

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Analyte Proficiency From All Labs

Sample # 191011

Grade 18-46-0 DAP

Statistical Summary

Analytes: 32

Labs Reporting: 94

Issue Date : 11/30/2019

Analyte Code	Analyte Sample # 191011	# 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)	Horwitz %RSD
001	Ammoniacal Nitrogen (%)	40	40	17.80	0.5941	17.87		0.3793	0.0750	2.12%		0.1560	2.59%
002	Nitrate Nitrogen (%)	1		17.80									
010	Total Nitrogen (18%)	79	77	17.95	0.2468	17.95	0.6993	0.2202	0.0314	1.23%	0.73	0.1094	2.59%
020	Total Phosphorus as P2O5 (%)	58	56	46.05	1.953	46.10		0.8458	0.1413	1.83%		0.5700	2.25%
030	Citrate Insoluble Phosphorus as P2O5 (%)	3	3	0.0350	0.0000	0.0350		0.0000	0.0000	0.00%		0.0100	6.62%
040	Indirect Available Phosphorus as P2O5 (46%)	3	3	46.60	0.3471	46.60	1.0090	0.3471	0.2505	0.74%	0.80	0.0833	2.24%
041	Direct Available Phosphorus as P2O5 (46%)	52	51	46.05	0.7056	46.05	1.0008	0.6852	0.1199	1.49%	1.60	0.3106	2.25%
042	Water Soluble OrthoP as P2O5 (%)	1		41.78									
048	Water Soluble Phosphorus as P2O5 (%)	20	19	42.97	1.686	43.10		1.546	0.4435	3.59%		0.2011	2.27%
050	Soluble Potassium as K2O (%)	12	11	0.4743	0.9015	0.1813	0.4100	0.0489	0.0184	26.95%	0.28	0.0241	5.17%
060	Water (Free) (%)	5	5	0.9082	0.3348	0.9082		0.3348	0.1871	36.86%		0.0421	4.06%
101	Acid Soluble Calcium (%)	16	15	0.2860	0.1206	0.2791	0.2140	0.0505	0.0163	18.09%	0.55	0.0189	4.85%
121	Acid Soluble Magnesium (%)	19	19	0.6671	0.2083	0.6692	0.2335	0.1015	0.0291	15.16%	1.01	0.0358	4.25%
143	Elemental Sulfur (%)	3	3	2.247	0.0950	2.247		0.0950	0.0686	4.23%		0.0400	3.54%
148	Total Sulfur (%)	8	8	2.200	0.1880	2.206	0.3103	0.1996	0.0882	9.05%	1.50	0.1583	3.55%
149	Sulfur - HNO3 soluble (%)	2	2	2.635	0.0353								
151	Acid Soluble Arsenic (ppm)	15	9	1.677	0.4653	1.677		0.5277	0.2199	31.47%		0.1416	14.80%
165	Acid Soluble Boron (%)	10	8	0.0146	0.0132	0.0119	0.0048	0.0078	0.0034	64.94%	3.77	0.0020	7.79%
181	Acid Soluble Cadmium (ppm)	23	22	33.61	11.34	35.85		5.633	1.501	15.71%		1.043	9.33%
191	Acid Soluble Chromium (ppm)	20	19	162.8	86.87	180.1		61.86	17.74	34.36%		3.155	7.32%
202	Acid Soluble Cobalt (ppm)	13	7	0.9974	0.6191	0.9974	1.2992	0.7020	0.3317	70.38%	1.26	0.0549	16.00%
221	Acid Soluble Copper (%)	21	9	0.0536	0.1489	0.0038	0.0054	0.0068	0.0028	180.62%	2.95	0.0344	9.27%
241	Acid Soluble Iron (%)	19	18	0.4525	0.0320	0.4488	0.0499	0.0241	0.0071	5.36%	1.12	0.0155	4.51%
251	Acid Soluble Lead (ppm)	15	9	1.320	1.983	0.8758		0.9607	0.4003	109.69%		0.2474	16.32%
261	Acid Soluble Manganese (%)	18	14	0.0112	0.0060	0.0105	0.0061	0.0013	0.0004	12.14%	0.49	0.0018	7.94%
281	Acid Soluble Mercury (ppm)	9	1	0.0142		0.0105		0.0013	0.0016	12.14%		0.0039	31.75%
289	Acid Soluble Molybdenum (ppm)	18	13	4.132	5.124	3.119	1.9357	2.476	0.8583	79.38%	2.98	0.2346	13.48%
291	Acid Soluble Nickel (ppm)	20	18	8.490	3.375	8.224		2.955	0.8705	35.93%		0.4383	11.65%
301	Acid Soluble Selenium (ppm)	11	3	3.797	2.231	3.797		2.231	1.610	58.75%		1.109	13.09%
311	Sodium (%)	7	7	0.1544	0.0545	0.1609	0.0211	0.0222	0.0105	13.81%	2.45	0.0087	5.27%
321	Acid Soluble Zinc (%)	31	30	0.0444	0.0062	0.0448	0.0095	0.0053	0.0012	11.88%	1.31	0.0018	6.38%
325	Water Soluble Zinc (%)	2	2	0.0318	0.0223								

The Analyte IA Ratio = 2.33 * Robust SD / 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

Analyte Code	Analyte Sample # 191011	# 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)	Horwitz %RSD
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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

