

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Analyte Proficiency From All Labs

Sample # 170411

Grade 15-15-15 + Micros

Statistical Summary

Analytes: 41

Labs Reporting: 94

Issue Date : 05/31/2017

Analyte Code	Analyte	# 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	IA %RSD	Average Range (R-bar)	Horwitz %RSD
001	Ammoniacal Nitrogen (%)	21	20	6.115	0.4602	6.101		0.4931	0.1378	8.08%		0.0825	3.05%
002	Nitrate Nitrogen (%)	5	5	0.4796	0.9674	0.4796		0.9674	0.5408	201.71%		0.1176	4.47%
003	Water Insoluble Nitrogen (%)	7	7	3.203	0.1741	3.203		0.1974	0.0933	6.16%		0.0676	3.36%
005	Urea Nitrogen (%)	8	8	8.700	3.217	9.033		2.830	1.251	31.34%		0.1927	2.87%
007	Urea (%)	1		9.845									
009	Ammoniacal Plus Nitrate Nitrogen (%)	2	2	11.23	7.014								
010	Total Nitrogen (15%)	84	81	19.60	1.439	19.95	0.7292	0.4052	0.0563	2.03%	1.83%	0.1262	2.55%
020	Total Phosphorus as P2O5 (%)	55	54	17.45	1.561	17.74		0.9541	0.1623	5.38%		0.1673	2.59%
030	Citrate Insoluble Phosphorus as P2O5 (%)	3	3	5.970	10.16	5.970		10.16	7.331	170.16%		0.1067	3.06%
040	Indirect Available Phosphorus as P2O5 (15%)	3	3	17.99	0.2600	17.99	0.7099	0.2600	0.1877	1.45%	1.97%	0.0433	2.59%
041	Direct Available Phosphorus as P2O5 (15%)	49	47	17.77	1.095	17.90	0.7095	0.6345	0.1157	3.55%	1.98%	0.2058	2.59%
048	Water Soluble Phosphorus as P2O5 (%)	7	7	13.24	1.808	13.57		1.199	0.5664	8.84%		0.1723	2.70%
050	Soluble Potassium as K2O (15%)	78	77	3.225	3.131	2.494	0.4100	0.2198	0.0313	8.81%	8.22%	0.0774	3.49%
060	Water (Free) (%)	6	6	2.782	0.4451	2.775		0.4885	0.2493	17.60%		0.0692	3.43%
101	Acid Soluble Calcium (%)	24	23	0.3371	0.0704	0.3360		0.0534	0.0139	15.89%		0.0113	4.71%
121	Acid Soluble Magnesium (1.2%)	60	58	2.693	0.4730	2.718	0.3359	0.1951	0.0320	7.18%	6.18%	0.0641	3.44%
131	Water Soluble Magnesium (%)	9	9	1.334	0.5681	1.334		0.6442	0.2684	48.28%		0.0799	3.83%
143	Elemental Sulfur (%)	3	3	3.190	2.597	3.190		2.597	1.874	81.41%		0.0133	3.36%
145	Sulfate Sulfur, HCl soluble (%)	9	9	4.739	0.3692	4.762		0.3652	0.1522	7.67%		0.0746	3.16%
146	Total Sulfur in Liquid (%)	1		4.651									
148	Total Sulfur (2%)	45	45	4.532	1.080	4.574	0.4287	0.4957	0.0924	10.84%	4.69%	0.1087	3.18%
149	Sulfur - HNO3 soluble (%)	3	3	4.771	0.2044	4.771		0.2044	0.1475	4.29%		0.1004	3.16%
151	Acid Soluble Arsenic (ppm)	17	16	8.616	2.604	8.853		2.412	0.7537	27.24%		0.7298	11.52%
165	Acid Soluble Boron (0.08%)	38	37	0.2822	0.1246	0.2795	0.0449	0.0404	0.0083	14.47%	8.04%	0.0105	4.85%
171	Water Soluble Boron (%)	7	7	0.2882	0.0326	0.2829		0.0154	0.0073	5.44%		0.0063	4.84%
181	Acid Soluble Cadmium (ppm)	23	22	5.217	0.9769	5.280		0.9414	0.2509	17.83%		0.3651	12.45%
190	Water Soluble Chlorine (%)	1		0.2150									
191	Acid Soluble Chromium (ppm)	21	20	83.21	17.17	84.10		17.48	4.887	20.79%		2.839	8.21%
202	Acid Soluble Cobalt (ppm)	22	21	32.07	6.429	32.36		6.663	1.818	20.59%		1.290	9.48%
221	Acid Soluble Copper (0.5%)	58	57	0.6032	0.0741	0.6072	0.0657	0.0427	0.0071	7.04%	5.41%	0.0286	4.31%
241	Acid Soluble Iron (1.6%)	57	56	2.343	0.4348	2.427	0.2477	0.2966	0.0495	12.22%	5.10%	0.1176	3.50%

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251	Acid Soluble Lead (ppm)	23	22	28.50	5.807	28.89		5.532	1.474	19.15%		1.764	9.64%
261	Acid Soluble Manganese (1%)	59	58	1.210	0.1030	1.220	0.1270	0.0867	0.0142	7.11%	5.20%	0.0327	3.88%
271	Water Soluble Manganese (%)	7	7	0.2313	0.3153	0.1622		0.1748	0.0826	107.78%		0.0203	5.26%
281	Acid Soluble Mercury (ppm)	7	6	0.0636	0.0304	0.0649		0.0313	0.0160	48.25%		0.0142	24.14%
289	Acid Soluble Molybdenum (50ppm)	25	24	1,138	531.0	1,292	388.5148	238.3	60.81	18.45%	15.04%	42.15	5.44%
291	Acid Soluble Nickel (ppm)	25	24	91.47	14.85	91.86		15.98	4.078	17.40%		2.652	8.10%
301	Acid Soluble Selenium (ppm)	12	9	3.836	3.919	3.728		4.202	1.751	112.70%		0.0923	13.12%
311	Sodium (%)	9	8	0.5253	0.0862	0.5346		0.0747	0.0330	13.98%		0.0139	4.40%
321	Acid Soluble Zinc (1%)	60	59	1.448	0.2165	1.449	0.1499	0.1328	0.0216	9.17%	5.17%	0.0734	3.78%
325	Water Soluble Zinc (%)	5	5	0.6010	0.8095	0.6010		0.8095	0.4525	134.71%		0.0204	4.32%

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Lab Values

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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 (%)	0368	5.411	0.2029	6.101	0.4931	0.0825	20	-1.40	001.99	0
001	Ammoniacal Nitrogen (%)	0230	5.480	0.0600	6.101	0.4931	0.0825	20	-1.26	001.10	0
001	Ammoniacal Nitrogen (%)	0394	5.517	0.0230	6.101	0.4931	0.0825	20	-1.19	001.99	0
001	Ammoniacal Nitrogen (%)	0498	5.550	0.1000	6.101	0.4931	0.0825	20	-1.12	001.10	0
001	Ammoniacal Nitrogen (%)	0177	5.768	0.0104	6.101	0.4931	0.0825	20	-0.68	001.10	0
001	Ammoniacal Nitrogen (%)	0444	5.795	0.0500	6.101	0.4931	0.0825	20	-0.62	001.10	0
001	Ammoniacal Nitrogen (%)	0027	5.925	0.0300	6.101	0.4931	0.0825	20	-0.36	001.99	0
001	Ammoniacal Nitrogen (%)	0420	5.935	0.3500	6.101	0.4931	0.0825	20	-0.34	001.99	0
001	Ammoniacal Nitrogen (%)	0231	6.070	0.1000	6.101	0.4931	0.0825	20	-0.06	001.10	0
001	Ammoniacal Nitrogen (%)	0096	6.090	0.0200	6.101	0.4931	0.0825	20	-0.02	001.99	0
001	Ammoniacal Nitrogen (%)	0524	6.141	0.0774	6.101	0.4931	0.0825	20	0.08	001.99	0
001	Ammoniacal Nitrogen (%)	0510	6.215	0.0057	6.101	0.4931	0.0825	20	0.23	001.99	0
001	Ammoniacal Nitrogen (%)	0389	6.240	0.0000	6.101	0.4931	0.0825	20	0.28	001.10	0
001	Ammoniacal Nitrogen (%)	0486	6.245	0.2300	6.101	0.4931	0.0825	20	0.29	001.10	0
001	Ammoniacal Nitrogen (%)	0522	6.360	0.0400	6.101	0.4931	0.0825	20	0.52	001.99	0
001	Ammoniacal Nitrogen (%)	0423	6.440	0.1200	6.101	0.4931	0.0825	20	0.69	001.99	0
001	Ammoniacal Nitrogen (%)	0309	6.470	0.0800	6.101	0.4931	0.0825	20	0.75	001.10	0
001	Ammoniacal Nitrogen (%)	0405	6.695	0.0500	6.101	0.4931	0.0825	20	1.20	001.10	0
001	Ammoniacal Nitrogen (%)	0529	6.940	0.1000	6.101	0.4931	0.0825	20	1.70	001.99	0
001	Ammoniacal Nitrogen (%)	0220	7.010	0.0000	6.101	0.4931	0.0825	20	1.84	001.99	0
001	Ammoniacal Nitrogen (%)	0501	6.147	2.253	6.101	0.4931	0.0825	20	0.09	001.99	1
002	Nitrate Nitrogen (%)	0423	0.0240	0.0020	0.4796	0.9674	0.1176	5	-0.47	002.99	0
002	Nitrate Nitrogen (%)	0394	0.0480	0.0020	0.4796	0.9674	0.1176	5	-0.45	002.99	0
002	Nitrate Nitrogen (%)	0486	0.0560	0.0040	0.4796	0.9674	0.1176	5	-0.44	002.99	0
002	Nitrate Nitrogen (%)	0220	0.0600	0.0000	0.4796	0.9674	0.1176	5	-0.43	002.99	0
002	Nitrate Nitrogen (%)	0230	2.210	0.5800	0.4796	0.9674	0.1176	5	1.79	002.20	0
003	Water Insoluble Nitrogen (%)	0423	2.985	0.0100	3.203	0.1974	0.0676	7	-1.00	003.10	0
003	Water Insoluble Nitrogen (%)	0027	2.990	0.1000	3.203	0.1974	0.0676	7	-0.98	003.10	0
003	Water Insoluble Nitrogen (%)	0486	3.160	0.1600	3.203	0.1974	0.0676	7	-0.20	003.99	0
003	Water Insoluble Nitrogen (%)	0494	3.245	0.0500	3.203	0.1974	0.0676	7	0.19	003.10	0
003	Water Insoluble Nitrogen (%)	0029	3.258	0.0630	3.203	0.1974	0.0676	7	0.25	003.10	0
003	Water Insoluble Nitrogen (%)	0230	3.320	0.0600	3.203	0.1974	0.0676	7	0.53	003.10	0
003	Water Insoluble Nitrogen (%)	0220	3.465	0.0300	3.203	0.1974	0.0676	7	1.20	003.10	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				
005	Urea Nitrogen (%)	0368	2.122	0.1313	9.033	2.830	0.1927	8	-2.23	005.00	0
005	Urea Nitrogen (%)	0486	5.715	0.0300	9.033	2.830	0.1927	8	-1.07	005.99	0
005	Urea Nitrogen (%)	0230	8.555	0.5300	9.033	2.830	0.1927	8	-0.15	005.00	0
005	Urea Nitrogen (%)	0444	10.21	0.3700	9.033	2.830	0.1927	8	0.38	005.00	0
005	Urea Nitrogen (%)	0394	10.35	0.0200	9.033	2.830	0.1927	8	0.43	005.99	0
005	Urea Nitrogen (%)	0027	10.47	0.1300	9.033	2.830	0.1927	8	0.46	005.99	0
005	Urea Nitrogen (%)	0420	10.50	0.2000	9.033	2.830	0.1927	8	0.47	005.99	0
005	Urea Nitrogen (%)	0309	11.69	0.1300	9.033	2.830	0.1927	8	0.86	005.99	0
007	Urea (%)	0220	9.845	0.1100				1		007.99	0
009	Ammoniacal Plus Nitrate Nitrogen (%)	0309	6.270	0.0400				2		009.10	0
009	Ammoniacal Plus Nitrate Nitrogen (%)	0200	16.19	0.0400				2		009.10	0
010	Total Nitrogen (15%)	0095	11.86*	0.1500	19.95	0.4052	0.1262	81	-19.97	010.60	0
010	Total Nitrogen (15%)	0500	14.83*	0.0200	19.95	0.4052	0.1262	81	-12.63	010.11	0
010	Total Nitrogen (15%)	0519	14.89*	0.0300	19.95	0.4052	0.1262	81	-12.49	010.99	0
010	Total Nitrogen (15%)	0476	15.12*	0.0000	19.95	0.4052	0.1262	81	-11.91	010.99	0
010	Total Nitrogen (15%)	0455	16.33*	0.1500	19.95	0.4052	0.1262	81	-8.94	010.11	0
010	Total Nitrogen (15%)	0371	17.02*	0.2600	19.95	0.4052	0.1262	81	-7.22	010.11	0
010	Total Nitrogen (15%)	0457	18.55*	0.1000	19.95	0.4052	0.1262	81	-3.45	010.60	0
010	Total Nitrogen (15%)	0498	18.70*	0.4000	19.95	0.4052	0.1262	81	-3.08	010.12	0
010	Total Nitrogen (15%)	0420	18.75*	0.3000	19.95	0.4052	0.1262	81	-2.95	010.60	0
010	Total Nitrogen (15%)	0309	18.91*	0.0500	19.95	0.4052	0.1262	81	-2.57	010.11	0
010	Total Nitrogen (15%)	0368	19.19*	0.2950	19.95	0.4052	0.1262	81	-1.85	010.60	0
010	Total Nitrogen (15%)	0525	19.21*	0.0470	19.95	0.4052	0.1262	81	-1.81	010.60	0
010	Total Nitrogen (15%)	0444	19.34	0.3200	19.95	0.4052	0.1262	81	-1.50	010.60	0
010	Total Nitrogen (15%)	0513	19.35	0.0900	19.95	0.4052	0.1262	81	-1.48	010.99	0
010	Total Nitrogen (15%)	0185	19.39	0.1400	19.95	0.4052	0.1262	81	-1.37	010.12	0
010	Total Nitrogen (15%)	0529	19.49	0.0500	19.95	0.4052	0.1262	81	-1.14	010.11	0
010	Total Nitrogen (15%)	0137	19.72	0.3570	19.95	0.4052	0.1262	81	-0.55	010.60	0
010	Total Nitrogen (15%)	0421	19.74	0.0400	19.95	0.4052	0.1262	81	-0.51	010.60	0
010	Total Nitrogen (15%)	0114	19.75	0.4800	19.95	0.4052	0.1262	81	-0.48	010.11	0
010	Total Nitrogen (15%)	0041	19.75	0.0800	19.95	0.4052	0.1262	81	-0.48	010.60	0
010	Total Nitrogen (15%)	0493	19.75	0.1000	19.95	0.4052	0.1262	81	-0.48	010.99	0
010	Total Nitrogen (15%)	0420	19.76	0.4200	19.95	0.4052	0.1262	81	-0.46	010.99	0
010	Total Nitrogen (15%)	0035	19.78	0.2800	19.95	0.4052	0.1262	81	-0.41	010.60	0
010	Total Nitrogen (15%)	0300	19.79	0.0240	19.95	0.4052	0.1262	81	-0.39	010.16	0
010	Total Nitrogen (15%)	0394	19.80	0.6000	19.95	0.4052	0.1262	81	-0.36	010.99	0
010	Total Nitrogen (15%)	0510	19.81	0.0126	19.95	0.4052	0.1262	81	-0.34	010.11	0
010	Total Nitrogen (15%)	0472	19.84	0.0100	19.95	0.4052	0.1262	81	-0.27	010.60	0
010	Total Nitrogen (15%)	0522	19.84	0.0300	19.95	0.4052	0.1262	81	-0.27	010.99	0
010	Total Nitrogen (15%)	0018	19.90	0.0000	19.95	0.4052	0.1262	81	-0.11	010.60	0
010	Total Nitrogen (15%)	0443	19.92	0.0200	19.95	0.4052	0.1262	81	-0.06	010.60	0
010	Total Nitrogen (15%)	0043	19.94	0.0200	19.95	0.4052	0.1262	81	-0.02	010.60	0
010	Total Nitrogen (15%)	0234	19.95	0.1900	19.95	0.4052	0.1262	81	0.00	010.60	0

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			Value	Range	Rob Mean	Rob SD	R-bar				
010	Total Nitrogen (15%)	0482	19.95	0.1000	19.95	0.4052	0.1262	81	0.01	010.60	0
010	Total Nitrogen (15%)	0416	19.97	0.0200	19.95	0.4052	0.1262	81	0.06	010.12	0
010	Total Nitrogen (15%)	0524	19.98	0.0144	19.95	0.4052	0.1262	81	0.10	010.99	0
010	Total Nitrogen (15%)	0086	19.99	0.3160	19.95	0.4052	0.1262	81	0.10	010.60	0
010	Total Nitrogen (15%)	0105	19.99	0.0640	19.95	0.4052	0.1262	81	0.12	010.60	0
010	Total Nitrogen (15%)	0523	20.00	0.0000	19.95	0.4052	0.1262	81	0.13	010.60	0
010	Total Nitrogen (15%)	0105	20.01	0.0400	19.95	0.4052	0.1262	81	0.16	010.11	0
