

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 190211

Grade 14-14-14

Statistical Summary

Methods: 152

Labs Reporting: 94

Issue Date : 03/31/2019

Method Code	Analyte & Method Sample # 190211	# 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)	Hornitz %RSD
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	7	7	13.66	0.2595	13.66		0.2943	0.1390	2.15%		0.0891	2.70%
001.99	Ammoniacal Nitrogen, Other (%)	26	25	13.86	0.3997	13.83		0.2787	0.0697	2.02%		0.0757	2.69%
010.11	Total Nitrogen, Modified Comprehensive (14%)	7	7	13.91	0.2707	13.90	0.6290	0.2861	0.1352	2.06%	1.06	0.1537	2.69%
010.12	Total Nitrogen, Salicylic (14%)	1		13.95									
010.60	Total Nitrogen, Combustion (14%)	58	56	13.83	0.1813	13.84	0.6284	0.1622	0.0271	1.17%	0.60	0.1250	2.69%
010.99	Total Nitrogen, Other (14%)	10	10	13.77	0.3300	13.77	0.6277	0.3743	0.1479	2.72%	1.39	0.0933	2.70%
020.10	Total Phosphorus as P2O5, Gravimetric Quinolinium ..	3	3	14.67	0.0833	14.67		0.0833	0.0601	0.57%		0.1333	2.67%
020.20	Total Phosphorus as P2O5, Spectrophotometric Molyb	21	21	14.52	0.5868	14.60		0.3951	0.1078	2.71%		0.1565	2.67%
020.40	Total Phosphorus as P2O5, Automated (%)	2	2	14.63	0.2581								
020.50	Total Phosphorus as P2O5, ICP (%)	23	23	14.37	0.4456	14.36		0.4427	0.1154	3.08%		0.2826	2.68%
020.99	Total Phosphorus as P2O5, Other (%)	3	3	14.20	0.4532	14.20		0.4532	0.3271	3.19%		0.9580	2.68%
030.20	Citrate Insoluble Phosphorus as P2O5, Spectrophoto..	2	2	7.555	10.58								
030.40	Citrate Insoluble Phosphorus as P2O5, Automated, t...	1		0.0850									
040.20	Indirect Available Phosphorus as P2O5, Spectrophot...	1		14.71									
040.40	Indirect Available Phosphorus as P2O5, Automated (1.	1		14.73									
041.10	Direct Available Phosphorus as P2O5, Gravimetric Q..	4	4	14.65	0.1217	14.65	0.7000	0.1217	0.0761	0.83%	0.41	0.0696	2.67%
041.11	Direct Available Phosphorus as P2O5, Gravimetric Q..	3	3	14.70	0.1027	14.70	0.7000	0.1027	0.0741	0.70%	0.34	0.0854	2.67%
041.20	Direct Available Phosphorus as P2O5, Spectrophotom	1		13.96									
041.21	Direct Available Phosphorus as P2O5, Spectrophotom	2	2	14.77	0.1945								
041.40	Direct Available Phosphorus as P2O5, Automated (14'	3	3	14.74	0.7154	14.74	0.7000	0.7154	0.5163	4.85%	2.38	0.2300	2.67%
041.50	Direct Available Phosphorus as P2O5, ICP (14%)	2	2	14.50	0.9192								
041.51	Direct Available Phosphorus as P2O5, ICP, Citrate-... (	10	10	14.35	0.4134	14.38	0.7000	0.3901	0.1542	2.71%	1.30	0.1482	2.68%
041.60	Direct Available Phosphorus as P2O5, Citrate-EDTA ..	12	11	14.47	0.4319	14.57	0.7000	0.1292	0.0487	0.89%	0.43	0.1317	2.67%
041.99	Direct Available Phosphorus as P2O5, Other (14%)	11	11	14.25	0.2229	14.24	0.7000	0.2317	0.0873	1.63%	0.77	0.1218	2.68%
048.10	Water Soluble Phosphorus as P2O5, Gravimetric Quin	1		12.81									
048.20	Water Soluble Phosphorus as P2O5, Spectrophotome	1		13.02									
048.50	Water Soluble Phosphorus as P2O5, ICP (%)	2	2	13.76	1.358								
048.99	Water Soluble Phosphorus as P2O5, Other (%)	2	2	13.08	0.6010								
050.00	Soluble Potassium as K2O, STPB Oxalate (14%)	11	10	14.36	0.4451	14.40	0.8841	0.4039	0.1597	2.80%	1.06	0.1730	2.68%
050.30	Soluble Potassium as K2O, AA (Oxalate) (14%)	4	4	14.29	0.2642	14.29	0.8800	0.2642	0.1652	1.85%	0.70	0.1825	2.68%
050.31	Soluble Potassium as K2O, AA (Citrate) (14%)	2	2	13.56	0.5551								

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050.50	Soluble Potassium as K2O, ICP (Oxalate) (14%)	6	6	14.79	0.7260	14.61	0.8912	0.3589	0.1832	2.46%	0.94	0.0842	2.67%
050.51	Soluble Potassium as K2O, ICP (Citrate) (14%)	4	4	14.72	0.2593	14.72	0.8953	0.2593	0.1621	1.76%	0.67	0.3807	2.67%
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (14%)	10	9	14.49	0.4568	14.47	0.8863	0.4645	0.1936	3.21%	1.22	0.1289	2.68%
050.60	Soluble Potassium as K2O, Flame Photometric (Oxala	7	7	13.86	0.9635	13.96	0.8683	0.8628	0.4076	6.18%	2.32	0.1959	2.69%
050.61	Soluble Potassium as K2O, Flame Photometric (Citra..	3	3	14.76	1.008	14.76	0.8965	1.008	0.7272	6.83%	2.62	0.0433	2.67%
050.62	Soluble Potassium as K2O, Flame Photometric (Citra..	5	5	14.67	0.4191	14.67	0.8936	0.4191	0.2343	2.86%	1.09	0.0960	2.67%
050.99	Soluble Potassium as K2O, Other (14%)	38	37	14.22	0.7773	14.33	0.8817	0.4604	0.0946	3.21%	1.22	0.1704	2.68%
060.00	Water (Free), Vacuum Oven (%)	4	4	0.7619	0.0704	0.7619		0.0704	0.0440	9.24%		0.0612	4.17%
060.30	Water (Free), AFPC No. 2B (105°C oven for 2 hours,..	1		2.190									
060.99	Water (Free), Other (%)	1		0.8610									
101.30	Acid Soluble Calcium, ICP, test portion inorganic ... (%)	7	6	0.2949	0.0959	0.2838	0.2142	0.0818	0.0417	28.82%	0.89	0.0158	4.83%
101.32	Acid Soluble Calcium, ICP, test portion 2006.03A-C (%)	1		0.3068									
101.33	Acid Soluble Calcium, ICP, 2017.02 (%)	2	2	0.2959	0.0109								
101.99	Acid Soluble Calcium, Other (%)	3	3	5.025	7.884	5.025	0.4513	7.884	5.690	156.90%	40.71	0.0567	3.14%
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (1%)	8	8	0.6451	0.1274	0.6299	0.2315	0.1063	0.0470	16.88%	1.07	0.0182	4.29%
121.03	Acid Soluble Magnesium, AA, 965.09, test portion 2...	1		0.5935									
121.30	Acid Soluble Magnesium, ICP, test portion inorgani... (	14	13	0.9711	1.436	0.5803	0.2290	0.0366	0.0127	6.31%	0.37	0.0319	4.34%
121.32	Acid Soluble Magnesium, ICP, test portion 2006.03A...	3	3	0.5605	0.0080	0.5605	0.2280	0.0080	0.0058	1.43%	0.08	0.0044	4.36%
121.33	Acid Soluble Magnesium, ICP, 2017.02 (1%)	8	8	0.5681	0.0368	0.5680	0.2284	0.0416	0.0184	7.33%	0.42	0.0258	4.36%
121.99	Acid Soluble Magnesium, Other (1%)	12	12	0.5957	0.1482	0.5761	0.2288	0.1100	0.0397	19.09%	1.12	0.0195	4.35%
131.00	Water Soluble Magnesium, AA (%)	5	5	0.5119	0.3714	0.5119		0.3714	0.2076	72.55%		0.0162	4.42%
131.30	Water Soluble Magnesium, ICP (%)	7	7	0.3411	0.1224	0.3372		0.1298	0.0613	38.49%		0.0138	4.71%
131.70	Water Soluble Magnesium, Titrimetric (EDTA) (%)	2	2	0.7822	0.4273								
143.00	Elemental Sulfur, Gravimetric Sulfur - carbon disu... (%)	1		0.0250									
143.99	Elemental Sulfur, Other (%)	4	4	9.735	0.7930	9.735		0.7930	0.4956	8.15%		0.2695	2.84%
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulfur - ... (%)	12	11	10.18	0.7909	10.40		0.3502	0.1320	3.37%		0.0781	2.81%
145.99	Sulfate Sulfur, HCl soluble, Other (%)	2	2	9.625	0.3253								
148.00	Total Sulfur, Combustion (7.75%)	7	6	10.40	0.5484	10.42	0.7210	0.5781	0.2950	5.55%	1.87	0.1522	2.81%
148.01	Total Sulfur, Gravimetric - sulfate and elemental... (7.7	10	9	10.56	0.1735	10.55	0.7276	0.1786	0.0744	1.69%	0.57	0.1773	2.81%
148.07	Total Sulfur, ICP, test portion as in 2017.02 (7.75%)	18	17	10.22	0.4935	10.28	0.7142	0.3749	0.1137	3.65%	1.22	0.1244	2.82%
148.99	Total Sulfur, Other (7.75%)	13	13	11.28	4.134	10.42	0.7208	1.052	0.3646	10.10%	3.40	0.1365	2.81%
149.02	Sulfur - HNO3 soluble, Turbidimetric, modification... (%)	1		7.690									
149.04	Sulfur - HNO3 soluble, ICP (%)	2	2	10.45	0.7193								
151.00	Acid Soluble Arsenic , AA, test portion 2006.03 m... (p	2	2	144.6	26.66								
151.30	Acid Soluble Arsenic , ICP (ppm)	8	8	136.7	21.57	136.7		24.46	10.81	17.90%		8.070	7.63%
151.32	Acid Soluble Arsenic , ICP, 2006.03 (ppm)	1		169.3									
151.33	Acid Soluble Arsenic , ICP, 2017.02 (ppm)	4	4	164.7	11.08	164.7		11.08	6.923	6.73%		5.188	7.42%
151.34	Acid Soluble Arsenic , ICP, EPA 3050B/6010C (ppm)	2	2	157.5	2.261								
151.99	Acid Soluble Arsenic , Other (ppm)	4	4	158.4	30.03	158.4		30.03	18.77	18.96%		2.427	7.46%
165.00	Acid Soluble Boron , Spectrophotometric (0.2%)	13	13	0.1965	0.0136	0.1966	0.0325	0.0152	0.0053	7.72%	1.09	0.0053	5.11%
165.30	Acid Soluble Boron , ICP, test portion in 982.01 ... (0.2	14	14	0.2098	0.0073	0.2100	0.0345	0.0078	0.0026	3.69%	0.52	0.0053	5.06%
165.99	Acid Soluble Boron , Other (0.2%)	21	20	0.2007	0.0234	0.2015	0.0332	0.0240	0.0067	11.93%	1.69	0.0073	5.09%

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171.00	Water Soluble Boron , AA, JAOAC 52.950 (%)	2	2	0.1968	0.0046								
171.10	Water Soluble Boron , Spectrophotometric (%)	6	6	0.1909	0.0163	0.1933		0.0127	0.0065	6.55%		0.0034	5.12%
171.99	Water Soluble Boron , Other (%)	7	7	0.1966	0.0188	0.1979		0.0182	0.0086	9.19%		0.0028	5.10%
181.00	Acid Soluble Cadmium , AA, test portion 2006.03 m...	3	3	189.1	47.90	189.1		47.90	34.57	25.33%		10.70	7.27%
181.30	Acid Soluble Cadmium , ICP (ppm)	11	11	192.8	65.42	182.8		37.32	14.07	20.42%		5.305	7.31%
181.32	Acid Soluble Cadmium , ICP, 2006.03 (ppm)	1		180.9									
181.33	Acid Soluble Cadmium , ICP, 2017.02 (ppm)	4	4	193.0	13.97	193.0		13.97	8.729	7.24%		12.07	7.25%
181.34	Acid Soluble Cadmium , ICP, EPA 3050B/6010C (ppn	2	2	185.0	1.952								
181.99	Acid Soluble Cadmium , Other (ppm)	6	6	188.2	32.99	190.6		31.66	16.16	16.61%		9.849	7.26%
191.00	Acid Soluble Chromium , AA, test portion 2006.03 ... (	2	2	538.7	146.8								
191.30	Acid Soluble Chromium , ICP (ppm)	10	10	537.5	103.0	537.5		116.7	46.15	21.72%		15.62	6.21%
191.32	Acid Soluble Chromium , ICP, 2006.03 (ppm)	1		615.6									
191.33	Acid Soluble Chromium , ICP, 2017.02 (ppm)	4	4	620.1	31.10	620.1		31.10	19.44	5.02%		40.61	6.08%
191.34	Acid Soluble Chromium , ICP, EPA 3050B/6010C (ppi	2	2	607.2	41.19								
191.99	Acid Soluble Chromium , Other (ppm)	6	6	642.0	177.3	631.9		177.1	90.36	28.02%		14.13	6.06%
202.00	Acid Soluble Cobalt , AA, test portion 2006.03 mo... (p	1		335.0									
202.30	Acid Soluble Cobalt , ICP (ppm)	8	8	339.5	78.76	339.5	102.8380	89.32	39.47	26.31%	2.02	10.37	6.65%
202.32	Acid Soluble Cobalt , ICP, 2006.03 (ppm)	1		373.0									
202.33	Acid Soluble Cobalt , ICP, 2017.02 (ppm)	6	5	350.1	42.45	350.1	106.0351	42.45	23.73	12.12%	0.93	6.853	6.62%
202.34	Acid Soluble Cobalt , ICP, EPA 3050B/6010C (ppm)	2	2	369.5	3.483								
202.99	Acid Soluble Cobalt , Other (ppm)	6	6	363.4	95.42	363.4	110.0312	108.2	55.22	29.77%	2.29	7.450	6.59%
221.00	Acid Soluble Copper , AA, inorganic 965.09 (0.06%)	10	10	0.1197	0.0344	0.1278	0.0178	0.0098	0.0039	7.65%	1.28	0.0108	5.45%
221.30	Acid Soluble Copper , ICP, test portion inorganic... (0.	17	16	0.1289	0.0129	0.1296	0.0180	0.0129	0.0040	9.96%	1.68	0.0066	5.44%
221.32	Acid Soluble Copper , ICP, test portion 2006.03A-... (C	3	3	0.1293	0.0066	0.1293	0.0179	0.0066	0.0048	5.14%	0.86	0.0023	5.44%
221.33	Acid Soluble Copper , ICP, 2017.02 (0.06%)	8	8	0.1332	0.0188	0.1304	0.0180	0.0141	0.0062	10.81%	1.82	0.0063	5.43%
221.99	Acid Soluble Copper , Other (0.06%)	13	13	0.1118	0.0403	0.1171	0.0167	0.0305	0.0106	26.09%	4.26	0.0027	5.52%
241.00	Acid Soluble Iron , AA, inorganic 965.09 (1%)	11	11	0.6078	0.0790	0.6083	0.0658	0.0885	0.0333	14.55%	3.13	0.0449	4.31%
241.30	Acid Soluble Iron , ICP, test portion inorganic 96... (1%	16	15	0.6967	0.0785	0.7000	0.0750	0.0372	0.0120	5.31%	1.15	0.0293	4.22%
241.32	Acid Soluble Iron , ICP, test portion 2006.03A-C (1%)	3	3	0.6599	0.0317	0.6599	0.0710	0.0316	0.0228	4.80%	1.04	0.0087	4.26%
241.33	Acid Soluble Iron , ICP, 2017.02 (1%)	9	9	0.6662	0.0922	0.6745	0.0724	0.0843	0.0351	12.49%	2.71	0.0177	4.24%
241.99	Acid Soluble Iron , Other (1%)	13	12	0.5261	0.2569	0.5616	0.0612	0.1489	0.0537	26.51%	5.67	0.0138	4.36%
251.00	Acid Soluble Lead , AA, test portion 2006.03 modi... (f	1		608.8									
251.30	Acid Soluble Lead , ICP (ppm)	10	10	814.7	190.8	814.7		216.3	85.52	26.56%		26.43	5.83%
251.32	Acid Soluble Lead , ICP, 2006.03 (ppm)	1		907.1									
251.33	Acid Soluble Lead , ICP, 2017.02 (ppm)	4	4	1,030	204.3	1,030		204.3	127.7	19.84%		42.27	5.63%
251.34	Acid Soluble Lead , ICP, EPA 3050B/6010C (ppm)	2	2	770.6	349.2								
251.99	Acid Soluble Lead , Other (ppm)	6	6	902.3	167.3	937.6		99.96	51.01	10.66%		30.47	5.71%
261.11	Acid Soluble Manganese , AA, total Mn (0.16%)	2	2	0.1493	0.0202								
261.12	Acid Soluble Manganese , AA, inorganic 965.09 (0.16	8	8	0.1466	0.0234	0.1466	0.0197	0.0266	0.0117	18.14%	3.15	0.0099	5.34%
261.13	Acid Soluble Manganese , AA, organic 965.09 (0.16%	1		0.1175									
261.30	Acid Soluble Manganese , ICP, test portion 972.02... (	7	7	0.1643	0.0085	0.1643	0.0214	0.0096	0.0045	5.84%	1.04	0.0086	5.25%
261.31	Acid Soluble Manganese , ICP, test portion 972.02... (3	3	0.1708	0.0177	0.1708	0.0221	0.0177	0.0128	10.38%	1.87	0.0050	5.22%