Sample # 191011
Grade 18-46-0 DAP

Lab Values

Analytes: 32

Labs Reporting: 94

Issue Date : 11/30/2019

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
001	Ammoniacal Nitrogen (%)	0230	15.80	0.2000	17.87	0.3793	0.1560	40	-5.46	001.10	0
001	Ammoniacal Nitrogen (%)	0389	15.92	0.1600	17.87	0.3793	0.1560	40	-5.15	001.10	0
001	Ammoniacal Nitrogen (%)	0394	16.93	0.2300	17.87	0.3793	0.1560	40	-2.48	001.99	0
001	Ammoniacal Nitrogen (%)	0231	17.05	0.3200	17.87	0.3793	0.1560	40	-2.17	001.10	0
001	Ammoniacal Nitrogen (%)	0451	17.26	0.6400	17.87	0.3793	0.1560	40	-1.62	001.10	0
001	Ammoniacal Nitrogen (%)	0510	17.31	0.0299	17.87	0.3793	0.1560	40	-1.48	001.99	0
001	Ammoniacal Nitrogen (%)	0526	17.49	0.0181	17.87	0.3793	0.1560	40	-1.01	001.10	0
001	Ammoniacal Nitrogen (%)	0546	17.53	0.2400	17.87	0.3793	0.1560	40	-0.90	001.99	0
001	Ammoniacal Nitrogen (%)	0456	17.55	0.3000	17.87	0.3793	0.1560	40	-0.85	001.10	0
001	Ammoniacal Nitrogen (%)	0136	17.55	0.1000	17.87	0.3793	0.1560	40	-0.85	001.10	0
001	Ammoniacal Nitrogen (%)	0444	17.71	0.0100	17.87	0.3793	0.1560	40	-0.44	001.10	0
001	Ammoniacal Nitrogen (%)	0220	17.72	0.1000	17.87	0.3793	0.1560	40	-0.40	001.99	0
001	Ammoniacal Nitrogen (%)	0476	17.83	0.2477	17.87	0.3793	0.1560	40	-0.11	001.99	0
001	Ammoniacal Nitrogen (%)	0493	17.85	0.1000	17.87	0.3793	0.1560	40	-0.06	001.99	0
001	Ammoniacal Nitrogen (%)	0527	17.85	0.1000	17.87	0.3793	0.1560	40	-0.06	001.99	0
001	Ammoniacal Nitrogen (%)	0532	17.87	0.1400	17.87	0.3793	0.1560	40	-0.01	001.99	0
001	Ammoniacal Nitrogen (%)	0029	17.89	0.1600	17.87	0.3793	0.1560	40	0.05	001.99	0
001	Ammoniacal Nitrogen (%)	0550	17.89	0.0400	17.87	0.3793	0.1560	40	0.05	001.99	0
001	Ammoniacal Nitrogen (%)	0553	17.90	0.2000	17.87	0.3793	0.1560	40	0.07	001.99	0
001	Ammoniacal Nitrogen (%)	0558	17.90	0.0000	17.87	0.3793	0.1560	40	0.07	001.99	0
001	Ammoniacal Nitrogen (%)	0538	17.92	0.0600	17.87	0.3793	0.1560	40	0.12	001.99	0
001	Ammoniacal Nitrogen (%)	0405	17.93	0.0200	17.87	0.3793	0.1560	40	0.15	001.99	0
001	Ammoniacal Nitrogen (%)	0560	17.98	0.0100	17.87	0.3793	0.1560	40	0.27	001.99	0
001	Ammoniacal Nitrogen (%)	0537	17.98	0.2198	17.87	0.3793	0.1560	40	0.29	001.99	0
001	Ammoniacal Nitrogen (%)	0096	17.99	0.0100	17.87	0.3793	0.1560	40	0.30	001.99	0
001	Ammoniacal Nitrogen (%)	0117	18.00	0.0000	17.87	0.3793	0.1560	40	0.34	001.10	0
001	Ammoniacal Nitrogen (%)	0520	18.02	0.3400	17.87	0.3793	0.1560	40	0.39	001.99	0
001	Ammoniacal Nitrogen (%)	0559	18.03	0.0300	17.87	0.3793	0.1560	40	0.40	001.99	0
001	Ammoniacal Nitrogen (%)	0309	18.04	0.2900	17.87	0.3793	0.1560	40	0.43	001.10	0
001	Ammoniacal Nitrogen (%)	0549	18.04	0.1300	17.87	0.3793	0.1560	40	0.43	001.99	0
001	Ammoniacal Nitrogen (%)	0506	18.05	0.3000	17.87	0.3793	0.1560	40	0.47	001.99	0
001	Ammoniacal Nitrogen (%)	0522	18.08	0.0800	17.87	0.3793	0.1560	40	0.55	001.99	0
001	Ammoniacal Nitrogen (%)	0513	18.10	0.0500	17.87	0.3793	0.1560	40	0.59	001.99	0
001	Ammoniacal Nitrogen (%)	0545	18.15	0.0200	17.87	0.3793	0.1560	40	0.73	001.99	0
001	Ammoniacal Nitrogen (%)	0544	18.30	0.0600	17.87	0.3793	0.1560	40	1.13	001.99	0
001	Ammoniacal Nitrogen (%)	0486	18.34	0.6400	17.87	0.3793	0.1560	40	1.23	001.10	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				
001	Ammoniacal Nitrogen (%)	0027	18.36	0.0300	17.87	0.3793	0.1560	40	1.27	001.99	0
001	Ammoniacal Nitrogen (%)	0481	18.39	0.1400	17.87	0.3793	0.1560	40	1.36	001.10	0
001	Ammoniacal Nitrogen (%)	0255	18.79	0.4200	17.87	0.3793	0.1560	40	2.42	001.99	0
001	Ammoniacal Nitrogen (%)	0524	18.86	0.0526	17.87	0.3793	0.1560	40	2.60	001.99	0
002	Nitrate Nitrogen (%)	0371	17.80	0.2000				1		002.99	0
010	Total Nitrogen (18%)	0524	17.20†	0.1681	17.95	0.2202	0.1094	77	-3.40	010.99	0
010	Total Nitrogen (18%)	0422	17.45	0.1000	17.95	0.2202	0.1094	77	-2.29	010.60	0
010	Total Nitrogen (18%)	0450	17.45	0.1000	17.95	0.2202	0.1094	77	-2.29	010.60	0
010	Total Nitrogen (18%)	0042	17.50	0.2800	17.95	0.2202	0.1094	77	-2.06	010.60	0
010	Total Nitrogen (18%)	0394	17.50	0.1120	17.95	0.2202	0.1094	77	-2.05	010.99	0
010	Total Nitrogen (18%)	0356	17.52	0.2900	17.95	0.2202	0.1094	77	-1.99	010.60	0
010	Total Nitrogen (18%)	0421	17.55	0.0400	17.95	0.2202	0.1094	77	-1.83	010.60	0
010	Total Nitrogen (18%)	0525	17.60	0.2600	17.95	0.2202	0.1094	77	-1.61	010.60	0
010	Total Nitrogen (18%)	0292	17.64	0.0700	17.95	0.2202	0.1094	77	-1.45	010.60	0
010	Total Nitrogen (18%)	0117	17.65	0.1000	17.95	0.2202	0.1094	77	-1.38	010.60	0
010	Total Nitrogen (18%)	0324	17.65	0.1000	17.95	0.2202	0.1094	77	-1.38	010.60	0
010	Total Nitrogen (18%)	0526	17.68	0.0000	17.95	0.2202	0.1094	77	-1.23	010.17	0
010	Total Nitrogen (18%)	0230	17.70	0.2000	17.95	0.2202	0.1094	77	-1.15	010.60	0
010	Total Nitrogen (18%)	0035	17.80	0.2000	17.95	0.2202	0.1094	77	-0.70	010.60	0
010	Total Nitrogen (18%)	0027	17.80	0.4000	17.95	0.2202	0.1094	77	-0.70	010.60	0
010	Total Nitrogen (18%)	0482	17.80	0.0000	17.95	0.2202	0.1094	77	-0.70	010.60	0
010	Total Nitrogen (18%)	0255	17.80	0.4260	17.95	0.2202	0.1094	77	-0.68	010.60	0
010	Total Nitrogen (18%)	0231	17.81	0.0300	17.95	0.2202	0.1094	77	-0.67	010.60	0
010	Total Nitrogen (18%)	0055	17.81	0.0140	17.95	0.2202	0.1094	77	-0.65	010.60	0
010	Total Nitrogen (18%)	0073	17.81	0.0200	17.95	0.2202	0.1094	77	-0.65	010.60	0
010	Total Nitrogen (18%)	0533	17.82	0.1500	17.95	0.2202	0.1094	77	-0.63	010.99	0
010	Total Nitrogen (18%)	0390	17.84	0.0200	17.95	0.2202	0.1094	77	-0.52	010.60	0
010	Total Nitrogen (18%)	0095	17.85	0.2300	17.95	0.2202	0.1094	77	-0.49	010.60	0
010	Total Nitrogen (18%)	0527	17.85	0.0130	17.95	0.2202	0.1094	77	-0.48	010.60	0
010	Total Nitrogen (18%)	0389	17.86	0.0100	17.95	0.2202	0.1094	77	-0.45	010.60	0
010	Total Nitrogen (18%)	0233	17.88	0.0300	17.95	0.2202	0.1094	77	-0.36	010.60	0
010	Total Nitrogen (18%)	0309	17.89	0.1300	17.95	0.2202	0.1094	77	-0.31	010.11	0
010	Total Nitrogen (18%)	0360	17.89	0.0300	17.95	0.2202	0.1094	77	-0.31	010.60	0
010	Total Nitrogen (18%)	0553	17.90	0.2000	17.95	0.2202	0.1094	77	-0.24	010.99	0
010	Total Nitrogen (18%)	0558	17.90	0.0000	17.95	0.2202	0.1094	77	-0.24	010.99	0
010	Total Nitrogen (18%)	0451	17.91	0.3700	17.95	0.2202	0.1094	77	-0.22	010.60	0
010	Total Nitrogen (18%)	0177	17.92	0.1300	17.95	0.2202	0.1094	77	-0.18	010.60	0
010	Total Nitrogen (18%)	0472	17.92	0.0500	17.95	0.2202	0.1094	77	-0.18	010.60	0
010	Total Nitrogen (18%)	0086	17.93	0.1250	17.95	0.2202	0.1094	77	-0.09	010.60	0
010	Total Nitrogen (18%)	0105	17.96	0.1300	17.95	0.2202	0.1094	77	0.01	010.11	0
010	Total Nitrogen (18%)	0481	17.97	0.0500	17.95	0.2202	0.1094	77	0.05	010.60	0
010	Total Nitrogen (18%)	0096	17.98	0.0400	17.95	0.2202	0.1094	77	0.12	010.60	0
010	Total Nitrogen (18%)	0452	17.98	0.0000	17.95	0.2202	0.1094	77	0.12	010.60	0
010	Total Nitrogen (18%)	0043	17.99	0.0300	17.95	0.2202	0.1094	77	0.14	010.60	0
010	Total Nitrogen (18%)	0106	17.99	0.0900	17.95	0.2202	0.1094	77	0.14	010.60	0
010	Total Nitrogen (18%)	0485	17.99	0.0370	17.95	0.2202	0.1094	77	0.16	010.60	0
010	Total Nitrogen (18%)	0494	18.00	0.0100	17.95	0.2202	0.1094	77	0.19	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 (18%)	0040	18.00	0.2000	17.95	0.2202	0.1094	77	0.21	010.60	0
010	Total Nitrogen (18%)	0234	18.00	0.0000	17.95	0.2202	0.1094	77	0.21	010.60	0
010	Total Nitrogen (18%)	0560	18.01	0.0300	17.95	0.2202	0.1094	77	0.23	010.99	0
010	Total Nitrogen (18%)	0034	18.03	0.0100	17.95	0.2202	0.1094	77	0.32	010.60	0
010	Total Nitrogen (18%)	0510	18.03	0.0409	17.95	0.2202	0.1094	77	0.34	010.11	0
010	Total Nitrogen (18%)	0041	18.04	0.0000	17.95	0.2202	0.1094	77	0.39	010.60	0
