

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Analyte Proficiency From All Labs

Sample # 180311

Grade 3-1-2

Statistical Summary

Analytes: 35

Labs Reporting: 87

Issue Date : 04/30/2018

Analyte Code	Analyte Sample # 180311	# 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)	Hornitz %RSD
001	Ammoniacal Nitrogen (%)	8	7	0.8471	1.513	0.3186		0.1676	0.0792	52.61%		0.0171	4.75%
002	Nitrate Nitrogen (%)	2	2	0.0400	0.0141								
003	Water Insoluble Nitrogen (%)	3	3	0.7250	0.0397	0.7250		0.0397	0.0286	5.47%		0.0167	4.20%
005	Urea Nitrogen (%)	2	2	0.9850	1.365								
007	Urea (%)	1		0.0100									
009	Ammoniacal Plus Nitrate Nitrogen (%)	1		2.550									
010	Total Nitrogen (3%)	78	75	3.096	0.3430	3.071	0.4900	0.1302	0.0188	4.24%	0.62	0.0561	3.38%
020	Total Phosphorus as P2O5 (%)	50	48	3.426	0.6871	3.515		0.5389	0.0972	15.33%		0.0648	3.31%
040	Indirect Available Phosphorus as P2O5 (1%)	1		2.990									
041	Direct Available Phosphorus as P2O5 (1%)	40	39	3.188	0.7592	3.315	0.6700	0.5246	0.1050	15.82%	1.82	0.0904	3.34%
050	Soluble Potassium as K2O (2%)	82	80	3.600	0.4422	3.669	0.4100	0.2546	0.0356	6.94%	1.45	0.1024	3.29%
101	Acid Soluble Calcium (%)	14	13	0.0673	0.0641	0.0470	0.2023	0.0137	0.0048	29.17%	0.16	0.0073	6.34%
121	Acid Soluble Magnesium (%)	20	19	0.3658	0.0874	0.3793	0.2190	0.0386	0.0111	10.17%	0.41	0.0112	4.63%
131	Water Soluble Magnesium (%)	1		0.3900									
143	Elemental Sulfur (%)	2	2	0.8950	0.0071								
146	Total Sulfur in Liquid (%)	1		3.660									
148	Total Sulfur (%)	11	10	0.8644	0.3004	0.9473	0.2474	0.0660	0.0261	6.97%	0.62	0.0395	4.03%
149	Sulfur - HNO3 soluble (%)	3	3	0.9303	0.0196	0.9303		0.0196	0.0142	2.11%		0.0039	4.04%
151	Acid Soluble Arsenic (ppm)	14	13	1.526	1.006	1.331		0.6065	0.2103	45.57%		0.2562	15.32%
165	Acid Soluble Boron (%)	7	6	0.0029	0.0037	0.0023	0.0033	0.0027	0.0014	120.05%	1.89	0.0000	10.01%
181	Acid Soluble Cadmium (ppm)	24	22	3.506	0.4391	3.513		0.4825	0.1286	13.73%		0.1889	13.24%
190	Water Soluble Chlorine (%)	1		1.175									
191	Acid Soluble Chromium (ppm)	23	23	22.55	8.648	22.81		5.557	1.448	24.36%		1.596	9.99%
202	Acid Soluble Cobalt (ppm)	16	14	0.5415	0.4410	0.4120	1.1236	0.1370	0.0458	33.24%	0.28	0.2172	18.28%
221	Acid Soluble Copper (%)	22	21	0.0024	0.0060	0.0007	0.0051	0.0005	0.0001	60.16%	0.21	0.0004	11.82%
241	Acid Soluble Iron (%)	20	19	0.1523	0.5023	0.0362	0.0086	0.0089	0.0026	24.61%	2.41	0.0039	6.59%
251	Acid Soluble Lead (ppm)	13	7	0.9314	1.004	0.8871		1.035	0.4891	116.69%		0.6734	16.29%
261	Acid Soluble Manganese (%)	14	13	0.0027	0.0022	0.0021	0.0052	0.0002	0.0001	8.17%	0.08	0.0000	10.11%
281	Acid Soluble Mercury (ppm)	3	1	0.0210		0.0021		0.0002	0.0002	8.17%		0.0060	40.44%
289	Acid Soluble Molybdenum (ppm)	19	18	1.541	0.9983	1.330	1.3990	0.3102	0.0914	23.33%	0.52	0.4467	15.32%
291	Acid Soluble Nickel (ppm)	25	24	7.238	2.826	6.924		1.368	0.3490	19.75%		0.5646	11.96%

Analyte Code	Analyte Sample # 180311	# 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
301	Acid Soluble Selenium (ppm)	12	12	1.632	1.277	1.461		1.039	0.3749	71.10%		0.2674	15.11%
311	Sodium (%)	9	9	1.116	0.0806	1.114	0.1164	0.0802	0.0334	7.20%	1.61	0.0774	3.94%
321	Acid Soluble Zinc (%)	34	33	0.0103	0.0094	0.0083	0.0058	0.0017	0.0004	19.87%	0.66	0.0013	8.22%
325	Water Soluble Zinc (%)	1		0.0100									

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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Analyte Proficiency From All Labs