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261.32	Acid Soluble Manganese , ICP, test portion inorga... (7	6	0.1631	0.0057	0.1631	0.0213	0.0064	0.0033	3.93%	0.70	0.0067	5.26%
261.34	Acid Soluble Manganese , ICP, test portion 2006.0... (	3	3	0.1684	0.0116	0.1684	0.0218	0.0116	0.0084	6.92%	1.24	0.0040	5.23%
261.35	Acid Soluble Manganese , ICP, 2017.02 (0.16%)	10	10	0.1591	0.0179	0.1577	0.0208	0.0169	0.0067	10.69%	1.89	0.0077	5.28%
261.99	Acid Soluble Manganese , Other (0.16%)	13	13	0.1482	0.0352	0.1558	0.0206	0.0194	0.0067	12.47%	2.20	0.0065	5.29%
271.00	Water Soluble Manganese , AA (%)	4	4	0.0323	0.0430	0.0323		0.0430	0.0269	132.92%		0.0014	6.70%
271.30	Water Soluble Manganese , ICP, Ext. 972.03 (%)	2	2	0.0112	0.0037								
271.99	Water Soluble Manganese , Other (%)	1		0.0200									
281.00	Acid Soluble Mercury , AA (ppm)	2	2	20.55	24.42								
281.30	Acid Soluble Mercury , ICP (ppm)	3	2	43.00	1.664	43.00		1.664	1.471	3.87%		1.149	9.08%
281.99	Acid Soluble Mercury , Other (ppm)	4	4	27.68	14.41	27.68		14.41	9.005	52.06%		0.7274	9.70%
289.00	Acid Soluble Molybdenum , AA, test portion 2006.0... (	1		615.0									
289.30	Acid Soluble Molybdenum , ICP (50ppm)	9	9	780.9	287.8	849.6	255.8805	123.2	51.33	14.50%	1.12	23.41	5.80%
289.32	Acid Soluble Molybdenum , ICP, 2006.03 (50ppm)	2	2	869.8	6.081								
289.33	Acid Soluble Molybdenum , ICP, 2017.02 (50ppm)	6	5	826.1	89.37	826.1	248.8274	89.37	49.96	10.82%	0.84	14.87	5.82%
289.34	Acid Soluble Molybdenum , ICP, EPA 3050B/6010C (	1		883.6									
289.99	Acid Soluble Molybdenum , Other (50ppm)	7	7	856.3	532.9	856.3	257.8868	604.3	285.5	70.57%	5.46	19.01	5.79%
291.30	Acid Soluble Nickel , ICP (ppm)	9	8	12.96	2.515	12.96		2.853	1.261	22.00%		1.096	10.88%
291.32	Acid Soluble Nickel , ICP, 2006.03 (ppm)	1		13.07									
291.33	Acid Soluble Nickel , ICP, 2017.02 (ppm)	4	4	14.12	1.289	14.12		1.289	0.8059	9.13%		1.433	10.74%
291.34	Acid Soluble Nickel , ICP, EPA 3050B/6010C (ppm)	2	2	14.05	1.155								
291.99	Acid Soluble Nickel , Other (ppm)	7	7	13.18	2.951	13.34		2.954	1.396	22.14%		0.7275	10.83%
301.30	Acid Soluble Selenium , ICP (ppm)	3	3	252.1	72.28	252.1		72.28	52.16	28.66%		8.368	6.96%
301.32	Acid Soluble Selenium , ICP, 2006.03 (ppm)	1		331.1									
301.33	Acid Soluble Selenium , ICP, 2017.02 (ppm)	2	2	302.1	42.92								
301.34	Acid Soluble Selenium , ICP, EPA 3050B/6010C (ppr	2	2	313.4	64.70								
301.99	Acid Soluble Selenium , Other (ppm)	6	5	289.8	57.57	289.8		57.57	32.19	19.87%		4.313	6.82%
311.32	Sodium, ICP, 2006.03 test portion (%)	1		0.4658									
311.33	Sodium, ICP, test portion as in 2017.02 (%)	2	2	0.3738	0.0380								
311.99	Sodium, Other (%)	3	3	0.4700	0.0150	0.4700	0.0520	0.0150	0.0108	3.19%	0.67	0.0067	4.48%
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.13%)	13	12	0.1765	0.0164	0.1788	0.0229	0.0066	0.0024	3.69%	0.67	0.0129	5.18%
321.30	Acid Soluble Zinc , ICP, test portion inorganic 9... (0.1	17	17	0.1965	0.0177	0.1949	0.0245	0.0158	0.0048	8.12%	1.51	0.0140	5.12%
321.32	Acid Soluble Zinc , ICP, test portion 2006.03A-C ... (0.	4	4	0.1960	0.0206	0.1960	0.0246	0.0205	0.0128	10.48%	1.95	0.0067	5.11%
321.33	Acid Soluble Zinc , ICP, 2017.02 (0.13%)	10	10	0.1984	0.0347	0.1901	0.0240	0.0130	0.0051	6.83%	1.26	0.0071	5.14%
321.99	Acid Soluble Zinc , Other (0.13%)	12	11	0.1717	0.0282	0.1722	0.0222	0.0308	0.0116	17.87%	3.23	0.0039	5.21%
325.00	Water Soluble Zinc , AA (%)	4	4	0.0402	0.0498	0.0402		0.0498	0.0311	124.06%		0.0021	6.49%
325.30	Water Soluble Zinc , ICP (%)	3	2	0.0023	0.0003	0.0023		0.0003	0.0003	13.99%		0.0016	10.00%
325.99	Water Soluble Zinc , Other (%)	1		0.0019									

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.

Howitz %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 # 190211	
Method Code	

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 190211

Grade 14-14-14

Method Precision Report

Issue Date : 03/31/2019

Method Code	Analyte & Method	# Tests Submitted	# Tests Used in Precision Calcs	Mean	SD	Between Labs sL	Within Labs sr	Reproducibility SR	Between Labs %RSD	Within Labs %rsd	Reproducibility %RSD	sR/sr
001.99	Ammoniacal Nitrogen, Other (%)	26	23	13.79	0.2623	0.2591	0.0574	0.2654	1.88%	0.42%	1.93%	4.628
010.60	Total Nitrogen, Combustion (14%)	58	51	13.83	0.1567	0.1418	0.0943	0.1703	1.03%	0.68%	1.23%	1.806
010.99	Total Nitrogen, Other (14%)	10	9	13.74	0.3348	0.3316	0.0648	0.3379	2.41%	0.47%	2.46%	5.211
020.20	Total Phosphorus as P2O5, Spectrophotometric MolybdovanadoP (%)	21	20	14.62	0.3552	0.3442	0.1242	0.3659	2.35%	0.85%	2.50%	2.947
020.50	Total Phosphorus as P2O5, ICP (%)	23	22	14.37	0.4557	0.4207	0.2480	0.4883	2.93%	1.73%	3.40%	1.969
041.51	Direct Available Phosphorus as P2O5, ICP, Citrate-EDTA Ext. (14%)	10	10	14.35	0.4134	0.3993	0.1515	0.4271	2.78%	1.06%	2.98%	2.820
041.60	Direct Available Phosphorus as P2O5, Citrate-EDTA Ext. (14%)	12	10	14.59	0.1054	0.0772	0.1015	0.1275	0.53%	0.70%	0.87%	1.256
041.99	Direct Available Phosphorus as P2O5, Other (14%)	11	11	14.25	0.2229	0.2093	0.1088	0.2358	1.47%	0.76%	1.66%	2.168
050.00	Soluble Potassium as K2O, STPB Oxalate (14%)	11	9	14.47	0.3029	0.2635	0.2113	0.3378	1.82%	1.46%	2.33%	1.598
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (14%)	10	8	14.43	0.4478	0.4430	0.0931	0.4526	3.07%	0.64%	3.14%	4.864
050.99	Soluble Potassium as K2O, Other (14%)	38	34	14.36	0.5248	0.5136	0.1526	0.5357	3.58%	1.06%	3.73%	3.512
121.30	Acid Soluble Magnesium, ICP, test portion inorganic 965.09 (1%)	14	12	0.5730	0.0350	0.0335	0.0144	0.0364	5.84%	2.51%	6.36%	2.537
121.99	Acid Soluble Magnesium, Other (1%)	12	11	0.5603	0.0874	0.0861	0.0212	0.0887	15.37%	3.79%	15.83%	4.181
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulfur - sulfate form (%)	12	10	10.36	0.5142	0.5115	0.0744	0.5168	4.93%	0.72%	4.99%	6.949
148.01	Total Sulfur, Gravimetric - sulfate and elemental (7.75%)	10	9	10.56	0.1735	0.1341	0.1558	0.2056	1.27%	1.48%	1.95%	1.319
148.07	Total Sulfur, ICP, test portion as in 2017.02 (7.75%)	18	15	10.29	0.3412	0.3363	0.0817	0.3460	3.27%	0.79%	3.36%	4.235
148.99	Total Sulfur, Other (7.75%)	13	11	10.08	1.075	1.072	0.1020	1.077	10.64%	1.01%	10.69%	10.56
165.00	Acid Soluble Boron , Spectrophotometric (0.2%)	13	13	0.1965	0.0136	0.0131	0.0051	0.0140	6.66%	2.60%	7.15%	2.753
165.30	Acid Soluble Boron , ICP, test portion in 982.01 (0.2%)	14	14	0.2098	0.0073	0.0063	0.0052	0.0082	3.01%	2.50%	3.91%	1.568
165.99	Acid Soluble Boron , Other (0.2%)	21	19	0.2035	0.0202	0.0198	0.0053	0.0205	9.75%	2.59%	10.09%	3.894
181.30	Acid Soluble Cadmium , ICP (ppm)	11	10	175.4	32.41	32.27	4.326	32.56	18.40%	2.47%	18.56%	7.526
191.30	Acid Soluble Chromium , ICP (ppm)	10	10	537.5	103.0	102.4	15.67	103.5	19.04%	2.92%	19.26%	6.606
202.30	Acid Soluble Cobalt , ICP (ppm)	8	8	339.5	78.76	78.48	9.529	79.05	23.12%	2.81%	23.29%	8.296
221.00	Acid Soluble Copper , AA, inorganic 965.09 (0.06%)	10	8	0.1315	0.0089	0.0077	0.0064	0.0100	5.86%	4.86%	7.62%	1.567
221.30	Acid Soluble Copper , ICP, test portion inorganic 965.09 (0.06%)	17	16	0.1289	0.0129	0.0122	0.0062	0.0137	9.43%	4.84%	10.60%	2.193
221.99	Acid Soluble Copper , Other (0.06%)	13	11	0.1251	0.0203	0.0203	0.0019	0.0204	16.22%	1.51%	16.29%	10.78
241.00	Acid Soluble Iron , AA, inorganic 965.09 (1%)	11	11	0.6078	0.0790	0.0746	0.0367	0.0831	12.27%	6.04%	13.68%	2.265
241.30	Acid Soluble Iron , ICP, test portion inorganic 965.09 (1%)	16	13	0.6985	0.0420	0.0399	0.0189	0.0441	5.71%	2.70%	6.31%	2.336
241.33	Acid Soluble Iron , ICP, 2017.02 (1%)	9	9	0.6662	0.0922	0.0916	0.0152	0.0928	13.75%	2.29%	13.94%	6.095
241.99	Acid Soluble Iron , Other (1%)	13	12	0.5261	0.2569	0.2568	0.0133	0.2571	48.81%	2.53%	48.87%	19.34

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
251.30	Acid Soluble Lead , ICP (ppm)	10	10	814.7	190.8	189.9	26.23	191.7	23.31%	3.22%	23.53%	7.309
261.12	Acid Soluble Manganese , AA, inorganic 965.09 (0.16%)	8	8	0.1466	0.0234	0.0227	0.0082	0.0241	15.50%	5.56%	16.47%	2.960
261.35	Acid Soluble Manganese , ICP, 2017.02 (0.16%)	10	10	0.1591	0.0179	0.0171	0.0074	0.0186	10.75%	4.65%	11.72%	2.518
261.99	Acid Soluble Manganese , Other (0.16%)	13	12	0.1564	0.0200	0.0194	0.0069	0.0206	12.39%	4.41%	13.15%	2.984
289.30	Acid Soluble Molybdenum , ICP (50ppm)	9	8	872.7	89.44	87.48	26.32	91.35	10.02%	3.02%	10.47%	3.471
291.30	Acid Soluble Nickel , ICP (ppm)	9	8	12.96	2.515	2.376	1.168	2.648	18.33%	9.01%	20.42%	2.267
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.13%)	13	11	0.1807	0.0077	0.0061	0.0066	0.0090	3.38%	3.62%	4.95%	1.367
321.30	Acid Soluble Zinc , ICP, test portion inorganic 965.09 (0.13%)	17	16	0.1938	0.0141	0.0102	0.0138	0.0172	5.28%	7.12%	8.87%	1.245
321.33	Acid Soluble Zinc , ICP, 2017.02 (0.13%)	10	9	0.1879	0.0099	0.0086	0.0070	0.0111	4.56%	3.72%	5.88%	1.581
321.99	Acid Soluble Zinc , Other (0.13%)	12	10	0.1684	0.0274	0.0273	0.0029	0.0275	16.24%	1.72%	16.33%	9.486