010	Total Nitrogen (18%)	0486	18.04	0.0400	17.95	0.2202	0.1094	77	0.39	010.60	0
010	Total Nitrogen (18%)	0291	18.05	0.0100	17.95	0.2202	0.1094	77	0.42	010.60	0
010	Total Nitrogen (18%)	0547	18.05	0.0600	17.95	0.2202	0.1094	77	0.44	010.60	0
010	Total Nitrogen (18%)	0506	18.05	0.3000	17.95	0.2202	0.1094	77	0.44	010.99	0
010	Total Nitrogen (18%)	0405	18.05	0.0400	17.95	0.2202	0.1094	77	0.44	010.60	0
010	Total Nitrogen (18%)	0114	18.06	0.3500	17.95	0.2202	0.1094	77	0.46	010.60	0
010	Total Nitrogen (18%)	0456	18.06	0.1200	17.95	0.2202	0.1094	77	0.48	010.11	0
010	Total Nitrogen (18%)	0169	18.08	0.1500	17.95	0.2202	0.1094	77	0.55	010.60	0
010	Total Nitrogen (18%)	0444	18.09	0.2200	17.95	0.2202	0.1094	77	0.62	010.60	0
010	Total Nitrogen (18%)	0136	18.10	0.2000	17.95	0.2202	0.1094	77	0.67	010.60	0
010	Total Nitrogen (18%)	0354	18.10	0.0000	17.95	0.2202	0.1094	77	0.67	010.60	0
010	Total Nitrogen (18%)	0561	18.10	0.0200	17.95	0.2202	0.1094	77	0.67	010.60	0
010	Total Nitrogen (18%)	0029	18.11	0.2600	17.95	0.2202	0.1094	77	0.71	010.60	0
010	Total Nitrogen (18%)	0555	18.11	0.0600	17.95	0.2202	0.1094	77	0.71	010.60	0
010	Total Nitrogen (18%)	0220	18.12	0.0600	17.95	0.2202	0.1094	77	0.76	010.60	0
010	Total Nitrogen (18%)	0402	18.14	0.0160	17.95	0.2202	0.1094	77	0.84	010.60	0
010	Total Nitrogen (18%)	0025	18.14	0.0600	17.95	0.2202	0.1094	77	0.85	010.60	0
010	Total Nitrogen (18%)	0377	18.15	0.0100	17.95	0.2202	0.1094	77	0.87	010.60	0
010	Total Nitrogen (18%)	0416	18.16	0.0000	17.95	0.2202	0.1094	77	0.94	010.11	0
010	Total Nitrogen (18%)	0105	18.17	0.4290	17.95	0.2202	0.1094	77	0.99	010.60	0
010	Total Nitrogen (18%)	0559	18.19	0.0200	17.95	0.2202	0.1094	77	1.07	010.99	0
010	Total Nitrogen (18%)	0131	18.20	0.2110	17.95	0.2202	0.1094	77	1.10	010.60	0
010	Total Nitrogen (18%)	0023	18.25	0.1000	17.95	0.2202	0.1094	77	1.35	010.60	0
010	Total Nitrogen (18%)	0550	18.28	0.0000	17.95	0.2202	0.1094	77	1.48	010.60	0
010	Total Nitrogen (18%)	0520	18.30	0.3100	17.95	0.2202	0.1094	77	1.55	010.99	0
010	Total Nitrogen (18%)	0516	18.30	0.0000	17.95	0.2202	0.1094	77	1.57	010.60	0
010	Total Nitrogen (18%)	0534	18.40	0.0000	17.95	0.2202	0.1094	77	2.03	010.60	0
010	Total Nitrogen (18%)	0423	18.46	0.0800	17.95	0.2202	0.1094	77	2.30	010.60	0
010	Total Nitrogen (18%)	0481	18.69‡	0.2300	17.95	0.2202	0.1094	77	3.32	010.99	0
010	Total Nitrogen (18%)	0325	18.15	0.9000	17.95	0.2202	0.1094	77	0.89	010.60	1
010	Total Nitrogen (18%)	0102	20.05‡	0.3000	17.95	0.2202	0.1094	77	9.52	010.60	2
020	Total Phosphorus as P2O5 (%)	0451	38.82	0.5000	46.10	0.8458	0.5700	56	-8.60	020.50	0
020	Total Phosphorus as P2O5 (%)	0389	41.46	0.1800	46.10	0.8458	0.5700	56	-5.48	020.50	0
020	Total Phosphorus as P2O5 (%)	0390	43.74	1.170	46.10	0.8458	0.5700	56	-2.79	020.50	0
020	Total Phosphorus as P2O5 (%)	0472	43.78	0.0400	46.10	0.8458	0.5700	56	-2.74	020.50	0
020	Total Phosphorus as P2O5 (%)	0525	44.75	0.1500	46.10	0.8458	0.5700	56	-1.60	020.50	0
020	Total Phosphorus as P2O5 (%)	0027	44.76	0.4100	46.10	0.8458	0.5700	56	-1.59	020.20	0
020	Total Phosphorus as P2O5 (%)	0230	44.85	0.3000	46.10	0.8458	0.5700	56	-1.47	020.20	0
020	Total Phosphorus as P2O5 (%)	0552	44.91	3.030	46.10	0.8458	0.5700	56	-1.41	020.50	0
020	Total Phosphorus as P2O5 (%)	0526	45.11	0.1166	46.10	0.8458	0.5700	56	-1.17	020.20	0
020	Total Phosphorus as P2O5 (%)	0476	45.11	0.1885	46.10	0.8458	0.5700	56	-1.16	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 (%)	0136	45.20	2.400	46.10	0.8458	0.5700	56	-1.06	020.10	0
020	Total Phosphorus as P2O5 (%)	0035	45.20	0.7200	46.10	0.8458	0.5700	56	-1.06	020.40	0
020	Total Phosphorus as P2O5 (%)	0550	45.31	0.0600	46.10	0.8458	0.5700	56	-0.93	020.20	0
020	Total Phosphorus as P2O5 (%)	0444	45.55	0.6200	46.10	0.8458	0.5700	56	-0.65	020.50	0
020	Total Phosphorus as P2O5 (%)	0292	45.60	0.0200	46.10	0.8458	0.5700	56	-0.59	020.20	0
020	Total Phosphorus as P2O5 (%)	0433	45.63	0.1900	46.10	0.8458	0.5700	56	-0.56	020.50	0
020	Total Phosphorus as P2O5 (%)	0559	45.74	0.0200	46.10	0.8458	0.5700	56	-0.42	020.99	0
020	Total Phosphorus as P2O5 (%)	0481	45.84	0.2500	46.10	0.8458	0.5700	56	-0.31	020.20	0
020	Total Phosphorus as P2O5 (%)	0527	45.91	0.0697	46.10	0.8458	0.5700	56	-0.22	020.50	0
020	Total Phosphorus as P2O5 (%)	0555	45.92	0.2500	46.10	0.8458	0.5700	56	-0.21	020.50	0
020	Total Phosphorus as P2O5 (%)	0309	45.97	0.1400	46.10	0.8458	0.5700	56	-0.15	020.20	0
020	Total Phosphorus as P2O5 (%)	0402	45.99	3.460	46.10	0.8458	0.5700	56	-0.13	020.50	0
020	Total Phosphorus as P2O5 (%)	0558	46.00	0.2000	46.10	0.8458	0.5700	56	-0.11	020.20	0
020	Total Phosphorus as P2O5 (%)	0560	46.01	0.0500	46.10	0.8458	0.5700	56	-0.11	020.99	0
020	Total Phosphorus as P2O5 (%)	0553	46.10	1.200	46.10	0.8458	0.5700	56	0.00	020.20	0
020	Total Phosphorus as P2O5 (%)	0114	46.14	0.2500	46.10	0.8458	0.5700	56	0.05	020.10	0
020	Total Phosphorus as P2O5 (%)	0506	46.15	0.1000	46.10	0.8458	0.5700	56	0.06	020.20	0
020	Total Phosphorus as P2O5 (%)	0486	46.29	0.5300	46.10	0.8458	0.5700	56	0.22	020.50	0
020	Total Phosphorus as P2O5 (%)	0456	46.35	0.1000	46.10	0.8458	0.5700	56	0.30	020.40	0
020	Total Phosphorus as P2O5 (%)	0169	46.38	0.1100	46.10	0.8458	0.5700	56	0.33	020.20	0
020	Total Phosphorus as P2O5 (%)	0405	46.39	0.0500	46.10	0.8458	0.5700	56	0.34	020.20	0
020	Total Phosphorus as P2O5 (%)	0520	46.43	0.6000	46.10	0.8458	0.5700	56	0.39	020.99	0
020	Total Phosphorus as P2O5 (%)	0394	46.47	0.2980	46.10	0.8458	0.5700	56	0.44	020.20	0
020	Total Phosphorus as P2O5 (%)	0096	46.49	0.0100	46.10	0.8458	0.5700	56	0.46	020.40	0
020	Total Phosphorus as P2O5 (%)	0522	46.49	0.2200	46.10	0.8458	0.5700	56	0.46	020.20	0
020	Total Phosphorus as P2O5 (%)	0234	46.50	1.000	46.10	0.8458	0.5700	56	0.48	020.50	0
020	Total Phosphorus as P2O5 (%)	0493	46.52	0.1200	46.10	0.8458	0.5700	56	0.50	020.20	0
020	Total Phosphorus as P2O5 (%)	0231	46.52	0.0000	46.10	0.8458	0.5700	56	0.50	020.20	0
020	Total Phosphorus as P2O5 (%)	0416	46.55	0.0300	46.10	0.8458	0.5700	56	0.53	020.20	0
020	Total Phosphorus as P2O5 (%)	0561	46.58	0.0300	46.10	0.8458	0.5700	56	0.57	020.20	0
020	Total Phosphorus as P2O5 (%)	0493	46.60	0.1000	46.10	0.8458	0.5700	56	0.60	020.10	0
020	Total Phosphorus as P2O5 (%)	0534	46.70	0.0000	46.10	0.8458	0.5700	56	0.71	020.20	0
020	Total Phosphorus as P2O5 (%)	0547	46.70	0.2000	46.10	0.8458	0.5700	56	0.71	020.50	0
020	Total Phosphorus as P2O5 (%)	0450	46.74	0.5300	46.10	0.8458	0.5700	56	0.75	020.20	0
020	Total Phosphorus as P2O5 (%)	0324	46.75	2.100	46.10	0.8458	0.5700	56	0.77	020.20	0
020	Total Phosphorus as P2O5 (%)	0513	46.77	0.1000	46.10	0.8458	0.5700	56	0.80	020.99	0
020	Total Phosphorus as P2O5 (%)	0510	46.80	0.2025	46.10	0.8458	0.5700	56	0.83	020.20	0
020	Total Phosphorus as P2O5 (%)	0371	46.80	0.2000	46.10	0.8458	0.5700	56	0.83	020.20	0
020	Total Phosphorus as P2O5 (%)	0444	46.82	0.5200	46.10	0.8458	0.5700	56	0.86	020.10	0
020	Total Phosphorus as P2O5 (%)	0356	46.85	0.4800	46.10	0.8458	0.5700	56	0.89	020.20	0
020	Total Phosphorus as P2O5 (%)	0255	46.92	1.832	46.10	0.8458	0.5700	56	0.98	020.50	0
020	Total Phosphorus as P2O5 (%)	0544	47.00	0.0000	46.10	0.8458	0.5700	56	1.07	020.20	0
020	Total Phosphorus as P2O5 (%)	0220	47.03	0.2200	46.10	0.8458	0.5700	56	1.10	020.20	0
020	Total Phosphorus as P2O5 (%)	0516	47.10	2.200	46.10	0.8458	0.5700	56	1.19	020.50	0
020	Total Phosphorus as P2O5 (%)	0482	47.95	3.900	46.10	0.8458	0.5700	56	2.19	020.50	0
020	Total Phosphorus as P2O5 (%)	0515	56.08	0.1553	46.10	0.8458	0.5700	56	11.81	020.99	0
020	Total Phosphorus as P2O5 (%)	0422	47.96	5.600	46.10	0.8458	0.5700	56	2.20	020.50	1

