

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Analyte Proficiency From All Labs

Sample # 160211

Grade 24-25-4

Statistical Summary

Analytes: 36

Labs Reporting: 83

Issue Date : 03/31/2016

Analyte Code	Analyte	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Analyte Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	IA %RSD	Average Range (R-bar)	Horwitz %RSD
001	Ammoniacal Nitrogen (%)	25	24	5.511	0.6613	5.510		0.5445	0.1111	9.88%		0.0991	3.09%
002	Nitrate Nitrogen (%)	2	2	0.7780	1.092								
003	Water Insoluble Nitrogen (%)	8	8	0.6335	0.0602	0.6335		0.0682	0.0241	10.77%		0.0699	4.28%
005	Urea Nitrogen (%)	8	8	11.15	2.391	10.70		1.515	0.5357	14.16%		0.1014	2.80%
007	Urea (%)	1		10.35									
009	Ammoniacal Plus Nitrate Nitrogen (%)	2	2	6.723	1.255								
010	Total Nitrogen (24%)	78	77	24.53	0.5619	24.56	0.7884	0.4061	0.0463	1.65%	1.61%	0.1571	2.47%
020	Total Phosphorus as P2O5 (%)	44	43	25.01	0.6897	25.03		0.5975	0.0911	2.39%		0.2225	2.46%
030	Citrate Insoluble Phosphorus as P2O5 (%)	2	2	0.0625	0.0389								
040	Indirect Available Phosphorus as P2O5 (25%)	3	3	25.06	0.1358	25.06	0.7300	0.1358	0.0784	0.54%	1.46%	0.0253	2.46%
041	Direct Available Phosphorus as P2O5 (25%)	43	42	24.76	0.6708	24.81	0.7300	0.5604	0.0865	2.26%	1.47%	0.2454	2.47%
042	Water Soluble Orthophosphate as P2O5 (%)	1		23.38									
048	Water Soluble Phosphorus as P2O5 (%)	6	6	22.77	0.7076	22.65		0.5218	0.2130	2.30%		0.2226	2.50%
050	Soluble Potassium as K2O (4%)	82	80	4.135	0.3632	4.131	0.4126	0.2610	0.0292	6.32%	4.99%	0.0828	3.23%
060	Water (Free) (%)	8	7	1.944	1.229	1.728		0.8398	0.3174	48.59%		0.0229	3.68%
101	Acid Soluble Calcium (%)	17	17	0.3716	0.0657	0.3586		0.0229	0.0056	6.39%		0.0145	4.67%
121	Acid Soluble Magnesium (%)	18	17	0.3739	0.0313	0.3719		0.0303	0.0073	8.15%		0.0096	4.64%
143	Elemental Sulfur (%)	1		0.8800									
145	Sulfate Sulfur, HCl soluble (%)	1		0.7700									
148	Total Sulfur (%)	14	13	0.8624	0.0790	0.8671		0.0782	0.0217	9.02%		0.0163	4.09%
151	Acid Soluble Arsenic (ppm)	17	17	6.238	1.396	6.316		1.378	0.3342	21.82%		0.3809	12.12%
165	Acid Soluble Boron (%)	5	5	0.0175	0.0112	0.0175		0.0112	0.0050	63.90%		0.0035	7.35%
181	Acid Soluble Cadmium (ppm)	21	20	1.880	0.4052	1.871		0.3623	0.0810	19.37%		0.0675	14.56%
190	Water Soluble Chlorine (%)	1		2.970									
191	Acid Soluble Chromium (ppm)	22	21	40.58	6.420	41.40		4.623	1.009	11.17%		1.156	9.13%
202	Acid Soluble Cobalt (ppm)	14	13	1.628	0.3643	1.655		0.3453	0.0958	20.86%		0.0621	14.83%
221	Acid Soluble Copper (%)	14	12	2.454	6.391	0.0583		0.1135	0.0328	194.67%		0.0680	6.13%
241	Acid Soluble Iron (%)	17	16	0.5593	0.0552	0.5502		0.0264	0.0066	4.81%		0.0123	4.38%
251	Acid Soluble Lead (ppm)	16	13	1.804	1.210	1.694		1.109	0.3075	65.46%		0.3420	14.78%
261	Acid Soluble Manganese (%)	16	15	0.0203	0.0074	0.0186		0.0019	0.0005	10.08%		0.0009	7.29%
281	Acid Soluble Mercury (ppm)	5	4	38.54	76.97	38.54		76.97	38.49	199.73%		0.0030	9.23%

Analyte Code	Analyte	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Analyte Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	IA %RSD	Average Range (R-bar)	Horwitz %RSD
289	Acid Soluble Molybdenum (ppm)	18	17	5.808	1.254	5.908		1.105	0.2679	18.70%		0.5348	12.24%
291	Acid Soluble Nickel (ppm)	21	20	8.131	1.730	8.128		1.329	0.2972	16.35%		0.3039	11.67%
301	Acid Soluble Selenium (ppm)	6	4	1.426	1.667	1.426		1.667	0.8334	116.87%		0.1625	15.16%
311	Sodium (%)	10	9	0.1165	0.0077	0.1165		0.0087	0.0029	7.47%		0.0035	5.53%
321	Acid Soluble Zinc (%)	28	27	3.031	11.88	0.0075		0.0033	0.0006	43.96%		0.0256	8.35%

