

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Analyte Proficiency From All Labs

Sample # 181211

Grade 11-11-21

Statistical Summary

Analytes: 36

Labs Reporting: 101

Issue Date : 01/31/2019

Analyte Code	Analyte Sample # 181211	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Analyte Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	Analyte IA Ratio	Average Range (R-bar)	Honwitz %RSD
001	Ammoniacal Nitrogen (%)	39	38	6.981	0.5461	7.011		0.2996	0.0608	4.27%		0.0698	2.98%
002	Nitrate Nitrogen (%)	26	25	4.482	0.6570	4.332		0.2833	0.0708	6.54%		0.0867	3.21%
009	Ammoniacal Plus Nitrate Nitrogen (%)	7	7	11.18	0.1383	11.17		0.1431	0.0676	1.28%		0.1371	2.78%
010	Total Nitrogen (11%)	83	81	11.26	0.2063	11.27	0.5990	0.1462	0.0203	1.30%	0.57	0.0841	2.78%
020	Total Phosphorus as P2O5 (%)	53	52	10.77	0.6555	10.81		0.4301	0.0746	3.98%		0.2270	2.80%
030	Citrate Insoluble Phosphorus as P2O5 (%)	1		0.2400									
040	Indirect Available Phosphorus as P2O5 (11%)	4	4	10.65	0.2679	10.65	0.6900	0.2679	0.1674	2.52%	0.90	0.1328	2.80%
041	Direct Available Phosphorus as P2O5 (11%)	51	50	10.62	0.5888	10.69	0.6900	0.3258	0.0576	3.05%	1.10	0.0805	2.80%
048	Water Soluble Phosphorus as P2O5 (%)	5	5	8.568	0.4134	8.568		0.4134	0.2311	4.83%		0.1284	2.89%
050	Soluble Potassium as K2O (21%)	90	88	21.63	1.126	21.69	1.1391	0.7558	0.1007	3.48%	1.55	0.2774	2.52%
060	Water (Free) (%)	5	5	0.6254	0.2297	0.6254		0.2297	0.1284	36.74%		0.0294	4.29%
101	Acid Soluble Calcium (%)	16	15	1.321	0.3450	1.377	0.2689	0.1062	0.0343	7.71%	0.92	0.0428	3.81%
121	Acid Soluble Magnesium (1.5%)	59	56	1.584	0.1792	1.573	0.2786	0.1164	0.0194	7.40%	0.97	0.0355	3.74%
131	Water Soluble Magnesium (%)	14	14	1.453	0.7085	1.421		0.7332	0.2449	51.61%		0.0861	3.79%
143	Elemental Sulfur (%)	7	7	9.014	4.000	10.18		1.287	0.6080	12.64%		0.0829	2.82%
145	Sulfate Sulfur, HCl soluble (%)	13	13	10.64	0.6797	10.71		0.5566	0.1930	5.20%		0.1494	2.80%
148	Total Sulfur (10%)	48	47	10.72	0.7434	10.76	0.7381	0.3977	0.0725	3.70%	1.26	0.2113	2.80%
149	Sulfur - HNO3 soluble (%)	3	3	10.69	1.124	10.69		1.124	0.8113	10.51%		0.6798	2.80%
151	Acid Soluble Arsenic (ppm)	15	14	1.361	0.6968	1.319		0.6091	0.2035	46.18%		0.1193	15.34%
165	Acid Soluble Boron (0.05%)	46	44	0.0472	0.0048	0.0476	0.0101	0.0039	0.0007	8.26%	0.90	0.0011	6.33%
171	Water Soluble Boron (%)	5	5	0.0464	0.0017	0.0464		0.0017	0.0010	3.73%		0.0025	6.35%
181	Acid Soluble Cadmium (ppm)	18	14	0.1993	0.2580	0.1295		0.0690	0.0231	53.27%		0.0185	21.76%
191	Acid Soluble Chromium (ppm)	21	19	10.57	4.483	10.79		4.541	1.302	42.07%		0.7198	11.18%
202	Acid Soluble Cobalt (ppm)	18	17	1.969	0.4489	1.980	1.5940	0.4836	0.1466	24.43%	0.71	0.1431	14.43%
221	Acid Soluble Copper (0.05%)	53	50	0.0359	0.0043	0.0356	0.0086	0.0040	0.0007	11.32%	1.10	0.0020	6.61%
241	Acid Soluble Iron (0.1%)	55	52	0.1320	0.0247	0.1313	0.0181	0.0165	0.0029	12.59%	2.13	0.0039	5.43%
251	Acid Soluble Lead (ppm)	19	18	2.013	1.464	1.913		1.427	0.4204	74.57%		0.3033	14.51%
261	Acid Soluble Manganese (0.25%)	57	56	0.2609	0.0234	0.2627	0.0313	0.0194	0.0032	7.38%	1.45	0.0093	4.89%
271	Water Soluble Manganese (%)	2	2	0.2068	0.0520								
281	Acid Soluble Mercury (ppm)	6	5	0.0182	0.0117	0.0182		0.0117	0.0065	64.16%		0.0086	29.24%
289	Acid Soluble Molybdenum (20ppm)	25	24	37.69	8.969	37.40	12.2189	7.527	1.920	20.13%	1.44	2.090	9.28%

Analyte Code	Analyte Sample # 181211	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Analyte Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	Analyte IA Ratio	Average Range (R-bar)	Howitz %RSD
291	Acid Soluble Nickel (ppm)	19	17	5.828	2.250	5.866		2.235	0.6776	38.10%		0.6577	12.26%
301	Acid Soluble Selenium (ppm)	11	9	2.337	2.257	2.002		1.679	0.6995	83.86%		0.3940	14.41%
311	Sodium (%)	6	6	0.3258	0.0596	0.3258	0.0376	0.0676	0.0345	20.74%	4.19	0.0347	4.74%
321	Acid Soluble Zinc (0.05%)	62	59	0.0485	0.0467	0.0426	0.0093	0.0032	0.0005	7.40%	0.79	0.0017	6.43%
325	Water Soluble Zinc (%)	1		0.0080									