010	Total Nitrogen (15%)	0354	20.01	0.0000	19.95	0.4052	0.1262	81	0.16	010.60	0
010	Total Nitrogen (15%)	0034	20.03	0.0900	19.95	0.4052	0.1262	81	0.19	010.60	0
010	Total Nitrogen (15%)	0231	20.03	0.0100	19.95	0.4052	0.1262	81	0.19	010.60	0
010	Total Nitrogen (15%)	0037	20.04	0.0120	19.95	0.4052	0.1262	81	0.23	010.60	0
010	Total Nitrogen (15%)	0136	20.04	0.0200	19.95	0.4052	0.1262	81	0.23	010.60	0
010	Total Nitrogen (15%)	0233	20.05	0.1500	19.95	0.4052	0.1262	81	0.24	010.60	0
010	Total Nitrogen (15%)	0451	20.06	0.3000	19.95	0.4052	0.1262	81	0.28	010.60	0
010	Total Nitrogen (15%)	0291	20.07	0.0100	19.95	0.4052	0.1262	81	0.29	010.60	0
010	Total Nitrogen (15%)	0042	20.07	0.0700	19.95	0.4052	0.1262	81	0.29	010.60	0
010	Total Nitrogen (15%)	0456	20.08	0.2400	19.95	0.4052	0.1262	81	0.33	010.11	0
010	Total Nitrogen (15%)	0106	20.09	0.2700	19.95	0.4052	0.1262	81	0.34	010.60	0
010	Total Nitrogen (15%)	0007	20.10	0.0000	19.95	0.4052	0.1262	81	0.38	010.60	0
010	Total Nitrogen (15%)	0157	20.10	0.0000	19.95	0.4052	0.1262	81	0.38	010.60	0
010	Total Nitrogen (15%)	0389	20.10	0.2400	19.95	0.4052	0.1262	81	0.38	010.60	0
010	Total Nitrogen (15%)	0450	20.11	0.2100	19.95	0.4052	0.1262	81	0.39	010.60	0
010	Total Nitrogen (15%)	0131	20.13	0.0470	19.95	0.4052	0.1262	81	0.46	010.60	0
010	Total Nitrogen (15%)	0096	20.14	0.0100	19.95	0.4052	0.1262	81	0.47	010.60	0
010	Total Nitrogen (15%)	0324	20.15	0.3000	19.95	0.4052	0.1262	81	0.50	010.60	0
010	Total Nitrogen (15%)	0516	20.15	0.1000	19.95	0.4052	0.1262	81	0.50	010.60	0
010	Total Nitrogen (15%)	0485	20.18	0.0950	19.95	0.4052	0.1262	81	0.57	010.60	0
010	Total Nitrogen (15%)	0423	20.18	0.2000	19.95	0.4052	0.1262	81	0.58	010.60	0
010	Total Nitrogen (15%)	0220	20.19	0.0500	19.95	0.4052	0.1262	81	0.59	010.99	0
010	Total Nitrogen (15%)	0040	20.20	0.2000	19.95	0.4052	0.1262	81	0.63	010.60	0
010	Total Nitrogen (15%)	0177	20.21	0.0700	19.95	0.4052	0.1262	81	0.64	010.60	0
010	Total Nitrogen (15%)	0405	20.21	0.0600	19.95	0.4052	0.1262	81	0.65	010.60	0
010	Total Nitrogen (15%)	0292	20.24	0.0100	19.95	0.4052	0.1262	81	0.71	010.60	0
010	Total Nitrogen (15%)	0356	20.24	0.0400	19.95	0.4052	0.1262	81	0.73	010.60	0
010	Total Nitrogen (15%)	0486	20.25	0.1400	19.95	0.4052	0.1262	81	0.75	010.60	0
010	Total Nitrogen (15%)	0527	20.25	0.2860	19.95	0.4052	0.1262	81	0.75	010.60	0
010	Total Nitrogen (15%)	0360	20.28	0.0000	19.95	0.4052	0.1262	81	0.82	010.60	0
010	Total Nitrogen (15%)	0377	20.28	0.0800	19.95	0.4052	0.1262	81	0.82	010.60	0
010	Total Nitrogen (15%)	0501	20.30	0.3620	19.95	0.4052	0.1262	81	0.87	010.60	0
010	Total Nitrogen (15%)	0055	20.33	0.1100	19.95	0.4052	0.1262	81	0.93	010.60	0
010	Total Nitrogen (15%)	0073	20.34	0.1700	19.95	0.4052	0.1262	81	0.96	010.60	0
010	Total Nitrogen (15%)	0452	20.35	0.0500	19.95	0.4052	0.1262	81	0.98	010.60	0
010	Total Nitrogen (15%)	0483	20.45	0.0300	19.95	0.4052	0.1262	81	1.23	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 (15%)	0025	20.49	0.2000	19.95	0.4052	0.1262	81	1.34	010.60	0
010	Total Nitrogen (15%)	0029	20.50	0.0300	19.95	0.4052	0.1262	81	1.35	010.60	0
010	Total Nitrogen (15%)	0024	20.50	0.2000	19.95	0.4052	0.1262	81	1.37	010.60	0
010	Total Nitrogen (15%)	0402	20.65	0.1000	19.95	0.4052	0.1262	81	1.74	010.60	0
010	Total Nitrogen (15%)	0406	20.68	0.0300	19.95	0.4052	0.1262	81	1.80	010.60	0
010	Total Nitrogen (15%)	0494	20.73	0.0100	19.95	0.4052	0.1262	81	1.92	010.60	0
010	Total Nitrogen (15%)	0351	19.72	0.8000	19.95	0.4052	0.1262	81	-0.56	010.60	1
010	Total Nitrogen (15%)	0325	20.11	1.100	19.95	0.4052	0.1262	81	0.40	010.60	1
010	Total Nitrogen (15%)	0230	21.40	0.8000	19.95	0.4052	0.1262	81	3.59	010.60	1
020	Total Phosphorus as P2O5 (%)	0371	10.67	0.0700	17.74	0.9541	0.1673	54	-7.41	020.20	0
020	Total Phosphorus as P2O5 (%)	0457	14.30	0.2000	17.74	0.9541	0.1673	54	-3.60	020.20	0
020	Total Phosphorus as P2O5 (%)	0455	14.53	0.1500	17.74	0.9541	0.1673	54	-3.37	020.99	0
020	Total Phosphorus as P2O5 (%)	0501	14.75	0.2417	17.74	0.9541	0.1673	54	-3.13	020.50	0
020	Total Phosphorus as P2O5 (%)	0476	15.22	0.1500	17.74	0.9541	0.1673	54	-2.64	020.99	0
020	Total Phosphorus as P2O5 (%)	0500	15.30	0.0000	17.74	0.9541	0.1673	54	-2.56	020.10	0
020	Total Phosphorus as P2O5 (%)	0508	15.47	0.1800	17.74	0.9541	0.1673	54	-2.38	020.50	0
020	Total Phosphorus as P2O5 (%)	0515	15.51	0.4883	17.74	0.9541	0.1673	54	-2.34	020.99	0
020	Total Phosphorus as P2O5 (%)	0260	15.56	0.4500	17.74	0.9541	0.1673	54	-2.29	020.50	0
020	Total Phosphorus as P2O5 (%)	0498	15.75	0.3000	17.74	0.9541	0.1673	54	-2.08	020.20	0
020	Total Phosphorus as P2O5 (%)	0523	15.95	0.3000	17.74	0.9541	0.1673	54	-1.87	020.50	0
020	Total Phosphorus as P2O5 (%)	0234	17.25	0.1700	17.74	0.9541	0.1673	54	-0.52	020.50	0
020	Total Phosphorus as P2O5 (%)	0472	17.27	0.2400	17.74	0.9541	0.1673	54	-0.49	020.50	0
020	Total Phosphorus as P2O5 (%)	0521	17.29	0.0000	17.74	0.9541	0.1673	54	-0.47	020.50	0
020	Total Phosphorus as P2O5 (%)	0513	17.44	0.1100	17.74	0.9541	0.1673	54	-0.32	020.99	0
020	Total Phosphorus as P2O5 (%)	0443	17.44	0.3600	17.74	0.9541	0.1673	54	-0.31	020.99	0
020	Total Phosphorus as P2O5 (%)	0456	17.70	0.2000	17.74	0.9541	0.1673	54	-0.04	020.40	0
020	Total Phosphorus as P2O5 (%)	0105	17.72	0.2300	17.74	0.9541	0.1673	54	-0.02	020.10	0
020	Total Phosphorus as P2O5 (%)	0420	17.73	0.4500	17.74	0.9541	0.1673	54	-0.01	020.20	0
020	Total Phosphorus as P2O5 (%)	0356	17.75	0.1400	17.74	0.9541	0.1673	54	0.01	020.20	0
020	Total Phosphorus as P2O5 (%)	0421	17.75	0.1000	17.74	0.9541	0.1673	54	0.01	020.50	0
020	Total Phosphorus as P2O5 (%)	0394	17.77	0.2240	17.74	0.9541	0.1673	54	0.04	020.20	0
020	Total Phosphorus as P2O5 (%)	0389	17.80	0.2000	17.74	0.9541	0.1673	54	0.06	020.50	0
020	Total Phosphorus as P2O5 (%)	0324	17.80	0.0000	17.74	0.9541	0.1673	54	0.06	020.20	0
020	Total Phosphorus as P2O5 (%)	0510	17.80	0.0082	17.74	0.9541	0.1673	54	0.07	020.20	0
020	Total Phosphorus as P2O5 (%)	0105	17.84	0.1500	17.74	0.9541	0.1673	54	0.10	020.40	0
020	Total Phosphorus as P2O5 (%)	0529	17.93	0.0100	17.74	0.9541	0.1673	54	0.20	020.20	0
020	Total Phosphorus as P2O5 (%)	0169	17.96	0.0800	17.74	0.9541	0.1673	54	0.23	020.20	0
020	Total Phosphorus as P2O5 (%)	0482	18.00	0.0000	17.74	0.9541	0.1673	54	0.27	020.50	0
020	Total Phosphorus as P2O5 (%)	0444	18.01	0.0200	17.74	0.9541	0.1673	54	0.28	020.50	0
020	Total Phosphorus as P2O5 (%)	0522	18.09	0.0900	17.74	0.9541	0.1673	54	0.36	020.20	0
020	Total Phosphorus as P2O5 (%)	0157	18.10	0.2000	17.74	0.9541	0.1673	54	0.38	020.10	0
020	Total Phosphorus as P2O5 (%)	0493	18.10	0.1000	17.74	0.9541	0.1673	54	0.38	020.10	0
020	Total Phosphorus as P2O5 (%)	0231	18.10	0.0800	17.74	0.9541	0.1673	54	0.38	020.20	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 (%)	0450	18.15	0.1400	17.74	0.9541	0.1673	54	0.43	020.20	0
020	Total Phosphorus as P2O5 (%)	0405	18.16	0.0000	17.74	0.9541	0.1673	54	0.44	020.20	0
020	Total Phosphorus as P2O5 (%)	0035	18.17	0.2300	17.74	0.9541	0.1673	54	0.45	020.40	0
020	Total Phosphorus as P2O5 (%)	0096	18.20	0.0500	17.74	0.9541	0.1673	54	0.48	020.40	0
020	Total Phosphorus as P2O5 (%)	0309	18.24	0.2100	17.74	0.9541	0.1673	54	0.52	020.20	0
020	Total Phosphorus as P2O5 (%)	0516	18.26	0.0800	17.74	0.9541	0.1673	54	0.55	020.20	0
020	Total Phosphorus as P2O5 (%)	0300	18.31	0.1500	17.74	0.9541	0.1673	54	0.59	020.20	0
020	Total Phosphorus as P2O5 (%)	0416	18.33	0.0900	17.74	0.9541	0.1673	54	0.61	020.20	0
020	Total Phosphorus as P2O5 (%)	0292	18.36	0.0000	17.74	0.9541	0.1673	54	0.65	020.20	0
020	Total Phosphorus as P2O5 (%)	0406	18.38	0.4600	17.74	0.9541	0.1673	54	0.67	020.20	0
020	Total Phosphorus as P2O5 (%)	0368	18.39	0.1344	17.74	0.9541	0.1673	54	0.68	020.50	0
020	Total Phosphorus as P2O5 (%)	0444	18.45	0.0900	17.74	0.9541	0.1673	54	0.74	020.10	0
020	Total Phosphorus as P2O5 (%)	0114	18.50	0.0000	17.74	0.9541	0.1673	54	0.80	020.10	0
020	Total Phosphorus as P2O5 (%)	0451	18.60	0.4300	17.74	0.9541	0.1673	54	0.90	020.50	0
020	Total Phosphorus as P2O5 (%)	0157	18.65	0.3000	17.74	0.9541	0.1673	54	0.96	020.50	0
020	Total Phosphorus as P2O5 (%)	0402	18.70	0.4800	17.74	0.9541	0.1673	54	1.01	020.50	0
020	Total Phosphorus as P2O5 (%)	0423	18.78	0.0900	17.74	0.9541	0.1673	54	1.09	020.50	0
020	Total Phosphorus as P2O5 (%)	0527	18.96	0.2600	17.74	0.9541	0.1673	54	1.28	020.50	0
020	Total Phosphorus as P2O5 (%)	0483	19.61	0.0700	17.74	0.9541	0.1673	54	1.96	020.50	0
020	Total Phosphorus as P2O5 (%)	0433	19.68	0.0800	17.74	0.9541	0.1673	54	2.03	020.50	0
020	Total Phosphorus as P2O5 (%)	0524	19.36	1.526	17.74	0.9541	0.1673	54	1.70	020.50	1
030	Citrate Insoluble Phosphorus as P2O5 (%)	0405	0.0750	0.0100	5.970	10.16	0.1067	3	-0.58	030.20	0
030	Citrate Insoluble Phosphorus as P2O5 (%)	0096	0.1350	0.0300	5.970	10.16	0.1067	3	-0.57	030.40	0
030	Citrate Insoluble Phosphorus as P2O5 (%)	0444	17.70	0.2800	5.970	10.16	0.1067	3	1.15	030.10	0
040	Indirect Available Phosphorus as P2O5 (15%)	0394	17.70	0.0000	17.99	0.2600	0.0433	3	-1.11	040.99	0
040	Indirect Available Phosphorus as P2O5 (15%)	0096	18.06	0.0800	17.99	0.2600	0.0433	3	0.28	040.40	0
040	Indirect Available Phosphorus as P2O5 (15%)	0300	18.21	0.0500	17.99	0.2600	0.0433	3	0.83	040.20	0
041	Direct Available Phosphorus as P2O5 (15%)	0423	13.19*	0.1700	17.90	0.6345	0.2058	47	-7.43	041.51	0
041	Direct Available Phosphorus as P2O5 (15%)	0519	15.03*	0.0300	17.90	0.6345	0.2058	47	-4.53	041.99	0
041	Direct Available Phosphorus as P2O5 (15%)	0513	15.25*	0.0700	17.90	0.6345	0.2058	47	-4.18	041.11	0
041	Direct Available Phosphorus as P2O5 (15%)	0043	16.64*	0.0600	17.90	0.6345	0.2058	47	-1.98	041.50	0
041	Direct Available Phosphorus as P2O5 (15%)	0377	16.91*	0.2200	17.90	0.6345	0.2058	47	-1.55	041.51	0
041	Direct Available Phosphorus as P2O5 (15%)	0368	16.96*	0.2565	17.90	0.6345	0.2058	47	-1.47	041.50	0
041	Direct Available Phosphorus as P2O5 (15%)	0325	17.00*	0.2000	17.90	0.6345	0.2058	47	-1.41	041.50	0
041	Direct Available Phosphorus as P2O5 (15%)	0354	17.02*	0.0100	17.90	0.6345	0.2058	47	-1.38	041.60	0
041	Direct Available Phosphorus as P2O5 (15%)	0027	17.24	0.0900	17.90	0.6345	0.2058	47	-1.04	041.20	0
041	Direct Available Phosphorus as P2O5 (15%)	0472	17.26	0.3400	17.90	0.6345	0.2058	47	-1.00	041.60	0
041	Direct Available Phosphorus as P2O5 (15%)	0055	17.47	0.1100	17.90	0.6345	0.2058	47	-0.68	041.10	0
041	Direct Available Phosphorus as P2O5 (15%)	0029	17.58	0.2500	17.90	0.6345	0.2058	47	-0.51	041.60	0
041	Direct Available Phosphorus as P2O5 (15%)	0522	17.58	0.1300	17.90	0.6345	0.2058	47	-0.51	041.21	0
041	Direct Available Phosphorus as P2O5 (15%)	0177	17.60	0.1828	17.90	0.6345	0.2058	47	-0.46	041.10	0
041	Direct Available Phosphorus as P2O5 (15%)	0137	17.69	0.3000	17.90	0.6345	0.2058	47	-0.33	041.50	0
041	Direct Available Phosphorus as P2O5 (15%)	0073	17.73	0.6200	17.90	0.6345	0.2058	47	-0.26	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 (15%)	0055	17.79	0.1800	17.90	0.6345	0.2058	47	-0.17	041.60	0
041	Direct Available Phosphorus as P2O5 (15%)	0040	17.85	0.1000	17.90	0.6345	0.2058	47	-0.07	041.51	0
041	Direct Available Phosphorus as P2O5 (15%)	0086	17.93	0.0288	17.90	0.6345	0.2058	47	0.05	041.10	0