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Analytes: 36

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Lab Values

Labs Reporting: 83

Grade 24-25-4

Issue Date : 03/31/2016

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 (%)	0511	3.680	0.0000	5.510	0.5445	0.0991	24	-3.36	001.99	0
001	Ammoniacal Nitrogen (%)	0486	4.805	0.0300	5.510	0.5445	0.0991	24	-1.29	001.10	0
001	Ammoniacal Nitrogen (%)	0501	4.910	0.0200	5.510	0.5445	0.0991	24	-1.10	001.99	0
001	Ammoniacal Nitrogen (%)	0487	5.000	0.0000	5.510	0.5445	0.0991	24	-0.94	001.99	0
001	Ammoniacal Nitrogen (%)	0394	5.111	0.0100	5.510	0.5445	0.0991	24	-0.73	001.99	0
001	Ammoniacal Nitrogen (%)	0456	5.150	0.1000	5.510	0.5445	0.0991	24	-0.66	001.10	0
001	Ammoniacal Nitrogen (%)	0368	5.215	0.3100	5.510	0.5445	0.0991	24	-0.54	001.99	0
001	Ammoniacal Nitrogen (%)	0177	5.289	0.0007	5.510	0.5445	0.0991	24	-0.41	001.10	0
001	Ammoniacal Nitrogen (%)	0309	5.295	0.4900	5.510	0.5445	0.0991	24	-0.39	001.10	0
001	Ammoniacal Nitrogen (%)	0513	5.375	0.0300	5.510	0.5445	0.0991	24	-0.25	001.99	0
001	Ammoniacal Nitrogen (%)	0444	5.400	0.2800	5.510	0.5445	0.0991	24	-0.20	001.10	0
001	Ammoniacal Nitrogen (%)	0027	5.415	0.1500	5.510	0.5445	0.0991	24	-0.17	001.99	0
001	Ammoniacal Nitrogen (%)	0500	5.450	0.0200	5.510	0.5445	0.0991	24	-0.11	001.10	0
001	Ammoniacal Nitrogen (%)	0510	5.470	0.1000	5.510	0.5445	0.0991	24	-0.07	001.99	0
001	Ammoniacal Nitrogen (%)	0420	5.535	0.1100	5.510	0.5445	0.0991	24	0.05	001.99	0
001	Ammoniacal Nitrogen (%)	0096	5.660	0.1000	5.510	0.5445	0.0991	24	0.28	001.99	0
001	Ammoniacal Nitrogen (%)	0506	5.750	0.1400	5.510	0.5445	0.0991	24	0.44	001.99	0
001	Ammoniacal Nitrogen (%)	0200	5.760	0.0000	5.510	0.5445	0.0991	24	0.46	001.99	0
001	Ammoniacal Nitrogen (%)	0519	5.825	0.2300	5.510	0.5445	0.0991	24	0.58	001.10	0
001	Ammoniacal Nitrogen (%)	0397	5.832	0.0910	5.510	0.5445	0.0991	24	0.59	001.99	0
001	Ammoniacal Nitrogen (%)	0481	6.320	0.0600	5.510	0.5445	0.0991	24	1.49	001.10	0
001	Ammoniacal Nitrogen (%)	0405	6.605	0.0300	5.510	0.5445	0.0991	24	2.01	001.10	0
001	Ammoniacal Nitrogen (%)	0220	6.630	0.0000	5.510	0.5445	0.0991	24	2.06	001.99	0
001	Ammoniacal Nitrogen (%)	0415	6.783	0.0775	5.510	0.5445	0.0991	24	2.34	001.99	0
001	Ammoniacal Nitrogen (%)	0230	5.275	0.8100	5.510	0.5445	0.0991	24	-0.43	001.10	1
002	Nitrate Nitrogen (%)	0394	0.0060	0.0000				2		002.99	0
002	Nitrate Nitrogen (%)	0368	1.550	1.040				2		002.99	0
003	Water Insoluble Nitrogen (%)	0519	0.5500	0.2200	0.6335	0.0682	0.0699	8	-1.15	003.99	0
003	Water Insoluble Nitrogen (%)	0494	0.5699	0.0623	0.6335	0.0682	0.0699	8	-0.88	003.10	0
003	Water Insoluble Nitrogen (%)	0397	0.5965	0.0110	0.6335	0.0682	0.0699	8	-0.51	003.99	0
003	Water Insoluble Nitrogen (%)	0486	0.6100	0.1200	0.6335	0.0682	0.0699	8	-0.33	003.99	0
003	Water Insoluble Nitrogen (%)	0117	0.6520	0.0260	0.6335	0.0682	0.0699	8	0.26	003.10	0
003	Water Insoluble Nitrogen (%)	0220	0.6900	0.0400	0.6335	0.0682	0.0699	8	0.78	003.10	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