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
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020	Total Phosphorus as P2O5 (%)	0524	55.22	9.301	46.10	0.8458	0.5700	56	10.79	020.50	1
030	Citrate Insoluble Phosphorus as P2O5 (%)	0220	0.0350	0.0100	0.0350	0.0000	0.0100	3	0.00	030.20	0
030	Citrate Insoluble Phosphorus as P2O5 (%)	0405	0.0350	0.0100	0.0350	0.0000	0.0100	3	0.00	030.20	0
030	Citrate Insoluble Phosphorus as P2O5 (%)	0096	0.0350	0.0100	0.0350	0.0000	0.0100	3	0.00	030.40	0
040	Indirect Available Phosphorus as P2O5 (46%)	0405	46.35	0.0400	46.60	0.3471	0.0833	3	-0.72	040.99	0
040	Indirect Available Phosphorus as P2O5 (46%)	0096	46.45	0.0000	46.60	0.3471	0.0833	3	-0.43	040.40	0
040	Indirect Available Phosphorus as P2O5 (46%)	0220	47.00	0.2100	46.60	0.3471	0.0833	3	1.14	040.20	0
041	Direct Available Phosphorus as P2O5 (46%)	0526	44.53†	0.0000	46.05	0.6852	0.3106	51	-2.22	041.21	0
041	Direct Available Phosphorus as P2O5 (46%)	0230	44.60†	0.2000	46.05	0.6852	0.3106	51	-2.12	041.21	0
041	Direct Available Phosphorus as P2O5 (46%)	0136	44.75†	1.500	46.05	0.6852	0.3106	51	-1.90	041.51	0
041	Direct Available Phosphorus as P2O5 (46%)	0423	44.87†	0.8300	46.05	0.6852	0.3106	51	-1.73	041.51	0
041	Direct Available Phosphorus as P2O5 (46%)	0117	45.00†	0.7359	46.05	0.6852	0.3106	51	-1.54	041.51	0
041	Direct Available Phosphorus as P2O5 (46%)	0041	45.05†	0.9000	46.05	0.6852	0.3106	51	-1.46	041.10	0
041	Direct Available Phosphorus as P2O5 (46%)	0377	45.23	0.3100	46.05	0.6852	0.3106	51	-1.21	041.51	0
041	Direct Available Phosphorus as P2O5 (46%)	0027	45.23	0.0400	46.05	0.6852	0.3106	51	-1.20	041.20	0
041	Direct Available Phosphorus as P2O5 (46%)	0472	45.32	0.0000	46.05	0.6852	0.3106	51	-1.07	041.21	0
041	Direct Available Phosphorus as P2O5 (46%)	0544	45.50	0.2000	46.05	0.6852	0.3106	51	-0.81	041.21	0
041	Direct Available Phosphorus as P2O5 (46%)	0421	45.50	0.2000	46.05	0.6852	0.3106	51	-0.81	041.50	0
041	Direct Available Phosphorus as P2O5 (46%)	0095	45.56	0.4700	46.05	0.6852	0.3106	51	-0.73	041.40	0
041	Direct Available Phosphorus as P2O5 (46%)	0025	45.60	0.2000	46.05	0.6852	0.3106	51	-0.66	041.51	0
041	Direct Available Phosphorus as P2O5 (46%)	0533	45.65	0.1500	46.05	0.6852	0.3106	51	-0.60	041.99	0
041	Direct Available Phosphorus as P2O5 (46%)	0043	45.67	0.4900	46.05	0.6852	0.3106	51	-0.57	041.51	0
041	Direct Available Phosphorus as P2O5 (46%)	0532	45.69	0.1700	46.05	0.6852	0.3106	51	-0.54	041.99	0
041	Direct Available Phosphorus as P2O5 (46%)	0102	45.80	0.6000	46.05	0.6852	0.3106	51	-0.37	041.10	0
041	Direct Available Phosphorus as P2O5 (46%)	0040	45.85	0.5000	46.05	0.6852	0.3106	51	-0.30	041.51	0
041	Direct Available Phosphorus as P2O5 (46%)	0538	45.88	0.1600	46.05	0.6852	0.3106	51	-0.25	041.99	0
041	Direct Available Phosphorus as P2O5 (46%)	0537	45.98	0.0431	46.05	0.6852	0.3106	51	-0.11	041.99	0
041	Direct Available Phosphorus as P2O5 (46%)	0549	45.99	0.0200	46.05	0.6852	0.3106	51	-0.09	041.99	0
041	Direct Available Phosphorus as P2O5 (46%)	0354	46.00	0.2000	46.05	0.6852	0.3106	51	-0.08	041.21	0
041	Direct Available Phosphorus as P2O5 (46%)	0106	46.01	0.7300	46.05	0.6852	0.3106	51	-0.07	041.21	0
041	Direct Available Phosphorus as P2O5 (46%)	0560	46.01	0.0500	46.05	0.6852	0.3106	51	-0.07	041.99	0
041	Direct Available Phosphorus as P2O5 (46%)	0131	46.03	0.6580	46.05	0.6852	0.3106	51	-0.03	041.50	0
041	Direct Available Phosphorus as P2O5 (46%)	0360	46.09	0.3000	46.05	0.6852	0.3106	51	0.05	041.51	0
041	Direct Available Phosphorus as P2O5 (46%)	0522	46.14	0.2500	46.05	0.6852	0.3106	51	0.12	041.21	0
041	Direct Available Phosphorus as P2O5 (46%)	0291	46.17	0.0100	46.05	0.6852	0.3106	51	0.16	041.50	0
041	Direct Available Phosphorus as P2O5 (46%)	0545	46.18	0.0500	46.05	0.6852	0.3106	51	0.18	041.99	0
041	Direct Available Phosphorus as P2O5 (46%)	0494	46.22	1.330	46.05	0.6852	0.3106	51	0.24	041.51	0
041	Direct Available Phosphorus as P2O5 (46%)	0231	46.26	0.0400	46.05	0.6852	0.3106	51	0.30	041.21	0
041	Direct Available Phosphorus as P2O5 (46%)	0486	46.29	0.2300	46.05	0.6852	0.3106	51	0.34	041.51	0
041	Direct Available Phosphorus as P2O5 (46%)	0049	46.34	0.1700	46.05	0.6852	0.3106	51	0.41	041.10	0
041	Direct Available Phosphorus as P2O5 (46%)	0452	46.36	0.0500	46.05	0.6852	0.3106	51	0.44	041.50	0
041	Direct Available Phosphorus as P2O5 (46%)	0394	46.36	0.0950	46.05	0.6852	0.3106	51	0.44	041.21	0
041	Direct Available Phosphorus as P2O5 (46%)	0177	46.43	0.0141	46.05	0.6852	0.3106	51	0.55	041.10	0
041	Direct Available Phosphorus as P2O5 (46%)	0023	46.45	0.1000	46.05	0.6852	0.3106	51	0.58	041.51	0
041	Direct Available Phosphorus as P2O5 (46%)	0405	46.55	0.3000	46.05	0.6852	0.3106	51	0.73	041.21	0
041	Direct Available Phosphorus as P2O5 (46%)	0055	46.56	0.2400	46.05	0.6852	0.3106	51	0.74	041.11	0
041	Direct Available Phosphorus as P2O5 (46%)	0073	46.62	0.0100	46.05	0.6852	0.3106	51	0.82	041.11	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 (46%)	0086	46.63	0.1629	46.05	0.6852	0.3106	51	0.84	041.10	0
041	Direct Available Phosphorus as P2O5 (46%)	0177	46.64	0.1741	46.05	0.6852	0.3106	51	0.85	041.21	0
041	Direct Available Phosphorus as P2O5 (46%)	0105	46.68	0.0500	46.05	0.6852	0.3106	51	0.91	041.21	0
041	Direct Available Phosphorus as P2O5 (46%)	0513	46.71	0.1200	46.05	0.6852	0.3106	51	0.96	041.11	0
041	Direct Available Phosphorus as P2O5 (46%)	0494	46.76	0.4900	46.05	0.6852	0.3106	51	1.02	041.10	0
041	Direct Available Phosphorus as P2O5 (46%)	0485	46.76	0.0262	46.05	0.6852	0.3106	51	1.03	041.11	0
041	Direct Available Phosphorus as P2O5 (46%)	0029	46.88	1.240	46.05	0.6852	0.3106	51	1.21	041.40	0
041	Direct Available Phosphorus as P2O5 (46%)	0055	46.91	0.4800	46.05	0.6852	0.3106	51	1.25	041.21	0
041	Direct Available Phosphorus as P2O5 (46%)	0220	46.98	0.0100	46.05	0.6852	0.3106	51	1.35	041.11	0
041	Direct Available Phosphorus as P2O5 (46%)	0007	47.10‡	0.4000	46.05	0.6852	0.3106	51	1.53	041.50	0
041	Direct Available Phosphorus as P2O5 (46%)	0034	48.12‡	0.1410	46.05	0.6852	0.3106	51	3.02	041.40	0
041	Direct Available Phosphorus as P2O5 (46%)	0325	37.35†	1.700	46.05	0.6852	0.3106	51	-12.70	041.50	2
042	Water Soluble OrthoP as P2O5 (%)	0520	41.78	0.2900				1		042.99	0
048	Water Soluble Phosphorus as P2O5 (%)	0389	38.27	0.4300	43.10	1.546	0.2011	19	-3.13	048.50	0
048	Water Soluble Phosphorus as P2O5 (%)	0476	40.94	0.3698	43.10	1.546	0.2011	19	-1.40	048.20	0
048	Water Soluble Phosphorus as P2O5 (%)	0550	41.02	0.1000	43.10	1.546	0.2011	19	-1.35	048.20	0
048	Water Soluble Phosphorus as P2O5 (%)	0558	41.85	0.3000	43.10	1.546	0.2011	19	-0.81	048.20	0
048	Water Soluble Phosphorus as P2O5 (%)	0526	41.90	0.0262	43.10	1.546	0.2011	19	-0.78	048.20	0
048	Water Soluble Phosphorus as P2O5 (%)	0560	42.03	0.0100	43.10	1.546	0.2011	19	-0.70	048.99	0
048	Water Soluble Phosphorus as P2O5 (%)	0559	42.27	0.0300	43.10	1.546	0.2011	19	-0.54	048.99	0
048	Water Soluble Phosphorus as P2O5 (%)	0309	42.45	0.2400	43.10	1.546	0.2011	19	-0.42	048.20	0
048	Water Soluble Phosphorus as P2O5 (%)	0394	43.23	0.2790	43.10	1.546	0.2011	19	0.08	048.20	0