Analytes: 35

Sample # 180311

Lab Values

Labs Reporting: 87

Grade 3-1-2

Issue Date : 04/30/2018

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 (%)	0309	0.1300	0.0200	0.3186	0.1676	0.0171	7	-1.02	001.10	0
001	Ammoniacal Nitrogen (%)	0423	0.2150	0.0100	0.3186	0.1676	0.0171	7	-0.56	001.99	0
001	Ammoniacal Nitrogen (%)	0482	0.2200	0.0000	0.3186	0.1676	0.0171	7	-0.53	001.99	0
001	Ammoniacal Nitrogen (%)	0522	0.3050	0.0100	0.3186	0.1676	0.0171	7	-0.07	001.99	0
001	Ammoniacal Nitrogen (%)	0220	0.3950	0.0500	0.3186	0.1676	0.0171	7	0.41	001.99	0
001	Ammoniacal Nitrogen (%)	0541	0.3950	0.0300	0.3186	0.1676	0.0171	7	0.41	001.99	0
001	Ammoniacal Nitrogen (%)	0524	4.270	0.0000	0.3186	0.1676	0.0171	7	21.32	001.99	0
001	Ammoniacal Nitrogen (%)	0096	23.55	5.150	0.3186	0.1676	0.0171	7	125.29	001.99	1
002	Nitrate Nitrogen (%)	0423	0.0300	0.0000				2		002.99	0
002	Nitrate Nitrogen (%)	0482	0.0500	0.0200				2		002.99	0
003	Water Insoluble Nitrogen (%)	0027	0.6800	0.0000	0.7250	0.0397	0.0167	3	-1.13	003.10	0
003	Water Insoluble Nitrogen (%)	0451	0.7400	0.0400	0.7250	0.0397	0.0167	3	0.38	003.10	0
003	Water Insoluble Nitrogen (%)	0220	0.7550	0.0100	0.7250	0.0397	0.0167	3	0.76	003.10	0
005	Urea Nitrogen (%)	0482	0.0200	0.0000				2		005.99	0
005	Urea Nitrogen (%)	0027	1.950	0.1000				2		005.00	0
007	Urea (%)	0220	0.0100	0.0000				1		007.99	0
009	Ammoniacal Plus Nitrate Nitrogen (%)	0518	2.550	0.1400				1		009.99	0
010	Total Nitrogen (3%)	0522	1.685†	0.0500	3.071	0.1302	0.0561	75	-10.64	010.99	0
010	Total Nitrogen (3%)	0540	2.590	0.0200	3.071	0.1302	0.0561	75	-3.69	010.11	0
010	Total Nitrogen (3%)	0055	2.800	0.0600	3.071	0.1302	0.0561	75	-2.08	010.60	0
010	Total Nitrogen (3%)	0546	2.810	0.0000	3.071	0.1302	0.0561	75	-2.00	010.10	0
010	Total Nitrogen (3%)	0309	2.815	0.0700	3.071	0.1302	0.0561	75	-1.97	010.11	0
010	Total Nitrogen (3%)	0520	2.815	0.1700	3.071	0.1302	0.0561	75	-1.97	010.99	0
010	Total Nitrogen (3%)	0476	2.836	0.1138	3.071	0.1302	0.0561	75	-1.80	010.99	0
010	Total Nitrogen (3%)	0073	2.905	0.0700	3.071	0.1302	0.0561	75	-1.28	010.60	0
010	Total Nitrogen (3%)	0482	2.945	0.1900	3.071	0.1302	0.0561	75	-0.97	010.60	0
010	Total Nitrogen (3%)	0292	2.955	0.0100	3.071	0.1302	0.0561	75	-0.89	010.60	0
010	Total Nitrogen (3%)	0405	2.960	0.0000	3.071	0.1302	0.0561	75	-0.85	010.60	0
010	Total Nitrogen (3%)	0042	2.965	0.0100	3.071	0.1302	0.0561	75	-0.81	010.60	0
010	Total Nitrogen (3%)	0072	2.970	0.1000	3.071	0.1302	0.0561	75	-0.78	010.60	0
010	Total Nitrogen (3%)	0027	2.975	0.0100	3.071	0.1302	0.0561	75	-0.74	010.60	0
010	Total Nitrogen (3%)	0493	2.975	0.0500	3.071	0.1302	0.0561	75	-0.74	010.99	0
010	Total Nitrogen (3%)	0023	2.980	0.0860	3.071	0.1302	0.0561	75	-0.70	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 (3%)	0389	2.990	0.0000	3.071	0.1302	0.0561	75	-0.62	010.60	0
010	Total Nitrogen (3%)	0444	2.990	0.2000	3.071	0.1302	0.0561	75	-0.62	010.60	0
010	Total Nitrogen (3%)	0527	2.992	0.0130	3.071	0.1302	0.0561	75	-0.61	010.60	0
010	Total Nitrogen (3%)	0041	2.995	0.0100	3.071	0.1302	0.0561	75	-0.58	010.60	0
010	Total Nitrogen (3%)	0533	2.995	0.0700	3.071	0.1302	0.0561	75	-0.58	010.99	0
010	Total Nitrogen (3%)	0307	2.997	0.1220	3.071	0.1302	0.0561	75	-0.57	010.60	0
010	Total Nitrogen (3%)	0537	2.997	0.0101	3.071	0.1302	0.0561	75	-0.57	010.99	0
010	Total Nitrogen (3%)	0114	3.005	0.1100	3.071	0.1302	0.0561	75	-0.51	010.11	0
010	Total Nitrogen (3%)	0501	3.005	0.0300	3.071	0.1302	0.0561	75	-0.51	010.60	0
010	Total Nitrogen (3%)	0136	3.015	0.0300	3.071	0.1302	0.0561	75	-0.43	010.60	0
010	Total Nitrogen (3%)	0043	3.020	0.0600	3.071	0.1302	0.0561	75	-0.39	010.60	0
010	Total Nitrogen (3%)	0105	3.025	0.0100	3.071	0.1302	0.0561	75	-0.35	010.11	0
010	Total Nitrogen (3%)	0354	3.025	0.0100	3.071	0.1302	0.0561	75	-0.35	010.60	0
010	Total Nitrogen (3%)	0494	3.030	0.1200	3.071	0.1302	0.0561	75	-0.32	010.60	0
010	Total Nitrogen (3%)	0234	3.035	0.0100	3.071	0.1302	0.0561	75	-0.28	010.60	0
010	Total Nitrogen (3%)	0416	3.040	0.0000	3.071	0.1302	0.0561	75	-0.24	010.12	0
010	Total Nitrogen (3%)	0049	3.040	0.0405	3.071	0.1302	0.0561	75	-0.24	010.60	0
010	Total Nitrogen (3%)	0086	3.043	0.0069	3.071	0.1302	0.0561	75	-0.22	010.60	0
010	Total Nitrogen (3%)	0177	3.045	0.0040	3.071	0.1302	0.0561	75	-0.20	010.60	0
010	Total Nitrogen (3%)	0481	3.045	0.0500	3.071	0.1302	0.0561	75	-0.20	010.60	0
010	Total Nitrogen (3%)	0523	3.050	0.1000	3.071	0.1302	0.0561	75	-0.16	010.60	0
010	Total Nitrogen (3%)	0550	3.050	0.2600	3.071	0.1302	0.0561	75	-0.16	010.60	0
010	Total Nitrogen (3%)	0368	3.064	0.0490	3.071	0.1302	0.0561	75	-0.06	010.60	0
010	Total Nitrogen (3%)	0220	3.065	0.0100	3.071	0.1302	0.0561	75	-0.05	010.11	0
010	Total Nitrogen (3%)	0508	3.065	0.0100	3.071	0.1302	0.0561	75	-0.05	010.99	0
010	Total Nitrogen (3%)	0524	3.070	0.0018	3.071	0.1302	0.0561	75	-0.01	010.99	0
010	Total Nitrogen (3%)	0486	3.070	0.0000	3.071	0.1302	0.0561	75	-0.01	010.60	0
010	Total Nitrogen (3%)	0521	3.081	0.0000	3.071	0.1302	0.0561	75	0.07	010.60	0
010	Total Nitrogen (3%)	0451	3.083	0.1890	3.071	0.1302	0.0561	75	0.09	010.60	0
010	Total Nitrogen (3%)	0035	3.090	0.0600	3.071	0.1302	0.0561	75	0.15	010.60	0
010	Total Nitrogen (3%)	0018	3.105	0.1500	3.071	0.1302	0.0561	75	0.26	010.60	0
010	Total Nitrogen (3%)	0037	3.109	0.2180	3.071	0.1302	0.0561	75	0.29	010.60	0
010	Total Nitrogen (3%)	0131	3.120	0.0262	3.071	0.1302	0.0561	75	0.38	010.60	0
010	Total Nitrogen (3%)	0185	3.125	0.0700	3.071	0.1302	0.0561	75	0.41	010.60	0
010	Total Nitrogen (3%)	0034	3.137	0.0310	3.071	0.1302	0.0561	75	0.50	010.60	0
010	Total Nitrogen (3%)	0397	3.138	0.0450	3.071	0.1302	0.0561	75	0.51	010.99	0
010	Total Nitrogen (3%)	0029	3.139	0.0040	3.071	0.1302	0.0561	75	0.52	010.60	0
010	Total Nitrogen (3%)	0025	3.142	0.0380	3.071	0.1302	0.0561	75	0.54	010.60	0
010	Total Nitrogen (3%)	0231	3.145	0.0100	3.071	0.1302	0.0561	75	0.57	010.60	0
010	Total Nitrogen (3%)	0105	3.150	0.0000	3.071	0.1302	0.0561	75	0.61	010.60	0
010	Total Nitrogen (3%)	0452	3.150	0.0000	3.071	0.1302	0.0561	75	0.61	010.60	0
010	Total Nitrogen (3%)	0291	3.155	0.0100	3.071	0.1302	0.0561	75	0.64	010.60	0
010	Total Nitrogen (3%)	0423	3.155	0.0700	3.071	0.1302	0.0561	75	0.64	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 (3%)	0547	3.155	0.0100	3.071	0.1302	0.0561	75	0.64	010.60	0
010	Total Nitrogen (3%)	0324	3.160	0.0200	3.071	0.1302	0.0561	75	0.68	010.60	0
010	Total Nitrogen (3%)	0095	3.195	0.0300	3.071	0.1302	0.0561	75	0.95	010.60	0
010	Total Nitrogen (3%)	0377	3.195	0.0100	3.071	0.1302	0.0561	75	0.95	010.60	0
010	Total Nitrogen (3%)	0534	3.200	0.2000	3.071	0.1302	0.0561	75	0.99	010.60	0
010	Total Nitrogen (3%)	0498	3.250	0.1000	3.071	0.1302	0.0561	75	1.37	010.12	0
010	Total Nitrogen (3%)	0040	3.250	0.1000	3.071	0.1302	0.0561	75	1.37	010.60	0
010	Total Nitrogen (3%)	0483	3.250	0.0600	3.071	0.1302	0.0561	75	1.37	010.60	0
010	Total Nitrogen (3%)	0472	3.320	0.0000	3.071	0.1302	0.0561	75	1.91	010.60	0
010	Total Nitrogen (3%)	0325	3.350	0.1000	3.071	0.1302	0.0561	75	2.14	010.60	0
010	Total Nitrogen (3%)	0481	3.360	0.0400	3.071	0.1302	0.0561	75	2.22	010.12	0
010	Total Nitrogen (3%)	0544	3.510	0.0000	3.071	0.1302	0.0561	75	3.37	010.99	0
010	Total Nitrogen (3%)	0545	3.510	0.0200	3.071	0.1302	0.0561	75	3.37	010.99	0
010	Total Nitrogen (3%)	0007	3.600‡	0.0000	3.071	0.1302	0.0561	75	4.06	010.60	0
010	Total Nitrogen (3%)	0230	4.010‡	0.2000	3.071	0.1302	0.0561	75	7.21	010.60	0
