.0002	0.0023	0.0006	0.0001	8	-0.09	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0527	0.0023	0.0001	0.0023	0.0006	0.0001	8	-0.02	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0419	0.0025	0.0003	0.0023	0.0006	0.0001	8	0.28	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0037	0.0030	0.0000	0.0023	0.0006	0.0001	8	1.11	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0043	0.0030	0.0000	0.0023	0.0006	0.0001	8	1.11	OK	0
321.99	Acid Soluble Zn, Other (%)	0220	0.0013	0.0002	0.0020	0.0007	0.0005	6	-0.92	OK	0
321.99	Acid Soluble Zn, Other (%)	0476	0.0016	0.0002	0.0020	0.0007	0.0005	6	-0.51	OK	0
321.99	Acid Soluble Zn, Other (%)	0405	0.0018	0.0002	0.0020	0.0007	0.0005	6	-0.24	OK	0
321.99	Acid Soluble Zn, Other (%)	0515	0.0020	0.0011	0.0020	0.0007	0.0005	6	-0.04	OK	0
321.99	Acid Soluble Zn, Other (%)	0524	0.0023	0.0003	0.0020	0.0007	0.0005	6	0.37	OK	0
321.99	Acid Soluble Zn, Other (%)	0389	0.0030	0.0008	0.0020	0.0007	0.0005	6	1.39	OK	0
321.99	Acid Soluble Zn, Other (%)	0523	0.0055	0.0050	0.0020	0.0007	0.0005	6	4.78	OK	1

Interpreting Z Scores: Red indicates a normally distributed Z value >3 or <-3 (requires action), Orange = Z between 2 and 3 or -2 and -3 (warning) and Green = Z < 2 and >-2 (OK at 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.