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

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Methods: 152

Sample # 190211

Lab Values

Labs Reporting: 94

Grade 14-14-14

Issue Date : 03/31/2019

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				
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0231	13.34	0.0100	13.66	0.2943	0.0891	7	-0.99	NA	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0451	13.48	0.0400	13.66	0.2943	0.0891	7	-0.54	NA	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0177	13.49	0.0139	13.66	0.2943	0.0891	7	-0.50	NA	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0169	13.54	0.0100	13.66	0.2943	0.0891	7	-0.37	NA	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0456	13.80	0.2400	13.66	0.2943	0.0891	7	0.44	NA	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0498	13.95	0.1000	13.66	0.2943	0.0891	7	0.90	NA	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0444	14.01	0.2100	13.66	0.2943	0.0891	7	1.07	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0200	13.14	0.0100	13.83	0.2787	0.0757	25	-2.50	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0394	13.37	0.0090	13.83	0.2787	0.0757	25	-1.66	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0027	13.49	0.0200	13.83	0.2787	0.0757	25	-1.22	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0513	13.54	0.0700	13.83	0.2787	0.0757	25	-1.06	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0169	13.57	0.0400	13.83	0.2787	0.0757	25	-0.94	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0476	13.58	0.2101	13.83	0.2787	0.0757	25	-0.91	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0506	13.60	0.2000	13.83	0.2787	0.0757	25	-0.83	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0522	13.62	0.0200	13.83	0.2787	0.0757	25	-0.76	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0096	13.72	0.0500	13.83	0.2787	0.0757	25	-0.42	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0405	13.74	0.0300	13.83	0.2787	0.0757	25	-0.34	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0556	13.81	0.0900	13.83	0.2787	0.0757	25	-0.09	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0510	13.84	0.0700	13.83	0.2787	0.0757	25	0.02	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0549	13.90	0.1000	13.83	0.2787	0.0757	25	0.25	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0535	13.91	0.0200	13.83	0.2787	0.0757	25	0.28	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0544	13.96	0.0800	13.83	0.2787	0.0757	25	0.46	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0545	13.99	0.0800	13.83	0.2787	0.0757	25	0.57	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0538	14.00	0.1000	13.83	0.2787	0.0757	25	0.61	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0536	14.03	0.0800	13.83	0.2787	0.0757	25	0.71	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0524	14.04	0.0112	13.83	0.2787	0.0757	25	0.77	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0368	14.05	0.0310	13.83	0.2787	0.0757	25	0.78	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0550	14.05	0.0000	13.83	0.2787	0.0757	25	0.79	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0537	14.09	0.3600	13.83	0.2787	0.0757	25	0.93	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0416	14.10	0.0500	13.83	0.2787	0.0757	25	0.95	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0519	14.10	0.0100	13.83	0.2787	0.0757	25	0.95	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0553	15.33	0.1500	13.83	0.2787	0.0757	25	5.36	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0540	13.59	0.5800	13.83	0.2787	0.0757	25	-0.86	NA	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				
010.11	Total Nitrogen, Modified Comprehensive (14%)	0540	13.53	0.0900	13.90	0.2861	0.1537	7	-1.19	OK	0
010.11	Total Nitrogen, Modified Comprehensive (14%)	0105	13.74	0.0700	13.90	0.2861	0.1537	7	-0.53	OK	0
010.11	Total Nitrogen, Modified Comprehensive (14%)	0456	13.86	0.2800	13.90	0.2861	0.1537	7	-0.13	OK	0
010.11	Total Nitrogen, Modified Comprehensive (14%)	0510	13.89	0.0861	13.90	0.2861	0.1537	7	-0.05	OK	0
010.11	Total Nitrogen, Modified Comprehensive (14%)	0309	13.92	0.4200	13.90	0.2861	0.1537	7	0.06	OK	0
010.11	Total Nitrogen, Modified Comprehensive (14%)	0531	14.06	0.0200	13.90	0.2861	0.1537	7	0.50	OK	0
010.11	Total Nitrogen, Modified Comprehensive (14%)	0546	14.40	0.1100	13.90	0.2861	0.1537	7	1.56	OK	0
010.12	Total Nitrogen, Salicylic (14%)	0498	13.95	0.1000				1			0
010.60	Total Nitrogen, Combustion (14%)	0117	13.30	0.0000	13.84	0.1622	0.1250	56	-3.31	OK	0
010.60	Total Nitrogen, Combustion (14%)	0521	13.39	0.3100	13.84	0.1622	0.1250	56	-2.78	OK	0
010.60	Total Nitrogen, Combustion (14%)	0472	13.58	0.0300	13.84	0.1622	0.1250	56	-1.61	OK	0
010.60	Total Nitrogen, Combustion (14%)	0028	13.60	0.1500	13.84	0.1622	0.1250	56	-1.49	OK	0
010.60	Total Nitrogen, Combustion (14%)	0027	13.60	0.0000	13.84	0.1622	0.1250	56	-1.46	OK	0
010.60	Total Nitrogen, Combustion (14%)	0356	13.62	0.0800	13.84	0.1622	0.1250	56	-1.33	OK	0
010.60	Total Nitrogen, Combustion (14%)	0525	13.64	0.2690	13.84	0.1622	0.1250	56	-1.20	OK	0
010.60	Total Nitrogen, Combustion (14%)	0389	13.65	0.0500	13.84	0.1622	0.1250	56	-1.18	OK	0
010.60	Total Nitrogen, Combustion (14%)	0482	13.65	0.1000	13.84	0.1622	0.1250	56	-1.15	OK	0
010.60	Total Nitrogen, Combustion (14%)	0351	13.68	0.2000	13.84	0.1622	0.1250	56	-0.96	OK	0
010.60	Total Nitrogen, Combustion (14%)	0230	13.70	0.0000	13.84	0.1622	0.1250	56	-0.84	OK	0
010.60	Total Nitrogen, Combustion (14%)	0234	13.70	0.2000	13.84	0.1622	0.1250	56	-0.84	OK	0
010.60	Total Nitrogen, Combustion (14%)	0043	13.72	0.0800	13.84	0.1622	0.1250	56	-0.72	OK	0
010.60	Total Nitrogen, Combustion (14%)	0136	13.73	0.0200	13.84	0.1622	0.1250	56	-0.66	OK	0
010.60	Total Nitrogen, Combustion (14%)	0105	13.75	0.0100	13.84	0.1622	0.1250	56	-0.56	OK	0
010.60	Total Nitrogen, Combustion (14%)	0292	13.75	0.0200	13.84	0.1622	0.1250	56	-0.53	OK	0
010.60	Total Nitrogen, Combustion (14%)	0451	13.76	0.6200	13.84	0.1622	0.1250	56	-0.47	OK	0
010.60	Total Nitrogen, Combustion (14%)	0073	13.76	0.1000	13.84	0.1622	0.1250	56	-0.47	OK	0
010.60	Total Nitrogen, Combustion (14%)	0527	13.78	0.0620	13.84	0.1622	0.1250	56	-0.38	OK	0
010.60	Total Nitrogen, Combustion (14%)	0177	13.79	0.0400	13.84	0.1622	0.1250	56	-0.29	OK	0
010.60	Total Nitrogen, Combustion (14%)	0481	13.80	0.0500	13.84	0.1622	0.1250	56	-0.26	OK	0
010.60	Total Nitrogen, Combustion (14%)	0325	13.80	0.8000	13.84	0.1622	0.1250	56	-0.23	OK	0
010.60	Total Nitrogen, Combustion (14%)	0523	13.80	0.0000	13.84	0.1622	0.1250	56	-0.23	OK	0
010.60	Total Nitrogen, Combustion (14%)	0095	13.82	0.1000	13.84	0.1622	0.1250	56	-0.10	OK	0
010.60	Total Nitrogen, Combustion (14%)	0096	13.84	0.0100	13.84	0.1622	0.1250	56	-0.01	OK	0
010.60	Total Nitrogen, Combustion (14%)	0360	13.84	0.0500	13.84	0.1622	0.1250	56	-0.01	OK	0
010.60	Total Nitrogen, Combustion (14%)	0501	13.85	0.0100	13.84	0.1622	0.1250	56	0.05	OK	0
010.60	Total Nitrogen, Combustion (14%)	0169	13.85	0.0420	13.84	0.1622	0.1250	56	0.07	OK	0
010.60	Total Nitrogen, Combustion (14%)	0421	13.85	0.1800	13.84	0.1622	0.1250	56	0.08	OK	0
010.60	Total Nitrogen, Combustion (14%)	0024	13.85	0.1000	13.84	0.1622	0.1250	56	0.08	OK	0
010.60	Total Nitrogen, Combustion (14%)	0547	13.86	0.0100	13.84	0.1622	0.1250	56	0.11	OK	0
010.60	Total Nitrogen, Combustion (14%)	0405	13.86	0.0400	13.84	0.1622	0.1250	56	0.14	OK	0
010.60	Total Nitrogen, Combustion (14%)	0042	13.87	0.0300	13.84	0.1622	0.1250	56	0.18	OK	0
010.60	Total Nitrogen, Combustion (14%)	0231	13.87	0.0400	13.84	0.1622	0.1250	56	0.21	OK	0
010.60	Total Nitrogen, Combustion (14%)	0377	13.88	0.2900	13.84	0.1622	0.1250	56	0.24	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				
010.60	Total Nitrogen, Combustion (14%)	0483	13.88	0.0500	13.84	0.1622	0.1250	56	0.24	OK	0
010.60	Total Nitrogen, Combustion (14%)	0354	13.88	0.0200	13.84	0.1622	0.1250	56	0.29	OK	0
010.60	Total Nitrogen, Combustion (14%)	0444	13.89	0.1600	13.84	0.1622	0.1250	56	0.33	OK	0
010.60	Total Nitrogen, Combustion (14%)	0029	13.90	0.0900	13.84	0.1622	0.1250	56	0.36	OK	0
010.60	Total Nitrogen, Combustion (14%)	0007	13.90	0.2000	13.84	0.1622	0.1250	56	0.39	OK	0
010.60	Total Nitrogen, Combustion (14%)	0086	13.92	0.0640	13.84	0.1622	0.1250	56	0.53	OK	0
010.60	Total Nitrogen, Combustion (14%)	0443	13.93	0.0500	13.84	0.1622	0.1250	56	0.55	OK	0
010.60	Total Nitrogen, Combustion (14%)	0041	13.94	0.0100	13.84	0.1622	0.1250	56	0.61	OK	0
010.60	Total Nitrogen, Combustion (14%)	0131	13.95	0.1120	13.84	0.1622	0.1250	56	0.69	OK	0
010.60	Total Nitrogen, Combustion (14%)	0025	13.96	0.3100	13.84	0.1622	0.1250	56	0.73	OK	0
010.60	Total Nitrogen, Combustion (14%)	0486	13.96	0.0400	13.84	0.1622	0.1250	56	0.76	OK	0
010.60	Total Nitrogen, Combustion (14%)	0114	14.00	0.5800	13.84	0.1622	0.1250	56	1.01	OK	0
010.60	Total Nitrogen, Combustion (14%)	0494	14.01	0.1500	13.84	0.1622	0.1250	56	1.04	OK	0
010.60	Total Nitrogen, Combustion (14%)	0040	14.05	0.3000	13.84	0.1622	0.1250	56	1.32	OK	0
010.60	Total Nitrogen, Combustion (14%)	0102	14.05	0.1000	13.84	0.1622	0.1250	56	1.32	OK	0
010.60	Total Nitrogen, Combustion (14%)	0534	14.05	0.3000	13.84	0.1622	0.1250	56	1.32	OK	0
010.60	Total Nitrogen, Combustion (14%)	0550	14.05	0.0000	13.84	0.1622	0.1250	56	1.32	OK	0
010.60	Total Nitrogen, Combustion (14%)	0555	14.07	0.0100	13.84	0.1622	0.1250	56	1.41	OK	0
010.60	Total Nitrogen, Combustion (14%)	0402	14.10	0.2000	13.84	0.1622	0.1250	56	1.62	OK	0
010.60	Total Nitrogen, Combustion (14%)	0368	14.22	0.0160	13.84	0.1622	0.1250	56	2.39	OK	0
010.60	Total Nitrogen, Combustion (14%)	0255	14.34	0.1450	13.84	0.1622	0.1250	56	3.13	OK	0
010.60	Total Nitrogen, Combustion (14%)	0485	14.86	2.170	13.84	0.1622	0.1250	56	6.28	High	1
010.60	Total Nitrogen, Combustion (14%)	0422	21.19	0.2200	13.84	0.1622	0.1250	56	45.32	High	2
010.99	Total Nitrogen, Other (14%)	0481	13.24	0.0500	13.77	0.3743	0.0933	10	-1.32	OK	0
010.99	Total Nitrogen, Other (14%)	0394	13.37	0.0090	13.77	0.3743	0.0933	10	-0.99	OK	0
010.99	Total Nitrogen, Other (14%)	0371	13.49	0.0100	13.77	0.3743	0.0933	10	-0.70	OK	0
010.99	Total Nitrogen, Other (14%)	0506	13.60	0.2000	13.77	0.3743	0.0933	10	-0.41	OK	0
010.99	Total Nitrogen, Other (14%)	0300	13.73	0.1000	13.77	0.3743	0.0933	10	-0.09	OK	0
010.99	Total Nitrogen, Other (14%)	0524	13.90	0.0041	13.77	0.3743	0.0933	10	0.33	OK	0
010.99	Total Nitrogen, Other (14%)	0518	14.04	0.3200	13.77	0.3743	0.0933	10	0.68	OK	0
010.99	Total Nitrogen, Other (14%)	0531	14.06	0.0300	13.77	0.3743	0.0933	10	0.72	OK	0
010.99	Total Nitrogen, Other (14%)	0493	14.10	0.1000	13.77	0.3743	0.0933	10	0.83	OK	0
010.99	Total Nitrogen, Other (14%)	0533	14.15	0.1100	13.77	0.3743	0.0933	10	0.94	OK	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0114	14.58	0.0000	14.67	0.0833	0.1333	3	-1.12		0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0493	14.70	0.1000	14.67	0.0833	0.1333	3	0.32		0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0444	14.74	0.3000	14.67	0.0833	0.1333	3	0.80		0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0506	12.45	0.5000	14.60	0.3951	0.1565	21	-5.45	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0476	13.78	0.1230	14.60	0.3951	0.1565	21	-2.08	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0553	14.06	0.3300	14.60	0.3951	0.1565	21	-1.39	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0498	14.20	0.0000	14.60	0.3951	0.1565	21	-1.02	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0534	14.25	0.3000	14.60	0.3951	0.1565	21	-0.89	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0510	14.39	0.2595	14.60	0.3951	0.1565	21	-0.53	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0292	14.52	0.0500	14.60	0.3951	0.1565	21	-0.22	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				
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0027	14.58	0.1900	14.60	0.3951	0.1565	21	-0.07	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0394	14.58	0.1640	14.60	0.3951	0.1565	21	-0.06	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0356	14.61	0.0500	14.60	0.3951	0.1565	21	0.01	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0416	14.65	0.0100	14.60	0.3951	0.1565	21	0.11	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0522	14.66	0.3200	14.60	0.3951	0.1565	21	0.14	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0419	14.71	0.0200	14.60	0.3951	0.1565	21	0.27	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0309	14.78	0.0500	14.60	0.3951	0.1565	21	0.44	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0405	14.79	0.1700	14.60	0.3951	0.1565	21	0.46	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0231	14.82	0.0400	14.60	0.3951	0.1565	21	0.55	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0481	14.85	0.1000	14.60	0.3951	0.1565	21	0.63	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0371	14.89	0.2400	14.60	0.3951	0.1565	21	0.73	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0550	14.95	0.2200	14.60	0.3951	0.1565	21	0.88	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0300	15.19	0.1200	14.60	0.3951	0.1565	21	1.49	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0169	15.20	0.0300	14.60	0.3951	0.1565	21	1.50	NA	0
020.40	Total Phosphorus as P2O5, Automated (%)	0456	14.45	0.1600				2			0
020.40	Total Phosphorus as P2O5, Automated (%)	0096	14.82	0.0700				2			0
020.50	Total Phosphorus as P2O5, ICP (%)	0255	13.48	0.3590	14.36	0.4427	0.2826	23	-1.99	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0552	13.71	0.9600	14.36	0.4427	0.2826	23	-1.48	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0547	13.84	0.1800	14.36	0.4427	0.2826	23	-1.19	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0523	13.85	0.3000	14.36	0.4427	0.2826	23	-1.16	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0472	13.89	0.0200	14.36	0.4427	0.2826	23	-1.07	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0501	14.06	0.0200	14.36	0.4427	0.2826	23	-0.69	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0451	14.09	0.0500	14.36	0.4427	0.2826	23	-0.63	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0389	14.15	0.0600	14.36	0.4427	0.2826	23	-0.48	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0483	14.32	0.1800	14.36	0.4427	0.2826	23	-0.10	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0368	14.37	0.3174	14.36	0.4427	0.2826	23	0.01	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0444	14.40	0.6800	14.36	0.4427	0.2826	23	0.08	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0042	14.45	1.260	14.36	0.4427	0.2826	23	0.19	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0524	14.48	0.0699	14.36	0.4427	0.2826	23	0.25	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0234	14.50	0.4000	14.36	0.4427	0.2826	23	0.31	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0546	14.50	0.0250	14.36	0.4427	0.2826	23	0.31	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0527	14.54	0.1513	14.36	0.4427	0.2826	23	0.39	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0525	14.57	0.0450	14.36	0.4427	0.2826	23	0.46	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0402	14.71	0.4900	14.36	0.4427	0.2826	23	0.77	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0521	14.71	0.0000	14.36	0.4427	0.2826	23	0.78	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0422	14.82	0.0700	14.36	0.4427	0.2826	23	1.02	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0482	14.85	0.1000	14.36	0.4427	0.2826	23	1.10	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0555	14.87	0.6926	14.36	0.4427	0.2826	23	1.14	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0433	15.43	0.0700	14.36	0.4427	0.2826	23	2.40	NA	0
020.99	Total Phosphorus as P2O5, Other (%)	0515	13.77	2.704	14.20	0.4532	0.9580	3	-0.93		0
020.99	Total Phosphorus as P2O5, Other (%)	0443	14.14	0.1400	14.20	0.4532	0.9580	3	-0.12		0
020.99	Total Phosphorus as P2O5, Other (%)	0513	14.68	0.0300	14.20	0.4532	0.9580	3	1.06		0
030.20	Citrate Insoluble Phosphorus as P2O5, Spectro... (%)	0405	0.0750	0.0100				2			0

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			Value	Range	Rob Mean	Rob SD	R-bar				
030.20	Citrate Insoluble Phosphorus as P2O5, Spectro... (%)	0300	15.04	0.1300				2			0
030.40	Citrate Insoluble Phosphorus as P2O5, Automat... (%)	0096	0.0850	0.0500				1			0
040.20	Indirect Available Phosphorus as P2O5, Spectr... (14%)	0405	14.71	0.1900				1			0
040.40	Indirect Available Phosphorus as P2O5, Automa... (14%)	0096	14.73	0.1200				1			0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (14%)	0102	14.55	0.1000	14.65	0.1217	0.0696	4	-0.79		0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (14%)	0177	14.60	0.0861	14.65	0.1217	0.0696	4	-0.35		0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (14%)	0041	14.61	0.0100	14.65	0.1217	0.0696	4	-0.33		0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (14%)	0086	14.82	0.0821	14.65	0.1217	0.0696	4	1.47		0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (14%)	0513	14.59	0.0200	14.70	0.1027	0.0854	3	-1.11		0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (14%)	0105	14.74	0.1700	14.70	0.1027	0.0854	3	0.30		0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (14%)	0485	14.79	0.0662	14.70	0.1027	0.0854	3	0.82		0
041.20	Direct Available Phosphorus as P2O5, Spectrop... (14%)	0027	13.96	0.2700				1			0
041.21	Direct Available Phosphorus as P2O5, Spectrop... (14%)	0200	14.63	0.0000				2			0
041.21	Direct Available Phosphorus as P2O5, Spectrop... (14%)	0544	14.91	0.0300				2			0
041.40	Direct Available Phosphorus as P2O5, Automate... (14%)	0095	14.04	0.5800	14.74	0.7154	0.2300	3	-0.98		0
041.40	Direct Available Phosphorus as P2O5, Automate... (14%)	0028	14.72	0.1100	14.74	0.7154	0.2300	3	-0.04		0
041.40	Direct Available Phosphorus as P2O5, Automate... (14%)	0131	15.47	0.0000	14.74	0.7154	0.2300	3	1.02		0
041.50	Direct Available Phosphorus as P2O5, ICP (14%)	0325	13.85	0.7000				2			0
041.50	Direct Available Phosphorus as P2O5, ICP (14%)	0007	15.15	0.7000				2			0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (14%)	0377	13.47	0.0400	14.38	0.3901	0.1482	10	-2.17	Low	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (14%)	0043	14.08	0.0800	14.38	0.3901	0.1482	10	-0.71	OK	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (14%)	0072	14.09	0.0700	14.38	0.3901	0.1482	10	-0.70	OK	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (14%)	0368	14.23	0.3292	14.38	0.3901	0.1482	10	-0.35	OK	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (14%)	0117	14.30	0.0224	14.38	0.3901	0.1482	10	-0.19	OK	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (14%)	0494	14.44	0.4100	14.38	0.3901	0.1482	10	0.13	OK	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (14%)	0040	14.60	0.0000	14.38	0.3901	0.1482	10	0.53	OK	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (14%)	0360	14.65	0.0500	14.38	0.3901	0.1482	10	0.63	OK	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (14%)	0025	14.70	0.4000	14.38	0.3901	0.1482	10	0.77	OK	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (14%)	0486	14.92	0.0800	14.38	0.3901	0.1482	10	1.29	OK	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (14%)	0230	13.20	0.4000	14.57	0.1292	0.1317	11	-10.61	Low	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (14%)	0394	14.49	0.0250	14.57	0.1292	0.1317	11	-0.65	OK	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (14%)	0024	14.50	0.2000	14.57	0.1292	0.1317	11	-0.55	OK	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (14%)	0472	14.51	0.0100	14.57	0.1292	0.1317	11	-0.51	OK	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (14%)	0351	14.55	0.3500	14.57	0.1292	0.1317	11	-0.20	OK	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (14%)	0136	14.55	0.0600	14.57	0.1292	0.1317	11	-0.16	OK	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (14%)	0177	14.56	0.1142	14.57	0.1292	0.1317	11	-0.07	OK	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (14%)	0105	14.61	0.0900	14.57	0.1292	0.1317	11	0.26	OK	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (14%)	0029	14.64	0.0100	14.57	0.1292	0.1317	11	0.49	OK	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (14%)	0354	14.75	0.1000	14.57	0.1292	0.1317	11	1.38	OK	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (14%)	0231	14.80	0.0900	14.57	0.1292	0.1317	11	1.73	OK	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (14%)	0072	< 14.95		14.57	0.1292	0.1317	11			5
041.99	Direct Available Phosphorus as P2O5, Other (14%)	0533	13.94	0.1000	14.24	0.2317	0.1218	11	-1.20	OK	0
041.99	Direct Available Phosphorus as P2O5, Other (14%)	0519	13.97	0.0000	14.24	0.2317	0.1218	11	-1.08	OK	0

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			Value	Range	Rob Mean	Rob SD	R-bar				
041.99	Direct Available Phosphorus as P2O5, Other (14%)	0531	14.02	0.0200	14.24	0.2317	0.1218	11	-0.87	OK	0
041.99	Direct Available Phosphorus as P2O5, Other (14%)	0540	14.11	0.1500	14.24	0.2317	0.1218	11	-0.53	OK	0
041.99	Direct Available Phosphorus as P2O5, Other (14%)	0518	14.26	0.2800	14.24	0.2317	0.1218	11	0.10	OK	0
041.99	Direct Available Phosphorus as P2O5, Other (14%)	0536	14.30	0.2000	14.24	0.2317	0.1218	11	0.26	OK	0
041.99	Direct Available Phosphorus as P2O5, Other (14%)	0549	14.30	0.2000	14.24	0.2317	0.1218	11	0.26	OK	0
041.99	Direct Available Phosphorus as P2O5, Other (14%)	0537	14.33	0.2400	14.24	0.2317	0.1218	11	0.38	OK	0
041.99	Direct Available Phosphorus as P2O5, Other (14%)	0545	14.34	0.0200	14.24	0.2317	0.1218	11	0.42	OK	0
041.99	Direct Available Phosphorus as P2O5, Other (14%)	0538	14.45	0.1000	14.24	0.2317	0.1218	11	0.86	OK	0
041.99	Direct Available Phosphorus as P2O5, Other (14%)	0405	14.69	0.0300	14.24	0.2317	0.1218	11	1.81	OK	0
048.10	Water Soluble Phosphorus as P2O5, Gravimetric... (%)	0444	12.81	0.3000				1			0
048.20	Water Soluble Phosphorus as P2O5, Spectrophot... (%)	0394	13.02	0.0300				1			0
048.50	Water Soluble Phosphorus as P2O5, ICP (%)	0444	12.80	0.2300				2			0
048.50	Water Soluble Phosphorus as P2O5, ICP (%)	0546	14.72	0.2270				2			0
048.99	Water Soluble Phosphorus as P2O5, Other (%)	0513	12.65	0.0400				2			0
048.99	Water Soluble Phosphorus as P2O5, Other (%)	0556	13.50	0.2000				2			0
050.00	Soluble Potassium as K2O, STPB Oxalate (14%)	0544	13.39	0.0000	14.40	0.4039	0.1730	10	-2.33	Low	0
050.00	Soluble Potassium as K2O, STPB Oxalate (14%)	0102	13.90	0.4000	14.40	0.4039	0.1730	10	-1.16	OK	0
050.00	Soluble Potassium as K2O, STPB Oxalate (14%)	0444	14.22	0.4700	14.40	0.4039	0.1730	10	-0.43	OK	0
050.00	Soluble Potassium as K2O, STPB Oxalate (14%)	0072	14.33	0.0700	14.40	0.4039	0.1730	10	-0.18	OK	0
050.00	Soluble Potassium as K2O, STPB Oxalate (14%)	0550	14.36	0.0000	14.40	0.4039	0.1730	10	-0.10	OK	0
050.00	Soluble Potassium as K2O, STPB Oxalate (14%)	0522	14.55	0.0700	14.40	0.4039	0.1730	10	0.33	OK	0
050.00	Soluble Potassium as K2O, STPB Oxalate (14%)	0231	14.62	0.0000	14.40	0.4039	0.1730	10	0.50	OK	0
050.00	Soluble Potassium as K2O, STPB Oxalate (14%)	0405	14.64	0.0300	14.40	0.4039	0.1730	10	0.54	OK	0
050.00	Soluble Potassium as K2O, STPB Oxalate (14%)	0494	14.71	0.6400	14.40	0.4039	0.1730	10	0.71	OK	0
050.00	Soluble Potassium as K2O, STPB Oxalate (14%)	0416	14.92	0.0500	14.40	0.4039	0.1730	10	1.18	OK	0
050.00	Soluble Potassium as K2O, STPB Oxalate (14%)	0114	15.14	1.350	14.40	0.4039	0.1730	10	1.69	OK	1
050.30	Soluble Potassium as K2O, AA (Oxalate) (14%)	0040	13.95	0.1000	14.29	0.2642	0.1825	4	-1.27		0
050.30	Soluble Potassium as K2O, AA (Oxalate) (14%)	0309	14.21	0.2200	14.29	0.2642	0.1825	4	-0.29		0
050.30	Soluble Potassium as K2O, AA (Oxalate) (14%)	0356	14.44	0.3000	14.29	0.2642	0.1825	4	0.58		0
050.30	Soluble Potassium as K2O, AA (Oxalate) (14%)	0136	14.55	0.1100	14.29	0.2642	0.1825	4	0.98		0
050.31	Soluble Potassium as K2O, AA (Citrate) (14%)	0472	13.17	0.3300				2			0
050.31	Soluble Potassium as K2O, AA (Citrate) (14%)	0498	13.95	0.3000				2			0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (14%)	0292	14.22	0.1100	14.61	0.3589	0.0842	6	-0.97	OK	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (14%)	0444	14.46	0.0700	14.61	0.3589	0.0842	6	-0.38	OK	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (14%)	0351	14.49	0.0850	14.61	0.3589	0.0842	6	-0.29	OK	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (14%)	0419	14.59	0.0700	14.61	0.3589	0.0842	6	-0.05	OK	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (14%)	0230	14.75	0.1000	14.61	0.3589	0.0842	6	0.36	OK	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (14%)	0422	16.23	0.0700	14.61	0.3589	0.0842	6	4.02	High	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (14%)	0483	14.40	0.1300	14.72	0.2593	0.3807	4	-1.26		0
050.51	Soluble Potassium as K2O, ICP (Citrate) (14%)	0547	14.65	0.0200	14.72	0.2593	0.3807	4	-0.28		0
050.51	Soluble Potassium as K2O, ICP (Citrate) (14%)	0007	14.85	0.1000	14.72	0.2593	0.3807	4	0.49		0
050.51	Soluble Potassium as K2O, ICP (Citrate) (14%)	0555	14.99	1.273	14.72	0.2593	0.3807	4	1.04		0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (14%)	0377	14.07	0.0200	14.47	0.4645	0.1289	9	-0.79	OK	0