041	Direct Available Phosphorus as P2O5 (15%)	0177	17.96	0.0941	17.90	0.6345	0.2058	47	0.10	041.60	0
041	Direct Available Phosphorus as P2O5 (15%)	0105	17.97	0.2800	17.90	0.6345	0.2058	47	0.12	041.60	0
041	Direct Available Phosphorus as P2O5 (15%)	0200	18.00	0.0500	17.90	0.6345	0.2058	47	0.16	041.21	0
041	Direct Available Phosphorus as P2O5 (15%)	0185	18.03	0.2200	17.90	0.6345	0.2058	47	0.21	041.11	0
041	Direct Available Phosphorus as P2O5 (15%)	0037	18.03	0.2290	17.90	0.6345	0.2058	47	0.21	041.60	0
041	Direct Available Phosphorus as P2O5 (15%)	0494	18.05	0.0200	17.90	0.6345	0.2058	47	0.24	041.10	0
041	Direct Available Phosphorus as P2O5 (15%)	0040	18.05	0.1000	17.90	0.6345	0.2058	47	0.24	041.10	0
041	Direct Available Phosphorus as P2O5 (15%)	0231	18.06	0.0000	17.90	0.6345	0.2058	47	0.26	041.60	0
041	Direct Available Phosphorus as P2O5 (15%)	0105	18.07	0.0500	17.90	0.6345	0.2058	47	0.27	041.10	0
041	Direct Available Phosphorus as P2O5 (15%)	0041	18.07	0.2200	17.90	0.6345	0.2058	47	0.27	041.10	0
041	Direct Available Phosphorus as P2O5 (15%)	0043	18.08	0.0400	17.90	0.6345	0.2058	47	0.29	041.60	0
041	Direct Available Phosphorus as P2O5 (15%)	0494	18.10	0.4000	17.90	0.6345	0.2058	47	0.32	041.50	0
041	Direct Available Phosphorus as P2O5 (15%)	0360	18.17	0.2900	17.90	0.6345	0.2058	47	0.42	041.51	0
041	Direct Available Phosphorus as P2O5 (15%)	0034	18.21	0.1700	17.90	0.6345	0.2058	47	0.49	041.60	0
041	Direct Available Phosphorus as P2O5 (15%)	0028	18.27	0.0700	17.90	0.6345	0.2058	47	0.58	041.40	0
041	Direct Available Phosphorus as P2O5 (15%)	0136	18.29	0.1000	17.90	0.6345	0.2058	47	0.62	041.60	0
041	Direct Available Phosphorus as P2O5 (15%)	0007	18.30	0.6000	17.90	0.6345	0.2058	47	0.64	041.50	0
041	Direct Available Phosphorus as P2O5 (15%)	0220	18.31	0.0000	17.90	0.6345	0.2058	47	0.65	041.11	0
041	Direct Available Phosphorus as P2O5 (15%)	0233	18.32	0.0500	17.90	0.6345	0.2058	47	0.66	041.50	0
041	Direct Available Phosphorus as P2O5 (15%)	0452	18.33	0.1300	17.90	0.6345	0.2058	47	0.68	041.50	0
041	Direct Available Phosphorus as P2O5 (15%)	0117	18.37	0.3500	17.90	0.6345	0.2058	47	0.74	041.51	0
041	Direct Available Phosphorus as P2O5 (15%)	0106	18.53	1.150	17.90	0.6345	0.2058	47	0.99	041.21	0
041	Direct Available Phosphorus as P2O5 (15%)	0291	18.54	0.0100	17.90	0.6345	0.2058	47	1.01	041.50	0
041	Direct Available Phosphorus as P2O5 (15%)	0485	18.54	0.5200	17.90	0.6345	0.2058	47	1.01	041.11	0
041	Direct Available Phosphorus as P2O5 (15%)	0025	18.58	0.2900	17.90	0.6345	0.2058	47	1.07	041.51	0
041	Direct Available Phosphorus as P2O5 (15%)	0131	18.91	0.1100	17.90	0.6345	0.2058	47	1.59	041.40	0
041	Direct Available Phosphorus as P2O5 (15%)	0486	19.42	0.3800	17.90	0.6345	0.2058	47	2.40	041.60	0
041	Direct Available Phosphorus as P2O5 (15%)	0230	20.20	0.4000	17.90	0.6345	0.2058	47	3.63	041.60	0
041	Direct Available Phosphorus as P2O5 (15%)	0024	17.35	1.300	17.90	0.6345	0.2058	47	-0.86	041.60	1
041	Direct Available Phosphorus as P2O5 (15%)	0095	38.75	1.410	17.90	0.6345	0.2058	47	32.86	041.40	2
048	Water Soluble Phosphorus as P2O5 (%)	0529	9.455	0.1700	13.57	1.199	0.1723	7	-3.10	048.20	0
048	Water Soluble Phosphorus as P2O5 (%)	0394	12.41	0.1560	13.57	1.199	0.1723	7	-0.87	048.20	0
048	Water Soluble Phosphorus as P2O5 (%)	0522	13.83	0.3400	13.57	1.199	0.1723	7	0.20	048.20	0
048	Water Soluble Phosphorus as P2O5 (%)	0420	13.90	0.3200	13.57	1.199	0.1723	7	0.25	048.20	0
048	Water Soluble Phosphorus as P2O5 (%)	0309	14.21	0.1500	13.57	1.199	0.1723	7	0.48	048.20	0
048	Water Soluble Phosphorus as P2O5 (%)	0096	14.22	0.0400	13.57	1.199	0.1723	7	0.49	048.40	0
048	Water Soluble Phosphorus as P2O5 (%)	0444	14.63	0.0300	13.57	1.199	0.1723	7	0.80	048.50	0
050	Soluble Potassium as K2O (15%)	0309	2.005*	0.2100	2.494	0.2198	0.0774	77	-2.23	050.30	0
050	Soluble Potassium as K2O (15%)	0055	2.010*	0.0200	2.494	0.2198	0.0774	77	-2.20	050.50	0
050	Soluble Potassium as K2O (15%)	0029	2.015*	0.3100	2.494	0.2198	0.0774	77	-2.18	050.62	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
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050	Soluble Potassium as K2O (15%)	0513	2.045*	0.0300	2.494	0.2198	0.0774	77	-2.04	050.62	0
050	Soluble Potassium as K2O (15%)	0200	2.130	0.0200	2.494	0.2198	0.0774	77	-1.66	050.60	0
050	Soluble Potassium as K2O (15%)	0523	2.150	0.1000	2.494	0.2198	0.0774	77	-1.57	050.99	0
050	Soluble Potassium as K2O (15%)	0354	2.180	0.0290	2.494	0.2198	0.0774	77	-1.43	050.52	0
050	Soluble Potassium as K2O (15%)	0043	2.185	0.0500	2.494	0.2198	0.0774	77	-1.41	050.99	0
050	Soluble Potassium as K2O (15%)	0325	2.200	0.0000	2.494	0.2198	0.0774	77	-1.34	050.99	0
050	Soluble Potassium as K2O (15%)	0035	2.225	0.0500	2.494	0.2198	0.0774	77	-1.22	050.61	0
050	Soluble Potassium as K2O (15%)	0494	2.240	0.1400	2.494	0.2198	0.0774	77	-1.16	050.00	0
050	Soluble Potassium as K2O (15%)	0041	2.240	0.0200	2.494	0.2198	0.0774	77	-1.16	050.60	0
050	Soluble Potassium as K2O (15%)	0040	2.250	0.1000	2.494	0.2198	0.0774	77	-1.11	050.30	0
050	Soluble Potassium as K2O (15%)	0024	2.285	0.2300	2.494	0.2198	0.0774	77	-0.95	050.61	0
050	Soluble Potassium as K2O (15%)	0485	2.315	0.0100	2.494	0.2198	0.0774	77	-0.82	050.52	0
050	Soluble Potassium as K2O (15%)	0185	2.345	0.0300	2.494	0.2198	0.0774	77	-0.68	050.32	0
050	Soluble Potassium as K2O (15%)	0106	2.355	0.0900	2.494	0.2198	0.0774	77	-0.63	050.50	0
050	Soluble Potassium as K2O (15%)	0292	2.355	0.0300	2.494	0.2198	0.0774	77	-0.63	050.50	0
050	Soluble Potassium as K2O (15%)	0136	2.360	0.0200	2.494	0.2198	0.0774	77	-0.61	050.30	0
050	Soluble Potassium as K2O (15%)	0476	2.385	0.1700	2.494	0.2198	0.0774	77	-0.50	050.99	0
050	Soluble Potassium as K2O (15%)	0043	2.390	0.1000	2.494	0.2198	0.0774	77	-0.47	050.51	0
050	Soluble Potassium as K2O (15%)	0007	2.400	0.0000	2.494	0.2198	0.0774	77	-0.43	050.51	0
050	Soluble Potassium as K2O (15%)	0450	2.400	0.3600	2.494	0.2198	0.0774	77	-0.43	050.99	0
050	Soluble Potassium as K2O (15%)	0034	2.410	0.0400	2.494	0.2198	0.0774	77	-0.38	050.62	0
050	Soluble Potassium as K2O (15%)	0105	2.415	0.0300	2.494	0.2198	0.0774	77	-0.36	050.60	0
050	Soluble Potassium as K2O (15%)	0356	2.425	0.0900	2.494	0.2198	0.0774	77	-0.31	050.30	0
050	Soluble Potassium as K2O (15%)	0096	2.430	0.0200	2.494	0.2198	0.0774	77	-0.29	050.99	0
050	Soluble Potassium as K2O (15%)	0105	2.435	0.0300	2.494	0.2198	0.0774	77	-0.27	050.62	0
050	Soluble Potassium as K2O (15%)	0472	2.440	0.0400	2.494	0.2198	0.0774	77	-0.25	050.31	0
050	Soluble Potassium as K2O (15%)	0360	2.440	0.0200	2.494	0.2198	0.0774	77	-0.25	050.52	0
050	Soluble Potassium as K2O (15%)	0493	2.450	0.1000	2.494	0.2198	0.0774	77	-0.20	050.99	0
050	Soluble Potassium as K2O (15%)	0498	2.450	0.1000	2.494	0.2198	0.0774	77	-0.20	050.99	0
050	Soluble Potassium as K2O (15%)	0482	2.455	0.0900	2.494	0.2198	0.0774	77	-0.18	050.99	0
050	Soluble Potassium as K2O (15%)	0025	2.465	0.0280	2.494	0.2198	0.0774	77	-0.13	050.52	0
050	Soluble Potassium as K2O (15%)	0377	2.465	0.0300	2.494	0.2198	0.0774	77	-0.13	050.52	0
050	Soluble Potassium as K2O (15%)	0494	2.465	0.0100	2.494	0.2198	0.0774	77	-0.13	050.52	0
050	Soluble Potassium as K2O (15%)	0394	2.473	0.0240	2.494	0.2198	0.0774	77	-0.10	050.99	0
050	Soluble Potassium as K2O (15%)	0433	2.480	0.0000	2.494	0.2198	0.0774	77	-0.06	050.99	0
050	Soluble Potassium as K2O (15%)	0117	2.488	0.0040	2.494	0.2198	0.0774	77	-0.03	050.52	0
050	Soluble Potassium as K2O (15%)	0451	2.495	0.0100	2.494	0.2198	0.0774	77	0.00	050.99	0
050	Soluble Potassium as K2O (15%)	0483	2.500	0.0400	2.494	0.2198	0.0774	77	0.03	050.51	0
050	Soluble Potassium as K2O (15%)	0131	2.505	0.0100	2.494	0.2198	0.0774	77	0.05	050.61	0
050	Soluble Potassium as K2O (15%)	0233	2.515	0.1020	2.494	0.2198	0.0774	77	0.09	050.52	0
050	Soluble Potassium as K2O (15%)	0157	2.530	0.0000	2.494	0.2198	0.0774	77	0.16	050.50	0
050	Soluble Potassium as K2O (15%)	0220	2.540	0.0000	2.494	0.2198	0.0774	77	0.21	050.00	0
050	Soluble Potassium as K2O (15%)	0522	2.540	0.1000	2.494	0.2198	0.0774	77	0.21	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 (15%)	0524	2.542	0.0238	2.494	0.2198	0.0774	77	0.22	050.99	0
050	Soluble Potassium as K2O (15%)	0521	2.558	0.0000	2.494	0.2198	0.0774	77	0.29	050.99	0
050	Soluble Potassium as K2O (15%)	0086	2.566	0.2546	2.494	0.2198	0.0774	77	0.33	050.50	0
050	Soluble Potassium as K2O (15%)	0231	2.570	0.0200	2.494	0.2198	0.0774	77	0.35	050.00	0
050	Soluble Potassium as K2O (15%)	0114	2.575	0.3500	2.494	0.2198	0.0774	77	0.37	050.00	0
050	Soluble Potassium as K2O (15%)	0137	2.577	0.0140	2.494	0.2198	0.0774	77	0.38	050.52	0
050	Soluble Potassium as K2O (15%)	0157	2.580	0.0600	2.494	0.2198	0.0774	77	0.39	050.30	0
050	Soluble Potassium as K2O (15%)	0177	2.588	0.0298	2.494	0.2198	0.0774	77	0.43	050.99	0
050	Soluble Potassium as K2O (15%)	0055	2.595	0.0700	2.494	0.2198	0.0774	77	0.46	050.00	0
050	Soluble Potassium as K2O (15%)	0028	2.595	0.1100	2.494	0.2198	0.0774	77	0.46	050.61	0
050	Soluble Potassium as K2O (15%)	0527	2.610	0.0400	2.494	0.2198	0.0774	77	0.53	050.99	0
050	Soluble Potassium as K2O (15%)	0291	2.625	0.0100	2.494	0.2198	0.0774	77	0.60	050.51	0
050	Soluble Potassium as K2O (15%)	0389	2.625	0.0100	2.494	0.2198	0.0774	77	0.60	050.99	0
050	Soluble Potassium as K2O (15%)	0452	2.640	0.0200	2.494	0.2198	0.0774	77	0.66	050.51	0
050	Soluble Potassium as K2O (15%)	0402	2.640	0.2200	2.494	0.2198	0.0774	77	0.66	050.99	0
050	Soluble Potassium as K2O (15%)	0230	2.640	0.1200	2.494	0.2198	0.0774	77	0.66	050.50	0
050	Soluble Potassium as K2O (15%)	0420	2.661	0.0320	2.494	0.2198	0.0774	77	0.76	050.50	0
050	Soluble Potassium as K2O (15%)	0415	2.666	0.0654	2.494	0.2198	0.0774	77	0.78	050.30	0
050	Soluble Potassium as K2O (15%)	0234	2.685	0.0500	2.494	0.2198	0.0774	77	0.87	050.99	0
050	Soluble Potassium as K2O (15%)	0300	2.700	0.0800	2.494	0.2198	0.0774	77	0.94	050.99	0
050	Soluble Potassium as K2O (15%)	0324	2.740	0.1600	2.494	0.2198	0.0774	77	1.12	050.50	0
050	Soluble Potassium as K2O (15%)	0444	2.750	0.1000	2.494	0.2198	0.0774	77	1.16	050.50	0
050	Soluble Potassium as K2O (15%)	0423	2.909	0.0240	2.494	0.2198	0.0774	77	1.89	050.52	0
050	Soluble Potassium as K2O (15%)	0416	2.950	0.0000	2.494	0.2198	0.0774	77	2.07	050.00	0
050	Soluble Potassium as K2O (15%)	0516	3.065	0.0700	2.494	0.2198	0.0774	77	2.60	050.30	0
050	Soluble Potassium as K2O (15%)	0444	3.155	0.1500	2.494	0.2198	0.0774	77	3.01	050.99	0
050	Soluble Potassium as K2O (15%)	0073	5.150	0.1600	2.494	0.2198	0.0774	77	12.08	050.00	0
050	Soluble Potassium as K2O (15%)	0455	14.16	0.0800	2.494	0.2198	0.0774	77	53.07	050.99	0
050	Soluble Potassium as K2O (15%)	0519	14.90	0.0200	2.494	0.2198	0.0774	77	56.44	050.99	0
050	Soluble Potassium as K2O (15%)	0457	16.60	0.2000	2.494	0.2198	0.0774	77	64.17	050.99	0
050	Soluble Potassium as K2O (15%)	0486	19.42	0.3800	2.494	0.2198	0.0774	77	77.00	050.52	0
050	Soluble Potassium as K2O (15%)	0443	18.55	0.5400	2.494	0.2198	0.0774	77	73.05	050.60	1
060	Water (Free) (%)	0510	2.358	0.0080	2.775	0.4885	0.0692	6	-0.76	060.99	0
060	Water (Free) (%)	0007	2.360	0.0200	2.775	0.4885	0.0692	6	-0.76	060.00	0