010	Total Nitrogen (3%)	0117	5.095‡	0.0500	3.071	0.1302	0.0561	75	15.54	010.12	0
010	Total Nitrogen (3%)	0255	3.307	0.4980	3.071	0.1302	0.0561	75	1.81	010.60	1
010	Total Nitrogen (3%)	0506	3.600‡	0.4200	3.071	0.1302	0.0561	75	4.06	010.99	1
010	Total Nitrogen (3%)	0526	0.6094†	0.0000	3.071	0.1302	0.0561	75	-18.90	010.99	2
020	Total Phosphorus as P2O5 (%)	0520	1.300	0.0000	3.515	0.5389	0.0648	48	-4.11	020.99	0
020	Total Phosphorus as P2O5 (%)	0523	1.550	0.1000	3.515	0.5389	0.0648	48	-3.65	020.50	0
020	Total Phosphorus as P2O5 (%)	0481	1.750	0.1000	3.515	0.5389	0.0648	48	-3.27	020.20	0
020	Total Phosphorus as P2O5 (%)	0542	2.040	0.1400	3.515	0.5389	0.0648	48	-2.74	020.50	0
020	Total Phosphorus as P2O5 (%)	0515	2.519	0.0753	3.515	0.5389	0.0648	48	-1.85	020.99	0
020	Total Phosphorus as P2O5 (%)	0516	2.718	0.0260	3.515	0.5389	0.0648	48	-1.48	020.20	0
020	Total Phosphorus as P2O5 (%)	0049	2.870	0.0600	3.515	0.5389	0.0648	48	-1.20	020.10	0
020	Total Phosphorus as P2O5 (%)	0527	2.940	0.0200	3.515	0.5389	0.0648	48	-1.07	020.50	0
020	Total Phosphorus as P2O5 (%)	0493	2.955	0.0500	3.515	0.5389	0.0648	48	-1.04	020.10	0
020	Total Phosphorus as P2O5 (%)	0157	3.020	0.0000	3.515	0.5389	0.0648	48	-0.92	020.10	0
020	Total Phosphorus as P2O5 (%)	0114	3.025	0.0900	3.515	0.5389	0.0648	48	-0.91	020.10	0
020	Total Phosphorus as P2O5 (%)	0177	3.055	0.0605	3.515	0.5389	0.0648	48	-0.85	020.20	0
020	Total Phosphorus as P2O5 (%)	0356	3.100	0.1200	3.515	0.5389	0.0648	48	-0.77	020.20	0
020	Total Phosphorus as P2O5 (%)	0292	3.135	0.0100	3.515	0.5389	0.0648	48	-0.70	020.20	0
020	Total Phosphorus as P2O5 (%)	0416	3.205	0.0100	3.515	0.5389	0.0648	48	-0.58	020.20	0
020	Total Phosphorus as P2O5 (%)	0506	3.215	0.1900	3.515	0.5389	0.0648	48	-0.56	020.20	0
020	Total Phosphorus as P2O5 (%)	0498	3.350	0.1000	3.515	0.5389	0.0648	48	-0.31	020.20	0
020	Total Phosphorus as P2O5 (%)	0234	3.365	0.1100	3.515	0.5389	0.0648	48	-0.28	020.50	0
020	Total Phosphorus as P2O5 (%)	0324	3.505	0.0500	3.515	0.5389	0.0648	48	-0.02	020.20	0
020	Total Phosphorus as P2O5 (%)	0389	3.545	0.0100	3.515	0.5389	0.0648	48	0.06	020.50	0
020	Total Phosphorus as P2O5 (%)	0157	3.570	0.1800	3.515	0.5389	0.0648	48	0.10	020.50	0
020	Total Phosphorus as P2O5 (%)	0096	3.605	0.0100	3.515	0.5389	0.0648	48	0.17	020.40	0
020	Total Phosphorus as P2O5 (%)	0482	3.625	0.2500	3.515	0.5389	0.0648	48	0.20	020.50	0
020	Total Phosphorus as P2O5 (%)	0541	3.635	0.1300	3.515	0.5389	0.0648	48	0.22	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 (%)	0476	3.643	0.1493	3.515	0.5389	0.0648	48	0.24	020.20	0
020	Total Phosphorus as P2O5 (%)	0035	3.740	0.0600	3.515	0.5389	0.0648	48	0.42	020.40	0
020	Total Phosphorus as P2O5 (%)	0524	3.742	0.0846	3.515	0.5389	0.0648	48	0.42	020.50	0
020	Total Phosphorus as P2O5 (%)	0105	3.760	0.0200	3.515	0.5389	0.0648	48	0.45	020.40	0
020	Total Phosphorus as P2O5 (%)	0444	3.775	0.0500	3.515	0.5389	0.0648	48	0.48	020.50	0
020	Total Phosphorus as P2O5 (%)	0547	3.780	0.0000	3.515	0.5389	0.0648	48	0.49	020.20	0
020	Total Phosphorus as P2O5 (%)	0105	3.785	0.0100	3.515	0.5389	0.0648	48	0.50	020.10	0
020	Total Phosphorus as P2O5 (%)	0522	3.795	0.0100	3.515	0.5389	0.0648	48	0.52	020.20	0
020	Total Phosphorus as P2O5 (%)	0472	3.805	0.0300	3.515	0.5389	0.0648	48	0.54	020.50	0
020	Total Phosphorus as P2O5 (%)	0433	3.810	0.0000	3.515	0.5389	0.0648	48	0.55	020.50	0
020	Total Phosphorus as P2O5 (%)	0042	3.820	0.1000	3.515	0.5389	0.0648	48	0.57	020.50	0
020	Total Phosphorus as P2O5 (%)	0136	3.830	0.0000	3.515	0.5389	0.0648	48	0.58	020.10	0
020	Total Phosphorus as P2O5 (%)	0291	3.885	0.0100	3.515	0.5389	0.0648	48	0.69	020.50	0
020	Total Phosphorus as P2O5 (%)	0423	3.885	0.0100	3.515	0.5389	0.0648	48	0.69	020.50	0
020	Total Phosphorus as P2O5 (%)	0546	3.905	0.0680	3.515	0.5389	0.0648	48	0.72	020.50	0
020	Total Phosphorus as P2O5 (%)	0231	3.920	0.1000	3.515	0.5389	0.0648	48	0.75	020.50	0
020	Total Phosphorus as P2O5 (%)	0521	3.935	0.0000	3.515	0.5389	0.0648	48	0.78	020.50	0
020	Total Phosphorus as P2O5 (%)	0451	3.945	0.0300	3.515	0.5389	0.0648	48	0.80	020.50	0
020	Total Phosphorus as P2O5 (%)	0309	4.050	0.1200	3.515	0.5389	0.0648	48	0.99	020.20	0
020	Total Phosphorus as P2O5 (%)	0483	4.090	0.0200	3.515	0.5389	0.0648	48	1.07	020.50	0
020	Total Phosphorus as P2O5 (%)	0307	4.095	0.2300	3.515	0.5389	0.0648	48	1.08	020.50	0
020	Total Phosphorus as P2O5 (%)	0452	4.205	0.0100	3.515	0.5389	0.0648	48	1.28	020.50	0
020	Total Phosphorus as P2O5 (%)	0368	4.222	0.0083	3.515	0.5389	0.0648	48	1.31	020.50	0
020	Total Phosphorus as P2O5 (%)	0255	4.423	0.0980	3.515	0.5389	0.0648	48	1.68	020.50	0
020	Total Phosphorus as P2O5 (%)	0027	3.170	0.4000	3.515	0.5389	0.0648	48	-0.64	020.20	1
020	Total Phosphorus as P2O5 (%)	0550	3.620	0.3800	3.515	0.5389	0.0648	48	0.19	020.20	1
040	Indirect Available Phosphorus as P2O5 (1%)	0405	2.990‡	0.0000				1		040.20	0
041	Direct Available Phosphorus as P2O5 (1%)	0537	1.026†	0.0658	3.315	0.5246	0.0904	39	-4.36	041.99	0
041	Direct Available Phosphorus as P2O5 (1%)	0533	1.035†	0.1900	3.315	0.5246	0.0904	39	-4.35	041.99	0
041	Direct Available Phosphorus as P2O5 (1%)	0545	1.210†	0.0200	3.315	0.5246	0.0904	39	-4.01	041.99	0
041	Direct Available Phosphorus as P2O5 (1%)	0230	1.900†	0.1800	3.315	0.5246	0.0904	39	-2.70	041.60	0
041	Direct Available Phosphorus as P2O5 (1%)	0472	2.635†	0.0100	3.315	0.5246	0.0904	39	-1.30	041.60	0
041	Direct Available Phosphorus as P2O5 (1%)	0220	2.705	0.0700	3.315	0.5246	0.0904	39	-1.16	041.11	0
041	Direct Available Phosphorus as P2O5 (1%)	0522	2.785	0.0900	3.315	0.5246	0.0904	39	-1.01	041.11	0
041	Direct Available Phosphorus as P2O5 (1%)	0086	2.823	0.0069	3.315	0.5246	0.0904	39	-0.94	041.10	0
041	Direct Available Phosphorus as P2O5 (1%)	0055	2.835	0.0100	3.315	0.5246	0.0904	39	-0.92	041.10	0
041	Direct Available Phosphorus as P2O5 (1%)	0185	2.835	0.0100	3.315	0.5246	0.0904	39	-0.92	041.11	0
041	Direct Available Phosphorus as P2O5 (1%)	0485	2.939	0.0283	3.315	0.5246	0.0904	39	-0.72	041.11	0
041	Direct Available Phosphorus as P2O5 (1%)	0494	2.995	0.1700	3.315	0.5246	0.0904	39	-0.61	041.10	0
041	Direct Available Phosphorus as P2O5 (1%)	0540	3.090	0.0400	3.315	0.5246	0.0904	39	-0.43	041.99	0
041	Direct Available Phosphorus as P2O5 (1%)	0041	3.130	0.1800	3.315	0.5246	0.0904	39	-0.35	041.10	0
041	Direct Available Phosphorus as P2O5 (1%)	0397	3.199	0.2190	3.315	0.5246	0.0904	39	-0.22	041.60	0
041	Direct Available Phosphorus as P2O5 (1%)	0027	3.200	0.0600	3.315	0.5246	0.0904	39	-0.22	041.20	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 (1%)	0095	3.215	0.0500	3.315	0.5246	0.0904	39	-0.19	041.40	0
041	Direct Available Phosphorus as P2O5 (1%)	0423	3.269	0.1170	3.315	0.5246	0.0904	39	-0.09	041.51	0
041	Direct Available Phosphorus as P2O5 (1%)	0034	3.321	0.1350	3.315	0.5246	0.0904	39	0.01	041.60	0
041	Direct Available Phosphorus as P2O5 (1%)	0105	3.470	0.1000	3.315	0.5246	0.0904	39	0.30	041.11	0
041	Direct Available Phosphorus as P2O5 (1%)	0105	3.475	0.0900	3.315	0.5246	0.0904	39	0.30	041.60	0
041	Direct Available Phosphorus as P2O5 (1%)	0018	3.560	0.0600	3.315	0.5246	0.0904	39	0.47	041.40	0
041	Direct Available Phosphorus as P2O5 (1%)	0029	3.570	0.1200	3.315	0.5246	0.0904	39	0.49	041.60	0
041	Direct Available Phosphorus as P2O5 (1%)	0518	3.600	0.0600	3.315	0.5246	0.0904	39	0.54	041.99	0
041	Direct Available Phosphorus as P2O5 (1%)	0106	3.630	0.1400	3.315	0.5246	0.0904	39	0.60	041.21	0