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			Value	Range	Rob Mean	Rob SD	R-bar				
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (14%)	0486	14.08	0.0600	14.47	0.4645	0.1289	9	-0.77	OK	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (14%)	0117	14.14	0.0604	14.47	0.4645	0.1289	9	-0.65	OK	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (14%)	0043	14.17	0.0300	14.47	0.4645	0.1289	9	-0.60	OK	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (14%)	0485	14.30	0.2000	14.47	0.4645	0.1289	9	-0.33	OK	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (14%)	0354	14.65	0.3000	14.47	0.4645	0.1289	9	0.37	OK	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (14%)	0360	14.65	0.0000	14.47	0.4645	0.1289	9	0.37	OK	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (14%)	0494	14.98	0.4900	14.47	0.4645	0.1289	9	1.01	OK	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (14%)	0072	15.37	0.0000	14.47	0.4645	0.1289	9	1.80	High	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (14%)	0025	14.45	1.100	14.47	0.4645	0.1289	9	-0.03	OK	1
050.60	Soluble Potassium as K2O, Flame Photometric ... (14%)	0443	12.00	0.1000	13.96	0.8628	0.1959	7	-2.05	Low	0
050.60	Soluble Potassium as K2O, Flame Photometric ... (14%)	0476	13.40	0.3626	13.96	0.8628	0.1959	7	-0.59	OK	0
050.60	Soluble Potassium as K2O, Flame Photometric ... (14%)	0041	13.63	0.0100	13.96	0.8628	0.1959	7	-0.35	OK	0
050.60	Soluble Potassium as K2O, Flame Photometric ... (14%)	0510	14.17	0.6088	13.96	0.8628	0.1959	7	0.23	OK	0
050.60	Soluble Potassium as K2O, Flame Photometric ... (14%)	0200	14.47	0.0500	13.96	0.8628	0.1959	7	0.53	OK	0
050.60	Soluble Potassium as K2O, Flame Photometric ... (14%)	0169	14.68	0.1300	13.96	0.8628	0.1959	7	0.75	OK	0
050.60	Soluble Potassium as K2O, Flame Photometric ... (14%)	0105	14.71	0.1100	13.96	0.8628	0.1959	7	0.78	OK	0
050.61	Soluble Potassium as K2O, Flame Photometric ... (14%)	0456	13.91	0.0900	14.76	1.008	0.0433	3	-0.85		0
050.61	Soluble Potassium as K2O, Flame Photometric ... (14%)	0024	14.50	0.0000	14.76	1.008	0.0433	3	-0.26		0
050.61	Soluble Potassium as K2O, Flame Photometric ... (14%)	0131	15.87	0.0400	14.76	1.008	0.0433	3	1.10		0
050.62	Soluble Potassium as K2O, Flame Photometric ... (14%)	0513	14.04	0.0200	14.67	0.4191	0.0960	5	-1.51		0
050.62	Soluble Potassium as K2O, Flame Photometric ... (14%)	0105	14.56	0.1000	14.67	0.4191	0.0960	5	-0.27		0
050.62	Soluble Potassium as K2O, Flame Photometric ... (14%)	0029	14.67	0.0700	14.67	0.4191	0.0960	5	-0.02		0
050.62	Soluble Potassium as K2O, Flame Photometric ... (14%)	0028	15.03	0.1000	14.67	0.4191	0.0960	5	0.85		0
050.62	Soluble Potassium as K2O, Flame Photometric ... (14%)	0095	15.08	0.1900	14.67	0.4191	0.0960	5	0.96		0
050.99	Soluble Potassium as K2O, Other (14%)	0255	11.68	0.1890	14.33	0.4604	0.1704	37	-5.76	Low	0
050.99	Soluble Potassium as K2O, Other (14%)	0096	11.87	0.1000	14.33	0.4604	0.1704	37	-5.35	Low	0
050.99	Soluble Potassium as K2O, Other (14%)	0553	12.56	0.1800	14.33	0.4604	0.1704	37	-3.85	Low	0
050.99	Soluble Potassium as K2O, Other (14%)	0540	13.56	0.0800	14.33	0.4604	0.1704	37	-1.68	OK	0
050.99	Soluble Potassium as K2O, Other (14%)	0481	13.80	0.0400	14.33	0.4604	0.1704	37	-1.16	OK	0
050.99	Soluble Potassium as K2O, Other (14%)	0538	14.00	0.2100	14.33	0.4604	0.1704	37	-0.74	OK	0
050.99	Soluble Potassium as K2O, Other (14%)	0531	14.03	0.0100	14.33	0.4604	0.1704	37	-0.67	OK	0
050.99	Soluble Potassium as K2O, Other (14%)	0325	14.05	0.1000	14.33	0.4604	0.1704	37	-0.62	OK	0
050.99	Soluble Potassium as K2O, Other (14%)	0518	14.05	0.3000	14.33	0.4604	0.1704	37	-0.62	OK	0
050.99	Soluble Potassium as K2O, Other (14%)	0519	14.09	0.0000	14.33	0.4604	0.1704	37	-0.53	OK	0
050.99	Soluble Potassium as K2O, Other (14%)	0537	14.09	0.5000	14.33	0.4604	0.1704	37	-0.53	OK	0
050.99	Soluble Potassium as K2O, Other (14%)	0506	14.10	0.2000	14.33	0.4604	0.1704	37	-0.51	OK	0
050.99	Soluble Potassium as K2O, Other (14%)	0533	14.14	0.1200	14.33	0.4604	0.1704	37	-0.42	OK	0
050.99	Soluble Potassium as K2O, Other (14%)	0444	14.22	0.4700	14.33	0.4604	0.1704	37	-0.26	OK	0
050.99	Soluble Potassium as K2O, Other (14%)	0536	14.23	0.1500	14.33	0.4604	0.1704	37	-0.24	OK	0
050.99	Soluble Potassium as K2O, Other (14%)	0501	14.25	0.4800	14.33	0.4604	0.1704	37	-0.18	OK	0
050.99	Soluble Potassium as K2O, Other (14%)	0523	14.25	0.1000	14.33	0.4604	0.1704	37	-0.18	OK	0
050.99	Soluble Potassium as K2O, Other (14%)	0549	14.25	0.1000	14.33	0.4604	0.1704	37	-0.18	OK	0
050.99	Soluble Potassium as K2O, Other (14%)	0394	14.25	0.0120	14.33	0.4604	0.1704	37	-0.17	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				
050.99	Soluble Potassium as K2O, Other (14%)	0521	14.31	0.0000	14.33	0.4604	0.1704	37	-0.06	OK	0
050.99	Soluble Potassium as K2O, Other (14%)	0371	14.34	0.0300	14.33	0.4604	0.1704	37	0.00	OK	0
050.99	Soluble Potassium as K2O, Other (14%)	0545	14.41	0.0300	14.33	0.4604	0.1704	37	0.16	OK	0
050.99	Soluble Potassium as K2O, Other (14%)	0451	14.42	0.8000	14.33	0.4604	0.1704	37	0.19	OK	0
050.99	Soluble Potassium as K2O, Other (14%)	0527	14.43	0.1319	14.33	0.4604	0.1704	37	0.20	OK	0
050.99	Soluble Potassium as K2O, Other (14%)	0389	14.45	0.0200	14.33	0.4604	0.1704	37	0.25	OK	0
050.99	Soluble Potassium as K2O, Other (14%)	0402	14.56	0.4100	14.33	0.4604	0.1704	37	0.48	OK	0
050.99	Soluble Potassium as K2O, Other (14%)	0552	14.57	0.0300	14.33	0.4604	0.1704	37	0.50	OK	0
050.99	Soluble Potassium as K2O, Other (14%)	0433	14.60	0.0100	14.33	0.4604	0.1704	37	0.57	OK	0
050.99	Soluble Potassium as K2O, Other (14%)	0177	14.61	0.0959	14.33	0.4604	0.1704	37	0.59	OK	0
050.99	Soluble Potassium as K2O, Other (14%)	0027	14.66	0.1330	14.33	0.4604	0.1704	37	0.71	OK	0
050.99	Soluble Potassium as K2O, Other (14%)	0300	14.80	0.3400	14.33	0.4604	0.1704	37	1.01	OK	0
050.99	Soluble Potassium as K2O, Other (14%)	0525	14.89	0.1500	14.33	0.4604	0.1704	37	1.20	OK	0
050.99	Soluble Potassium as K2O, Other (14%)	0482	14.90	0.0000	14.33	0.4604	0.1704	37	1.23	OK	0
050.99	Soluble Potassium as K2O, Other (14%)	0556	15.00	0.2000	14.33	0.4604	0.1704	37	1.45	OK	0
050.99	Soluble Potassium as K2O, Other (14%)	0368	15.06	0.4406	14.33	0.4604	0.1704	37	1.58	OK	0
050.99	Soluble Potassium as K2O, Other (14%)	0234	15.15	0.1000	14.33	0.4604	0.1704	37	1.77	OK	0
050.99	Soluble Potassium as K2O, Other (14%)	0524	15.59	0.0417	14.33	0.4604	0.1704	37	2.73	High	0
050.99	Soluble Potassium as K2O, Other (14%)	0042	15.43	1.730	14.33	0.4604	0.1704	37	2.37	High	1
060.00	Water (Free), Vacuum Oven (%)	0007	0.6700	0.0600	0.7619	0.0704	0.0612	4	-1.30		0
060.00	Water (Free), Vacuum Oven (%)	0456	0.7450	0.0300	0.7619	0.0704	0.0612	4	-0.24		0
060.00	Water (Free), Vacuum Oven (%)	0096	0.8050	0.1500	0.7619	0.0704	0.0612	4	0.61		0
060.00	Water (Free), Vacuum Oven (%)	0416	0.8274	0.0048	0.7619	0.0704	0.0612	4	0.93		0
060.30	Water (Free), AFPC No. 2B (105°C oven for 2 h... (%)	0518	2.190	0.0600				1			0
060.99	Water (Free), Other (%)	0510	0.8610	0.0049				1			0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0354	0.1950	0.0300	0.2838	0.0818	0.0158	6	-0.97	OK	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0472	0.2300	0.0000	0.2838	0.0818	0.0158	6	-0.59	OK	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0451	0.2865	0.0290	0.2838	0.0818	0.0158	6	0.03	OK	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0482	0.2900	0.0200	0.2838	0.0818	0.0158	6	0.07	OK	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0096	0.2950	0.0100	0.2838	0.0818	0.0158	6	0.12	OK	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0483	0.4730	0.0060	0.2838	0.0818	0.0158	6	2.06	OK	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0041	0.4450	0.1700	0.2838	0.0818	0.0158	6	1.75	OK	1
101.32	Acid Soluble Calcium, ICP, test portion 2006.... (%)	0521	0.3068	0.0000				1			0
101.33	Acid Soluble Calcium, ICP, 2017.02 (%)	0494	0.2882	0.0053				2			0
101.33	Acid Soluble Calcium, ICP, 2017.02 (%)	0527	0.3036	0.0023				2			0
101.99	Acid Soluble Calcium, Other (%)	0389	0.2500	0.0000	5.025	7.884	0.0567	3	-0.61		0
101.99	Acid Soluble Calcium, Other (%)	0552	0.7000	0.1200	5.025	7.884	0.0567	3	-0.55		0
101.99	Acid Soluble Calcium, Other (%)	0519	14.13	0.0500	5.025	7.884	0.0567	3	1.15		0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (1%)	0040	0.5500	0.0200	0.6299	0.1063	0.0182	8	-0.69	OK	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (1%)	0485	0.5554	0.0154	0.6299	0.1063	0.0182	8	-0.64	OK	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (1%)	0513	0.5650	0.0100	0.6299	0.1063	0.0182	8	-0.56	OK	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (1%)	0498	0.5850	0.0100	0.6299	0.1063	0.0182	8	-0.39	OK	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (1%)	0029	0.5985	0.0264	0.6299	0.1063	0.0182	8	-0.27	OK	0

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121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (1%)	0553	0.6358	0.0085	0.6299	0.1063	0.0182	8	0.05	OK	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (1%)	0169	0.7600	0.0400	0.6299	0.1063	0.0182	8	1.12	OK	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (1%)	0550	0.9115	0.0150	0.6299	0.1063	0.0182	8	2.42	High	0
121.03	Acid Soluble Magnesium, AA, 965.09, test port... (1%)	0546	0.5935	0.0110				1			0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1%)	0255	0.4930	0.0400	0.5803	0.0366	0.0319	13	-2.38	OK	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1%)	0231	0.5350	0.0300	0.5803	0.0366	0.0319	13	-1.24	OK	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1%)	0360	0.5575	0.0110	0.5803	0.0366	0.0319	13	-0.62	OK	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1%)	0444	0.5700	0.0200	0.5803	0.0366	0.0319	13	-0.28	OK	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1%)	0096	0.5750	0.0100	0.5803	0.0366	0.0319	13	-0.14	OK	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1%)	0354	0.5750	0.0100	0.5803	0.0366	0.0319	13	-0.14	OK	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1%)	0482	0.5750	0.0100	0.5803	0.0366	0.0319	13	-0.14	OK	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1%)	0451	0.5755	0.0250	0.5803	0.0366	0.0319	13	-0.13	OK	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1%)	0041	0.5900	0.0000	0.5803	0.0366	0.0319	13	0.27	OK	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1%)	0472	0.5950	0.0100	0.5803	0.0366	0.0319	13	0.40	OK	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1%)	0234	0.6000	0.0000	0.5803	0.0366	0.0319	13	0.54	OK	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1%)	0371	0.6350	0.0300	0.5803	0.0366	0.0319	13	1.50	OK	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1%)	0102	5.749	0.2190	0.5803	0.0366	0.0319	13	141.19	High	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1%)	0483	303.8	606.4	0.5803	0.0366	0.0319	13	8283.85	High	2
121.32	Acid Soluble Magnesium, ICP, test portion 200... (1%)	0394	0.5513	0.0043	0.5605	0.0080	0.0044	3	-1.15		0
121.32	Acid Soluble Magnesium, ICP, test portion 200... (1%)	0300	0.5648	0.0089	0.5605	0.0080	0.0044	3	0.54		0
121.32	Acid Soluble Magnesium, ICP, test portion 200... (1%)	0521	0.5654	0.0000	0.5605	0.0080	0.0044	3	0.62		0
121.33	Acid Soluble Magnesium, ICP, 2017.02 (1%)	0515	0.5109	0.0051	0.5680	0.0416	0.0258	8	-1.26	OK	0
121.33	Acid Soluble Magnesium, ICP, 2017.02 (1%)	0555	0.5442	0.0479	0.5680	0.0416	0.0258	8	-0.52	OK	0
121.33	Acid Soluble Magnesium, ICP, 2017.02 (1%)	0177	0.5490	0.0087	0.5680	0.0416	0.0258	8	-0.42	OK	0
121.33	Acid Soluble Magnesium, ICP, 2017.02 (1%)	0024	0.5630	0.0140	0.5680	0.0416	0.0258	8	-0.11	OK	0
121.33	Acid Soluble Magnesium, ICP, 2017.02 (1%)	0494	0.5683	0.0062	0.5680	0.0416	0.0258	8	0.01	OK	0
121.33	Acid Soluble Magnesium, ICP, 2017.02 (1%)	0043	0.5750	0.0100	0.5680	0.0416	0.0258	8	0.15	OK	0
121.33	Acid Soluble Magnesium, ICP, 2017.02 (1%)	0527	0.6035	0.0139	0.5680	0.0416	0.0258	8	0.78	OK	0
121.33	Acid Soluble Magnesium, ICP, 2017.02 (1%)	0117	0.6308	0.1002	0.5680	0.0416	0.0258	8	1.38	OK	0
121.99	Acid Soluble Magnesium, Other (1%)	0476	0.4029	0.0049	0.5761	0.1100	0.0195	12	-1.58	OK	0
121.99	Acid Soluble Magnesium, Other (1%)	0524	0.4899	0.0109	0.5761	0.1100	0.0195	12	-0.78	OK	0
121.99	Acid Soluble Magnesium, Other (1%)	0515	0.5050	0.0643	0.5761	0.1100	0.0195	12	-0.65	OK	0
121.99	Acid Soluble Magnesium, Other (1%)	0389	0.5345	0.0010	0.5761	0.1100	0.0195	12	-0.38	OK	0
121.99	Acid Soluble Magnesium, Other (1%)	0506	0.5435	0.0130	0.5761	0.1100	0.0195	12	-0.30	OK	0
121.99	Acid Soluble Magnesium, Other (1%)	0405	0.5550	0.0300	0.5761	0.1100	0.0195	12	-0.19	OK	0
121.99	Acid Soluble Magnesium, Other (1%)	0419	0.5620	0.0160	0.5761	0.1100	0.0195	12	-0.13	OK	0
121.99	Acid Soluble Magnesium, Other (1%)	0481	0.5650	0.0100	0.5761	0.1100	0.0195	12	-0.10	OK	0
121.99	Acid Soluble Magnesium, Other (1%)	0523	0.6000	0.0000	0.5761	0.1100	0.0195	12	0.22	OK	0
121.99	Acid Soluble Magnesium, Other (1%)	0027	0.6910	0.0640	0.5761	0.1100	0.0195	12	1.05	OK	0
121.99	Acid Soluble Magnesium, Other (1%)	0552	0.7150	0.0100	0.5761	0.1100	0.0195	12	1.26	OK	0
121.99	Acid Soluble Magnesium, Other (1%)	0519	0.9850	0.0100	0.5761	0.1100	0.0195	12	3.72	High	0
131.00	Water Soluble Magnesium, AA (%)	0553	0.1050	0.0009	0.5119	0.3714	0.0162	5	-1.10		0
131.00	Water Soluble Magnesium, AA (%)	0550	0.2715	0.0210	0.5119	0.3714	0.0162	5	-0.65		0