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

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Analytes: 36

Sample # 181211

Lab Values

Labs Reporting: 101

Grade 11-11-21

Issue Date : 01/31/2019

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
001	Ammoniacal Nitrogen (%)	0549	4.450	0.1000	7.011	0.2996	0.0698	38	-8.55	001.99	0
001	Ammoniacal Nitrogen (%)	0309	6.520	0.0400	7.011	0.2996	0.0698	38	-1.64	001.10	0
001	Ammoniacal Nitrogen (%)	0520	6.530	0.2400	7.011	0.2996	0.0698	38	-1.60	001.99	0
001	Ammoniacal Nitrogen (%)	0532	6.580	0.0800	7.011	0.2996	0.0698	38	-1.44	001.99	0
001	Ammoniacal Nitrogen (%)	0519	6.620	0.0200	7.011	0.2996	0.0698	38	-1.30	001.99	0
001	Ammoniacal Nitrogen (%)	0444	6.635	0.1900	7.011	0.2996	0.0698	38	-1.25	001.10	0
001	Ammoniacal Nitrogen (%)	0531	6.725	0.0500	7.011	0.2996	0.0698	38	-0.95	001.10	0
001	Ammoniacal Nitrogen (%)	0531	6.735	0.0300	7.011	0.2996	0.0698	38	-0.92	001.99	0
001	Ammoniacal Nitrogen (%)	0537	6.750	0.1200	7.011	0.2996	0.0698	38	-0.87	001.99	0
001	Ammoniacal Nitrogen (%)	0117	6.850	0.1000	7.011	0.2996	0.0698	38	-0.54	001.10	0
001	Ammoniacal Nitrogen (%)	0498	6.900	0.2000	7.011	0.2996	0.0698	38	-0.37	001.10	0
001	Ammoniacal Nitrogen (%)	0231	6.920	0.0000	7.011	0.2996	0.0698	38	-0.30	001.10	0
001	Ammoniacal Nitrogen (%)	0481	6.920	0.1200	7.011	0.2996	0.0698	38	-0.30	001.99	0
001	Ammoniacal Nitrogen (%)	0545	6.970	0.0200	7.011	0.2996	0.0698	38	-0.14	001.99	0
001	Ammoniacal Nitrogen (%)	0027	6.977	0.1630	7.011	0.2996	0.0698	38	-0.11	001.99	0
001	Ammoniacal Nitrogen (%)	0486	6.990	0.0200	7.011	0.2996	0.0698	38	-0.07	001.10	0
001	Ammoniacal Nitrogen (%)	0368	6.992	0.0970	7.011	0.2996	0.0698	38	-0.06	001.99	0
001	Ammoniacal Nitrogen (%)	0177	7.015	0.0174	7.011	0.2996	0.0698	38	0.01	001.10	0
001	Ammoniacal Nitrogen (%)	0476	7.028	0.0854	7.011	0.2996	0.0698	38	0.06	001.99	0
001	Ammoniacal Nitrogen (%)	0544	7.035	0.0700	7.011	0.2996	0.0698	38	0.08	001.99	0
001	Ammoniacal Nitrogen (%)	0394	7.060	0.0500	7.011	0.2996	0.0698	38	0.16	001.99	0
001	Ammoniacal Nitrogen (%)	0451	7.065	0.0700	7.011	0.2996	0.0698	38	0.18	001.10	0
001	Ammoniacal Nitrogen (%)	0169	7.070	0.0600	7.011	0.2996	0.0698	38	0.20	001.10	0
001	Ammoniacal Nitrogen (%)	0522	7.075	0.0100	7.011	0.2996	0.0698	38	0.21	001.99	0
001	Ammoniacal Nitrogen (%)	0371	7.120	0.0000	7.011	0.2996	0.0698	38	0.37	001.99	0
001	Ammoniacal Nitrogen (%)	0096	7.150	0.0000	7.011	0.2996	0.0698	38	0.47	001.99	0
001	Ammoniacal Nitrogen (%)	0423	7.155	0.0700	7.011	0.2996	0.0698	38	0.48	001.99	0
001	Ammoniacal Nitrogen (%)	0510	7.161	0.0036	7.011	0.2996	0.0698	38	0.50	001.99	0
001	Ammoniacal Nitrogen (%)	0405	7.170	0.0000	7.011	0.2996	0.0698	38	0.53	001.99	0
001	Ammoniacal Nitrogen (%)	0527	7.170	0.1000	7.011	0.2996	0.0698	38	0.53	001.99	0
001	Ammoniacal Nitrogen (%)	0513	7.175	0.0100	7.011	0.2996	0.0698	38	0.55	001.99	0
001	Ammoniacal Nitrogen (%)	0220	7.180	0.0400	7.011	0.2996	0.0698	38	0.57	001.99	0
001	Ammoniacal Nitrogen (%)	0550	7.350	0.0000	7.011	0.2996	0.0698	38	1.13	001.99	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
001	Ammoniacal Nitrogen (%)	0230	7.415	0.2900	7.011	0.2996	0.0698	38	1.35	001.10	0
001	Ammoniacal Nitrogen (%)	0506	7.415	0.0100	7.011	0.2996	0.0698	38	1.35	001.99	0
001	Ammoniacal Nitrogen (%)	0524	7.437	0.0695	7.011	0.2996	0.0698	38	1.42	001.99	0
001	Ammoniacal Nitrogen (%)	0553	7.450	0.0770	7.011	0.2996	0.0698	38	1.46	001.99	0
001	Ammoniacal Nitrogen (%)	0540	8.515	0.0300	7.011	0.2996	0.0698	38	5.02	001.99	0
001	Ammoniacal Nitrogen (%)	0546	7.005	0.5900	7.011	0.2996	0.0698	38	-0.02	001.99	1
002	Nitrate Nitrogen (%)	0029	3.860	0.0800	4.332	0.2833	0.0867	25	-1.66	002.99	0
002	Nitrate Nitrogen (%)	0498	3.900	0.0000	4.332	0.2833	0.0867	25	-1.52	002.10	0
002	Nitrate Nitrogen (%)	0545	4.000	0.0400	4.332	0.2833	0.0867	25	-1.17	002.99	0
002	Nitrate Nitrogen (%)	0394	4.033	0.1370	4.332	0.2833	0.0867	25	-1.06	002.99	0
002	Nitrate Nitrogen (%)	0481	4.040	0.0000	4.332	0.2833	0.0867	25	-1.03	002.99	0
002	Nitrate Nitrogen (%)	0027	4.097	0.1470	4.332	0.2833	0.0867	25	-0.83	002.99	0
002	Nitrate Nitrogen (%)	0423	4.220	0.1000	4.332	0.2833	0.0867	25	-0.39	002.99	0
002	Nitrate Nitrogen (%)	0371	4.235	0.0300	4.332	0.2833	0.0867	25	-0.34	002.99	0
002	Nitrate Nitrogen (%)	0231	4.240	0.0600	4.332	0.2833	0.0867	25	-0.32	002.99	0
002	Nitrate Nitrogen (%)	0513	4.265	0.0300	4.332	0.2833	0.0867	25	-0.24	002.99	0
002	Nitrate Nitrogen (%)	0506	4.275	0.0300	4.332	0.2833	0.0867	25	-0.20	002.99	0
002	Nitrate Nitrogen (%)	0486	4.290	0.0200	4.332	0.2833	0.0867	25	-0.15	002.99	0
002	Nitrate Nitrogen (%)	0476	4.350	0.0066	4.332	0.2833	0.0867	25	0.06	002.99	0
002	Nitrate Nitrogen (%)	0537	4.365	0.2100	4.332	0.2833	0.0867	25	0.12	002.99	0
002	Nitrate Nitrogen (%)	0527	4.370	0.1000	4.332	0.2833	0.0867	25	0.14	002.99	0
002	Nitrate Nitrogen (%)	0553	4.396	0.0230	4.332	0.2833	0.0867	25	0.23	002.99	0
002	Nitrate Nitrogen (%)	0519	4.400	0.0200	4.332	0.2833	0.0867	25	0.24	002.99	0
002	Nitrate Nitrogen (%)	0368	4.468	0.1340	4.332	0.2833	0.0867	25	0.48	002.99	0
002	Nitrate Nitrogen (%)	0532	4.470	0.1000	4.332	0.2833	0.0867	25	0.49	002.99	0
002	Nitrate Nitrogen (%)	0531	4.525	0.0500	4.332	0.2833	0.0867	25	0.68	002.99	0
002	Nitrate Nitrogen (%)	0520	4.570	0.4400	4.332	0.2833	0.0867	25	0.84	002.99	0
002	Nitrate Nitrogen (%)	0518	4.600	0.2000	4.332	0.2833	0.0867	25	0.95	002.99	0
002	Nitrate Nitrogen (%)	0540	5.110	0.0200	4.332	0.2833	0.0867	25	2.75	002.99	0
002	Nitrate Nitrogen (%)	0549	6.310	0.0800	4.332	0.2833	0.0867	25	6.98	002.99	0
002	Nitrate Nitrogen (%)	0230	6.655	0.1100	4.332	0.2833	0.0867	25	8.20	002.20	0
002	Nitrate Nitrogen (%)	0550	4.245	0.4700	4.332	0.2833	0.0867	25	-0.31	002.99	1
009	Ammoniacal Plus Nitrate Nitrogen (%)	0309	11.00	0.0300	11.17	0.1431	0.1371	7	-1.13	009.10	0
009	Ammoniacal Plus Nitrate Nitrogen (%)	0169	11.11	0.0600	11.17	0.1431	0.1371	7	-0.41	009.10	0
009	Ammoniacal Plus Nitrate Nitrogen (%)	0537	11.12	0.3300	11.17	0.1431	0.1371	7	-0.37	009.10	0
009	Ammoniacal Plus Nitrate Nitrogen (%)	0444	11.15	0.2100	11.17	0.1431	0.1371	7	-0.18	009.10	0
009	Ammoniacal Plus Nitrate Nitrogen (%)	0518	11.20	0.2000	11.17	0.1431	0.1371	7	0.16	009.99	0
009	Ammoniacal Plus Nitrate Nitrogen (%)	0200	11.27	0.0900	11.17	0.1431	0.1371	7	0.57	009.10	0
009	Ammoniacal Plus Nitrate Nitrogen (%)	0513	11.43	0.0400	11.17	0.1431	0.1371	7	1.62	009.99	0
010	Total Nitrogen (11%)	0510	10.50†	0.0581	11.27	0.1462	0.0841	81	-5.23	010.11	0
010	Total Nitrogen (11%)	0481	10.58†	0.1000	11.27	0.1462	0.0841	81	-4.71	010.99	0
010	Total Nitrogen (11%)	0498	10.80	0.2000	11.27	0.1462	0.0841	81	-3.20	010.12	0
010	Total Nitrogen (11%)	0325	10.90	0.2000	11.27	0.1462	0.0841	81	-2.52	010.60	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
010	Total Nitrogen (11%)	0544	10.96	0.0200	11.27	0.1462	0.0841	81	-2.11	010.99	0
010	Total Nitrogen (11%)	0545	10.97	0.0200	11.27	0.1462	0.0841	81	-2.04	010.99	0
010	Total Nitrogen (11%)	0234	11.00	0.2000	11.27	0.1462	0.0841	81	-1.84	010.60	0
010	Total Nitrogen (11%)	0519	11.03	0.0200	11.27	0.1462	0.0841	81	-1.63	010.99	0
010	Total Nitrogen (11%)	0255	11.04	0.1900	11.27	0.1462	0.0841	81	-1.53	010.60	0
010	Total Nitrogen (11%)	0532	11.05	0.1800	11.27	0.1462	0.0841	81	-1.49	010.99	0
010	Total Nitrogen (11%)	0394	11.09	0.0870	11.27	0.1462	0.0841	81	-1.20	010.99	0
010	Total Nitrogen (11%)	0493	11.10	0.1000	11.27	0.1462	0.0841	81	-1.15	010.99	0
010	Total Nitrogen (11%)	0027	11.12	0.0400	11.27	0.1462	0.0841	81	-1.01	010.60	0
010	Total Nitrogen (11%)	0534	11.13	0.0100	11.27	0.1462	0.0841	81	-0.98	010.60	0
010	Total Nitrogen (11%)	0042	11.14	0.2000	11.27	0.1462	0.0841	81	-0.88	010.60	0
010	Total Nitrogen (11%)	0307	11.15	0.2400	11.27	0.1462	0.0841	81	-0.81	010.60	0
010	Total Nitrogen (11%)	0309	11.16	0.0700	11.27	0.1462	0.0841	81	-0.78	010.11	0
010	Total Nitrogen (11%)	0072	11.16	0.1600	11.27	0.1462	0.0841	81	-0.74	010.60	0
010	Total Nitrogen (11%)	0416	11.17	0.0100	11.27	0.1462	0.0841	81	-0.71	010.12	0
010	Total Nitrogen (11%)	0105	11.17	0.0800	11.27	0.1462	0.0841	81	-0.67	010.11	0
010	Total Nitrogen (11%)	0525	11.18	0.0600	11.27	0.1462	0.0841	81	-0.60	010.60	0
010	Total Nitrogen (11%)	0486	11.20	0.0200	11.27	0.1462	0.0841	81	-0.47	010.60	0
010	Total Nitrogen (11%)	0501	11.20	0.0000	11.27	0.1462	0.0841	81	-0.47	010.60	0
010	Total Nitrogen (11%)	0523	11.20	0.0000	11.27	0.1462	0.0841	81	-0.47	010.60	0
010	Total Nitrogen (11%)	0472	11.21	0.0100	11.27	0.1462	0.0841	81	-0.43	010.60	0
010	Total Nitrogen (11%)	0531	11.23	0.0500	11.27	0.1462	0.0841	81	-0.30	010.11	0
010	Total Nitrogen (11%)	0043	11.23	0.0400	11.27	0.1462	0.0841	81	-0.26	010.60	0
010	Total Nitrogen (11%)	0177	11.23	0.0600	11.27	0.1462	0.0841	81	-0.26	010.60	0
010	Total Nitrogen (11%)	0405	11.23	0.0400	11.27	0.1462	0.0841	81	-0.26	010.60	0
010	Total Nitrogen (11%)	0390	11.24	0.0100	11.27	0.1462	0.0841	81	-0.23	010.60	0
010	Total Nitrogen (11%)	0034	11.24	0.0000	11.27	0.1462	0.0841	81	-0.19	010.60	0
010	Total Nitrogen (11%)	0531	11.25	0.0500	11.27	0.1462	0.0841	81	-0.16	010.99	0
010	Total Nitrogen (11%)	0524	11.25	0.0490	11.27	0.1462	0.0841	81	-0.14	010.99	0
010	Total Nitrogen (11%)	0354	11.25	0.1000	11.27	0.1462	0.0841	81	-0.13	010.60	0
010	Total Nitrogen (11%)	0482	11.25	0.1000	11.27	0.1462	0.0841	81	-0.13	010.60	0
010	Total Nitrogen (11%)	0220	11.25	0.1000	11.27	0.1462	0.0841	81	-0.13	010.99	0
010	Total Nitrogen (11%)	0096	11.26	0.0300	11.27	0.1462	0.0841	81	-0.09	010.60	0
010	Total Nitrogen (11%)	0451	11.26	0.0900	11.27	0.1462	0.0841	81	-0.09	010.60	0
010	Total Nitrogen (11%)	0522	11.26	0.0200	11.27	0.1462	0.0841	81	-0.06	010.11	0
010	Total Nitrogen (11%)	0423	11.27	0.0800	11.27	0.1462	0.0841	81	0.01	010.60	0
010	Total Nitrogen (11%)	0402	11.28	0.0340	11.27	0.1462	0.0841	81	0.05	010.60	0
010	Total Nitrogen (11%)	0105	11.29	0.0300	11.27	0.1462	0.0841	81	0.11	010.60	0
010	Total Nitrogen (11%)	0035	11.29	0.0400	11.27	0.1462	0.0841	81	0.15	010.60	0
010	Total Nitrogen (11%)	0389	11.29	0.0200	11.27	0.1462	0.0841	81	0.15	010.60	0
010	Total Nitrogen (11%)	0452	11.30	0.0300	11.27	0.1462	0.0841	81	0.18	010.60	0
010	Total Nitrogen (11%)	0483	11.30	0.0700	11.27	0.1462	0.0841	81	0.18	010.60	0
010	Total Nitrogen (11%)	0040	11.30	0.0000	11.27	0.1462	0.0841	81	0.22	010.60	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
010	Total Nitrogen (11%)	0157	11.30	0.0000	11.27	0.1462	0.0841	81	0.22	010.60	0
010	Total Nitrogen (11%)	0324	11.30	0.2000	11.27	0.1462	0.0841	81	0.22	010.60	0
010	Total Nitrogen (11%)	0443	11.30	0.0400	11.27	0.1462	0.0841	81	0.22	010.60	0
010	Total Nitrogen (11%)	0356	11.31	0.1400	11.27	0.1462	0.0841	81	0.28	010.60	0
010	Total Nitrogen (11%)	0086	11.31	0.0130	11.27	0.1462	0.0841	81	0.30	010.60	0
010	Total Nitrogen (11%)	0185	11.32	0.0300	11.27	0.1462	0.0841	81	0.32	010.60	0
010	Total Nitrogen (11%)	0073	11.33	0.0100	11.27	0.1462	0.0841	81	0.39	010.60	0
010	Total Nitrogen (11%)	0049	11.33	0.0400	11.27	0.1462	0.0841	81	0.42	010.60	0
010	Total Nitrogen (11%)	0368	11.33	0.0510	11.27	0.1462	0.0841	81	0.42	010.60	0
010	Total Nitrogen (11%)	0231	11.34	0.0100	11.27	0.1462	0.0841	81	0.46	010.60	0
010	Total Nitrogen (11%)	0291	11.34	0.0100	11.27	0.1462	0.0841	81	0.46	010.60	0
010	Total Nitrogen (11%)	0292	11.34	0.0100	11.27	0.1462	0.0841	81	0.46	010.60	0
010	Total Nitrogen (11%)	0485	11.35	0.2000	11.27	0.1462	0.0841	81	0.56	010.60	0
010	Total Nitrogen (11%)	0114	11.36	0.1300	11.27	0.1462	0.0841	81	0.59	010.60	0
010	Total Nitrogen (11%)	0444	11.36	0.0300	11.27	0.1462	0.0841	81	0.59	010.60	0
010	Total Nitrogen (11%)	0360	11.37	0.0500	11.27	0.1462	0.0841	81	0.66	010.60	0
010	Total Nitrogen (11%)	0136	11.37	0.1400	11.27	0.1462	0.0841	81	0.69	010.60	0
010	Total Nitrogen (11%)	0547	11.37	0.0400	11.27	0.1462	0.0841	81	0.69	010.60	0
010	Total Nitrogen (11%)	0476	11.38	0.0674	11.27	0.1462	0.0841	81	0.77	010.99	0
010	Total Nitrogen (11%)	0037	11.39	0.0770	11.27	0.1462	0.0841	81	0.86	010.60	0
010	Total Nitrogen (11%)	0550	11.40	0.0200	11.27	0.1462	0.0841	81	0.90	010.60	0
010	Total Nitrogen (11%)	0419	11.41	0.1000	11.27	0.1462	0.0841	81	0.97	010.60	0
010	Total Nitrogen (11%)	0095	11.42	0.2200	11.27	0.1462	0.0841	81	1.04	010.60	0
010	Total Nitrogen (11%)	0023	11.42	0.3410	11.27	0.1462	0.0841	81	1.07	010.60	0
010	Total Nitrogen (11%)	0520	11.44	0.3300	11.27	0.1462	0.0841	81	1.14	010.99	0