003	Water Insoluble Nitrogen (%)	0230	0.7000	0.0800	0.6335	0.0682	0.0699	8	0.92	003.10	0
003	Water Insoluble Nitrogen (%)	0511	0.7000	0.0000	0.6335	0.0682	0.0699	8	0.92	003.10	0
005	Urea Nitrogen (%)	0230	8.850	0.1000	10.70	1.515	0.1014	8	-1.15	005.00	0
005	Urea Nitrogen (%)	0356	10.09	0.0600	10.70	1.515	0.1014	8	-0.38	005.99	0
005	Urea Nitrogen (%)	0444	10.11	0.0200	10.70	1.515	0.1014	8	-0.37	005.00	0
005	Urea Nitrogen (%)	0220	10.15	0.1000	10.70	1.515	0.1014	8	-0.35	005.00	0
005	Urea Nitrogen (%)	0394	10.35	0.1000	10.70	1.515	0.1014	8	-0.22	005.99	0
005	Urea Nitrogen (%)	0519	10.76	0.1100	10.70	1.515	0.1014	8	0.03	005.99	0
005	Urea Nitrogen (%)	0368	12.36	0.2614	10.70	1.515	0.1014	8	1.03	005.00	0
005	Urea Nitrogen (%)	0200	16.56	0.0600	10.70	1.515	0.1014	8	3.64	005.99	0
007	Urea (%)	0486	10.35	0.0100				1		007.99	0
009	Ammoniacal Plus Nitrate Nitrogen (%)	0444	5.835	0.1100				2		009.10	0
009	Ammoniacal Plus Nitrate Nitrogen (%)	0519	7.610	0.3200				2		009.99	0
010	Total Nitrogen (24%)	0456	22.10*	0.2000	24.56	0.4061	0.1571	77	-6.05	010.11	0
010	Total Nitrogen (24%)	0200	22.50*	0.0900	24.56	0.4061	0.1571	77	-5.08	010.99	0
010	Total Nitrogen (24%)	0211	23.42*	0.1900	24.56	0.4061	0.1571	77	-2.81	010.11	0
010	Total Nitrogen (24%)	0422	23.65*	0.5000	24.56	0.4061	0.1571	77	-2.23	010.60	0
010	Total Nitrogen (24%)	0090	23.89	0.0600	24.56	0.4061	0.1571	77	-1.64	010.11	0
010	Total Nitrogen (24%)	0309	23.92	0.0700	24.56	0.4061	0.1571	77	-1.58	010.11	0
010	Total Nitrogen (24%)	0519	23.92	0.5200	24.56	0.4061	0.1571	77	-1.57	010.99	0
010	Total Nitrogen (24%)	0486	23.93	0.1100	24.56	0.4061	0.1571	77	-1.56	010.60	0
010	Total Nitrogen (24%)	0220	23.99	0.5600	24.56	0.4061	0.1571	77	-1.40	010.11	0
010	Total Nitrogen (24%)	0377	24.05	0.0700	24.56	0.4061	0.1571	77	-1.26	010.60	0
010	Total Nitrogen (24%)	0420	24.06	0.4500	24.56	0.4061	0.1571	77	-1.24	010.99	0
010	Total Nitrogen (24%)	0114	24.10	0.2500	24.56	0.4061	0.1571	77	-1.14	010.11	0
010	Total Nitrogen (24%)	0415	24.21	0.1606	24.56	0.4061	0.1571	77	-0.86	010.99	0
010	Total Nitrogen (24%)	0023	24.23	1.247	24.56	0.4061	0.1571	77	-0.82	010.60	0
010	Total Nitrogen (24%)	0472	24.23	0.0600	24.56	0.4061	0.1571	77	-0.81	010.60	0
010	Total Nitrogen (24%)	0234	24.26	0.0600	24.56	0.4061	0.1571	77	-0.73	010.60	0
010	Total Nitrogen (24%)	0043	24.28	0.1600	24.56	0.4061	0.1571	77	-0.68	010.60	0
010	Total Nitrogen (24%)	0157	24.30	0.0000	24.56	0.4061	0.1571	77	-0.63	010.60	0
010	Total Nitrogen (24%)	0029	24.31	0.2500	24.56	0.4061	0.1571	77	-0.62	010.60	0
010	Total Nitrogen (24%)	0506	24.35	0.3000	24.56	0.4061	0.1571	77	-0.51	010.99	0
010	Total Nitrogen (24%)	0105	24.37	0.0200	24.56	0.4061	0.1571	77	-0.46	010.11	0
010	Total Nitrogen (24%)	0481	24.40	0.2100	24.56	0.4061	0.1571	77	-0.40	010.12	0
010	Total Nitrogen (24%)	0510	24.40	0.0400	24.56	0.4061	0.1571	77	-0.39	010.11	0
010	Total Nitrogen (24%)	0117	24.40	0.2000	24.56	0.4061	0.1571	77	-0.39	010.12	0
010	Total Nitrogen (24%)	0487	24.40	0.0000	24.56	0.4061	0.1571	77	-0.39	010.99	0