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			Value	Range	Rob Mean	Rob SD	R-bar				
131.00	Water Soluble Magnesium, AA (%)	0029	0.3731	0.0193	0.5119	0.3714	0.0162	5	-0.37		0
131.00	Water Soluble Magnesium, AA (%)	0200	0.9050	0.0300	0.5119	0.3714	0.0162	5	1.06		0
131.00	Water Soluble Magnesium, AA (%)	0309	0.9050	0.0100	0.5119	0.3714	0.0162	5	1.06		0
131.30	Water Soluble Magnesium, ICP (%)	0300	0.1920	0.0180	0.3372	0.1298	0.0138	7	-1.01	NA	0
131.30	Water Soluble Magnesium, ICP (%)	0231	0.2600	0.0200	0.3372	0.1298	0.0138	7	-0.54	NA	0
131.30	Water Soluble Magnesium, ICP (%)	0394	0.2826	0.0045	0.3372	0.1298	0.0138	7	-0.38	NA	0
131.30	Water Soluble Magnesium, ICP (%)	0405	0.3200	0.0000	0.3372	0.1298	0.0138	7	-0.12	NA	0
131.30	Water Soluble Magnesium, ICP (%)	0486	0.3350	0.0100	0.3372	0.1298	0.0138	7	-0.02	NA	0
131.30	Water Soluble Magnesium, ICP (%)	0027	0.4390	0.0200	0.3372	0.1298	0.0138	7	0.71	NA	0
131.30	Water Soluble Magnesium, ICP (%)	0368	0.5592	0.0239	0.3372	0.1298	0.0138	7	1.55	NA	0
131.70	Water Soluble Magnesium, Titrimetric (EDTA) (%)	0518	0.4800	0.0400				2			0
131.70	Water Soluble Magnesium, Titrimetric (EDTA) (%)	0510	1.084	0.0434				2			0
143.00	Elemental Sulfur, Gravimetric Sulfur - carbon... (%)	0405	0.0250	0.0100				1			0
143.99	Elemental Sulfur, Other (%)	0255	8.731	0.8780	9.735	0.7930	0.2695	4	-1.27		0
143.99	Elemental Sulfur, Other (%)	0472	9.470	0.0400	9.735	0.7930	0.2695	4	-0.33		0
143.99	Elemental Sulfur, Other (%)	0481	10.34	0.0600	9.735	0.7930	0.2695	4	0.76		0
143.99	Elemental Sulfur, Other (%)	0389	10.40	0.1000	9.735	0.7930	0.2695	4	0.84		0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0550	8.300	0.0000	10.40	0.3502	0.0781	11	-6.00	NA	0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0027	8.990	0.0200	10.40	0.3502	0.0781	11	-4.03	NA	0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0444	10.27	0.0300	10.40	0.3502	0.0781	11	-0.39	NA	0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0544	10.35	0.0400	10.40	0.3502	0.0781	11	-0.15	NA	0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0177	10.44	0.1932	10.40	0.3502	0.0781	11	0.11	NA	0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0095	10.45	0.0900	10.40	0.3502	0.0781	11	0.13	NA	0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0498	10.45	0.1000	10.40	0.3502	0.0781	11	0.14	NA	0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0510	10.50	0.0437	10.40	0.3502	0.0781	11	0.29	NA	0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0485	10.64	0.1913	10.40	0.3502	0.0781	11	0.67	NA	0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0476	10.71	0.0414	10.40	0.3502	0.0781	11	0.88	NA	0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0405	10.87	0.1100	10.40	0.3502	0.0781	11	1.33	NA	0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0522	10.23	0.5100	10.40	0.3502	0.0781	11	-0.50	NA	1
145.99	Sulfate Sulfur, HCl soluble, Other (%)	0444	9.395	0.0500				2			0
145.99	Sulfate Sulfur, HCl soluble, Other (%)	0200	9.855	0.0700				2			0
148.00	Total Sulfur, Combustion (7.75%)	0131	9.441	0.0630	10.42	0.5781	0.1522	6	-1.51	Low	0
148.00	Total Sulfur, Combustion (7.75%)	0029	10.26	0.1900	10.42	0.5781	0.1522	6	-0.25	OK	0
148.00	Total Sulfur, Combustion (7.75%)	0114	10.38	0.0200	10.42	0.5781	0.1522	6	-0.06	OK	0
148.00	Total Sulfur, Combustion (7.75%)	0025	10.53	0.2200	10.42	0.5781	0.1522	6	0.17	OK	0
148.00	Total Sulfur, Combustion (7.75%)	0451	10.75	0.1000	10.42	0.5781	0.1522	6	0.51	OK	0
148.00	Total Sulfur, Combustion (7.75%)	0136	11.05	0.3200	10.42	0.5781	0.1522	6	0.97	OK	0
148.00	Total Sulfur, Combustion (7.75%)	0555	8.868	1.761	10.42	0.5781	0.1522	6	-2.39	Low	1
148.01	Total Sulfur, Gravimetric - sulfate and elem... (7.75%)	0231	10.35	0.1000	10.55	0.1786	0.1773	9	-1.04	OK	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (7.75%)	0534	10.40	0.2000	10.55	0.1786	0.1773	9	-0.78	OK	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (7.75%)	0177	10.44	0.1870	10.55	0.1786	0.1773	9	-0.57	OK	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (7.75%)	0029	10.50	0.1100	10.55	0.1786	0.1773	9	-0.29	OK	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (7.75%)	0510	10.51	0.0390	10.55	0.1786	0.1773	9	-0.23	OK	0

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			Value	Range	Rob Mean	Rob SD	R-bar				
148.01	Total Sulfur, Gravimetric - sulfate and elem... (7.75%)	0513	10.57	0.0600	10.55	0.1786	0.1773	9	0.10	OK	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (7.75%)	0444	10.63	0.4800	10.55	0.1786	0.1773	9	0.41	OK	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (7.75%)	0230	10.75	0.3000	10.55	0.1786	0.1773	9	1.03	OK	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (7.75%)	0405	10.89	0.1200	10.55	0.1786	0.1773	9	1.75	OK	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (7.75%)	0485	0.0000	0.0000	10.55	0.1786	0.1773	9			4
148.07	Total Sulfur, ICP, test portion as in 2017.02... (7.75%)	0542	8.775	0.3300	10.28	0.3749	0.1244	17	-4.03	Low	0
148.07	Total Sulfur, ICP, test portion as in 2017.02... (7.75%)	0444	9.525	0.0300	10.28	0.3749	0.1244	17	-2.03	Low	0
148.07	Total Sulfur, ICP, test portion as in 2017.02... (7.75%)	0486	9.880	0.3400	10.28	0.3749	0.1244	17	-1.08	OK	0
148.07	Total Sulfur, ICP, test portion as in 2017.02... (7.75%)	0402	9.965	0.1300	10.28	0.3749	0.1244	17	-0.85	OK	0
148.07	Total Sulfur, ICP, test portion as in 2017.02... (7.75%)	0292	10.01	0.0000	10.28	0.3749	0.1244	17	-0.73	OK	0
148.07	Total Sulfur, ICP, test portion as in 2017.02... (7.75%)	0040	10.20	0.0000	10.28	0.3749	0.1244	17	-0.23	OK	0
148.07	Total Sulfur, ICP, test portion as in 2017.02... (7.75%)	0394	10.26	0.0620	10.28	0.3749	0.1244	17	-0.07	OK	0
148.07	Total Sulfur, ICP, test portion as in 2017.02... (7.75%)	0546	10.31	0.1500	10.28	0.3749	0.1244	17	0.05	OK	0
148.07	Total Sulfur, ICP, test portion as in 2017.02... (7.75%)	0483	10.35	0.1000	10.28	0.3749	0.1244	17	0.17	OK	0
148.07	Total Sulfur, ICP, test portion as in 2017.02... (7.75%)	0177	10.37	0.0163	10.28	0.3749	0.1244	17	0.22	OK	0
148.07	Total Sulfur, ICP, test portion as in 2017.02... (7.75%)	0117	10.38	0.0400	10.28	0.3749	0.1244	17	0.25	OK	0
148.07	Total Sulfur, ICP, test portion as in 2017.02... (7.75%)	0024	10.41	0.0500	10.28	0.3749	0.1244	17	0.32	OK	0
148.07	Total Sulfur, ICP, test portion as in 2017.02... (7.75%)	0102	10.54	0.6518	10.28	0.3749	0.1244	17	0.67	OK	0
148.07	Total Sulfur, ICP, test portion as in 2017.02... (7.75%)	0525	10.59	0.0350	10.28	0.3749	0.1244	17	0.82	OK	0
148.07	Total Sulfur, ICP, test portion as in 2017.02... (7.75%)	0527	10.63	0.1573	10.28	0.3749	0.1244	17	0.93	OK	0
148.07	Total Sulfur, ICP, test portion as in 2017.02... (7.75%)	0494	10.71	0.0120	10.28	0.3749	0.1244	17	1.14	OK	0
148.07	Total Sulfur, ICP, test portion as in 2017.02... (7.75%)	0043	10.81	0.0100	10.28	0.3749	0.1244	17	1.39	OK	0
148.07	Total Sulfur, ICP, test portion as in 2017.02... (7.75%)	0515	8.857	1.596	10.28	0.3749	0.1244	17	-3.81	Low	1
148.99	Total Sulfur, Other (7.75%)	0519	7.865	0.0300	10.42	1.052	0.1365	13	-2.43	Low	0
148.99	Total Sulfur, Other (7.75%)	0523	8.425	0.2100	10.42	1.052	0.1365	13	-1.89	Low	0
148.99	Total Sulfur, Other (7.75%)	0368	9.709	0.0432	10.42	1.052	0.1365	13	-0.67	OK	0
148.99	Total Sulfur, Other (7.75%)	0354	10.35	0.3000	10.42	1.052	0.1365	13	-0.06	OK	0
148.99	Total Sulfur, Other (7.75%)	0096	10.38	0.1200	10.42	1.052	0.1365	13	-0.04	OK	0
148.99	Total Sulfur, Other (7.75%)	0433	10.40	0.0010	10.42	1.052	0.1365	13	-0.02	OK	0
148.99	Total Sulfur, Other (7.75%)	0300	10.41	0.0300	10.42	1.052	0.1365	13	-0.01	OK	0
148.99	Total Sulfur, Other (7.75%)	0419	10.41	0.0500	10.42	1.052	0.1365	13	-0.01	OK	0
148.99	Total Sulfur, Other (7.75%)	0506	10.55	0.1000	10.42	1.052	0.1365	13	0.13	OK	0
148.99	Total Sulfur, Other (7.75%)	0371	10.67	0.0400	10.42	1.052	0.1365	13	0.24	OK	0
148.99	Total Sulfur, Other (7.75%)	0482	11.15	0.5000	10.42	1.052	0.1365	13	0.70	High	0
148.99	Total Sulfur, Other (7.75%)	0553	11.73	0.2505	10.42	1.052	0.1365	13	1.25	High	0
148.99	Total Sulfur, Other (7.75%)	0072	24.61	0.1000	10.42	1.052	0.1365	13	13.49	High	0
149.02	Sulfur - HNO3 soluble, Turbidimetric, modific... (%)	0518	7.690	0.2600				1			0
149.04	Sulfur - HNO3 soluble, ICP (%)	0524	9.938	0.0817				2			0
149.04	Sulfur - HNO3 soluble, ICP (%)	0521	10.96	0.0000				2			0
151.00	Acid Soluble Arsenic , AA, test portion 2006... (ppm)	0550	125.8	3.990				2			0
151.00	Acid Soluble Arsenic , AA, test portion 2006... (ppm)	0498	163.5	5.000				2			0
151.30	Acid Soluble Arsenic , ICP (ppm)	0523	103.7	1.203	136.7	24.46	8.070	8	-1.23	NA	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0524	114.2	2.898	136.7	24.46	8.070	8	-0.84	NA	0

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151.30	Acid Soluble Arsenic , ICP (ppm)	0255	124.2	14.16	136.7	24.46	8.070	8	-0.46	NA	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0444	132.5	1.000	136.7	24.46	8.070	8	-0.16	NA	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0521	144.8	4.847	136.7	24.46	8.070	8	0.30	NA	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0555	151.6	30.24	136.7	24.46	8.070	8	0.56	NA	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0096	160.2	5.700	136.7	24.46	8.070	8	0.88	NA	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0102	162.2	4.517	136.7	24.46	8.070	8	0.95	NA	0
151.32	Acid Soluble Arsenic , ICP, 2006.03 (ppm)	0300	169.3	1.800				1			0
151.33	Acid Soluble Arsenic , ICP, 2017.02 (ppm)	0515	149.1	1.011	164.7	11.08	5.188	4	-1.40		0
151.33	Acid Soluble Arsenic , ICP, 2017.02 (ppm)	0117	164.4	7.996	164.7	11.08	5.188	4	-0.02		0
151.33	Acid Soluble Arsenic , ICP, 2017.02 (ppm)	0527	171.6	8.265	164.7	11.08	5.188	4	0.62		0
151.33	Acid Soluble Arsenic , ICP, 2017.02 (ppm)	0494	173.6	3.479	164.7	11.08	5.188	4	0.81		0
151.34	Acid Soluble Arsenic , ICP, EPA 3050B/6010C (ppm)	0515	155.9	4.603				2			0
151.34	Acid Soluble Arsenic , ICP, EPA 3050B/6010C (ppm)	0368	159.1	9.963				2			0
151.99	Acid Soluble Arsenic , Other (ppm)	0476	117.2	1.387	158.4	30.03	2.427	4	-1.37		0
151.99	Acid Soluble Arsenic , Other (ppm)	0481	160.9	0.3000	158.4	30.03	2.427	4	0.08		0
151.99	Acid Soluble Arsenic , Other (ppm)	0519	166.7	0.0200	158.4	30.03	2.427	4	0.27		0
151.99	Acid Soluble Arsenic , Other (ppm)	0405	189.0	8.000	158.4	30.03	2.427	4	1.02		0
165.00	Acid Soluble Boron , Spectrophotometric (0.2%)	0506	0.1725	0.0050	0.1966	0.0152	0.0053	13	-1.59	OK	0
165.00	Acid Soluble Boron , Spectrophotometric (0.2%)	0309	0.1750	0.0100	0.1966	0.0152	0.0053	13	-1.42	OK	0
165.00	Acid Soluble Boron , Spectrophotometric (0.2%)	0537	0.1850	0.0100	0.1966	0.0152	0.0053	13	-0.76	OK	0
165.00	Acid Soluble Boron , Spectrophotometric (0.2%)	0029	0.1900	0.0100	0.1966	0.0152	0.0053	13	-0.43	OK	0
165.00	Acid Soluble Boron , Spectrophotometric (0.2%)	0405	0.1900	0.0000	0.1966	0.0152	0.0053	13	-0.43	OK	0
165.00	Acid Soluble Boron , Spectrophotometric (0.2%)	0028	0.1970	0.0000	0.1966	0.0152	0.0053	13	0.03	OK	0
165.00	Acid Soluble Boron , Spectrophotometric (0.2%)	0481	0.2000	0.0000	0.1966	0.0152	0.0053	13	0.22	OK	0
165.00	Acid Soluble Boron , Spectrophotometric (0.2%)	0498	0.2000	0.0000	0.1966	0.0152	0.0053	13	0.22	OK	0
165.00	Acid Soluble Boron , Spectrophotometric (0.2%)	0550	0.2005	0.0030	0.1966	0.0152	0.0053	13	0.26	OK	0
165.00	Acid Soluble Boron , Spectrophotometric (0.2%)	0536	0.2065	0.0030	0.1966	0.0152	0.0053	13	0.65	OK	0
165.00	Acid Soluble Boron , Spectrophotometric (0.2%)	0535	0.2075	0.0030	0.1966	0.0152	0.0053	13	0.72	OK	0
165.00	Acid Soluble Boron , Spectrophotometric (0.2%)	0540	0.2150	0.0100	0.1966	0.0152	0.0053	13	1.21	OK	0
165.00	Acid Soluble Boron , Spectrophotometric (0.2%)	0169	0.2153	0.0150	0.1966	0.0152	0.0053	13	1.23	OK	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.2%)	0234	0.1950	0.0100	0.2100	0.0078	0.0053	14	-1.94	OK	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.2%)	0389	0.2000	0.0000	0.2100	0.0078	0.0053	14	-1.30	OK	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.2%)	0542	0.2035	0.0065	0.2100	0.0078	0.0053	14	-0.85	OK	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.2%)	0040	0.2050	0.0160	0.2100	0.0078	0.0053	14	-0.65	OK	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.2%)	0354	0.2050	0.0100	0.2100	0.0078	0.0053	14	-0.65	OK	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.2%)	0043	0.2085	0.0030	0.2100	0.0078	0.0053	14	-0.20	OK	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.2%)	0444	0.2100	0.0000	0.2100	0.0078	0.0053	14	-0.01	OK	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.2%)	0451	0.2120	0.0060	0.2100	0.0078	0.0053	14	0.25	OK	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.2%)	0494	0.2129	0.0060	0.2100	0.0078	0.0053	14	0.37	OK	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.2%)	0394	0.2153	0.0016	0.2100	0.0078	0.0053	14	0.68	OK	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.2%)	0433	0.2155	0.0010	0.2100	0.0078	0.0053	14	0.70	OK	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.2%)	0485	0.2162	0.0136	0.2100	0.0078	0.0053	14	0.79	OK	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.2%)	0521	0.2183	0.0000	0.2100	0.0078	0.0053	14	1.07	OK	0