048	Water Soluble Phosphorus as P2O5 (%)	0513	43.74	0.1100	43.10	1.546	0.2011	19	0.41	048.99	0
048	Water Soluble Phosphorus as P2O5 (%)	0444	43.95	0.0100	43.10	1.546	0.2011	19	0.55	048.50	0
048	Water Soluble Phosphorus as P2O5 (%)	0234	44.00	0.0000	43.10	1.546	0.2011	19	0.58	048.50	0
048	Water Soluble Phosphorus as P2O5 (%)	0405	44.25	0.1200	43.10	1.546	0.2011	19	0.74	048.20	0
048	Water Soluble Phosphorus as P2O5 (%)	0561	44.27	0.1600	43.10	1.546	0.2011	19	0.76	048.20	0
048	Water Soluble Phosphorus as P2O5 (%)	0444	44.30	0.0000	43.10	1.546	0.2011	19	0.77	048.10	0
048	Water Soluble Phosphorus as P2O5 (%)	0096	44.44	0.0000	43.10	1.546	0.2011	19	0.87	048.40	0
048	Water Soluble Phosphorus as P2O5 (%)	0220	44.47	0.7800	43.10	1.546	0.2011	19	0.88	048.20	0
048	Water Soluble Phosphorus as P2O5 (%)	0546	44.52	0.7360	43.10	1.546	0.2011	19	0.92	048.50	0
048	Water Soluble Phosphorus as P2O5 (%)	0231	44.54	0.1200	43.10	1.546	0.2011	19	0.93	048.20	0
048	Water Soluble Phosphorus as P2O5 (%)	0506	41.90	2.800	43.10	1.546	0.2011	19	-0.78	048.99	1
050	Soluble Potassium as K2O (%)	0494	0.0700	0.0000	0.1813	0.0489	0.0241	11	-2.28	050.52	0
050	Soluble Potassium as K2O (%)	0325	0.1500	0.1000	0.1813	0.0489	0.0241	11	-0.64	050.99	0
050	Soluble Potassium as K2O (%)	0096	0.1600	0.0000	0.1813	0.0489	0.0241	11	-0.44	050.99	0
050	Soluble Potassium as K2O (%)	0389	0.1600	0.0000	0.1813	0.0489	0.0241	11	-0.44	050.99	0
050	Soluble Potassium as K2O (%)	0482	0.1700	0.0200	0.1813	0.0489	0.0241	11	-0.23	050.99	0
050	Soluble Potassium as K2O (%)	0354	0.1755	0.0050	0.1813	0.0489	0.0241	11	-0.12	050.52	0
050	Soluble Potassium as K2O (%)	0527	0.1755	0.0038	0.1813	0.0489	0.0241	11	-0.12	050.99	0
050	Soluble Potassium as K2O (%)	0524	0.1860	0.0159	0.1813	0.0489	0.0241	11	0.10	050.99	0
050	Soluble Potassium as K2O (%)	0136	0.2000	0.0000	0.1813	0.0489	0.0241	11	0.38	050.30	0
050	Soluble Potassium as K2O (%)	0516	0.6100	0.0800	0.1813	0.0489	0.0241	11	8.77	050.99	0
050	Soluble Potassium as K2O (%)	0552	3.160	0.0400	0.1813	0.0489	0.0241	11	60.96	050.99	0
050	Soluble Potassium as K2O (%)	0402	0.0000	0.0000	0.1813	0.0489	0.0241	11		050.99	4
060	Water (Free) (%)	0513	0.4300	0.0200	0.9082	0.3348	0.0421	5	-1.43	060.00	0
060	Water (Free) (%)	0416	0.7021	0.0147	0.9082	0.3348	0.0421	5	-0.62	060.00	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				
060	Water (Free) (%)	0456	1.020	0.0400	0.9082	0.3348	0.0421	5	0.33	060.00	0
060	Water (Free) (%)	0096	1.175	0.1300	0.9082	0.3348	0.0421	5	0.80	060.00	0
060	Water (Free) (%)	0510	1.214	0.0058	0.9082	0.3348	0.0421	5	0.91	060.99	0
101	Acid Soluble Calcium (%)	0553	0.0500	0.0080	0.2791	0.0505	0.0189	15	-4.54	101.00	0
101	Acid Soluble Calcium (%)	0106	0.1744	0.0013	0.2791	0.0505	0.0189	15	-2.07	101.33	0
101	Acid Soluble Calcium (%)	0493	0.2380	0.0000	0.2791	0.0505	0.0189	15	-0.81	101.33	0
101	Acid Soluble Calcium (%)	0472	0.2550	0.0300	0.2791	0.0505	0.0189	15	-0.48	101.30	0
101	Acid Soluble Calcium (%)	0389	0.2600	0.0000	0.2791	0.0505	0.0189	15	-0.38	101.99	0
101	Acid Soluble Calcium (%)	0423	0.2615	0.0150	0.2791	0.0505	0.0189	15	-0.35	101.32	0
101	Acid Soluble Calcium (%)	0494	0.2655	0.0029	0.2791	0.0505	0.0189	15	-0.27	101.33	0
101	Acid Soluble Calcium (%)	0482	0.2850	0.0300	0.2791	0.0505	0.0189	15	0.12	101.30	0
101	Acid Soluble Calcium (%)	0086	0.2851	0.0137	0.2791	0.0505	0.0189	15	0.12	101.33	0
101	Acid Soluble Calcium (%)	0096	0.2900	0.0000	0.2791	0.0505	0.0189	15	0.21	101.30	0
101	Acid Soluble Calcium (%)	0035	0.3135	0.0970	0.2791	0.0505	0.0189	15	0.68	101.30	0
101	Acid Soluble Calcium (%)	0390	0.3220	0.0100	0.2791	0.0505	0.0189	15	0.85	101.99	0
101	Acid Soluble Calcium (%)	0354	0.3250	0.0100	0.2791	0.0505	0.0189	15	0.91	101.30	0
101	Acid Soluble Calcium (%)	0527	0.3251	0.0159	0.2791	0.0505	0.0189	15	0.91	101.33	0
101	Acid Soluble Calcium (%)	0402	0.6400	0.0500	0.2791	0.0505	0.0189	15	7.14	101.30	0
101	Acid Soluble Calcium (%)	0552	1.350	0.2600	0.2791	0.0505	0.0189	15	21.20	101.99	1
121	Acid Soluble Magnesium (%)	0035	0.0460	0.0020	0.6692	0.1015	0.0358	19	-6.14	121.30	0
121	Acid Soluble Magnesium (%)	0515	0.5281	0.0137	0.6692	0.1015	0.0358	19	-1.39	121.33	0
121	Acid Soluble Magnesium (%)	0515	0.5424	0.0104	0.6692	0.1015	0.0358	19	-1.25	121.99	0
121	Acid Soluble Magnesium (%)	0086	0.6083	0.1261	0.6692	0.1015	0.0358	19	-0.60	121.33	0
121	Acid Soluble Magnesium (%)	0106	0.6288	0.0204	0.6692	0.1015	0.0358	19	-0.40	121.33	0
121	Acid Soluble Magnesium (%)	0389	0.6300	0.0000	0.6692	0.1015	0.0358	19	-0.39	121.99	0
121	Acid Soluble Magnesium (%)	0494	0.6301	0.0117	0.6692	0.1015	0.0358	19	-0.39	121.33	0
121	Acid Soluble Magnesium (%)	0423	0.6370	0.0080	0.6692	0.1015	0.0358	19	-0.32	121.32	0
121	Acid Soluble Magnesium (%)	0354	0.6500	0.0000	0.6692	0.1015	0.0358	19	-0.19	121.30	0
121	Acid Soluble Magnesium (%)	0096	0.6550	0.0100	0.6692	0.1015	0.0358	19	-0.14	121.30	0
121	Acid Soluble Magnesium (%)	0482	0.6750	0.0500	0.6692	0.1015	0.0358	19	0.06	121.30	0
121	Acid Soluble Magnesium (%)	0516	0.6850	0.0100	0.6692	0.1015	0.0358	19	0.16	121.99	0
121	Acid Soluble Magnesium (%)	0527	0.6964	0.0123	0.6692	0.1015	0.0358	19	0.27	121.33	0
121	Acid Soluble Magnesium (%)	0390	0.7090	0.0320	0.6692	0.1015	0.0358	19	0.39	121.30	0
121	Acid Soluble Magnesium (%)	0493	0.7310	0.0000	0.6692	0.1015	0.0358	19	0.61	121.33	0
121	Acid Soluble Magnesium (%)	0472	0.7700	0.0000	0.6692	0.1015	0.0358	19	0.99	121.30	0
121	Acid Soluble Magnesium (%)	0524	0.7788	0.1237	0.6692	0.1015	0.0358	19	1.08	121.99	0
121	Acid Soluble Magnesium (%)	0553	0.8850	0.0900	0.6692	0.1015	0.0358	19	2.13	121.00	0
121	Acid Soluble Magnesium (%)	0552	1.190	0.1600	0.6692	0.1015	0.0358	19	5.13	121.99	0
143	Elemental Sulfur (%)	0472	2.150	0.0200	2.247	0.0950	0.0400	3	-1.02	143.99	0
143	Elemental Sulfur (%)	0390	2.250	0.0800	2.247	0.0950	0.0400	3	0.04	143.99	0
143	Elemental Sulfur (%)	0389	2.340	0.0200	2.247	0.0950	0.0400	3	0.98	143.99	0
148	Total Sulfur (%)	0515	1.859	0.2871	2.206	0.1996	0.1583	8	-1.59	148.07	0
148	Total Sulfur (%)	0402	2.080	0.2800	2.206	0.1996	0.1583	8	-0.58	148.07	0
148	Total Sulfur (%)	0527	2.086	0.0037	2.206	0.1996	0.1583	8	-0.55	148.07	0
148	Total Sulfur (%)	0096	2.210	0.0800	2.206	0.1996	0.1583	8	0.02	148.99	0
148	Total Sulfur (%)	0354	2.215	0.1100	2.206	0.1996	0.1583	8	0.04	148.99	0
148	Total Sulfur (%)	0494	2.346	0.1359	2.206	0.1996	0.1583	8	0.64	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 (%)	0516	2.400	0.2000	2.206	0.1996	0.1583	8	0.89	148.99	0
148	Total Sulfur (%)	0482	2.405	0.1700	2.206	0.1996	0.1583	8	0.91	148.99	0
149	Sulfur - HNO3 soluble (%)	0423	2.610	0.0600				2		149.04	0
149	Sulfur - HNO3 soluble (%)	0524	2.660	0.4298				2		149.04	0
151	Acid Soluble Arsenic (ppm)	0527	1.127	0.0303	1.677	0.5277	0.1416	9	-1.04	151.33	0
151	Acid Soluble Arsenic (ppm)	0096	1.150	0.1000	1.677	0.5277	0.1416	9	-1.00	151.30	0
151	Acid Soluble Arsenic (ppm)	0481	1.405	0.0100	1.677	0.5277	0.1416	9	-0.52	151.99	0
151	Acid Soluble Arsenic (ppm)	0450	1.450	0.1000	1.677	0.5277	0.1416	9	-0.43	151.30	0
151	Acid Soluble Arsenic (ppm)	0136	1.565	0.0900	1.677	0.5277	0.1416	9	-0.21	151.33	0
151	Acid Soluble Arsenic (ppm)	0524	1.693	0.6870	1.677	0.5277	0.1416	9	0.03	151.30	0