060	Water (Free) (%)	0456	2.650	0.1000	2.775	0.4885	0.0692	6	-0.23	060.00	0
060	Water (Free) (%)	0513	2.845	0.0900	2.775	0.4885	0.0692	6	0.13	060.99	0
060	Water (Free) (%)	0096	2.930	0.0400	2.775	0.4885	0.0692	6	0.28	060.00	0
060	Water (Free) (%)	0416	3.550	0.1571	2.775	0.4885	0.0692	6	1.41	060.00	0
101	Acid Soluble Calcium (%)	0420	0.1838	0.0042	0.3360	0.0534	0.0113	23	-2.85	101.30	0
101	Acid Soluble Calcium (%)	0106	0.2284	0.0016	0.3360	0.0534	0.0113	23	-2.01	101.33	0
101	Acid Soluble Calcium (%)	0501	0.2523	0.0046	0.3360	0.0534	0.0113	23	-1.57	101.99	0
101	Acid Soluble Calcium (%)	0105	0.2635	0.0030	0.3360	0.0534	0.0113	23	-1.36	101.00	0
101	Acid Soluble Calcium (%)	0457	0.2750	0.0100	0.3360	0.0534	0.0113	23	-1.14	101.00	0

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101	Acid Soluble Calcium (%)	0423	0.3025	0.0150	0.3360	0.0534	0.0113	23	-0.63	101.32	0
101	Acid Soluble Calcium (%)	0421	0.3290	0.0000	0.3360	0.0534	0.0113	23	-0.13	101.33	0
101	Acid Soluble Calcium (%)	0034	0.3340	0.0000	0.3360	0.0534	0.0113	23	-0.04	101.33	0
101	Acid Soluble Calcium (%)	0035	0.3395	0.0050	0.3360	0.0534	0.0113	23	0.07	101.30	0
101	Acid Soluble Calcium (%)	0055	0.3400	0.0000	0.3360	0.0534	0.0113	23	0.08	101.33	0
101	Acid Soluble Calcium (%)	0117	0.3432	0.0161	0.3360	0.0534	0.0113	23	0.13	101.33	0
101	Acid Soluble Calcium (%)	0389	0.3450	0.0100	0.3360	0.0534	0.0113	23	0.17	101.99	0
101	Acid Soluble Calcium (%)	0482	0.3500	0.0000	0.3360	0.0534	0.0113	23	0.26	101.30	0
101	Acid Soluble Calcium (%)	0096	0.3530	0.0200	0.3360	0.0534	0.0113	23	0.32	101.30	0
101	Acid Soluble Calcium (%)	0494	0.3562	0.0185	0.3360	0.0534	0.0113	23	0.38	101.33	0
101	Acid Soluble Calcium (%)	0354	0.3595	0.0270	0.3360	0.0534	0.0113	23	0.44	101.30	0
101	Acid Soluble Calcium (%)	0472	0.3600	0.0000	0.3360	0.0534	0.0113	23	0.45	101.30	0
101	Acid Soluble Calcium (%)	0028	0.3600	0.0000	0.3360	0.0534	0.0113	23	0.45	101.33	0
101	Acid Soluble Calcium (%)	0521	0.3695	0.0000	0.3360	0.0534	0.0113	23	0.63	101.32	0
101	Acid Soluble Calcium (%)	0041	0.3700	0.0600	0.3360	0.0534	0.0113	23	0.64	101.30	0
101	Acid Soluble Calcium (%)	0527	0.3815	0.0030	0.3360	0.0534	0.0113	23	0.85	101.33	0
101	Acid Soluble Calcium (%)	0105	0.4125	0.0190	0.3360	0.0534	0.0113	23	1.43	101.03	0
101	Acid Soluble Calcium (%)	0483	0.5460	0.0420	0.3360	0.0534	0.0113	23	3.93	101.30	0
101	Acid Soluble Calcium (%)	0324	0.4050	0.2100	0.3360	0.0534	0.0113	23	1.29	101.30	1
121	Acid Soluble Magnesium (1.2%)	0519	1.200*	0.0200	2.718	0.1951	0.0641	58	-7.78	121.99	0
121	Acid Soluble Magnesium (1.2%)	0420	1.370*	0.0468	2.718	0.1951	0.0641	58	-6.91	121.30	0
121	Acid Soluble Magnesium (1.2%)	0501	1.470*	0.0895	2.718	0.1951	0.0641	58	-6.40	121.99	0
121	Acid Soluble Magnesium (1.2%)	0042	1.835*	0.0700	2.718	0.1951	0.0641	58	-4.53	121.99	0
121	Acid Soluble Magnesium (1.2%)	0486	2.100*	0.0200	2.718	0.1951	0.0641	58	-3.17	121.33	0
121	Acid Soluble Magnesium (1.2%)	0457	2.250*	0.0400	2.718	0.1951	0.0641	58	-2.40	121.00	0
121	Acid Soluble Magnesium (1.2%)	0513	2.385	0.0100	2.718	0.1951	0.0641	58	-1.71	121.00	0
121	Acid Soluble Magnesium (1.2%)	0515	2.460	0.1998	2.718	0.1951	0.0641	58	-1.33	121.33	0
121	Acid Soluble Magnesium (1.2%)	0037	2.483	0.0530	2.718	0.1951	0.0641	58	-1.21	121.33	0
121	Acid Soluble Magnesium (1.2%)	0354	2.509	0.0990	2.718	0.1951	0.0641	58	-1.08	121.30	0
121	Acid Soluble Magnesium (1.2%)	0029	2.524	0.0210	2.718	0.1951	0.0641	58	-1.00	121.00	0
121	Acid Soluble Magnesium (1.2%)	0498	2.550	0.1000	2.718	0.1951	0.0641	58	-0.86	121.00	0
121	Acid Soluble Magnesium (1.2%)	0515	2.569	0.0738	2.718	0.1951	0.0641	58	-0.77	121.99	0
121	Acid Soluble Magnesium (1.2%)	0523	2.600	0.0000	2.718	0.1951	0.0641	58	-0.61	121.99	0
121	Acid Soluble Magnesium (1.2%)	0360	2.635	0.0700	2.718	0.1951	0.0641	58	-0.43	121.30	0
121	Acid Soluble Magnesium (1.2%)	0034	2.647	0.0190	2.718	0.1951	0.0641	58	-0.37	121.33	0
121	Acid Soluble Magnesium (1.2%)	0040	2.650	0.0600	2.718	0.1951	0.0641	58	-0.35	121.00	0
121	Acid Soluble Magnesium (1.2%)	0025	2.656	0.0290	2.718	0.1951	0.0641	58	-0.32	121.33	0
121	Acid Soluble Magnesium (1.2%)	0035	2.680	0.0400	2.718	0.1951	0.0641	58	-0.20	121.30	0
121	Acid Soluble Magnesium (1.2%)	0485	2.686	0.0120	2.718	0.1951	0.0641	58	-0.17	121.00	0
121	Acid Soluble Magnesium (1.2%)	0421	2.690	0.0400	2.718	0.1951	0.0641	58	-0.15	121.33	0
121	Acid Soluble Magnesium (1.2%)	0106	2.693	0.2864	2.718	0.1951	0.0641	58	-0.13	121.33	0
121	Acid Soluble Magnesium (1.2%)	0105	2.695	0.0130	2.718	0.1951	0.0641	58	-0.12	121.03	0
121	Acid Soluble Magnesium (1.2%)	0291	2.695	0.0500	2.718	0.1951	0.0641	58	-0.12	121.30	0

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121	Acid Soluble Magnesium (1.2%)	0055	2.705	0.0300	2.718	0.1951	0.0641	58	-0.07	121.33	0
121	Acid Soluble Magnesium (1.2%)	0300	2.706	0.0230	2.718	0.1951	0.0641	58	-0.07	121.32	0
121	Acid Soluble Magnesium (1.2%)	0028	2.710	0.1800	2.718	0.1951	0.0641	58	-0.04	121.33	0
121	Acid Soluble Magnesium (1.2%)	0096	2.715	0.1500	2.718	0.1951	0.0641	58	-0.02	121.30	0
121	Acid Soluble Magnesium (1.2%)	0309	2.725	0.0300	2.718	0.1951	0.0641	58	0.03	121.00	0
121	Acid Soluble Magnesium (1.2%)	0105	2.733	0.0220	2.718	0.1951	0.0641	58	0.07	121.00	0
121	Acid Soluble Magnesium (1.2%)	0233	2.747	0.1390	2.718	0.1951	0.0641	58	0.14	121.33	0
121	Acid Soluble Magnesium (1.2%)	0177	2.750	0.0272	2.718	0.1951	0.0641	58	0.16	121.33	0
121	Acid Soluble Magnesium (1.2%)	0114	2.750	0.0200	2.718	0.1951	0.0641	58	0.16	121.30	0
121	Acid Soluble Magnesium (1.2%)	0117	2.754	0.0980	2.718	0.1951	0.0641	58	0.18	121.33	0
121	Acid Soluble Magnesium (1.2%)	0220	2.770	0.0000	2.718	0.1951	0.0641	58	0.26	121.33	0
121	Acid Soluble Magnesium (1.2%)	0450	2.780	0.0400	2.718	0.1951	0.0641	58	0.32	121.30	0
121	Acid Soluble Magnesium (1.2%)	0494	2.783	0.1934	2.718	0.1951	0.0641	58	0.33	121.33	0
121	Acid Soluble Magnesium (1.2%)	0521	2.786	0.0000	2.718	0.1951	0.0641	58	0.35	121.32	0
121	Acid Soluble Magnesium (1.2%)	0169	2.790	0.0200	2.718	0.1951	0.0641	58	0.37	121.00	0
121	Acid Soluble Magnesium (1.2%)	0234	2.795	0.1500	2.718	0.1951	0.0641	58	0.39	121.30	0
121	Acid Soluble Magnesium (1.2%)	0482	2.795	0.0500	2.718	0.1951	0.0641	58	0.39	121.30	0
121	Acid Soluble Magnesium (1.2%)	0157	2.800	0.0000	2.718	0.1951	0.0641	58	0.42	121.30	0
121	Acid Soluble Magnesium (1.2%)	0389	2.800	0.0400	2.718	0.1951	0.0641	58	0.42	121.99	0
121	Acid Soluble Magnesium (1.2%)	0423	2.808	0.0050	2.718	0.1951	0.0641	58	0.46	121.32	0
121	Acid Soluble Magnesium (1.2%)	0368	2.821	0.0223	2.718	0.1951	0.0641	58	0.53	121.99	0
121	Acid Soluble Magnesium (1.2%)	0433	2.824	0.0010	2.718	0.1951	0.0641	58	0.54	121.30	0
121	Acid Soluble Magnesium (1.2%)	0444	2.835	0.0300	2.718	0.1951	0.0641	58	0.60	121.30	0
121	Acid Soluble Magnesium (1.2%)	0024	2.840	0.0000	2.718	0.1951	0.0641	58	0.62	121.30	0
121	Acid Soluble Magnesium (1.2%)	0136	2.855	0.1700	2.718	0.1951	0.0641	58	0.70	121.33	0
121	Acid Soluble Magnesium (1.2%)	0394	2.940	0.1000	2.718	0.1951	0.0641	58	1.14	121.32	0
121	Acid Soluble Magnesium (1.2%)	0524	2.941	0.3019	2.718	0.1951	0.0641	58	1.14	121.99	0
121	Acid Soluble Magnesium (1.2%)	0483	2.950	0.1000	2.718	0.1951	0.0641	58	1.19	121.30	0
121	Acid Soluble Magnesium (1.2%)	0157	3.035	0.0500	2.718	0.1951	0.0641	58	1.62	121.00	0
121	Acid Soluble Magnesium (1.2%)	0027	3.124	0.0980	2.718	0.1951	0.0641	58	2.08	121.99	0
121	Acid Soluble Magnesium (1.2%)	0527	3.194	0.0240	2.718	0.1951	0.0641	58	2.44	121.33	0
121	Acid Soluble Magnesium (1.2%)	0472	3.255	0.0300	2.718	0.1951	0.0641	58	2.75	121.30	0
121	Acid Soluble Magnesium (1.2%)	0415	3.964	0.0409	2.718	0.1951	0.0641	58	6.38	121.99	0
121	Acid Soluble Magnesium (1.2%)	0529	4.365	0.0700	2.718	0.1951	0.0641	58	8.44	121.70	0
121	Acid Soluble Magnesium (1.2%)	0324	2.665	0.3700	2.718	0.1951	0.0641	58	-0.27	121.30	1
121	Acid Soluble Magnesium (1.2%)	0041	2.670	0.5400	2.718	0.1951	0.0641	58	-0.25	121.30	1
131	Water Soluble Magnesium (%)	0300	0.5489	0.0392	1.334	0.6442	0.0799	9	-1.13	131.30	0
131	Water Soluble Magnesium (%)	0309	0.6300	0.0400	1.334	0.6442	0.0799	9	-1.01	131.00	0
131	Water Soluble Magnesium (%)	0394	1.010	0.0200	1.334	0.6442	0.0799	9	-0.46	131.30	0
131	Water Soluble Magnesium (%)	0029	1.241	0.0460	1.334	0.6442	0.0799	9	-0.13	131.00	0
131	Water Soluble Magnesium (%)	0230	1.305	0.0100	1.334	0.6442	0.0799	9	-0.04	131.30	0
131	Water Soluble Magnesium (%)	0220	1.385	0.1500	1.334	0.6442	0.0799	9	0.07	131.30	0
131	Water Soluble Magnesium (%)	0444	1.755	0.2900	1.334	0.6442	0.0799	9	0.60	131.30	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				
131	Water Soluble Magnesium (%)	0027	1.840	0.1200	1.334	0.6442	0.0799	9	0.72	131.30	0
131	Water Soluble Magnesium (%)	0510	2.293	0.0038	1.334	0.6442	0.0799	9	1.37	131.70	0
143	Elemental Sulfur (%)	0220	0.2000	0.0000	3.190	2.597	0.0133	3	-1.15	143.00	0
143	Elemental Sulfur (%)	0472	4.485	0.0100	3.190	2.597	0.0133	3	0.50	143.99	0
143	Elemental Sulfur (%)	0389	4.885	0.0300	3.190	2.597	0.0133	3	0.65	143.99	0
145	Sulfate Sulfur, HCl soluble (%)	0498	4.010	0.0800	4.762	0.3652	0.0746	9	-1.90	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0233	4.474	0.1110	4.762	0.3652	0.0746	9	-0.73	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0106	4.515	0.0700	4.762	0.3652	0.0746	9	-0.62	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0444	4.610	0.2000	4.762	0.3652	0.0746	9	-0.38	145.99	0
145	Sulfate Sulfur, HCl soluble (%)	0522	4.870	0.0200	4.762	0.3652	0.0746	9	0.27	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0485	4.895	0.0700	4.762	0.3652	0.0746	9	0.34	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0027	5.050	0.0400	4.762	0.3652	0.0746	9	0.73	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0043	5.095	0.0100	4.762	0.3652	0.0746	9	0.84	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0220	5.135	0.0700	4.762	0.3652	0.0746	9	0.94	145.00	0
146	Total Sulfur in Liquid (%)	0131	4.651	0.0510				1		146.99	0
148	Total Sulfur (2%)	0519	2.095*	0.0100	4.574	0.4957	0.1087	45	-5.00	148.99	0
148	Total Sulfur (2%)	0513	2.365*	0.0100	4.574	0.4957	0.1087	45	-4.46	148.01	0
148	Total Sulfur (2%)	0457	2.615*	0.0700	4.574	0.4957	0.1087	45	-3.95	148.01	0
148	Total Sulfur (2%)	0501	3.027*	0.3291	4.574	0.4957	0.1087	45	-3.12	148.99	0
148	Total Sulfur (2%)	0073	3.425*	0.1100	4.574	0.4957	0.1087	45	-2.32	148.01	0
148	Total Sulfur (2%)	0177	3.518*	0.0222	4.574	0.4957	0.1087	45	-2.13	148.01	0
148	Total Sulfur (2%)	0510	3.544*	0.0004	4.574	0.4957	0.1087	45	-2.08	148.01	0
148	Total Sulfur (2%)	0029	3.725*	0.0100	4.574	0.4957	0.1087	45	-1.71	148.01	0
148	Total Sulfur (2%)	0515	4.091*	0.3818	4.574	0.4957	0.1087	45	-0.98	148.07	0
148	Total Sulfur (2%)	0523	4.150	0.2200	4.574	0.4957	0.1087	45	-0.86	148.99	0
148	Total Sulfur (2%)	0291	4.280	0.0800	4.574	0.4957	0.1087	45	-0.59	148.99	0
148	Total Sulfur (2%)	0486	4.305	0.0100	4.574	0.4957	0.1087	45	-0.54	148.07	0
148	Total Sulfur (2%)	0354	4.347	0.2950	4.574	0.4957	0.1087	45	-0.46	148.99	0
148	Total Sulfur (2%)	0450	4.380	0.3600	4.574	0.4957	0.1087	45	-0.39	148.99	0
148	Total Sulfur (2%)	0394	4.420	0.0400	4.574	0.4957	0.1087	45	-0.31	148.04	0