010	Total Nitrogen (24%)	0037	24.42	0.3600	24.56	0.4061	0.1571	77	-0.34	010.60	0
010	Total Nitrogen (24%)	0291	24.44	0.0100	24.56	0.4061	0.1571	77	-0.30	010.60	0
010	Total Nitrogen (24%)	0007	24.45	0.1000	24.56	0.4061	0.1571	77	-0.26	010.60	0
010	Total Nitrogen (24%)	0508	24.47	0.0300	24.56	0.4061	0.1571	77	-0.23	010.99	0
010	Total Nitrogen (24%)	0307	24.47	0.3330	24.56	0.4061	0.1571	77	-0.22	010.60	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
010	Total Nitrogen (24%)	0474	24.47	0.1000	24.56	0.4061	0.1571	77	-0.21	010.11	0
010	Total Nitrogen (24%)	0513	24.48	0.0300	24.56	0.4061	0.1571	77	-0.20	010.99	0
010	Total Nitrogen (24%)	0493	24.50	0.2000	24.56	0.4061	0.1571	77	-0.14	010.99	0
010	Total Nitrogen (24%)	0136	24.51	0.0500	24.56	0.4061	0.1571	77	-0.13	010.60	0
010	Total Nitrogen (24%)	0177	24.53	0.0500	24.56	0.4061	0.1571	77	-0.08	010.60	0
010	Total Nitrogen (24%)	0405	24.53	0.0700	24.56	0.4061	0.1571	77	-0.08	010.60	0
010	Total Nitrogen (24%)	0354	24.54	0.0370	24.56	0.4061	0.1571	77	-0.05	010.60	0
010	Total Nitrogen (24%)	0049	24.55	0.0300	24.56	0.4061	0.1571	77	-0.03	010.60	0
010	Total Nitrogen (24%)	0356	24.57	0.0200	24.56	0.4061	0.1571	77	0.03	010.60	0
010	Total Nitrogen (24%)	0185	24.59	0.1700	24.56	0.4061	0.1571	77	0.07	010.12	0
010	Total Nitrogen (24%)	0292	24.59	0.0200	24.56	0.4061	0.1571	77	0.08	010.60	0
010	Total Nitrogen (24%)	0102	24.60	0.0000	24.56	0.4061	0.1571	77	0.11	010.60	0
010	Total Nitrogen (24%)	0482	24.60	0.2000	24.56	0.4061	0.1571	77	0.11	010.60	0
010	Total Nitrogen (24%)	0516	24.60	0.0000	24.56	0.4061	0.1571	77	0.11	010.60	0
010	Total Nitrogen (24%)	0131	24.62	0.0060	24.56	0.4061	0.1571	77	0.15	010.60	0
010	Total Nitrogen (24%)	0105	24.62	0.1100	24.56	0.4061	0.1571	77	0.16	010.60	0
010	Total Nitrogen (24%)	0042	24.64	0.0700	24.56	0.4061	0.1571	77	0.19	010.60	0
010	Total Nitrogen (24%)	0494	24.65	0.0500	24.56	0.4061	0.1571	77	0.22	010.60	0
010	Total Nitrogen (24%)	0501	24.65	0.1000	24.56	0.4061	0.1571	77	0.23	010.60	0
010	Total Nitrogen (24%)	0451	24.66	0.0900	24.56	0.4061	0.1571	77	0.24	010.60	0
010	Total Nitrogen (24%)	0421	24.66	0.0000	24.56	0.4061	0.1571	77	0.25	010.60	0
010	Total Nitrogen (24%)	0035	24.67	0.0300	24.56	0.4061	0.1571	77	0.27	010.60	0
010	Total Nitrogen (24%)	0360	24.68	0.1800	24.56	0.4061	0.1571	77	0.30	010.60	0
010	Total Nitrogen (24%)	0485	24.69	0.5200	24.56	0.4061	0.1571	77	0.33	010.60	0
010	Total Nitrogen (24%)	0394	24.70	0.0000	24.56	0.4061	0.1571	77	0.35	010.60	0
010	Total Nitrogen (24%)	0086	24.74	0.1710	24.56	0.4061	0.1571	77	0.46	010.60	0
010	Total Nitrogen (24%)	0452	24.79	0.0200	24.56	0.4061	0.1571	77	0.57	010.60	0
010	Total Nitrogen (24%)	0231	24.80	0.0700	24.56	0.4061	0.1571	77	0.59	010.60	0
010	Total Nitrogen (24%)	0481	24.80	0.1400	24.56	0.4061	0.1571	77	0.60	010.60	0
010	Total Nitrogen (24%)	0406	24.81	0.3000	24.56	0.4061	0.1571	77	0.62	010.60	0
010	Total Nitrogen (24%)	0368	24.88	0.2830	24.56	0.4061	0.1571	77	0.79	010.60	0