041	Direct Available Phosphorus as P2O5 (1%)	0544	3.655	0.0100	3.315	0.5246	0.0904	39	0.65	041.21	0
041	Direct Available Phosphorus as P2O5 (1%)	0494	3.670	0.2800	3.315	0.5246	0.0904	39	0.68	041.51	0
041	Direct Available Phosphorus as P2O5 (1%)	0055	3.705	0.1100	3.315	0.5246	0.0904	39	0.74	041.60	0
041	Direct Available Phosphorus as P2O5 (1%)	0040	3.750	0.1000	3.315	0.5246	0.0904	39	0.83	041.10	0
041	Direct Available Phosphorus as P2O5 (1%)	0117	3.755	0.0450	3.315	0.5246	0.0904	39	0.84	041.51	0
041	Direct Available Phosphorus as P2O5 (1%)	0231	3.765	0.0500	3.315	0.5246	0.0904	39	0.86	041.60	0
041	Direct Available Phosphorus as P2O5 (1%)	0354	3.765	0.0500	3.315	0.5246	0.0904	39	0.86	041.60	0
041	Direct Available Phosphorus as P2O5 (1%)	0023	3.775	0.0500	3.315	0.5246	0.0904	39	0.88	041.51	0
041	Direct Available Phosphorus as P2O5 (1%)	0043	3.780	0.0400	3.315	0.5246	0.0904	39	0.89	041.51	0
041	Direct Available Phosphorus as P2O5 (1%)	0377	3.785	0.0100	3.315	0.5246	0.0904	39	0.90	041.51	0
041	Direct Available Phosphorus as P2O5 (1%)	0025	3.798	0.0690	3.315	0.5246	0.0904	39	0.92	041.51	0
041	Direct Available Phosphorus as P2O5 (1%)	0325	3.800	0.4000	3.315	0.5246	0.0904	39	0.92	041.50	0
041	Direct Available Phosphorus as P2O5 (1%)	0522	3.855	0.0300	3.315	0.5246	0.0904	39	1.03	041.21	0
041	Direct Available Phosphorus as P2O5 (1%)	0486	4.040‡	0.0600	3.315	0.5246	0.0904	39	1.38	041.60	0
041	Direct Available Phosphorus as P2O5 (1%)	0073	2.030†	0.5800	3.315	0.5246	0.0904	39	-2.45	041.60	1
050	Soluble Potassium as K2O (2%)	0533	2.010†	0.0200	3.669	0.2546	0.1024	80	-6.52	050.99	0
050	Soluble Potassium as K2O (2%)	0520	2.075†	0.0100	3.669	0.2546	0.1024	80	-6.26	050.60	0
050	Soluble Potassium as K2O (2%)	0537	2.135†	0.1538	3.669	0.2546	0.1024	80	-6.03	050.99	0
050	Soluble Potassium as K2O (2%)	0114	2.630†	0.2600	3.669	0.2546	0.1024	80	-4.08	050.00	0
050	Soluble Potassium as K2O (2%)	0389	2.745†	0.1100	3.669	0.2546	0.1024	80	-3.63	050.99	0
050	Soluble Potassium as K2O (2%)	0518	2.750†	0.3000	3.669	0.2546	0.1024	80	-3.61	050.99	0
050	Soluble Potassium as K2O (2%)	0522	2.770†	0.0800	3.669	0.2546	0.1024	80	-3.53	050.00	0
050	Soluble Potassium as K2O (2%)	0049	3.040†	0.5800	3.669	0.2546	0.1024	80	-2.47	050.00	0
050	Soluble Potassium as K2O (2%)	0544	3.055†	0.1700	3.669	0.2546	0.1024	80	-2.41	050.00	0
050	Soluble Potassium as K2O (2%)	0481	3.170†	0.1200	3.669	0.2546	0.1024	80	-1.96	050.99	0
050	Soluble Potassium as K2O (2%)	0527	3.290	0.0400	3.669	0.2546	0.1024	80	-1.49	050.99	0
050	Soluble Potassium as K2O (2%)	0547	3.300	0.0000	3.669	0.2546	0.1024	80	-1.45	050.51	0
050	Soluble Potassium as K2O (2%)	0494	3.350	0.1600	3.669	0.2546	0.1024	80	-1.25	050.00	0
050	Soluble Potassium as K2O (2%)	0157	3.435	0.0100	3.669	0.2546	0.1024	80	-0.92	050.50	0
050	Soluble Potassium as K2O (2%)	0494	3.460	0.1200	3.669	0.2546	0.1024	80	-0.82	050.52	0
050	Soluble Potassium as K2O (2%)	0482	3.475	0.3100	3.669	0.2546	0.1024	80	-0.76	050.99	0
050	Soluble Potassium as K2O (2%)	0476	3.481	0.1717	3.669	0.2546	0.1024	80	-0.74	050.99	0
050	Soluble Potassium as K2O (2%)	0541	3.485	0.2300	3.669	0.2546	0.1024	80	-0.72	050.99	0
050	Soluble Potassium as K2O (2%)	0433	3.520	0.0400	3.669	0.2546	0.1024	80	-0.58	050.99	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				
050	Soluble Potassium as K2O (2%)	0545	3.525	0.0500	3.669	0.2546	0.1024	80	-0.56	050.99	0
050	Soluble Potassium as K2O (2%)	0506	3.530	0.0200	3.669	0.2546	0.1024	80	-0.55	050.99	0
050	Soluble Potassium as K2O (2%)	0516	3.530	0.0473	3.669	0.2546	0.1024	80	-0.54	050.99	0
050	Soluble Potassium as K2O (2%)	0234	3.560	0.1200	3.669	0.2546	0.1024	80	-0.43	050.99	0
050	Soluble Potassium as K2O (2%)	0354	3.565	0.0100	3.669	0.2546	0.1024	80	-0.41	050.52	0
050	Soluble Potassium as K2O (2%)	0055	3.575	0.1300	3.669	0.2546	0.1024	80	-0.37	050.00	0
050	Soluble Potassium as K2O (2%)	0055	3.595	0.1100	3.669	0.2546	0.1024	80	-0.29	050.50	0
050	Soluble Potassium as K2O (2%)	0106	3.600	0.0600	3.669	0.2546	0.1024	80	-0.27	050.50	0
050	Soluble Potassium as K2O (2%)	0498	3.600	0.0000	3.669	0.2546	0.1024	80	-0.27	050.30	0
050	Soluble Potassium as K2O (2%)	0029	3.610	0.2000	3.669	0.2546	0.1024	80	-0.23	050.62	0
050	Soluble Potassium as K2O (2%)	0483	3.615	0.0700	3.669	0.2546	0.1024	80	-0.21	050.51	0
050	Soluble Potassium as K2O (2%)	0309	3.640	0.0000	3.669	0.2546	0.1024	80	-0.11	050.30	0
050	Soluble Potassium as K2O (2%)	0157	3.645	0.0900	3.669	0.2546	0.1024	80	-0.09	050.30	0
050	Soluble Potassium as K2O (2%)	0040	3.650	0.1000	3.669	0.2546	0.1024	80	-0.07	050.30	0
050	Soluble Potassium as K2O (2%)	0523	3.650	0.1000	3.669	0.2546	0.1024	80	-0.07	050.99	0
050	Soluble Potassium as K2O (2%)	0220	3.655	0.0500	3.669	0.2546	0.1024	80	-0.05	050.00	0
050	Soluble Potassium as K2O (2%)	0035	3.660	0.0200	3.669	0.2546	0.1024	80	-0.03	050.61	0
050	Soluble Potassium as K2O (2%)	0105	3.660	0.1200	3.669	0.2546	0.1024	80	-0.03	050.62	0
050	Soluble Potassium as K2O (2%)	0377	3.675	0.0500	3.669	0.2546	0.1024	80	0.02	050.52	0
050	Soluble Potassium as K2O (2%)	0018	3.675	0.0100	3.669	0.2546	0.1024	80	0.02	050.62	0
050	Soluble Potassium as K2O (2%)	0292	3.680	0.0200	3.669	0.2546	0.1024	80	0.04	050.50	0
050	Soluble Potassium as K2O (2%)	0542	3.685	0.2700	3.669	0.2546	0.1024	80	0.06	050.99	0
050	Soluble Potassium as K2O (2%)	0131	3.690	0.2200	3.669	0.2546	0.1024	80	0.08	050.61	0
050	Soluble Potassium as K2O (2%)	0472	3.700	0.0200	3.669	0.2546	0.1024	80	0.12	050.31	0
050	Soluble Potassium as K2O (2%)	0540	3.700	0.0600	3.669	0.2546	0.1024	80	0.12	050.99	0
050	Soluble Potassium as K2O (2%)	0025	3.705	0.0960	3.669	0.2546	0.1024	80	0.14	050.52	0
050	Soluble Potassium as K2O (2%)	0105	3.710	0.0200	3.669	0.2546	0.1024	80	0.16	050.60	0
050	Soluble Potassium as K2O (2%)	0096	3.715	0.2500	3.669	0.2546	0.1024	80	0.18	050.99	0
050	Soluble Potassium as K2O (2%)	0356	3.725	0.0900	3.669	0.2546	0.1024	80	0.22	050.30	0
050	Soluble Potassium as K2O (2%)	0324	3.725	0.0100	3.669	0.2546	0.1024	80	0.22	050.50	0
050	Soluble Potassium as K2O (2%)	0416	3.760	0.0600	3.669	0.2546	0.1024	80	0.36	050.00	0
050	Soluble Potassium as K2O (2%)	0307	3.760	0.2000	3.669	0.2546	0.1024	80	0.36	050.99	0
050	Soluble Potassium as K2O (2%)	0526	3.786	0.2127	3.669	0.2546	0.1024	80	0.46	050.00	0
050	Soluble Potassium as K2O (2%)	0231	3.790	0.0000	3.669	0.2546	0.1024	80	0.48	050.00	0
050	Soluble Potassium as K2O (2%)	0034	3.804	0.0640	3.669	0.2546	0.1024	80	0.53	050.62	0
050	Soluble Potassium as K2O (2%)	0177	3.808	0.0540	3.669	0.2546	0.1024	80	0.55	050.99	0
050	Soluble Potassium as K2O (2%)	0117	3.809	0.0440	3.669	0.2546	0.1024	80	0.55	050.52	0
050	Soluble Potassium as K2O (2%)	0451	3.815	0.0100	3.669	0.2546	0.1024	80	0.57	050.99	0
050	Soluble Potassium as K2O (2%)	0524	3.818	0.2036	3.669	0.2546	0.1024	80	0.58	050.99	0
050	Soluble Potassium as K2O (2%)	0521	3.819	0.0000	3.669	0.2546	0.1024	80	0.59	050.99	0
050	Soluble Potassium as K2O (2%)	0136	3.825	0.0100	3.669	0.2546	0.1024	80	0.61	050.30	0
050	Soluble Potassium as K2O (2%)	0042	3.830	0.0600	3.669	0.2546	0.1024	80	0.63	050.99	0
050	Soluble Potassium as K2O (2%)	0095	3.850	0.2400	3.669	0.2546	0.1024	80	0.71	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 (2%)	0546	3.850	0.0060	3.669	0.2546	0.1024	80	0.71	050.99	0
050	Soluble Potassium as K2O (2%)	0291	3.855	0.0100	3.669	0.2546	0.1024	80	0.73	050.51	0