151	Acid Soluble Arsenic (ppm)	0405	2.000	0.0000	1.677	0.5277	0.1416	9	0.61	151.99	0
151	Acid Soluble Arsenic (ppm)	0506	2.325	0.1100	1.677	0.5277	0.1416	9	1.23	151.99	0
151	Acid Soluble Arsenic (ppm)	0494	2.377	0.1474	1.677	0.5277	0.1416	9	1.33	151.33	0
151	Acid Soluble Arsenic (ppm)	0255	4.057	1.716	1.677	0.5277	0.1416	9	4.51	151.30	1
151	Acid Soluble Arsenic (ppm)	0515	0.0000	0.0000	1.677	0.5277	0.1416	9		151.33	4
151	Acid Soluble Arsenic (ppm)	0515	0.0000	0.0000	1.677	0.5277	0.1416	9		151.34	4
151	Acid Soluble Arsenic (ppm)	0520	< 0.04		1.677	0.5277	0.1416	9		151.99	5
151	Acid Soluble Arsenic (ppm)	0555	< 0.5		1.677	0.5277	0.1416	9		151.30	5
151	Acid Soluble Arsenic (ppm)	0526	< 50		1.677	0.5277	0.1416	9		151.00	5
165	Acid Soluble Boron (%)	0515	0.0046	0.0006	0.0119	0.0078	0.0020	8	-0.87	165.99	0
165	Acid Soluble Boron (%)	0106	0.0057	0.0019	0.0119	0.0078	0.0020	8	-0.74	165.30	0
165	Acid Soluble Boron (%)	0524	0.0078	0.0007	0.0119	0.0078	0.0020	8	-0.49	165.99	0
165	Acid Soluble Boron (%)	0423	0.0095	0.0010	0.0119	0.0078	0.0020	8	-0.29	165.99	0
165	Acid Soluble Boron (%)	0472	0.0100	0.0000	0.0119	0.0078	0.0020	8	-0.23	165.99	0
165	Acid Soluble Boron (%)	0527	0.0145	0.0017	0.0119	0.0078	0.0020	8	0.30	165.99	0
165	Acid Soluble Boron (%)	0354	0.0200	0.0000	0.0119	0.0078	0.0020	8	0.95	165.30	0
165	Acid Soluble Boron (%)	0516	0.0450	0.0100	0.0119	0.0078	0.0020	8	3.90	165.99	0
165	Acid Soluble Boron (%)	0086	0.1245	0.1978	0.0119	0.0078	0.0020	8	13.28	165.30	1
165	Acid Soluble Boron (%)	0552	0.0000	0.0000	0.0119	0.0078	0.0020	8		165.99	4
181	Acid Soluble Cadmium (ppm)	0035	0.4275	0.0930	35.85	5.633	1.043	22	-6.29	181.30	0
181	Acid Soluble Cadmium (ppm)	0389	3.371	0.0290	35.85	5.633	1.043	22	-5.77	181.30	0
181	Acid Soluble Cadmium (ppm)	0520	24.96	0.5600	35.85	5.633	1.043	22	-1.93	181.99	0
181	Acid Soluble Cadmium (ppm)	0515	31.33	1.316	35.85	5.633	1.043	22	-0.80	181.33	0
181	Acid Soluble Cadmium (ppm)	0444	31.56	0.0400	35.85	5.633	1.043	22	-0.76	181.30	0
181	Acid Soluble Cadmium (ppm)	0526	33.42	0.3903	35.85	5.633	1.043	22	-0.43	181.00	0
181	Acid Soluble Cadmium (ppm)	0515	33.50	1.216	35.85	5.633	1.043	22	-0.42	181.34	0
181	Acid Soluble Cadmium (ppm)	0555	33.80	0.8000	35.85	5.633	1.043	22	-0.36	181.30	0
181	Acid Soluble Cadmium (ppm)	0405	35.65	0.3000	35.85	5.633	1.043	22	-0.04	181.99	0
181	Acid Soluble Cadmium (ppm)	0394	35.85	0.1000	35.85	5.633	1.043	22	0.00	181.30	0
181	Acid Soluble Cadmium (ppm)	0086	36.23	1.903	35.85	5.633	1.043	22	0.07	181.33	0
181	Acid Soluble Cadmium (ppm)	0550	36.50	0.1000	35.85	5.633	1.043	22	0.12	181.00	0
181	Acid Soluble Cadmium (ppm)	0481	36.65	0.1000	35.85	5.633	1.043	22	0.14	181.99	0
181	Acid Soluble Cadmium (ppm)	0136	36.80	0.6000	35.85	5.633	1.043	22	0.17	181.33	0
181	Acid Soluble Cadmium (ppm)	0096	36.95	0.9000	35.85	5.633	1.043	22	0.20	181.30	0
181	Acid Soluble Cadmium (ppm)	0482	37.55	0.3000	35.85	5.633	1.043	22	0.30	181.30	0
181	Acid Soluble Cadmium (ppm)	0494	37.97	1.702	35.85	5.633	1.043	22	0.38	181.33	0
181	Acid Soluble Cadmium (ppm)	0450	39.90	4.000	35.85	5.633	1.043	22	0.72	181.30	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
181	Acid Soluble Cadmium (ppm)	0527	41.49	0.9981	35.85	5.633	1.043	22	1.00	181.33	0
181	Acid Soluble Cadmium (ppm)	0233	42.76	2.520	35.85	5.633	1.043	22	1.23	181.33	0
181	Acid Soluble Cadmium (ppm)	0524	45.11	2.586	35.85	5.633	1.043	22	1.64	181.30	0
181	Acid Soluble Cadmium (ppm)	0506	47.60	2.400	35.85	5.633	1.043	22	2.09	181.99	0
181	Acid Soluble Cadmium (ppm)	0255	18.98	14.89	35.85	5.633	1.043	22	-2.99	181.30	1
191	Acid Soluble Chromium (ppm)	0515	0.0199	0.0007	180.1	61.86	3.155	19	-2.91	191.34	0
191	Acid Soluble Chromium (ppm)	0515	0.0206	0.0079	180.1	61.86	3.155	19	-2.91	191.33	0
191	Acid Soluble Chromium (ppm)	0389	6.620	0.0600	180.1	61.86	3.155	19	-2.80	191.30	0
191	Acid Soluble Chromium (ppm)	0035	14.35	0.3000	180.1	61.86	3.155	19	-2.68	191.30	0
191	Acid Soluble Chromium (ppm)	0520	132.4	4.180	180.1	61.86	3.155	19	-0.77	191.99	0
191	Acid Soluble Chromium (ppm)	0444	183.0	0.0000	180.1	61.86	3.155	19	0.05	191.30	0
191	Acid Soluble Chromium (ppm)	0524	183.9	3.415	180.1	61.86	3.155	19	0.06	191.30	0
191	Acid Soluble Chromium (ppm)	0526	194.5	0.0000	180.1	61.86	3.155	19	0.23	191.00	0
191	Acid Soluble Chromium (ppm)	0450	202.0	12.00	180.1	61.86	3.155	19	0.35	191.30	0
191	Acid Soluble Chromium (ppm)	0482	202.0	2.000	180.1	61.86	3.155	19	0.35	191.30	0
191	Acid Soluble Chromium (ppm)	0394	202.5	3.000	180.1	61.86	3.155	19	0.36	191.30	0
191	Acid Soluble Chromium (ppm)	0086	210.2	6.920	180.1	61.86	3.155	19	0.49	191.33	0
191	Acid Soluble Chromium (ppm)	0550	210.6	3.400	180.1	61.86	3.155	19	0.49	191.00	0
191	Acid Soluble Chromium (ppm)	0096	210.7	2.000	180.1	61.86	3.155	19	0.50	191.30	0
191	Acid Soluble Chromium (ppm)	0494	216.0	6.305	180.1	61.86	3.155	19	0.58	191.33	0
191	Acid Soluble Chromium (ppm)	0527	221.6	5.965	180.1	61.86	3.155	19	0.67	191.33	0
191	Acid Soluble Chromium (ppm)	0405	222.5	9.000	180.1	61.86	3.155	19	0.69	191.99	0
191	Acid Soluble Chromium (ppm)	0481	226.5	0.4000	180.1	61.86	3.155	19	0.75	191.99	0
191	Acid Soluble Chromium (ppm)	0506	253.5	1.000	180.1	61.86	3.155	19	1.19	191.99	0
191	Acid Soluble Chromium (ppm)	0555	< 0.5		180.1	61.86	3.155	19		191.30	5
202	Acid Soluble Cobalt (ppm)	0520	0.2500	0.0200	0.9974	0.7020	0.0549	7	-1.06	202.99	0
202	Acid Soluble Cobalt (ppm)	0527	0.5945	0.0037	0.9974	0.7020	0.0549	7	-0.57	202.33	0
202	Acid Soluble Cobalt (ppm)	0405	0.6500	0.1000	0.9974	0.7020	0.0549	7	-0.49	202.99	0
202	Acid Soluble Cobalt (ppm)	0389	0.8870	0.1440	0.9974	0.7020	0.0549	7	-0.16	202.30	0
202	Acid Soluble Cobalt (ppm)	0086	0.9233	0.0827	0.9974	0.7020	0.0549	7	-0.11	202.33	0
202	Acid Soluble Cobalt (ppm)	0524	1.727	0.0338	0.9974	0.7020	0.0549	7	1.04	202.30	0
202	Acid Soluble Cobalt (ppm)	0550	1.950	0.0000	0.9974	0.7020	0.0549	7	1.36	202.33	0
202	Acid Soluble Cobalt (ppm)	0255	3.009	3.253	0.9974	0.7020	0.0549	7	2.86	202.99	1
202	Acid Soluble Cobalt (ppm)	0515	0.0000	0.0000	0.9974	0.7020	0.0549	7		202.33	4
202	Acid Soluble Cobalt (ppm)	0515	0.0000	0.0000	0.9974	0.7020	0.0549	7		202.34	4
202	Acid Soluble Cobalt (ppm)	0555	< 0.5		0.9974	0.7020	0.0549	7		202.30	5
202	Acid Soluble Cobalt (ppm)	0136	< 5		0.9974	0.7020	0.0549	7		202.33	5
202	Acid Soluble Cobalt (ppm)	0481	< 10		0.9974	0.7020	0.0549	7		202.99	5
221	Acid Soluble Copper (%)	0444	0.0001	0.0000	0.0038	0.0068	0.0344	9	-0.54	221.30	0
221	Acid Soluble Copper (%)	0515	0.0001	0.0000	0.0038	0.0068	0.0344	9	-0.54	221.33	0
221	Acid Soluble Copper (%)	0389	0.0001	0.0000	0.0038	0.0068	0.0344	9	-0.54	221.99	0
221	Acid Soluble Copper (%)	0550	0.0002	0.0001	0.0038	0.0068	0.0344	9	-0.53	221.00	0
221	Acid Soluble Copper (%)	0526	0.0002	0.0000	0.0038	0.0068	0.0344	9	-0.52	221.03	0
221	Acid Soluble Copper (%)	0515	0.0003	0.0002	0.0038	0.0068	0.0344	9	-0.51	221.99	0
221	Acid Soluble Copper (%)	0516	0.0050	0.0080	0.0038	0.0068	0.0344	9	0.18	221.99	0
221	Acid Soluble Copper (%)	0506	0.0265	0.0010	0.0038	0.0068	0.0344	9	3.35	221.99	0