010	Total Nitrogen (11%)	0102	11.45	0.1000	11.27	0.1462	0.0841	81	1.24	010.60	0
010	Total Nitrogen (11%)	0029	11.46	0.2000	11.27	0.1462	0.0841	81	1.31	010.60	0
010	Total Nitrogen (11%)	0131	11.51	0.1250	11.27	0.1462	0.0841	81	1.66	010.60	0
010	Total Nitrogen (11%)	0230	11.55	0.3000	11.27	0.1462	0.0841	81	1.93	010.60	0
010	Total Nitrogen (11%)	0397	11.55	0.0521	11.27	0.1462	0.0841	81	1.96	010.12	0
010	Total Nitrogen (11%)	0025	11.64	0.2100	11.27	0.1462	0.0841	81	2.51	010.60	0
010	Total Nitrogen (11%)	0117	11.70	0.0000	11.27	0.1462	0.0841	81	2.95	010.60	0
010	Total Nitrogen (11%)	0506	11.70	0.0000	11.27	0.1462	0.0841	81	2.95	010.99	0
010	Total Nitrogen (11%)	0546	11.86	0.2100	11.27	0.1462	0.0841	81	4.01	010.11	0
010	Total Nitrogen (11%)	0527	11.45	0.4190	11.27	0.1462	0.0841	81	1.22	010.60	1
010	Total Nitrogen (11%)	0422	1.815†	0.0300	11.27	0.1462	0.0841	81	-64.65	010.60	2
020	Total Phosphorus as P2O5 (%)	0515	7.490	0.3349	10.81	0.4301	0.2270	52	-7.71	020.99	0
020	Total Phosphorus as P2O5 (%)	0552	9.715	0.2500	10.81	0.4301	0.2270	52	-2.54	020.50	0
020	Total Phosphorus as P2O5 (%)	0422	9.848	1.364	10.81	0.4301	0.2270	52	-2.23	020.50	0
020	Total Phosphorus as P2O5 (%)	0389	10.13	0.0100	10.81	0.4301	0.2270	52	-1.58	020.50	0
020	Total Phosphorus as P2O5 (%)	0516	10.21	0.8700	10.81	0.4301	0.2270	52	-1.40	020.50	0
020	Total Phosphorus as P2O5 (%)	0472	10.22	0.0300	10.81	0.4301	0.2270	52	-1.37	020.50	0
020	Total Phosphorus as P2O5 (%)	0451	10.26	0.1400	10.81	0.4301	0.2270	52	-1.27	020.50	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
020	Total Phosphorus as P2O5 (%)	0523	10.35	0.3000	10.81	0.4301	0.2270	52	-1.06	020.50	0
020	Total Phosphorus as P2O5 (%)	0309	10.36	0.1100	10.81	0.4301	0.2270	52	-1.05	020.20	0
020	Total Phosphorus as P2O5 (%)	0525	10.39	0.5500	10.81	0.4301	0.2270	52	-0.98	020.50	0
020	Total Phosphorus as P2O5 (%)	0307	10.47	0.9100	10.81	0.4301	0.2270	52	-0.79	020.50	0
020	Total Phosphorus as P2O5 (%)	0096	10.49	0.1300	10.81	0.4301	0.2270	52	-0.75	020.40	0
020	Total Phosphorus as P2O5 (%)	0483	10.52	0.1400	10.81	0.4301	0.2270	52	-0.67	020.50	0
020	Total Phosphorus as P2O5 (%)	0506	10.55	0.3000	10.81	0.4301	0.2270	52	-0.60	020.20	0
020	Total Phosphorus as P2O5 (%)	0476	10.57	0.0691	10.81	0.4301	0.2270	52	-0.54	020.20	0
020	Total Phosphorus as P2O5 (%)	0324	10.60	0.6000	10.81	0.4301	0.2270	52	-0.48	020.20	0
020	Total Phosphorus as P2O5 (%)	0255	10.62	0.3410	10.81	0.4301	0.2270	52	-0.43	020.50	0
020	Total Phosphorus as P2O5 (%)	0513	10.63	0.0200	10.81	0.4301	0.2270	52	-0.41	020.99	0
020	Total Phosphorus as P2O5 (%)	0423	10.66	0.0900	10.81	0.4301	0.2270	52	-0.35	020.50	0
020	Total Phosphorus as P2O5 (%)	0371	10.75	0.1000	10.81	0.4301	0.2270	52	-0.13	020.20	0
020	Total Phosphorus as P2O5 (%)	0547	10.75	0.3000	10.81	0.4301	0.2270	52	-0.13	020.50	0
020	Total Phosphorus as P2O5 (%)	0481	10.80	0.4700	10.81	0.4301	0.2270	52	-0.03	020.20	0
020	Total Phosphorus as P2O5 (%)	0114	10.81	0.0900	10.81	0.4301	0.2270	52	0.00	020.10	0
020	Total Phosphorus as P2O5 (%)	0550	10.81	0.2700	10.81	0.4301	0.2270	52	0.00	020.20	0
020	Total Phosphorus as P2O5 (%)	0546	10.82	0.0210	10.81	0.4301	0.2270	52	0.03	020.50	0
020	Total Phosphorus as P2O5 (%)	0291	10.83	0.0100	10.81	0.4301	0.2270	52	0.04	020.50	0
020	Total Phosphorus as P2O5 (%)	0419	10.83	0.0400	10.81	0.4301	0.2270	52	0.06	020.20	0
020	Total Phosphorus as P2O5 (%)	0231	10.84	0.0200	10.81	0.4301	0.2270	52	0.08	020.20	0
020	Total Phosphorus as P2O5 (%)	0394	10.87	0.0300	10.81	0.4301	0.2270	52	0.15	020.20	0
020	Total Phosphorus as P2O5 (%)	0522	10.88	0.0100	10.81	0.4301	0.2270	52	0.16	020.20	0
020	Total Phosphorus as P2O5 (%)	0510	10.88	0.0157	10.81	0.4301	0.2270	52	0.18	020.20	0
020	Total Phosphorus as P2O5 (%)	0493	10.90	0.1000	10.81	0.4301	0.2270	52	0.22	020.10	0
020	Total Phosphorus as P2O5 (%)	0455	10.94	0.0200	10.81	0.4301	0.2270	52	0.31	020.20	0
020	Total Phosphorus as P2O5 (%)	0405	10.94	0.0600	10.81	0.4301	0.2270	52	0.31	020.20	0
020	Total Phosphorus as P2O5 (%)	0027	10.95	0.4900	10.81	0.4301	0.2270	52	0.32	020.20	0
020	Total Phosphorus as P2O5 (%)	0433	11.00	0.0200	10.81	0.4301	0.2270	52	0.45	020.50	0
020	Total Phosphorus as P2O5 (%)	0169	11.02	0.0800	10.81	0.4301	0.2270	52	0.50	020.20	0
020	Total Phosphorus as P2O5 (%)	0356	11.04	0.2800	10.81	0.4301	0.2270	52	0.54	020.20	0
020	Total Phosphorus as P2O5 (%)	0553	11.05	0.0800	10.81	0.4301	0.2270	52	0.57	020.20	0
020	Total Phosphorus as P2O5 (%)	0234	11.10	0.2000	10.81	0.4301	0.2270	52	0.68	020.50	0
020	Total Phosphorus as P2O5 (%)	0482	11.10	0.0000	10.81	0.4301	0.2270	52	0.68	020.50	0
020	Total Phosphorus as P2O5 (%)	0368	11.11	0.0229	10.81	0.4301	0.2270	52	0.70	020.50	0
020	Total Phosphorus as P2O5 (%)	0534	11.12	0.0600	10.81	0.4301	0.2270	52	0.73	020.20	0
020	Total Phosphorus as P2O5 (%)	0444	11.29	0.4900	10.81	0.4301	0.2270	52	1.11	020.50	0
020	Total Phosphorus as P2O5 (%)	0527	11.29	0.2234	10.81	0.4301	0.2270	52	1.12	020.50	0
020	Total Phosphorus as P2O5 (%)	0402	11.29	0.0152	10.81	0.4301	0.2270	52	1.13	020.50	0
020	Total Phosphorus as P2O5 (%)	0390	11.30	0.0200	10.81	0.4301	0.2270	52	1.15	020.50	0
020	Total Phosphorus as P2O5 (%)	0501	11.35	0.1100	10.81	0.4301	0.2270	52	1.25	020.50	0
020	Total Phosphorus as P2O5 (%)	0444	11.44	0.4700	10.81	0.4301	0.2270	52	1.46	020.10	0
020	Total Phosphorus as P2O5 (%)	0443	11.72	0.2200	10.81	0.4301	0.2270	52	2.12	020.99	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
020	Total Phosphorus as P2O5 (%)	0520	11.77	0.3200	10.81	0.4301	0.2270	52	2.24	020.99	0
020	Total Phosphorus as P2O5 (%)	0524	12.30	0.5844	10.81	0.4301	0.2270	52	3.48	020.50	0
020	Total Phosphorus as P2O5 (%)	0416	6.255	9.110	10.81	0.4301	0.2270	52	-10.58	020.20	1
030	Citrate Insoluble Phosphorus as P2O5 (%)	0096	0.2400	0.2000				1		030.40	0
040	Indirect Available Phosphorus as P2O5 (11%)	0096	10.25	0.3200	10.65	0.2679	0.1328	4	-1.48	040.40	0
040	Indirect Available Phosphorus as P2O5 (11%)	0498	10.75	0.1000	10.65	0.2679	0.1328	4	0.38	040.20	0
040	Indirect Available Phosphorus as P2O5 (11%)	0394	10.76	0.0410	10.65	0.2679	0.1328	4	0.40	040.99	0
040	Indirect Available Phosphorus as P2O5 (11%)	0405	10.84	0.0700	10.65	0.2679	0.1328	4	0.70	040.20	0
041	Direct Available Phosphorus as P2O5 (11%)	0025	8.400†	0.0600	10.69	0.3258	0.0805	50	-7.03	041.51	0
041	Direct Available Phosphorus as P2O5 (11%)	0230	8.550†	0.0600	10.69	0.3258	0.0805	50	-6.57	041.60	0
041	Direct Available Phosphorus as P2O5 (11%)	0423	9.375†	0.1900	10.69	0.3258	0.0805	50	-4.04	041.51	0
041	Direct Available Phosphorus as P2O5 (11%)	0472	10.07	0.0000	10.69	0.3258	0.0805	50	-1.91	041.60	0
041	Direct Available Phosphorus as P2O5 (11%)	0397	10.07	0.1441	10.69	0.3258	0.0805	50	-1.91	041.60	0
041	Direct Available Phosphorus as P2O5 (11%)	0095	10.13	0.1500	10.69	0.3258	0.0805	50	-1.74	041.40	0
041	Direct Available Phosphorus as P2O5 (11%)	0027	10.16	0.2100	10.69	0.3258	0.0805	50	-1.65	041.20	0
041	Direct Available Phosphorus as P2O5 (11%)	0177	10.20	0.0058	10.69	0.3258	0.0805	50	-1.52	041.60	0
041	Direct Available Phosphorus as P2O5 (11%)	0049	10.34	0.0100	10.69	0.3258	0.0805	50	-1.10	041.10	0
041	Direct Available Phosphorus as P2O5 (11%)	0354	10.45	0.1000	10.69	0.3258	0.0805	50	-0.74	041.60	0
041	Direct Available Phosphorus as P2O5 (11%)	0106	10.49	0.1300	10.69	0.3258	0.0805	50	-0.64	041.21	0
041	Direct Available Phosphorus as P2O5 (11%)	0485	10.51	0.2352	10.69	0.3258	0.0805	50	-0.55	041.11	0
041	Direct Available Phosphorus as P2O5 (11%)	0185	10.52	0.0100	10.69	0.3258	0.0805	50	-0.54	041.11	0
041	Direct Available Phosphorus as P2O5 (11%)	0405	10.55	0.1200	10.69	0.3258	0.0805	50	-0.44	041.99	0
041	Direct Available Phosphorus as P2O5 (11%)	0486	10.58	0.0500	10.69	0.3258	0.0805	50	-0.36	041.51	0
041	Direct Available Phosphorus as P2O5 (11%)	0102	10.60	0.4000	10.69	0.3258	0.0805	50	-0.28	041.10	0
041	Direct Available Phosphorus as P2O5 (11%)	0513	10.60	0.0600	10.69	0.3258	0.0805	50	-0.28	041.11	0
041	Direct Available Phosphorus as P2O5 (11%)	0037	10.61	0.0200	10.69	0.3258	0.0805	50	-0.25	041.51	0
041	Direct Available Phosphorus as P2O5 (11%)	0220	10.63	0.0800	10.69	0.3258	0.0805	50	-0.19	041.11	0
041	Direct Available Phosphorus as P2O5 (11%)	0040	10.65	0.1000	10.69	0.3258	0.0805	50	-0.13	041.51	0
041	Direct Available Phosphorus as P2O5 (11%)	0105	10.67	0.0900	10.69	0.3258	0.0805	50	-0.08	041.11	0
041	Direct Available Phosphorus as P2O5 (11%)	0029	10.67	0.0100	10.69	0.3258	0.0805	50	-0.08	041.60	0
041	Direct Available Phosphorus as P2O5 (11%)	0518	10.68	0.0500	10.69	0.3258	0.0805	50	-0.05	041.99	0
041	Direct Available Phosphorus as P2O5 (11%)	0086	10.69	0.0481	10.69	0.3258	0.0805	50	-0.01	041.10	0
041	Direct Available Phosphorus as P2O5 (11%)	0177	10.70	0.0608	10.69	0.3258	0.0805	50	0.04	041.10	0
041	Direct Available Phosphorus as P2O5 (11%)	0394	10.73	0.0110	10.69	0.3258	0.0805	50	0.11	041.60	0
041	Direct Available Phosphorus as P2O5 (11%)	0452	10.76	0.0500	10.69	0.3258	0.0805	50	0.19	041.50	0
041	Direct Available Phosphorus as P2O5 (11%)	0105	10.76	0.1600	10.69	0.3258	0.0805	50	0.21	041.60	0
041	Direct Available Phosphorus as P2O5 (11%)	0377	10.77	0.0800	10.69	0.3258	0.0805	50	0.24	041.51	0
041	Direct Available Phosphorus as P2O5 (11%)	0117	10.79	0.0150	10.69	0.3258	0.0805	50	0.30	041.51	0
041	Direct Available Phosphorus as P2O5 (11%)	0200	10.80	0.0400	10.69	0.3258	0.0805	50	0.33	041.21	0
041	Direct Available Phosphorus as P2O5 (11%)	0043	10.82	0.0100	10.69	0.3258	0.0805	50	0.38	041.51	0
041	Direct Available Phosphorus as P2O5 (11%)	0034	10.82	0.0010	10.69	0.3258	0.0805	50	0.38	041.60	0
041	Direct Available Phosphorus as P2O5 (11%)	0231	10.82	0.0600	10.69	0.3258	0.0805	50	0.39	041.60	0
041	Direct Available Phosphorus as P2O5 (11%)	0073	10.85	0.0500	10.69	0.3258	0.0805	50	0.47	041.60	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
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041	Direct Available Phosphorus as P2O5 (11%)	0117	10.88	0.0550	10.69	0.3258	0.0805	50	0.59	041.11	0
041	Direct Available Phosphorus as P2O5 (11%)	0023	10.90	0.0400	10.69	0.3258	0.0805	50	0.64	041.51	0
041	Direct Available Phosphorus as P2O5 (11%)	0519	10.91	0.0200	10.69	0.3258	0.0805	50	0.67	041.99	0
041	Direct Available Phosphorus as P2O5 (11%)	0072	10.92	0.0500	10.69	0.3258	0.0805	50	0.68	041.51	0
041	Direct Available Phosphorus as P2O5 (11%)	0131	10.93	0.1000	10.69	0.3258	0.0805	50	0.73	041.50	0
041	Direct Available Phosphorus as P2O5 (11%)	0368	10.94	0.0446	10.69	0.3258	0.0805	50	0.76	041.51	0
041	Direct Available Phosphorus as P2O5 (11%)	0536	10.99	0.0600	10.69	0.3258	0.0805	50	0.91	041.99	0
041	Direct Available Phosphorus as P2O5 (11%)	0072	11.01	0.0130	10.69	0.3258	0.0805	50	0.96	041.60	0
041	Direct Available Phosphorus as P2O5 (11%)	0549	11.03	0.0500	10.69	0.3258	0.0805	50	1.02	041.99	0
041	Direct Available Phosphorus as P2O5 (11%)	0531	11.05	0.0300	10.69	0.3258	0.0805	50	1.08	041.99	0
041	Direct Available Phosphorus as P2O5 (11%)	0537	11.07	0.2100	10.69	0.3258	0.0805	50	1.14	041.99	0
041	Direct Available Phosphorus as P2O5 (11%)	0360	11.07	0.0200	10.69	0.3258	0.0805	50	1.16	041.51	0
041	Direct Available Phosphorus as P2O5 (11%)	0545	11.13	0.0600	10.69	0.3258	0.0805	50	1.34	041.99	0
041	Direct Available Phosphorus as P2O5 (11%)	0532	11.21	0.1000	10.69	0.3258	0.0805	50	1.59	041.99	0
041	Direct Available Phosphorus as P2O5 (11%)	0540	12.15†	0.3000	10.69	0.3258	0.0805	50	4.47	041.99	0
041	Direct Available Phosphorus as P2O5 (11%)	0325	10.60	0.8000	10.69	0.3258	0.0805	50	-0.28	041.50	1
048	Water Soluble Phosphorus as P2O5 (%)	0309	8.070	0.0400	8.568	0.4134	0.1284	5	-1.20	048.20	0
048	Water Soluble Phosphorus as P2O5 (%)	0096	8.265	0.2500	8.568	0.4134	0.1284	5	-0.73	048.40	0
048	Water Soluble Phosphorus as P2O5 (%)	0513	8.660	0.1000	8.568	0.4134	0.1284	5	0.22	048.99	0
048	Water Soluble Phosphorus as P2O5 (%)	0394	8.718	0.0910	8.568	0.4134	0.1284	5	0.36	048.20	0
048	Water Soluble Phosphorus as P2O5 (%)	0546	9.128	0.1610	8.568	0.4134	0.1284	5	1.35	048.50	0
050	Soluble Potassium as K2O (21%)	0025	16.85†	0.1000	21.69	0.7558	0.2774	88	-6.40	050.52	0
050	Soluble Potassium as K2O (21%)	0515	17.53†	1.695	21.69	0.7558	0.2774	88	-5.50	050.99	0
050	Soluble Potassium as K2O (21%)	0324	18.55†	0.1000	21.69	0.7558	0.2774	88	-4.15	050.50	0
050	Soluble Potassium as K2O (21%)	0486	20.00†	0.0900	21.69	0.7558	0.2774	88	-2.24	050.52	0