050	Soluble Potassium as K2O (2%)	0086	3.865	0.2029	3.669	0.2546	0.1024	80	0.77	050.50	0
050	Soluble Potassium as K2O (2%)	0043	3.870	0.1400	3.669	0.2546	0.1024	80	0.79	050.52	0
050	Soluble Potassium as K2O (2%)	0023	3.880	0.1000	3.669	0.2546	0.1024	80	0.83	050.52	0
050	Soluble Potassium as K2O (2%)	0485	3.880	0.0200	3.669	0.2546	0.1024	80	0.83	050.52	0
050	Soluble Potassium as K2O (2%)	0185	3.885	0.1100	3.669	0.2546	0.1024	80	0.85	050.32	0
050	Soluble Potassium as K2O (2%)	0041	3.915	0.0500	3.669	0.2546	0.1024	80	0.97	050.60	0
050	Soluble Potassium as K2O (2%)	0073	3.920	0.0600	3.669	0.2546	0.1024	80	0.99	050.30	0
050	Soluble Potassium as K2O (2%)	0368	3.960	0.0554	3.669	0.2546	0.1024	80	1.14	050.99	0
050	Soluble Potassium as K2O (2%)	0444	4.000	0.0800	3.669	0.2546	0.1024	80	1.30	050.50	0
050	Soluble Potassium as K2O (2%)	0486	4.000	0.0200	3.669	0.2546	0.1024	80	1.30	050.52	0
050	Soluble Potassium as K2O (2%)	0027	4.005	0.4100	3.669	0.2546	0.1024	80	1.32	050.99	0
050	Soluble Potassium as K2O (2%)	0397	4.027	0.0650	3.669	0.2546	0.1024	80	1.41	050.50	0
050	Soluble Potassium as K2O (2%)	0452	4.125‡	0.0100	3.669	0.2546	0.1024	80	1.79	050.51	0
050	Soluble Potassium as K2O (2%)	0255	4.226‡	0.0150	3.669	0.2546	0.1024	80	2.19	050.99	0
050	Soluble Potassium as K2O (2%)	0230	4.315‡	0.3500	3.669	0.2546	0.1024	80	2.54	050.00	0
050	Soluble Potassium as K2O (2%)	0423	4.508‡	0.0300	3.669	0.2546	0.1024	80	3.30	050.52	0
050	Soluble Potassium as K2O (2%)	0325	3.450	0.7000	3.669	0.2546	0.1024	80	-0.86	050.99	1
050	Soluble Potassium as K2O (2%)	0550	3.470	0.8800	3.669	0.2546	0.1024	80	-0.78	050.00	1
101	Acid Soluble Calcium (%)	0521	0.0362	0.0000	0.0470	0.0137	0.0073	13	-0.79	101.32	0
101	Acid Soluble Calcium (%)	0117	0.0366	0.0016	0.0470	0.0137	0.0073	13	-0.76	101.33	0
101	Acid Soluble Calcium (%)	0494	0.0371	0.0006	0.0470	0.0137	0.0073	13	-0.72	101.33	0
101	Acid Soluble Calcium (%)	0086	0.0381	0.0006	0.0470	0.0137	0.0073	13	-0.65	101.33	0
101	Acid Soluble Calcium (%)	0105	0.0387	0.0035	0.0470	0.0137	0.0073	13	-0.61	101.03	0
101	Acid Soluble Calcium (%)	0482	0.0400	0.0000	0.0470	0.0137	0.0073	13	-0.51	101.30	0
101	Acid Soluble Calcium (%)	0389	0.0400	0.0000	0.0470	0.0137	0.0073	13	-0.51	101.99	0
101	Acid Soluble Calcium (%)	0423	0.0410	0.0020	0.0470	0.0137	0.0073	13	-0.44	101.32	0
101	Acid Soluble Calcium (%)	0096	0.0505	0.0030	0.0470	0.0137	0.0073	13	0.26	101.30	0
101	Acid Soluble Calcium (%)	0527	0.0560	0.0000	0.0470	0.0137	0.0073	13	0.66	101.33	0
101	Acid Soluble Calcium (%)	0035	0.0615	0.0530	0.0470	0.0137	0.0073	13	1.06	101.30	0
101	Acid Soluble Calcium (%)	0354	0.1400	0.0000	0.0470	0.0137	0.0073	13	6.79	101.30	0
101	Acid Soluble Calcium (%)	0483	0.2595	0.0310	0.0470	0.0137	0.0073	13	15.51	101.30	0
101	Acid Soluble Calcium (%)	0041	0.0900	0.1000	0.0470	0.0137	0.0073	13	3.14	101.30	1
121	Acid Soluble Magnesium (%)	0515	0.0341	0.0085	0.3793	0.0386	0.0112	19	-8.95	121.99	0
121	Acid Soluble Magnesium (%)	0105	0.3268	0.0104	0.3793	0.0386	0.0112	19	-1.36	121.03	0
121	Acid Soluble Magnesium (%)	0524	0.3445	0.0109	0.3793	0.0386	0.0112	19	-0.90	121.99	0
121	Acid Soluble Magnesium (%)	0035	0.3465	0.0050	0.3793	0.0386	0.0112	19	-0.85	121.30	0
121	Acid Soluble Magnesium (%)	0106	0.3550	0.0059	0.3793	0.0386	0.0112	19	-0.63	121.33	0
121	Acid Soluble Magnesium (%)	0482	0.3650	0.0300	0.3793	0.0386	0.0112	19	-0.37	121.30	0
121	Acid Soluble Magnesium (%)	0494	0.3673	0.0032	0.3793	0.0386	0.0112	19	-0.31	121.33	0
121	Acid Soluble Magnesium (%)	0354	0.3700	0.0000	0.3793	0.0386	0.0112	19	-0.24	121.30	0
121	Acid Soluble Magnesium (%)	0389	0.3700	0.0000	0.3793	0.0386	0.0112	19	-0.24	121.99	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				
121	Acid Soluble Magnesium (%)	0041	0.3800	0.0400	0.3793	0.0386	0.0112	19	0.02	121.30	0
121	Acid Soluble Magnesium (%)	0423	0.3815	0.0030	0.3793	0.0386	0.0112	19	0.06	121.32	0
121	Acid Soluble Magnesium (%)	0117	0.3825	0.0012	0.3793	0.0386	0.0112	19	0.08	121.33	0
121	Acid Soluble Magnesium (%)	0086	0.3861	0.0269	0.3793	0.0386	0.0112	19	0.18	121.33	0
121	Acid Soluble Magnesium (%)	0444	0.3950	0.0300	0.3793	0.0386	0.0112	19	0.41	121.30	0
121	Acid Soluble Magnesium (%)	0521	0.3951	0.0000	0.3793	0.0386	0.0112	19	0.41	121.32	0
121	Acid Soluble Magnesium (%)	0527	0.4105	0.0050	0.3793	0.0386	0.0112	19	0.81	121.33	0
121	Acid Soluble Magnesium (%)	0472	0.4350	0.0100	0.3793	0.0386	0.0112	19	1.44	121.30	0
121	Acid Soluble Magnesium (%)	0096	0.4500	0.0200	0.3793	0.0386	0.0112	19	1.83	121.30	0
121	Acid Soluble Magnesium (%)	0483	0.4555	0.0030	0.3793	0.0386	0.0112	19	1.98	121.30	0
121	Acid Soluble Magnesium (%)	0515	0.8653	0.0908	0.3793	0.0386	0.0112	19	12.59	121.33	1
131	Water Soluble Magnesium (%)	0444	0.3900	0.0000				1		131.30	0
143	Elemental Sulfur (%)	0472	0.8900	0.0000				2		143.99	0
143	Elemental Sulfur (%)	0389	0.9000	0.0000				2		143.99	0
146	Total Sulfur in Liquid (%)	0131	3.660	0.1600				1		146.99	0
148	Total Sulfur (%)	0542	0.0200	0.0000	0.9473	0.0660	0.0395	10	-13.06	148.07	0
148	Total Sulfur (%)	0527	0.8860	0.0000	0.9473	0.0660	0.0395	10	-0.86	148.07	0
148	Total Sulfur (%)	0494	0.8865	0.0051	0.9473	0.0660	0.0395	10	-0.86	148.07	0
148	Total Sulfur (%)	0117	0.9426	0.0409	0.9473	0.0660	0.0395	10	-0.07	148.07	0
148	Total Sulfur (%)	0086	0.9439	0.0417	0.9473	0.0660	0.0395	10	-0.05	148.07	0
148	Total Sulfur (%)	0482	0.9700	0.1000	0.9473	0.0660	0.0395	10	0.32	148.99	0
148	Total Sulfur (%)	0354	0.9750	0.0900	0.9473	0.0660	0.0395	10	0.39	148.99	0
148	Total Sulfur (%)	0483	0.9855	0.0490	0.9473	0.0660	0.0395	10	0.54	148.07	0
148	Total Sulfur (%)	0292	1.000	0.0200	0.9473	0.0660	0.0395	10	0.74	148.07	0
148	Total Sulfur (%)	0096	1.035	0.0480	0.9473	0.0660	0.0395	10	1.24	148.99	0
148	Total Sulfur (%)	0515	2.261	0.4203	0.9473	0.0660	0.0395	10	18.49	148.07	1
149	Sulfur - HNO3 soluble (%)	0423	0.9095	0.0030	0.9303	0.0196	0.0039	3	-1.06	149.04	0
149	Sulfur - HNO3 soluble (%)	0524	0.9329	0.0087	0.9303	0.0196	0.0039	3	0.13	149.04	0
149	Sulfur - HNO3 soluble (%)	0521	0.9485	0.0000	0.9303	0.0196	0.0039	3	0.93	149.04	0
151	Acid Soluble Arsenic (ppm)	0498	0.2700	0.0000	1.331	0.6065	0.2562	13	-1.75	151.00	0
151	Acid Soluble Arsenic (ppm)	0136	0.5650	0.0100	1.331	0.6065	0.2562	13	-1.26	151.00	0
151	Acid Soluble Arsenic (ppm)	0520	1.001	0.0700	1.331	0.6065	0.2562	13	-0.54	151.99	0
151	Acid Soluble Arsenic (ppm)	0389	1.069	0.0074	1.331	0.6065	0.2562	13	-0.43	151.30	0
151	Acid Soluble Arsenic (ppm)	0255	1.258	0.0320	1.331	0.6065	0.2562	13	-0.12	151.30	0
151	Acid Soluble Arsenic (ppm)	0476	1.273	0.0100	1.331	0.6065	0.2562	13	-0.10	151.99	0
151	Acid Soluble Arsenic (ppm)	0494	1.320	0.1502	1.331	0.6065	0.2562	13	-0.02	151.33	0
151	Acid Soluble Arsenic (ppm)	0368	1.325	0.0300	1.331	0.6065	0.2562	13	-0.01	151.34	0
151	Acid Soluble Arsenic (ppm)	0527	1.357	0.0260	1.331	0.6065	0.2562	13	0.04	151.33	0
151	Acid Soluble Arsenic (ppm)	0037	1.531	0.2910	1.331	0.6065	0.2562	13	0.33	151.33	0
151	Acid Soluble Arsenic (ppm)	0096	1.700	0.2000	1.331	0.6065	0.2562	13	0.61	151.30	0
151	Acid Soluble Arsenic (ppm)	0515	3.150	0.6600	1.331	0.6065	0.2562	13	3.00	151.34	0
151	Acid Soluble Arsenic (ppm)	0515	4.026	1.844	1.331	0.6065	0.2562	13	4.44	151.33	0
151	Acid Soluble Arsenic (ppm)	0541	17.70	27.20	1.331	0.6065	0.2562	13	26.99	151.30	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				
165	Acid Soluble Boron (%)	0515	0.0002	0.0000	0.0023	0.0027	0.0000	6	-0.68	165.99	0