148	Total Sulfur (2%)	0024	4.485	0.0700	4.574	0.4957	0.1087	45	-0.18	148.99	0
148	Total Sulfur (2%)	0137	4.539	0.1210	4.574	0.4957	0.1087	45	-0.07	148.99	0
148	Total Sulfur (2%)	0444	4.610	0.0800	4.574	0.4957	0.1087	45	0.07	148.07	0
148	Total Sulfur (2%)	0037	4.612	0.1070	4.574	0.4957	0.1087	45	0.08	148.07	0
148	Total Sulfur (2%)	0117	4.631	0.0960	4.574	0.4957	0.1087	45	0.11	148.07	0
148	Total Sulfur (2%)	0177	4.678	0.0453	4.574	0.4957	0.1087	45	0.21	148.07	0
148	Total Sulfur (2%)	0420	4.700	0.2000	4.574	0.4957	0.1087	45	0.25	148.00	0
148	Total Sulfur (2%)	0230	4.725	0.2300	4.574	0.4957	0.1087	45	0.30	148.01	0
148	Total Sulfur (2%)	0096	4.727	0.0600	4.574	0.4957	0.1087	45	0.31	148.99	0
148	Total Sulfur (2%)	0300	4.736	0.0080	4.574	0.4957	0.1087	45	0.33	148.99	0
148	Total Sulfur (2%)	0494	4.757	0.0729	4.574	0.4957	0.1087	45	0.37	148.07	0
148	Total Sulfur (2%)	0029	4.763	0.0220	4.574	0.4957	0.1087	45	0.38	148.00	0
148	Total Sulfur (2%)	0421	4.790	0.0800	4.574	0.4957	0.1087	45	0.44	148.07	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				
148	Total Sulfur (2%)	0368	4.803	0.1565	4.574	0.4957	0.1087	45	0.46	148.99	0
148	Total Sulfur (2%)	0105	4.815	0.1100	4.574	0.4957	0.1087	45	0.49	148.01	0
148	Total Sulfur (2%)	0157	4.815	0.1500	4.574	0.4957	0.1087	45	0.49	148.01	0
148	Total Sulfur (2%)	0025	4.820	0.0600	4.574	0.4957	0.1087	45	0.50	148.00	0
148	Total Sulfur (2%)	0324	4.855	0.0500	4.574	0.4957	0.1087	45	0.57	148.01	0
148	Total Sulfur (2%)	0157	4.870	0.0200	4.574	0.4957	0.1087	45	0.60	148.00	0
148	Total Sulfur (2%)	0406	4.880	0.2800	4.574	0.4957	0.1087	45	0.62	148.07	0
148	Total Sulfur (2%)	0485	4.895	0.0700	4.574	0.4957	0.1087	45	0.65	148.01	0
148	Total Sulfur (2%)	0292	4.925	0.0100	4.574	0.4957	0.1087	45	0.71	148.07	0
148	Total Sulfur (2%)	0055	4.940	0.1200	4.574	0.4957	0.1087	45	0.74	148.01	0
148	Total Sulfur (2%)	0483	4.970	0.0400	4.574	0.4957	0.1087	45	0.80	148.07	0
148	Total Sulfur (2%)	0114	5.000	0.1000	4.574	0.4957	0.1087	45	0.86	148.01	0
148	Total Sulfur (2%)	0451	5.073	0.3440	4.574	0.4957	0.1087	45	1.01	148.00	0
148	Total Sulfur (2%)	0527	5.087	0.0220	4.574	0.4957	0.1087	45	1.03	148.07	0
148	Total Sulfur (2%)	0482	5.090	0.0200	4.574	0.4957	0.1087	45	1.04	148.99	0
148	Total Sulfur (2%)	0220	5.330	0.0600	4.574	0.4957	0.1087	45	1.52	148.99	0
148	Total Sulfur (2%)	0231	9.720	0.1400	4.574	0.4957	0.1087	45	10.38	148.01	0
149	Sulfur - HNO3 soluble (%)	0524	4.537	0.2261	4.771	0.2044	0.1004	3	-1.14	149.04	0
149	Sulfur - HNO3 soluble (%)	0423	4.858	0.0750	4.771	0.2044	0.1004	3	0.42	149.04	0
149	Sulfur - HNO3 soluble (%)	0521	4.918	0.0000	4.771	0.2044	0.1004	3	0.72	149.04	0
151	Acid Soluble Arsenic (ppm)	0498	3.170	0.1800	8.853	2.412	0.7298	16	-2.36	151.00	0
151	Acid Soluble Arsenic (ppm)	0368	3.500	4.000	8.853	2.412	0.7298	16	-2.22	151.30	0
151	Acid Soluble Arsenic (ppm)	0523	5.775	0.0700	8.853	2.412	0.7298	16	-1.28	151.30	0
151	Acid Soluble Arsenic (ppm)	0220	6.550	0.5000	8.853	2.412	0.7298	16	-0.95	151.99	0
151	Acid Soluble Arsenic (ppm)	0519	8.520	0.0200	8.853	2.412	0.7298	16	-0.14	151.99	0
151	Acid Soluble Arsenic (ppm)	0476	8.595	0.0300	8.853	2.412	0.7298	16	-0.11	151.30	0
151	Acid Soluble Arsenic (ppm)	0096	8.650	0.5000	8.853	2.412	0.7298	16	-0.08	151.30	0
151	Acid Soluble Arsenic (ppm)	0117	8.942	0.2110	8.853	2.412	0.7298	16	0.04	151.33	0
151	Acid Soluble Arsenic (ppm)	0037	9.349	0.6160	8.853	2.412	0.7298	16	0.21	151.33	0
151	Acid Soluble Arsenic (ppm)	0394	9.500	0.2000	8.853	2.412	0.7298	16	0.27	151.30	0
151	Acid Soluble Arsenic (ppm)	0136	10.15	0.1000	8.853	2.412	0.7298	16	0.54	151.00	0
151	Acid Soluble Arsenic (ppm)	0515	10.57	2.542	8.853	2.412	0.7298	16	0.71	151.33	0
151	Acid Soluble Arsenic (ppm)	0527	10.78	0.1990	8.853	2.412	0.7298	16	0.80	151.33	0
151	Acid Soluble Arsenic (ppm)	0450	11.00	0.6000	8.853	2.412	0.7298	16	0.89	151.30	0
151	Acid Soluble Arsenic (ppm)	0494	11.18	1.261	8.853	2.412	0.7298	16	0.97	151.33	0
151	Acid Soluble Arsenic (ppm)	0501	11.62	0.6478	8.853	2.412	0.7298	16	1.15	151.30	0
151	Acid Soluble Arsenic (ppm)	0515	10.62	5.316	8.853	2.412	0.7298	16	0.73	151.34	1
165	Acid Soluble Boron (0.08%)	0309	0.02500*	0.0100	0.2795	0.0404	0.0105	37	-6.29	165.00	0
165	Acid Soluble Boron (0.08%)	0394	0.03000*	0.0000	0.2795	0.0404	0.0105	37	-6.17	165.30	0
165	Acid Soluble Boron (0.08%)	0042	0.1650*	0.0100	0.2795	0.0404	0.0105	37	-2.83	165.99	0
165	Acid Soluble Boron (0.08%)	0521	0.2037*	0.0000	0.2795	0.0404	0.0105	37	-1.88	165.30	0
165	Acid Soluble Boron (0.08%)	0498	0.2100*	0.0000	0.2795	0.0404	0.0105	37	-1.72	165.00	0
165	Acid Soluble Boron (0.08%)	0501	0.2219*	0.0097	0.2795	0.0404	0.0105	37	-1.43	165.99	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
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165	Acid Soluble Boron (0.08%)	0324	0.2375	0.0150	0.2795	0.0404	0.0105	37	-1.04	165.30	0
165	Acid Soluble Boron (0.08%)	0524	0.2490	0.0035	0.2795	0.0404	0.0105	37	-0.76	165.99	0
165	Acid Soluble Boron (0.08%)	0136	0.2500	0.0400	0.2795	0.0404	0.0105	37	-0.73	165.30	0
165	Acid Soluble Boron (0.08%)	0220	0.2545	0.0010	0.2795	0.0404	0.0105	37	-0.62	165.00	0
165	Acid Soluble Boron (0.08%)	0043	0.2650	0.0100	0.2795	0.0404	0.0105	37	-0.36	165.99	0
165	Acid Soluble Boron (0.08%)	0494	0.2723	0.0010	0.2795	0.0404	0.0105	37	-0.18	165.30	0
165	Acid Soluble Boron (0.08%)	0515	0.2730	0.0551	0.2795	0.0404	0.0105	37	-0.16	165.99	0
165	Acid Soluble Boron (0.08%)	0354	0.2750	0.0160	0.2795	0.0404	0.0105	37	-0.11	165.30	0
165	Acid Soluble Boron (0.08%)	0486	0.2750	0.0100	0.2795	0.0404	0.0105	37	-0.11	165.99	0
165	Acid Soluble Boron (0.08%)	0025	0.2770	0.0041	0.2795	0.0404	0.0105	37	-0.06	165.99	0
165	Acid Soluble Boron (0.08%)	0055	0.2815	0.0190	0.2795	0.0404	0.0105	37	0.05	165.00	0
165	Acid Soluble Boron (0.08%)	0117	0.2837	0.0095	0.2795	0.0404	0.0105	37	0.10	165.99	0
165	Acid Soluble Boron (0.08%)	0291	0.2850	0.0100	0.2795	0.0404	0.0105	37	0.13	165.30	0
165	Acid Soluble Boron (0.08%)	0029	0.2860	0.0180	0.2795	0.0404	0.0105	37	0.16	165.00	0
165	Acid Soluble Boron (0.08%)	0106	0.2929	0.0228	0.2795	0.0404	0.0105	37	0.33	165.30	0
165	Acid Soluble Boron (0.08%)	0421	0.2935	0.0050	0.2795	0.0404	0.0105	37	0.34	165.99	0
165	Acid Soluble Boron (0.08%)	0444	0.2950	0.0100	0.2795	0.0404	0.0105	37	0.38	165.30	0
165	Acid Soluble Boron (0.08%)	0360	0.2970	0.0000	0.2795	0.0404	0.0105	37	0.43	165.99	0
165	Acid Soluble Boron (0.08%)	0037	0.2980	0.0160	0.2795	0.0404	0.0105	37	0.46	165.00	0
165	Acid Soluble Boron (0.08%)	0300	0.3005	0.0005	0.2795	0.0404	0.0105	37	0.52	165.99	0
165	Acid Soluble Boron (0.08%)	0040	0.3025	0.0170	0.2795	0.0404	0.0105	37	0.57	165.30	0
165	Acid Soluble Boron (0.08%)	0423	0.3040	0.0020	0.2795	0.0404	0.0105	37	0.60	165.99	0
165	Acid Soluble Boron (0.08%)	0389	0.3045	0.0010	0.2795	0.0404	0.0105	37	0.62	165.30	0
165	Acid Soluble Boron (0.08%)	0234	0.3050	0.0100	0.2795	0.0404	0.0105	37	0.63	165.30	0
165	Acid Soluble Boron (0.08%)	0482	0.3050	0.0100	0.2795	0.0404	0.0105	37	0.63	165.99	0
165	Acid Soluble Boron (0.08%)	0368	0.3127	0.0057	0.2795	0.0404	0.0105	37	0.82	165.99	0
165	Acid Soluble Boron (0.08%)	0433	0.3140	0.0020	0.2795	0.0404	0.0105	37	0.85	165.30	0
165	Acid Soluble Boron (0.08%)	0472	0.3200	0.0200	0.2795	0.0404	0.0105	37	1.00	165.99	0
165	Acid Soluble Boron (0.08%)	0527	0.3380	0.0240	0.2795	0.0404	0.0105	37	1.45	165.99	0
165	Acid Soluble Boron (0.08%)	0231	0.3400	0.0000	0.2795	0.0404	0.0105	37	1.49	165.99	0
165	Acid Soluble Boron (0.08%)	0519	0.9000	0.0000	0.2795	0.0404	0.0105	37	15.34	165.99	0
165	Acid Soluble Boron (0.08%)	0483	3,170	20.00	0.2795	0.0404	0.0105	37	78375.24	165.99	2
171	Water Soluble Boron (%)	0220	0.2475	0.0030	0.2829	0.0154	0.0063	7	-2.08	171.10	0
171	Water Soluble Boron (%)	0486	0.2750	0.0100	0.2829	0.0154	0.0063	7	-0.47	171.99	0
171	Water Soluble Boron (%)	0027	0.2800	0.0060	0.2829	0.0154	0.0063	7	-0.17	171.99	0
171	Water Soluble Boron (%)	0444	0.2850	0.0100	0.2829	0.0154	0.0063	7	0.12	171.99	0
171	Water Soluble Boron (%)	0300	0.2861	0.0000	0.2829	0.0154	0.0063	7	0.19	171.99	0
171	Water Soluble Boron (%)	0028	0.2885	0.0050	0.2829	0.0154	0.0063	7	0.33	171.10	0
171	Water Soluble Boron (%)	0231	0.3550	0.0100	0.2829	0.0154	0.0063	7	4.24	171.99	0
181	Acid Soluble Cadmium (ppm)	0368	2.700	0.2000	5.280	0.9414	0.3651	22	-2.74	181.30	0
181	Acid Soluble Cadmium (ppm)	0096	3.600	0.2000	5.280	0.9414	0.3651	22	-1.78	181.30	0
181	Acid Soluble Cadmium (ppm)	0444	3.910	0.2200	5.280	0.9414	0.3651	22	-1.45	181.30	0
181	Acid Soluble Cadmium (ppm)	0524	4.505	0.0206	5.280	0.9414	0.3651	22	-0.82	181.30	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
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181	Acid Soluble Cadmium (ppm)	0523	4.575	0.5100	5.280	0.9414	0.3651	22	-0.75	181.30	0
181	Acid Soluble Cadmium (ppm)	0476	4.600	0.4000	5.280	0.9414	0.3651	22	-0.72	181.30	0
181	Acid Soluble Cadmium (ppm)	0501	4.645	0.0477	5.280	0.9414	0.3651	22	-0.67	181.30	0
181	Acid Soluble Cadmium (ppm)	0515	4.908	2.160	5.280	0.9414	0.3651	22	-0.40	181.33	0
181	Acid Soluble Cadmium (ppm)	0037	5.280	0.2940	5.280	0.9414	0.3651	22	0.00	181.33	0
181	Acid Soluble Cadmium (ppm)	0136	5.350	0.1000	5.280	0.9414	0.3651	22	0.07	181.00	0
181	Acid Soluble Cadmium (ppm)	0482	5.350	0.3000	5.280	0.9414	0.3651	22	0.07	181.30	0
181	Acid Soluble Cadmium (ppm)	0117	5.422	0.0840	5.280	0.9414	0.3651	22	0.15	181.33	0
181	Acid Soluble Cadmium (ppm)	0394	5.550	0.1000	5.280	0.9414	0.3651	22	0.29	181.30	0
181	Acid Soluble Cadmium (ppm)	0498	5.580	0.3600	5.280	0.9414	0.3651	22	0.32	181.00	0
181	Acid Soluble Cadmium (ppm)	0300	5.675	0.0900	5.280	0.9414	0.3651	22	0.42	181.99	0
181	Acid Soluble Cadmium (ppm)	0300	5.725	0.0410	5.280	0.9414	0.3651	22	0.47	181.32	0
181	Acid Soluble Cadmium (ppm)	0494	5.764	0.0935	5.280	0.9414	0.3651	22	0.51	181.33	0
181	Acid Soluble Cadmium (ppm)	0035	5.915	1.910	5.280	0.9414	0.3651	22	0.68	181.30	0
181	Acid Soluble Cadmium (ppm)	0527	6.155	0.1520	5.280	0.9414	0.3651	22	0.93	181.33	0
181	Acid Soluble Cadmium (ppm)	0519	6.315	0.0500	5.280	0.9414	0.3651	22	1.10	181.99	0
181	Acid Soluble Cadmium (ppm)	0220	6.500	0.0000	5.280	0.9414	0.3651	22	1.30	181.99	0
181	Acid Soluble Cadmium (ppm)	0450	6.750	0.7000	5.280	0.9414	0.3651	22	1.56	181.30	0
181	Acid Soluble Cadmium (ppm)	0515	4.160	5.752	5.280	0.9414	0.3651	22	-1.19	181.34	1
190	Water Soluble Chlorine (%)	0105	0.2150	0.0100				1		190.00	0
191	Acid Soluble Chromium (ppm)	0519	46.37	0.0600	84.10	17.48	2.839	20	-2.16	191.99	0
191	Acid Soluble Chromium (ppm)	0501	51.62	2.738	84.10	17.48	2.839	20	-1.86	191.30	0
191	Acid Soluble Chromium (ppm)	0476	60.45	1.500	84.10	17.48	2.839	20	-1.35	191.30	0
191	Acid Soluble Chromium (ppm)	0444	65.77	3.830	84.10	17.48	2.839	20	-1.05	191.30	0
191	Acid Soluble Chromium (ppm)	0096	73.20	5.000	84.10	17.48	2.839	20	-0.62	191.30	0
191	Acid Soluble Chromium (ppm)	0498	73.90	5.400	84.10	17.48	2.839	20	-0.58	191.00	0
191	Acid Soluble Chromium (ppm)	0482	76.60	6.200	84.10	17.48	2.839	20	-0.43	191.30	0
191	Acid Soluble Chromium (ppm)	0027	78.00	2.000	84.10	17.48	2.839	20	-0.35	191.30	0
191	Acid Soluble Chromium (ppm)	0394	78.50	4.400	84.10	17.48	2.839	20	-0.32	191.30	0
191	Acid Soluble Chromium (ppm)	0523	87.20	0.2000	84.10	17.48	2.839	20	0.18	191.30	0