050	Soluble Potassium as K2O (21%)	0523	20.20†	0.8000	21.69	0.7558	0.2774	88	-1.97	050.99	0
050	Soluble Potassium as K2O (21%)	0476	20.27†	0.1847	21.69	0.7558	0.2774	88	-1.87	050.60	0
050	Soluble Potassium as K2O (21%)	0455	20.34†	0.0800	21.69	0.7558	0.2774	88	-1.78	050.60	0
050	Soluble Potassium as K2O (21%)	0072	20.53†	0.6800	21.69	0.7558	0.2774	88	-1.53	050.52	0
050	Soluble Potassium as K2O (21%)	0422	20.65	0.0200	21.69	0.7558	0.2774	88	-1.37	050.50	0
050	Soluble Potassium as K2O (21%)	0481	20.67	0.1000	21.69	0.7558	0.2774	88	-1.35	050.99	0
050	Soluble Potassium as K2O (21%)	0255	20.82	0.5380	21.69	0.7558	0.2774	88	-1.15	050.99	0
050	Soluble Potassium as K2O (21%)	0544	20.87	0.0200	21.69	0.7558	0.2774	88	-1.08	050.00	0
050	Soluble Potassium as K2O (21%)	0309	20.90	0.0500	21.69	0.7558	0.2774	88	-1.05	050.30	0
050	Soluble Potassium as K2O (21%)	0510	20.95	0.0991	21.69	0.7558	0.2774	88	-0.98	050.60	0
050	Soluble Potassium as K2O (21%)	0354	20.95	0.3000	21.69	0.7558	0.2774	88	-0.98	050.52	0
050	Soluble Potassium as K2O (21%)	0102	21.00	0.4000	21.69	0.7558	0.2774	88	-0.91	050.00	0
050	Soluble Potassium as K2O (21%)	0553	21.02	0.1500	21.69	0.7558	0.2774	88	-0.89	050.99	0
050	Soluble Potassium as K2O (21%)	0537	21.02	0.2200	21.69	0.7558	0.2774	88	-0.88	050.99	0
050	Soluble Potassium as K2O (21%)	0519	21.03	0.0030	21.69	0.7558	0.2774	88	-0.86	050.99	0
050	Soluble Potassium as K2O (21%)	0536	21.05	0.2000	21.69	0.7558	0.2774	88	-0.84	050.99	0
050	Soluble Potassium as K2O (21%)	0547	21.07	0.0000	21.69	0.7558	0.2774	88	-0.82	050.51	0
050	Soluble Potassium as K2O (21%)	0423	21.09	0.0200	21.69	0.7558	0.2774	88	-0.79	050.52	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
050	Soluble Potassium as K2O (21%)	0532	21.11	0.3800	21.69	0.7558	0.2774	88	-0.76	050.99	0
050	Soluble Potassium as K2O (21%)	0501	21.13	0.1500	21.69	0.7558	0.2774	88	-0.74	050.99	0
050	Soluble Potassium as K2O (21%)	0451	21.18	0.3200	21.69	0.7558	0.2774	88	-0.67	050.99	0
050	Soluble Potassium as K2O (21%)	0518	21.20	0.0000	21.69	0.7558	0.2774	88	-0.64	050.99	0
050	Soluble Potassium as K2O (21%)	0185	21.23	0.4800	21.69	0.7558	0.2774	88	-0.61	050.32	0
050	Soluble Potassium as K2O (21%)	0444	21.33	0.9700	21.69	0.7558	0.2774	88	-0.48	050.99	0
050	Soluble Potassium as K2O (21%)	0482	21.35	0.1000	21.69	0.7558	0.2774	88	-0.45	050.99	0
050	Soluble Potassium as K2O (21%)	0516	21.37	0.3800	21.69	0.7558	0.2774	88	-0.42	050.99	0
050	Soluble Potassium as K2O (21%)	0095	21.39	0.2800	21.69	0.7558	0.2774	88	-0.39	050.62	0
050	Soluble Potassium as K2O (21%)	0549	21.45	0.1000	21.69	0.7558	0.2774	88	-0.31	050.99	0
050	Soluble Potassium as K2O (21%)	0230	21.45	1.700	21.69	0.7558	0.2774	88	-0.31	050.50	0
050	Soluble Potassium as K2O (21%)	0527	21.45	0.0297	21.69	0.7558	0.2774	88	-0.31	050.99	0
050	Soluble Potassium as K2O (21%)	0096	21.54	0.2500	21.69	0.7558	0.2774	88	-0.20	050.99	0
050	Soluble Potassium as K2O (21%)	0472	21.55	0.5000	21.69	0.7558	0.2774	88	-0.18	050.31	0
050	Soluble Potassium as K2O (21%)	0394	21.59	0.0840	21.69	0.7558	0.2774	88	-0.13	050.99	0
050	Soluble Potassium as K2O (21%)	0292	21.61	0.1200	21.69	0.7558	0.2774	88	-0.10	050.50	0
050	Soluble Potassium as K2O (21%)	0524	21.65	1.208	21.69	0.7558	0.2774	88	-0.06	050.99	0
050	Soluble Potassium as K2O (21%)	0200	21.66	0.0500	21.69	0.7558	0.2774	88	-0.04	050.60	0
050	Soluble Potassium as K2O (21%)	0043	21.67	0.0100	21.69	0.7558	0.2774	88	-0.03	050.52	0
050	Soluble Potassium as K2O (21%)	0037	21.69	0.1500	21.69	0.7558	0.2774	88	0.00	050.52	0
050	Soluble Potassium as K2O (21%)	0027	21.72	0.0830	21.69	0.7558	0.2774	88	0.04	050.99	0
050	Soluble Potassium as K2O (21%)	0545	21.76	0.0000	21.69	0.7558	0.2774	88	0.10	050.99	0
050	Soluble Potassium as K2O (21%)	0169	21.82	0.1300	21.69	0.7558	0.2774	88	0.17	050.60	0
050	Soluble Potassium as K2O (21%)	0405	21.83	0.0700	21.69	0.7558	0.2774	88	0.18	050.00	0
050	Soluble Potassium as K2O (21%)	0377	21.84	0.0300	21.69	0.7558	0.2774	88	0.20	050.52	0
050	Soluble Potassium as K2O (21%)	0433	21.85	0.0700	21.69	0.7558	0.2774	88	0.21	050.99	0
050	Soluble Potassium as K2O (21%)	0105	21.89	0.1700	21.69	0.7558	0.2774	88	0.26	050.62	0
050	Soluble Potassium as K2O (21%)	0177	21.90	0.1316	21.69	0.7558	0.2774	88	0.28	050.99	0
050	Soluble Potassium as K2O (21%)	0506	21.90	0.2000	21.69	0.7558	0.2774	88	0.28	050.99	0
050	Soluble Potassium as K2O (21%)	0513	21.92	0.0500	21.69	0.7558	0.2774	88	0.30	050.62	0
050	Soluble Potassium as K2O (21%)	0231	21.93	0.0500	21.69	0.7558	0.2774	88	0.31	050.00	0
050	Soluble Potassium as K2O (21%)	0483	21.93	0.9700	21.69	0.7558	0.2774	88	0.31	050.51	0
050	Soluble Potassium as K2O (21%)	0522	21.93	0.1600	21.69	0.7558	0.2774	88	0.32	050.00	0
050	Soluble Potassium as K2O (21%)	0416	21.94	0.0000	21.69	0.7558	0.2774	88	0.33	050.00	0
050	Soluble Potassium as K2O (21%)	0220	21.97	0.0500	21.69	0.7558	0.2774	88	0.37	050.00	0
050	Soluble Potassium as K2O (21%)	0443	21.98	0.2400	21.69	0.7558	0.2774	88	0.39	050.60	0
050	Soluble Potassium as K2O (21%)	0029	21.99	0.3300	21.69	0.7558	0.2774	88	0.39	050.62	0
050	Soluble Potassium as K2O (21%)	0034	22.03	0.0800	21.69	0.7558	0.2774	88	0.45	050.62	0
050	Soluble Potassium as K2O (21%)	0040	22.10	0.8000	21.69	0.7558	0.2774	88	0.55	050.30	0
050	Soluble Potassium as K2O (21%)	0550	22.13	0.1100	21.69	0.7558	0.2774	88	0.58	050.00	0
050	Soluble Potassium as K2O (21%)	0493	22.15	0.1000	21.69	0.7558	0.2774	88	0.61	050.99	0
050	Soluble Potassium as K2O (21%)	0356	22.16	0.4300	21.69	0.7558	0.2774	88	0.62	050.30	0
050	Soluble Potassium as K2O (21%)	0049	22.17	0.1100	21.69	0.7558	0.2774	88	0.63	050.00	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
050	Soluble Potassium as K2O (21%)	0402	22.21	0.0871	21.69	0.7558	0.2774	88	0.69	050.99	0
050	Soluble Potassium as K2O (21%)	0397	22.25	0.0576	21.69	0.7558	0.2774	88	0.75	050.50	0
050	Soluble Potassium as K2O (21%)	0234	22.26	0.1200	21.69	0.7558	0.2774	88	0.76	050.99	0
050	Soluble Potassium as K2O (21%)	0106	22.30	0.1900	21.69	0.7558	0.2774	88	0.80	050.50	0
050	Soluble Potassium as K2O (21%)	0325	22.30	0.4000	21.69	0.7558	0.2774	88	0.81	050.99	0
050	Soluble Potassium as K2O (21%)	0520	22.35	0.1000	21.69	0.7558	0.2774	88	0.88	050.99	0
050	Soluble Potassium as K2O (21%)	0389	22.36	0.0600	21.69	0.7558	0.2774	88	0.89	050.99	0
050	Soluble Potassium as K2O (21%)	0368	22.39	0.5547	21.69	0.7558	0.2774	88	0.93	050.99	0
050	Soluble Potassium as K2O (21%)	0307	22.47	0.3600	21.69	0.7558	0.2774	88	1.04	050.99	0
050	Soluble Potassium as K2O (21%)	0023	22.50	0.8500	21.69	0.7558	0.2774	88	1.07	050.52	0
050	Soluble Potassium as K2O (21%)	0540	22.50	1.000	21.69	0.7558	0.2774	88	1.08	050.99	0
050	Soluble Potassium as K2O (21%)	0360	22.51	0.3600	21.69	0.7558	0.2774	88	1.09	050.52	0
050	Soluble Potassium as K2O (21%)	0114	22.51	1.180	21.69	0.7558	0.2774	88	1.09	050.00	0
050	Soluble Potassium as K2O (21%)	0291	22.52	0.0100	21.69	0.7558	0.2774	88	1.10	050.51	0
050	Soluble Potassium as K2O (21%)	0452	22.52	0.1000	21.69	0.7558	0.2774	88	1.10	050.51	0
050	Soluble Potassium as K2O (21%)	0546	22.54	0.0810	21.69	0.7558	0.2774	88	1.12	050.99	0
050	Soluble Potassium as K2O (21%)	0531	22.55	0.1000	21.69	0.7558	0.2774	88	1.14	050.99	0
050	Soluble Potassium as K2O (21%)	0419	22.58	0.0100	21.69	0.7558	0.2774	88	1.17	050.50	0
050	Soluble Potassium as K2O (21%)	0073	22.76	0.3400	21.69	0.7558	0.2774	88	1.42	050.30	0
050	Soluble Potassium as K2O (21%)	0117	22.94‡	0.0860	21.69	0.7558	0.2774	88	1.65	050.52	0
050	Soluble Potassium as K2O (21%)	0444	22.98‡	0.3600	21.69	0.7558	0.2774	88	1.71	050.50	0
050	Soluble Potassium as K2O (21%)	0131	24.80‡	0.1300	21.69	0.7558	0.2774	88	4.11	050.51	0
050	Soluble Potassium as K2O (21%)	0498	25.40‡	0.4000	21.69	0.7558	0.2774	88	4.91	050.30	0
050	Soluble Potassium as K2O (21%)	0552	19.15†	3.760	21.69	0.7558	0.2774	88	-3.36	050.99	1
050	Soluble Potassium as K2O (21%)	0390	19.92†	3.080	21.69	0.7558	0.2774	88	-2.34	050.50	1
060	Water (Free) (%)	0510	0.2863	0.0261	0.6254	0.2297	0.0294	5	-1.48	060.99	0
060	Water (Free) (%)	0513	0.5605	0.0210	0.6254	0.2297	0.0294	5	-0.28	060.99	0
060	Water (Free) (%)	0096	0.6550	0.0300	0.6254	0.2297	0.0294	5	0.13	060.00	0
060	Water (Free) (%)	0513	0.7100	0.0200	0.6254	0.2297	0.0294	5	0.37	060.30	0
060	Water (Free) (%)	0518	0.9150	0.0500	0.6254	0.2297	0.0294	5	1.26	060.30	0
101	Acid Soluble Calcium (%)	0535	0.1550	0.0100	1.377	0.1062	0.0428	15	-11.51	101.00	0
101	Acid Soluble Calcium (%)	0354	1.265	0.1300	1.377	0.1062	0.0428	15	-1.06	101.30	0
101	Acid Soluble Calcium (%)	0324	1.300	0.0400	1.377	0.1062	0.0428	15	-0.73	101.30	0
101	Acid Soluble Calcium (%)	0043	1.325	0.0700	1.377	0.1062	0.0428	15	-0.49	101.33	0
101	Acid Soluble Calcium (%)	0553	1.328	0.0320	1.377	0.1062	0.0428	15	-0.46	101.00	0
101	Acid Soluble Calcium (%)	0472	1.330	0.0000	1.377	0.1062	0.0428	15	-0.44	101.30	0
101	Acid Soluble Calcium (%)	0028	1.345	0.0100	1.377	0.1062	0.0428	15	-0.30	101.32	0
101	Acid Soluble Calcium (%)	0106	1.358	0.0077	1.377	0.1062	0.0428	15	-0.18	101.33	0
101	Acid Soluble Calcium (%)	0482	1.370	0.0400	1.377	0.1062	0.0428	15	-0.07	101.30	0
101	Acid Soluble Calcium (%)	0423	1.375	0.0110	1.377	0.1062	0.0428	15	-0.02	101.32	0
101	Acid Soluble Calcium (%)	0552	1.445	0.0300	1.377	0.1062	0.0428	15	0.64	101.99	0
101	Acid Soluble Calcium (%)	0231	1.460	0.0800	1.377	0.1062	0.0428	15	0.78	101.30	0
101	Acid Soluble Calcium (%)	0527	1.466	0.0218	1.377	0.1062	0.0428	15	0.83	101.33	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
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101	Acid Soluble Calcium (%)	0483	1.540	0.0000	1.377	0.1062	0.0428	15	1.53	101.30	0
101	Acid Soluble Calcium (%)	0096	1.760	0.1600	1.377	0.1062	0.0428	15	3.60	101.30	0
101	Acid Soluble Calcium (%)	0389	1.649	0.9070	1.377	0.1062	0.0428	15	2.55	101.99	1
121	Acid Soluble Magnesium (1.5%)	0476	1.095†	0.0497	1.573	0.1164	0.0355	56	-4.10	121.99	0
121	Acid Soluble Magnesium (1.5%)	0371	1.340	0.0000	1.573	0.1164	0.0355	56	-2.00	121.30	0
121	Acid Soluble Magnesium (1.5%)	0255	1.368	0.0160	1.573	0.1164	0.0355	56	-1.76	121.30	0
121	Acid Soluble Magnesium (1.5%)	0515	1.389	0.0228	1.573	0.1164	0.0355	56	-1.58	121.99	0
121	Acid Soluble Magnesium (1.5%)	0524	1.414	0.0300	1.573	0.1164	0.0355	56	-1.36	121.99	0
121	Acid Soluble Magnesium (1.5%)	0433	1.415	0.0020	1.573	0.1164	0.0355	56	-1.36	121.30	0
121	Acid Soluble Magnesium (1.5%)	0043	1.435	0.0500	1.573	0.1164	0.0355	56	-1.18	121.33	0
121	Acid Soluble Magnesium (1.5%)	0535	1.455	0.0100	1.573	0.1164	0.0355	56	-1.01	121.00	0
121	Acid Soluble Magnesium (1.5%)	0515	1.457	0.0058	1.573	0.1164	0.0355	56	-0.99	121.33	0
121	Acid Soluble Magnesium (1.5%)	0397	1.470	0.0310	1.573	0.1164	0.0355	56	-0.88	121.33	0
121	Acid Soluble Magnesium (1.5%)	0106	1.484	0.0025	1.573	0.1164	0.0355	56	-0.76	121.33	0
121	Acid Soluble Magnesium (1.5%)	0423	1.490	0.0300	1.573	0.1164	0.0355	56	-0.71	121.32	0
121	Acid Soluble Magnesium (1.5%)	0552	1.490	0.0000	1.573	0.1164	0.0355	56	-0.71	121.99	0
121	Acid Soluble Magnesium (1.5%)	0105	1.492	0.0340	1.573	0.1164	0.0355	56	-0.69	121.00	0
121	Acid Soluble Magnesium (1.5%)	0419	1.509	0.0380	1.573	0.1164	0.0355	56	-0.55	121.30	0
121	Acid Soluble Magnesium (1.5%)	0354	1.510	0.1600	1.573	0.1164	0.0355	56	-0.54	121.30	0
121	Acid Soluble Magnesium (1.5%)	0516	1.515	0.0100	1.573	0.1164	0.0355	56	-0.50	121.99	0
121	Acid Soluble Magnesium (1.5%)	0481	1.520	0.0000	1.573	0.1164	0.0355	56	-0.45	121.99	0
121	Acid Soluble Magnesium (1.5%)	0519	1.520	0.0200	1.573	0.1164	0.0355	56	-0.45	121.99	0
121	Acid Soluble Magnesium (1.5%)	0394	1.525	0.0088	1.573	0.1164	0.0355	56	-0.41	121.32	0
121	Acid Soluble Magnesium (1.5%)	0389	1.533	0.0040	1.573	0.1164	0.0355	56	-0.34	121.99	0
121	Acid Soluble Magnesium (1.5%)	0324	1.535	0.1300	1.573	0.1164	0.0355	56	-0.33	121.30	0
121	Acid Soluble Magnesium (1.5%)	0377	1.540	0.0400	1.573	0.1164	0.0355	56	-0.28	121.30	0
121	Acid Soluble Magnesium (1.5%)	0546	1.544	0.0120	1.573	0.1164	0.0355	56	-0.25	121.03	0
121	Acid Soluble Magnesium (1.5%)	0040	1.545	0.0500	1.573	0.1164	0.0355	56	-0.24	121.00	0
121	Acid Soluble Magnesium (1.5%)	0309	1.550	0.0600	1.573	0.1164	0.0355	56	-0.20	121.00	0
121	Acid Soluble Magnesium (1.5%)	0292	1.555	0.0100	1.573	0.1164	0.0355	56	-0.15	121.32	0
121	Acid Soluble Magnesium (1.5%)	0307	1.565	0.0500	1.573	0.1164	0.0355	56	-0.07	121.30	0
