

Method PT For All Labs

Magruder Fertilizer Proficiency Testing Program

Methods: 114

Sample # 221011

Regular PT Scheme

Labs Reporting: 74

High Micros

Statistical Summary

Issue Date : 11/30/2022

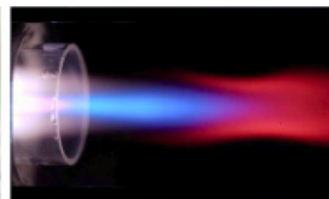
Method Code	Analyte & Method Sample # 221011	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Method Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	Method IA Ratio	Average Range (R-bar)	Horwitz %RSD
001.99	Ammoniacal N, Other (%)	1		0.0700									
002.99	Nitrate N, Other (%)	1		0.0430									
005.99	Urea N, Other (%)	1		0.2300									
010.60	Total N, Combustion (%)	6	5	1.332	3.135	1.596	0.4900	3.429	1.917	214.86%	16.31	0.0102	3.73%
010.99	Total N, Other (%)	1		0.0658									
020.50	Total P2O5, ICP (%)	4	2	0.1148	0.1379	0.2290		0.0693	0.0613	30.26%		0.0553	4.99%
020.99	Total P2O5, Other (%)	1		0.0117									
041.10	Direct Available P2O5, Gravimetric Quinolinium (%)	1		0.1000									
041.20	Direct Available P2O5, Spectrophotometric (%)	1		0.0075									
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext.	1		0.0100									
050.52	Soluble K2O, ICP (Citrate-EDTA) (%)	1		0.0005									
050.99	Soluble K2O, Other (%)	5	3	0.0753	0.1543	0.1251	0.4100	0.1956	0.1412	156.39%	1.11	0.1135	5.47%
060.99	Water (Free), Other (%)	1		9.650									
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	2	2	0.2365	0.0403								
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (%)	1		0.2085									
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	6	5	0.1733	0.0847	0.2078	0.2104	0.0072	0.0040	3.48%	0.08	0.0099	5.07%
101.99	Acid Soluble Ca, Other (%)	3	3	0.3710	0.3326	0.3710	0.2185	0.3326	0.2400	89.65%	3.55	0.0312	4.64%
121.00	Acid Soluble Mg, AA, inorganic 965.09 (%)	1		0.1545									
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	2	2	0.1358	0.0131								
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (%)	1		0.1545									
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	7	7	0.1451	0.0372	0.1451	0.2073	0.0422	0.0200	29.10%	0.47	0.0040	5.35%
121.99	Acid Soluble Mg, Other (%)	5	5	0.1609	0.0644	0.1609	0.2080	0.0644	0.0360	40.02%	0.72	0.0222	5.27%
143.00	Elemental S, Gravimetric Sulfur - carbon disulfide soluble sulfu	1		0.4067									
143.99	Elemental S, Other (%)	1		3.690									
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	1		12.41									
145.99	Sulfate S, HCl soluble, Other (%)	2	2	12.18	0.1393								
148.00	Total S, Combustion (%)	1		13.45									
148.01	Total S, Gravimetric - sulfate and elemental (%)	2	2	12.48	0.4706								
148.07	Total S, ICP, test portion as in 2017.02 (%)	8	8	11.83	1.174	11.85	0.7927	1.269	0.5608	10.71%	3.73	0.4137	2.76%

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148.99	Total S, Other (%)	3	3	12.08	0.4032	12.08	0.8038	0.4032	0.2910	3.34%	1.17	0.3452	2.75%
149.04	S - HNO3 soluble, ICP (%)	2	2	12.42	1.129								
151.30	Acid Soluble As, ICP (ppm)	5	3	4.950	6.705	6.183		8.637	6.233	139.68%		0.6869	12.16%
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	2	0	2.000	1.414								
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	5	3	2.959	2.462	3.265		2.349	1.695	71.95%		0.3230	13.39%
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	2	2	2.966	2.311								
151.99	Acid Soluble As, Other (ppm)	4	3	1.433	0.5175	1.577		0.5262	0.3798	33.38%		0.2700	14.94%
165.00	Acid Soluble B, Spectrophotometric (2.6%)	9	9	2.502	0.2447	2.478	0.3746	0.1969	0.0820	7.95%	1.22	0.0631	3.49%
165.30	Acid Soluble B, ICP, test portion in 982.01 (2.6%)	23	23	2.447	0.2061	2.449	0.3704	0.2015	0.0525	8.23%	1.27	0.0989	3.50%
165.99	Acid Soluble B, Other (2.6%)	24	23	2.468	0.3116	2.514	0.3800	0.1547	0.0403	6.15%	0.95	0.0429	3.48%
171.10	Water Soluble B, Spectrophotometric (%)	6	6	2.525	0.0597	2.514		0.0403	0.0206	1.60%		0.0267	3.48%
171.99	Water Soluble B, Other (%)	1		2.560									
181.00	Acid Soluble Cd, AA, test portion 2006.03 modified w/dual acic	1		22.93									
181.30	Acid Soluble Cd, ICP (ppm)	9	9	24.72	5.279	24.69		5.912	2.463	23.95%		0.8141	9.87%
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	2	2	29.30	0.4243								
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	7	7	27.82	2.860	27.98		2.858	1.350	10.21%		0.9307	9.69%
181.34	Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm)	2	2	26.97	0.2362								
181.99	Acid Soluble Cd, Other (ppm)	5	5	26.60	2.977	26.60		2.977	1.664	11.19%		0.6992	9.76%
191.30	Acid Soluble Cr, ICP (ppm)	6	5	30.20	11.95	26.60		9.013	5.038	33.88%		0.8067	9.76%
191.32	Acid Soluble Cr, ICP, 2006.03 (ppm)	2	2	47.00	21.92								
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	6	6	32.58	16.97	29.07		10.34	5.275	35.56%		1.450	9.63%
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	2	2	32.35	0.3465								
191.99	Acid Soluble Cr, Other (ppm)	3	3	35.61	24.59	35.61		24.59	17.75	69.04%		4.555	9.34%
202.30	Acid Soluble Co, ICP (ppm)	6	6	81.91	33.30	80.29	25.0856	33.91	17.31	42.24%	3.15	3.074	8.27%
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	3	3	82.63	7.211	82.63	25.7890	7.211	5.204	8.73%	0.65	0.7733	8.23%
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	7	7	87.93	5.329	88.57	27.5696	4.380	2.069	4.95%	0.37	2.786	8.15%
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	2	2	86.35	0.2807								
202.99	Acid Soluble Co, Other (ppm)	4	4	76.57	11.83	76.57	23.9720	11.83	7.391	15.44%	1.15	7.829	8.33%
221.00	Acid Soluble Cu, AA, inorganic 965.09 (10%)	9	9	9.393	2.139	9.979	1.0000	0.6077	0.2532	6.09%	1.42	0.1489	2.83%
221.02	Acid Soluble Cu, AA, 965.09, test portion 2006.03A-C (10%)	1		9.210									
221.03	Acid Soluble Cu, AA, 965.09, test portion 2006.03A-C w/dual ε	1		10.02									
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (10%)	19	19	10.38	0.5878	10.44	1.0000	0.5168	0.1482	4.95%	1.20	0.2245	2.81%
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (10%)	7	7	10.14	0.5042	10.14	1.0000	0.5718	0.2701	5.64%	1.33	0.2262	2.82%
221.33	Acid Soluble Cu, ICP, 2017.02 (10%)	15	13	9.394	2.614	10.12	1.0000	0.5065	0.1756	5.00%	1.18	0.2665	2.82%
221.99	Acid Soluble Cu, Other (10%)	19	18	10.10	1.400	10.29	1.0000	0.4805	0.1416	4.67%	1.12	0.0874	2.82%
241.00	Acid Soluble Fe, AA, inorganic 965.09 (9%)	7	7	8.419	0.5340	8.425	0.8475	0.5922	0.2798	7.03%	1.63	0.3757	2.90%
241.02	Acid Soluble Fe, AA, 965.09, test portion 2006.03A-C (9%)	1		8.766									
241.03	Acid Soluble Fe, AA, 965.09, test portion 2006.03A-C w/dual a	1		8.965									
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (9%)	18	18	8.551	1.327	8.749	0.8799	0.9145	0.2694	10.45%	2.42	0.2653	2.89%
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (9%)	6	6	8.402	1.323	8.402	0.8452	1.501	0.7658	17.86%	4.14	0.1763	2.90%

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241.33	Acid Soluble Fe, ICP, 2017.02 (9%)	14	14	8.421	0.8881	8.534	0.8584	0.6422	0.2145	7.52%	1.74	0.2895	2.90%
241.99	Acid Soluble Fe, Other (9%)	20	19	8.310	1.593	8.564	0.8614	0.8780	0.2518	10.25%	2.37	0.1430	2.90%
251.00	Acid Soluble Pb, AA, test portion 2006.03 modified w/dual acid	1		274.1									
251.30	Acid Soluble Pb, ICP (ppm)	8	8	287.4	81.65	291.3		83.57	36.93	28.68%		8.883	6.81%
251.32	Acid Soluble Pb, ICP, 2006.03 (ppm)	2	2	301.5	78.49								
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	5	5	342.7	13.64	342.7		13.64	7.627	3.98%		4.940	6.65%
251.34	Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm)	2	2	345.5	38.11								
251.99	Acid Soluble Pb, Other (ppm)	4	4	292.5	32.53	292.5		32.53	20.33	11.12%		41.22	6.81%
261.00	Acid Soluble Mn, AA, Mn2+ only (12%)	1		10.15									
261.12	Acid Soluble Mn, AA, inorganic 965.09 (12%)	5	5	8.051	0.2518	8.051	0.8101	0.2518	0.1408	3.13%	0.72	0.1178	2.92%
261.15	Acid Soluble Mn, AA, 965.09, test portion 2006.03A-C w/dual acid	1		7.475									
261.30	Acid Soluble Mn, ICP, test portion 972.02a (12%)	7	7	8.010	0.6755	8.111	0.8161	0.5108	0.2413	6.30%	1.46	0.2844	2.92%
261.31	Acid Soluble Mn, ICP, test portion 972.02b (12%)	3	3	7.730	0.5478	7.730	0.7780	0.5478	0.3954	7.09%	1.64	0.2267	2.94%
261.32	Acid Soluble Mn, ICP, test portion inorganic 965.09 (12%)	9	9	8.172	0.6767	8.149	0.8199	0.7135	0.2973	8.76%	2.03	0.1832	2.92%
261.34	Acid Soluble Mn, ICP, test portion 2006.03A-C (12%)	5	5	7.990	0.3051	7.990	0.8040	0.3051	0.1706	3.82%	0.88	0.1320	2.93%
261.35	Acid Soluble Mn, ICP, 2017.02 (12%)	15	14	8.029	0.6462	8.152	0.8202	0.5154	0.1722	6.32%	1.46	0.2547	2.92%
261.99	Acid Soluble Mn, Other (12%)	20	19	10.25	7.683	8.437	0.8487	0.6374	0.1828	7.55%	1.75	0.1794	2.90%
271.00	Water Soluble Mn, AA (%)	2	2	9.033	0.2934								
281.00	Acid Soluble Hg, AA (ppm)	2	0	0.3500	0.2121								
281.30	Acid Soluble Hg, ICP (ppm)	5	1	0.6953	0.8904	9.033		0.2934	0.3668	3.25%		0.0370	11.49%
281.99	Acid Soluble Hg, Other (ppm)	6	5	0.0503	0.0043	0.0515		0.0034	0.0019	6.51%		0.0030	22.00%
289.30	Acid Soluble Mo, ICP (ppm)	6	5	7.191	6.563	5.629	2.6887	5.963	3.333	105.93%	5.17	0.4995	12.33%
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	2	2	4.025	4.207								
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	5	4	4.284	2.790	5.355	2.6064	1.653	1.033	30.87%	1.48	0.6083	12.43%
289.34	Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm)	1		0.1000									
289.99	Acid Soluble Mo, Other (ppm)	3	2	35.23	56.14	2.843	1.8529	3.172	2.804	111.58%	3.99	0.9640	13.67%
291.30	Acid Soluble Ni, ICP (ppm)	7	7	136.3	35.70	136.3		40.48	19.13	29.69%		7.572	7.63%
291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	2	2	170.8	29.34								
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	6	6	159.6	21.52	156.7		17.39	8.876	11.10%		11.23	7.48%
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	2	2	149.2	6.592								
291.99	Acid Soluble Ni, Other (ppm)	5	5	149.7	9.449	149.7		9.449	5.282	6.31%		18.74	7.53%
301.30	Acid Soluble Se, ICP (ppm)	3	3	17.17	13.86	17.17		13.86	10.01	80.75%		0.1890	10.43%
301.32	Acid Soluble Se, ICP, 2006.03 (ppm)	2	2	24.50	30.41								
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	6	4	22.93	18.07	28.90		17.93	11.21	62.05%		4.237	9.64%
301.34	Acid Soluble Se, ICP, EPA 3050B/6010C (ppm)	2	1	21.84	28.91								
301.99	Acid Soluble Se, Other (ppm)	5	4	4.761	7.263	5.826		7.922	4.951	135.98%		0.4225	12.27%
311.00	Sodium, AA (%)	1		1.308									
311.33	Sodium, ICP, test portion as in 2017.02 (%)	5	5	1.116	0.5285	1.116	0.1166	0.5285	0.2955	47.38%	10.56	0.0088	3.93%
311.99	Sodium, Other (%)	2	2	1.311	0.0083								
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	3	3	4.243	0.3697	4.243	0.4293	0.3697	0.2668	8.71%	2.01	0.2583	3.22%