165	Acid Soluble Boron (%)	0106	0.0010	0.0001	0.0023	0.0027	0.0000	6	-0.43	165.30	0
165	Acid Soluble Boron (%)	0524	0.0010	0.0000	0.0023	0.0027	0.0000	6	-0.41	165.99	0
165	Acid Soluble Boron (%)	0423	0.0011	0.0001	0.0023	0.0027	0.0000	6	-0.40	165.99	0
165	Acid Soluble Boron (%)	0542	0.0040	0.0000	0.0023	0.0027	0.0000	6	0.58	165.30	0
165	Acid Soluble Boron (%)	0354	0.0100	0.0000	0.0023	0.0027	0.0000	6	2.55	165.30	0
165	Acid Soluble Boron (%)	0527	0.0120	0.0040	0.0023	0.0027	0.0000	6	3.21	165.99	1
181	Acid Soluble Cadmium (ppm)	0481	2.685	0.0700	3.513	0.4825	0.1889	22	-1.72	181.99	0
181	Acid Soluble Cadmium (ppm)	0523	2.735	0.0300	3.513	0.4825	0.1889	22	-1.61	181.30	0
181	Acid Soluble Cadmium (ppm)	0444	2.785	0.1500	3.513	0.4825	0.1889	22	-1.51	181.30	0
181	Acid Soluble Cadmium (ppm)	0506	2.950	0.0000	3.513	0.4825	0.1889	22	-1.17	181.99	0
181	Acid Soluble Cadmium (ppm)	0524	3.101	0.0404	3.513	0.4825	0.1889	22	-0.85	181.30	0
181	Acid Soluble Cadmium (ppm)	0476	3.287	0.0160	3.513	0.4825	0.1889	22	-0.47	181.99	0
181	Acid Soluble Cadmium (ppm)	0498	3.370	0.2600	3.513	0.4825	0.1889	22	-0.30	181.00	0
181	Acid Soluble Cadmium (ppm)	0389	3.405	0.0700	3.513	0.4825	0.1889	22	-0.22	181.30	0
181	Acid Soluble Cadmium (ppm)	0520	3.488	0.0100	3.513	0.4825	0.1889	22	-0.05	181.99	0
181	Acid Soluble Cadmium (ppm)	0482	3.550	0.1000	3.513	0.4825	0.1889	22	0.08	181.30	0
181	Acid Soluble Cadmium (ppm)	0035	3.600	0.1600	3.513	0.4825	0.1889	22	0.18	181.30	0
181	Acid Soluble Cadmium (ppm)	0096	3.600	0.8000	3.513	0.4825	0.1889	22	0.18	181.30	0
181	Acid Soluble Cadmium (ppm)	0255	3.610	0.0700	3.513	0.4825	0.1889	22	0.20	181.30	0
181	Acid Soluble Cadmium (ppm)	0086	3.614	0.3091	3.513	0.4825	0.1889	22	0.21	181.33	0
181	Acid Soluble Cadmium (ppm)	0527	3.622	0.0020	3.513	0.4825	0.1889	22	0.23	181.33	0
181	Acid Soluble Cadmium (ppm)	0494	3.717	0.1723	3.513	0.4825	0.1889	22	0.42	181.33	0
181	Acid Soluble Cadmium (ppm)	0136	3.800	0.2000	3.513	0.4825	0.1889	22	0.59	181.00	0
181	Acid Soluble Cadmium (ppm)	0220	3.800	0.2000	3.513	0.4825	0.1889	22	0.59	181.99	0
181	Acid Soluble Cadmium (ppm)	0515	4.008	0.3830	3.513	0.4825	0.1889	22	1.02	181.34	0
181	Acid Soluble Cadmium (ppm)	0037	4.051	0.0020	3.513	0.4825	0.1889	22	1.12	181.33	0
181	Acid Soluble Cadmium (ppm)	0368	4.145	0.1100	3.513	0.4825	0.1889	22	1.31	181.34	0
181	Acid Soluble Cadmium (ppm)	0541	4.200	1.000	3.513	0.4825	0.1889	22	1.42	181.30	0
181	Acid Soluble Cadmium (ppm)	0550	3.430	2.320	3.513	0.4825	0.1889	22	-0.17	181.00	1
181	Acid Soluble Cadmium (ppm)	0515	9.116	1.099	3.513	0.4825	0.1889	22	11.61	181.33	2
190	Water Soluble Chlorine (%)	0105	1.175	0.0700				1		190.00	0
191	Acid Soluble Chromium (ppm)	0550	0.9700	0.0000	22.81	5.557	1.596	23	-3.93	191.00	0
191	Acid Soluble Chromium (ppm)	0506	6.270	0.0000	22.81	5.557	1.596	23	-2.98	191.99	0
191	Acid Soluble Chromium (ppm)	0520	16.26	0.4020	22.81	5.557	1.596	23	-1.18	191.99	0
191	Acid Soluble Chromium (ppm)	0523	17.65	0.3000	22.81	5.557	1.596	23	-0.93	191.30	0
191	Acid Soluble Chromium (ppm)	0541	18.80	7.600	22.81	5.557	1.596	23	-0.72	191.30	0
191	Acid Soluble Chromium (ppm)	0389	19.50	0.3400	22.81	5.557	1.596	23	-0.60	191.30	0
191	Acid Soluble Chromium (ppm)	0482	20.35	0.1000	22.81	5.557	1.596	23	-0.44	191.30	0
191	Acid Soluble Chromium (ppm)	0444	20.84	1.230	22.81	5.557	1.596	23	-0.36	191.30	0
191	Acid Soluble Chromium (ppm)	0086	21.62	1.095	22.81	5.557	1.596	23	-0.21	191.33	0
191	Acid Soluble Chromium (ppm)	0498	21.70	1.800	22.81	5.557	1.596	23	-0.20	191.00	0
191	Acid Soluble Chromium (ppm)	0481	21.85	0.1000	22.81	5.557	1.596	23	-0.17	191.99	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
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191	Acid Soluble Chromium (ppm)	0494	22.14	0.7551	22.81	5.557	1.596	23	-0.12	191.33	0
191	Acid Soluble Chromium (ppm)	0476	22.78	0.3050	22.81	5.557	1.596	23	-0.01	191.99	0
191	Acid Soluble Chromium (ppm)	0515	23.33	1.335	22.81	5.557	1.596	23	0.09	191.34	0
191	Acid Soluble Chromium (ppm)	0117	23.40	1.340	22.81	5.557	1.596	23	0.11	191.33	0
191	Acid Soluble Chromium (ppm)	0035	23.85	1.300	22.81	5.557	1.596	23	0.19	191.30	0
191	Acid Soluble Chromium (ppm)	0368	26.53	0.5800	22.81	5.557	1.596	23	0.67	191.34	0
191	Acid Soluble Chromium (ppm)	0220	27.00	0.0000	22.81	5.557	1.596	23	0.75	191.99	0
191	Acid Soluble Chromium (ppm)	0105	27.46	6.950	22.81	5.557	1.596	23	0.84	191.33	0
191	Acid Soluble Chromium (ppm)	0527	27.62	0.9700	22.81	5.557	1.596	23	0.87	191.33	0
191	Acid Soluble Chromium (ppm)	0096	30.80	1.200	22.81	5.557	1.596	23	1.44	191.30	0
191	Acid Soluble Chromium (ppm)	0037	31.03	1.599	22.81	5.557	1.596	23	1.48	191.33	0
191	Acid Soluble Chromium (ppm)	0515	46.82	7.397	22.81	5.557	1.596	23	4.32	191.33	0
202	Acid Soluble Cobalt (ppm)	0220	0.2500	0.1000	0.4120	0.1370	0.2172	14	-1.18	202.99	0
202	Acid Soluble Cobalt (ppm)	0523	0.2750	0.0100	0.4120	0.1370	0.2172	14	-1.00	202.30	0
202	Acid Soluble Cobalt (ppm)	0368	0.2950	0.2100	0.4120	0.1370	0.2172	14	-0.85	202.34	0
202	Acid Soluble Cobalt (ppm)	0389	0.3250	0.0100	0.4120	0.1370	0.2172	14	-0.64	202.30	0
202	Acid Soluble Cobalt (ppm)	0086	0.3588	0.1599	0.4120	0.1370	0.2172	14	-0.39	202.33	0
202	Acid Soluble Cobalt (ppm)	0520	0.3645	0.0070	0.4120	0.1370	0.2172	14	-0.35	202.30	0
202	Acid Soluble Cobalt (ppm)	0255	0.3850	0.0000	0.4120	0.1370	0.2172	14	-0.20	202.99	0
202	Acid Soluble Cobalt (ppm)	0527	0.3890	0.0040	0.4120	0.1370	0.2172	14	-0.17	202.33	0
202	Acid Soluble Cobalt (ppm)	0476	0.3890	0.0260	0.4120	0.1370	0.2172	14	-0.17	202.99	0
202	Acid Soluble Cobalt (ppm)	0494	0.4256	0.0328	0.4120	0.1370	0.2172	14	0.10	202.33	0
202	Acid Soluble Cobalt (ppm)	0515	0.5310	0.0400	0.4120	0.1370	0.2172	14	0.87	202.34	0
202	Acid Soluble Cobalt (ppm)	0524	0.5452	0.0017	0.4120	0.1370	0.2172	14	0.97	202.30	0
202	Acid Soluble Cobalt (ppm)	0550	1.220	0.0000	0.4120	0.1370	0.2172	14	5.90	202.33	0
202	Acid Soluble Cobalt (ppm)	0515	1.828	2.440	0.4120	0.1370	0.2172	14	10.34	202.33	0
202	Acid Soluble Cobalt (ppm)	0037	5,725	290.0	0.4120	0.1370	0.2172	14	41797.89	202.33	2
202	Acid Soluble Cobalt (ppm)	0546	0.0000	0.0000	0.4120	0.1370	0.2172	14		202.33	4
221	Acid Soluble Copper (%)	0106	0.0001	0.0000	0.0007	0.0005	0.0004	21	-1.44	221.33	0
221	Acid Soluble Copper (%)	0096	0.0004	0.0000	0.0007	0.0005	0.0004	21	-0.77	221.30	0
221	Acid Soluble Copper (%)	0494	0.0004	0.0000	0.0007	0.0005	0.0004	21	-0.77	221.33	0
221	Acid Soluble Copper (%)	0546	0.0004	0.0000	0.0007	0.0005	0.0004	21	-0.77	221.33	0
221	Acid Soluble Copper (%)	0389	0.0004	0.0000	0.0007	0.0005	0.0004	21	-0.77	221.99	0
221	Acid Soluble Copper (%)	0476	0.0004	0.0000	0.0007	0.0005	0.0004	21	-0.77	221.99	0
221	Acid Soluble Copper (%)	0524	0.0004	0.0000	0.0007	0.0005	0.0004	21	-0.77	221.99	0
221	Acid Soluble Copper (%)	0423	0.0005	0.0001	0.0007	0.0005	0.0004	21	-0.66	221.32	0
221	Acid Soluble Copper (%)	0368	0.0005	0.0000	0.0007	0.0005	0.0004	21	-0.55	221.99	0
221	Acid Soluble Copper (%)	0541	0.0006	0.0003	0.0007	0.0005	0.0004	21	-0.44	221.30	0
221	Acid Soluble Copper (%)	0220	0.0006	0.0000	0.0007	0.0005	0.0004	21	-0.33	221.99	0
221	Acid Soluble Copper (%)	0035	0.0008	0.0002	0.0007	0.0005	0.0004	21	0.11	221.30	0
221	Acid Soluble Copper (%)	0515	0.0010	0.0001	0.0007	0.0005	0.0004	21	0.45	221.33	0
221	Acid Soluble Copper (%)	0515	0.0010	0.0001	0.0007	0.0005	0.0004	21	0.45	221.99	0
221	Acid Soluble Copper (%)	0041	0.0010	0.0000	0.0007	0.0005	0.0004	21	0.56	221.30	0