121	Acid Soluble Magnesium (1.5%)	0360	1.570	0.0000	1.573	0.1164	0.0355	56	-0.02	121.30	0
121	Acid Soluble Magnesium (1.5%)	0231	1.585	0.1100	1.573	0.1164	0.0355	56	0.10	121.30	0
121	Acid Soluble Magnesium (1.5%)	0028	1.585	0.0100	1.573	0.1164	0.0355	56	0.10	121.32	0
121	Acid Soluble Magnesium (1.5%)	0177	1.587	0.0179	1.573	0.1164	0.0355	56	0.12	121.33	0
121	Acid Soluble Magnesium (1.5%)	0527	1.589	0.0160	1.573	0.1164	0.0355	56	0.14	121.33	0
121	Acid Soluble Magnesium (1.5%)	0498	1.600	0.0000	1.573	0.1164	0.0355	56	0.23	121.00	0
121	Acid Soluble Magnesium (1.5%)	0096	1.605	0.0300	1.573	0.1164	0.0355	56	0.28	121.30	0
121	Acid Soluble Magnesium (1.5%)	0037	1.619	0.0090	1.573	0.1164	0.0355	56	0.39	121.33	0
121	Acid Soluble Magnesium (1.5%)	0102	1.619	0.0206	1.573	0.1164	0.0355	56	0.40	121.30	0
121	Acid Soluble Magnesium (1.5%)	0405	1.620	0.0800	1.573	0.1164	0.0355	56	0.40	121.99	0
121	Acid Soluble Magnesium (1.5%)	0486	1.630	0.0600	1.573	0.1164	0.0355	56	0.49	121.33	0
121	Acid Soluble Magnesium (1.5%)	0023	1.634	0.0080	1.573	0.1164	0.0355	56	0.52	121.33	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
121	Acid Soluble Magnesium (1.5%)	0444	1.640	0.0200	1.573	0.1164	0.0355	56	0.58	121.30	0
121	Acid Soluble Magnesium (1.5%)	0506	1.645	0.0100	1.573	0.1164	0.0355	56	0.62	121.99	0
121	Acid Soluble Magnesium (1.5%)	0234	1.650	0.1000	1.573	0.1164	0.0355	56	0.66	121.30	0
121	Acid Soluble Magnesium (1.5%)	0523	1.650	0.1000	1.573	0.1164	0.0355	56	0.66	121.99	0
121	Acid Soluble Magnesium (1.5%)	0483	1.655	0.0300	1.573	0.1164	0.0355	56	0.71	121.30	0
121	Acid Soluble Magnesium (1.5%)	0390	1.666	0.0150	1.573	0.1164	0.0355	56	0.80	121.30	0
121	Acid Soluble Magnesium (1.5%)	0513	1.690	0.0200	1.573	0.1164	0.0355	56	1.01	121.00	0
121	Acid Soluble Magnesium (1.5%)	0027	1.692	0.0870	1.573	0.1164	0.0355	56	1.02	121.99	0
121	Acid Soluble Magnesium (1.5%)	0368	1.696	0.0279	1.573	0.1164	0.0355	56	1.06	121.99	0
121	Acid Soluble Magnesium (1.5%)	0029	1.717	0.1330	1.573	0.1164	0.0355	56	1.23	121.00	0
121	Acid Soluble Magnesium (1.5%)	0169	1.740	0.0800	1.573	0.1164	0.0355	56	1.44	121.00	0
121	Acid Soluble Magnesium (1.5%)	0472	1.790	0.0000	1.573	0.1164	0.0355	56	1.86	121.30	0
121	Acid Soluble Magnesium (1.5%)	0291	1.795	0.0100	1.573	0.1164	0.0355	56	1.91	121.30	0
121	Acid Soluble Magnesium (1.5%)	0553	1.819	0.0550	1.573	0.1164	0.0355	56	2.11	121.00	0
121	Acid Soluble Magnesium (1.5%)	0520	1.825	0.0100	1.573	0.1164	0.0355	56	2.17	121.99	0
121	Acid Soluble Magnesium (1.5%)	0550	2.515‡	0.0500	1.573	0.1164	0.0355	56	8.09	121.00	0
121	Acid Soluble Magnesium (1.5%)	0482	1.190†	0.2200	1.573	0.1164	0.0355	56	-3.29	121.30	1
121	Acid Soluble Magnesium (1.5%)	0525	1.825	0.2500	1.573	0.1164	0.0355	56	2.17	121.33	1
121	Acid Soluble Magnesium (1.5%)	0200	3.620‡	0.0600	1.573	0.1164	0.0355	56	17.58	121.99	2
131	Water Soluble Magnesium (%)	0444	0.4700	0.0000	1.421	0.7332	0.0861	14	-1.30	131.30	0
131	Water Soluble Magnesium (%)	0309	0.6050	0.0100	1.421	0.7332	0.0861	14	-1.11	131.00	0
131	Water Soluble Magnesium (%)	0546	0.7920	0.3120	1.421	0.7332	0.0861	14	-0.86	131.30	0
131	Water Soluble Magnesium (%)	0518	0.8600	0.1200	1.421	0.7332	0.0861	14	-0.76	131.70	0
131	Water Soluble Magnesium (%)	0501	1.200	0.2000	1.421	0.7332	0.0861	14	-0.30	131.30	0
131	Water Soluble Magnesium (%)	0394	1.335	0.0062	1.421	0.7332	0.0861	14	-0.12	131.30	0
131	Water Soluble Magnesium (%)	0405	1.400	0.0000	1.421	0.7332	0.0861	14	-0.03	131.30	0
131	Water Soluble Magnesium (%)	0506	1.425	0.0500	1.421	0.7332	0.0861	14	0.01	131.99	0
131	Water Soluble Magnesium (%)	0422	1.443	0.0130	1.421	0.7332	0.0861	14	0.03	131.30	0
131	Water Soluble Magnesium (%)	0029	1.518	0.0810	1.421	0.7332	0.0861	14	0.13	131.00	0
131	Water Soluble Magnesium (%)	0520	1.575	0.0100	1.421	0.7332	0.0861	14	0.21	131.99	0
131	Water Soluble Magnesium (%)	0550	2.225	0.3300	1.421	0.7332	0.0861	14	1.10	131.00	0
131	Water Soluble Magnesium (%)	0510	2.678	0.0237	1.421	0.7332	0.0861	14	1.71	131.70	0
131	Water Soluble Magnesium (%)	0200	2.815	0.0500	1.421	0.7332	0.0861	14	1.90	131.99	0
143	Elemental Sulfur (%)	0095	0.1050	0.0900	10.18	1.287	0.0829	7	-7.08	143.00	0
143	Elemental Sulfur (%)	0255	9.354	0.2700	10.18	1.287	0.0829	7	-0.58	143.99	0
143	Elemental Sulfur (%)	0472	9.805	0.0100	10.18	1.287	0.0829	7	-0.26	143.99	0
143	Elemental Sulfur (%)	0481	10.23	0.0700	10.18	1.287	0.0829	7	0.03	143.99	0
143	Elemental Sulfur (%)	0390	11.12	0.0700	10.18	1.287	0.0829	7	0.66	143.99	0
143	Elemental Sulfur (%)	0389	11.17	0.0600	10.18	1.287	0.0829	7	0.70	143.99	0
143	Elemental Sulfur (%)	0291	11.33	0.0100	10.18	1.287	0.0829	7	0.81	143.99	0
145	Sulfate Sulfur, HCl soluble (%)	0476	9.002	0.2496	10.71	0.5566	0.1494	13	-3.08	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0444	9.715	0.4300	10.71	0.5566	0.1494	13	-1.80	145.99	0
145	Sulfate Sulfur, HCl soluble (%)	0200	10.36	0.0600	10.71	0.5566	0.1494	13	-0.64	145.99	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
145	Sulfate Sulfur, HCl soluble (%)	0444	10.58	0.1900	10.71	0.5566	0.1494	13	-0.25	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0106	10.67	0.1800	10.71	0.5566	0.1494	13	-0.08	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0405	10.74	0.0800	10.71	0.5566	0.1494	13	0.05	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0095	10.75	0.0400	10.71	0.5566	0.1494	13	0.06	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0498	10.75	0.1000	10.71	0.5566	0.1494	13	0.06	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0522	10.77	0.0100	10.71	0.5566	0.1494	13	0.09	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0544	10.91	0.0100	10.71	0.5566	0.1494	13	0.34	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0027	11.04	0.0200	10.71	0.5566	0.1494	13	0.58	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0550	11.43	0.5700	10.71	0.5566	0.1494	13	1.28	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0397	11.65	0.0030	10.71	0.5566	0.1494	13	1.68	145.00	0
148	Total Sulfur (10%)	0515	7.171†	0.6788	10.76	0.3977	0.2113	47	-9.03	148.07	0
148	Total Sulfur (10%)	0523	9.285†	0.1500	10.76	0.3977	0.2113	47	-3.71	148.99	0
148	Total Sulfur (10%)	0542	9.905†	0.1100	10.76	0.3977	0.2113	47	-2.15	148.07	0
148	Total Sulfur (10%)	0096	9.975†	0.6900	10.76	0.3977	0.2113	47	-1.98	148.99	0
148	Total Sulfur (10%)	0519	10.10	0.0200	10.76	0.3977	0.2113	47	-1.66	148.99	0
148	Total Sulfur (10%)	0527	10.27	0.2212	10.76	0.3977	0.2113	47	-1.24	148.07	0
148	Total Sulfur (10%)	0114	10.30	0.1200	10.76	0.3977	0.2113	47	-1.16	148.00	0
148	Total Sulfur (10%)	0516	10.35	0.9100	10.76	0.3977	0.2113	47	-1.05	148.99	0
148	Total Sulfur (10%)	0043	10.39	0.4000	10.76	0.3977	0.2113	47	-0.93	148.07	0
148	Total Sulfur (10%)	0037	10.43	0.2810	10.76	0.3977	0.2113	47	-0.83	148.07	0
148	Total Sulfur (10%)	0394	10.47	0.0350	10.76	0.3977	0.2113	47	-0.74	148.07	0
148	Total Sulfur (10%)	0422	10.54	0.3200	10.76	0.3977	0.2113	47	-0.56	148.99	0
148	Total Sulfur (10%)	0501	10.55	0.1000	10.76	0.3977	0.2113	47	-0.53	148.99	0
148	Total Sulfur (10%)	0025	10.64	0.1300	10.76	0.3977	0.2113	47	-0.32	148.00	0
148	Total Sulfur (10%)	0444	10.64	0.3800	10.76	0.3977	0.2113	47	-0.30	148.01	0
148	Total Sulfur (10%)	0506	10.65	0.1000	10.76	0.3977	0.2113	47	-0.28	148.99	0
148	Total Sulfur (10%)	0023	10.69	0.0260	10.76	0.3977	0.2113	47	-0.19	148.07	0
148	Total Sulfur (10%)	0292	10.69	0.0800	10.76	0.3977	0.2113	47	-0.18	148.07	0
148	Total Sulfur (10%)	0368	10.70	0.0183	10.76	0.3977	0.2113	47	-0.16	148.99	0
148	Total Sulfur (10%)	0444	10.73	0.2900	10.76	0.3977	0.2113	47	-0.09	148.07	0
148	Total Sulfur (10%)	0029	10.74	0.0700	10.76	0.3977	0.2113	47	-0.07	148.00	0
148	Total Sulfur (10%)	0230	10.75	0.1000	10.76	0.3977	0.2113	47	-0.03	148.01	0
148	Total Sulfur (10%)	0231	10.75	0.1000	10.76	0.3977	0.2113	47	-0.03	148.01	0
148	Total Sulfur (10%)	0405	10.76	0.0900	10.76	0.3977	0.2113	47	-0.02	148.01	0
148	Total Sulfur (10%)	0482	10.80	0.0000	10.76	0.3977	0.2113	47	0.10	148.99	0
148	Total Sulfur (10%)	0433	10.82	0.0600	10.76	0.3977	0.2113	47	0.15	148.99	0
148	Total Sulfur (10%)	0029	10.84	0.1600	10.76	0.3977	0.2113	47	0.20	148.01	0
148	Total Sulfur (10%)	0486	10.84	0.1800	10.76	0.3977	0.2113	47	0.20	148.07	0
148	Total Sulfur (10%)	0095	10.86	0.1300	10.76	0.3977	0.2113	47	0.24	148.01	0
148	Total Sulfur (10%)	0177	10.86	0.0924	10.76	0.3977	0.2113	47	0.25	148.07	0
148	Total Sulfur (10%)	0102	10.89	1.003	10.76	0.3977	0.2113	47	0.33	148.07	0
148	Total Sulfur (10%)	0028	10.90	0.1300	10.76	0.3977	0.2113	47	0.34	148.01	0
148	Total Sulfur (10%)	0483	10.90	0.4000	10.76	0.3977	0.2113	47	0.35	148.07	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
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148	Total Sulfur (10%)	0040	10.90	0.2000	10.76	0.3977	0.2113	47	0.35	148.07	0
148	Total Sulfur (10%)	0520	10.91	0.1100	10.76	0.3977	0.2113	47	0.36	148.99	0
148	Total Sulfur (10%)	0513	10.92	0.0100	10.76	0.3977	0.2113	47	0.39	148.01	0
148	Total Sulfur (10%)	0157	11.00	0.0000	10.76	0.3977	0.2113	47	0.60	148.00	0
148	Total Sulfur (10%)	0402	11.03	0.0633	10.76	0.3977	0.2113	47	0.66	148.07	0
148	Total Sulfur (10%)	0371	11.10	0.0000	10.76	0.3977	0.2113	47	0.85	148.01	0
148	Total Sulfur (10%)	0525	11.11	0.9200	10.76	0.3977	0.2113	47	0.88	148.07	0
148	Total Sulfur (10%)	0451	11.25	0.3000	10.76	0.3977	0.2113	47	1.23	148.00	0
148	Total Sulfur (10%)	0324	11.25	0.1000	10.76	0.3977	0.2113	47	1.23	148.01	0
148	Total Sulfur (10%)	0546	11.44	0.1400	10.76	0.3977	0.2113	47	1.71	148.07	0
148	Total Sulfur (10%)	0049	11.67‡	0.0900	10.76	0.3977	0.2113	47	2.27	148.00	0
148	Total Sulfur (10%)	0220	11.82‡	0.3000	10.76	0.3977	0.2113	47	2.66	148.99	0
148	Total Sulfur (10%)	0072	12.00‡	0.0600	10.76	0.3977	0.2113	47	3.12	148.99	0
148	Total Sulfur (10%)	0307	12.37‡	0.0600	10.76	0.3977	0.2113	47	4.05	148.99	0
148	Total Sulfur (10%)	0354	10.41	1.190	10.76	0.3977	0.2113	47	-0.90	148.99	1
149	Sulfur - HNO3 soluble (%)	0518	9.710	0.2200	10.69	1.124	0.6798	3	-0.87	149.02	0
149	Sulfur - HNO3 soluble (%)	0423	10.45	0.0600	10.69	1.124	0.6798	3	-0.22	149.04	0
149	Sulfur - HNO3 soluble (%)	0524	11.92	1.759	10.69	1.124	0.6798	3	1.09	149.04	0
151	Acid Soluble Arsenic (ppm)	0506	0.1845	0.0310	1.319	0.6091	0.1193	14	-1.86	151.99	0
151	Acid Soluble Arsenic (ppm)	0368	0.6199	0.1758	1.319	0.6091	0.1193	14	-1.15	151.34	0
151	Acid Soluble Arsenic (ppm)	0394	0.9500	0.0200	1.319	0.6091	0.1193	14	-0.61	151.30	0
151	Acid Soluble Arsenic (ppm)	0498	0.9750	0.0900	1.319	0.6091	0.1193	14	-0.56	151.00	0
151	Acid Soluble Arsenic (ppm)	0405	1.000	0.0000	1.319	0.6091	0.1193	14	-0.52	151.99	0
151	Acid Soluble Arsenic (ppm)	0519	1.105	0.0100	1.319	0.6091	0.1193	14	-0.35	151.99	0
151	Acid Soluble Arsenic (ppm)	0476	1.149	0.1004	1.319	0.6091	0.1193	14	-0.28	151.99	0
151	Acid Soluble Arsenic (ppm)	0220	1.250	0.3000	1.319	0.6091	0.1193	14	-0.11	151.99	0
151	Acid Soluble Arsenic (ppm)	0255	1.450	0.0310	1.319	0.6091	0.1193	14	0.21	151.30	0
151	Acid Soluble Arsenic (ppm)	0515	1.624	0.5600	1.319	0.6091	0.1193	14	0.50	151.34	0
151	Acid Soluble Arsenic (ppm)	0102	1.767	0.0000	1.319	0.6091	0.1193	14	0.74	151.30	0
151	Acid Soluble Arsenic (ppm)	0501	1.951	0.0590	1.319	0.6091	0.1193	14	1.04	151.30	0
151	Acid Soluble Arsenic (ppm)	0527	1.988	0.0886	1.319	0.6091	0.1193	14	1.10	151.33	0
151	Acid Soluble Arsenic (ppm)	0524	3.042	0.2040	1.319	0.6091	0.1193	14	2.83	151.30	0
151	Acid Soluble Arsenic (ppm)	0515	5.932	4.759	1.319	0.6091	0.1193	14	7.57	151.33	1
165	Acid Soluble Boron (0.05%)	0476	0.03025†	0.0003	0.0476	0.0039	0.0011	44	-4.41	165.99	0
165	Acid Soluble Boron (0.05%)	0255	0.0390	0.0000	0.0476	0.0039	0.0011	44	-2.18	165.99	0
165	Acid Soluble Boron (0.05%)	0498	0.0400	0.0000	0.0476	0.0039	0.0011	44	-1.92	165.00	0
165	Acid Soluble Boron (0.05%)	0354	0.0400	0.0000	0.0476	0.0039	0.0011	44	-1.92	165.30	0
165	Acid Soluble Boron (0.05%)	0472	0.0400	0.0000	0.0476	0.0039	0.0011	44	-1.92	165.99	0
165	Acid Soluble Boron (0.05%)	0486	0.0400	0.0000	0.0476	0.0039	0.0011	44	-1.92	165.99	0
165	Acid Soluble Boron (0.05%)	0169	0.0412	0.0034	0.0476	0.0039	0.0011	44	-1.62	165.00	0
165	Acid Soluble Boron (0.05%)	0397	0.0427	0.0012	0.0476	0.0039	0.0011	44	-1.24	165.00	0
165	Acid Soluble Boron (0.05%)	0515	0.0434	0.0022	0.0476	0.0039	0.0011	44	-1.06	165.99	0
165	Acid Soluble Boron (0.05%)	0423	0.0445	0.0010	0.0476	0.0039	0.0011	44	-0.78	165.99	0