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321.03	Acid Soluble Zn, AA, 965.09, test portion 2006.03A-C w/dual a	1		4.565									
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	8	7	4.700	1.670	4.212	0.4262	0.5609	0.2650	13.32%	3.07	0.0699	3.22%
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	6	6	4.125	0.3018	4.125	0.4175	0.3423	0.1747	8.30%	1.91	0.1283	3.23%
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	12	12	4.380	0.8076	4.300	0.4350	0.7283	0.2628	16.94%	3.90	0.4524	3.21%
321.99	Acid Soluble Zn, Other (%)	10	10	3.914	0.7451	4.070	0.4120	0.3793	0.1499	9.32%	2.15	0.2312	3.24%

The Method IA Ratio = $2.33 * \text{Robust SD} / \text{IA at the Method Assigned Value}$. 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.



Method PT For All Labs

Magruder Fertilizer Proficiency Testing Program

Sample # 221011

Regular PT Scheme

High Micros

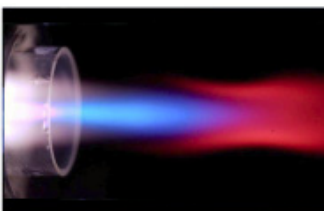
Method Precision Report

Issue Date : 11/30/2022

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
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	7	6	0.1415	0.0394	0.0394	0.0022	0.0394	27.84%	1.56%	27.88%	17.86
148.07	Total S, ICP, test portion as in 2017.02 (%)	8	8	11.83	1.174	1.139	0.4025	1.208	9.63%	3.40%	10.22%	3.002
165.00	Acid Soluble B, Spectrophotometric (2.6%)	9	8	2.436	0.1536	0.1488	0.0541	0.1583	6.11%	2.22%	6.50%	2.924
165.30	Acid Soluble B, ICP, test portion in 982.01 (2.6%)	23	22	2.432	0.1969	0.1853	0.0941	0.2078	7.62%	3.87%	8.55%	2.210
165.99	Acid Soluble B, Other (2.6%)	24	21	2.514	0.1237	0.1216	0.0319	0.1257	4.84%	1.27%	5.00%	3.938
171.10	Water Soluble B, Spectrophotometric (%)	6	5	2.502	0.0220	0.0171	0.0195	0.0259	0.68%	0.78%	1.04%	1.330
181.30	Acid Soluble Cd, ICP (ppm)	9	9	24.72	5.279	5.244	0.8490	5.313	21.21%	3.43%	21.49%	6.257
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	7	7	27.82	2.860	2.790	0.8920	2.929	10.03%	3.21%	10.53%	3.283
181.99	Acid Soluble Cd, Other (ppm)	5	5	26.60	2.977	2.936	0.6960	3.017	11.04%	2.62%	11.34%	4.335
191.30	Acid Soluble Cr, ICP (ppm)	6	5	26.60	9.013	9.000	0.6808	9.026	33.84%	2.56%	33.93%	13.26
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	6	5	25.97	5.633	5.586	1.025	5.680	21.51%	3.95%	21.87%	5.539
202.30	Acid Soluble Co, ICP (ppm)	6	6	81.91	33.30	33.23	3.083	33.37	40.57%	3.76%	40.74%	10.82
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	7	7	87.93	5.329	5.007	2.578	5.632	5.69%	2.93%	6.40%	2.185
221.00	Acid Soluble Cu, AA, inorganic 965.09 (10%)	9	8	10.09	0.4412	0.4312	0.1320	0.4510	4.27%	1.31%	4.47%	3.416
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (10%)	19	18	10.46	0.4758	0.4438	0.2425	0.5058	4.24%	2.32%	4.83%	2.086
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (10%)	7	7	10.14	0.5042	0.4824	0.2074	0.5251	4.76%	2.04%	5.18%	2.532
221.33	Acid Soluble Cu, ICP, 2017.02 (10%)	15	13	10.13	0.4525	0.4205	0.2362	0.4823	4.15%	2.33%	4.76%	2.042
221.99	Acid Soluble Cu, Other (10%)	19	17	10.36	0.4675	0.4639	0.0822	0.4711	4.48%	0.79%	4.55%	5.735
241.00	Acid Soluble Fe, AA, inorganic 965.09 (9%)	7	7	8.419	0.5340	0.4614	0.3802	0.5979	5.48%	4.52%	7.10%	1.572
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (9%)	18	17	8.803	0.8122	0.7871	0.2832	0.8365	8.94%	3.22%	9.50%	2.954
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (9%)	6	6	8.402	1.323	1.318	0.1632	1.328	15.69%	1.94%	15.81%	8.138
241.33	Acid Soluble Fe, ICP, 2017.02 (9%)	14	13	8.608	0.5669	0.5293	0.2873	0.6022	6.15%	3.34%	7.00%	2.096
241.99	Acid Soluble Fe, Other (9%)	20	17	8.719	0.6573	0.6537	0.0974	0.6609	7.50%	1.12%	7.58%	6.783
251.30	Acid Soluble Pb, ICP (ppm)	8	8	287.4	81.65	81.42	8.814	81.89	28.33%	3.07%	28.49%	9.291
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	5	5	342.7	13.64	13.28	4.417	14.00	3.87%	1.29%	4.08%	3.169
261.30	Acid Soluble Mn, ICP, test portion 972.02a (12%)	7	6	8.239	0.3264	0.2989	0.1854	0.3517	3.63%	2.25%	4.27%	1.897

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
261.32	Acid Soluble Mn, ICP, test portion inorganic 965.09 (12%)	9	9	8.172	0.6767	0.6658	0.1706	0.6873	8.15%	2.09%	8.41%	4.028
261.34	Acid Soluble Mn, ICP, test portion 2006.03A-C (12%)	5	5	7.990	0.3051	0.2936	0.1176	0.3163	3.67%	1.47%	3.96%	2.690
261.35	Acid Soluble Mn, ICP, 2017.02 (12%)	15	14	8.152	0.4545	0.4133	0.2674	0.4923	5.07%	3.28%	6.04%	1.841
261.99	Acid Soluble Mn, Other (12%)	20	18	8.534	1.664	1.661	0.1431	1.668	19.47%	1.68%	19.54%	11.65
281.99	Acid Soluble Hg, Other (ppm)	6	5	0.0515	0.0034	0.0025	0.0032	0.0040	4.86%	6.12%	7.82%	1.277
289.30	Acid Soluble Mo, ICP (ppm)	6	5	5.629	5.963	5.955	0.4415	5.971	105.78%	7.84%	106.07%	13.52
291.30	Acid Soluble Ni, ICP (ppm)	7	6	131.2	36.19	36.08	4.011	36.30	27.49%	3.06%	27.66%	9.050
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	6	5	151.5	9.480	7.897	7.416	10.83	5.21%	4.90%	7.15%	1.461
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	8	5	3.957	0.2458	0.2441	0.0399	0.2474	6.17%	1.01%	6.25%	6.206
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	6	6	4.125	0.3018	0.2912	0.1120	0.3120	7.06%	2.71%	7.56%	2.786
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	12	12	4.380	0.8076	0.7376	0.4651	0.8720	16.84%	10.62%	19.91%	1.875
321.99	Acid Soluble Zn, Other (%)	10	8	4.197	0.2263	0.1941	0.1645	0.2544	4.62%	3.92%	6.06%	1.546