221	Acid Soluble Copper (%)	0450	0.4500	0.3000	0.0038	0.0068	0.0344	9	65.67	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 (%)	0552	0.4800	0.6600	0.0038	0.0068	0.0344	9	70.08	221.30	1
221	Acid Soluble Copper (%)	0095	0.0000	0.0000	0.0038	0.0068	0.0344	9		221.30	4
221	Acid Soluble Copper (%)	0255	0.0000	0.0000	0.0038	0.0068	0.0344	9		221.30	4
221	Acid Soluble Copper (%)	0402	0.0000	0.0000	0.0038	0.0068	0.0344	9		221.30	4
221	Acid Soluble Copper (%)	0405	0.0000	0.0000	0.0038	0.0068	0.0344	9		221.99	4
221	Acid Soluble Copper (%)	0524	0.0001	0.0001	0.0038	0.0068	0.0344	9		221.99	4
221	Acid Soluble Copper (%)	0527	< 0.0001		0.0038	0.0068	0.0344	9		221.33	5
221	Acid Soluble Copper (%)	0136	< 0.0005		0.0038	0.0068	0.0344	9		221.33	5
221	Acid Soluble Copper (%)	0481	< 0.001		0.0038	0.0068	0.0344	9		221.99	5
221	Acid Soluble Copper (%)	0027	< 0.005		0.0038	0.0068	0.0344	9		221.99	5
221	Acid Soluble Copper (%)	0354	< 0.01		0.0038	0.0068	0.0344	9		221.30	5
221	Acid Soluble Copper (%)	0555	< 0.5		0.0038	0.0068	0.0344	9		221.33	5
241	Acid Soluble Iron (%)	0389	0.4100	0.0000	0.4488	0.0241	0.0155	18	-1.61	241.99	0
241	Acid Soluble Iron (%)	0423	0.4190	0.0020	0.4488	0.0241	0.0155	18	-1.24	241.32	0
241	Acid Soluble Iron (%)	0390	0.4245	0.0090	0.4488	0.0241	0.0155	18	-1.01	241.30	0
241	Acid Soluble Iron (%)	0515	0.4273	0.0059	0.4488	0.0241	0.0155	18	-0.89	241.33	0
241	Acid Soluble Iron (%)	0515	0.4304	0.0133	0.4488	0.0241	0.0155	18	-0.77	241.99	0
241	Acid Soluble Iron (%)	0096	0.4350	0.0100	0.4488	0.0241	0.0155	18	-0.57	241.30	0
241	Acid Soluble Iron (%)	0086	0.4423	0.0042	0.4488	0.0241	0.0155	18	-0.27	241.33	0
241	Acid Soluble Iron (%)	0106	0.4431	0.0162	0.4488	0.0241	0.0155	18	-0.24	241.33	0
241	Acid Soluble Iron (%)	0494	0.4439	0.0002	0.4488	0.0241	0.0155	18	-0.20	241.33	0
241	Acid Soluble Iron (%)	0493	0.4510	0.0000	0.4488	0.0241	0.0155	18	0.09	241.33	0
241	Acid Soluble Iron (%)	0402	0.4563	0.0375	0.4488	0.0241	0.0155	18	0.31	241.30	0
241	Acid Soluble Iron (%)	0354	0.4600	0.0000	0.4488	0.0241	0.0155	18	0.47	241.30	0
241	Acid Soluble Iron (%)	0527	0.4620	0.0184	0.4488	0.0241	0.0155	18	0.55	241.33	0
241	Acid Soluble Iron (%)	0035	0.4660	0.0200	0.4488	0.0241	0.0155	18	0.71	241.30	0
241	Acid Soluble Iron (%)	0472	0.4700	0.0000	0.4488	0.0241	0.0155	18	0.88	241.30	0
241	Acid Soluble Iron (%)	0482	0.4750	0.0500	0.4488	0.0241	0.0155	18	1.09	241.30	0
241	Acid Soluble Iron (%)	0516	0.4750	0.0100	0.4488	0.0241	0.0155	18	1.09	241.99	0
241	Acid Soluble Iron (%)	0524	0.5543	0.0819	0.4488	0.0241	0.0155	18	4.38	241.99	0
241	Acid Soluble Iron (%)	0552	2.830	3.760	0.4488	0.0241	0.0155	18	98.91	241.30	2
251	Acid Soluble Lead (ppm)	0524	0.0441	0.0305	0.8758	0.9607	0.2474	9	-0.87	251.30	0
251	Acid Soluble Lead (ppm)	0450	0.2500	0.1000	0.8758	0.9607	0.2474	9	-0.65	251.30	0
251	Acid Soluble Lead (ppm)	0527	0.2976	0.0016	0.8758	0.9607	0.2474	9	-0.60	251.33	0
251	Acid Soluble Lead (ppm)	0136	0.3100	0.0800	0.8758	0.9607	0.2474	9	-0.59	251.33	0
251	Acid Soluble Lead (ppm)	0506	0.3420	0.0420	0.8758	0.9607	0.2474	9	-0.56	251.99	0
251	Acid Soluble Lead (ppm)	0405	0.8500	0.1000	0.8758	0.9607	0.2474	9	-0.03	251.99	0
251	Acid Soluble Lead (ppm)	0515	1.452	0.2221	0.8758	0.9607	0.2474	9	0.60	251.33	0
251	Acid Soluble Lead (ppm)	0394	2.020	0.4000	0.8758	0.9607	0.2474	9	1.19	251.30	0
251	Acid Soluble Lead (ppm)	0550	6.315	1.250	0.8758	0.9607	0.2474	9	5.66	251.00	0
251	Acid Soluble Lead (ppm)	0255	2.593	3.546	0.8758	0.9607	0.2474	9	1.79	251.30	1
251	Acid Soluble Lead (ppm)	0515	0.0000	0.0000	0.8758	0.9607	0.2474	9		251.34	4
251	Acid Soluble Lead (ppm)	0526	< 0.013		0.8758	0.9607	0.2474	9		251.00	5
251	Acid Soluble Lead (ppm)	0520	< 0.04		0.8758	0.9607	0.2474	9		251.99	5
251	Acid Soluble Lead (ppm)	0555	< 0.5		0.8758	0.9607	0.2474	9		251.30	5
251	Acid Soluble Lead (ppm)	0481	< 0.5		0.8758	0.9607	0.2474	9		251.99	5
261	Acid Soluble Manganese (%)	0515	0.0009	0.0001	0.0105	0.0013	0.0018	14	-7.57	261.99	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				
261	Acid Soluble Manganese (%)	0106	0.0089	0.0005	0.0105	0.0013	0.0018	14	-1.31	261.35	0
261	Acid Soluble Manganese (%)	0553	0.0095	0.0010	0.0105	0.0013	0.0018	14	-0.80	261.00	0
261	Acid Soluble Manganese (%)	0389	0.0097	0.0001	0.0105	0.0013	0.0018	14	-0.68	261.99	0
261	Acid Soluble Manganese (%)	0472	0.0100	0.0000	0.0105	0.0013	0.0018	14	-0.40	261.30	0
261	Acid Soluble Manganese (%)	0494	0.0104	0.0001	0.0105	0.0013	0.0018	14	-0.13	261.35	0
261	Acid Soluble Manganese (%)	0423	0.0105	0.0010	0.0105	0.0013	0.0018	14	-0.01	261.34	0
261	Acid Soluble Manganese (%)	0096	0.0106	0.0003	0.0105	0.0013	0.0018	14	0.03	261.30	0
261	Acid Soluble Manganese (%)	0524	0.0109	0.0004	0.0105	0.0013	0.0018	14	0.30	261.99	0
261	Acid Soluble Manganese (%)	0086	0.0111	0.0007	0.0105	0.0013	0.0018	14	0.42	261.33	0
261	Acid Soluble Manganese (%)	0527	0.0114	0.0001	0.0105	0.0013	0.0018	14	0.65	261.35	0
261	Acid Soluble Manganese (%)	0035	0.0115	0.0006	0.0105	0.0013	0.0018	14	0.77	261.30	0
261	Acid Soluble Manganese (%)	0390	0.0120	0.0000	0.0105	0.0013	0.0018	14	1.16	261.30	0
261	Acid Soluble Manganese (%)	0516	0.0300	0.0200	0.0105	0.0013	0.0018	14	15.26	261.99	0
261	Acid Soluble Manganese (%)	0552	0.6100	0.7600	0.0105	0.0013	0.0018	14	469.57	261.32	2
261	Acid Soluble Manganese (%)	0402	0.0000	0.0000	0.0105	0.0013	0.0018	14		261.32	4
261	Acid Soluble Manganese (%)	0515	0.0000	0.0000	0.0105	0.0013	0.0018	14		261.35	4
261	Acid Soluble Manganese (%)	0354	< 0.01		0.0105	0.0013	0.0018	14		261.30	5
281	Acid Soluble Mercury (ppm)	0035	0.0142	0.0039				1		281.99	0
281	Acid Soluble Mercury (ppm)	0450	0.0000	0.0000				1		281.30	4
281	Acid Soluble Mercury (ppm)	0515	0.0000	0.0000				1		281.30	4
281	Acid Soluble Mercury (ppm)	0527	< 0.0001					1		281.30	5
281	Acid Soluble Mercury (ppm)	0550	< 0.001					1		281.00	5
281	Acid Soluble Mercury (ppm)	0520	< 0.007					1		281.99	5
281	Acid Soluble Mercury (ppm)	0405	< 0.01					1		281.99	5
281	Acid Soluble Mercury (ppm)	0481	< 0.5					1		281.99	5
281	Acid Soluble Mercury (ppm)	0526	< 60					1		281.00	5
289	Acid Soluble Molybdenum (ppm)	0106	0.0005	0.0001	3.119	2.476	0.2346	13	-1.26	289.33	0
289	Acid Soluble Molybdenum (ppm)	0515	0.2396	0.1069	3.119	2.476	0.2346	13	-1.16	289.33	0
289	Acid Soluble Molybdenum (ppm)	0515	0.3472	0.5843	3.119	2.476	0.2346	13	-1.12	289.34	0
289	Acid Soluble Molybdenum (ppm)	0255	1.639	1.436	3.119	2.476	0.2346	13	-0.60	289.30	0
289	Acid Soluble Molybdenum (ppm)	0550	2.025	0.1900	3.119	2.476	0.2346	13	-0.44	289.00	0
289	Acid Soluble Molybdenum (ppm)	0096	2.300	0.0000	3.119	2.476	0.2346	13	-0.33	289.30	0
289	Acid Soluble Molybdenum (ppm)	0450	3.750	0.1000	3.119	2.476	0.2346	13	0.25	289.30	0
289	Acid Soluble Molybdenum (ppm)	0494	4.294	0.2083	3.119	2.476	0.2346	13	0.47	289.33	0
289	Acid Soluble Molybdenum (ppm)	0405	4.350	0.0400	3.119	2.476	0.2346	13	0.50	289.99	0
289	Acid Soluble Molybdenum (ppm)	0524	4.469	0.1474	3.119	2.476	0.2346	13	0.55	289.30	0
289	Acid Soluble Molybdenum (ppm)	0527	4.774	0.1268	3.119	2.476	0.2346	13	0.67	289.33	0
289	Acid Soluble Molybdenum (ppm)	0423	5.525	0.1100	3.119	2.476	0.2346	13	0.97	289.33	0
289	Acid Soluble Molybdenum (ppm)	0516	20.00	0.0000	3.119	2.476	0.2346	13	6.82	289.30	0