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165	Acid Soluble Boron (0.05%)	0419	0.0449	0.0010	0.0476	0.0039	0.0011	44	-0.68	165.99	0
165	Acid Soluble Boron (0.05%)	0389	0.0453	0.0002	0.0476	0.0039	0.0011	44	-0.58	165.30	0
165	Acid Soluble Boron (0.05%)	0390	0.0456	0.0050	0.0476	0.0039	0.0011	44	-0.50	165.30	0
165	Acid Soluble Boron (0.05%)	0324	0.0465	0.0010	0.0476	0.0039	0.0011	44	-0.27	165.30	0
165	Acid Soluble Boron (0.05%)	0043	0.0470	0.0020	0.0476	0.0039	0.0011	44	-0.14	165.30	0
165	Acid Soluble Boron (0.05%)	0394	0.0471	0.0004	0.0476	0.0039	0.0011	44	-0.12	165.30	0
165	Acid Soluble Boron (0.05%)	0524	0.0471	0.0042	0.0476	0.0039	0.0011	44	-0.12	165.99	0
165	Acid Soluble Boron (0.05%)	0377	0.0475	0.0030	0.0476	0.0039	0.0011	44	-0.02	165.30	0
165	Acid Soluble Boron (0.05%)	0360	0.0475	0.0010	0.0476	0.0039	0.0011	44	-0.02	165.99	0
165	Acid Soluble Boron (0.05%)	0542	0.0476	0.0006	0.0476	0.0039	0.0011	44	0.01	165.30	0
165	Acid Soluble Boron (0.05%)	0220	0.0480	0.0020	0.0476	0.0039	0.0011	44	0.11	165.00	0
165	Acid Soluble Boron (0.05%)	0433	0.0485	0.0010	0.0476	0.0039	0.0011	44	0.24	165.30	0
165	Acid Soluble Boron (0.05%)	0546	0.0489	0.0018	0.0476	0.0039	0.0011	44	0.34	165.99	0
165	Acid Soluble Boron (0.05%)	0029	0.0490	0.0020	0.0476	0.0039	0.0011	44	0.37	165.00	0
165	Acid Soluble Boron (0.05%)	0307	0.0490	0.0020	0.0476	0.0039	0.0011	44	0.37	165.30	0
165	Acid Soluble Boron (0.05%)	0444	0.0490	0.0000	0.0476	0.0039	0.0011	44	0.37	165.30	0
165	Acid Soluble Boron (0.05%)	0506	0.0495	0.0010	0.0476	0.0039	0.0011	44	0.49	165.00	0
165	Acid Soluble Boron (0.05%)	0405	0.0500	0.0020	0.0476	0.0039	0.0011	44	0.62	165.00	0
165	Acid Soluble Boron (0.05%)	0481	0.0500	0.0000	0.0476	0.0039	0.0011	44	0.62	165.00	0
165	Acid Soluble Boron (0.05%)	0534	0.0500	0.0000	0.0476	0.0039	0.0011	44	0.62	165.00	0
165	Acid Soluble Boron (0.05%)	0234	0.0500	0.0000	0.0476	0.0039	0.0011	44	0.62	165.30	0
165	Acid Soluble Boron (0.05%)	0200	0.0500	0.0000	0.0476	0.0039	0.0011	44	0.62	165.99	0
165	Acid Soluble Boron (0.05%)	0231	0.0500	0.0000	0.0476	0.0039	0.0011	44	0.62	165.99	0
165	Acid Soluble Boron (0.05%)	0291	0.0500	0.0000	0.0476	0.0039	0.0011	44	0.62	165.99	0
165	Acid Soluble Boron (0.05%)	0482	0.0500	0.0000	0.0476	0.0039	0.0011	44	0.62	165.99	0
165	Acid Soluble Boron (0.05%)	0501	0.0500	0.0000	0.0476	0.0039	0.0011	44	0.62	165.99	0
165	Acid Soluble Boron (0.05%)	0535	0.0505	0.0010	0.0476	0.0039	0.0011	44	0.75	165.00	0
165	Acid Soluble Boron (0.05%)	0519	0.0505	0.0010	0.0476	0.0039	0.0011	44	0.75	165.99	0
165	Acid Soluble Boron (0.05%)	0550	0.0509	0.0035	0.0476	0.0039	0.0011	44	0.84	165.00	0
165	Acid Soluble Boron (0.05%)	0540	0.0510	0.0020	0.0476	0.0039	0.0011	44	0.87	165.00	0
165	Acid Soluble Boron (0.05%)	0368	0.0513	0.0005	0.0476	0.0039	0.0011	44	0.94	165.99	0
165	Acid Soluble Boron (0.05%)	0106	0.0516	0.0007	0.0476	0.0039	0.0011	44	1.01	165.30	0
165	Acid Soluble Boron (0.05%)	0483	0.0547	0.0027	0.0476	0.0039	0.0011	44	1.80	165.99	0
165	Acid Soluble Boron (0.05%)	0527	0.0569	0.0003	0.0476	0.0039	0.0011	44	2.36	165.99	0
165	Acid Soluble Boron (0.05%)	0516	0.06500‡	0.0100	0.0476	0.0039	0.0011	44	4.44	165.99	1
165	Acid Soluble Boron (0.05%)	0552	0.00000†	0.0000	0.0476	0.0039	0.0011	44		165.99	4
171	Water Soluble Boron (%)	0402	0.0441	0.0043	0.0464	0.0017	0.0025	5	-1.36	171.99	0
171	Water Soluble Boron (%)	0444	0.0455	0.0010	0.0464	0.0017	0.0025	5	-0.53	171.99	0
171	Water Soluble Boron (%)	0553	0.0465	0.0014	0.0464	0.0017	0.0025	5	0.05	171.10	0
171	Water Soluble Boron (%)	0540	0.0475	0.0050	0.0464	0.0017	0.0025	5	0.63	171.00	0
171	Water Soluble Boron (%)	0535	0.0485	0.0010	0.0464	0.0017	0.0025	5	1.21	171.10	0
181	Acid Soluble Cadmium (ppm)	0506	0.0465	0.0030	0.1295	0.0690	0.0185	14	-1.20	181.99	0
181	Acid Soluble Cadmium (ppm)	0255	0.0560	0.0000	0.1295	0.0690	0.0185	14	-1.07	181.30	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
181	Acid Soluble Cadmium (ppm)	0405	0.0800	0.0200	0.1295	0.0690	0.0185	14	-0.72	181.99	0
181	Acid Soluble Cadmium (ppm)	0550	0.0843	0.1114	0.1295	0.0690	0.0185	14	-0.66	181.00	0
181	Acid Soluble Cadmium (ppm)	0389	0.0890	0.0020	0.1295	0.0690	0.0185	14	-0.59	181.30	0
181	Acid Soluble Cadmium (ppm)	0501	0.1000	0.0000	0.1295	0.0690	0.0185	14	-0.43	181.30	0
181	Acid Soluble Cadmium (ppm)	0394	0.1100	0.0000	0.1295	0.0690	0.0185	14	-0.28	181.30	0
181	Acid Soluble Cadmium (ppm)	0524	0.1110	0.0160	0.1295	0.0690	0.0185	14	-0.27	181.30	0
181	Acid Soluble Cadmium (ppm)	0527	0.1458	0.0057	0.1295	0.0690	0.0185	14	0.23	181.33	0
181	Acid Soluble Cadmium (ppm)	0482	0.1650	0.0700	0.1295	0.0690	0.0185	14	0.51	181.30	0
181	Acid Soluble Cadmium (ppm)	0498	0.1750	0.0100	0.1295	0.0690	0.0185	14	0.66	181.00	0
181	Acid Soluble Cadmium (ppm)	0519	0.1850	0.0100	0.1295	0.0690	0.0185	14	0.80	181.99	0
181	Acid Soluble Cadmium (ppm)	0220	0.4000	0.0000	0.1295	0.0690	0.0185	14	3.92	181.99	0
181	Acid Soluble Cadmium (ppm)	0102	1.043	0.0110	0.1295	0.0690	0.0185	14	13.23	181.30	0
181	Acid Soluble Cadmium (ppm)	0515	4.818	3.474	0.1295	0.0690	0.0185	14	67.94	181.33	2
181	Acid Soluble Cadmium (ppm)	0368	0.0000	0.0000	0.1295	0.0690	0.0185	14		181.34	4
181	Acid Soluble Cadmium (ppm)	0515	0.0000	0.0000	0.1295	0.0690	0.0185	14		181.34	4
181	Acid Soluble Cadmium (ppm)	0200	0.0000	0.0000	0.1295	0.0690	0.0185	14		181.99	4
191	Acid Soluble Chromium (ppm)	0506	0.0810	0.0080	10.79	4.541	0.7198	19	-2.36	191.99	0
191	Acid Soluble Chromium (ppm)	0550	3.650	2.140	10.79	4.541	0.7198	19	-1.57	191.00	0
191	Acid Soluble Chromium (ppm)	0519	4.545	0.0100	10.79	4.541	0.7198	19	-1.38	191.99	0
191	Acid Soluble Chromium (ppm)	0498	6.360	0.4800	10.79	4.541	0.7198	19	-0.98	191.00	0
191	Acid Soluble Chromium (ppm)	0524	7.745	0.0100	10.79	4.541	0.7198	19	-0.67	191.30	0
191	Acid Soluble Chromium (ppm)	0482	9.400	1.200	10.79	4.541	0.7198	19	-0.31	191.30	0
191	Acid Soluble Chromium (ppm)	0096	9.550	0.3000	10.79	4.541	0.7198	19	-0.27	191.30	0
191	Acid Soluble Chromium (ppm)	0444	10.82	0.6900	10.79	4.541	0.7198	19	0.00	191.30	0
191	Acid Soluble Chromium (ppm)	0405	11.00	0.0000	10.79	4.541	0.7198	19	0.05	191.99	0
191	Acid Soluble Chromium (ppm)	0394	11.40	0.4000	10.79	4.541	0.7198	19	0.13	191.30	0
191	Acid Soluble Chromium (ppm)	0527	11.49	0.0948	10.79	4.541	0.7198	19	0.15	191.33	0
191	Acid Soluble Chromium (ppm)	0501	11.93	0.0900	10.79	4.541	0.7198	19	0.25	191.30	0
191	Acid Soluble Chromium (ppm)	0368	12.76	1.376	10.79	4.541	0.7198	19	0.43	191.34	0
191	Acid Soluble Chromium (ppm)	0037	13.39	0.0620	10.79	4.541	0.7198	19	0.57	191.33	0
191	Acid Soluble Chromium (ppm)	0102	13.70	0.7510	10.79	4.541	0.7198	19	0.64	191.30	0
191	Acid Soluble Chromium (ppm)	0476	14.99	0.0060	10.79	4.541	0.7198	19	0.92	191.99	0
191	Acid Soluble Chromium (ppm)	0515	15.02	3.228	10.79	4.541	0.7198	19	0.93	191.34	0
191	Acid Soluble Chromium (ppm)	0220	15.40	0.2000	10.79	4.541	0.7198	19	1.01	191.99	0
191	Acid Soluble Chromium (ppm)	0389	17.68	2.630	10.79	4.541	0.7198	19	1.52	191.30	0
191	Acid Soluble Chromium (ppm)	0515	17.18	5.307	10.79	4.541	0.7198	19	1.41	191.33	1
191	Acid Soluble Chromium (ppm)	0200	0.0000	0.0000	10.79	4.541	0.7198	19		191.99	4
202	Acid Soluble Cobalt (ppm)	0389	1.062	0.1360	1.980	0.4836	0.1431	17	-1.90	202.30	0
202	Acid Soluble Cobalt (ppm)	0506	1.460	0.3600	1.980	0.4836	0.1431	17	-1.08	202.99	0
202	Acid Soluble Cobalt (ppm)	0255	1.465	0.0240	1.980	0.4836	0.1431	17	-1.06	202.99	0
202	Acid Soluble Cobalt (ppm)	0482	1.475	0.1500	1.980	0.4836	0.1431	17	-1.04	202.30	0
202	Acid Soluble Cobalt (ppm)	0096	1.630	0.0600	1.980	0.4836	0.1431	17	-0.72	202.30	0
202	Acid Soluble Cobalt (ppm)	0519	1.830	0.0200	1.980	0.4836	0.1431	17	-0.31	202.99	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
202	Acid Soluble Cobalt (ppm)	0423	1.865	0.0700	1.980	0.4836	0.1431	17	-0.24	202.32	0
202	Acid Soluble Cobalt (ppm)	0476	1.899	0.2006	1.980	0.4836	0.1431	17	-0.17	202.99	0
202	Acid Soluble Cobalt (ppm)	0524	1.952	0.1427	1.980	0.4836	0.1431	17	-0.06	202.30	0
202	Acid Soluble Cobalt (ppm)	0405	2.100	0.0000	1.980	0.4836	0.1431	17	0.25	202.99	0
202	Acid Soluble Cobalt (ppm)	0501	2.140	0.0000	1.980	0.4836	0.1431	17	0.33	202.34	0
202	Acid Soluble Cobalt (ppm)	0102	2.190	0.2010	1.980	0.4836	0.1431	17	0.43	202.30	0
202	Acid Soluble Cobalt (ppm)	0527	2.318	0.0110	1.980	0.4836	0.1431	17	0.70	202.33	0
202	Acid Soluble Cobalt (ppm)	0220	2.350	0.1000	1.980	0.4836	0.1431	17	0.77	202.99	0
202	Acid Soluble Cobalt (ppm)	0515	2.494	0.5470	1.980	0.4836	0.1431	17	1.06	202.34	0
202	Acid Soluble Cobalt (ppm)	0037	2.538	0.0390	1.980	0.4836	0.1431	17	1.15	202.33	0
202	Acid Soluble Cobalt (ppm)	0368	2.700	0.3714	1.980	0.4836	0.1431	17	1.49	202.34	0
202	Acid Soluble Cobalt (ppm)	0515	4.681	3.908	1.980	0.4836	0.1431	17	5.59	202.33	1
221	Acid Soluble Copper (0.05%)	0476	0.0292	0.0009	0.0356	0.0040	0.0020	50	-1.59	221.99	0
221	Acid Soluble Copper (0.05%)	0234	0.0300	0.0200	0.0356	0.0040	0.0020	50	-1.38	221.30	0
221	Acid Soluble Copper (0.05%)	0354	0.0300	0.0000	0.0356	0.0040	0.0020	50	-1.38	221.30	0
221	Acid Soluble Copper (0.05%)	0472	0.0300	0.0000	0.0356	0.0040	0.0020	50	-1.38	221.30	0
221	Acid Soluble Copper (0.05%)	0486	0.0300	0.0000	0.0356	0.0040	0.0020	50	-1.38	221.33	0
221	Acid Soluble Copper (0.05%)	0291	0.0300	0.0000	0.0356	0.0040	0.0020	50	-1.38	221.99	0
221	Acid Soluble Copper (0.05%)	0481	0.0300	0.0000	0.0356	0.0040	0.0020	50	-1.38	221.99	0
221	Acid Soluble Copper (0.05%)	0523	0.0315	0.0010	0.0356	0.0040	0.0020	50	-1.01	221.99	0
221	Acid Soluble Copper (0.05%)	0029	0.0317	0.0059	0.0356	0.0040	0.0020	50	-0.97	221.00	0
221	Acid Soluble Copper (0.05%)	0531	0.0320	0.0040	0.0356	0.0040	0.0020	50	-0.88	221.00	0
221	Acid Soluble Copper (0.05%)	0540	0.0325	0.0030	0.0356	0.0040	0.0020	50	-0.76	221.00	0
221	Acid Soluble Copper (0.05%)	0524	0.0325	0.0008	0.0356	0.0040	0.0020	50	-0.76	221.99	0
221	Acid Soluble Copper (0.05%)	0324	0.0330	0.0020	0.0356	0.0040	0.0020	50	-0.64	221.30	0
221	Acid Soluble Copper (0.05%)	0389	0.0330	0.0000	0.0356	0.0040	0.0020	50	-0.64	221.99	0
221	Acid Soluble Copper (0.05%)	0535	0.0335	0.0030	0.0356	0.0040	0.0020	50	-0.51	221.00	0
221	Acid Soluble Copper (0.05%)	0433	0.0335	0.0010	0.0356	0.0040	0.0020	50	-0.51	221.30	0
221	Acid Soluble Copper (0.05%)	0043	0.0340	0.0000	0.0356	0.0040	0.0020	50	-0.39	221.33	0
221	Acid Soluble Copper (0.05%)	0550	0.0345	0.0054	0.0356	0.0040	0.0020	50	-0.26	221.00	0
221	Acid Soluble Copper (0.05%)	0419	0.0346	0.0019	0.0356	0.0040	0.0020	50	-0.25	221.30	0
221	Acid Soluble Copper (0.05%)	0102	0.0348	0.0077	0.0356	0.0040	0.0020	50	-0.20	221.30	0
221	Acid Soluble Copper (0.05%)	0220	0.0350	0.0020	0.0356	0.0040	0.0020	50	-0.14	221.32	0
221	Acid Soluble Copper (0.05%)	0546	0.0350	0.0004	0.0356	0.0040	0.0020	50	-0.14	221.33	0
221	Acid Soluble Copper (0.05%)	0028	0.0352	0.0006	0.0356	0.0040	0.0020	50	-0.09	221.32	0
221	Acid Soluble Copper (0.05%)	0360	0.0353	0.0002	0.0356	0.0040	0.0020	50	-0.06	221.30	0
221	Acid Soluble Copper (0.05%)	0394	0.0353	0.0004	0.0356	0.0040	0.0020	50	-0.06	221.32	0
221	Acid Soluble Copper (0.05%)	0515	0.0354	0.0025	0.0356	0.0040	0.0020	50	-0.05	221.99	0
221	Acid Soluble Copper (0.05%)	0515	0.0355	0.0011	0.0356	0.0040	0.0020	50	-0.03	221.33	0
221	Acid Soluble Copper (0.05%)	0405	0.0360	0.0040	0.0356	0.0040	0.0020	50	0.11	221.99	0
221	Acid Soluble Copper (0.05%)	0527	0.0364	0.0027	0.0356	0.0040	0.0020	50	0.20	221.33	0
221	Acid Soluble Copper (0.05%)	0423	0.0365	0.0010	0.0356	0.0040	0.0020	50	0.23	221.32	0
221	Acid Soluble Copper (0.05%)	0255	0.0370	0.0120	0.0356	0.0040	0.0020	50	0.36	221.30	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
221	Acid Soluble Copper (0.05%)	0444	0.0370	0.0020	0.0356	0.0040	0.0020	50	0.36	221.30	0
221	Acid Soluble Copper (0.05%)	0105	0.0371	0.0010	0.0356	0.0040	0.0020	50	0.38	221.00	0
221	Acid Soluble Copper (0.05%)	0483	0.0373	0.0014	0.0356	0.0040	0.0020	50	0.43	221.30	0
221	Acid Soluble Copper (0.05%)	0377	0.0375	0.0010	0.0356	0.0040	0.0020	50	0.48	221.30	0
221	Acid Soluble Copper (0.05%)	0506	0.0375	0.0010	0.0356	0.0040	0.0020	50	0.48	221.99	0
221	Acid Soluble Copper (0.05%)	0368	0.0379	0.0003	0.0356	0.0040	0.0020	50	0.57	221.99	0
221	Acid Soluble Copper (0.05%)	0106	0.0382	0.0014	0.0356	0.0040	0.0020	50	0.66	221.33	0
221	Acid Soluble Copper (0.05%)	0040	0.0387	0.0003	0.0356	0.0040	0.0020	50	0.77	221.00	0
221	Acid Soluble Copper (0.05%)	0096	0.0390	0.0002	0.0356	0.0040	0.0020	50	0.85	221.30	0
221	Acid Soluble Copper (0.05%)	0037	0.0390	0.0000	0.0356	0.0040	0.0020	50	0.85	221.33	0
221	Acid Soluble Copper (0.05%)	0231	0.0400	0.0000	0.0356	0.0040	0.0020	50	1.10	221.30	0
221	Acid Soluble Copper (0.05%)	0371	0.0400	0.0000	0.0356	0.0040	0.0020	50	1.10	221.30	0
221	Acid Soluble Copper (0.05%)	0482	0.0400	0.0000	0.0356	0.0040	0.0020	50	1.10	221.30	0
221	Acid Soluble Copper (0.05%)	0027	0.0400	0.0000	0.0356	0.0040	0.0020	50	1.10	221.99	0
221	Acid Soluble Copper (0.05%)	0516	0.0400	0.0000	0.0356	0.0040	0.0020	50	1.10	221.99	0
221	Acid Soluble Copper (0.05%)	0402	0.0413	0.0013	0.0356	0.0040	0.0020	50	1.41	221.30	0
221	Acid Soluble Copper (0.05%)	0519	0.04450‡	0.0050	0.0356	0.0040	0.0020	50	2.22	221.99	0
221	Acid Soluble Copper (0.05%)	0534	0.04550‡	0.0030	0.0356	0.0040	0.0020	50	2.47	221.00	0
221	Acid Soluble Copper (0.05%)	0200	0.05000‡	0.0000	0.0356	0.0040	0.0020	50	3.59	221.00	0
221	Acid Soluble Copper (0.05%)	0553	0.2019‡	0.3303	0.0356	0.0040	0.0020	50	41.31	221.00	1
221	Acid Soluble Copper (0.05%)	0498	0.3000‡	0.0000	0.0356	0.0040	0.0020	50	65.69	221.00	2
221	Acid Soluble Copper (0.05%)	0552	0.01500†	0.0300	0.0356	0.0040	0.0020	50		221.30	4
241	Acid Soluble Iron (0.1%)	0498	0.08000†	0.0000	0.1313	0.0165	0.0039	52	-3.10	241.00	0
241	Acid Soluble Iron (0.1%)	0476	0.08810†	0.0038	0.1313	0.0165	0.0039	52	-2.61	241.99	0
241	Acid Soluble Iron (0.1%)	0402	0.09880†	0.0052	0.1313	0.0165	0.0039	52	-1.97	241.30	0
241	Acid Soluble Iron (0.1%)	0234	0.1000†	0.0000	0.1313	0.0165	0.0039	52	-1.89	241.32	0
241	Acid Soluble Iron (0.1%)	0519	0.1015†	0.0010	0.1313	0.0165	0.0039	52	-1.80	241.99	0
241	Acid Soluble Iron (0.1%)	0531	0.1050†	0.0100	0.1313	0.0165	0.0039	52	-1.59	241.00	0
241	Acid Soluble Iron (0.1%)	0535	0.1050†	0.0100	0.1313	0.0165	0.0039	52	-1.59	241.00	0
241	Acid Soluble Iron (0.1%)	0501	0.1050†	0.0100	0.1313	0.0165	0.0039	52	-1.59	241.99	0
241	Acid Soluble Iron (0.1%)	0506	0.1055†	0.0010	0.1313	0.0165	0.0039	52	-1.56	241.99	0
241	Acid Soluble Iron (0.1%)	0371	0.1200	0.0000	0.1313	0.0165	0.0039	52	-0.69	241.30	0
241	Acid Soluble Iron (0.1%)	0481	0.1200	0.0000	0.1313	0.0165	0.0039	52	-0.69	241.99	0
241	Acid Soluble Iron (0.1%)	0524	0.1208	0.0005	0.1313	0.0165	0.0039	52	-0.64	241.99	0
241	Acid Soluble Iron (0.1%)	0397	0.1239	0.0037	0.1313	0.0165	0.0039	52	-0.45	241.33	0
241	Acid Soluble Iron (0.1%)	0540	0.1250	0.0100	0.1313	0.0165	0.0039	52	-0.38	241.00	0
241	Acid Soluble Iron (0.1%)	0354	0.1250	0.0100	0.1313	0.0165	0.0039	52	-0.38	241.30	0
241	Acid Soluble Iron (0.1%)	0255	0.1260	0.0040	0.1313	0.0165	0.0039	52	-0.32	241.30	0
241	Acid Soluble Iron (0.1%)	0523	0.1260	0.0040	0.1313	0.0165	0.0039	52	-0.32	241.99	0
241	Acid Soluble Iron (0.1%)	0106	0.1269	0.0020	0.1313	0.0165	0.0039	52	-0.27	241.33	0
241	Acid Soluble Iron (0.1%)	0546	0.1275	0.0050	0.1313	0.0165	0.0039	52	-0.23	241.33	0
241	Acid Soluble Iron (0.1%)	0389	0.1275	0.0010	0.1313	0.0165	0.0039	52	-0.23	241.99	0
241	Acid Soluble Iron (0.1%)	0291	0.1300	0.0000	0.1313	0.0165	0.0039	52	-0.08	241.30	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