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



Method PT For All Labs

Magruder Fertilizer Proficiency Testing Program

Methods: 114

Sample # 221011

Regular PT Scheme

Labs Reporting: 74

High Micros

Lab Values

Issue Date : 11/30/2022

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	Range				
001.99	Ammoniacal N, Other (%)	0524	0.0700	0.0200				1			0
002.99	Nitrate N, Other (%)	0553	0.0430	0.0020				1			0
005.99	Urea N, Other (%)	0524	0.2300	0.1000				1			0
010.60	Total N, Combustion (%)	0422	0.0150	0.0100	1.596	3.429	0.0102	5	-0.40		0
010.60	Total N, Combustion (%)	0472	0.0150	0.0000	1.596	3.429	0.0102	5	-0.40		0
010.60	Total N, Combustion (%)	0354	0.0770	0.0040	1.596	3.429	0.0102	5	-0.39		0
010.60	Total N, Combustion (%)	0516	0.1435	0.0370	1.596	3.429	0.0102	5	-0.37		0
010.60	Total N, Combustion (%)	0291	7.730	0.0000	1.596	3.429	0.0102	5	1.56		0
010.60	Total N, Combustion (%)	0527	< 0.01		1.596	3.429	0.0102	5			5
010.99	Total N, Other (%)	0524	0.0658	0.0077				1			0
020.50	Total P2O5, ICP (%)	0524	0.1800	0.0206				2			0
020.50	Total P2O5, ICP (%)	0516	0.2780	0.0900				2			0
020.50	Total P2O5, ICP (%)	0552	0.0000	0.0000				2			4
020.50	Total P2O5, ICP (%)	0527	< 0.001					2			5
020.99	Total P2O5, Other (%)	0572	0.0117	0.0015				1			0
041.10	Direct Available P2O5, Gravimetric Quinolinium (%)	0009	< 0.1					0			5
041.20	Direct Available P2O5, Spectrophotometric (%)	0553	0.0075	0.0010				1			0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext.	0354	< 0.01					0			5
050.52	Soluble K2O, ICP (Citrate-EDTA) (%)	0354	0.0005	0.0010				0			4
050.99	Soluble K2O, Other (%)	0553	0.0100	0.0000	0.1251	0.1956	0.1135	3	-0.59		0
050.99	Soluble K2O, Other (%)	0524	0.0143	0.0004	0.1251	0.1956	0.1135	3	-0.57		0
050.99	Soluble K2O, Other (%)	0516	0.3510	0.3400	0.1251	0.1956	0.1135	3	1.15		0
050.99	Soluble K2O, Other (%)	0552	0.0000	0.0000	0.1251	0.1956	0.1135	3			4
050.99	Soluble K2O, Other (%)	0527	< 0.001		0.1251	0.1956	0.1135	3			5
060.99	Water (Free), Other (%)	0009	9.650	0.1000				1			0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0035	0.2080	0.0220				2			0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0354	0.2650	0.0100				2			0
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (%)	0423	0.2085	0.0010				1			0
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0009	0.2000	0.0000	0.2078	0.0072	0.0099	5	-0.94		0
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0494	0.2034	0.0026	0.2078	0.0072	0.0099	5	-0.53		0
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0472	0.2050	0.0300	0.2078	0.0072	0.0099	5	-0.34		0
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0025	0.2130	0.0100	0.2078	0.0072	0.0099	5	0.63		0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	Range				
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0421	0.2175	0.0070	0.2078	0.0072	0.0099	5	1.17		0
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0527	< 0.001		0.2078	0.0072	0.0099	5			5
101.99	Acid Soluble Ca, Other (%)	0572	0.1779	0.0036	0.3710	0.3326	0.0312	3	-0.58		0
101.99	Acid Soluble Ca, Other (%)	0389	0.1800	0.0000	0.3710	0.3326	0.0312	3	-0.57		0
101.99	Acid Soluble Ca, Other (%)	0552	0.7550	0.0900	0.3710	0.3326	0.0312	3	1.15		0
121.00	Acid Soluble Mg, AA, inorganic 965.09 (%)	0553	0.1545	0.0170				1			0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0035	0.1265	0.0190				2			0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0354	0.1450	0.0100				2			0
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (%)	0423	0.1545	0.0010				1			0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0472	0.0900	0.0000	0.1451	0.0422	0.0040	7	-1.18	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0421	0.0990	0.0060	0.1451	0.0422	0.0040	7	-0.99	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0515	0.1400	0.0013	0.1451	0.0422	0.0040	7	-0.11	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0009	0.1600	0.0000	0.1451	0.0422	0.0040	7	0.32	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0494	0.1669	0.0143	0.1451	0.0422	0.0040	7	0.47	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0527	0.1779	0.0022	0.1451	0.0422	0.0040	7	0.70	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0025	0.1820	0.0040	0.1451	0.0422	0.0040	7	0.79	OK	0
121.99	Acid Soluble Mg, Other (%)	0524	0.0787	0.0096	0.1609	0.0644	0.0222	5	-1.28		0
121.99	Acid Soluble Mg, Other (%)	0515	0.1375	0.0029	0.1609	0.0644	0.0222	5	-0.36		0
121.99	Acid Soluble Mg, Other (%)	0572	0.1533	0.0224	0.1609	0.0644	0.0222	5	-0.12		0
121.99	Acid Soluble Mg, Other (%)	0516	0.1800	0.0060	0.1609	0.0644	0.0222	5	0.30		0
121.99	Acid Soluble Mg, Other (%)	0552	0.2550	0.0700	0.1609	0.0644	0.0222	5	1.46		0
143.00	Elemental S, Gravimetric Sulfur - carbon disulfide soluble sulfu	0494	0.4067	0.0160				1			0
143.99	Elemental S, Other (%)	0389	3.690	0.0200				1			0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0494	12.41	0.1180				1			0
145.99	Sulfate S, HCl soluble, Other (%)	0553	12.09	0.0300				2			0
145.99	Sulfate S, HCl soluble, Other (%)	0419	12.28	0.1527				2			0
148.00	Total S, Combustion (%)	0451	13.45	0.1000				1			0
148.01	Total S, Gravimetric - sulfate and elemental (%)	0231	12.15	0.1000				2			0
148.01	Total S, Gravimetric - sulfate and elemental (%)	0494	12.82	0.1016				2			0
148.07	Total S, ICP, test portion as in 2017.02 (%)	0515	9.728	0.2285	11.85	1.269	0.4137	8	-1.53	Low	0
148.07	Total S, ICP, test portion as in 2017.02 (%)	0527	11.17	0.4307	11.85	1.269	0.4137	8	-0.49	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (%)	0472	11.21	0.0100	11.85	1.269	0.4137	8	-0.47	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (%)	0260	11.34	0.8700	11.85	1.269	0.4137	8	-0.37	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (%)	0035	12.25	0.3000	11.85	1.269	0.4137	8	0.29	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (%)	0513	12.80	0.0600	11.85	1.269	0.4137	8	0.68	High	0
148.07	Total S, ICP, test portion as in 2017.02 (%)	0494	12.92	1.210	11.85	1.269	0.4137	8	0.76	High	0
148.07	Total S, ICP, test portion as in 2017.02 (%)	0421	13.20	0.2000	11.85	1.269	0.4137	8	0.97	High	0
148.99	Total S, Other (%)	0572	11.75	0.4305	12.08	0.4032	0.3452	3	-0.81		0
148.99	Total S, Other (%)	0354	11.95	0.5000	12.08	0.4032	0.3452	3	-0.31		0
148.99	Total S, Other (%)	0516	12.53	0.1050	12.08	0.4032	0.3452	3	1.12		0
149.04	S - HNO3 soluble, ICP (%)	0423	11.63	0.2500				2			0
149.04	S - HNO3 soluble, ICP (%)	0524	13.22	0.3588				2			0
151.30	Acid Soluble As, ICP (ppm)	0524	1.149	0.0177	6.183	8.637	0.6869	3	-0.58		0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	Range				
151.30	Acid Soluble As, ICP (ppm)	0476	1.245	0.0900	6.183	8.637	0.6869	3	-0.57		0
151.30	Acid Soluble As, ICP (ppm)	0419	16.16	1.953	6.183	8.637	0.6869	3	1.15		0
151.30	Acid Soluble As, ICP (ppm)	0255	0.0000	0.0000	6.183	8.637	0.6869	3			4
151.30	Acid Soluble As, ICP (ppm)	0605	< 6.2		6.183	8.637	0.6869	3			5
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	0220	< 1					0			5
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	0405	< 3					0			5
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0136	1.745	0.0100	3.265	2.349	0.3230	3	-0.65		0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0563	2.079	0.0390	3.265	2.349	0.3230	3	-0.50		0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0494	5.970	0.9200	3.265	2.349	0.3230	3	1.15		0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0527	< 0.0001		3.265	2.349	0.3230	3			5
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0009	< 5		3.265	2.349	0.3230	3			5
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	0515	1.331	1.069				2			0
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	0368	4.600	4.800				2			0
151.99	Acid Soluble As, Other (ppm)	0481	0.9700	0.0400	1.577	0.5262	0.2700	3	-1.15		0
151.99	Acid Soluble As, Other (ppm)	0009	1.850	0.1000	1.577	0.5262	0.2700	3	0.52		0
151.99	Acid Soluble As, Other (ppm)	0572	1.910	0.6700	1.577	0.5262	0.2700	3	0.63		0
151.99	Acid Soluble As, Other (ppm)	0220	< 1		1.577	0.5262	0.2700	3			5
165.00	Acid Soluble B, Spectrophotometric (2.6%)	0553	2.143	0.0250	2.478	0.1969	0.0631	9	-1.57	OK	0
165.00	Acid Soluble B, Spectrophotometric (2.6%)	0405	2.345	0.0300	2.478	0.1969	0.0631	9	-0.62	OK	0
165.00	Acid Soluble B, Spectrophotometric (2.6%)	0577	2.375	0.1100	2.478	0.1969	0.0631	9	-0.48	OK	0
165.00	Acid Soluble B, Spectrophotometric (2.6%)	0481	2.405	0.1100	2.478	0.1969	0.0631	9	-0.34	OK	0
165.00	Acid Soluble B, Spectrophotometric (2.6%)	0055	2.505	0.1100	2.478	0.1969	0.0631	9	0.13	OK	0
165.00	Acid Soluble B, Spectrophotometric (2.6%)	0518	2.520	0.0600	2.478	0.1969	0.0631	9	0.20	OK	0
165.00	Acid Soluble B, Spectrophotometric (2.6%)	0533	2.560	0.0600	2.478	0.1969	0.0631	9	0.39	OK	0
165.00	Acid Soluble B, Spectrophotometric (2.6%)	0558	2.633	0.0432	2.478	0.1969	0.0631	9	0.73	OK	0
165.00	Acid Soluble B, Spectrophotometric (2.6%)	0534	3.030	0.0200	2.478	0.1969	0.0631	9	2.59	High	0
165.30	Acid Soluble B, ICP, test portion in 982.01 (2.6%)	0419	2.079	0.0246	2.449	0.2015	0.0989	23	-1.84	OK	0
165.30	Acid Soluble B, ICP, test portion in 982.01 (2.6%)	0324	2.080	0.1800	2.449	0.2015	0.0989	23	-1.83	OK	0
165.30	Acid Soluble B, ICP, test portion in 982.01 (2.6%)	0377	2.085	0.1500	2.449	0.2015	0.0989	23	-1.81	OK	0
165.30	Acid Soluble B, ICP, test portion in 982.01 (2.6%)	0292	2.270	0.0000	2.449	0.2015	0.0989	23	-0.89	OK	0
165.30	Acid Soluble B, ICP, test portion in 982.01 (2.6%)	0220	2.275	0.0100	2.449	0.2015	0.0989	23	-0.86	OK	0
165.30	Acid Soluble B, ICP, test portion in 982.01 (2.6%)	0389	2.330	0.0000	2.449	0.2015	0.0989	23	-0.59	OK	0
165.30	Acid Soluble B, ICP, test portion in 982.01 (2.6%)	0073	2.365	0.2900	2.449	0.2015	0.0989	23	-0.42	OK	0
165.30	Acid Soluble B, ICP, test portion in 982.01 (2.6%)	0485	2.380	0.3000	2.449	0.2015	0.0989	23	-0.34	OK	0
165.30	Acid Soluble B, ICP, test portion in 982.01 (2.6%)	0397	2.384	0.0001	2.449	0.2015	0.0989	23	-0.32	OK	0
165.30	Acid Soluble B, ICP, test portion in 982.01 (2.6%)	0394	2.390	0.0000	2.449	0.2015	0.0989	23	-0.29	OK	0
165.30	Acid Soluble B, ICP, test portion in 982.01 (2.6%)	0260	2.403	0.0950	2.449	0.2015	0.0989	23	-0.23	OK	0
165.30	Acid Soluble B, ICP, test portion in 982.01 (2.6%)	0043	2.495	0.0900	2.449	0.2015	0.0989	23	0.23	OK	0
165.30	Acid Soluble B, ICP, test portion in 982.01 (2.6%)	0106	2.506	0.3416	2.449	0.2015	0.0989	23	0.28	OK	0
165.30	Acid Soluble B, ICP, test portion in 982.01 (2.6%)	0023	2.520	0.0000	2.449	0.2015	0.0989	23	0.35	OK	0
165.30	Acid Soluble B, ICP, test portion in 982.01 (2.6%)	0354	2.530	0.0000	2.449	0.2015	0.0989	23	0.40	OK	0
165.30	Acid Soluble B, ICP, test portion in 982.01 (2.6%)	0513	2.540	0.0200	2.449	0.2015	0.0989	23	0.45	OK	0
165.30	Acid Soluble B, ICP, test portion in 982.01 (2.6%)	0025	2.585	0.0700	2.449	0.2015	0.0989	23	0.67	OK	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	Range				
165.30	Acid Soluble B, ICP, test portion in 982.01 (2.6%)	0444	2.585	0.0500	2.449	0.2015	0.0989	23	0.67	OK	0
165.30	Acid Soluble B, ICP, test portion in 982.01 (2.6%)	0234	2.600	0.1000	2.449	0.2015	0.0989	23	0.75	OK	0
165.30	Acid Soluble B, ICP, test portion in 982.01 (2.6%)	0049	2.613	0.0065	2.449	0.2015	0.0989	23	0.81	OK	0
165.30	Acid Soluble B, ICP, test portion in 982.01 (2.6%)	0508	2.616	0.0280	2.449	0.2015	0.0989	23	0.83	OK	0
165.30	Acid Soluble B, ICP, test portion in 982.01 (2.6%)	0451	2.787	0.4340	2.449	0.2015	0.0989	23	1.68	OK	0
165.30	Acid Soluble B, ICP, test portion in 982.01 (2.6%)	0422	2.870	0.0840	2.449	0.2015	0.0989	23	2.09	High	0
165.99	Acid Soluble B, Other (2.6%)	0476	1.175	0.0100	2.514	0.1547	0.0429	23	-8.65	Low	0
165.99	Acid Soluble B, Other (2.6%)	0472	2.295	0.0100	2.514	0.1547	0.0429	23	-1.41	OK	0
165.99	Acid Soluble B, Other (2.6%)	0563	2.313	0.1150	2.514	0.1547	0.0429	23	-1.30	OK	0
165.99	Acid Soluble B, Other (2.6%)	0561	2.320	0.0800	2.514	0.1547	0.0429	23	-1.25	OK	0
165.99	Acid Soluble B, Other (2.6%)	0572	2.413	0.0954	2.514	0.1547	0.0429	23	-0.65	OK	0
165.99	Acid Soluble B, Other (2.6%)	0421	2.420	0.0060	2.514	0.1547	0.0429	23	-0.61	OK	0
165.99	Acid Soluble B, Other (2.6%)	0136	2.425	0.0100	2.514	0.1547	0.0429	23	-0.57	OK	0
165.99	Acid Soluble B, Other (2.6%)	0423	2.455	0.0100	2.514	0.1547	0.0429	23	-0.38	OK	0
165.99	Acid Soluble B, Other (2.6%)	0231	2.460	0.0200	2.514	0.1547	0.0429	23	-0.35	OK	0
165.99	Acid Soluble B, Other (2.6%)	0605	2.490	0.0180	2.514	0.1547	0.0429	23	-0.15	OK	0
165.99	Acid Soluble B, Other (2.6%)	0559	2.505	0.0100	2.514	0.1547	0.0429	23	-0.06	OK	0
165.99	Acid Soluble B, Other (2.6%)	0524	2.527	0.0124	2.514	0.1547	0.0429	23	0.09	OK	0
165.99	Acid Soluble B, Other (2.6%)	0521	2.528	0.0220	2.514	0.1547	0.0429	23	0.09	OK	0
165.99	Acid Soluble B, Other (2.6%)	0291	2.555	0.0100	2.514	0.1547	0.0429	23	0.27	OK	0
165.99	Acid Soluble B, Other (2.6%)	0042	2.579	0.0390	2.514	0.1547	0.0429	23	0.42	OK	0
165.99	Acid Soluble B, Other (2.6%)	0516	2.593	0.0590	2.514	0.1547	0.0429	23	0.51	OK	0
165.99	Acid Soluble B, Other (2.6%)	0360	2.600	0.0200	2.514	0.1547	0.0429	23	0.56	OK	0
165.99	Acid Soluble B, Other (2.6%)	0527	2.610	0.0235	2.514	0.1547	0.0429	23	0.62	OK	0
165.99	Acid Soluble B, Other (2.6%)	0255	2.614	0.0140	2.514	0.1547	0.0429	23	0.65	OK	0
165.99	Acid Soluble B, Other (2.6%)	0095	2.670	0.0200	2.514	0.1547	0.0429	23	1.01	OK	0
165.99	Acid Soluble B, Other (2.6%)	0368	2.670	0.0562	2.514	0.1547	0.0429	23	1.01	OK	0
165.99	Acid Soluble B, Other (2.6%)	0552	2.755	0.0500	2.514	0.1547	0.0429	23	1.56	OK	0
165.99	Acid Soluble B, Other (2.6%)	0515	2.912	0.2764	2.514	0.1547	0.0429	23	2.58	High	0
165.99	Acid Soluble B, Other (2.6%)	0009	2.350	0.3000	2.514	0.1547	0.0429	23	-1.06	OK	1
171.10	Water Soluble B, Spectrophotometric (%)	0567	2.485	0.0100	2.514	0.0403	0.0267	6	-0.64	NA	0
171.10	Water Soluble B, Spectrophotometric (%)	0551	2.490	0.0200	2.514	0.0403	0.0267	6	-0.53	NA	0
171.10	Water Soluble B, Spectrophotometric (%)	0556	2.495	0.0100	2.514	0.0403	0.0267	6	-0.42	NA	0
171.10	Water Soluble B, Spectrophotometric (%)	0565	2.500	0.0400	2.514	0.0403	0.0267	6	-0.31	NA	0
171.10	Water Soluble B, Spectrophotometric (%)	0564	2.540	0.0400	2.514	0.0403	0.0267	6	0.57	NA	0
171.10	Water Soluble B, Spectrophotometric (%)	0538	2.640	0.0400	2.514	0.0403	0.0267	6	2.78	NA	0
171.99	Water Soluble B, Other (%)	0600	2.560	0.0400				1			0
181.00	Acid Soluble Cd, AA, test portion 2006.03 modified w/dual acid	0534	22.93	0.1700				1			0
181.30	Acid Soluble Cd, ICP (ppm)	0476	16.06	2.030	24.69	5.912	0.8141	9	-1.35	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0444	18.65	0.7900	24.69	5.912	0.8141	9	-0.94	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0389	23.14	0.0700	24.69	5.912	0.8141	9	-0.24	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0524	24.03	0.0243	24.69	5.912	0.8141	9	-0.10	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0605	24.25	1.080	24.69	5.912	0.8141	9	-0.07	NA	0