010	Total Nitrogen (24%)	0511	24.88	0.0000	24.56	0.4061	0.1571	77	0.79	010.60	0
010	Total Nitrogen (24%)	0034	24.95	0.2400	24.56	0.4061	0.1571	77	0.97	010.60	0
010	Total Nitrogen (24%)	0325	24.95	0.5000	24.56	0.4061	0.1571	77	0.97	010.60	0
010	Total Nitrogen (24%)	0444	25.00	0.1800	24.56	0.4061	0.1571	77	1.09	010.60	0
010	Total Nitrogen (24%)	0095	25.02	0.0600	24.56	0.4061	0.1571	77	1.14	010.60	0
010	Total Nitrogen (24%)	0233	25.03	0.0400	24.56	0.4061	0.1571	77	1.16	010.60	0
010	Total Nitrogen (24%)	0300	25.04	0.2600	24.56	0.4061	0.1571	77	1.19	010.16	0
010	Total Nitrogen (24%)	0055	25.05	0.0200	24.56	0.4061	0.1571	77	1.21	010.60	0
010	Total Nitrogen (24%)	0040	25.10	0.0000	24.56	0.4061	0.1571	77	1.34	010.60	0
010	Total Nitrogen (24%)	0324	25.10	0.2000	24.56	0.4061	0.1571	77	1.34	010.60	0
010	Total Nitrogen (24%)	0025	25.17	0.1200	24.56	0.4061	0.1571	77	1.51	010.60	0
010	Total Nitrogen (24%)	0230	25.20	0.4000	24.56	0.4061	0.1571	77	1.58	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 (24%)	0260	25.45	0.1100	24.56	0.4061	0.1571	77	2.19	010.60	0
010	Total Nitrogen (24%)	0073	25.54	0.1100	24.56	0.4061	0.1571	77	2.41	010.60	0
010	Total Nitrogen (24%)	0457	25.67	0.1000	24.56	0.4061	0.1571	77	2.74	010.60	0
010	Total Nitrogen (24%)	0397	25.85	0.0310	24.56	0.4061	0.1571	77	3.18	010.12	0
010	Total Nitrogen (24%)	0483	1,245	2,443	24.56	0.4061	0.1571	77	3006.21	010.60	2
020	Total Phosphorus as P2O5 (%)	0157	23.60	0.2000	25.03	0.5975	0.2225	43	-2.40	020.50	0
020	Total Phosphorus as P2O5 (%)	0444	23.64	0.0600	25.03	0.5975	0.2225	43	-2.33	020.50	0
020	Total Phosphorus as P2O5 (%)	0307	23.75	1.223	25.03	0.5975	0.2225	43	-2.15	020.99	0
020	Total Phosphorus as P2O5 (%)	0368	23.82	0.0264	25.03	0.5975	0.2225	43	-2.03	020.50	0
020	Total Phosphorus as P2O5 (%)	0472	23.83	0.1400	25.03	0.5975	0.2225	43	-2.01	020.50	0
020	Total Phosphorus as P2O5 (%)	0260	24.01	0.0100	25.03	0.5975	0.2225	43	-1.72	020.50	0
020	Total Phosphorus as P2O5 (%)	0309	24.27	0.4900	25.03	0.5975	0.2225	43	-1.29	020.20	0
020	Total Phosphorus as P2O5 (%)	0511	24.43	0.0000	25.03	0.5975	0.2225	43	-1.01	020.50	0
020	Total Phosphorus as P2O5 (%)	0487	24.50	0.0000	25.03	0.5975	0.2225	43	-0.89	020.99	0
020	Total Phosphorus as P2O5 (%)	0421	24.61	0.1100	25.03	0.5975	0.2225	43	-0.72	020.50	0
020	Total Phosphorus as P2O5 (%)	0420	24.79	0.2400	25.03	0.5975	0.2225	43	-0.41	020.20	0
020	Total Phosphorus as P2O5 (%)	0231	24.83	0.1400	25.03	0.5975	0.2225	43	-0.34	020.20	0
020	Total Phosphorus as P2O5 (%)	0324	24.85	0.3000	25.03	0.5975	0.2225	43	-0.31	020.20	0
020	Total Phosphorus as P2O5 (%)	0500	24.88	0.0100	25.03	0.5975	0.2225	43	-0.26	020.10	0
020	Total Phosphorus as P2O5 (%)	0516	24.89	0.0200	25.03	0.5975	0.2225	43	-0.24	020.20	0
020	Total Phosphorus as P2O5 (%)	0456	24.90	0.2000	25.03	0.5975	0.2225	43	-0.22	020.40	0
020	Total Phosphorus as P2O5 (%)	0474	24.91	0.1200	25.03	0.5975	0.2225	43	-0.21	020.20	0
020	Total Phosphorus as P2O5 (%)	0371	24.94	0.6500	25.03	0.5975	0.2225	43	-0.16	020.20	0