241	Acid Soluble Iron (0.1%)	0433	0.1300	0.0040	0.1313	0.0165	0.0039	52	-0.08	241.30	0
241	Acid Soluble Iron (0.1%)	0043	0.1300	0.0000	0.1313	0.0165	0.0039	52	-0.08	241.33	0
241	Acid Soluble Iron (0.1%)	0177	0.1300	0.0018	0.1313	0.0165	0.0039	52	-0.08	241.33	0
241	Acid Soluble Iron (0.1%)	0486	0.1300	0.0000	0.1313	0.0165	0.0039	52	-0.08	241.33	0
241	Acid Soluble Iron (0.1%)	0324	0.1310	0.0100	0.1313	0.0165	0.0039	52	-0.02	241.30	0
241	Acid Soluble Iron (0.1%)	0423	0.1330	0.0020	0.1313	0.0165	0.0039	52	0.10	241.32	0
241	Acid Soluble Iron (0.1%)	0444	0.1350	0.0100	0.1313	0.0165	0.0039	52	0.22	241.30	0
241	Acid Soluble Iron (0.1%)	0394	0.1360	0.0027	0.1313	0.0165	0.0039	52	0.28	241.32	0
241	Acid Soluble Iron (0.1%)	0360	0.1370	0.0020	0.1313	0.0165	0.0039	52	0.34	241.30	0
241	Acid Soluble Iron (0.1%)	0368	0.1386	0.0073	0.1313	0.0165	0.0039	52	0.44	241.99	0
241	Acid Soluble Iron (0.1%)	0483	0.1395	0.0010	0.1313	0.0165	0.0039	52	0.49	241.30	0
241	Acid Soluble Iron (0.1%)	0028	0.1395	0.0030	0.1313	0.0165	0.0039	52	0.49	241.32	0
241	Acid Soluble Iron (0.1%)	0040	0.1400	0.0000	0.1313	0.0165	0.0039	52	0.52	241.00	0
241	Acid Soluble Iron (0.1%)	0096	0.1400	0.0000	0.1313	0.0165	0.0039	52	0.52	241.30	0
241	Acid Soluble Iron (0.1%)	0472	0.1400	0.0000	0.1313	0.0165	0.0039	52	0.52	241.30	0
241	Acid Soluble Iron (0.1%)	0405	0.1400	0.0000	0.1313	0.0165	0.0039	52	0.52	241.99	0
241	Acid Soluble Iron (0.1%)	0516	0.1400	0.0000	0.1313	0.0165	0.0039	52	0.52	241.99	0
241	Acid Soluble Iron (0.1%)	0029	0.1401	0.0076	0.1313	0.0165	0.0039	52	0.53	241.00	0
241	Acid Soluble Iron (0.1%)	0515	0.1406	0.0104	0.1313	0.0165	0.0039	52	0.56	241.99	0
241	Acid Soluble Iron (0.1%)	0527	0.1410	0.0019	0.1313	0.0165	0.0039	52	0.58	241.33	0
241	Acid Soluble Iron (0.1%)	0377	0.1410	0.0060	0.1313	0.0165	0.0039	52	0.58	241.30	0
241	Acid Soluble Iron (0.1%)	0102	0.1429	0.0153	0.1313	0.0165	0.0039	52	0.70	241.30	0
241	Acid Soluble Iron (0.1%)	0534	0.1450	0.0100	0.1313	0.0165	0.0039	52	0.83	241.00	0
241	Acid Soluble Iron (0.1%)	0419	0.1460	0.0040	0.1313	0.0165	0.0039	52	0.89	241.30	0
241	Acid Soluble Iron (0.1%)	0037	0.1475	0.0010	0.1313	0.0165	0.0039	52	0.98	241.33	0
241	Acid Soluble Iron (0.1%)	0027	0.1485	0.0010	0.1313	0.0165	0.0039	52	1.04	241.99	0
241	Acid Soluble Iron (0.1%)	0482	0.1500‡	0.0000	0.1313	0.0165	0.0039	52	1.13	241.30	0
241	Acid Soluble Iron (0.1%)	0105	0.1520‡	0.0060	0.1313	0.0165	0.0039	52	1.25	241.00	0
241	Acid Soluble Iron (0.1%)	0390	0.1568‡	0.0146	0.1313	0.0165	0.0039	52	1.54	241.30	0
241	Acid Soluble Iron (0.1%)	0231	0.1600‡	0.0000	0.1313	0.0165	0.0039	52	1.73	241.30	0
241	Acid Soluble Iron (0.1%)	0553	0.2580‡	0.0000	0.1313	0.0165	0.0039	52	7.66	241.00	0
241	Acid Soluble Iron (0.1%)	0552	0.1600‡	0.0600	0.1313	0.0165	0.0039	52	1.73	241.30	1
241	Acid Soluble Iron (0.1%)	0515	0.1866‡	0.0539	0.1313	0.0165	0.0039	52	3.34	241.33	1
241	Acid Soluble Iron (0.1%)	0200	0.3850‡	0.0300	0.1313	0.0165	0.0039	52	15.34	241.00	2
251	Acid Soluble Lead (ppm)	0200	0.0250	0.0100	1.913	1.427	0.3033	18	-1.32	251.99	0
251	Acid Soluble Lead (ppm)	0498	0.2500	0.0200	1.913	1.427	0.3033	18	-1.17	251.00	0
251	Acid Soluble Lead (ppm)	0255	0.9360	0.0440	1.913	1.427	0.3033	18	-0.69	251.30	0
251	Acid Soluble Lead (ppm)	0550	1.295	0.3700	1.913	1.427	0.3033	18	-0.43	251.00	0
251	Acid Soluble Lead (ppm)	0506	1.300	0.1400	1.913	1.427	0.3033	18	-0.43	251.99	0
251	Acid Soluble Lead (ppm)	0519	1.395	0.0100	1.913	1.427	0.3033	18	-0.36	251.99	0
251	Acid Soluble Lead (ppm)	0476	1.399	0.0005	1.913	1.427	0.3033	18	-0.36	251.99	0
251	Acid Soluble Lead (ppm)	0405	1.500	0.0000	1.913	1.427	0.3033	18	-0.29	251.99	0
251	Acid Soluble Lead (ppm)	0527	1.519	0.0930	1.913	1.427	0.3033	18	-0.28	251.33	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
251	Acid Soluble Lead (ppm)	0389	1.565	0.1080	1.913	1.427	0.3033	18	-0.24	251.30	0
251	Acid Soluble Lead (ppm)	0501	1.590	0.0160	1.913	1.427	0.3033	18	-0.23	251.30	0
251	Acid Soluble Lead (ppm)	0524	1.610	0.0688	1.913	1.427	0.3033	18	-0.21	251.30	0
251	Acid Soluble Lead (ppm)	0220	1.750	0.1000	1.913	1.427	0.3033	18	-0.11	251.99	0
251	Acid Soluble Lead (ppm)	0394	2.285	0.0300	1.913	1.427	0.3033	18	0.26	251.30	0
251	Acid Soluble Lead (ppm)	0482	3.895	0.0700	1.913	1.427	0.3033	18	1.39	251.30	0
251	Acid Soluble Lead (ppm)	0515	4.020	0.6810	1.913	1.427	0.3033	18	1.48	251.33	0
251	Acid Soluble Lead (ppm)	0515	4.509	1.491	1.913	1.427	0.3033	18	1.82	251.34	0
251	Acid Soluble Lead (ppm)	0102	5.394	2.207	1.913	1.427	0.3033	18	2.44	251.30	0
251	Acid Soluble Lead (ppm)	0368	1.022	2.044	1.913	1.427	0.3033	18		251.34	4
261	Acid Soluble Manganese (0.25%)	0481	0.1850†	0.0100	0.2627	0.0194	0.0093	56	-4.01	261.99	0
261	Acid Soluble Manganese (0.25%)	0519	0.2000†	0.0020	0.2627	0.0194	0.0093	56	-3.23	261.99	0
261	Acid Soluble Manganese (0.25%)	0535	0.2150†	0.0100	0.2627	0.0194	0.0093	56	-2.46	261.12	0
261	Acid Soluble Manganese (0.25%)	0476	0.2189†	0.0090	0.2627	0.0194	0.0093	56	-2.26	261.99	0
261	Acid Soluble Manganese (0.25%)	0540	0.2200†	0.0400	0.2627	0.0194	0.0093	56	-2.20	261.12	0
261	Acid Soluble Manganese (0.25%)	0534	0.2300†	0.0000	0.2627	0.0194	0.0093	56	-1.69	261.12	0
261	Acid Soluble Manganese (0.25%)	0524	0.2356	0.0034	0.2627	0.0194	0.0093	56	-1.40	261.99	0
261	Acid Soluble Manganese (0.25%)	0255	0.2390	0.0160	0.2627	0.0194	0.0093	56	-1.22	261.99	0
261	Acid Soluble Manganese (0.25%)	0486	0.2400	0.0000	0.2627	0.0194	0.0093	56	-1.17	261.35	0
261	Acid Soluble Manganese (0.25%)	0371	0.2450	0.0100	0.2627	0.0194	0.0093	56	-0.91	261.32	0
261	Acid Soluble Manganese (0.25%)	0368	0.2464	0.0412	0.2627	0.0194	0.0093	56	-0.84	261.99	0
261	Acid Soluble Manganese (0.25%)	0498	0.2500	0.0400	0.2627	0.0194	0.0093	56	-0.66	261.11	0
261	Acid Soluble Manganese (0.25%)	0531	0.2500	0.0200	0.2627	0.0194	0.0093	56	-0.66	261.12	0
261	Acid Soluble Manganese (0.25%)	0043	0.2500	0.0000	0.2627	0.0194	0.0093	56	-0.66	261.35	0
261	Acid Soluble Manganese (0.25%)	0389	0.2525	0.0010	0.2627	0.0194	0.0093	56	-0.53	261.99	0
261	Acid Soluble Manganese (0.25%)	0394	0.2530	0.0014	0.2627	0.0194	0.0093	56	-0.50	261.34	0
261	Acid Soluble Manganese (0.25%)	0542	0.2534	0.0080	0.2627	0.0194	0.0093	56	-0.48	261.34	0
261	Acid Soluble Manganese (0.25%)	0501	0.2535	0.0010	0.2627	0.0194	0.0093	56	-0.48	261.99	0
261	Acid Soluble Manganese (0.25%)	0433	0.2545	0.0010	0.2627	0.0194	0.0093	56	-0.42	261.30	0
261	Acid Soluble Manganese (0.25%)	0419	0.2546	0.0047	0.2627	0.0194	0.0093	56	-0.42	261.30	0
261	Acid Soluble Manganese (0.25%)	0291	0.2550	0.0100	0.2627	0.0194	0.0093	56	-0.40	261.30	0
261	Acid Soluble Manganese (0.25%)	0397	0.2560	0.0022	0.2627	0.0194	0.0093	56	-0.35	261.35	0
261	Acid Soluble Manganese (0.25%)	0546	0.2577	0.0056	0.2627	0.0194	0.0093	56	-0.26	261.35	0
261	Acid Soluble Manganese (0.25%)	0405	0.2580	0.0180	0.2627	0.0194	0.0093	56	-0.24	261.99	0
261	Acid Soluble Manganese (0.25%)	0550	0.2595	0.0010	0.2627	0.0194	0.0093	56	-0.17	261.11	0
261	Acid Soluble Manganese (0.25%)	0029	0.2598	0.0014	0.2627	0.0194	0.0093	56	-0.15	261.12	0
261	Acid Soluble Manganese (0.25%)	0506	0.2645	0.0030	0.2627	0.0194	0.0093	56	0.09	261.99	0
261	Acid Soluble Manganese (0.25%)	0177	0.2646	0.0063	0.2627	0.0194	0.0093	56	0.09	261.35	0
261	Acid Soluble Manganese (0.25%)	0444	0.2650	0.0100	0.2627	0.0194	0.0093	56	0.12	261.32	0
261	Acid Soluble Manganese (0.25%)	0324	0.2670	0.0060	0.2627	0.0194	0.0093	56	0.22	261.31	0
261	Acid Soluble Manganese (0.25%)	0106	0.2672	0.0017	0.2627	0.0194	0.0093	56	0.23	261.35	0
261	Acid Soluble Manganese (0.25%)	0102	0.2678	0.0373	0.2627	0.0194	0.0093	56	0.26	261.30	0
261	Acid Soluble Manganese (0.25%)	0360	0.2685	0.0010	0.2627	0.0194	0.0093	56	0.30	261.31	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
261	Acid Soluble Manganese (0.25%)	0472	0.2700	0.0000	0.2627	0.0194	0.0093	56	0.37	261.30	0
261	Acid Soluble Manganese (0.25%)	0516	0.2700	0.0000	0.2627	0.0194	0.0093	56	0.37	261.99	0
261	Acid Soluble Manganese (0.25%)	0515	0.2707	0.0109	0.2627	0.0194	0.0093	56	0.41	261.99	0
261	Acid Soluble Manganese (0.25%)	0028	0.2715	0.0150	0.2627	0.0194	0.0093	56	0.45	261.34	0
261	Acid Soluble Manganese (0.25%)	0423	0.2715	0.0030	0.2627	0.0194	0.0093	56	0.45	261.34	0
261	Acid Soluble Manganese (0.25%)	0527	0.2732	0.0051	0.2627	0.0194	0.0093	56	0.54	261.35	0
261	Acid Soluble Manganese (0.25%)	0523	0.2745	0.0110	0.2627	0.0194	0.0093	56	0.61	261.99	0
261	Acid Soluble Manganese (0.25%)	0552	0.2750	0.0300	0.2627	0.0194	0.0093	56	0.63	261.32	0
261	Acid Soluble Manganese (0.25%)	0483	0.2765	0.0030	0.2627	0.0194	0.0093	56	0.71	261.32	0
261	Acid Soluble Manganese (0.25%)	0096	0.2769	0.0011	0.2627	0.0194	0.0093	56	0.73	261.30	0
261	Acid Soluble Manganese (0.25%)	0105	0.2790	0.0080	0.2627	0.0194	0.0093	56	0.84	261.12	0
261	Acid Soluble Manganese (0.25%)	0027	0.2790	0.0120	0.2627	0.0194	0.0093	56	0.84	261.99	0
261	Acid Soluble Manganese (0.25%)	0515	0.2799	0.0346	0.2627	0.0194	0.0093	56	0.89	261.35	0
261	Acid Soluble Manganese (0.25%)	0234	0.2800	0.0000	0.2627	0.0194	0.0093	56	0.89	261.31	0
261	Acid Soluble Manganese (0.25%)	0377	0.2810	0.0100	0.2627	0.0194	0.0093	56	0.94	261.32	0
261	Acid Soluble Manganese (0.25%)	0040	0.2815	0.0010	0.2627	0.0194	0.0093	56	0.97	261.12	0
261	Acid Soluble Manganese (0.25%)	0402	0.2828	0.0017	0.2627	0.0194	0.0093	56	1.03	261.32	0
261	Acid Soluble Manganese (0.25%)	0037	0.2830	0.0060	0.2627	0.0194	0.0093	56	1.04	261.35	0
261	Acid Soluble Manganese (0.25%)	0231	0.2850	0.0100	0.2627	0.0194	0.0093	56	1.15	261.32	0
261	Acid Soluble Manganese (0.25%)	0390	0.2869	0.0083	0.2627	0.0194	0.0093	56	1.24	261.30	0
261	Acid Soluble Manganese (0.25%)	0553	0.2960‡	0.0060	0.2627	0.0194	0.0093	56	1.71	261.12	0
261	Acid Soluble Manganese (0.25%)	0307	0.3050‡	0.0100	0.2627	0.0194	0.0093	56	2.18	261.30	0
261	Acid Soluble Manganese (0.25%)	0482	0.3050‡	0.0100	0.2627	0.0194	0.0093	56	2.18	261.31	0
261	Acid Soluble Manganese (0.25%)	0354	0.2650	0.0500	0.2627	0.0194	0.0093	56	0.12	261.30	1
271	Water Soluble Manganese (%)	0444	0.1700	0.0000				2		271.30	0
271	Water Soluble Manganese (%)	0027	0.2435	0.0050				2		271.00	0
281	Acid Soluble Mercury (ppm)	0550	0.0004	0.0000	0.0182	0.0117	0.0086	5	-1.33	281.00	0
281	Acid Soluble Mercury (ppm)	0527	0.0174	0.0048	0.0182	0.0117	0.0086	5	-0.06	281.30	0
281	Acid Soluble Mercury (ppm)	0394	0.0200	0.0200	0.0182	0.0117	0.0086	5	0.14	281.30	0
281	Acid Soluble Mercury (ppm)	0519	0.0200	0.0000	0.0182	0.0117	0.0086	5	0.14	281.99	0
281	Acid Soluble Mercury (ppm)	0506	0.0330	0.0180	0.0182	0.0117	0.0086	5	1.11	281.00	0
281	Acid Soluble Mercury (ppm)	0515	0.0000	0.0000	0.0182	0.0117	0.0086	5		281.30	4
289	Acid Soluble Molybdenum (20ppm)	0519	18.92†	0.0600	37.40	7.527	2.090	24	-2.45	289.99	0
289	Acid Soluble Molybdenum (20ppm)	0476	24.79†	2.009	37.40	7.527	2.090	24	-1.68	289.99	0
289	Acid Soluble Molybdenum (20ppm)	0255	27.90	1.550	37.40	7.527	2.090	24	-1.26	289.30	0
289	Acid Soluble Molybdenum (20ppm)	0486	28.50	1.000	37.40	7.527	2.090	24	-1.18	289.33	0
289	Acid Soluble Molybdenum (20ppm)	0550	29.68	0.0500	37.40	7.527	2.090	24	-1.03	289.00	0
289	Acid Soluble Molybdenum (20ppm)	0433	31.60	0.4800	37.40	7.527	2.090	24	-0.77	289.30	0
289	Acid Soluble Molybdenum (20ppm)	0394	34.00	0.0000	37.40	7.527	2.090	24	-0.45	289.32	0
289	Acid Soluble Molybdenum (20ppm)	0423	34.39	0.8200	37.40	7.527	2.090	24	-0.40	289.33	0
289	Acid Soluble Molybdenum (20ppm)	0419	35.00	2.000	37.40	7.527	2.090	24	-0.32	289.30	0
289	Acid Soluble Molybdenum (20ppm)	0546	35.58	0.0800	37.40	7.527	2.090	24	-0.24	289.33	0
289	Acid Soluble Molybdenum (20ppm)	0405	37.50	3.000	37.40	7.527	2.090	24	0.01	289.99	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
289	Acid Soluble Molybdenum (20ppm)	0515	39.27	6.728	37.40	7.527	2.090	24	0.25	289.33	0
289	Acid Soluble Molybdenum (20ppm)	0515	39.67	3.775	37.40	7.527	2.090	24	0.30	289.34	0
289	Acid Soluble Molybdenum (20ppm)	0524	39.74	1.393	37.40	7.527	2.090	24	0.31	289.30	0
289	Acid Soluble Molybdenum (20ppm)	0444	40.00	0.0000	37.40	7.527	2.090	24	0.35	289.30	0
289	Acid Soluble Molybdenum (20ppm)	0220	40.00	2.000	37.40	7.527	2.090	24	0.35	289.99	0
289	Acid Soluble Molybdenum (20ppm)	0234	40.50	1.000	37.40	7.527	2.090	24	0.41	289.30	0
289	Acid Soluble Molybdenum (20ppm)	0037	40.64	0.6170	37.40	7.527	2.090	24	0.43	289.33	0
289	Acid Soluble Molybdenum (20ppm)	0527	40.95	0.0497	37.40	7.527	2.090	24	0.47	289.33	0
289	Acid Soluble Molybdenum (20ppm)	0368	42.49	2.439	37.40	7.527	2.090	24	0.68	289.34	0
289	Acid Soluble Molybdenum (20ppm)	0106	44.00	0.0000	37.40	7.527	2.090	24	0.88	289.33	0
289	Acid Soluble Molybdenum (20ppm)	0102	47.15	15.10	37.40	7.527	2.090	24	1.30	289.30	0
289	Acid Soluble Molybdenum (20ppm)	0506	48.05	5.900	37.40	7.527	2.090	24	1.42	289.99	0
289	Acid Soluble Molybdenum (20ppm)	0096	64.25‡	0.1000	37.40	7.527	2.090	24	3.57	289.30	0
289	Acid Soluble Molybdenum (20ppm)	0516	30.00	20.00	37.40	7.527	2.090	24	-0.98	289.30	1
291	Acid Soluble Nickel (ppm)	0444	1.560	0.0800	5.866	2.235	0.6577	17	-1.93	291.30	0
291	Acid Soluble Nickel (ppm)	0389	1.885	0.4350	5.866	2.235	0.6577	17	-1.78	291.30	0
291	Acid Soluble Nickel (ppm)	0519	3.985	0.0100	5.866	2.235	0.6577	17	-0.84	291.99	0
291	Acid Soluble Nickel (ppm)	0524	4.356	0.1277	5.866	2.235	0.6577	17	-0.68	291.30	0
291	Acid Soluble Nickel (ppm)	0482	4.400	0.6000	5.866	2.235	0.6577	17	-0.66	291.30	0
291	Acid Soluble Nickel (ppm)	0255	4.947	0.7330	5.866	2.235	0.6577	17	-0.41	291.99	0
291	Acid Soluble Nickel (ppm)	0102	5.606	2.433	5.866	2.235	0.6577	17	-0.12	291.30	0
291	Acid Soluble Nickel (ppm)	0476	5.797	0.8018	5.866	2.235	0.6577	17	-0.03	291.99	0
291	Acid Soluble Nickel (ppm)	0394	5.870	0.0400	5.866	2.235	0.6577	17	0.00	291.30	0
291	Acid Soluble Nickel (ppm)	0096	6.100	0.2000	5.866	2.235	0.6577	17	0.10	291.30	0
291	Acid Soluble Nickel (ppm)	0405	6.150	0.1000	5.866	2.235	0.6577	17	0.13	291.99	0
291	Acid Soluble Nickel (ppm)	0368	6.969	0.9220	5.866	2.235	0.6577	17	0.49	291.34	0
291	Acid Soluble Nickel (ppm)	0527	6.978	0.3247	5.866	2.235	0.6577	17	0.50	291.33	0
291	Acid Soluble Nickel (ppm)	0515	7.360	0.4520	5.866	2.235	0.6577	17	0.67	291.34	0
291	Acid Soluble Nickel (ppm)	0037	7.747	0.0240	5.866	2.235	0.6577	17	0.84	291.33	0
291	Acid Soluble Nickel (ppm)	0220	9.300	0.2000	5.866	2.235	0.6577	17	1.54	291.99	0
291	Acid Soluble Nickel (ppm)	0515	10.06	3.697	5.866	2.235	0.6577	17	1.88	291.33	0
291	Acid Soluble Nickel (ppm)	0550	5.050	8.860	5.866	2.235	0.6577	17	-0.37	291.00	1
291	Acid Soluble Nickel (ppm)	0506	35.90	3.600	5.866	2.235	0.6577	17	13.44	291.99	2
301	Acid Soluble Selenium (ppm)	0394	0.0700	0.0200	2.002	1.679	0.3940	9	-1.06	301.30	0
301	Acid Soluble Selenium (ppm)	0220	0.4000	0.0000	2.002	1.679	0.3940	9	-0.88	301.99	0
301	Acid Soluble Selenium (ppm)	0519	1.105	0.0100	2.002	1.679	0.3940	9	-0.49	301.99	0
301	Acid Soluble Selenium (ppm)	0524	1.678	2.385	2.002	1.679	0.3940	9	-0.18	301.30	0
301	Acid Soluble Selenium (ppm)	0527	1.831	0.1801	2.002	1.679	0.3940	9	-0.09	301.33	0
301	Acid Soluble Selenium (ppm)	0476	2.049	0.2990	2.002	1.679	0.3940	9	0.03	301.99	0
301	Acid Soluble Selenium (ppm)	0501	2.420	0.0800	2.002	1.679	0.3940	9	0.23	301.30	0
301	Acid Soluble Selenium (ppm)	0515	3.946	0.4070	2.002	1.679	0.3940	9	1.07	301.34	0
301	Acid Soluble Selenium (ppm)	0255	7.532	0.1650	2.002	1.679	0.3940	9	3.04	301.99	0
301	Acid Soluble Selenium (ppm)	0515	6.536	6.699	2.002	1.679	0.3940	9	2.49	301.33	1