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			Value	Range	Rob Mean	Rob SD	Range				
181.30	Acid Soluble Cd, ICP (ppm)	0394	26.79	0.1530	24.69	5.912	0.8141	9	0.33	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0255	27.63	0.0600	24.69	5.912	0.8141	9	0.46	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0035	28.10	2.600	24.69	5.912	0.8141	9	0.53	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0419	33.86	0.5200	24.69	5.912	0.8141	9	1.43	NA	0
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	0405	29.00	0.0000				2			0
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	0220	29.60	0.6000				2			0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0609	22.55	0.5000	27.98	2.858	0.9307	7	-1.72	NA	0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0563	25.84	0.1910	27.98	2.858	0.9307	7	-0.68	NA	0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0009	28.00	2.000	27.98	2.858	0.9307	7	0.00	NA	0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0136	28.65	0.1000	27.98	2.858	0.9307	7	0.21	NA	0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0515	28.66	2.359	27.98	2.858	0.9307	7	0.21	NA	0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0527	29.69	0.2651	27.98	2.858	0.9307	7	0.54	NA	0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0494	31.35	1.100	27.98	2.858	0.9307	7	1.06	NA	0
181.34	Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm)	0368	26.80	1.200				2			0
181.34	Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm)	0515	27.13	1.384				2			0
181.99	Acid Soluble Cd, Other (ppm)	0028	22.70	0.4000	26.60	2.977	0.6992	5	-1.31		0
181.99	Acid Soluble Cd, Other (ppm)	0481	25.15	0.1000	26.60	2.977	0.6992	5	-0.49		0
181.99	Acid Soluble Cd, Other (ppm)	0009	26.00	2.000	26.60	2.977	0.6992	5	-0.20		0
181.99	Acid Soluble Cd, Other (ppm)	0572	29.56	0.7960	26.60	2.977	0.6992	5	0.99		0
181.99	Acid Soluble Cd, Other (ppm)	0220	29.60	0.2000	26.60	2.977	0.6992	5	1.01		0
191.30	Acid Soluble Cr, ICP (ppm)	0476	12.70	1.600	26.60	9.013	0.8067	5	-1.35		0
191.30	Acid Soluble Cr, ICP (ppm)	0419	25.29	0.9210	26.60	9.013	0.8067	5	-0.13		0
191.30	Acid Soluble Cr, ICP (ppm)	0605	27.68	0.5300	26.60	9.013	0.8067	5	0.10		0
191.30	Acid Soluble Cr, ICP (ppm)	0524	29.86	0.9725	26.60	9.013	0.8067	5	0.32		0
191.30	Acid Soluble Cr, ICP (ppm)	0389	37.48	0.0100	26.60	9.013	0.8067	5	1.05		0
191.30	Acid Soluble Cr, ICP (ppm)	0035	48.20	18.60	26.60	9.013	0.8067	5	2.09		1
191.32	Acid Soluble Cr, ICP, 2006.03 (ppm)	0405	31.50	3.000				2			0
191.32	Acid Soluble Cr, ICP, 2006.03 (ppm)	0220	62.50	2.000				2			0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0136	18.10	0.6000	29.07	10.34	1.450	6	-0.95	NA	0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0527	24.19	0.1822	29.07	10.34	1.450	6	-0.42	NA	0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0515	26.08	1.458	29.07	10.34	1.450	6	-0.26	NA	0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0563	27.87	2.561	29.07	10.34	1.450	6	-0.10	NA	0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0494	33.60	1.200	29.07	10.34	1.450	6	0.39	NA	0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0609	65.65	2.700	29.07	10.34	1.450	6	3.15	NA	0
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	0368	32.10	1.600				2			0
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	0515	32.59	1.072				2			0
191.99	Acid Soluble Cr, Other (ppm)	0572	20.95	10.63	35.61	24.59	4.555	3	-0.60		0
191.99	Acid Soluble Cr, Other (ppm)	0481	21.89	3.040	35.61	24.59	4.555	3	-0.56		0
191.99	Acid Soluble Cr, Other (ppm)	0220	64.00	0.0000	35.61	24.59	4.555	3	1.15		0
202.30	Acid Soluble Co, ICP (ppm)	0476	43.48	0.7600	80.29	33.91	3.074	6	-0.97	Low	0
202.30	Acid Soluble Co, ICP (ppm)	0389	59.16	0.1200	80.29	33.91	3.074	6	-0.55	OK	0
202.30	Acid Soluble Co, ICP (ppm)	0605	78.59	3.960	80.29	33.91	3.074	6	-0.04	OK	0
202.30	Acid Soluble Co, ICP (ppm)	0524	80.08	0.3016	80.29	33.91	3.074	6	-0.01	OK	0