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165.30	Acid Soluble Boron , ICP, test portion in 98... (0.2%)	0371	0.2200	0.0000	0.2100	0.0078	0.0053	14	1.28	OK	0
165.99	Acid Soluble Boron , Other (0.2%)	0515	0.1471	0.0548	0.2015	0.0240	0.0073	20	-2.26	Low	0
165.99	Acid Soluble Boron , Other (0.2%)	0255	0.1715	0.0190	0.2015	0.0240	0.0073	20	-1.25	OK	0
165.99	Acid Soluble Boron , Other (0.2%)	0476	0.1715	0.0180	0.2015	0.0240	0.0073	20	-1.25	OK	0
165.99	Acid Soluble Boron , Other (0.2%)	0513	0.1750	0.0100	0.2015	0.0240	0.0073	20	-1.10	OK	0
165.99	Acid Soluble Boron , Other (0.2%)	0524	0.1766	0.0022	0.2015	0.0240	0.0073	20	-1.04	OK	0
165.99	Acid Soluble Boron , Other (0.2%)	0472	0.1800	0.0000	0.2015	0.0240	0.0073	20	-0.89	OK	0
165.99	Acid Soluble Boron , Other (0.2%)	0486	0.2000	0.0000	0.2015	0.0240	0.0073	20	-0.06	OK	0
165.99	Acid Soluble Boron , Other (0.2%)	0501	0.2000	0.0000	0.2015	0.0240	0.0073	20	-0.06	OK	0
165.99	Acid Soluble Boron , Other (0.2%)	0117	0.2061	0.0052	0.2015	0.0240	0.0073	20	0.19	OK	0
165.99	Acid Soluble Boron , Other (0.2%)	0368	0.2067	0.0051	0.2015	0.0240	0.0073	20	0.22	OK	0
165.99	Acid Soluble Boron , Other (0.2%)	0527	0.2076	0.0030	0.2015	0.0240	0.0073	20	0.25	OK	0
165.99	Acid Soluble Boron , Other (0.2%)	0360	0.2085	0.0010	0.2015	0.0240	0.0073	20	0.29	OK	0
165.99	Acid Soluble Boron , Other (0.2%)	0519	0.2100	0.0000	0.2015	0.0240	0.0073	20	0.35	OK	0
165.99	Acid Soluble Boron , Other (0.2%)	0546	0.2104	0.0079	0.2015	0.0240	0.0073	20	0.37	OK	0
165.99	Acid Soluble Boron , Other (0.2%)	0483	0.2120	0.0000	0.2015	0.0240	0.0073	20	0.44	OK	0
165.99	Acid Soluble Boron , Other (0.2%)	0482	0.2150	0.0100	0.2015	0.0240	0.0073	20	0.56	OK	0
165.99	Acid Soluble Boron , Other (0.2%)	0405	0.2185	0.0010	0.2015	0.0240	0.0073	20	0.71	OK	0
165.99	Acid Soluble Boron , Other (0.2%)	0300	0.2279	0.0039	0.2015	0.0240	0.0073	20	1.10	OK	0
165.99	Acid Soluble Boron , Other (0.2%)	0042	0.2295	0.0050	0.2015	0.0240	0.0073	20	1.17	OK	0
165.99	Acid Soluble Boron , Other (0.2%)	0231	0.2400	0.0000	0.2015	0.0240	0.0073	20	1.60	High	0
165.99	Acid Soluble Boron , Other (0.2%)	0552	0.3700	0.2000	0.2015	0.0240	0.0073	20	7.01	High	1
171.00	Water Soluble Boron , AA, JAOAC 52.950 (%)	0536	0.1935	0.0050				2			0
171.00	Water Soluble Boron , AA, JAOAC 52.950 (%)	0540	0.2000	0.0020				2			0
171.10	Water Soluble Boron , Spectrophotometric (%)	0200	0.1600	0.0000	0.1933	0.0127	0.0034	6	-2.34	NA	0
171.10	Water Soluble Boron , Spectrophotometric (%)	0405	0.1900	0.0000	0.1933	0.0127	0.0034	6	-0.23	NA	0
171.10	Water Soluble Boron , Spectrophotometric (%)	0535	0.1925	0.0050	0.1933	0.0127	0.0034	6	-0.05	NA	0
171.10	Water Soluble Boron , Spectrophotometric (%)	0533	0.1950	0.0100	0.1933	0.0127	0.0034	6	0.12	NA	0
171.10	Water Soluble Boron , Spectrophotometric (%)	0550	0.2005	0.0010	0.1933	0.0127	0.0034	6	0.51	NA	0
171.10	Water Soluble Boron , Spectrophotometric (%)	0553	0.2073	0.0045	0.1933	0.0127	0.0034	6	0.98	NA	0
171.99	Water Soluble Boron , Other (%)	0506	0.1615	0.0070	0.1979	0.0182	0.0028	7	-1.81	NA	0
171.99	Water Soluble Boron , Other (%)	0444	0.1800	0.0000	0.1979	0.0182	0.0028	7	-0.89	NA	0
171.99	Water Soluble Boron , Other (%)	0486	0.2000	0.0000	0.1979	0.0182	0.0028	7	0.10	NA	0
171.99	Water Soluble Boron , Other (%)	0394	0.2060	0.0008	0.1979	0.0182	0.0028	7	0.40	NA	0
171.99	Water Soluble Boron , Other (%)	0027	0.2090	0.0080	0.1979	0.0182	0.0028	7	0.55	NA	0
171.99	Water Soluble Boron , Other (%)	0300	0.2097	0.0037	0.1979	0.0182	0.0028	7	0.58	NA	0
171.99	Water Soluble Boron , Other (%)	0402	0.2100	0.0000	0.1979	0.0182	0.0028	7	0.60	NA	0
181.00	Acid Soluble Cadmium , AA, test portion 2006... (ppm)	0550	134.4	0.1000	189.1	47.90	10.70	3	-1.14		0
181.00	Acid Soluble Cadmium , AA, test portion 2006... (ppm)	0300	209.5	31.00	189.1	47.90	10.70	3	0.43		0
181.00	Acid Soluble Cadmium , AA, test portion 2006... (ppm)	0498	223.5	1.000	189.1	47.90	10.70	3	0.72		0
181.30	Acid Soluble Cadmium , ICP (ppm)	0523	109.0	0.3840	182.8	37.32	5.305	11	-1.85	NA	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0255	138.4	5.821	182.8	37.32	5.305	11	-1.11	NA	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0524	161.5	3.677	182.8	37.32	5.305	11	-0.53	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				
181.30	Acid Soluble Cadmium , ICP (ppm)	0521	163.5	2.415	182.8	37.32	5.305	11	-0.48	NA	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0389	185.8	4.000	182.8	37.32	5.305	11	0.08	NA	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0394	188.0	10.00	182.8	37.32	5.305	11	0.13	NA	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0096	189.9	2.400	182.8	37.32	5.305	11	0.18	NA	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0102	200.2	11.58	182.8	37.32	5.305	11	0.44	NA	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0482	205.0	8.000	182.8	37.32	5.305	11	0.56	NA	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0444	212.5	1.000	182.8	37.32	5.305	11	0.75	NA	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0555	366.9	9.070	182.8	37.32	5.305	11	4.62	NA	0
181.32	Acid Soluble Cadmium , ICP, 2006.03 (ppm)	0300	180.9	10.00				1			0
181.33	Acid Soluble Cadmium , ICP, 2017.02 (ppm)	0515	175.7	19.62	193.0	13.97	12.07	4	-1.24		0
181.33	Acid Soluble Cadmium , ICP, 2017.02 (ppm)	0494	188.7	4.356	193.0	13.97	12.07	4	-0.30		0
181.33	Acid Soluble Cadmium , ICP, 2017.02 (ppm)	0117	199.3	16.70	193.0	13.97	12.07	4	0.46		0
181.33	Acid Soluble Cadmium , ICP, 2017.02 (ppm)	0527	208.1	7.598	193.0	13.97	12.07	4	1.08		0
181.34	Acid Soluble Cadmium , ICP, EPA 3050B/6010C (ppm)	0368	183.6	7.445				2			0
181.34	Acid Soluble Cadmium , ICP, EPA 3050B/6010C (ppm)	0515	186.4	36.77				2			0
181.99	Acid Soluble Cadmium , Other (ppm)	0476	128.7	16.18	190.6	31.66	9.849	6	-1.74	NA	0
181.99	Acid Soluble Cadmium , Other (ppm)	0419	189.5	16.20	190.6	31.66	9.849	6	-0.03	NA	0
181.99	Acid Soluble Cadmium , Other (ppm)	0519	189.8	0.0100	190.6	31.66	9.849	6	-0.02	NA	0
181.99	Acid Soluble Cadmium , Other (ppm)	0481	191.3	0.7000	190.6	31.66	9.849	6	0.02	NA	0
181.99	Acid Soluble Cadmium , Other (ppm)	0405	200.0	16.00	190.6	31.66	9.849	6	0.26	NA	0
181.99	Acid Soluble Cadmium , Other (ppm)	0506	230.0	10.00	190.6	31.66	9.849	6	1.11	NA	0
191.00	Acid Soluble Chromium , AA, test portion 200... (ppm)	0550	434.8	10.17				2			0
191.00	Acid Soluble Chromium , AA, test portion 200... (ppm)	0498	642.5	9.000				2			0
191.30	Acid Soluble Chromium , ICP (ppm)	0523	379.1	6.730	537.5	116.7	15.62	10	-1.26	NA	0
191.30	Acid Soluble Chromium , ICP (ppm)	0444	414.0	2.000	537.5	116.7	15.62	10	-0.98	NA	0
191.30	Acid Soluble Chromium , ICP (ppm)	0521	456.8	7.087	537.5	116.7	15.62	10	-0.64	NA	0
191.30	Acid Soluble Chromium , ICP (ppm)	0524	510.4	14.86	537.5	116.7	15.62	10	-0.22	NA	0
191.30	Acid Soluble Chromium , ICP (ppm)	0394	528.5	5.000	537.5	116.7	15.62	10	-0.07	NA	0
191.30	Acid Soluble Chromium , ICP (ppm)	0482	547.0	36.00	537.5	116.7	15.62	10	0.08	NA	0
191.30	Acid Soluble Chromium , ICP (ppm)	0389	557.6	0.0000	537.5	116.7	15.62	10	0.16	NA	0
191.30	Acid Soluble Chromium , ICP (ppm)	0096	638.0	3.900	537.5	116.7	15.62	10	0.80	NA	0
191.30	Acid Soluble Chromium , ICP (ppm)	0102	649.8	38.61	537.5	116.7	15.62	10	0.89	NA	0
191.30	Acid Soluble Chromium , ICP (ppm)	0555	694.1	42.03	537.5	116.7	15.62	10	1.25	NA	0
191.32	Acid Soluble Chromium , ICP, 2006.03 (ppm)	0300	615.6	5.900				1			0
191.33	Acid Soluble Chromium , ICP, 2017.02 (ppm)	0494	577.3	13.91	620.1	31.10	40.61	4	-1.38		0
191.33	Acid Soluble Chromium , ICP, 2017.02 (ppm)	0117	618.6	5.645	620.1	31.10	40.61	4	-0.05		0
191.33	Acid Soluble Chromium , ICP, 2017.02 (ppm)	0527	636.1	19.08	620.1	31.10	40.61	4	0.51		0
191.33	Acid Soluble Chromium , ICP, 2017.02 (ppm)	0515	648.5	123.8	620.1	31.10	40.61	4	0.91		0
191.34	Acid Soluble Chromium , ICP, EPA 3050B/6010C... (ppm)	0368	578.1	19.92				2			0
191.34	Acid Soluble Chromium , ICP, EPA 3050B/6010C... (ppm)	0515	636.3	36.59				2			0
191.99	Acid Soluble Chromium , Other (ppm)	0476	427.2	22.04	631.9	177.1	14.13	6	-1.03	NA	0
191.99	Acid Soluble Chromium , Other (ppm)	0405	551.5	43.00	631.9	177.1	14.13	6	-0.40	NA	0
191.99	Acid Soluble Chromium , Other (ppm)	0519	614.0	0.0500	631.9	177.1	14.13	6	-0.09	NA	0

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			Value	Range	Rob Mean	Rob SD	R-bar				
191.99	Acid Soluble Chromium , Other (ppm)	0419	619.0	7.400	631.9	177.1	14.13	6	-0.06	NA	0
191.99	Acid Soluble Chromium , Other (ppm)	0481	682.2	0.3000	631.9	177.1	14.13	6	0.25	NA	0
191.99	Acid Soluble Chromium , Other (ppm)	0506	958.0	12.00	631.9	177.1	14.13	6	1.64	NA	0
202.00	Acid Soluble Cobalt , AA, test portion 2006.... (ppm)	0498	335.0	10.00				1			0
202.30	Acid Soluble Cobalt , ICP (ppm)	0523	209.0	4.683	339.5	89.32	10.37	8	-1.34	Low	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0521	249.7	3.270	339.5	89.32	10.37	8	-0.92	OK	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0482	304.0	6.000	339.5	89.32	10.37	8	-0.36	OK	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0524	354.4	6.279	339.5	89.32	10.37	8	0.15	OK	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0389	361.0	3.300	339.5	89.32	10.37	8	0.22	OK	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0096	399.8	10.10	339.5	89.32	10.37	8	0.62	OK	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0555	410.9	22.03	339.5	89.32	10.37	8	0.73	OK	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0102	427.0	27.32	339.5	89.32	10.37	8	0.90	OK	0
202.32	Acid Soluble Cobalt , ICP, 2006.03 (ppm)	0300	373.0	4.700				1			0
202.33	Acid Soluble Cobalt , ICP, 2017.02 (ppm)	0550	277.1	2.500	350.1	42.45	6.853	5	-1.50		0
202.33	Acid Soluble Cobalt , ICP, 2017.02 (ppm)	0527	357.0	7.551	350.1	42.45	6.853	5	0.14		0
202.33	Acid Soluble Cobalt , ICP, 2017.02 (ppm)	0515	363.9	20.54	350.1	42.45	6.853	5	0.28		0
202.33	Acid Soluble Cobalt , ICP, 2017.02 (ppm)	0494	364.8	2.582	350.1	42.45	6.853	5	0.30		0
202.33	Acid Soluble Cobalt , ICP, 2017.02 (ppm)	0117	387.8	1.088	350.1	42.45	6.853	5	0.77		0
202.33	Acid Soluble Cobalt , ICP, 2017.02 (ppm)	0546	405.0	90.00	350.1	42.45	6.853	5	1.13		1
202.34	Acid Soluble Cobalt , ICP, EPA 3050B/6010C (ppm)	0368	367.0	10.28				2			0
202.34	Acid Soluble Cobalt , ICP, EPA 3050B/6010C (ppm)	0515	371.9	31.15				2			0
202.99	Acid Soluble Cobalt , Other (ppm)	0476	248.9	9.054	363.4	108.2	7.450	6	-0.94	Low	0
202.99	Acid Soluble Cobalt , Other (ppm)	0255	286.1	19.96	363.4	108.2	7.450	6	-0.64	OK	0
202.99	Acid Soluble Cobalt , Other (ppm)	0481	363.8	5.200	363.4	108.2	7.450	6	0.00	OK	0
202.99	Acid Soluble Cobalt , Other (ppm)	0419	374.8	2.500	363.4	108.2	7.450	6	0.09	OK	0
202.99	Acid Soluble Cobalt , Other (ppm)	0405	382.5	7.000	363.4	108.2	7.450	6	0.16	OK	0
202.99	Acid Soluble Cobalt , Other (ppm)	0519	524.5	0.9900	363.4	108.2	7.450	6	1.33	High	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (... (0.06%)	0537	0.0250	0.0100	0.1278	0.0098	0.0108	10	-9.78	Low	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (... (0.06%)	0550	0.1200	0.0080	0.1278	0.0098	0.0108	10	-0.74	OK	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (... (0.06%)	0531	0.1200	0.0400	0.1278	0.0098	0.0108	10	-0.74	OK	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (... (0.06%)	0485	0.1252	0.0190	0.1278	0.0098	0.0108	10	-0.25	OK	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (... (0.06%)	0540	0.1270	0.0040	0.1278	0.0098	0.0108	10	-0.07	OK	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (... (0.06%)	0535	0.1290	0.0020	0.1278	0.0098	0.0108	10	0.12	OK	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (... (0.06%)	0029	0.1320	0.0096	0.1278	0.0098	0.0108	10	0.40	OK	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (... (0.06%)	0040	0.1341	0.0073	0.1278	0.0098	0.0108	10	0.60	OK	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (... (0.06%)	0553	0.1350	0.0080	0.1278	0.0098	0.0108	10	0.69	OK	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (... (0.06%)	0498	0.1500	0.0000	0.1278	0.0098	0.0108	10	2.11	High	0
221.30	Acid Soluble Copper , ICP, test portion inor... (0.06%)	0234	0.1000	0.0000	0.1296	0.0129	0.0066	16	-2.29	Low	0
221.30	Acid Soluble Copper , ICP, test portion inor... (0.06%)	0255	0.1085	0.0190	0.1296	0.0129	0.0066	16	-1.63	Low	0
221.30	Acid Soluble Copper , ICP, test portion inor... (0.06%)	0451	0.1195	0.0030	0.1296	0.0129	0.0066	16	-0.78	OK	0
221.30	Acid Soluble Copper , ICP, test portion inor... (0.06%)	0472	0.1200	0.0000	0.1296	0.0129	0.0066	16	-0.74	OK	0
221.30	Acid Soluble Copper , ICP, test portion inor... (0.06%)	0354	0.1250	0.0100	0.1296	0.0129	0.0066	16	-0.36	OK	0
221.30	Acid Soluble Copper , ICP, test portion inor... (0.06%)	0371	0.1250	0.0100	0.1296	0.0129	0.0066	16	-0.36	OK	0