289	Acid Soluble Molybdenum (ppm)	0035	4.180	4.240	3.119	2.476	0.2346	13	0.43	289.30	1
289	Acid Soluble Molybdenum (ppm)	0526	< 0.021		3.119	2.476	0.2346	13		289.00	5
289	Acid Soluble Molybdenum (ppm)	0520	< 0.04		3.119	2.476	0.2346	13		289.99	5
289	Acid Soluble Molybdenum (ppm)	0555	< 0.5		3.119	2.476	0.2346	13		289.30	5
289	Acid Soluble Molybdenum (ppm)	0481	< 50		3.119	2.476	0.2346	13		289.99	5
291	Acid Soluble Nickel (ppm)	0035	3.290	1.560	8.224	2.955	0.4383	18	-1.67	291.30	0
291	Acid Soluble Nickel (ppm)	0389	4.671	0.2520	8.224	2.955	0.4383	18	-1.20	291.30	0
291	Acid Soluble Nickel (ppm)	0515	4.767	0.0190	8.224	2.955	0.4383	18	-1.17	291.33	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				
291	Acid Soluble Nickel (ppm)	0526	5.890	0.3947	8.224	2.955	0.4383	18	-0.79	291.00	0
291	Acid Soluble Nickel (ppm)	0481	6.420	0.4000	8.224	2.955	0.4383	18	-0.61	291.99	0
291	Acid Soluble Nickel (ppm)	0096	6.450	0.1000	8.224	2.955	0.4383	18	-0.60	291.30	0
291	Acid Soluble Nickel (ppm)	0515	6.605	0.1340	8.224	2.955	0.4383	18	-0.55	291.34	0
291	Acid Soluble Nickel (ppm)	0520	7.800	0.2400	8.224	2.955	0.4383	18	-0.14	291.99	0
291	Acid Soluble Nickel (ppm)	0444	7.890	0.1800	8.224	2.955	0.4383	18	-0.11	291.30	0
291	Acid Soluble Nickel (ppm)	0482	8.800	0.2000	8.224	2.955	0.4383	18	0.19	291.30	0
291	Acid Soluble Nickel (ppm)	0524	9.393	0.4682	8.224	2.955	0.4383	18	0.40	291.30	0
291	Acid Soluble Nickel (ppm)	0450	9.500	1.000	8.224	2.955	0.4383	18	0.43	291.30	0
291	Acid Soluble Nickel (ppm)	0494	9.714	0.1931	8.224	2.955	0.4383	18	0.50	291.33	0
291	Acid Soluble Nickel (ppm)	0527	10.24	0.2980	8.224	2.955	0.4383	18	0.68	291.33	0
291	Acid Soluble Nickel (ppm)	0405	10.60	0.2000	8.224	2.955	0.4383	18	0.80	291.99	0
291	Acid Soluble Nickel (ppm)	0506	10.70	0.0000	8.224	2.955	0.4383	18	0.84	291.99	0
291	Acid Soluble Nickel (ppm)	0394	12.15	0.5000	8.224	2.955	0.4383	18	1.33	291.30	0
291	Acid Soluble Nickel (ppm)	0550	17.95	1.750	8.224	2.955	0.4383	18	3.29	291.00	0
291	Acid Soluble Nickel (ppm)	0255	35.44	9.777	8.224	2.955	0.4383	18	9.21	291.99	1
291	Acid Soluble Nickel (ppm)	0555	< 0.5		8.224	2.955	0.4383	18		291.30	5
301	Acid Soluble Selenium (ppm)	0524	1.975	1.390	3.797	2.231	1.109	3	-0.66	301.30	0
301	Acid Soluble Selenium (ppm)	0527	3.131	0.2395	3.797	2.231	1.109	3	-0.24	301.33	0
301	Acid Soluble Selenium (ppm)	0255	6.285	1.696	3.797	2.231	1.109	3	0.90	301.99	0
301	Acid Soluble Selenium (ppm)	0515	0.0000	0.0000	3.797	2.231	1.109	3		301.33	4
301	Acid Soluble Selenium (ppm)	0515	0.0000	0.0000	3.797	2.231	1.109	3		301.34	4
301	Acid Soluble Selenium (ppm)	0520	< 0.04		3.797	2.231	1.109	3		301.99	5
301	Acid Soluble Selenium (ppm)	0550	< 0.08		3.797	2.231	1.109	3		301.00	5
301	Acid Soluble Selenium (ppm)	0526	< 0.23		3.797	2.231	1.109	3		301.00	5
301	Acid Soluble Selenium (ppm)	0555	< 0.5		3.797	2.231	1.109	3		301.30	5
301	Acid Soluble Selenium (ppm)	0481	< 0.5		3.797	2.231	1.109	3		301.99	5
301	Acid Soluble Selenium (ppm)	0405	< 1		3.797	2.231	1.109	3		301.99	5
311	Sodium (%)	0035	0.0465	0.0050	0.1609	0.0222	0.0087	7	-4.65	311.33	0
311	Sodium (%)	0423	0.1505	0.0050	0.1609	0.0222	0.0087	7	-0.42	311.33	0
311	Sodium (%)	0527	0.1578	0.0004	0.1609	0.0222	0.0087	7	-0.12	311.33	0
311	Sodium (%)	0482	0.1600	0.0200	0.1609	0.0222	0.0087	7	-0.04	311.99	0
311	Sodium (%)	0086	0.1660	0.0302	0.1609	0.0222	0.0087	7	0.21	311.33	0
311	Sodium (%)	0096	0.1700	0.0000	0.1609	0.0222	0.0087	7	0.37	311.99	0
311	Sodium (%)	0354	0.2300	0.0000	0.1609	0.0222	0.0087	7	2.81	311.99	0
321	Acid Soluble Zinc (%)	0550	0.0285	0.0047	0.0448	0.0053	0.0018	30	-3.07	321.00	0
321	Acid Soluble Zinc (%)	0520	0.0287	0.0000	0.0448	0.0053	0.0018	30	-3.02	321.99	0
321	Acid Soluble Zinc (%)	0444	0.0368	0.0008	0.0448	0.0053	0.0018	30	-1.50	321.30	0
321	Acid Soluble Zinc (%)	0558	0.0380	0.0000	0.0448	0.0053	0.0018	30	-1.27	321.99	0
321	Acid Soluble Zinc (%)	0389	0.0390	0.0000	0.0448	0.0053	0.0018	30	-1.09	321.99	0
321	Acid Soluble Zinc (%)	0106	0.0399	0.0041	0.0448	0.0053	0.0018	30	-0.93	321.33	0
321	Acid Soluble Zinc (%)	0472	0.0400	0.0000	0.0448	0.0053	0.0018	30	-0.90	321.30	0
321	Acid Soluble Zinc (%)	0481	0.0400	0.0000	0.0448	0.0053	0.0018	30	-0.90	321.99	0
321	Acid Soluble Zinc (%)	0515	0.0410	0.0029	0.0448	0.0053	0.0018	30	-0.72	321.33	0
321	Acid Soluble Zinc (%)	0255	0.0430	0.0040	0.0448	0.0053	0.0018	30	-0.33	321.30	0
321	Acid Soluble Zinc (%)	0494	0.0439	0.0001	0.0448	0.0053	0.0018	30	-0.17	321.33	0
321	Acid Soluble Zinc (%)	0402	0.0449	0.0052	0.0448	0.0053	0.0018	30	0.02	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 (%)	0354	0.0450	0.0100	0.0448	0.0053	0.0018	30	0.04	321.30	0
321	Acid Soluble Zinc (%)	0482	0.0450	0.0100	0.0448	0.0053	0.0018	30	0.04	321.30	0
321	Acid Soluble Zinc (%)	0086	0.0454	0.0020	0.0448	0.0053	0.0018	30	0.12	321.33	0
321	Acid Soluble Zinc (%)	0390	0.0455	0.0010	0.0448	0.0053	0.0018	30	0.14	321.30	0
321	Acid Soluble Zinc (%)	0136	0.0455	0.0010	0.0448	0.0053	0.0018	30	0.14	321.33	0
321	Acid Soluble Zinc (%)	0515	0.0456	0.0014	0.0448	0.0053	0.0018	30	0.16	321.99	0
321	Acid Soluble Zinc (%)	0231	0.0465	0.0010	0.0448	0.0053	0.0018	30	0.33	321.30	0
321	Acid Soluble Zinc (%)	0035	0.0474	0.0004	0.0448	0.0053	0.0018	30	0.49	321.30	0
321	Acid Soluble Zinc (%)	0096	0.0477	0.0001	0.0448	0.0053	0.0018	30	0.54	321.30	0
321	Acid Soluble Zinc (%)	0524	0.0477	0.0014	0.0448	0.0053	0.0018	30	0.55	321.99	0
321	Acid Soluble Zinc (%)	0405	0.0485	0.0015	0.0448	0.0053	0.0018	30	0.69	321.99	0
321	Acid Soluble Zinc (%)	0526	0.0497	0.0013	0.0448	0.0053	0.0018	30	0.92	321.03	0
321	Acid Soluble Zinc (%)	0095	0.0500	0.0000	0.0448	0.0053	0.0018	30	0.98	321.30	0
321	Acid Soluble Zinc (%)	0234	0.0500	0.0000	0.0448	0.0053	0.0018	30	0.98	321.30	0
321	Acid Soluble Zinc (%)	0043	0.0500	0.0000	0.0448	0.0053	0.0018	30	0.98	321.33	0
321	Acid Soluble Zinc (%)	0516	0.0500	0.0000	0.0448	0.0053	0.0018	30	0.98	321.99	0
321	Acid Soluble Zinc (%)	0527	0.0511	0.0014	0.0448	0.0053	0.0018	30	1.19	321.33	0
321	Acid Soluble Zinc (%)	0423	0.0565	0.0010	0.0448	0.0053	0.0018	30	2.21	321.32	0
321	Acid Soluble Zinc (%)	0552	3.035	3.710	0.0448	0.0053	0.0018	30	562.32	321.30	2
325	Water Soluble Zinc (%)	0027	0.0160	0.0020				2		325.00	0
325	Water Soluble Zinc (%)	0555	0.0475	0.0010				2		325.30	0

Interpreting Z Scores: Red indicates a normally distributed Z value >3 or <-3 (requires action), Orange = Z between 2 and 3 or -2 and -3 (warning) and Green = Z < 2 and >-2 (OK at 95%). Flags indicate data usage: 0 = Used, 1 = rejected for duplicates too far apart, 2 = rejected as extreme outlier, 3 = removed from stats, 4 = rejected due to 0s submitted and 5 = LOD. A 9 flag indicates a data problem - scores not calculated. Robust statistics not used if < 6 labs used in calculations, in this case the Z Scores are grey and included for information only. Your offset values are higher (‡) or lower (†) than the Robust Analyte value ± Investigational Allowance. Analyte codes in light green indicate a guaranteed analyte. Individual lab values may be below detection limits but are reported solely for the purpose of this Proficiency Testing program.