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202.30	Acid Soluble Co, ICP (ppm)	0035	89.25	4.500	80.29	33.91	3.074	6	0.24	OK	0
202.30	Acid Soluble Co, ICP (ppm)	0419	140.9	8.800	80.29	33.91	3.074	6	1.59	High	0
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	0423	76.34	0.4200	82.63	7.211	0.7733	3	-0.87		0
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	0220	81.05	0.9000	82.63	7.211	0.7733	3	-0.22		0
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	0405	90.50	1.000	82.63	7.211	0.7733	3	1.09		0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0563	77.52	7.584	88.57	4.380	2.786	7	-2.28	OK	0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0136	86.95	1.900	88.57	4.380	2.786	7	-0.33	OK	0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0009	87.50	1.000	88.57	4.380	2.786	7	-0.22	OK	0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0515	88.53	3.899	88.57	4.380	2.786	7	-0.01	OK	0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0494	89.80	3.800	88.57	4.380	2.786	7	0.25	OK	0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0609	90.05	1.100	88.57	4.380	2.786	7	0.31	OK	0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0527	95.17	0.2203	88.57	4.380	2.786	7	1.36	OK	0
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	0515	86.15	1.892				2			0
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	0368	86.55	1.900				2			0
202.99	Acid Soluble Co, Other (ppm)	0255	59.53	0.2800	76.57	11.83	7.829	4	-1.44		0
202.99	Acid Soluble Co, Other (ppm)	0572	77.76	23.04	76.57	11.83	7.829	4	0.10		0
202.99	Acid Soluble Co, Other (ppm)	0220	83.50	1.000	76.57	11.83	7.829	4	0.59		0
202.99	Acid Soluble Co, Other (ppm)	0009	85.50	7.000	76.57	11.83	7.829	4	0.75		0
221.00	Acid Soluble Cu, AA, inorganic 965.09 (10%)	0518	3.795	0.1700	9.979	0.6077	0.1489	9	-9.39	Low	0
221.00	Acid Soluble Cu, AA, inorganic 965.09 (10%)	0553	9.125	0.1500	9.979	0.6077	0.1489	9	-1.30	OK	0
221.00	Acid Soluble Cu, AA, inorganic 965.09 (10%)	0485	9.805	0.3900	9.979	0.6077	0.1489	9	-0.26	OK	0
221.00	Acid Soluble Cu, AA, inorganic 965.09 (10%)	0029	10.07	0.2700	9.979	0.6077	0.1489	9	0.13	OK	0
221.00	Acid Soluble Cu, AA, inorganic 965.09 (10%)	0513	10.28	0.0800	9.979	0.6077	0.1489	9	0.46	OK	0
221.00	Acid Soluble Cu, AA, inorganic 965.09 (10%)	0577	10.30	0.0700	9.979	0.6077	0.1489	9	0.48	OK	0
221.00	Acid Soluble Cu, AA, inorganic 965.09 (10%)	0551	10.36	0.0400	9.979	0.6077	0.1489	9	0.58	OK	0
221.00	Acid Soluble Cu, AA, inorganic 965.09 (10%)	0533	10.40	0.0400	9.979	0.6077	0.1489	9	0.64	OK	0
221.00	Acid Soluble Cu, AA, inorganic 965.09 (10%)	0040	10.41	0.1302	9.979	0.6077	0.1489	9	0.66	OK	0
221.02	Acid Soluble Cu, AA, 965.09, test portion 2006.03A-C (10%)	0073	9.210	1.140				1			0
221.03	Acid Soluble Cu, AA, 965.09, test portion 2006.03A-C w/dual a	0534	10.02	0.1300				1			0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (10%)	0324	8.880	0.0600	10.44	0.5168	0.2245	19	-3.02	Low	0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (10%)	0377	9.290	0.3400	10.44	0.5168	0.2245	19	-2.22	Low	0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (10%)	0255	9.681	0.0050	10.44	0.5168	0.2245	19	-1.47	OK	0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (10%)	0049	9.946	0.1795	10.44	0.5168	0.2245	19	-0.96	OK	0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (10%)	0234	10.23	0.7600	10.44	0.5168	0.2245	19	-0.41	OK	0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (10%)	0444	10.24	0.1200	10.44	0.5168	0.2245	19	-0.39	OK	0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (10%)	0397	10.26	0.0009	10.44	0.5168	0.2245	19	-0.35	OK	0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (10%)	0552	10.37	0.4100	10.44	0.5168	0.2245	19	-0.14	OK	0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (10%)	0422	10.44	0.4600	10.44	0.5168	0.2245	19	0.00	OK	0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (10%)	0035	10.50	0.6000	10.44	0.5168	0.2245	19	0.12	OK	0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (10%)	0231	10.56	0.0200	10.44	0.5168	0.2245	19	0.23	OK	0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (10%)	0508	10.69	0.0200	10.44	0.5168	0.2245	19	0.48	OK	0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (10%)	0157	10.70	0.2000	10.44	0.5168	0.2245	19	0.50	OK	0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (10%)	0291	10.72	0.0100	10.44	0.5168	0.2245	19	0.53	OK	0