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			Value	Range	Rob Mean	Rob SD	R-bar				
221.30	Acid Soluble Copper , ICP, test portion inor... (0.06%)	0444	0.1250	0.0100	0.1296	0.0129	0.0066	16	-0.36	OK	0
221.30	Acid Soluble Copper , ICP, test portion inor... (0.06%)	0433	0.1280	0.0020	0.1296	0.0129	0.0066	16	-0.12	OK	0
221.30	Acid Soluble Copper , ICP, test portion inor... (0.06%)	0041	0.1300	0.0000	0.1296	0.0129	0.0066	16	0.03	OK	0
221.30	Acid Soluble Copper , ICP, test portion inor... (0.06%)	0360	0.1340	0.0020	0.1296	0.0129	0.0066	16	0.34	OK	0
221.30	Acid Soluble Copper , ICP, test portion inor... (0.06%)	0402	0.1350	0.0100	0.1296	0.0129	0.0066	16	0.42	OK	0
221.30	Acid Soluble Copper , ICP, test portion inor... (0.06%)	0483	0.1365	0.0170	0.1296	0.0129	0.0066	16	0.53	OK	0
221.30	Acid Soluble Copper , ICP, test portion inor... (0.06%)	0231	0.1400	0.0000	0.1296	0.0129	0.0066	16	0.80	OK	0
221.30	Acid Soluble Copper , ICP, test portion inor... (0.06%)	0102	0.1426	0.0055	0.1296	0.0129	0.0066	16	1.00	OK	0
221.30	Acid Soluble Copper , ICP, test portion inor... (0.06%)	0482	0.1450	0.0100	0.1296	0.0129	0.0066	16	1.19	OK	0
221.30	Acid Soluble Copper , ICP, test portion inor... (0.06%)	0096	0.1477	0.0067	0.1296	0.0129	0.0066	16	1.40	High	0
221.30	Acid Soluble Copper , ICP, test portion inor... (0.06%)	0552	0.1800	0.0600	0.1296	0.0129	0.0066	16	3.90	High	1
221.32	Acid Soluble Copper , ICP, test portion 2006... (0.06%)	0300	0.1230	0.0051	0.1293	0.0066	0.0023	3	-0.95		0
221.32	Acid Soluble Copper , ICP, test portion 2006... (0.06%)	0394	0.1286	0.0018	0.1293	0.0066	0.0023	3	-0.10		0
221.32	Acid Soluble Copper , ICP, test portion 2006... (0.06%)	0521	0.1362	0.0000	0.1293	0.0066	0.0023	3	1.05		0
221.33	Acid Soluble Copper , ICP, 2017.02 (0.06%)	0486	0.1150	0.0100	0.1304	0.0141	0.0063	8	-1.00	OK	0
221.33	Acid Soluble Copper , ICP, 2017.02 (0.06%)	0555	0.1189	0.0045	0.1304	0.0141	0.0063	8	-0.75	OK	0
221.33	Acid Soluble Copper , ICP, 2017.02 (0.06%)	0494	0.1194	0.0025	0.1304	0.0141	0.0063	8	-0.72	OK	0
221.33	Acid Soluble Copper , ICP, 2017.02 (0.06%)	0043	0.1290	0.0000	0.1304	0.0141	0.0063	8	-0.09	OK	0
221.33	Acid Soluble Copper , ICP, 2017.02 (0.06%)	0117	0.1333	0.0089	0.1304	0.0141	0.0063	8	0.19	OK	0
221.33	Acid Soluble Copper , ICP, 2017.02 (0.06%)	0527	0.1351	0.0035	0.1304	0.0141	0.0063	8	0.30	OK	0
221.33	Acid Soluble Copper , ICP, 2017.02 (0.06%)	0546	0.1410	0.0043	0.1304	0.0141	0.0063	8	0.69	OK	0
221.33	Acid Soluble Copper , ICP, 2017.02 (0.06%)	0515	0.1741	0.0167	0.1304	0.0141	0.0063	8	2.83	High	0
221.99	Acid Soluble Copper , Other (0.06%)	0550	0.0022	0.0003	0.1171	0.0305	0.0027	13	-3.76	Low	0
221.99	Acid Soluble Copper , Other (0.06%)	0519	0.0750	0.0100	0.1171	0.0305	0.0027	13	-1.38	Low	0
221.99	Acid Soluble Copper , Other (0.06%)	0476	0.0800	0.0000	0.1171	0.0305	0.0027	13	-1.21	Low	0
221.99	Acid Soluble Copper , Other (0.06%)	0042	0.1025	0.0030	0.1171	0.0305	0.0027	13	-0.48	OK	0
221.99	Acid Soluble Copper , Other (0.06%)	0515	0.1193	0.0009	0.1171	0.0305	0.0027	13	0.07	OK	0
221.99	Acid Soluble Copper , Other (0.06%)	0419	0.1215	0.0030	0.1171	0.0305	0.0027	13	0.14	OK	0
221.99	Acid Soluble Copper , Other (0.06%)	0524	0.1258	0.0046	0.1171	0.0305	0.0027	13	0.29	OK	0
221.99	Acid Soluble Copper , Other (0.06%)	0368	0.1263	0.0037	0.1171	0.0305	0.0027	13	0.30	OK	0
221.99	Acid Soluble Copper , Other (0.06%)	0389	0.1280	0.0020	0.1171	0.0305	0.0027	13	0.36	OK	0
221.99	Acid Soluble Copper , Other (0.06%)	0481	0.1300	0.0000	0.1171	0.0305	0.0027	13	0.42	OK	0
221.99	Acid Soluble Copper , Other (0.06%)	0027	0.1465	0.0010	0.1171	0.0305	0.0027	13	0.96	High	0
221.99	Acid Soluble Copper , Other (0.06%)	0405	0.1470	0.0040	0.1171	0.0305	0.0027	13	0.98	High	0
221.99	Acid Soluble Copper , Other (0.06%)	0523	0.1490	0.0020	0.1171	0.0305	0.0027	13	1.04	High	0
241.00	Acid Soluble Iron , AA, inorganic 965.09 (1%)	0498	0.4700	0.0200	0.6083	0.0885	0.0449	11	-1.46	Low	0
241.00	Acid Soluble Iron , AA, inorganic 965.09 (1%)	0537	0.5300	0.0600	0.6083	0.0885	0.0449	11	-0.83	Low	0
241.00	Acid Soluble Iron , AA, inorganic 965.09 (1%)	0553	0.5358	0.0785	0.6083	0.0885	0.0449	11	-0.77	Low	0
241.00	Acid Soluble Iron , AA, inorganic 965.09 (1%)	0540	0.5850	0.0300	0.6083	0.0885	0.0449	11	-0.25	OK	0
241.00	Acid Soluble Iron , AA, inorganic 965.09 (1%)	0513	0.5900	0.1000	0.6083	0.0885	0.0449	11	-0.19	OK	0
241.00	Acid Soluble Iron , AA, inorganic 965.09 (1%)	0535	0.5950	0.0300	0.6083	0.0885	0.0449	11	-0.14	OK	0
241.00	Acid Soluble Iron , AA, inorganic 965.09 (1%)	0550	0.6145	0.0650	0.6083	0.0885	0.0449	11	0.07	OK	0
241.00	Acid Soluble Iron , AA, inorganic 965.09 (1%)	0531	0.6500	0.0200	0.6083	0.0885	0.0449	11	0.44	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				
241.00	Acid Soluble Iron , AA, inorganic 965.09 (1%)	0485	0.6868	0.0145	0.6083	0.0885	0.0449	11	0.83	High	0
241.00	Acid Soluble Iron , AA, inorganic 965.09 (1%)	0040	0.7000	0.0400	0.6083	0.0885	0.0449	11	0.97	High	0
241.00	Acid Soluble Iron , AA, inorganic 965.09 (1%)	0029	0.7286	0.0354	0.6083	0.0885	0.0449	11	1.27	High	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0472	0.5050	0.0100	0.7000	0.0372	0.0293	15	-5.25	Low	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0255	0.5955	0.0190	0.7000	0.0372	0.0293	15	-2.81	Low	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0483	0.6780	0.0120	0.7000	0.0372	0.0293	15	-0.59	OK	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0231	0.6800	0.0200	0.7000	0.0372	0.0293	15	-0.54	OK	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0433	0.6805	0.0030	0.7000	0.0372	0.0293	15	-0.52	OK	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0444	0.6850	0.0100	0.7000	0.0372	0.0293	15	-0.40	OK	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0041	0.6950	0.0700	0.7000	0.0372	0.0293	15	-0.13	OK	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0234	0.7000	0.0000	0.7000	0.0372	0.0293	15	0.00	OK	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0096	0.7100	0.0400	0.7000	0.0372	0.0293	15	0.27	OK	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0360	0.7110	0.0160	0.7000	0.0372	0.0293	15	0.30	OK	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0354	0.7150	0.0100	0.7000	0.0372	0.0293	15	0.40	OK	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0402	0.7150	0.0300	0.7000	0.0372	0.0293	15	0.40	OK	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0482	0.7300	0.0200	0.7000	0.0372	0.0293	15	0.81	OK	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0371	0.7850	0.0100	0.7000	0.0372	0.0293	15	2.29	High	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0552	0.8650	0.1700	0.7000	0.0372	0.0293	15	4.44	High	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0102	6.151	0.5444	0.7000	0.0372	0.0293	15	146.72	High	2
241.32	Acid Soluble Iron , ICP, test portion 2006.03... (1%)	0521	0.6266	0.0000	0.6599	0.0316	0.0087	3	-1.05		0
241.32	Acid Soluble Iron , ICP, test portion 2006.03... (1%)	0394	0.6634	0.0165	0.6599	0.0316	0.0087	3	0.11		0
241.32	Acid Soluble Iron , ICP, test portion 2006.03... (1%)	0300	0.6896	0.0096	0.6599	0.0316	0.0087	3	0.94		0
241.33	Acid Soluble Iron , ICP, 2017.02 (1%)	0555	0.4734	0.0397	0.6745	0.0843	0.0177	9	-2.20	Low	0
241.33	Acid Soluble Iron , ICP, 2017.02 (1%)	0043	0.5650	0.0100	0.6745	0.0843	0.0177	9	-1.20	Low	0
241.33	Acid Soluble Iron , ICP, 2017.02 (1%)	0494	0.6331	0.0009	0.6745	0.0843	0.0177	9	-0.45	OK	0
241.33	Acid Soluble Iron , ICP, 2017.02 (1%)	0515	0.6931	0.0241	0.6745	0.0843	0.0177	9	0.20	OK	0
241.33	Acid Soluble Iron , ICP, 2017.02 (1%)	0117	0.7128	0.0348	0.6745	0.0843	0.0177	9	0.42	OK	0
241.33	Acid Soluble Iron , ICP, 2017.02 (1%)	0486	0.7150	0.0100	0.6745	0.0843	0.0177	9	0.44	OK	0
241.33	Acid Soluble Iron , ICP, 2017.02 (1%)	0177	0.7252	0.0077	0.6745	0.0843	0.0177	9	0.56	OK	0
241.33	Acid Soluble Iron , ICP, 2017.02 (1%)	0546	0.7308	0.0120	0.6745	0.0843	0.0177	9	0.62	OK	0
241.33	Acid Soluble Iron , ICP, 2017.02 (1%)	0527	0.7473	0.0201	0.6745	0.0843	0.0177	9	0.80	High	0
241.99	Acid Soluble Iron , Other (1%)	0550	0.0006	0.0010	0.5616	0.1489	0.0138	12	-3.77	Low	0
241.99	Acid Soluble Iron , Other (1%)	0476	0.0800	0.0000	0.5616	0.1489	0.0138	12	-3.24	Low	0
241.99	Acid Soluble Iron , Other (1%)	0389	0.4835	0.0010	0.5616	0.1489	0.0138	12	-0.52	Low	0
241.99	Acid Soluble Iron , Other (1%)	0506	0.5345	0.0130	0.5616	0.1489	0.0138	12	-0.18	OK	0
241.99	Acid Soluble Iron , Other (1%)	0481	0.5550	0.0100	0.5616	0.1489	0.0138	12	-0.04	OK	0
241.99	Acid Soluble Iron , Other (1%)	0419	0.5605	0.0390	0.5616	0.1489	0.0138	12	-0.01	OK	0
241.99	Acid Soluble Iron , Other (1%)	0042	0.5705	0.0210	0.5616	0.1489	0.0138	12	0.06	OK	0
241.99	Acid Soluble Iron , Other (1%)	0524	0.6096	0.0117	0.5616	0.1489	0.0138	12	0.32	OK	0
241.99	Acid Soluble Iron , Other (1%)	0368	0.6183	0.0020	0.5616	0.1489	0.0138	12	0.38	OK	0
241.99	Acid Soluble Iron , Other (1%)	0523	0.6355	0.0370	0.5616	0.1489	0.0138	12	0.50	High	0
241.99	Acid Soluble Iron , Other (1%)	0405	0.7100	0.0200	0.5616	0.1489	0.0138	12	1.00	High	0
241.99	Acid Soluble Iron , Other (1%)	0519	0.9550	0.0100	0.5616	0.1489	0.0138	12	2.64	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				
241.99	Acid Soluble Iron , Other (1%)	0515	0.5714	0.0984	0.5616	0.1489	0.0138	12	0.07	OK	1
251.00	Acid Soluble Lead , AA, test portion 2006.03... (ppm)	0550	608.8	10.47				1			0
251.30	Acid Soluble Lead , ICP (ppm)	0523	507.3	27.18	814.7	216.3	26.43	10	-1.32	NA	0
251.30	Acid Soluble Lead , ICP (ppm)	0444	570.0	0.0000	814.7	216.3	26.43	10	-1.05	NA	0
251.30	Acid Soluble Lead , ICP (ppm)	0255	650.6	62.34	814.7	216.3	26.43	10	-0.71	NA	0
251.30	Acid Soluble Lead , ICP (ppm)	0482	739.0	58.00	814.7	216.3	26.43	10	-0.33	NA	0
251.30	Acid Soluble Lead , ICP (ppm)	0394	844.0	38.00	814.7	216.3	26.43	10	0.13	NA	0
251.30	Acid Soluble Lead , ICP (ppm)	0524	901.4	0.2228	814.7	216.3	26.43	10	0.37	NA	0
251.30	Acid Soluble Lead , ICP (ppm)	0096	925.2	6.200	814.7	216.3	26.43	10	0.48	NA	0
251.30	Acid Soluble Lead , ICP (ppm)	0389	932.7	0.5000	814.7	216.3	26.43	10	0.51	NA	0
251.30	Acid Soluble Lead , ICP (ppm)	0102	982.8	65.11	814.7	216.3	26.43	10	0.72	NA	0
251.30	Acid Soluble Lead , ICP (ppm)	0555	1,094	6.740	814.7	216.3	26.43	10	1.20	NA	0
251.32	Acid Soluble Lead , ICP, 2006.03 (ppm)	0300	907.1	20.30				1			0
251.33	Acid Soluble Lead , ICP, 2017.02 (ppm)	0117	904.8	2.644	1,030	204.3	42.27	4	-0.61		0
251.33	Acid Soluble Lead , ICP, 2017.02 (ppm)	0494	920.7	49.12	1,030	204.3	42.27	4	-0.53		0
251.33	Acid Soluble Lead , ICP, 2017.02 (ppm)	0527	959.8	40.77	1,030	204.3	42.27	4	-0.34		0
251.33	Acid Soluble Lead , ICP, 2017.02 (ppm)	0515	1,335	76.57	1,030	204.3	42.27	4	1.49		0
251.34	Acid Soluble Lead , ICP, EPA 3050B/6010C (ppm)	0515	523.7	1,047				2			0
251.34	Acid Soluble Lead , ICP, EPA 3050B/6010C (ppm)	0368	1,018	105.2				2			0
251.99	Acid Soluble Lead , Other (ppm)	0476	575.6	31.62	937.6	99.96	30.47	6	-3.23	NA	0
251.99	Acid Soluble Lead , Other (ppm)	0405	910.5	29.00	937.6	99.96	30.47	6	-0.24	NA	0
251.99	Acid Soluble Lead , Other (ppm)	0519	940.5	0.9900	937.6	99.96	30.47	6	0.03	NA	0
251.99	Acid Soluble Lead , Other (ppm)	0419	942.0	4.400	937.6	99.96	30.47	6	0.04	NA	0
251.99	Acid Soluble Lead , Other (ppm)	0481	997.9	10.80	937.6	99.96	30.47	6	0.54	NA	0
251.99	Acid Soluble Lead , Other (ppm)	0506	1,047	106.0	937.6	99.96	30.47	6	0.97	NA	0
261.11	Acid Soluble Manganese , AA, total Mn (0.16%)	0537	0.1350	0.0700				2			0
261.11	Acid Soluble Manganese , AA, total Mn (0.16%)	0550	0.1635	0.0070				2			0
261.12	Acid Soluble Manganese , AA, inorganic 965.0... (0.16%)	0536	0.1150	0.0100	0.1466	0.0266	0.0099	8	-1.09	Low	0
261.12	Acid Soluble Manganese , AA, inorganic 965.0... (0.16%)	0531	0.1200	0.0200	0.1466	0.0266	0.0099	8	-0.91	Low	0
261.12	Acid Soluble Manganese , AA, inorganic 965.0... (0.16%)	0513	0.1350	0.0100	0.1466	0.0266	0.0099	8	-0.40	OK	0
261.12	Acid Soluble Manganese , AA, inorganic 965.0... (0.16%)	0485	0.1368	0.0012	0.1466	0.0266	0.0099	8	-0.34	OK	0
261.12	Acid Soluble Manganese , AA, inorganic 965.0... (0.16%)	0540	0.1530	0.0060	0.1466	0.0266	0.0099	8	0.22	OK	0
261.12	Acid Soluble Manganese , AA, inorganic 965.0... (0.16%)	0029	0.1643	0.0179	0.1466	0.0266	0.0099	8	0.61	OK	0
261.12	Acid Soluble Manganese , AA, inorganic 965.0... (0.16%)	0040	0.1705	0.0050	0.1466	0.0266	0.0099	8	0.82	High	0
261.12	Acid Soluble Manganese , AA, inorganic 965.0... (0.16%)	0553	0.1780	0.0090	0.1466	0.0266	0.0099	8	1.08	High	0
261.13	Acid Soluble Manganese , AA, organic 965.09 ... (0.16%)	0535	0.1175	0.0050				1			0
261.30	Acid Soluble Manganese , ICP, test portion 9... (0.16%)	0472	0.1500	0.0000	0.1643	0.0096	0.0086	7	-1.34	OK	0
261.30	Acid Soluble Manganese , ICP, test portion 9... (0.16%)	0354	0.1600	0.0000	0.1643	0.0096	0.0086	7	-0.40	OK	0
261.30	Acid Soluble Manganese , ICP, test portion 9... (0.16%)	0444	0.1600	0.0200	0.1643	0.0096	0.0086	7	-0.40	OK	0
261.30	Acid Soluble Manganese , ICP, test portion 9... (0.16%)	0096	0.1651	0.0155	0.1643	0.0096	0.0086	7	0.08	OK	0
261.30	Acid Soluble Manganese , ICP, test portion 9... (0.16%)	0433	0.1675	0.0010	0.1643	0.0096	0.0086	7	0.31	OK	0
261.30	Acid Soluble Manganese , ICP, test portion 9... (0.16%)	0102	0.1722	0.0134	0.1643	0.0096	0.0086	7	0.75	OK	0
261.30	Acid Soluble Manganese , ICP, test portion 9... (0.16%)	0041	0.1750	0.0100	0.1643	0.0096	0.0086	7	1.01	OK	0