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
301	Acid Soluble Selenium (ppm)	0368	0.0000	0.0000	2.002	1.679	0.3940	9		301.34	4
311	Sodium (%)	0354	0.2850	0.0500	0.3258	0.0676	0.0347	6	-0.54	311.99	0
311	Sodium (%)	0482	0.2850	0.0100	0.3258	0.0676	0.0347	6	-0.54	311.99	0
311	Sodium (%)	0096	0.2900	0.0000	0.3258	0.0676	0.0347	6	-0.47	311.99	0
311	Sodium (%)	0423	0.2955	0.0010	0.3258	0.0676	0.0347	6	-0.40	311.33	0
311	Sodium (%)	0515	0.3745	0.1454	0.3258	0.0676	0.0347	6	0.64	311.33	0
311	Sodium (%)	0527	0.4251	0.0019	0.3258	0.0676	0.0347	6	1.31	311.33	0
321	Acid Soluble Zinc (0.05%)	0234	0.0350	0.0100	0.0426	0.0032	0.0017	59	-2.40	321.30	0
321	Acid Soluble Zinc (0.05%)	0476	0.0353	0.0030	0.0426	0.0032	0.0017	59	-2.31	321.99	0
321	Acid Soluble Zinc (0.05%)	0106	0.0371	0.0001	0.0426	0.0032	0.0017	59	-1.75	321.33	0
321	Acid Soluble Zinc (0.05%)	0072	0.0375	0.0010	0.0426	0.0032	0.0017	59	-1.61	321.30	0
321	Acid Soluble Zinc (0.05%)	0523	0.0385	0.0030	0.0426	0.0032	0.0017	59	-1.29	321.99	0
321	Acid Soluble Zinc (0.05%)	0397	0.0390	0.0010	0.0426	0.0032	0.0017	59	-1.13	321.33	0
321	Acid Soluble Zinc (0.05%)	0535	0.0395	0.0010	0.0426	0.0032	0.0017	59	-0.98	321.00	0
321	Acid Soluble Zinc (0.05%)	0540	0.0395	0.0030	0.0426	0.0032	0.0017	59	-0.98	321.00	0
321	Acid Soluble Zinc (0.05%)	0169	0.0400	0.0020	0.0426	0.0032	0.0017	59	-0.82	321.00	0
321	Acid Soluble Zinc (0.05%)	0498	0.0400	0.0000	0.0426	0.0032	0.0017	59	-0.82	321.00	0
321	Acid Soluble Zinc (0.05%)	0291	0.0400	0.0000	0.0426	0.0032	0.0017	59	-0.82	321.30	0
321	Acid Soluble Zinc (0.05%)	0292	0.0400	0.0000	0.0426	0.0032	0.0017	59	-0.82	321.30	0
321	Acid Soluble Zinc (0.05%)	0354	0.0400	0.0000	0.0426	0.0032	0.0017	59	-0.82	321.30	0
321	Acid Soluble Zinc (0.05%)	0371	0.0400	0.0000	0.0426	0.0032	0.0017	59	-0.82	321.30	0
321	Acid Soluble Zinc (0.05%)	0472	0.0400	0.0000	0.0426	0.0032	0.0017	59	-0.82	321.30	0
321	Acid Soluble Zinc (0.05%)	0482	0.0400	0.0000	0.0426	0.0032	0.0017	59	-0.82	321.30	0
321	Acid Soluble Zinc (0.05%)	0486	0.0400	0.0000	0.0426	0.0032	0.0017	59	-0.82	321.33	0
321	Acid Soluble Zinc (0.05%)	0481	0.0400	0.0000	0.0426	0.0032	0.0017	59	-0.82	321.99	0
321	Acid Soluble Zinc (0.05%)	0389	0.0404	0.0001	0.0426	0.0032	0.0017	59	-0.71	321.99	0
321	Acid Soluble Zinc (0.05%)	0029	0.0404	0.0014	0.0426	0.0032	0.0017	59	-0.69	321.00	0
321	Acid Soluble Zinc (0.05%)	0027	0.0405	0.0010	0.0426	0.0032	0.0017	59	-0.66	321.99	0
321	Acid Soluble Zinc (0.05%)	0433	0.0410	0.0000	0.0426	0.0032	0.0017	59	-0.50	321.30	0
321	Acid Soluble Zinc (0.05%)	0043	0.0415	0.0010	0.0426	0.0032	0.0017	59	-0.34	321.33	0
321	Acid Soluble Zinc (0.05%)	0542	0.0416	0.0006	0.0426	0.0032	0.0017	59	-0.31	321.32	0
321	Acid Soluble Zinc (0.05%)	0419	0.0419	0.0003	0.0426	0.0032	0.0017	59	-0.23	321.30	0
321	Acid Soluble Zinc (0.05%)	0524	0.0423	0.0014	0.0426	0.0032	0.0017	59	-0.09	321.99	0
321	Acid Soluble Zinc (0.05%)	0515	0.0424	0.0011	0.0426	0.0032	0.0017	59	-0.07	321.33	0
321	Acid Soluble Zinc (0.05%)	0531	0.0425	0.0010	0.0426	0.0032	0.0017	59	-0.02	321.00	0
321	Acid Soluble Zinc (0.05%)	0444	0.0425	0.0010	0.0426	0.0032	0.0017	59	-0.02	321.30	0
321	Acid Soluble Zinc (0.05%)	0506	0.0425	0.0010	0.0426	0.0032	0.0017	59	-0.02	321.99	0
321	Acid Soluble Zinc (0.05%)	0360	0.0430	0.0020	0.0426	0.0032	0.0017	59	0.13	321.30	0
321	Acid Soluble Zinc (0.05%)	0028	0.0432	0.0001	0.0426	0.0032	0.0017	59	0.18	321.32	0
321	Acid Soluble Zinc (0.05%)	0368	0.0432	0.0038	0.0426	0.0032	0.0017	59	0.20	321.99	0
321	Acid Soluble Zinc (0.05%)	0105	0.0433	0.0022	0.0426	0.0032	0.0017	59	0.23	321.00	0
321	Acid Soluble Zinc (0.05%)	0546	0.0435	0.0003	0.0426	0.0032	0.0017	59	0.28	321.33	0
321	Acid Soluble Zinc (0.05%)	0405	0.0435	0.0030	0.0426	0.0032	0.0017	59	0.29	321.99	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
321	Acid Soluble Zinc (0.05%)	0553	0.0437	0.0000	0.0426	0.0032	0.0017	59	0.36	321.00	0
321	Acid Soluble Zinc (0.05%)	0040	0.0440	0.0000	0.0426	0.0032	0.0017	59	0.45	321.00	0
321	Acid Soluble Zinc (0.05%)	0023	0.0440	0.0000	0.0426	0.0032	0.0017	59	0.45	321.33	0
321	Acid Soluble Zinc (0.05%)	0220	0.0441	0.0007	0.0426	0.0032	0.0017	59	0.47	321.99	0
321	Acid Soluble Zinc (0.05%)	0096	0.0445	0.0006	0.0426	0.0032	0.0017	59	0.61	321.30	0
321	Acid Soluble Zinc (0.05%)	0255	0.0445	0.0030	0.0426	0.0032	0.0017	59	0.61	321.30	0
321	Acid Soluble Zinc (0.05%)	0377	0.0445	0.0010	0.0426	0.0032	0.0017	59	0.61	321.30	0
321	Acid Soluble Zinc (0.05%)	0394	0.0448	0.0011	0.0426	0.0032	0.0017	59	0.69	321.32	0
321	Acid Soluble Zinc (0.05%)	0527	0.0449	0.0001	0.0426	0.0032	0.0017	59	0.72	321.33	0
321	Acid Soluble Zinc (0.05%)	0231	0.0450	0.0100	0.0426	0.0032	0.0017	59	0.77	321.30	0
321	Acid Soluble Zinc (0.05%)	0037	0.0450	0.0000	0.0426	0.0032	0.0017	59	0.77	321.33	0
321	Acid Soluble Zinc (0.05%)	0516	0.0450	0.0100	0.0426	0.0032	0.0017	59	0.77	321.99	0
321	Acid Soluble Zinc (0.05%)	0515	0.0451	0.0059	0.0426	0.0032	0.0017	59	0.79	321.99	0
321	Acid Soluble Zinc (0.05%)	0307	0.0455	0.0010	0.0426	0.0032	0.0017	59	0.93	321.30	0
321	Acid Soluble Zinc (0.05%)	0423	0.0455	0.0010	0.0426	0.0032	0.0017	59	0.93	321.32	0
321	Acid Soluble Zinc (0.05%)	0102	0.0461	0.0016	0.0426	0.0032	0.0017	59	1.12	321.30	0
321	Acid Soluble Zinc (0.05%)	0534	0.0465	0.0030	0.0426	0.0032	0.0017	59	1.25	321.00	0
321	Acid Soluble Zinc (0.05%)	0390	0.0467	0.0021	0.0426	0.0032	0.0017	59	1.29	321.30	0
321	Acid Soluble Zinc (0.05%)	0483	0.0468	0.0041	0.0426	0.0032	0.0017	59	1.33	321.30	0
321	Acid Soluble Zinc (0.05%)	0519	0.0475	0.0010	0.0426	0.0032	0.0017	59	1.56	321.99	0
321	Acid Soluble Zinc (0.05%)	0324	0.0480	0.0020	0.0426	0.0032	0.0017	59	1.72	321.30	0
321	Acid Soluble Zinc (0.05%)	0402	0.0504	0.0044	0.0426	0.0032	0.0017	59	2.48	321.30	0
321	Acid Soluble Zinc (0.05%)	0501	0.4000‡	0.0000	0.0426	0.0032	0.0017	59	113.46	321.99	0
321	Acid Soluble Zinc (0.05%)	0550	0.0512	0.0161	0.0426	0.0032	0.0017	59	2.72	321.00	1
321	Acid Soluble Zinc (0.05%)	0200	0.5000‡	0.0000	0.0426	0.0032	0.0017	59	145.20	321.00	2
321	Acid Soluble Zinc (0.05%)	0552	0.00000†	0.0000	0.0426	0.0032	0.0017	59		321.30	4
325	Water Soluble Zinc (%)	0444	0.0080	0.0040				1		325.30	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. Your offset values are higher (‡) or lower (†) than the Robust Analyte value ± Investigational Allowance. Analyte codes in light green indicate a guaranteed analyte. Individual lab values may be below detection limits but are reported solely for the purpose of this Proficiency Testing program.