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221	Acid Soluble Copper (%)	0255	0.0010	0.0000	0.0007	0.0005	0.0004	21	0.56	221.30	0
221	Acid Soluble Copper (%)	0550	0.0011	0.0007	0.0007	0.0005	0.0004	21	0.67	221.00	0
221	Acid Soluble Copper (%)	0481	0.0011	0.0000	0.0007	0.0005	0.0004	21	0.78	221.99	0
221	Acid Soluble Copper (%)	0527	0.0020	0.0000	0.0007	0.0005	0.0004	21	2.78	221.33	0
221	Acid Soluble Copper (%)	0354	0.0100	0.0000	0.0007	0.0005	0.0004	21	20.54	221.30	0
221	Acid Soluble Copper (%)	0516	0.0268	0.0072	0.0007	0.0005	0.0004	21	57.84	221.00	0
221	Acid Soluble Copper (%)	0483	3.540	0.9800	0.0007	0.0005	0.0004	21	7858.50	221.30	2
241	Acid Soluble Iron (%)	0106	0.0107	0.0024	0.0362	0.0089	0.0039	19	-2.86	241.33	0
241	Acid Soluble Iron (%)	0389	0.0228	0.0011	0.0362	0.0089	0.0039	19	-1.51	241.99	0
241	Acid Soluble Iron (%)	0472	0.0250	0.0100	0.0362	0.0089	0.0039	19	-1.26	241.30	0
241	Acid Soluble Iron (%)	0515	0.0281	0.0127	0.0362	0.0089	0.0039	19	-0.92	241.99	0
241	Acid Soluble Iron (%)	0354	0.0300	0.0000	0.0362	0.0089	0.0039	19	-0.70	241.30	0
241	Acid Soluble Iron (%)	0546	0.0345	0.0010	0.0362	0.0089	0.0039	19	-0.19	241.33	0
241	Acid Soluble Iron (%)	0423	0.0355	0.0010	0.0362	0.0089	0.0039	19	-0.08	241.32	0
241	Acid Soluble Iron (%)	0524	0.0356	0.0002	0.0362	0.0089	0.0039	19	-0.07	241.99	0
241	Acid Soluble Iron (%)	0105	0.0360	0.0103	0.0362	0.0089	0.0039	19	-0.03	241.03	0
241	Acid Soluble Iron (%)	0494	0.0361	0.0010	0.0362	0.0089	0.0039	19	-0.01	241.33	0
241	Acid Soluble Iron (%)	0117	0.0369	0.0032	0.0362	0.0089	0.0039	19	0.08	241.33	0
241	Acid Soluble Iron (%)	0035	0.0380	0.0000	0.0362	0.0089	0.0039	19	0.20	241.30	0
241	Acid Soluble Iron (%)	0527	0.0390	0.0000	0.0362	0.0089	0.0039	19	0.31	241.33	0
241	Acid Soluble Iron (%)	0041	0.0400	0.0000	0.0362	0.0089	0.0039	19	0.43	241.30	0
241	Acid Soluble Iron (%)	0482	0.0400	0.0000	0.0362	0.0089	0.0039	19	0.43	241.30	0
241	Acid Soluble Iron (%)	0444	0.0435	0.0070	0.0362	0.0089	0.0039	19	0.82	241.30	0
241	Acid Soluble Iron (%)	0096	0.0450	0.0100	0.0362	0.0089	0.0039	19	0.99	241.30	0
241	Acid Soluble Iron (%)	0515	0.0908	0.0136	0.0362	0.0089	0.0039	19	6.13	241.33	0
241	Acid Soluble Iron (%)	0521	2.226	0.0000	0.0362	0.0089	0.0039	19	245.65	241.32	0
241	Acid Soluble Iron (%)	0483	325.0	2.000	0.0362	0.0089	0.0039	19	36463.10	241.30	2
251	Acid Soluble Lead (ppm)	0476	0.0775	0.0010	0.8871	1.035	0.6734	7	-0.78	251.99	0
251	Acid Soluble Lead (ppm)	0524	0.0901	0.0019	0.8871	1.035	0.6734	7	-0.77	251.30	0
251	Acid Soluble Lead (ppm)	0527	0.1700	0.0400	0.8871	1.035	0.6734	7	-0.69	251.33	0
251	Acid Soluble Lead (ppm)	0506	0.5300	0.0000	0.8871	1.035	0.6734	7	-0.35	251.99	0
251	Acid Soluble Lead (ppm)	0515	1.353	2.271	0.8871	1.035	0.6734	7	0.45	251.33	0
251	Acid Soluble Lead (ppm)	0220	1.550	1.100	0.8871	1.035	0.6734	7	0.64	251.99	0
251	Acid Soluble Lead (ppm)	0096	2.750	1.300	0.8871	1.035	0.6734	7	1.80	251.30	0
251	Acid Soluble Lead (ppm)	0550	14.38	28.51	0.8871	1.035	0.6734	7	13.03	251.00	1
251	Acid Soluble Lead (ppm)	0389	0.0000	0.0000	0.8871	1.035	0.6734	7		251.30	4
251	Acid Soluble Lead (ppm)	0541	0.0000	0.0000	0.8871	1.035	0.6734	7		251.30	4
251	Acid Soluble Lead (ppm)	0515	0.0000	0.0000	0.8871	1.035	0.6734	7		251.34	4
251	Acid Soluble Lead (ppm)	0255	0.0095	0.0190	0.8871	1.035	0.6734	7		251.30	4
251	Acid Soluble Lead (ppm)	0368	0.8800	1.760	0.8871	1.035	0.6734	7		251.34	4
261	Acid Soluble Manganese (%)	0389	0.0019	0.0000	0.0021	0.0002	0.0000	13	-1.20	261.99	0
261	Acid Soluble Manganese (%)	0041	0.0020	0.0000	0.0021	0.0002	0.0000	13	-0.62	261.30	0
261	Acid Soluble Manganese (%)	0423	0.0020	0.0000	0.0021	0.0002	0.0000	13	-0.62	261.34	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 (%)	0542	0.0020	0.0000	0.0021	0.0002	0.0000	13	-0.62	261.34	0
261	Acid Soluble Manganese (%)	0527	0.0020	0.0000	0.0021	0.0002	0.0000	13	-0.62	261.35	0
261	Acid Soluble Manganese (%)	0546	0.0020	0.0000	0.0021	0.0002	0.0000	13	-0.62	261.35	0
261	Acid Soluble Manganese (%)	0494	0.0021	0.0001	0.0021	0.0002	0.0000	13	-0.33	261.35	0
261	Acid Soluble Manganese (%)	0524	0.0021	0.0001	0.0021	0.0002	0.0000	13	-0.33	261.99	0
261	Acid Soluble Manganese (%)	0035	0.0022	0.0000	0.0021	0.0002	0.0000	13	0.55	261.30	0
261	Acid Soluble Manganese (%)	0521	0.0022	0.0000	0.0021	0.0002	0.0000	13	0.55	261.34	0
261	Acid Soluble Manganese (%)	0515	0.0023	0.0001	0.0021	0.0002	0.0000	13	0.84	261.99	0
261	Acid Soluble Manganese (%)	0096	0.0025	0.0001	0.0021	0.0002	0.0000	13	2.00	261.30	0
261	Acid Soluble Manganese (%)	0354	0.0100	0.0000	0.0021	0.0002	0.0000	13	45.91	261.30	0
261	Acid Soluble Manganese (%)	0515	0.0101	0.0018	0.0021	0.0002	0.0000	13	46.49	261.35	1
281	Acid Soluble Mercury (ppm)	0527	0.0210	0.0060				1		281.30	0
281	Acid Soluble Mercury (ppm)	0515	0.0000	0.0000				1		281.30	4
281	Acid Soluble Mercury (ppm)	0541	0.0000	0.0000				1		281.30	4
289	Acid Soluble Molybdenum (ppm)	0515	0.5500	0.1140	1.330	0.3102	0.4467	18	-2.51	289.34	0
289	Acid Soluble Molybdenum (ppm)	0255	0.8550	0.1860	1.330	0.3102	0.4467	18	-1.53	289.30	0
289	Acid Soluble Molybdenum (ppm)	0096	1.050	0.1000	1.330	0.3102	0.4467	18	-0.90	289.30	0
289	Acid Soluble Molybdenum (ppm)	0433	1.055	0.0213	1.330	0.3102	0.4467	18	-0.89	289.30	0
289	Acid Soluble Molybdenum (ppm)	0389	1.084	0.0230	1.330	0.3102	0.4467	18	-0.79	289.30	0
289	Acid Soluble Molybdenum (ppm)	0086	1.220	0.2466	1.330	0.3102	0.4467	18	-0.36	289.33	0
289	Acid Soluble Molybdenum (ppm)	0524	1.237	0.0018	1.330	0.3102	0.4467	18	-0.30	289.30	0
289	Acid Soluble Molybdenum (ppm)	0527	1.355	0.0040	1.330	0.3102	0.4467	18	0.08	289.33	0
289	Acid Soluble Molybdenum (ppm)	0476	1.363	0.1670	1.330	0.3102	0.4467	18	0.10	289.99	0
289	Acid Soluble Molybdenum (ppm)	0550	1.395	0.3100	1.330	0.3102	0.4467	18	0.21	289.33	0
289	Acid Soluble Molybdenum (ppm)	0220	1.400	0.4000	1.330	0.3102	0.4467	18	0.23	289.99	0
289	Acid Soluble Molybdenum (ppm)	0515	1.404	1.191	1.330	0.3102	0.4467	18	0.24	289.33	0
289	Acid Soluble Molybdenum (ppm)	0546	1.430	0.0800	1.330	0.3102	0.4467	18	0.32	289.33	0
289	Acid Soluble Molybdenum (ppm)	0037	1.492	0.0500	1.330	0.3102	0.4467	18	0.52	289.33	0
289	Acid Soluble Molybdenum (ppm)	0106	1.500	1.000	1.330	0.3102	0.4467	18	0.55	289.33	0
289	Acid Soluble Molybdenum (ppm)	0494	1.636	0.5052	1.330	0.3102	0.4467	18	0.99	289.33	0
289	Acid Soluble Molybdenum (ppm)	0541	2.500	1.400	1.330	0.3102	0.4467	18	3.77	289.30	0
289	Acid Soluble Molybdenum (ppm)	0035	5.220	2.240	1.330	0.3102	0.4467	18	12.54	289.30	0
289	Acid Soluble Molybdenum (ppm)	0368	0.7350	1.470	1.330	0.3102	0.4467	18		289.34	4
291	Acid Soluble Nickel (ppm)	0506	0.6500	0.0000	6.924	1.368	0.5646	24	-4.59	291.99	0
291	Acid Soluble Nickel (ppm)	0523	4.820	0.0600	6.924	1.368	0.5646	24	-1.54	291.30	0