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			Value	Range	Rob Mean	Rob SD	R-bar				
261.31	Acid Soluble Manganese , ICP, test portion 9... (0.16%)	0234	0.1550	0.0100	0.1708	0.0177	0.0050	3	-0.89		0
261.31	Acid Soluble Manganese , ICP, test portion 9... (0.16%)	0360	0.1675	0.0050	0.1708	0.0177	0.0050	3	-0.19		0
261.31	Acid Soluble Manganese , ICP, test portion 9... (0.16%)	0482	0.1900	0.0000	0.1708	0.0177	0.0050	3	1.08		0
261.32	Acid Soluble Manganese , ICP, test portion i... (0.16%)	0371	0.1550	0.0100	0.1631	0.0064	0.0067	6	-1.12	OK	0
261.32	Acid Soluble Manganese , ICP, test portion i... (0.16%)	0300	0.1593	0.0080	0.1631	0.0064	0.0067	6	-0.52	OK	0
261.32	Acid Soluble Manganese , ICP, test portion i... (0.16%)	0451	0.1610	0.0040	0.1631	0.0064	0.0067	6	-0.28	OK	0
261.32	Acid Soluble Manganese , ICP, test portion i... (0.16%)	0402	0.1650	0.0100	0.1631	0.0064	0.0067	6	0.27	OK	0
261.32	Acid Soluble Manganese , ICP, test portion i... (0.16%)	0483	0.1680	0.0080	0.1631	0.0064	0.0067	6	0.69	OK	0
261.32	Acid Soluble Manganese , ICP, test portion i... (0.16%)	0231	0.1700	0.0000	0.1631	0.0064	0.0067	6	0.97	OK	0
261.32	Acid Soluble Manganese , ICP, test portion i... (0.16%)	0552	0.2700	0.0600	0.1631	0.0064	0.0067	6	14.87	High	1
261.34	Acid Soluble Manganese , ICP, test portion 2... (0.16%)	0394	0.1561	0.0059	0.1684	0.0116	0.0040	3	-1.06		0
261.34	Acid Soluble Manganese , ICP, test portion 2... (0.16%)	0542	0.1698	0.0060	0.1684	0.0116	0.0040	3	0.12		0
261.34	Acid Soluble Manganese , ICP, test portion 2... (0.16%)	0521	0.1792	0.0000	0.1684	0.0116	0.0040	3	0.93		0
261.35	Acid Soluble Manganese , ICP, 2017.02 (0.16%)	0515	0.1324	0.0186	0.1577	0.0169	0.0077	10	-1.40	Low	0
261.35	Acid Soluble Manganese , ICP, 2017.02 (0.16%)	0494	0.1405	0.0078	0.1577	0.0169	0.0077	10	-0.95	OK	0
261.35	Acid Soluble Manganese , ICP, 2017.02 (0.16%)	0177	0.1470	0.0019	0.1577	0.0169	0.0077	10	-0.60	OK	0
261.35	Acid Soluble Manganese , ICP, 2017.02 (0.16%)	0043	0.1570	0.0060	0.1577	0.0169	0.0077	10	-0.04	OK	0
261.35	Acid Soluble Manganese , ICP, 2017.02 (0.16%)	0546	0.1579	0.0044	0.1577	0.0169	0.0077	10	0.01	OK	0
261.35	Acid Soluble Manganese , ICP, 2017.02 (0.16%)	0486	0.1600	0.0000	0.1577	0.0169	0.0077	10	0.12	OK	0
261.35	Acid Soluble Manganese , ICP, 2017.02 (0.16%)	0527	0.1613	0.0005	0.1577	0.0169	0.0077	10	0.19	OK	0
261.35	Acid Soluble Manganese , ICP, 2017.02 (0.16%)	0117	0.1653	0.0044	0.1577	0.0169	0.0077	10	0.42	OK	0
261.35	Acid Soluble Manganese , ICP, 2017.02 (0.16%)	0024	0.1730	0.0220	0.1577	0.0169	0.0077	10	0.84	OK	0
261.35	Acid Soluble Manganese , ICP, 2017.02 (0.16%)	0555	0.1970	0.0113	0.1577	0.0169	0.0077	10	2.16	High	0
261.99	Acid Soluble Manganese , Other (0.16%)	0481	0.0500	0.0000	0.1558	0.0194	0.0065	13	-5.45	Low	0
261.99	Acid Soluble Manganese , Other (0.16%)	0476	0.1050	0.0100	0.1558	0.0194	0.0065	13	-2.61	Low	0
261.99	Acid Soluble Manganese , Other (0.16%)	0255	0.1410	0.0220	0.1558	0.0194	0.0065	13	-0.76	OK	0
261.99	Acid Soluble Manganese , Other (0.16%)	0519	0.1450	0.0100	0.1558	0.0194	0.0065	13	-0.55	OK	0
261.99	Acid Soluble Manganese , Other (0.16%)	0524	0.1545	0.0008	0.1558	0.0194	0.0065	13	-0.06	OK	0
261.99	Acid Soluble Manganese , Other (0.16%)	0419	0.1560	0.0000	0.1558	0.0194	0.0065	13	0.01	OK	0
261.99	Acid Soluble Manganese , Other (0.16%)	0368	0.1576	0.0003	0.1558	0.0194	0.0065	13	0.09	OK	0
261.99	Acid Soluble Manganese , Other (0.16%)	0389	0.1590	0.0020	0.1558	0.0194	0.0065	13	0.17	OK	0
261.99	Acid Soluble Manganese , Other (0.16%)	0042	0.1660	0.0120	0.1558	0.0194	0.0065	13	0.53	OK	0
261.99	Acid Soluble Manganese , Other (0.16%)	0515	0.1665	0.0014	0.1558	0.0194	0.0065	13	0.55	OK	0
261.99	Acid Soluble Manganese , Other (0.16%)	0405	0.1675	0.0050	0.1558	0.0194	0.0065	13	0.60	OK	0
261.99	Acid Soluble Manganese , Other (0.16%)	0523	0.1770	0.0160	0.1558	0.0194	0.0065	13	1.09	High	0
261.99	Acid Soluble Manganese , Other (0.16%)	0027	0.1815	0.0050	0.1558	0.0194	0.0065	13	1.33	High	0
271.00	Water Soluble Manganese , AA (%)	0200	0.0063	0.0001	0.0323	0.0430	0.0014	4	-0.61		0
271.00	Water Soluble Manganese , AA (%)	0550	0.0066	0.0003	0.0323	0.0430	0.0014	4	-0.60		0
271.00	Water Soluble Manganese , AA (%)	0027	0.0205	0.0030	0.0323	0.0430	0.0014	4	-0.28		0
271.00	Water Soluble Manganese , AA (%)	0540	0.0960	0.0020	0.0323	0.0430	0.0014	4	1.48		0
271.30	Water Soluble Manganese , ICP, Ext. 972.03 (%)	0486	0.0085	0.0010				2			0
271.30	Water Soluble Manganese , ICP, Ext. 972.03 (%)	0300	0.0138	0.0004				2			0
271.99	Water Soluble Manganese , Other (%)	0405	0.0200	0.0000				1			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				
281.00	Acid Soluble Mercury , AA (ppm)	0550	3.285	0.4500				2			0
281.00	Acid Soluble Mercury , AA (ppm)	0117	37.82	1.650				2			0
281.30	Acid Soluble Mercury , ICP (ppm)	0527	41.83	0.9172				2			0
281.30	Acid Soluble Mercury , ICP (ppm)	0444	44.18	1.380				2			0
281.30	Acid Soluble Mercury , ICP (ppm)	0515	0.0000	0.0000				2			4
281.99	Acid Soluble Mercury , Other (ppm)	0481	6.605	0.0500	27.68	14.41	0.7274	4	-1.46		0
281.99	Acid Soluble Mercury , Other (ppm)	0476	31.72	2.390	27.68	14.41	0.7274	4	0.28		0
281.99	Acid Soluble Mercury , Other (ppm)	0519	33.25	0.0900	27.68	14.41	0.7274	4	0.39		0
281.99	Acid Soluble Mercury , Other (ppm)	0405	39.14	0.3800	27.68	14.41	0.7274	4	0.80		0
289.00	Acid Soluble Molybdenum , AA, test portion 2... (50ppm)	0550	615.0	2.000				1			0
289.30	Acid Soluble Molybdenum , ICP (50ppm)	0519	46.50	1.000	849.6	123.2	23.41	9	-6.02	Low	0
289.30	Acid Soluble Molybdenum , ICP (50ppm)	0255	707.5	15.23	849.6	123.2	23.41	9	-1.06	OK	0
289.30	Acid Soluble Molybdenum , ICP (50ppm)	0234	812.5	25.00	849.6	123.2	23.41	9	-0.28	OK	0
289.30	Acid Soluble Molybdenum , ICP (50ppm)	0389	827.0	6.700	849.6	123.2	23.41	9	-0.17	OK	0
289.30	Acid Soluble Molybdenum , ICP (50ppm)	0444	883.5	3.000	849.6	123.2	23.41	9	0.25	OK	0
289.30	Acid Soluble Molybdenum , ICP (50ppm)	0555	910.7	19.99	849.6	123.2	23.41	9	0.46	OK	0
289.30	Acid Soluble Molybdenum , ICP (50ppm)	0096	913.0	68.60	849.6	123.2	23.41	9	0.48	OK	0
289.30	Acid Soluble Molybdenum , ICP (50ppm)	0521	923.5	0.0000	849.6	123.2	23.41	9	0.55	OK	0
289.30	Acid Soluble Molybdenum , ICP (50ppm)	0102	1,004	71.16	849.6	123.2	23.41	9	1.16	OK	0
289.32	Acid Soluble Molybdenum , ICP, 2006.03 (50ppm)	0394	865.5	25.00				2			0
289.32	Acid Soluble Molybdenum , ICP, 2006.03 (50ppm)	0300	874.1	18.60				2			0
289.33	Acid Soluble Molybdenum , ICP, 2017.02 (50ppm)	0486	707.5	5.000	826.1	89.37	14.87	5	-1.16		0
289.33	Acid Soluble Molybdenum , ICP, 2017.02 (50ppm)	0494	791.8	20.31	826.1	89.37	14.87	5	-0.34		0
289.33	Acid Soluble Molybdenum , ICP, 2017.02 (50ppm)	0546	816.5	31.00	826.1	89.37	14.87	5	-0.09		0
289.33	Acid Soluble Molybdenum , ICP, 2017.02 (50ppm)	0117	866.0	14.00	826.1	89.37	14.87	5	0.39		0
289.33	Acid Soluble Molybdenum , ICP, 2017.02 (50ppm)	0527	948.7	4.069	826.1	89.37	14.87	5	1.20		0
289.33	Acid Soluble Molybdenum , ICP, 2017.02 (50ppm)	0515	1,148	180.0	826.1	89.37	14.87	5	3.15		1
289.34	Acid Soluble Molybdenum , ICP, EPA 3050B/601... (50ppm)	0515	883.6	56.58				1			0
289.99	Acid Soluble Molybdenum , Other (50ppm)	0027	0.0985	0.0030	856.3	604.3	19.01	7	-1.28	Low	0
289.99	Acid Soluble Molybdenum , Other (50ppm)	0476	669.2	31.49	856.3	604.3	19.01	7	-0.28	OK	0
289.99	Acid Soluble Molybdenum , Other (50ppm)	0405	762.5	11.00	856.3	604.3	19.01	7	-0.14	OK	0
289.99	Acid Soluble Molybdenum , Other (50ppm)	0042	794.4	15.20	856.3	604.3	19.01	7	-0.09	OK	0
289.99	Acid Soluble Molybdenum , Other (50ppm)	0419	811.4	5.600	856.3	604.3	19.01	7	-0.07	OK	0
289.99	Acid Soluble Molybdenum , Other (50ppm)	0481	1,206	9.800	856.3	604.3	19.01	7	0.52	High	0
289.99	Acid Soluble Molybdenum , Other (50ppm)	0506	1,750	60.00	856.3	604.3	19.01	7	1.34	High	0
291.30	Acid Soluble Nickel , ICP (ppm)	0444	9.785	0.0500	12.96	2.853	1.096	8	-1.02	NA	0
291.30	Acid Soluble Nickel , ICP (ppm)	0524	10.07	0.4579	12.96	2.853	1.096	8	-0.93	NA	0
291.30	Acid Soluble Nickel , ICP (ppm)	0482	10.85	0.1000	12.96	2.853	1.096	8	-0.68	NA	0
291.30	Acid Soluble Nickel , ICP (ppm)	0394	13.40	3.000	12.96	2.853	1.096	8	0.14	NA	0
291.30	Acid Soluble Nickel , ICP (ppm)	0102	13.88	1.452	12.96	2.853	1.096	8	0.29	NA	0
291.30	Acid Soluble Nickel , ICP (ppm)	0521	13.88	0.0000	12.96	2.853	1.096	8	0.29	NA	0
291.30	Acid Soluble Nickel , ICP (ppm)	0389	14.96	0.5100	12.96	2.853	1.096	8	0.64	NA	0
291.30	Acid Soluble Nickel , ICP (ppm)	0096	16.90	3.200	12.96	2.853	1.096	8	1.26	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 Nickel , ICP (ppm)	0555	< 0.5		12.96	2.853	1.096	8			5
291.32	Acid Soluble Nickel , ICP, 2006.03 (ppm)	0300	13.07	0.0000				1			0
291.33	Acid Soluble Nickel , ICP, 2017.02 (ppm)	0515	12.62	2.955	14.12	1.289	1.433	4	-1.16		0
291.33	Acid Soluble Nickel , ICP, 2017.02 (ppm)	0494	13.79	0.3060	14.12	1.289	1.433	4	-0.25		0
291.33	Acid Soluble Nickel , ICP, 2017.02 (ppm)	0117	14.34	0.3990	14.12	1.289	1.433	4	0.17		0
291.33	Acid Soluble Nickel , ICP, 2017.02 (ppm)	0527	15.73	2.073	14.12	1.289	1.433	4	1.25		0
291.34	Acid Soluble Nickel , ICP, EPA 3050B/6010C (ppm)	0515	13.24	1.717				2			0
291.34	Acid Soluble Nickel , ICP, EPA 3050B/6010C (ppm)	0368	14.87	0.2204				2			0
291.99	Acid Soluble Nickel , Other (ppm)	0476	7.744	0.9843	13.34	2.954	0.7275	7	-1.71	NA	0
291.99	Acid Soluble Nickel , Other (ppm)	0519	11.74	0.0700	13.34	2.954	0.7275	7	-0.49	NA	0
291.99	Acid Soluble Nickel , Other (ppm)	0255	12.28	0.9180	13.34	2.954	0.7275	7	-0.33	NA	0
291.99	Acid Soluble Nickel , Other (ppm)	0481	13.74	0.4000	13.34	2.954	0.7275	7	0.12	NA	0
291.99	Acid Soluble Nickel , Other (ppm)	0405	14.95	0.1000	13.34	2.954	0.7275	7	0.49	NA	0
291.99	Acid Soluble Nickel , Other (ppm)	0506	15.00	1.600	13.34	2.954	0.7275	7	0.51	NA	0
291.99	Acid Soluble Nickel , Other (ppm)	0419	16.79	1.020	13.34	2.954	0.7275	7	1.05	NA	0
301.30	Acid Soluble Selenium , ICP (ppm)	0555	206.5	8.510	252.1	72.28	8.368	3	-0.63		0
301.30	Acid Soluble Selenium , ICP (ppm)	0523	214.5	2.589	252.1	72.28	8.368	3	-0.52		0
301.30	Acid Soluble Selenium , ICP (ppm)	0524	335.5	14.01	252.1	72.28	8.368	3	1.15		0
301.32	Acid Soluble Selenium , ICP, 2006.03 (ppm)	0300	331.1	1.000				1			0
301.33	Acid Soluble Selenium , ICP, 2017.02 (ppm)	0515	271.8	8.208				2			0
301.33	Acid Soluble Selenium , ICP, 2017.02 (ppm)	0527	332.5	19.44				2			0
301.34	Acid Soluble Selenium , ICP, EPA 3050B/6010C... (ppm)	0515	267.6	64.10				2			0
301.34	Acid Soluble Selenium , ICP, EPA 3050B/6010C... (ppm)	0368	359.1	20.97				2			0
301.99	Acid Soluble Selenium , Other (ppm)	0476	240.8	4.260	289.8	57.57	4.313	5	-0.74		0
301.99	Acid Soluble Selenium , Other (ppm)	0255	241.6	16.25	289.8	57.57	4.313	5	-0.73		0
301.99	Acid Soluble Selenium , Other (ppm)	0519	285.0	0.0500	289.8	57.57	4.313	5	-0.07		0
301.99	Acid Soluble Selenium , Other (ppm)	0405	300.0	0.0000	289.8	57.57	4.313	5	0.15		0
301.99	Acid Soluble Selenium , Other (ppm)	0506	381.5	1.000	289.8	57.57	4.313	5	1.39		0
301.99	Acid Soluble Selenium , Other (ppm)	0481	< 0.5		289.8	57.57	4.313	5			5
311.32	Sodium, ICP, 2006.03 test portion (%)	0521	0.4658	0.0000				1			0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0527	0.3469	0.0222				2			0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0494	0.4006	0.0102				2			0
311.99	Sodium, Other (%)	0354	0.4550	0.0100	0.4700	0.0150	0.0067	3	-1.00		0
311.99	Sodium, Other (%)	0096	0.4700	0.0000	0.4700	0.0150	0.0067	3	0.00		0
311.99	Sodium, Other (%)	0482	0.4850	0.0100	0.4700	0.0150	0.0067	3	1.00		0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.13%)	0537	0.1300	0.0800	0.1788	0.0066	0.0129	12	-7.39	Low	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.13%)	0531	0.1700	0.0200	0.1788	0.0066	0.0129	12	-1.33	OK	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.13%)	0169	0.1725	0.0070	0.1788	0.0066	0.0129	12	-0.95	OK	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.13%)	0550	0.1775	0.0010	0.1788	0.0066	0.0129	12	-0.20	OK	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.13%)	0485	0.1786	0.0038	0.1788	0.0066	0.0129	12	-0.03	OK	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.13%)	0535	0.1800	0.0040	0.1788	0.0066	0.0129	12	0.18	OK	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.13%)	0536	0.1800	0.0100	0.1788	0.0066	0.0129	12	0.18	OK	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.13%)	0540	0.1805	0.0030	0.1788	0.0066	0.0129	12	0.26	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				
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.13%)	0553	0.1820	0.0170	0.1788	0.0066	0.0129	12	0.49	OK	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.13%)	0029	0.1828	0.0012	0.1788	0.0066	0.0129	12	0.61	OK	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.13%)	0040	0.1840	0.0080	0.1788	0.0066	0.0129	12	0.79	OK	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.13%)	0498	0.2000	0.0000	0.1788	0.0066	0.0129	12	3.21	OK	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.13%)	0513	9.085	17.83	0.1788	0.0066	0.0129	12	1349.00	High	2
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.13%)	0234	0.1700	0.0000	0.1949	0.0158	0.0140	17	-1.57	Low	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.13%)	0444	0.1800	0.0000	0.1949	0.0158	0.0140	17	-0.94	OK	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.13%)	0472	0.1800	0.0000	0.1949	0.0158	0.0140	17	-0.94	OK	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.13%)	0371	0.1850	0.0100	0.1949	0.0158	0.0140	17	-0.62	OK	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.13%)	0402	0.1850	0.0100	0.1949	0.0158	0.0140	17	-0.62	OK	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.13%)	0360	0.1875	0.0130	0.1949	0.0158	0.0140	17	-0.46	OK	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.13%)	0292	0.1900	0.0000	0.1949	0.0158	0.0140	17	-0.31	OK	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.13%)	0433	0.1920	0.0040	0.1949	0.0158	0.0140	17	-0.18	OK	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.13%)	0255	0.1930	0.0420	0.1949	0.0158	0.0140	17	-0.12	OK	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.13%)	0354	0.1950	0.0300	0.1949	0.0158	0.0140	17	0.01	OK	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.13%)	0096	0.1956	0.0203	0.1949	0.0158	0.0140	17	0.04	OK	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.13%)	0483	0.1975	0.0030	0.1949	0.0158	0.0140	17	0.17	OK	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.13%)	0102	0.2001	0.0055	0.1949	0.0158	0.0140	17	0.33	OK	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.13%)	0482	0.2050	0.0100	0.1949	0.0158	0.0140	17	0.64	OK	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.13%)	0231	0.2200	0.0000	0.1949	0.0158	0.0140	17	1.59	High	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.13%)	0041	0.2250	0.0500	0.1949	0.0158	0.0140	17	1.91	High	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.13%)	0552	0.2400	0.0400	0.1949	0.0158	0.0140	17	2.85	High	0
321.32	Acid Soluble Zinc , ICP, test portion 2006.0... (0.13%)	0394	0.1837	0.0045	0.1960	0.0205	0.0067	4	-0.60		0
321.32	Acid Soluble Zinc , ICP, test portion 2006.0... (0.13%)	0300	0.1840	0.0040	0.1960	0.0205	0.0067	4	-0.58		0
321.32	Acid Soluble Zinc , ICP, test portion 2006.0... (0.13%)	0542	0.1897	0.0182	0.1960	0.0205	0.0067	4	-0.30		0
321.32	Acid Soluble Zinc , ICP, test portion 2006.0... (0.13%)	0521	0.2265	0.0000	0.1960	0.0205	0.0067	4	1.49		0
321.33	Acid Soluble Zinc , ICP, 2017.02 (0.13%)	0486	0.1700	0.0000	0.1901	0.0130	0.0071	10	-1.44	OK	0
321.33	Acid Soluble Zinc , ICP, 2017.02 (0.13%)	0555	0.1791	0.0137	0.1901	0.0130	0.0071	10	-0.79	OK	0
321.33	Acid Soluble Zinc , ICP, 2017.02 (0.13%)	0494	0.1845	0.0058	0.1901	0.0130	0.0071	10	-0.40	OK	0
321.33	Acid Soluble Zinc , ICP, 2017.02 (0.13%)	0177	0.1852	0.0023	0.1901	0.0130	0.0071	10	-0.36	OK	0
321.33	Acid Soluble Zinc , ICP, 2017.02 (0.13%)	0117	0.1877	0.0004	0.1901	0.0130	0.0071	10	-0.17	OK	0
321.33	Acid Soluble Zinc , ICP, 2017.02 (0.13%)	0546	0.1883	0.0153	0.1901	0.0130	0.0071	10	-0.13	OK	0
321.33	Acid Soluble Zinc , ICP, 2017.02 (0.13%)	0024	0.1960	0.0020	0.1901	0.0130	0.0071	10	0.42	OK	0
321.33	Acid Soluble Zinc , ICP, 2017.02 (0.13%)	0043	0.1995	0.0190	0.1901	0.0130	0.0071	10	0.67	OK	0
321.33	Acid Soluble Zinc , ICP, 2017.02 (0.13%)	0527	0.2007	0.0074	0.1901	0.0130	0.0071	10	0.76	OK	0
321.33	Acid Soluble Zinc , ICP, 2017.02 (0.13%)	0515	0.2935	0.0048	0.1901	0.0130	0.0071	10	7.41	High	0
321.99	Acid Soluble Zinc , Other (0.13%)	0476	0.1200	0.0000	0.1722	0.0308	0.0039	11	-1.70	Low	0
321.99	Acid Soluble Zinc , Other (0.13%)	0042	0.1315	0.0070	0.1722	0.0308	0.0039	11	-1.32	Low	0
321.99	Acid Soluble Zinc , Other (0.13%)	0519	0.1400	0.0000	0.1722	0.0308	0.0039	11	-1.05	Low	0
321.99	Acid Soluble Zinc , Other (0.13%)	0506	0.1705	0.0010	0.1722	0.0308	0.0039	11	-0.06	OK	0
321.99	Acid Soluble Zinc , Other (0.13%)	0419	0.1790	0.0020	0.1722	0.0308	0.0039	11	0.22	OK	0
321.99	Acid Soluble Zinc , Other (0.13%)	0389	0.1835	0.0010	0.1722	0.0308	0.0039	11	0.37	OK	0
321.99	Acid Soluble Zinc , Other (0.13%)	0524	0.1860	0.0070	0.1722	0.0308	0.0039	11	0.45	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				
321.99	Acid Soluble Zinc , Other (0.13%)	0368	0.1862	0.0002	0.1722	0.0308	0.0039	11	0.45	OK	0
321.99	Acid Soluble Zinc , Other (0.13%)	0481	0.1900	0.0000	0.1722	0.0308	0.0039	11	0.58	OK	0
321.99	Acid Soluble Zinc , Other (0.13%)	0405	0.1970	0.0080	0.1722	0.0308	0.0039	11	0.81	High	0
321.99	Acid Soluble Zinc , Other (0.13%)	0523	0.2045	0.0170	0.1722	0.0308	0.0039	11	1.05	High	0
321.99	Acid Soluble Zinc , Other (0.13%)	0515	0.2171	0.0500	0.1722	0.0308	0.0039	11	1.46	High	1
325.00	Water Soluble Zinc , AA (%)	0550	0.0008	0.0001	0.0402	0.0498	0.0021	4	-0.79		0
325.00	Water Soluble Zinc , AA (%)	0200	0.0009	0.0001	0.0402	0.0498	0.0021	4	-0.79		0
325.00	Water Soluble Zinc , AA (%)	0027	0.0545	0.0030	0.0402	0.0498	0.0021	4	0.29		0
325.00	Water Soluble Zinc , AA (%)	0540	0.1045	0.0050	0.0402	0.0498	0.0021	4	1.29		0
325.30	Water Soluble Zinc , ICP (%)	0394	0.0021	0.0021				2			0
325.30	Water Soluble Zinc , ICP (%)	0486	0.0025	0.0010				2			0
325.30	Water Soluble Zinc , ICP (%)	0405	< 0.02					2			5
325.99	Water Soluble Zinc , Other (%)	0300	0.0019	0.0001				1			0

Interpreting Z Scores: Red indicates a normally distributed Z value >3 or <-3 (requires action), Orange = Z between 2 and 3 or -2 and -3 (warning) and Green = Z < 2 and >-2 (OK at 95%). Flags indicate data usage: 0 = Used, 1 = rejected for duplicates too far apart, 2 = rejected as extreme outlier, 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.