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221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (10%)	0102	10.75	0.1100	10.44	0.5168	0.2245	19	0.59	OK	0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (10%)	0354	10.79	0.0100	10.44	0.5168	0.2245	19	0.67	OK	0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (10%)	0451	10.99	0.7500	10.44	0.5168	0.2245	19	1.06	OK	0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (10%)	0360	11.04	0.1100	10.44	0.5168	0.2245	19	1.15	OK	0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (10%)	0023	11.15	0.1000	10.44	0.5168	0.2245	19	1.37	OK	0
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (10%)	0220	9.410	0.1400	10.14	0.5718	0.2262	7	-1.16	OK	0
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (10%)	0292	9.770	0.1600	10.14	0.5718	0.2262	7	-0.59	OK	0
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (10%)	0405	9.803	0.1833	10.14	0.5718	0.2262	7	-0.54	OK	0
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (10%)	0028	10.15	0.5100	10.14	0.5718	0.2262	7	0.00	OK	0
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (10%)	0423	10.51	0.0400	10.14	0.5718	0.2262	7	0.58	OK	0
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (10%)	0095	10.64	0.5100	10.14	0.5718	0.2262	7	0.78	OK	0
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (10%)	0394	10.74	0.0400	10.14	0.5718	0.2262	7	0.94	OK	0
221.33	Acid Soluble Cu, ICP, 2017.02 (10%)	0055	9.550	0.3000	10.12	0.5065	0.2665	13	-1.13	OK	0
221.33	Acid Soluble Cu, ICP, 2017.02 (10%)	0177	9.653	0.0230	10.12	0.5065	0.2665	13	-0.93	OK	0
221.33	Acid Soluble Cu, ICP, 2017.02 (10%)	0472	9.665	0.1100	10.12	0.5065	0.2665	13	-0.91	OK	0
221.33	Acid Soluble Cu, ICP, 2017.02 (10%)	0106	9.790	0.4408	10.12	0.5065	0.2665	13	-0.66	OK	0
221.33	Acid Soluble Cu, ICP, 2017.02 (10%)	0009	9.800	0.4000	10.12	0.5065	0.2665	13	-0.64	OK	0
221.33	Acid Soluble Cu, ICP, 2017.02 (10%)	0260	9.895	0.4100	10.12	0.5065	0.2665	13	-0.45	OK	0
221.33	Acid Soluble Cu, ICP, 2017.02 (10%)	0561	10.11	0.4600	10.12	0.5065	0.2665	13	-0.03	OK	0
221.33	Acid Soluble Cu, ICP, 2017.02 (10%)	0419	10.12	0.0530	10.12	0.5065	0.2665	13	-0.01	OK	0
221.33	Acid Soluble Cu, ICP, 2017.02 (10%)	0136	10.35	0.1000	10.12	0.5065	0.2665	13	0.45	OK	0
221.33	Acid Soluble Cu, ICP, 2017.02 (10%)	0563	10.45	0.5900	10.12	0.5065	0.2665	13	0.63	OK	0
221.33	Acid Soluble Cu, ICP, 2017.02 (10%)	0025	10.55	0.5000	10.12	0.5065	0.2665	13	0.84	OK	0
221.33	Acid Soluble Cu, ICP, 2017.02 (10%)	0043	10.80	0.0500	10.12	0.5065	0.2665	13	1.33	OK	0
221.33	Acid Soluble Cu, ICP, 2017.02 (10%)	0527	10.92	0.0281	10.12	0.5065	0.2665	13	1.58	OK	0
221.33	Acid Soluble Cu, ICP, 2017.02 (10%)	0515	9.160	2.498	10.12	0.5065	0.2665	13	-1.90	OK	1
221.33	Acid Soluble Cu, ICP, 2017.02 (10%)	0494	0.1097	0.0002	10.12	0.5065	0.2665	13	-19.77	Low	2
221.99	Acid Soluble Cu, Other (10%)	0476	4.655	0.0100	10.29	0.4805	0.0874	18	-11.73	Low	0
221.99	Acid Soluble Cu, Other (10%)	0042	9.525	0.0900	10.29	0.4805	0.0874	18	-1.59	OK	0
221.99	Acid Soluble Cu, Other (10%)	0515	9.972	0.1582	10.29	0.4805	0.0874	18	-0.66	OK	0
221.99	Acid Soluble Cu, Other (10%)	0558	9.982	0.0072	10.29	0.4805	0.0874	18	-0.64	OK	0
221.99	Acid Soluble Cu, Other (10%)	0368	9.991	0.1369	10.29	0.4805	0.0874	18	-0.62	OK	0
221.99	Acid Soluble Cu, Other (10%)	0481	10.03	0.0700	10.29	0.4805	0.0874	18	-0.55	OK	0
221.99	Acid Soluble Cu, Other (10%)	0521	10.06	0.2410	10.29	0.4805	0.0874	18	-0.49	OK	0
221.99	Acid Soluble Cu, Other (10%)	0538	10.21	0.1300	10.29	0.4805	0.0874	18	-0.18	OK	0
221.99	Acid Soluble Cu, Other (10%)	0600	10.25	0.1000	10.29	0.4805	0.0874	18	-0.08	OK	0
221.99	Acid Soluble Cu, Other (10%)	0567	10.32	0.0900	10.29	0.4805	0.0874	18	0.05	OK	0
221.99	Acid Soluble Cu, Other (10%)	0559	10.32	0.0100	10.29	0.4805	0.0874	18	0.05	OK	0
221.99	Acid Soluble Cu, Other (10%)	0565	10.37	0.0200	10.29	0.4805	0.0874	18	0.17	OK	0
221.99	Acid Soluble Cu, Other (10%)	0605	10.46	0.0800	10.29	0.4805	0.0874	18	0.35	OK	0
221.99	Acid Soluble Cu, Other (10%)	0564	10.57	0.0200	10.29	0.4805	0.0874	18	0.58	OK	0
221.99	Acid Soluble Cu, Other (10%)	0389	10.80	0.0100	10.29	0.4805	0.0874	18	1.05	OK	0
221.99	Acid Soluble Cu, Other (10%)	0587	10.80	0.0500	10.29	0.4805	0.0874	18	1.05	OK	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	Range				
221.99	Acid Soluble Cu, Other (10%)	0516	10.96	0.2400	10.29	0.4805	0.0874	18	1.40	OK	0
221.99	Acid Soluble Cu, Other (10%)	0572	11.51	0.1098	10.29	0.4805	0.0874	18	2.55	High	0
221.99	Acid Soluble Cu, Other (10%)	0524	11.09	0.9521	10.29	0.4805	0.0874	18	1.67	OK	1
241.00	Acid Soluble Fe, AA, inorganic 965.09 (9%)	0533	7.495	0.1700	8.425	0.5922	0.3757	7	-1.42	Low	0
241.00	Acid Soluble Fe, AA, inorganic 965.09 (9%)	0073	7.945	1.130	8.425	0.5922	0.3757	7	-0.73	OK	0
241.00	Acid Soluble Fe, AA, inorganic 965.09 (9%)	0553	8.425	0.0500	8.425	0.5922	0.3757	7	0.00	OK	0
241.00	Acid Soluble Fe, AA, inorganic 965.09 (9%)	0485	8.580	0.2800	8.425	0.5922	0.3757	7	0.24	OK	0
241.00	Acid Soluble Fe, AA, inorganic 965.09 (9%)	0551	8.640	0.0200	8.425	0.5922	0.3757	7	0.33	OK	0
241.00	Acid Soluble Fe, AA, inorganic 965.09 (9%)	0040	8.765	0.7700	8.425	0.5922	0.3757	7	0.52	OK	0
241.00	Acid Soluble Fe, AA, inorganic 965.09 (9%)	0029	9.081	0.2100	8.425	0.5922	0.3757	7	1.00	OK	0
241.02	Acid Soluble Fe, AA, 965.09, test portion 2006.03A-C (9%)	0405	8.766	0.0941				1			0
241.03	Acid Soluble Fe, AA, 965.09, test portion 2006.03A-C w/dual a	0534	8.965	0.0700				1			0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (9%)	0255	4.273	0.1170	8.749	0.9145	0.2653	18	-4.90	Low	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (9%)	0377	6.970	0.0400	8.749	0.9145	0.2653	18	-1.95	Low	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (9%)	0035	7.325	0.6500	8.749	0.9145	0.2653	18	-1.56	Low	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (9%)	0397	7.827	0.0111	8.749	0.9145	0.2653	18	-1.01	Low	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (9%)	0231	8.095	0.0100	8.749	0.9145	0.2653	18	-0.72	OK	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (9%)	0291	8.530	0.0200	8.749	0.9145	0.2653	18	-0.24	OK	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (9%)	0451	8.841	0.3420	8.749	0.9145	0.2653	18	0.10	OK	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (9%)	0324	8.870	0.9200	8.749	0.9145	0.2653	18	0.13	OK	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (9%)	0552	9.040	0.3000	8.749	0.9145	0.2653	18	0.32	OK	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (9%)	0234	9.055	0.0300	8.749	0.9145	0.2653	18	0.33	OK	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (9%)	0102	9.065	0.1900	8.749	0.9145	0.2653	18	0.35	OK	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (9%)	0360	9.165	0.2300	8.749	0.9145	0.2653	18	0.45	OK	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (9%)	0157	9.205	0.2700	8.749	0.9145	0.2653	18	0.50	OK	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (9%)	0444	9.215	0.1900	8.749	0.9145	0.2653	18	0.51	OK	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (9%)	0513	9.390	0.0200	8.749	0.9145	0.2653	18	0.70	OK	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (9%)	0354	9.415	0.4300	8.749	0.9145	0.2653	18	0.73	OK	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (9%)	0023	9.670	0.0800	8.749	0.9145	0.2653	18	1.01	High	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (9%)	0422	9.967	0.9260	8.749	0.9145	0.2653	18	1.33	High	0
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (9%)	0292	6.370	0.0400	8.402	1.501	0.1763	6	-1.21	Low	0
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (9%)	0220	7.980	0.1000	8.402	1.501	0.1763	6	-0.25	OK	0
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (9%)	0423	8.024	0.0180	8.402	1.501	0.1763	6	-0.22	OK	0
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (9%)	0394	8.750	0.1800	8.402	1.501	0.1763	6	0.21	OK	0
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (9%)	0028	8.905	0.4500	8.402	1.501	0.1763	6	0.30	OK	0
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (9%)	0095	10.39	0.2700	8.402	1.501	0.1763	6	1.18	High	0
241.33	Acid Soluble Fe, ICP, 2017.02 (9%)	0494	5.984	0.0137	8.534	0.6422	0.2895	14	-3.97	Low	0
241.33	Acid Soluble Fe, ICP, 2017.02 (9%)	0472	7.405	0.0300	8.534	0.6422	0.2895	14	-1.76	Low	0
241.33	Acid Soluble Fe, ICP, 2017.02 (9%)	0419	8.091	0.2010	8.534	0.6422	0.2895	14	-0.69	OK	0
241.33	Acid Soluble Fe, ICP, 2017.02 (9%)	0260	8.098	0.2150	8.534	0.6422	0.2895	14	-0.68	OK	0
241.33	Acid Soluble Fe, ICP, 2017.02 (9%)	0136	8.275	0.1300	8.534	0.6422	0.2895	14	-0.40	OK	0
241.33	Acid Soluble Fe, ICP, 2017.02 (9%)	0009	8.450	0.5000	8.534	0.6422	0.2895	14	-0.13	OK	0
241.33	Acid Soluble Fe, ICP, 2017.02 (9%)	0177	8.655	0.0099	8.534	0.6422	0.2895	14	0.19	OK	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	Range				
241.33	Acid Soluble Fe, ICP, 2017.02 (9%)	0106	8.664	0.7387	8.534	0.6422	0.2895	14	0.20	OK	0
241.33	Acid Soluble Fe, ICP, 2017.02 (9%)	0055	8.700	0.8000	8.534	0.6422	0.2895	14	0.26	OK	0
241.33	Acid Soluble Fe, ICP, 2017.02 (9%)	0563	8.824	0.0680	8.534	0.6422	0.2895	14	0.45	OK	0
241.33	Acid Soluble Fe, ICP, 2017.02 (9%)	0025	8.870	0.4400	8.534	0.6422	0.2895	14	0.52	OK	0
241.33	Acid Soluble Fe, ICP, 2017.02 (9%)	0527	9.039	0.0164	8.534	0.6422	0.2895	14	0.79	OK	0
241.33	Acid Soluble Fe, ICP, 2017.02 (9%)	0515	9.177	0.3709	8.534	0.6422	0.2895	14	1.00	OK	0
241.33	Acid Soluble Fe, ICP, 2017.02 (9%)	0561	9.660	0.5200	8.534	0.6422	0.2895	14	1.75	High	0
241.99	Acid Soluble Fe, Other (9%)	0476	3.835	0.3300	8.564	0.8780	0.1430	19	-5.39	Low	0
241.99	Acid Soluble Fe, Other (9%)	0042	4.300	0.7000	8.564	0.8780	0.1430	19	-4.86	Low	0
241.99	Acid Soluble Fe, Other (9%)	0515	7.370	0.1333	8.564	0.8780	0.1430	19	-1.36	Low	0
241.99	Acid Soluble Fe, Other (9%)	0605	7.372	0.2390	8.564	0.8780	0.1430	19	-1.36	Low	0
241.99	Acid Soluble Fe, Other (9%)	0521	7.701	0.0991	8.564	0.8780	0.1430	19	-0.98	Low	0
241.99	Acid Soluble Fe, Other (9%)	0481	8.525	0.0300	8.564	0.8780	0.1430	19	-0.04	OK	0
241.99	Acid Soluble Fe, Other (9%)	0389	8.550	0.0000	8.564	0.8780	0.1430	19	-0.02	OK	0
241.99	Acid Soluble Fe, Other (9%)	0577	8.670	0.3200	8.564	0.8780	0.1430	19	0.12	OK	0
241.99	Acid Soluble Fe, Other (9%)	0368	8.785	0.0475	8.564	0.8780	0.1430	19	0.25	OK	0
241.99	Acid Soluble Fe, Other (9%)	0572	8.794	0.2729	8.564	0.8780	0.1430	19	0.26	OK	0
241.99	Acid Soluble Fe, Other (9%)	0538	8.885	0.0500	8.564	0.8780	0.1430	19	0.37	OK	0
241.99	Acid Soluble Fe, Other (9%)	0558	8.965	0.0179	8.564	0.8780	0.1430	19	0.46	OK	0
241.99	Acid Soluble Fe, Other (9%)	0587	9.030	0.0800	8.564	0.8780	0.1430	19	0.53	OK	0
241.99	Acid Soluble Fe, Other (9%)	0600	9.100	0.1000	8.564	0.8780	0.1430	19	0.61	OK	0
241.99	Acid Soluble Fe, Other (9%)	0559	9.115	0.0100	8.564	0.8780	0.1430	19	0.63	OK	0
241.99	Acid Soluble Fe, Other (9%)	0516	9.129	0.1870	8.564	0.8780	0.1430	19	0.64	OK	0
241.99	Acid Soluble Fe, Other (9%)	0567	9.185	0.0300	8.564	0.8780	0.1430	19	0.71	OK	0
241.99	Acid Soluble Fe, Other (9%)	0565	9.515	0.0500	8.564	0.8780	0.1430	19	1.08	High	0
241.99	Acid Soluble Fe, Other (9%)	0564	9.530	0.0200	8.564	0.8780	0.1430	19	1.10	High	0
241.99	Acid Soluble Fe, Other (9%)	0524	9.844	0.8721	8.564	0.8780	0.1430	19	1.46	High	1
251.00	Acid Soluble Pb, AA, test portion 2006.03 modified w/dual acid	0534	274.1	5.200				1			0
251.30	Acid Soluble Pb, ICP (ppm)	0476	134.8	5.320	291.3	83.57	8.883	8	-1.71	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0444	208.0	10.00	291.3	83.57	8.883	8	-0.91	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0389	264.6	0.9800	291.3	83.57	8.883	8	-0.29	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0255	291.7	1.700	291.3	83.57	8.883	8	0.00	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0605	325.5	27.59	291.3	83.57	8.883	8	0.37	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0524	354.9	17.19	291.3	83.57	8.883	8	0.70	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0035	358.5	1.000	291.3	83.57	8.883	8	0.74	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0419	361.5	7.281	291.3	83.57	8.883	8	0.77	NA	0
251.32	Acid Soluble Pb, ICP, 2006.03 (ppm)	0220	246.0	10.00				2			0
251.32	Acid Soluble Pb, ICP, 2006.03 (ppm)	0405	357.0	98.00				2			0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0136	323.5	5.000	342.7	13.64	4.940	5	-1.41		0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0563	339.4	1.273	342.7	13.64	4.940	5	-0.24		0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0527	341.1	1.838	342.7	13.64	4.940	5	-0.12		0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0494	349.0	12.00	342.7	13.64	4.940	5	0.46		0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0515	360.7	4.590	342.7	13.64	4.940	5	1.31		0