020	Total Phosphorus as P2O5 (%)	0042	25.02	0.4900	25.03	0.5975	0.2225	43	-0.03	020.40	0
020	Total Phosphorus as P2O5 (%)	0096	25.03	0.0500	25.03	0.5975	0.2225	43	-0.01	020.40	0
020	Total Phosphorus as P2O5 (%)	0234	25.10	0.4300	25.03	0.5975	0.2225	43	0.10	020.50	0
020	Total Phosphorus as P2O5 (%)	0090	25.10	0.2000	25.03	0.5975	0.2225	43	0.11	020.10	0
020	Total Phosphorus as P2O5 (%)	0451	25.11	0.8800	25.03	0.5975	0.2225	43	0.13	020.50	0
020	Total Phosphorus as P2O5 (%)	0394	25.11	0.0050	25.03	0.5975	0.2225	43	0.13	020.20	0
020	Total Phosphorus as P2O5 (%)	0482	25.15	0.1000	25.03	0.5975	0.2225	43	0.20	020.50	0
020	Total Phosphorus as P2O5 (%)	0211	25.16	0.1000	25.03	0.5975	0.2225	43	0.21	020.10	0
020	Total Phosphorus as P2O5 (%)	0457	25.21	0.2500	25.03	0.5975	0.2225	43	0.29	020.20	0
020	Total Phosphorus as P2O5 (%)	0405	25.24	0.0041	25.03	0.5975	0.2225	43	0.35	020.20	0
020	Total Phosphorus as P2O5 (%)	0506	25.25	0.1000	25.03	0.5975	0.2225	43	0.36	020.20	0
020	Total Phosphorus as P2O5 (%)	0292	25.29	0.0300	25.03	0.5975	0.2225	43	0.42	020.20	0
020	Total Phosphorus as P2O5 (%)	0501	25.30	0.0000	25.03	0.5975	0.2225	43	0.45	020.50	0
020	Total Phosphorus as P2O5 (%)	0291	25.36	0.0100	25.03	0.5975	0.2225	43	0.54	020.50	0
020	Total Phosphorus as P2O5 (%)	0406	25.43	0.1400	25.03	0.5975	0.2225	43	0.66	020.20	0
020	Total Phosphorus as P2O5 (%)	0444	25.55	0.3000	25.03	0.5975	0.2225	43	0.87	020.10	0
020	Total Phosphorus as P2O5 (%)	0508	25.56	0.0500	25.03	0.5975	0.2225	43	0.87	020.50	0
020	Total Phosphorus as P2O5 (%)	0513	25.57	0.1000	25.03	0.5975	0.2225	43	0.90	020.99	0
020	Total Phosphorus as P2O5 (%)	0157	25.60	0.2000	25.03	0.5975	0.2225	43	0.95	020.10	0
020	Total Phosphorus as P2O5 (%)	0510	25.61	0.1800	25.03	0.5975	0.2225	43	0.97	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 (%)	0356	25.68	0.3400	25.03	0.5975	0.2225	43	1.08	020.20	0
020	Total Phosphorus as P2O5 (%)	0481	25.76	0.0900	25.03	0.5975	0.2225	43	1.21	020.20	0
020	Total Phosphorus as P2O5 (%)	0035	25.81	0.0200	25.03	0.5975	0.2225	43	1.30	020.40	0
020	Total Phosphorus as P2O5 (%)	0402	26.29	0.4100	25.03	0.5975	0.2225	43	2.10	020.50	0
020	Total Phosphorus as P2O5 (%)	0483	26.93	1.150	25.03	0.5975	0.2225	43	3.17	020.50	0
020	Total Phosphorus as P2O5 (%)	0422	24.30	2.600	25.03	0.5975	0.2225	43	-1.23	020.50	1
030	Citrate Insoluble Phosphorus as P2O5 (%)	0405	0.0350	0.0100				2		030.20	0
030	Citrate Insoluble Phosphorus as P2O5 (%)	0096	0.0900	0.1200				2		030.40	0
040	Indirect Available Phosphorus as P2O5 (25%)	0096	24.94	0.0700	25.06	0.1358	0.0253	3	-0.92	040.40	0
040	Indirect Available Phosphorus as P2O5 (25%)	0394	25.04	0.0000	25.06	0.1358	0.0253	3	-0.15	040.99	0
040	Indirect Available Phosphorus as P2O5 (25%)	0405	25.20	0.0059	25.06	0.1358	0.0253	3	1.06	040.20	0
041	Direct Available Phosphorus as P2O5 (25%)	0055	22.08*	0.0300	24.81	0.5604	0.2454	42	-4.88	041.21	0
041	Direct Available Phosphorus as P2O5 (25%)	0472	23.62*	0.5100	24.81	0.5604	0.2454	42	-2.13	041.60	0