191	Acid Soluble Chromium (ppm)	0220	92.00	2.000	84.10	17.48	2.839	20	0.45	191.99	0
191	Acid Soluble Chromium (ppm)	0450	93.00	4.000	84.10	17.48	2.839	20	0.51	191.30	0
191	Acid Soluble Chromium (ppm)	0037	95.55	0.9140	84.10	17.48	2.839	20	0.65	191.33	0
191	Acid Soluble Chromium (ppm)	0117	95.71	0.8800	84.10	17.48	2.839	20	0.66	191.33	0
191	Acid Soluble Chromium (ppm)	0300	95.73	0.8800	84.10	17.48	2.839	20	0.67	191.32	0
191	Acid Soluble Chromium (ppm)	0494	96.91	2.955	84.10	17.48	2.839	20	0.73	191.33	0
191	Acid Soluble Chromium (ppm)	0368	97.95	4.100	84.10	17.48	2.839	20	0.79	191.30	0
191	Acid Soluble Chromium (ppm)	0515	98.64	7.063	84.10	17.48	2.839	20	0.83	191.33	0
191	Acid Soluble Chromium (ppm)	0515	100.5	0.0050	84.10	17.48	2.839	20	0.94	191.34	0
191	Acid Soluble Chromium (ppm)	0527	106.7	2.650	84.10	17.48	2.839	20	1.29	191.33	0
191	Acid Soluble Chromium (ppm)	0035	95.65	44.70	84.10	17.48	2.839	20	0.66	191.30	1
202	Acid Soluble Cobalt (ppm)	0096	18.77	1.050	32.36	6.663	1.290	21	-2.04	202.30	0
202	Acid Soluble Cobalt (ppm)	0498	20.00	0.0000	32.36	6.663	1.290	21	-1.85	202.00	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				
202	Acid Soluble Cobalt (ppm)	0027	23.00	2.000	32.36	6.663	1.290	21	-1.40	202.30	0
202	Acid Soluble Cobalt (ppm)	0519	24.74	0.1200	32.36	6.663	1.290	21	-1.14	202.99	0
202	Acid Soluble Cobalt (ppm)	0476	26.70	1.000	32.36	6.663	1.290	21	-0.85	202.30	0
202	Acid Soluble Cobalt (ppm)	0482	29.20	2.200	32.36	6.663	1.290	21	-0.47	202.30	0
202	Acid Soluble Cobalt (ppm)	0501	30.00	1.186	32.36	6.663	1.290	21	-0.35	202.34	0
202	Acid Soluble Cobalt (ppm)	0523	30.05	0.7000	32.36	6.663	1.290	21	-0.35	202.30	0
202	Acid Soluble Cobalt (ppm)	0220	31.65	1.700	32.36	6.663	1.290	21	-0.11	202.99	0
202	Acid Soluble Cobalt (ppm)	0524	32.11	1.596	32.36	6.663	1.290	21	-0.04	202.30	0
202	Acid Soluble Cobalt (ppm)	0423	32.46	0.0900	32.36	6.663	1.290	21	0.01	202.32	0
202	Acid Soluble Cobalt (ppm)	0368	34.45	1.100	32.36	6.663	1.290	21	0.31	202.30	0
202	Acid Soluble Cobalt (ppm)	0233	35.59	3.900	32.36	6.663	1.290	21	0.48	202.33	0
202	Acid Soluble Cobalt (ppm)	0515	36.33	5.706	32.36	6.663	1.290	21	0.60	202.34	0
202	Acid Soluble Cobalt (ppm)	0515	37.12	0.8903	32.36	6.663	1.290	21	0.72	202.33	0
202	Acid Soluble Cobalt (ppm)	0037	37.15	0.0190	32.36	6.663	1.290	21	0.72	202.33	0
202	Acid Soluble Cobalt (ppm)	0117	37.39	0.5200	32.36	6.663	1.290	21	0.76	202.33	0
202	Acid Soluble Cobalt (ppm)	0494	38.30	1.263	32.36	6.663	1.290	21	0.89	202.33	0
202	Acid Soluble Cobalt (ppm)	0450	38.85	1.300	32.36	6.663	1.290	21	0.97	202.30	0
202	Acid Soluble Cobalt (ppm)	0300	39.54	0.4800	32.36	6.663	1.290	21	1.08	202.32	0
202	Acid Soluble Cobalt (ppm)	0527	40.18	0.2640	32.36	6.663	1.290	21	1.17	202.33	0
202	Acid Soluble Cobalt (ppm)	0035	31.45	8.100	32.36	6.663	1.290	21	-0.14	202.30	1
221	Acid Soluble Copper (0.5%)	0515	0.2579*	0.4995	0.6072	0.0427	0.0286	57	-8.18	221.33	0
221	Acid Soluble Copper (0.5%)	0519	0.4600*	0.0200	0.6072	0.0427	0.0286	57	-3.45	221.99	0
221	Acid Soluble Copper (0.5%)	0521	0.4642*	0.0000	0.6072	0.0427	0.0286	57	-3.35	221.32	0
221	Acid Soluble Copper (0.5%)	0513	0.4950*	0.0100	0.6072	0.0427	0.0286	57	-2.63	221.00	0
221	Acid Soluble Copper (0.5%)	0476	0.5300*	0.0200	0.6072	0.0427	0.0286	57	-1.81	221.99	0
221	Acid Soluble Copper (0.5%)	0486	0.5450	0.0100	0.6072	0.0427	0.0286	57	-1.46	221.33	0
221	Acid Soluble Copper (0.5%)	0324	0.5485	0.0090	0.6072	0.0427	0.0286	57	-1.37	221.30	0
221	Acid Soluble Copper (0.5%)	0457	0.5500	0.0200	0.6072	0.0427	0.0286	57	-1.34	221.00	0
221	Acid Soluble Copper (0.5%)	0501	0.5516	0.0354	0.6072	0.0427	0.0286	57	-1.30	221.99	0
221	Acid Soluble Copper (0.5%)	0029	0.5592	0.0123	0.6072	0.0427	0.0286	57	-1.13	221.00	0
221	Acid Soluble Copper (0.5%)	0043	0.5620	0.0040	0.6072	0.0427	0.0286	57	-1.06	221.00	0
221	Acid Soluble Copper (0.5%)	0137	0.5625	0.0090	0.6072	0.0427	0.0286	57	-1.05	221.99	0
221	Acid Soluble Copper (0.5%)	0291	0.5650	0.0100	0.6072	0.0427	0.0286	57	-0.99	221.30	0
221	Acid Soluble Copper (0.5%)	0025	0.5872	0.0077	0.6072	0.0427	0.0286	57	-0.47	221.33	0
221	Acid Soluble Copper (0.5%)	0515	0.5897	0.1222	0.6072	0.0427	0.0286	57	-0.41	221.99	0
221	Acid Soluble Copper (0.5%)	0037	0.5915	0.0230	0.6072	0.0427	0.0286	57	-0.37	221.33	0
221	Acid Soluble Copper (0.5%)	0041	0.5950	0.0500	0.6072	0.0427	0.0286	57	-0.29	221.30	0
221	Acid Soluble Copper (0.5%)	0421	0.5950	0.0100	0.6072	0.0427	0.0286	57	-0.29	221.33	0
221	Acid Soluble Copper (0.5%)	0402	0.6000	0.0000	0.6072	0.0427	0.0286	57	-0.17	221.30	0
221	Acid Soluble Copper (0.5%)	0106	0.6002	0.0266	0.6072	0.0427	0.0286	57	-0.16	221.33	0
221	Acid Soluble Copper (0.5%)	0177	0.6003	0.0064	0.6072	0.0427	0.0286	57	-0.16	221.33	0
221	Acid Soluble Copper (0.5%)	0027	0.6045	0.0250	0.6072	0.0427	0.0286	57	-0.06	221.99	0
221	Acid Soluble Copper (0.5%)	0234	0.6050	0.0300	0.6072	0.0427	0.0286	57	-0.05	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 (0.5%)	0028	0.6050	0.0100	0.6072	0.0427	0.0286	57	-0.05	221.33	0
221	Acid Soluble Copper (0.5%)	0368	0.6054	0.0114	0.6072	0.0427	0.0286	57	-0.04	221.99	0
221	Acid Soluble Copper (0.5%)	0527	0.6060	0.0120	0.6072	0.0427	0.0286	57	-0.03	221.33	0
221	Acid Soluble Copper (0.5%)	0523	0.6065	0.0010	0.6072	0.0427	0.0286	57	-0.02	221.99	0
221	Acid Soluble Copper (0.5%)	0498	0.6100	0.0000	0.6072	0.0427	0.0286	57	0.06	221.00	0
221	Acid Soluble Copper (0.5%)	0360	0.6105	0.0050	0.6072	0.0427	0.0286	57	0.08	221.30	0
221	Acid Soluble Copper (0.5%)	0420	0.6124	0.0079	0.6072	0.0427	0.0286	57	0.12	221.99	0
221	Acid Soluble Copper (0.5%)	0220	0.6135	0.0030	0.6072	0.0427	0.0286	57	0.15	221.33	0
221	Acid Soluble Copper (0.5%)	0105	0.6160	0.0140	0.6072	0.0427	0.0286	57	0.20	221.00	0
221	Acid Soluble Copper (0.5%)	0040	0.6188	0.0174	0.6072	0.0427	0.0286	57	0.27	221.00	0
221	Acid Soluble Copper (0.5%)	0485	0.6195	0.0030	0.6072	0.0427	0.0286	57	0.29	221.00	0
221	Acid Soluble Copper (0.5%)	0444	0.6200	0.0000	0.6072	0.0427	0.0286	57	0.30	221.30	0
221	Acid Soluble Copper (0.5%)	0450	0.6200	0.0600	0.6072	0.0427	0.0286	57	0.30	221.30	0
221	Acid Soluble Copper (0.5%)	0233	0.6204	0.0087	0.6072	0.0427	0.0286	57	0.31	221.33	0
221	Acid Soluble Copper (0.5%)	0389	0.6215	0.0030	0.6072	0.0427	0.0286	57	0.33	221.99	0
221	Acid Soluble Copper (0.5%)	0157	0.6220	0.0020	0.6072	0.0427	0.0286	57	0.35	221.30	0
221	Acid Soluble Copper (0.5%)	0105	0.6230	0.0140	0.6072	0.0427	0.0286	57	0.37	221.03	0
221	Acid Soluble Copper (0.5%)	0472	0.6250	0.0300	0.6072	0.0427	0.0286	57	0.42	221.30	0
221	Acid Soluble Copper (0.5%)	0394	0.6250	0.0300	0.6072	0.0427	0.0286	57	0.42	221.32	0
221	Acid Soluble Copper (0.5%)	0055	0.6250	0.0500	0.6072	0.0427	0.0286	57	0.42	221.33	0
221	Acid Soluble Copper (0.5%)	0494	0.6348	0.0156	0.6072	0.0427	0.0286	57	0.64	221.33	0
221	Acid Soluble Copper (0.5%)	0354	0.6375	0.0190	0.6072	0.0427	0.0286	57	0.71	221.30	0
221	Acid Soluble Copper (0.5%)	0136	0.6400	0.0200	0.6072	0.0427	0.0286	57	0.77	221.33	0
221	Acid Soluble Copper (0.5%)	0433	0.6445	0.0090	0.6072	0.0427	0.0286	57	0.87	221.30	0
221	Acid Soluble Copper (0.5%)	0117	0.6449	0.0235	0.6072	0.0427	0.0286	57	0.88	221.33	0
221	Acid Soluble Copper (0.5%)	0300	0.6459	0.0012	0.6072	0.0427	0.0286	57	0.90	221.32	0
221	Acid Soluble Copper (0.5%)	0114	0.6550	0.0100	0.6072	0.0427	0.0286	57	1.12	221.30	0
221	Acid Soluble Copper (0.5%)	0482	0.6550	0.0100	0.6072	0.0427	0.0286	57	1.12	221.30	0
221	Acid Soluble Copper (0.5%)	0096	0.6594	0.0098	0.6072	0.0427	0.0286	57	1.22	221.30	0
221	Acid Soluble Copper (0.5%)	0524	0.6635	0.0054	0.6072	0.0427	0.0286	57	1.32	221.99	0
221	Acid Soluble Copper (0.5%)	0231	0.6650	0.0100	0.6072	0.0427	0.0286	57	1.35	221.30	0
221	Acid Soluble Copper (0.5%)	0035	0.7090	0.0000	0.6072	0.0427	0.0286	57	2.38	221.30	0
221	Acid Soluble Copper (0.5%)	0423	0.7880	0.0060	0.6072	0.0427	0.0286	57	4.23	221.32	0
221	Acid Soluble Copper (0.5%)	0042	0.7965	0.2490	0.6072	0.0427	0.0286	57	4.43	221.99	0
221	Acid Soluble Copper (0.5%)	0483	6,520	40.00	0.6072	0.0427	0.0286	57	152547.39	221.30	2
241	Acid Soluble Iron (1.6%)	0501	1.112*	0.0027	2.427	0.2966	0.1176	56	-4.43	241.99	0
241	Acid Soluble Iron (1.6%)	0137	1.215*	0.2270	2.427	0.2966	0.1176	56	-4.09	241.99	0
241	Acid Soluble Iron (1.6%)	0523	1.430*	0.1600	2.427	0.2966	0.1176	56	-3.36	241.99	0
241	Acid Soluble Iron (1.6%)	0476	1.485*	0.0500	2.427	0.2966	0.1176	56	-3.18	241.99	0
241	Acid Soluble Iron (1.6%)	0420	1.539*	0.0548	2.427	0.2966	0.1176	56	-2.99	241.30	0
241	Acid Soluble Iron (1.6%)	0521	1.611*	0.0000	2.427	0.2966	0.1176	56	-2.75	241.32	0
241	Acid Soluble Iron (1.6%)	0519	1.635*	0.0100	2.427	0.2966	0.1176	56	-2.67	241.99	0
241	Acid Soluble Iron (1.6%)	0498	1.650*	0.1000	2.427	0.2966	0.1176	56	-2.62	241.00	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
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241	Acid Soluble Iron (1.6%)	0513	1.670*	0.0200	2.427	0.2966	0.1176	56	-2.55	241.00	0
241	Acid Soluble Iron (1.6%)	0042	1.735*	0.1700	2.427	0.2966	0.1176	56	-2.33	241.99	0
241	Acid Soluble Iron (1.6%)	0482	1.910*	0.0800	2.427	0.2966	0.1176	56	-1.74	241.30	0
241	Acid Soluble Iron (1.6%)	0389	2.090*	0.0200	2.427	0.2966	0.1176	56	-1.14	241.99	0
241	Acid Soluble Iron (1.6%)	0472	2.195	0.0700	2.427	0.2966	0.1176	56	-0.78	241.30	0
241	Acid Soluble Iron (1.6%)	0423	2.230	0.0400	2.427	0.2966	0.1176	56	-0.66	241.32	0
241	Acid Soluble Iron (1.6%)	0220	2.290	0.1800	2.427	0.2966	0.1176	56	-0.46	241.33	0
241	Acid Soluble Iron (1.6%)	0106	2.324	1.098	2.427	0.2966	0.1176	56	-0.35	241.33	0
241	Acid Soluble Iron (1.6%)	0105	2.346	0.0180	2.427	0.2966	0.1176	56	-0.27	241.03	0
241	Acid Soluble Iron (1.6%)	0037	2.363	0.1100	2.427	0.2966	0.1176	56	-0.22	241.33	0
241	Acid Soluble Iron (1.6%)	0041	2.410	0.0800	2.427	0.2966	0.1176	56	-0.06	241.30	0
241	Acid Soluble Iron (1.6%)	0027	2.429	0.9090	2.427	0.2966	0.1176	56	0.01	241.99	0
241	Acid Soluble Iron (1.6%)	0354	2.430	0.0160	2.427	0.2966	0.1176	56	0.01	241.30	0
241	Acid Soluble Iron (1.6%)	0231	2.440	0.0000	2.427	0.2966	0.1176	56	0.04	241.30	0
241	Acid Soluble Iron (1.6%)	0114	2.460	0.0400	2.427	0.2966	0.1176	56	0.11	241.30	0
241	Acid Soluble Iron (1.6%)	0515	2.469	0.1834	2.427	0.2966	0.1176	56	0.14	241.99	0
241	Acid Soluble Iron (1.6%)	0524	2.475	0.0593	2.427	0.2966	0.1176	56	0.16	241.99	0
241	Acid Soluble Iron (1.6%)	0028	2.500	0.0600	2.427	0.2966	0.1176	56	0.25	241.33	0
241	Acid Soluble Iron (1.6%)	0515	2.501	0.2613	2.427	0.2966	0.1176	56	0.25	241.33	0
241	Acid Soluble Iron (1.6%)	0029	2.501	0.1220	2.427	0.2966	0.1176	56	0.25	241.00	0
241	Acid Soluble Iron (1.6%)	0025	2.516	0.1450	2.427	0.2966	0.1176	56	0.30	241.33	0
241	Acid Soluble Iron (1.6%)	0136	2.520	0.1000	2.427	0.2966	0.1176	56	0.31	241.33	0
241	Acid Soluble Iron (1.6%)	0291	2.525	0.3100	2.427	0.2966	0.1176	56	0.33	241.30	0
241	Acid Soluble Iron (1.6%)	0034	2.530	0.1000	2.427	0.2966	0.1176	56	0.35	241.33	0
241	Acid Soluble Iron (1.6%)	0421	2.565	0.0300	2.427	0.2966	0.1176	56	0.47	241.33	0
241	Acid Soluble Iron (1.6%)	0117	2.568	0.0130	2.427	0.2966	0.1176	56	0.47	241.33	0
241	Acid Soluble Iron (1.6%)	0234	2.595	0.0300	2.427	0.2966	0.1176	56	0.57	241.30	0