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			Value	Range	Rob Mean	Rob SD	Range				
251.34	Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm)	0368	318.5	31.00				2			0
251.34	Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm)	0515	372.4	6.595				2			0
251.99	Acid Soluble Pb, Other (ppm)	0220	246.0	2.000	292.5	32.53	41.22	4	-1.43		0
251.99	Acid Soluble Pb, Other (ppm)	0481	300.5	38.80	292.5	32.53	41.22	4	0.25		0
251.99	Acid Soluble Pb, Other (ppm)	0572	301.4	106.1	292.5	32.53	41.22	4	0.27		0
251.99	Acid Soluble Pb, Other (ppm)	0028	322.0	18.00	292.5	32.53	41.22	4	0.91		0
261.00	Acid Soluble Mn, AA, Mn2+ only (12%)	0553	10.15	0.3000				1			0
261.12	Acid Soluble Mn, AA, inorganic 965.09 (12%)	0485	7.725	0.0700	8.051	0.2518	0.1178	5	-1.29		0
261.12	Acid Soluble Mn, AA, inorganic 965.09 (12%)	0533	7.890	0.1000	8.051	0.2518	0.1178	5	-0.64		0
261.12	Acid Soluble Mn, AA, inorganic 965.09 (12%)	0040	8.069	0.3350	8.051	0.2518	0.1178	5	0.07		0
261.12	Acid Soluble Mn, AA, inorganic 965.09 (12%)	0029	8.211	0.0640	8.051	0.2518	0.1178	5	0.64		0
261.12	Acid Soluble Mn, AA, inorganic 965.09 (12%)	0551	8.360	0.0200	8.051	0.2518	0.1178	5	1.23		0
261.15	Acid Soluble Mn, AA, 965.09, test portion 2006.03A-C w/dual a	0534	7.475	0.0500				1			0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (12%)	0035	6.635	0.8300	8.111	0.5108	0.2844	7	-2.61	Low	0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (12%)	0422	7.888	0.3660	8.111	0.5108	0.2844	7	-0.40	OK	0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (12%)	0157	7.910	0.0200	8.111	0.5108	0.2844	7	-0.36	OK	0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (12%)	0291	8.185	0.0100	8.111	0.5108	0.2844	7	0.13	OK	0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (12%)	0444	8.210	0.1400	8.111	0.5108	0.2844	7	0.17	OK	0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (12%)	0354	8.567	0.1350	8.111	0.5108	0.2844	7	0.81	OK	0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (12%)	0234	8.675	0.4900	8.111	0.5108	0.2844	7	1.00	OK	0
261.31	Acid Soluble Mn, ICP, test portion 972.02b (12%)	0292	7.120	0.0200	7.730	0.5478	0.2267	3	-1.11		0
261.31	Acid Soluble Mn, ICP, test portion 972.02b (12%)	0324	7.890	0.5600	7.730	0.5478	0.2267	3	0.29		0
261.31	Acid Soluble Mn, ICP, test portion 972.02b (12%)	0360	8.180	0.1000	7.730	0.5478	0.2267	3	0.82		0
261.32	Acid Soluble Mn, ICP, test portion inorganic 965.09 (12%)	0377	7.205	0.3100	8.149	0.7135	0.1832	9	-1.22	Low	0
261.32	Acid Soluble Mn, ICP, test portion inorganic 965.09 (12%)	0073	7.540	0.2200	8.149	0.7135	0.1832	9	-0.79	OK	0
261.32	Acid Soluble Mn, ICP, test portion inorganic 965.09 (12%)	0397	7.716	0.0111	8.149	0.7135	0.1832	9	-0.56	OK	0
261.32	Acid Soluble Mn, ICP, test portion inorganic 965.09 (12%)	0231	7.965	0.0700	8.149	0.7135	0.1832	9	-0.24	OK	0
261.32	Acid Soluble Mn, ICP, test portion inorganic 965.09 (12%)	0049	8.224	0.1296	8.149	0.7135	0.1832	9	0.10	OK	0
261.32	Acid Soluble Mn, ICP, test portion inorganic 965.09 (12%)	0552	8.300	0.3400	8.149	0.7135	0.1832	9	0.20	OK	0
261.32	Acid Soluble Mn, ICP, test portion inorganic 965.09 (12%)	0023	8.330	0.0600	8.149	0.7135	0.1832	9	0.23	OK	0
261.32	Acid Soluble Mn, ICP, test portion inorganic 965.09 (12%)	0513	8.840	0.0200	8.149	0.7135	0.1832	9	0.89	OK	0
261.32	Acid Soluble Mn, ICP, test portion inorganic 965.09 (12%)	0451	9.432	0.4880	8.149	0.7135	0.1832	9	1.66	High	0
261.34	Acid Soluble Mn, ICP, test portion 2006.03A-C (12%)	0220	7.575	0.1300	7.990	0.3051	0.1320	5	-1.36		0
261.34	Acid Soluble Mn, ICP, test portion 2006.03A-C (12%)	0423	7.765	0.0300	7.990	0.3051	0.1320	5	-0.74		0
261.34	Acid Soluble Mn, ICP, test portion 2006.03A-C (12%)	0028	8.130	0.1200	7.990	0.3051	0.1320	5	0.46		0
261.34	Acid Soluble Mn, ICP, test portion 2006.03A-C (12%)	0095	8.190	0.3200	7.990	0.3051	0.1320	5	0.66		0
261.34	Acid Soluble Mn, ICP, test portion 2006.03A-C (12%)	0394	8.290	0.0600	7.990	0.3051	0.1320	5	0.98		0
261.35	Acid Soluble Mn, ICP, 2017.02 (12%)	0260	7.563	0.0150	8.152	0.5154	0.2547	14	-1.14	OK	0
261.35	Acid Soluble Mn, ICP, 2017.02 (12%)	0009	7.600	0.8000	8.152	0.5154	0.2547	14	-1.07	OK	0
261.35	Acid Soluble Mn, ICP, 2017.02 (12%)	0494	7.616	0.3281	8.152	0.5154	0.2547	14	-1.04	OK	0
261.35	Acid Soluble Mn, ICP, 2017.02 (12%)	0177	7.638	0.0267	8.152	0.5154	0.2547	14	-1.00	OK	0
261.35	Acid Soluble Mn, ICP, 2017.02 (12%)	0419	7.803	0.0130	8.152	0.5154	0.2547	14	-0.68	OK	0
261.35	Acid Soluble Mn, ICP, 2017.02 (12%)	0472	7.865	0.0100	8.152	0.5154	0.2547	14	-0.56	OK	0