041	Direct Available Phosphorus as P2O5 (25%)	0368	23.80*	0.1056	24.81	0.5604	0.2454	42	-1.81	041.50	0
041	Direct Available Phosphorus as P2O5 (25%)	0007	24.00*	1.000	24.81	0.5604	0.2454	42	-1.45	041.50	0
041	Direct Available Phosphorus as P2O5 (25%)	0095	24.16	0.2500	24.81	0.5604	0.2454	42	-1.17	041.40	0
041	Direct Available Phosphorus as P2O5 (25%)	0185	24.22	1.250	24.81	0.5604	0.2454	42	-1.06	041.11	0
041	Direct Available Phosphorus as P2O5 (25%)	0354	24.22	0.0400	24.81	0.5604	0.2454	42	-1.06	041.60	0
041	Direct Available Phosphorus as P2O5 (25%)	0397	24.28	0.0120	24.81	0.5604	0.2454	42	-0.94	041.60	0
041	Direct Available Phosphorus as P2O5 (25%)	0102	24.30	0.0000	24.81	0.5604	0.2454	42	-0.91	041.10	0
041	Direct Available Phosphorus as P2O5 (25%)	0230	24.35	0.5000	24.81	0.5604	0.2454	42	-0.82	041.60	0
041	Direct Available Phosphorus as P2O5 (25%)	0511	24.43	0.0000	24.81	0.5604	0.2454	42	-0.68	041.51	0
041	Direct Available Phosphorus as P2O5 (25%)	0131	24.44	0.0400	24.81	0.5604	0.2454	42	-0.66	041.40	0
041	Direct Available Phosphorus as P2O5 (25%)	0029	24.51	0.2500	24.81	0.5604	0.2454	42	-0.54	041.60	0
041	Direct Available Phosphorus as P2O5 (25%)	0494	24.66	0.6600	24.81	0.5604	0.2454	42	-0.27	041.10	0
041	Direct Available Phosphorus as P2O5 (25%)	0177	24.67	0.0949	24.81	0.5604	0.2454	42	-0.25	041.10	0
041	Direct Available Phosphorus as P2O5 (25%)	0231	24.71	0.1800	24.81	0.5604	0.2454	42	-0.18	041.60	0
041	Direct Available Phosphorus as P2O5 (25%)	0073	24.77	0.2300	24.81	0.5604	0.2454	42	-0.08	041.60	0
041	Direct Available Phosphorus as P2O5 (25%)	0360	24.77	0.5000	24.81	0.5604	0.2454	42	-0.07	041.51	0
041	Direct Available Phosphorus as P2O5 (25%)	0055	24.82	0.6400	24.81	0.5604	0.2454	42	0.02	041.11	0
041	Direct Available Phosphorus as P2O5 (25%)	0023	24.83	0.2900	24.81	0.5604	0.2454	42	0.03	041.51	0
041	Direct Available Phosphorus as P2O5 (25%)	0220	24.83	0.1000	24.81	0.5604	0.2454	42	0.04	041.11	0
041	Direct Available Phosphorus as P2O5 (25%)	0086	24.85	0.2163	24.81	0.5604	0.2454	42	0.06	041.10	0
041	Direct Available Phosphorus as P2O5 (25%)	0200	24.85	0.0800	24.81	0.5604	0.2454	42	0.07	041.21	0
041	Direct Available Phosphorus as P2O5 (25%)	0049	24.86	0.0800	24.81	0.5604	0.2454	42	0.09	041.10	0
041	Direct Available Phosphorus as P2O5 (25%)	0177	24.89	0.0450	24.81	0.5604	0.2454	42	0.14	041.60	0
041	Direct Available Phosphorus as P2O5 (25%)	0040	24.95	0.3000	24.81	0.5604	0.2454	42	0.25	041.10	0
041	Direct Available Phosphorus as P2O5 (25%)	0494	24.97	0.2100	24.81	0.5604	0.2454	42	0.28	041.51	0
041	Direct Available Phosphorus as P2O5 (25%)	0493	24.98	0.0500	24.81	0.5604	0.2454	42	0.29	041.11	0
041	Direct Available Phosphorus as P2O5 (25%)	0506	25.05	0.1000	24.81	0.5604	0.2454	42	0.43	041.99	0
041	Direct Available Phosphorus as P2O5 (25%)	0043	25.06	0.0100	24.81	0.5604	0.2454	42	0.44	041.60	0
041	Direct Available Phosphorus as P2O5 (25%)	0485	25.12	0.0300	24.81	0.5604	0.2454	42	0.54	041.11	0
041	Direct Available Phosphorus as P2O5 (25%)	0136	25.13	0.1600	24.81	0.5604	0.2454	42	0.57	041.60	0