241	Acid Soluble Iron (1.6%)	0055	2.595	0.1100	2.427	0.2966	0.1176	56	0.57	241.33	0
241	Acid Soluble Iron (1.6%)	0096	2.604	0.0730	2.427	0.2966	0.1176	56	0.60	241.30	0
241	Acid Soluble Iron (1.6%)	0433	2.610	0.0200	2.427	0.2966	0.1176	56	0.62	241.30	0
241	Acid Soluble Iron (1.6%)	0177	2.611	0.1549	2.427	0.2966	0.1176	56	0.62	241.33	0
241	Acid Soluble Iron (1.6%)	0444	2.615	0.0500	2.427	0.2966	0.1176	56	0.63	241.30	0
241	Acid Soluble Iron (1.6%)	0485	2.620	0.0160	2.427	0.2966	0.1176	56	0.65	241.00	0
241	Acid Soluble Iron (1.6%)	0105	2.624	0.0080	2.427	0.2966	0.1176	56	0.66	241.00	0
241	Acid Soluble Iron (1.6%)	0040	2.625	0.0300	2.427	0.2966	0.1176	56	0.67	241.00	0
241	Acid Soluble Iron (1.6%)	0157	2.625	0.1100	2.427	0.2966	0.1176	56	0.67	241.30	0
241	Acid Soluble Iron (1.6%)	0300	2.625	0.0000	2.427	0.2966	0.1176	56	0.67	241.32	0
241	Acid Soluble Iron (1.6%)	0035	2.630	0.2600	2.427	0.2966	0.1176	56	0.68	241.30	0
241	Acid Soluble Iron (1.6%)	0324	2.645	0.1300	2.427	0.2966	0.1176	56	0.74	241.30	0
241	Acid Soluble Iron (1.6%)	0233	2.647	0.1290	2.427	0.2966	0.1176	56	0.74	241.33	0
241	Acid Soluble Iron (1.6%)	0494	2.661	0.0751	2.427	0.2966	0.1176	56	0.79	241.33	0
241	Acid Soluble Iron (1.6%)	0394	2.665	0.0900	2.427	0.2966	0.1176	56	0.80	241.32	0
241	Acid Soluble Iron (1.6%)	0360	2.696	0.0720	2.427	0.2966	0.1176	56	0.91	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 (1.6%)	0527	2.699	0.0430	2.427	0.2966	0.1176	56	0.92	241.33	0
241	Acid Soluble Iron (1.6%)	0368	2.702	0.0649	2.427	0.2966	0.1176	56	0.93	241.99	0
241	Acid Soluble Iron (1.6%)	0043	2.725	0.0100	2.427	0.2966	0.1176	56	1.00	241.00	0
241	Acid Soluble Iron (1.6%)	0402	2.745	0.1900	2.427	0.2966	0.1176	56	1.07	241.30	0
241	Acid Soluble Iron (1.6%)	0486	2.990	0.0800	2.427	0.2966	0.1176	56	1.90	241.33	0
241	Acid Soluble Iron (1.6%)	0483	27,850	700.0	2.427	0.2966	0.1176	56	93892.45	241.30	2
251	Acid Soluble Lead (ppm)	0498	12.45	0.5000	28.89	5.532	1.764	22	-2.97	251.00	0
251	Acid Soluble Lead (ppm)	0394	20.00	0.4000	28.89	5.532	1.764	22	-1.61	251.30	0
251	Acid Soluble Lead (ppm)	0096	22.75	1.900	28.89	5.532	1.764	22	-1.11	251.30	0
251	Acid Soluble Lead (ppm)	0501	23.06	0.0069	28.89	5.532	1.764	22	-1.05	251.30	0
251	Acid Soluble Lead (ppm)	0444	23.19	0.2100	28.89	5.532	1.764	22	-1.03	251.30	0
251	Acid Soluble Lead (ppm)	0368	23.60	3.600	28.89	5.532	1.764	22	-0.96	251.30	0
251	Acid Soluble Lead (ppm)	0136	26.35	0.3000	28.89	5.532	1.764	22	-0.46	251.00	0
251	Acid Soluble Lead (ppm)	0027	27.00	0.0000	28.89	5.532	1.764	22	-0.34	251.30	0
251	Acid Soluble Lead (ppm)	0476	27.60	0.2000	28.89	5.532	1.764	22	-0.23	251.30	0
251	Acid Soluble Lead (ppm)	0519	27.82	0.0400	28.89	5.532	1.764	22	-0.19	251.99	0
251	Acid Soluble Lead (ppm)	0220	29.50	9.000	28.89	5.532	1.764	22	0.11	251.99	0
251	Acid Soluble Lead (ppm)	0523	31.05	0.5000	28.89	5.532	1.764	22	0.39	251.30	0
251	Acid Soluble Lead (ppm)	0117	31.40	0.5300	28.89	5.532	1.764	22	0.45	251.33	0
251	Acid Soluble Lead (ppm)	0524	31.58	4.461	28.89	5.532	1.764	22	0.49	251.30	0
251	Acid Soluble Lead (ppm)	0037	32.11	3.142	28.89	5.532	1.764	22	0.58	251.33	0
251	Acid Soluble Lead (ppm)	0494	32.63	1.350	28.89	5.532	1.764	22	0.67	251.33	0
251	Acid Soluble Lead (ppm)	0450	33.00	2.200	28.89	5.532	1.764	22	0.74	251.30	0
251	Acid Soluble Lead (ppm)	0515	33.23	1.713	28.89	5.532	1.764	22	0.78	251.33	0
251	Acid Soluble Lead (ppm)	0233	33.57	4.910	28.89	5.532	1.764	22	0.84	251.33	0
251	Acid Soluble Lead (ppm)	0527	34.01	0.4500	28.89	5.532	1.764	22	0.92	251.33	0
251	Acid Soluble Lead (ppm)	0515	34.40	1.098	28.89	5.532	1.764	22	0.99	251.34	0
251	Acid Soluble Lead (ppm)	0482	36.65	2.300	28.89	5.532	1.764	22	1.40	251.30	0
251	Acid Soluble Lead (ppm)	0035	146.0	84.00	28.89	5.532	1.764	22	21.17	251.30	2
261	Acid Soluble Manganese (1%)	0457	0.9300*	0.0200	1.220	0.0867	0.0327	58	-3.34	261.12	0
261	Acid Soluble Manganese (1%)	0501	0.9393*	0.0081	1.220	0.0867	0.0327	58	-3.24	261.99	0
261	Acid Soluble Manganese (1%)	0498	0.9650*	0.1300	1.220	0.0867	0.0327	58	-2.94	261.11	0
261	Acid Soluble Manganese (1%)	0476	0.9985*	0.0030	1.220	0.0867	0.0327	58	-2.55	261.99	0
261	Acid Soluble Manganese (1%)	0519	1.020*	0.0000	1.220	0.0867	0.0327	58	-2.30	261.99	0
261	Acid Soluble Manganese (1%)	0137	1.064*	0.0120	1.220	0.0867	0.0327	58	-1.80	261.99	0
261	Acid Soluble Manganese (1%)	0291	1.065*	0.0100	1.220	0.0867	0.0327	58	-1.78	261.30	0
261	Acid Soluble Manganese (1%)	0042	1.110	0.0600	1.220	0.0867	0.0327	58	-1.27	261.99	0
261	Acid Soluble Manganese (1%)	0486	1.120	0.0000	1.220	0.0867	0.0327	58	-1.15	261.35	0
261	Acid Soluble Manganese (1%)	0513	1.130	0.0200	1.220	0.0867	0.0327	58	-1.03	261.12	0
261	Acid Soluble Manganese (1%)	0523	1.130	0.0200	1.220	0.0867	0.0327	58	-1.03	261.99	0
261	Acid Soluble Manganese (1%)	0025	1.152	0.0160	1.220	0.0867	0.0327	58	-0.78	261.35	0
261	Acid Soluble Manganese (1%)	0300	1.162	0.0100	1.220	0.0867	0.0327	58	-0.67	261.34	0
261	Acid Soluble Manganese (1%)	0527	1.166	0.0680	1.220	0.0867	0.0327	58	-0.62	261.35	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 (1%)	0037	1.172	0.0720	1.220	0.0867	0.0327	58	-0.55	261.35	0
261	Acid Soluble Manganese (1%)	0034	1.178	0.0300	1.220	0.0867	0.0327	58	-0.48	261.35	0
261	Acid Soluble Manganese (1%)	0028	1.180	0.0200	1.220	0.0867	0.0327	58	-0.46	261.35	0
261	Acid Soluble Manganese (1%)	0136	1.185	0.0300	1.220	0.0867	0.0327	58	-0.40	261.35	0
261	Acid Soluble Manganese (1%)	0420	1.188	0.0031	1.220	0.0867	0.0327	58	-0.36	261.30	0
261	Acid Soluble Manganese (1%)	0521	1.190	0.0000	1.220	0.0867	0.0327	58	-0.34	261.34	0
261	Acid Soluble Manganese (1%)	0157	1.195	0.0100	1.220	0.0867	0.0327	58	-0.29	261.30	0
261	Acid Soluble Manganese (1%)	0117	1.196	0.0340	1.220	0.0867	0.0327	58	-0.27	261.35	0
261	Acid Soluble Manganese (1%)	0515	1.196	0.0486	1.220	0.0867	0.0327	58	-0.27	261.99	0
261	Acid Soluble Manganese (1%)	0515	1.202	0.0896	1.220	0.0867	0.0327	58	-0.20	261.35	0
261	Acid Soluble Manganese (1%)	0027	1.214	0.0190	1.220	0.0867	0.0327	58	-0.07	261.99	0
261	Acid Soluble Manganese (1%)	0421	1.220	0.0000	1.220	0.0867	0.0327	58	0.00	261.35	0
261	Acid Soluble Manganese (1%)	0360	1.221	0.0140	1.220	0.0867	0.0327	58	0.01	261.31	0
261	Acid Soluble Manganese (1%)	0394	1.225	0.0100	1.220	0.0867	0.0327	58	0.06	261.34	0
261	Acid Soluble Manganese (1%)	0043	1.230	0.0200	1.220	0.0867	0.0327	58	0.12	261.00	0
261	Acid Soluble Manganese (1%)	0444	1.230	0.0200	1.220	0.0867	0.0327	58	0.12	261.32	0
261	Acid Soluble Manganese (1%)	0354	1.236	0.0130	1.220	0.0867	0.0327	58	0.18	261.30	0
261	Acid Soluble Manganese (1%)	0389	1.240	0.0000	1.220	0.0867	0.0327	58	0.23	261.99	0
261	Acid Soluble Manganese (1%)	0105	1.240	0.0140	1.220	0.0867	0.0327	58	0.23	261.12	0
261	Acid Soluble Manganese (1%)	0233	1.244	0.0730	1.220	0.0867	0.0327	58	0.27	261.35	0
261	Acid Soluble Manganese (1%)	0494	1.244	0.0481	1.220	0.0867	0.0327	58	0.28	261.35	0
261	Acid Soluble Manganese (1%)	0096	1.245	0.0300	1.220	0.0867	0.0327	58	0.29	261.30	0
261	Acid Soluble Manganese (1%)	0433	1.247	0.0050	1.220	0.0867	0.0327	58	0.31	261.30	0
261	Acid Soluble Manganese (1%)	0055	1.250	0.0800	1.220	0.0867	0.0327	58	0.35	261.35	0
261	Acid Soluble Manganese (1%)	0040	1.257	0.0250	1.220	0.0867	0.0327	58	0.42	261.12	0
261	Acid Soluble Manganese (1%)	0231	1.260	0.0200	1.220	0.0867	0.0327	58	0.46	261.31	0
261	Acid Soluble Manganese (1%)	0041	1.265	0.0500	1.220	0.0867	0.0327	58	0.52	261.30	0
261	Acid Soluble Manganese (1%)	0324	1.265	0.0700	1.220	0.0867	0.0327	58	0.52	261.31	0
261	Acid Soluble Manganese (1%)	0368	1.265	0.0043	1.220	0.0867	0.0327	58	0.52	261.99	0
261	Acid Soluble Manganese (1%)	0106	1.266	0.0250	1.220	0.0867	0.0327	58	0.53	261.35	0
261	Acid Soluble Manganese (1%)	0234	1.270	0.0200	1.220	0.0867	0.0327	58	0.58	261.31	0
261	Acid Soluble Manganese (1%)	0024	1.275	0.0300	1.220	0.0867	0.0327	58	0.64	261.30	0
261	Acid Soluble Manganese (1%)	0485	1.279	0.0000	1.220	0.0867	0.0327	58	0.68	261.12	0
261	Acid Soluble Manganese (1%)	0035	1.280	0.1600	1.220	0.0867	0.0327	58	0.70	261.30	0
261	Acid Soluble Manganese (1%)	0177	1.281	0.0060	1.220	0.0867	0.0327	58	0.70	261.35	0
261	Acid Soluble Manganese (1%)	0105	1.304	0.1100	1.220	0.0867	0.0327	58	0.97	261.15	0
261	Acid Soluble Manganese (1%)	0029	1.308	0.0060	1.220	0.0867	0.0327	58	1.02	261.12	0
261	Acid Soluble Manganese (1%)	0220	1.330	0.0000	1.220	0.0867	0.0327	58	1.27	261.35	0
261	Acid Soluble Manganese (1%)	0402	1.335	0.0100	1.220	0.0867	0.0327	58	1.33	261.32	0
261	Acid Soluble Manganese (1%)	0524	1.341	0.1001	1.220	0.0867	0.0327	58	1.40	261.99	0
261	Acid Soluble Manganese (1%)	0423	1.350	0.0200	1.220	0.0867	0.0327	58	1.50	261.34	0
261	Acid Soluble Manganese (1%)	0472	1.370	0.0800	1.220	0.0867	0.0327	58	1.73	261.30	0
261	Acid Soluble Manganese (1%)	0114	1.375	0.0700	1.220	0.0867	0.0327	58	1.79	261.30	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				
261	Acid Soluble Manganese (1%)	0482	1.405	0.0300	1.220	0.0867	0.0327	58	2.14	261.31	0
261	Acid Soluble Manganese (1%)	0483	12,850	100.0	1.220	0.0867	0.0327	58	148226.15	261.32	2
271	Water Soluble Manganese (%)	0300	0.0370	0.0004	0.1622	0.1748	0.0203	7	-0.65	271.30	0
271	Water Soluble Manganese (%)	0231	0.0400	0.0200	0.1622	0.1748	0.0203	7	-0.63	271.30	0
271	Water Soluble Manganese (%)	0230	0.0500	0.0000	0.1622	0.1748	0.0203	7	-0.58	271.30	0
271	Water Soluble Manganese (%)	0486	0.1250	0.0100	0.1622	0.1748	0.0203	7	-0.19	271.30	0
271	Water Soluble Manganese (%)	0394	0.1290	0.0040	0.1622	0.1748	0.0203	7	-0.17	271.30	0
271	Water Soluble Manganese (%)	0444	0.3300	0.0600	0.1622	0.1748	0.0203	7	0.87	271.30	0
271	Water Soluble Manganese (%)	0027	0.9080	0.0480	0.1622	0.1748	0.0203	7	3.86	271.00	0
281	Acid Soluble Mercury (ppm)	0519	0.0100	0.0000	0.0649	0.0313	0.0142	6	-1.56	281.99	0
281	Acid Soluble Mercury (ppm)	0394	0.0532	0.0005	0.0649	0.0313	0.0142	6	-0.34	281.30	0
281	Acid Soluble Mercury (ppm)	0527	0.0670	0.0120	0.0649	0.0313	0.0142	6	0.06	281.30	0
281	Acid Soluble Mercury (ppm)	0450	0.0750	0.0300	0.0649	0.0313	0.0142	6	0.29	281.30	0
281	Acid Soluble Mercury (ppm)	0501	0.0766	0.0428	0.0649	0.0313	0.0142	6	0.33	281.30	0
281	Acid Soluble Mercury (ppm)	0476	0.1000	0.0000	0.0649	0.0313	0.0142	6	1.00	281.30	0
281	Acid Soluble Mercury (ppm)	0515	0.0000	0.0000	0.0649	0.0313	0.0142	6		281.30	4
289	Acid Soluble Molybdenum (50ppm)	0494	0.1401*	0.0196	1,292	238.3	42.15	24	-5.42	289.33	0
289	Acid Soluble Molybdenum (50ppm)	0394	0.1450*	0.0100	1,292	238.3	42.15	24	-5.42	289.32	0
289	Acid Soluble Molybdenum (50ppm)	0106	0.1678*	0.0066	1,292	238.3	42.15	24	-5.42	289.33	0
289	Acid Soluble Molybdenum (50ppm)	0519	49.50*	3.000	1,292	238.3	42.15	24	-5.21	289.99	0
289	Acid Soluble Molybdenum (50ppm)	0521	982.5	0.0000	1,292	238.3	42.15	24	-1.30	289.30	0
289	Acid Soluble Molybdenum (50ppm)	0486	1,153	7.000	1,292	238.3	42.15	24	-0.58	289.33	0
289	Acid Soluble Molybdenum (50ppm)	0042	1,183	32.70	1,292	238.3	42.15	24	-0.46	289.99	0
289	Acid Soluble Molybdenum (50ppm)	0524	1,250	19.45	1,292	238.3	42.15	24	-0.18	289.30	0
289	Acid Soluble Molybdenum (50ppm)	0433	1,262	46.00	1,292	238.3	42.15	24	-0.12	289.30	0