291	Acid Soluble Nickel (ppm)	0389	5.421	0.1120	6.924	1.368	0.5646	24	-1.10	291.30	0
291	Acid Soluble Nickel (ppm)	0482	5.700	0.2000	6.924	1.368	0.5646	24	-0.90	291.30	0
291	Acid Soluble Nickel (ppm)	0524	5.827	0.0535	6.924	1.368	0.5646	24	-0.80	291.30	0
291	Acid Soluble Nickel (ppm)	0136	6.000	0.4000	6.924	1.368	0.5646	24	-0.68	291.00	0
291	Acid Soluble Nickel (ppm)	0520	6.057	0.0430	6.924	1.368	0.5646	24	-0.63	291.30	0
291	Acid Soluble Nickel (ppm)	0086	6.405	0.3501	6.924	1.368	0.5646	24	-0.38	291.33	0
291	Acid Soluble Nickel (ppm)	0527	6.489	0.1750	6.924	1.368	0.5646	24	-0.32	291.33	0
291	Acid Soluble Nickel (ppm)	0444	6.500	0.0200	6.924	1.368	0.5646	24	-0.31	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)	0255	6.702	0.1820	6.924	1.368	0.5646	24	-0.16	291.99	0
291	Acid Soluble Nickel (ppm)	0117	6.788	0.2980	6.924	1.368	0.5646	24	-0.10	291.33	0
291	Acid Soluble Nickel (ppm)	0494	6.788	0.1514	6.924	1.368	0.5646	24	-0.10	291.33	0
291	Acid Soluble Nickel (ppm)	0515	6.932	0.5690	6.924	1.368	0.5646	24	0.01	291.34	0
291	Acid Soluble Nickel (ppm)	0096	7.200	1.400	6.924	1.368	0.5646	24	0.20	291.30	0
291	Acid Soluble Nickel (ppm)	0476	7.297	0.3050	6.924	1.368	0.5646	24	0.27	291.99	0
291	Acid Soluble Nickel (ppm)	0037	7.621	0.1040	6.924	1.368	0.5646	24	0.51	291.33	0
291	Acid Soluble Nickel (ppm)	0105	7.677	1.933	6.924	1.368	0.5646	24	0.55	291.33	0
291	Acid Soluble Nickel (ppm)	0220	7.850	0.1000	6.924	1.368	0.5646	24	0.68	291.99	0
291	Acid Soluble Nickel (ppm)	0368	7.905	0.2100	6.924	1.368	0.5646	24	0.72	291.34	0
291	Acid Soluble Nickel (ppm)	0541	8.350	1.100	6.924	1.368	0.5646	24	1.04	291.30	0
291	Acid Soluble Nickel (ppm)	0035	10.30	5.210	6.924	1.368	0.5646	24	2.46	291.30	0
291	Acid Soluble Nickel (ppm)	0481	11.75	0.1000	6.924	1.368	0.5646	24	3.53	291.99	0
291	Acid Soluble Nickel (ppm)	0515	16.68	0.4750	6.924	1.368	0.5646	24	7.13	291.33	0
291	Acid Soluble Nickel (ppm)	0550	17.14	17.53	6.924	1.368	0.5646	24	7.47	291.00	1
301	Acid Soluble Selenium (ppm)	0220	0.2500	0.1000	1.461	1.039	0.2674	12	-1.17	301.99	0
301	Acid Soluble Selenium (ppm)	0389	0.5098	0.0004	1.461	1.039	0.2674	12	-0.92	301.30	0
301	Acid Soluble Selenium (ppm)	0476	0.5610	0.0820	1.461	1.039	0.2674	12	-0.87	301.99	0
301	Acid Soluble Selenium (ppm)	0520	0.7315	0.1270	1.461	1.039	0.2674	12	-0.70	301.32	0
301	Acid Soluble Selenium (ppm)	0524	1.185	0.0100	1.461	1.039	0.2674	12	-0.27	301.30	0
301	Acid Soluble Selenium (ppm)	0527	1.301	0.0160	1.461	1.039	0.2674	12	-0.15	301.33	0
301	Acid Soluble Selenium (ppm)	0255	1.484	0.1770	1.461	1.039	0.2674	12	0.02	301.99	0
301	Acid Soluble Selenium (ppm)	0368	1.625	0.7700	1.461	1.039	0.2674	12	0.16	301.34	0
301	Acid Soluble Selenium (ppm)	0541	1.700	1.200	1.461	1.039	0.2674	12	0.23	301.30	0
301	Acid Soluble Selenium (ppm)	0515	2.150	0.2280	1.461	1.039	0.2674	12	0.66	301.34	0
301	Acid Soluble Selenium (ppm)	0515	3.519	0.4980	1.461	1.039	0.2674	12	1.98	301.33	0
301	Acid Soluble Selenium (ppm)	0506	4.570	0.0000	1.461	1.039	0.2674	12	2.99	301.99	0
311	Sodium (%)	0035	0.9830	0.0740	1.114	0.0802	0.0774	9	-1.50	311.33	0
311	Sodium (%)	0494	1.039	0.0473	1.114	0.0802	0.0774	9	-0.86	311.33	0
311	Sodium (%)	0482	1.090	0.1600	1.114	0.0802	0.0774	9	-0.27	311.99	0
311	Sodium (%)	0354	1.105	0.0300	1.114	0.0802	0.0774	9	-0.10	311.99	0
311	Sodium (%)	0521	1.107	0.0000	1.114	0.0802	0.0774	9	-0.07	311.32	0
311	Sodium (%)	0117	1.135	0.0690	1.114	0.0802	0.0774	9	0.24	311.33	0
311	Sodium (%)	0423	1.145	0.0100	1.114	0.0802	0.0774	9	0.36	311.33	0
311	Sodium (%)	0096	1.175	0.2100	1.114	0.0802	0.0774	9	0.71	311.99	0
311	Sodium (%)	0527	1.267	0.0960	1.114	0.0802	0.0774	9	1.76	311.33	0
321	Acid Soluble Zinc (%)	0106	0.0030	0.0002	0.0083	0.0017	0.0013	33	-3.22	321.33	0
321	Acid Soluble Zinc (%)	0498	0.0050	0.0000	0.0083	0.0017	0.0013	33	-2.01	321.00	0
321	Acid Soluble Zinc (%)	0389	0.0066	0.0000	0.0083	0.0017	0.0013	33	-1.04	321.99	0
321	Acid Soluble Zinc (%)	0481	0.0068	0.0000	0.0083	0.0017	0.0013	33	-0.92	321.99	0
321	Acid Soluble Zinc (%)	0546	0.0069	0.0004	0.0083	0.0017	0.0013	33	-0.86	321.33	0
321	Acid Soluble Zinc (%)	0433	0.0070	0.0000	0.0083	0.0017	0.0013	33	-0.80	321.30	0
321	Acid Soluble Zinc (%)	0444	0.0070	0.0000	0.0083	0.0017	0.0013	33	-0.80	321.30	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				
321	Acid Soluble Zinc (%)	0494	0.0070	0.0002	0.0083	0.0017	0.0013	33	-0.80	321.33	0
321	Acid Soluble Zinc (%)	0476	0.0070	0.0002	0.0083	0.0017	0.0013	33	-0.80	321.99	0
321	Acid Soluble Zinc (%)	0105	0.0071	0.0007	0.0083	0.0017	0.0013	33	-0.77	321.03	0
321	Acid Soluble Zinc (%)	0117	0.0072	0.0003	0.0083	0.0017	0.0013	33	-0.71	321.33	0
321	Acid Soluble Zinc (%)	0524	0.0076	0.0001	0.0083	0.0017	0.0013	33	-0.47	321.99	0
321	Acid Soluble Zinc (%)	0220	0.0078	0.0001	0.0083	0.0017	0.0013	33	-0.35	321.99	0
321	Acid Soluble Zinc (%)	0515	0.0080	0.0001	0.0083	0.0017	0.0013	33	-0.23	321.99	0
321	Acid Soluble Zinc (%)	0423	0.0080	0.0000	0.0083	0.0017	0.0013	33	-0.20	321.32	0
321	Acid Soluble Zinc (%)	0542	0.0080	0.0000	0.0083	0.0017	0.0013	33	-0.20	321.32	0
321	Acid Soluble Zinc (%)	0105	0.0082	0.0013	0.0083	0.0017	0.0013	33	-0.11	321.33	0
321	Acid Soluble Zinc (%)	0521	0.0082	0.0000	0.0083	0.0017	0.0013	33	-0.08	321.32	0
321	Acid Soluble Zinc (%)	0041	0.0085	0.0010	0.0083	0.0017	0.0013	33	0.11	321.30	0
321	Acid Soluble Zinc (%)	0255	0.0085	0.0010	0.0083	0.0017	0.0013	33	0.11	321.30	0
321	Acid Soluble Zinc (%)	0368	0.0085	0.0002	0.0083	0.0017	0.0013	33	0.11	321.99	0
321	Acid Soluble Zinc (%)	0550	0.0087	0.0017	0.0083	0.0017	0.0013	33	0.20	321.00	0
321	Acid Soluble Zinc (%)	0035	0.0090	0.0033	0.0083	0.0017	0.0013	33	0.38	321.30	0
321	Acid Soluble Zinc (%)	0096	0.0094	0.0006	0.0083	0.0017	0.0013	33	0.65	321.30	0
321	Acid Soluble Zinc (%)	0292	0.0100	0.0000	0.0083	0.0017	0.0013	33	1.01	321.30	0
321	Acid Soluble Zinc (%)	0354	0.0100	0.0000	0.0083	0.0017	0.0013	33	1.01	321.30	0
321	Acid Soluble Zinc (%)	0472	0.0100	0.0000	0.0083	0.0017	0.0013	33	1.01	321.30	0
321	Acid Soluble Zinc (%)	0482	0.0100	0.0000	0.0083	0.0017	0.0013	33	1.01	321.30	0
321	Acid Soluble Zinc (%)	0527	0.0100	0.0000	0.0083	0.0017	0.0013	33	1.01	321.33	0
321	Acid Soluble Zinc (%)	0506	0.0100	0.0000	0.0083	0.0017	0.0013	33	1.01	321.99	0
321	Acid Soluble Zinc (%)	0515	0.0176	0.0021	0.0083	0.0017	0.0013	33	5.58	321.33	0
321	Acid Soluble Zinc (%)	0533	0.0235	0.0010	0.0083	0.0017	0.0013	33	9.18	321.00	0
321	Acid Soluble Zinc (%)	0516	0.0587	0.0298	0.0083	0.0017	0.0013	33	30.46	321.00	0
321	Acid Soluble Zinc (%)	0483	75.85	1.300	0.0083	0.0017	0.0013	33	45862.90	321.30	2
325	Water Soluble Zinc (%)	0541	0.0100	0.0000				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 and a 4 flag indicates rejected due to 0 value submitted. 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.