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			Value	Range	Rob Mean	Rob SD	Range				
261.35	Acid Soluble Mn, ICP, 2017.02 (12%)	0106	8.244	0.3533	8.152	0.5154	0.2547	14	0.18	OK	0
261.35	Acid Soluble Mn, ICP, 2017.02 (12%)	0136	8.305	0.0500	8.152	0.5154	0.2547	14	0.30	OK	0
261.35	Acid Soluble Mn, ICP, 2017.02 (12%)	0043	8.380	0.2000	8.152	0.5154	0.2547	14	0.44	OK	0
261.35	Acid Soluble Mn, ICP, 2017.02 (12%)	0561	8.425	0.0700	8.152	0.5154	0.2547	14	0.53	OK	0
261.35	Acid Soluble Mn, ICP, 2017.02 (12%)	0055	8.550	0.3000	8.152	0.5154	0.2547	14	0.77	OK	0
261.35	Acid Soluble Mn, ICP, 2017.02 (12%)	0527	8.617	0.0201	8.152	0.5154	0.2547	14	0.90	OK	0
261.35	Acid Soluble Mn, ICP, 2017.02 (12%)	0563	8.716	0.5490	8.152	0.5154	0.2547	14	1.09	OK	0
261.35	Acid Soluble Mn, ICP, 2017.02 (12%)	0025	8.805	0.8300	8.152	0.5154	0.2547	14	1.27	OK	0
261.35	Acid Soluble Mn, ICP, 2017.02 (12%)	0515	6.312	4.510	8.152	0.5154	0.2547	14	-3.57	Low	1
261.99	Acid Soluble Mn, Other (12%)	0476	4.375	0.0900	8.437	0.6374	0.1794	19	-6.37	Low	0
261.99	Acid Soluble Mn, Other (12%)	0481	7.440	0.1000	8.437	0.6374	0.1794	19	-1.56	Low	0
261.99	Acid Soluble Mn, Other (12%)	0515	7.881	0.2847	8.437	0.6374	0.1794	19	-0.87	OK	0
261.99	Acid Soluble Mn, Other (12%)	0389	7.975	0.0300	8.437	0.6374	0.1794	19	-0.72	OK	0
261.99	Acid Soluble Mn, Other (12%)	0521	7.991	0.2740	8.437	0.6374	0.1794	19	-0.70	OK	0
261.99	Acid Soluble Mn, Other (12%)	0577	8.060	0.1400	8.437	0.6374	0.1794	19	-0.59	OK	0
261.99	Acid Soluble Mn, Other (12%)	0255	8.220	0.0110	8.437	0.6374	0.1794	19	-0.34	OK	0
261.99	Acid Soluble Mn, Other (12%)	0368	8.233	0.2051	8.437	0.6374	0.1794	19	-0.32	OK	0
261.99	Acid Soluble Mn, Other (12%)	0587	8.330	0.1600	8.437	0.6374	0.1794	19	-0.17	OK	0
261.99	Acid Soluble Mn, Other (12%)	0605	8.502	0.0750	8.437	0.6374	0.1794	19	0.10	OK	0
261.99	Acid Soluble Mn, Other (12%)	0600	8.550	0.1000	8.437	0.6374	0.1794	19	0.18	OK	0
261.99	Acid Soluble Mn, Other (12%)	0565	8.560	0.0400	8.437	0.6374	0.1794	19	0.19	OK	0
261.99	Acid Soluble Mn, Other (12%)	0564	8.625	0.0500	8.437	0.6374	0.1794	19	0.30	OK	0
261.99	Acid Soluble Mn, Other (12%)	0567	8.650	0.1000	8.437	0.6374	0.1794	19	0.33	OK	0
261.99	Acid Soluble Mn, Other (12%)	0572	8.901	0.1353	8.437	0.6374	0.1794	19	0.73	OK	0
261.99	Acid Soluble Mn, Other (12%)	0042	8.955	0.6500	8.437	0.6374	0.1794	19	0.81	OK	0
261.99	Acid Soluble Mn, Other (12%)	0524	9.122	0.8860	8.437	0.6374	0.1794	19	1.07	OK	0
261.99	Acid Soluble Mn, Other (12%)	0558	11.92	0.0668	8.437	0.6374	0.1794	19	5.47	High	0
261.99	Acid Soluble Mn, Other (12%)	0559	12.45	0.0100	8.437	0.6374	0.1794	19	6.29	High	0
261.99	Acid Soluble Mn, Other (12%)	0516	42.19	1.154	8.437	0.6374	0.1794	19	52.96	High	2
271.00	Water Soluble Mn, AA (%)	0518	8.825	0.1500				2			0
271.00	Water Soluble Mn, AA (%)	0538	9.240	0.2200				2			0
281.00	Acid Soluble Hg, AA (ppm)	0117	< 0.2					0			5
281.00	Acid Soluble Hg, AA (ppm)	0481	< 0.5					0			5
281.30	Acid Soluble Hg, ICP (ppm)	0563	0.1255	0.0370				1			0
281.30	Acid Soluble Hg, ICP (ppm)	0527	< 0.001					1			5
281.30	Acid Soluble Hg, ICP (ppm)	0476	< 0.1					1			5
281.30	Acid Soluble Hg, ICP (ppm)	0605	< 1.25					1			5
281.30	Acid Soluble Hg, ICP (ppm)	0405	< 2					1			5
281.99	Acid Soluble Hg, Other (ppm)	0524	0.0466	0.0007	0.0515	0.0034	0.0030	5	-1.29		0
281.99	Acid Soluble Hg, Other (ppm)	0220	0.0500	0.0000	0.0515	0.0034	0.0030	5	-0.39		0
281.99	Acid Soluble Hg, Other (ppm)	0572	0.0520	0.0040	0.0515	0.0034	0.0030	5	0.13		0
281.99	Acid Soluble Hg, Other (ppm)	0035	0.0545	0.0090	0.0515	0.0034	0.0030	5	0.78		0
281.99	Acid Soluble Hg, Other (ppm)	0368	0.0545	0.0014	0.0515	0.0034	0.0030	5	0.78		0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	Range				
281.99	Acid Soluble Hg, Other (ppm)	0009	< 0.044		0.0515	0.0034	0.0030	5			5
289.30	Acid Soluble Mo, ICP (ppm)	0476	1.120	0.3000	5.629	5.963	0.4995	5	-0.66		0
289.30	Acid Soluble Mo, ICP (ppm)	0255	3.380	0.3200	5.629	5.963	0.4995	5	-0.33		0
289.30	Acid Soluble Mo, ICP (ppm)	0234	3.500	1.000	5.629	5.963	0.4995	5	-0.31		0
289.30	Acid Soluble Mo, ICP (ppm)	0524	4.040	0.0073	5.629	5.963	0.4995	5	-0.23		0
289.30	Acid Soluble Mo, ICP (ppm)	0419	16.11	0.8700	5.629	5.963	0.4995	5	1.53		0
289.30	Acid Soluble Mo, ICP (ppm)	0516	15.00	10.00	5.629	5.963	0.4995	5	1.37		1
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	0220	1.050	0.1000				2			0
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	0405	7.000	2.000				2			0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0136	4.215	0.3300	5.355	1.653	0.6083	4	-0.69		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0527	4.345	0.4652	5.355	1.653	0.6083	4	-0.61		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0563	5.094	0.1080	5.355	1.653	0.6083	4	-0.16		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0494	7.765	1.530	5.355	1.653	0.6083	4	1.46		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0106	0.0000	0.0000	5.355	1.653	0.6083	4			4
289.34	Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm)	0368	< 0.1					0			5
289.99	Acid Soluble Mo, Other (ppm)	0220	0.6000	0.2000				2			0
289.99	Acid Soluble Mo, Other (ppm)	0572	5.086	1.728				2			0
289.99	Acid Soluble Mo, Other (ppm)	0481	< 100					2			5
291.30	Acid Soluble Ni, ICP (ppm)	0476	77.41	0.7800	136.3	40.48	7.572	7	-1.32	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0444	102.0	2.000	136.3	40.48	7.572	7	-0.77	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0605	133.7	10.42	136.3	40.48	7.572	7	-0.06	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0394	138.3	7.524	136.3	40.48	7.572	7	0.04	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0524	163.6	4.477	136.3	40.48	7.572	7	0.61	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0035	167.0	26.00	136.3	40.48	7.572	7	0.68	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0419	172.4	1.805	136.3	40.48	7.572	7	0.81	NA	0
291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	0405	150.0	0.0000				2			0
291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	0220	191.5	7.000				2			0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0136	140.5	11.00	156.7	17.39	11.23	6	-0.83	NA	0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0009	145.0	10.00	156.7	17.39	11.23	6	-0.60	NA	0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0563	149.4	17.88	156.7	17.39	11.23	6	-0.37	NA	0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0494	160.5	3.000	156.7	17.39	11.23	6	0.19	NA	0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0527	162.0	0.4867	156.7	17.39	11.23	6	0.27	NA	0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0515	199.9	24.99	156.7	17.39	11.23	6	2.21	NA	0
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	0368	144.5	1.000				2			0
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	0515	153.8	8.833				2			0
291.99	Acid Soluble Ni, Other (ppm)	0028	137.0	8.000	149.7	9.449	18.74	5	-1.34		0
291.99	Acid Soluble Ni, Other (ppm)	0009	145.0	10.00	149.7	9.449	18.74	5	-0.50		0
291.99	Acid Soluble Ni, Other (ppm)	0572	149.0	68.59	149.7	9.449	18.74	5	-0.08		0
291.99	Acid Soluble Ni, Other (ppm)	0255	156.5	3.100	149.7	9.449	18.74	5	0.72		0
291.99	Acid Soluble Ni, Other (ppm)	0220	161.0	4.000	149.7	9.449	18.74	5	1.20		0
301.30	Acid Soluble Se, ICP (ppm)	0476	1.170	0.2400	17.17	13.86	0.1890	3	-1.15		0
301.30	Acid Soluble Se, ICP (ppm)	0419	24.70	0.2890	17.17	13.86	0.1890	3	0.54		0
301.30	Acid Soluble Se, ICP (ppm)	0524	25.64	0.0380	17.17	13.86	0.1890	3	0.61		0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	Range				
301.32	Acid Soluble Se, ICP, 2006.03 (ppm)	0220	3.000	0.2000				2			0
301.32	Acid Soluble Se, ICP, 2006.03 (ppm)	0405	46.00	2.000				2			0
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0563	2.439	0.1600	28.90	17.93	4.237	4	-1.25		0
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0515	33.69	4.806	28.90	17.93	4.237	4	0.23		0
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0494	37.85	5.300	28.90	17.93	4.237	4	0.42		0
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0043	41.60	6.680	28.90	17.93	4.237	4	0.60		0
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0527	< 0.01		28.90	17.93	4.237	4			5
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0009	< 22		28.90	17.93	4.237	4			5
301.34	Acid Soluble Se, ICP, EPA 3050B/6010C (ppm)	0515	42.29	3.210				1			0
301.34	Acid Soluble Se, ICP, EPA 3050B/6010C (ppm)	0368	< 1.4					1			5
301.99	Acid Soluble Se, Other (ppm)	0009	0.8150	0.0300	5.826	7.922	0.4225	4	-0.63		0
301.99	Acid Soluble Se, Other (ppm)	0572	1.809	0.7200	5.826	7.922	0.4225	4	-0.51		0
301.99	Acid Soluble Se, Other (ppm)	0220	3.050	0.1000	5.826	7.922	0.4225	4	-0.35		0
301.99	Acid Soluble Se, Other (ppm)	0255	17.63	0.8400	5.826	7.922	0.4225	4	1.49		0
301.99	Acid Soluble Se, Other (ppm)	0481	< 0.5		5.826	7.922	0.4225	4			5
311.00	Sodium, AA (%)	0553	1.308	0.0050				1			0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0419	0.1724	0.0013	1.116	0.5285	0.0088	5	-1.78		0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0035	1.300	0.0200	1.116	0.5285	0.0088	5	0.35		0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0423	1.344	0.0160	1.116	0.5285	0.0088	5	0.43		0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0527	1.362	0.0066	1.116	0.5285	0.0088	5	0.47		0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0009	1.400	0.0000	1.116	0.5285	0.0088	5	0.54		0
311.99	Sodium, Other (%)	0354	1.305	0.0100				2			0
311.99	Sodium, Other (%)	0572	1.317	0.0654				2			0
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	0553	3.818	0.4350	4.243	0.3697	0.2583	3	-1.15		0
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	0533	4.420	0.3200	4.243	0.3697	0.2583	3	0.48		0
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	0551	4.490	0.0200	4.243	0.3697	0.2583	3	0.67		0
321.03	Acid Soluble Zn, AA, 965.09, test portion 2006.03A-C w/dual a	0534	4.565	0.1300				1			0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0255	3.654	0.0330	4.212	0.5609	0.0699	7	-0.90	Low	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0552	3.840	0.0800	4.212	0.5609	0.0699	7	-0.60	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0354	3.870	0.0200	4.212	0.5609	0.0699	7	-0.55	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0231	4.200	0.0800	4.212	0.5609	0.0699	7	-0.02	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0513	4.220	0.0400	4.212	0.5609	0.0699	7	0.01	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0234	4.650	0.2000	4.212	0.5609	0.0699	7	0.71	High	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0049	8.754	0.0361	4.212	0.5609	0.0699	7	7.32	High	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0035	4.410	0.9800	4.212	0.5609	0.0699	7	0.32	OK	1
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0405	3.694	0.0426	4.125	0.3423	0.1283	6	-1.12	Low	0
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0028	3.900	0.3200	4.125	0.3423	0.1283	6	-0.59	OK	0
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0220	4.005	0.0500	4.125	0.3423	0.1283	6	-0.31	OK	0
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0423	4.335	0.1300	4.125	0.3423	0.1283	6	0.55	OK	0
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0095	4.405	0.0900	4.125	0.3423	0.1283	6	0.73	OK	0
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0394	4.412	0.1371	4.125	0.3423	0.1283	6	0.75	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0494	3.547	0.7413	4.300	0.7283	0.4524	12	-1.03	Low	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0419	3.686	0.0640	4.300	0.7283	0.4524	12	-0.84	Low	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	Range				
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0472	3.840	0.0400	4.300	0.7283	0.4524	12	-0.63	Low	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0009	3.850	0.3000	4.300	0.7283	0.4524	12	-0.62	Low	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0260	3.878	0.1550	4.300	0.7283	0.4524	12	-0.58	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0106	4.180	0.3960	4.300	0.7283	0.4524	12	-0.17	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0043	4.210	0.0200	4.300	0.7283	0.4524	12	-0.12	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0527	4.229	0.0644	4.300	0.7283	0.4524	12	-0.10	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0136	4.330	0.1000	4.300	0.7283	0.4524	12	0.04	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0421	5.065	0.9500	4.300	0.7283	0.4524	12	1.05	High	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0515	5.588	1.489	4.300	0.7283	0.4524	12	1.77	High	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0025	6.155	1.110	4.300	0.7283	0.4524	12	2.55	High	0
321.99	Acid Soluble Zn, Other (%)	0476	1.935	0.1300	4.070	0.3793	0.2312	10	-5.24	Low	0
321.99	Acid Soluble Zn, Other (%)	0572	3.627	0.9933	4.070	0.3793	0.2312	10	-1.09	Low	0
321.99	Acid Soluble Zn, Other (%)	0481	3.830	0.0400	4.070	0.3793	0.2312	10	-0.59	OK	0
321.99	Acid Soluble Zn, Other (%)	0389	3.985	0.0500	4.070	0.3793	0.2312	10	-0.21	OK	0
321.99	Acid Soluble Zn, Other (%)	0368	4.059	0.1085	4.070	0.3793	0.2312	10	-0.03	OK	0
321.99	Acid Soluble Zn, Other (%)	0524	4.216	0.0462	4.070	0.3793	0.2312	10	0.36	OK	0
321.99	Acid Soluble Zn, Other (%)	0516	4.244	0.0870	4.070	0.3793	0.2312	10	0.42	OK	0
321.99	Acid Soluble Zn, Other (%)	0605	4.320	0.1430	4.070	0.3793	0.2312	10	0.61	OK	0
321.99	Acid Soluble Zn, Other (%)	0515	4.421	0.6140	4.070	0.3793	0.2312	10	0.86	OK	0
321.99	Acid Soluble Zn, Other (%)	0600	4.500	0.1000	4.070	0.3793	0.2312	10	1.05	High	0

Interpreting Z Scores and Flags:

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.

Notes:

Robust statistics not used if < 6 labs used in calculations, in this case Values and Z Scores are grayed out and should be interpreted with extreme caution. IA Status describes where your result is relative to the Assigned Value $\pm$ IA. Red indicates Higher or Lower and Green indicates within the IA range about the Robust mean. 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.