289	Acid Soluble Molybdenum (50ppm)	0234	1,300	0.0000	1,292	238.3	42.15	24	0.03	289.30	0
289	Acid Soluble Molybdenum (50ppm)	0037	1,359	2.020	1,292	238.3	42.15	24	0.28	289.33	0
289	Acid Soluble Molybdenum (50ppm)	0117	1,373	39.00	1,292	238.3	42.15	24	0.34	289.33	0
289	Acid Soluble Molybdenum (50ppm)	0444	1,378	28.00	1,292	238.3	42.15	24	0.36	289.30	0
289	Acid Soluble Molybdenum (50ppm)	0300	1,388	27.00	1,292	238.3	42.15	24	0.40	289.32	0
289	Acid Soluble Molybdenum (50ppm)	0035	1,390	304.0	1,292	238.3	42.15	24	0.41	289.30	0
289	Acid Soluble Molybdenum (50ppm)	0423	1,417	4.000	1,292	238.3	42.15	24	0.53	289.33	0
289	Acid Soluble Molybdenum (50ppm)	0233	1,418	143.0	1,292	238.3	42.15	24	0.53	289.33	0
289	Acid Soluble Molybdenum (50ppm)	0096	1,426	11.00	1,292	238.3	42.15	24	0.56	289.30	0
289	Acid Soluble Molybdenum (50ppm)	0450	1,429	62.00	1,292	238.3	42.15	24	0.58	289.30	0
289	Acid Soluble Molybdenum (50ppm)	0368	1,436	14.00	1,292	238.3	42.15	24	0.61	289.30	0
289	Acid Soluble Molybdenum (50ppm)	0515	1,456	173.8	1,292	238.3	42.15	24	0.69	289.34	0
289	Acid Soluble Molybdenum (50ppm)	0527	1,473	22.55	1,292	238.3	42.15	24	0.76	289.33	0
289	Acid Soluble Molybdenum (50ppm)	0220	1,562	21.00	1,292	238.3	42.15	24	1.13	289.34	0
289	Acid Soluble Molybdenum (50ppm)	0501	1,632	51.95	1,292	238.3	42.15	24	1.43	289.34	0
289	Acid Soluble Molybdenum (50ppm)	0515	645.8*	1,236	1,292	238.3	42.15	24	-2.71	289.33	1
291	Acid Soluble Nickel (ppm)	0521	60.42	0.0000	91.86	15.98	2.652	24	-1.97	291.30	0
291	Acid Soluble Nickel (ppm)	0444	65.96	0.2000	91.86	15.98	2.652	24	-1.62	291.30	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				
291	Acid Soluble Nickel (ppm)	0519	69.95	0.1400	91.86	15.98	2.652	24	-1.37	291.99	0
291	Acid Soluble Nickel (ppm)	0501	72.24	0.0122	91.86	15.98	2.652	24	-1.23	291.34	0
291	Acid Soluble Nickel (ppm)	0476	73.14	1.130	91.86	15.98	2.652	24	-1.17	291.30	0
291	Acid Soluble Nickel (ppm)	0027	75.50	5.000	91.86	15.98	2.652	24	-1.02	291.30	0
291	Acid Soluble Nickel (ppm)	0523	82.60	4.400	91.86	15.98	2.652	24	-0.58	291.30	0
291	Acid Soluble Nickel (ppm)	0482	83.40	2.400	91.86	15.98	2.652	24	-0.53	291.30	0
291	Acid Soluble Nickel (ppm)	0394	84.20	0.4000	91.86	15.98	2.652	24	-0.48	291.30	0
291	Acid Soluble Nickel (ppm)	0220	95.50	1.000	91.86	15.98	2.652	24	0.23	291.99	0
291	Acid Soluble Nickel (ppm)	0524	96.04	9.325	91.86	15.98	2.652	24	0.26	291.30	0
291	Acid Soluble Nickel (ppm)	0515	98.95	5.406	91.86	15.98	2.652	24	0.44	291.33	0
291	Acid Soluble Nickel (ppm)	0498	99.00	1.600	91.86	15.98	2.652	24	0.45	291.00	0
291	Acid Soluble Nickel (ppm)	0515	99.86	2.014	91.86	15.98	2.652	24	0.50	291.34	0
291	Acid Soluble Nickel (ppm)	0037	99.99	1.203	91.86	15.98	2.652	24	0.51	291.33	0
291	Acid Soluble Nickel (ppm)	0494	100.3	0.2490	91.86	15.98	2.652	24	0.53	291.33	0
291	Acid Soluble Nickel (ppm)	0450	101.0	6.000	91.86	15.98	2.652	24	0.57	291.30	0
291	Acid Soluble Nickel (ppm)	0368	102.0	2.000	91.86	15.98	2.652	24	0.63	291.30	0
291	Acid Soluble Nickel (ppm)	0117	103.4	1.900	91.86	15.98	2.652	24	0.72	291.33	0
291	Acid Soluble Nickel (ppm)	0233	105.0	4.200	91.86	15.98	2.652	24	0.82	291.33	0
291	Acid Soluble Nickel (ppm)	0096	105.3	7.500	91.86	15.98	2.652	24	0.84	291.30	0
291	Acid Soluble Nickel (ppm)	0300	106.0	5.300	91.86	15.98	2.652	24	0.88	291.32	0
291	Acid Soluble Nickel (ppm)	0136	106.0	2.000	91.86	15.98	2.652	24	0.88	291.00	0
291	Acid Soluble Nickel (ppm)	0527	109.7	0.2700	91.86	15.98	2.652	24	1.12	291.33	0
291	Acid Soluble Nickel (ppm)	0035	94.60	26.80	91.86	15.98	2.652	24	0.17	291.30	1
301	Acid Soluble Selenium (ppm)	0485	0.1300	0.0160	3.728	4.202	0.0923	9	-0.86	301.99	0
301	Acid Soluble Selenium (ppm)	0476	0.5000	0.0000	3.728	4.202	0.0923	9	-0.77	301.30	0
301	Acid Soluble Selenium (ppm)	0519	0.6200	0.0400	3.728	4.202	0.0923	9	-0.74	301.99	0
301	Acid Soluble Selenium (ppm)	0501	0.9141	0.0660	3.728	4.202	0.0923	9	-0.67	301.30	0
301	Acid Soluble Selenium (ppm)	0527	1.786	0.0300	3.728	4.202	0.0923	9	-0.46	301.33	0
301	Acid Soluble Selenium (ppm)	0494	5.416	0.2159	3.728	4.202	0.0923	9	0.40	301.33	0
301	Acid Soluble Selenium (ppm)	0524	6.868	0.1837	3.728	4.202	0.0923	9	0.75	301.30	0
301	Acid Soluble Selenium (ppm)	0037	7.290	0.2790	3.728	4.202	0.0923	9	0.85	301.33	0
301	Acid Soluble Selenium (ppm)	0220	11.00	0.0000	3.728	4.202	0.0923	9	1.73	301.99	0
301	Acid Soluble Selenium (ppm)	0515	9.684	13.42	3.728	4.202	0.0923	9	1.42	301.33	1
301	Acid Soluble Selenium (ppm)	0368	1.200	2.400	3.728	4.202	0.0923	9		301.30	4
301	Acid Soluble Selenium (ppm)	0515	1.753	3.505	3.728	4.202	0.0923	9		301.34	4
311	Sodium (%)	0501	0.3478	0.0172	0.5346	0.0747	0.0139	8	-2.29	311.99	0
311	Sodium (%)	0096	0.5050	0.0300	0.5346	0.0747	0.0139	8	-0.36	311.99	0
311	Sodium (%)	0035	0.5080	0.0280	0.5346	0.0747	0.0139	8	-0.33	311.33	0
311	Sodium (%)	0521	0.5144	0.0000	0.5346	0.0747	0.0139	8	-0.25	311.32	0
311	Sodium (%)	0482	0.5150	0.0100	0.5346	0.0747	0.0139	8	-0.24	311.99	0
311	Sodium (%)	0354	0.5835	0.0130	0.5346	0.0747	0.0139	8	0.60	311.99	0
311	Sodium (%)	0527	0.6005	0.0070	0.5346	0.0747	0.0139	8	0.81	311.33	0
311	Sodium (%)	0423	0.6280	0.0060	0.5346	0.0747	0.0139	8	1.14	311.33	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				
311	Sodium (%)	0324	0.4900	0.1000	0.5346	0.0747	0.0139	8	-0.55	311.32	1
321	Acid Soluble Zinc (1%)	0515	0.7663*	1.508	1.449	0.1328	0.0734	59	-5.14	321.33	0
321	Acid Soluble Zinc (1%)	0519	1.030*	0.0000	1.449	0.1328	0.0734	59	-3.16	321.99	0
321	Acid Soluble Zinc (1%)	0476	1.035*	0.0100	1.449	0.1328	0.0734	59	-3.12	321.99	0
321	Acid Soluble Zinc (1%)	0521	1.112*	0.0000	1.449	0.1328	0.0734	59	-2.54	321.32	0
321	Acid Soluble Zinc (1%)	0486	1.130*	0.0200	1.449	0.1328	0.0734	59	-2.40	321.33	0
321	Acid Soluble Zinc (1%)	0457	1.220*	0.0200	1.449	0.1328	0.0734	59	-1.72	321.00	0
321	Acid Soluble Zinc (1%)	0501	1.256*	0.0164	1.449	0.1328	0.0734	59	-1.46	321.99	0
321	Acid Soluble Zinc (1%)	0137	1.256*	0.0342	1.449	0.1328	0.0734	59	-1.45	321.99	0
321	Acid Soluble Zinc (1%)	0485	1.285*	0.0030	1.449	0.1328	0.0734	59	-1.24	321.00	0
321	Acid Soluble Zinc (1%)	0291	1.335	0.0100	1.449	0.1328	0.0734	59	-0.86	321.30	0
321	Acid Soluble Zinc (1%)	0042	1.341	0.1150	1.449	0.1328	0.0734	59	-0.82	321.99	0
321	Acid Soluble Zinc (1%)	0029	1.351	0.0060	1.449	0.1328	0.0734	59	-0.74	321.00	0
321	Acid Soluble Zinc (1%)	0025	1.373	0.0600	1.449	0.1328	0.0734	59	-0.57	321.33	0
321	Acid Soluble Zinc (1%)	0034	1.375	0.0900	1.449	0.1328	0.0734	59	-0.56	321.33	0
321	Acid Soluble Zinc (1%)	0037	1.375	0.0520	1.449	0.1328	0.0734	59	-0.56	321.33	0
321	Acid Soluble Zinc (1%)	0028	1.380	0.0200	1.449	0.1328	0.0734	59	-0.52	321.33	0
321	Acid Soluble Zinc (1%)	0324	1.385	0.0500	1.449	0.1328	0.0734	59	-0.48	321.30	0
321	Acid Soluble Zinc (1%)	0513	1.400	0.0000	1.449	0.1328	0.0734	59	-0.37	321.00	0
321	Acid Soluble Zinc (1%)	0024	1.405	0.0500	1.449	0.1328	0.0734	59	-0.33	321.30	0
321	Acid Soluble Zinc (1%)	0234	1.410	0.0200	1.449	0.1328	0.0734	59	-0.29	321.30	0
321	Acid Soluble Zinc (1%)	0233	1.416	0.0730	1.449	0.1328	0.0734	59	-0.25	321.33	0
321	Acid Soluble Zinc (1%)	0105	1.422	0.1250	1.449	0.1328	0.0734	59	-0.21	321.00	0
321	Acid Soluble Zinc (1%)	0040	1.424	0.0270	1.449	0.1328	0.0734	59	-0.19	321.00	0
321	Acid Soluble Zinc (1%)	0444	1.435	0.0300	1.449	0.1328	0.0734	59	-0.11	321.30	0
321	Acid Soluble Zinc (1%)	0300	1.439	0.0020	1.449	0.1328	0.0734	59	-0.08	321.32	0
321	Acid Soluble Zinc (1%)	0157	1.440	0.0400	1.449	0.1328	0.0734	59	-0.07	321.30	0
321	Acid Soluble Zinc (1%)	0105	1.449	0.1310	1.449	0.1328	0.0734	59	0.00	321.03	0
321	Acid Soluble Zinc (1%)	0498	1.450	0.1000	1.449	0.1328	0.0734	59	0.01	321.00	0
321	Acid Soluble Zinc (1%)	0421	1.450	0.0200	1.449	0.1328	0.0734	59	0.01	321.33	0
321	Acid Soluble Zinc (1%)	0527	1.453	0.0050	1.449	0.1328	0.0734	59	0.03	321.33	0
321	Acid Soluble Zinc (1%)	0420	1.456	0.0033	1.449	0.1328	0.0734	59	0.05	321.30	0
321	Acid Soluble Zinc (1%)	0494	1.458	0.0509	1.449	0.1328	0.0734	59	0.07	321.33	0
321	Acid Soluble Zinc (1%)	0389	1.460	0.0200	1.449	0.1328	0.0734	59	0.08	321.99	0
321	Acid Soluble Zinc (1%)	0177	1.472	0.0034	1.449	0.1328	0.0734	59	0.17	321.33	0
321	Acid Soluble Zinc (1%)	0096	1.473	0.0080	1.449	0.1328	0.0734	59	0.18	321.30	0
321	Acid Soluble Zinc (1%)	0394	1.475	0.0500	1.449	0.1328	0.0734	59	0.19	321.32	0
321	Acid Soluble Zinc (1%)	0433	1.482	0.0010	1.449	0.1328	0.0734	59	0.24	321.30	0
321	Acid Soluble Zinc (1%)	0360	1.484	0.0530	1.449	0.1328	0.0734	59	0.26	321.30	0
321	Acid Soluble Zinc (1%)	0106	1.484	0.0740	1.449	0.1328	0.0734	59	0.26	321.33	0
321	Acid Soluble Zinc (1%)	0515	1.488	0.3521	1.449	0.1328	0.0734	59	0.29	321.99	0
321	Acid Soluble Zinc (1%)	0117	1.495	0.0520	1.449	0.1328	0.0734	59	0.35	321.33	0
321	Acid Soluble Zinc (1%)	0055	1.505	0.0700	1.449	0.1328	0.0734	59	0.42	321.33	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				
321	Acid Soluble Zinc (1%)	0368	1.509	0.0096	1.449	0.1328	0.0734	59	0.45	321.99	0
321	Acid Soluble Zinc (1%)	0136	1.510	0.1400	1.449	0.1328	0.0734	59	0.46	321.33	0
321	Acid Soluble Zinc (1%)	0482	1.515	0.0100	1.449	0.1328	0.0734	59	0.50	321.30	0
321	Acid Soluble Zinc (1%)	0354	1.524	0.0080	1.449	0.1328	0.0734	59	0.56	321.30	0
321	Acid Soluble Zinc (1%)	0035	1.525	0.0500	1.449	0.1328	0.0734	59	0.57	321.30	0
321	Acid Soluble Zinc (1%)	0220	1.535	0.0100	1.449	0.1328	0.0734	59	0.65	321.33	0
321	Acid Soluble Zinc (1%)	0292	1.550	0.0000	1.449	0.1328	0.0734	59	0.76	321.30	0
321	Acid Soluble Zinc (1%)	0041	1.570	0.0600	1.449	0.1328	0.0734	59	0.91	321.30	0
321	Acid Soluble Zinc (1%)	0472	1.595	0.1100	1.449	0.1328	0.0734	59	1.10	321.30	0
321	Acid Soluble Zinc (1%)	0231	1.600	0.0200	1.449	0.1328	0.0734	59	1.14	321.30	0
321	Acid Soluble Zinc (1%)	0523	1.645	0.1300	1.449	0.1328	0.0734	59	1.47	321.99	0
321	Acid Soluble Zinc (1%)	0450	1.650	0.0800	1.449	0.1328	0.0734	59	1.51	321.30	0
321	Acid Soluble Zinc (1%)	0114	1.655	0.1100	1.449	0.1328	0.0734	59	1.55	321.30	0
321	Acid Soluble Zinc (1%)	0027	1.672	0.0990	1.449	0.1328	0.0734	59	1.67	321.99	0
321	Acid Soluble Zinc (1%)	0524	1.757	0.0143	1.449	0.1328	0.0734	59	2.31	321.99	0
321	Acid Soluble Zinc (1%)	0423	1.945	0.0100	1.449	0.1328	0.0734	59	3.73	321.32	0
321	Acid Soluble Zinc (1%)	0428	2.368	0.0941	1.449	0.1328	0.0734	59	6.91	321.00	0
321	Acid Soluble Zinc (1%)	0483	16,150	700.0	1.449	0.1328	0.0734	59	121564.37	321.30	2
325	Water Soluble Zinc (%)	0300	0.0073	0.0011	0.6010	0.8095	0.0204	5	-0.73	325.30	0
325	Water Soluble Zinc (%)	0394	0.0075	0.0010	0.6010	0.8095	0.0204	5	-0.73	325.30	0
325	Water Soluble Zinc (%)	0230	0.0150	0.0100	0.6010	0.8095	0.0204	5	-0.72	325.30	0
325	Water Soluble Zinc (%)	0402	1.460	0.0200	0.6010	0.8095	0.0204	5	1.06	325.30	0
325	Water Soluble Zinc (%)	0406	1.515	0.0700	0.6010	0.8095	0.0204	5	1.13	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 and a 4 flag indicates rejected due to 0 value submitted. Robust statistics not used if < 6 labs used in calculations, in this case the Z Scores are included for information only (Grey). An offset lab value with an astrix indicates that the value is lower than the Analyte value less the IA. Method or 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.