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041	Direct Available Phosphorus as P2O5 (25%)	0377	25.14	0.1000	24.81	0.5604	0.2454	42	0.59	041.51	0
041	Direct Available Phosphorus as P2O5 (25%)	0105	25.17	0.0500	24.81	0.5604	0.2454	42	0.63	041.60	0
041	Direct Available Phosphorus as P2O5 (25%)	0105	25.19	0.3700	24.81	0.5604	0.2454	42	0.67	041.99	0
041	Direct Available Phosphorus as P2O5 (25%)	0025	25.34	0.5700	24.81	0.5604	0.2454	42	0.94	041.51	0
041	Direct Available Phosphorus as P2O5 (25%)	0105	25.50	0.0700	24.81	0.5604	0.2454	42	1.22	041.11	0
041	Direct Available Phosphorus as P2O5 (25%)	0117	25.60	0.4000	24.81	0.5604	0.2454	42	1.41	041.11	0
041	Direct Available Phosphorus as P2O5 (25%)	0519	25.63	0.1100	24.81	0.5604	0.2454	42	1.45	041.20	0
041	Direct Available Phosphorus as P2O5 (25%)	0034	25.70	0.5450	24.81	0.5604	0.2454	42	1.60	041.60	0
041	Direct Available Phosphorus as P2O5 (25%)	0486	25.78	0.0400	24.81	0.5604	0.2454	42	1.73	041.60	0
041	Direct Available Phosphorus as P2O5 (25%)	0452	25.86	0.0900	24.81	0.5604	0.2454	42	1.86	041.50	0
041	Direct Available Phosphorus as P2O5 (25%)	0325	23.80*	2.200	24.81	0.5604	0.2454	42	-1.80	041.50	1
042	Water Soluble Orthophosphate as P2O5 (%)	0513	23.38	0.0600				1		042.99	0
048	Water Soluble Phosphorus as P2O5 (%)	0444	22.12	0.2800	22.65	0.5218	0.2226	6	-0.95	048.50	0
048	Water Soluble Phosphorus as P2O5 (%)	0394	22.37	0.1330	22.65	0.5218	0.2226	6	-0.50	048.20	0
048	Water Soluble Phosphorus as P2O5 (%)	0309	22.45	0.3900	22.65	0.5218	0.2226	6	-0.37	048.20	0
048	Water Soluble Phosphorus as P2O5 (%)	0405	22.70	0.1124	22.65	0.5218	0.2226	6	0.09	048.20	0
048	Water Soluble Phosphorus as P2O5 (%)	0096	22.85	0.1500	22.65	0.5218	0.2226	6	0.34	048.40	0
048	Water Soluble Phosphorus as P2O5 (%)	0420	24.12	0.2700	22.65	0.5218	0.2226	6	2.59	048.20	0
050	Soluble Potassium as K2O (4%)	0309	3.110*	0.0800	4.131	0.2610	0.0828	80	-3.91	050.30	0
050	Soluble Potassium as K2O (4%)	0220	3.195*	0.0700	4.131	0.2610	0.0828	80	-3.59	050.00	0
050	Soluble Potassium as K2O (4%)	0516	3.505*	0.0300	4.131	0.2610	0.0828	80	-2.40	050.30	0
050	Soluble Potassium as K2O (4%)	0043	3.575*	0.0700	4.131	0.2610	0.0828	80	-2.13	050.99	0
050	Soluble Potassium as K2O (4%)	0457	3.640*	0.1000	4.131	0.2610	0.0828	80	-1.88	050.99	0
050	Soluble Potassium as K2O (4%)	0481	3.715*	0.0100	4.131	0.2610	0.0828	80	-1.59	050.99	0
050	Soluble Potassium as K2O (4%)	0055	3.765	0.0100	4.131	0.2610	0.0828	80	-1.40	050.50	0
050	Soluble Potassium as K2O (4%)	0356	3.775	0.0100	4.131	0.2610	0.0828	80	-1.36	050.30	0
050	Soluble Potassium as K2O (4%)	0040	3.800	0.0000	4.131	0.2610	0.0828	80	-1.27	050.30	0
050	Soluble Potassium as K2O (4%)	0444	3.820	0.2400	4.131	0.2610	0.0828	80	-1.19	050.99	0
050	Soluble Potassium as K2O (4%)	0029	3.835	0.3500	4.131	0.2610	0.0828	80	-1.13	050.62	0
050	Soluble Potassium as K2O (4%)	0200	3.855	0.0500	4.131	0.2610	0.0828	80	-1.06	050.60	0
050	Soluble Potassium as K2O (4%)	0474	3.875	0.0700	4.131	0.2610	0.0828	80	-0.98	050.99	0
050	Soluble Potassium as K2O (4%)	0500	3.875	0.0300	4.131	0.2610	0.0828	80	-0.98	050.99	0
050	Soluble Potassium as K2O (4%)	0117	3.880	0.0240	4.131	0.2610	0.0828	80	-0.96	050.60	0
050	Soluble Potassium as K2O (4%)	0034	3.912	0.0660	4.131	0.2610	0.0828	80	-0.84	050.62	0
050	Soluble Potassium as K2O (4%)	0513	3.915	0.0500	4.131	0.2610	0.0828	80	-0.83	050.99	0
050	Soluble Potassium as K2O (4%)	0485	3.950	0.0600	4.131	0.2610	0.0828	80	-0.69	050.52	0
050	Soluble Potassium as K2O (4%)	0324	3.960	0.2400	4.131	0.2610	0.0828	80	-0.66	050.50	0
050	Soluble Potassium as K2O (4%)	0136	3.980	0.0400	4.131	0.2610	0.0828	80	-0.58	050.30	0
050	Soluble Potassium as K2O (4%)	0405	3.990	0.0400	4.131	0.2610	0.0828	80	-0.54	050.00	0
050	Soluble Potassium as K2O (4%)	0035	3.990	0.0000	4.131	0.2610	0.0828	80	-0.54	050.61	0
050	Soluble Potassium as K2O (4%)	0096	3.990	0.0200	4.131	0.2610	0.0828	80	-0.54	050.99	0
050	Soluble Potassium as K2O (4%)	0157	4.015	0.0100	4.131	0.2610	0.0828	80	-0.44	050.30	0
050	Soluble Potassium as K2O (4%)	0444	4.020	0.0600	4.131	0.2610	0.0828	80	-0.43	050.50	0

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050	Soluble Potassium as K2O (4%)	0394	4.038	0.0050	4.131	0.2610	0.0828	80	-0.36	050.99	0
050	Soluble Potassium as K2O (4%)	0406	4.050	0.1800	4.131	0.2610	0.0828	80	-0.31	050.50	0
050	Soluble Potassium as K2O (4%)	0007	4.050	0.3000	4.131	0.2610	0.0828	80	-0.31	050.51	0
050	Soluble Potassium as K2O (4%)	0456	4.050	0.1000	4.131	0.2610	0.0828	80	-0.31	050.61	0
050	Soluble Potassium as K2O (4%)	0508	4.050	0.1000	4.131	0.2610	0.0828	80	-0.31	050.99	0
050	Soluble Potassium as K2O (4%)	0114	4.060	0.0600	4.131	0.2610	0.0828	80	-0.27	050.00	0
050	Soluble Potassium as K2O (4%)	0472	4.060	0.0600	4.131	0.2610	0.0828	80	-0.27	050.31	0
050	Soluble Potassium as K2O (4%)	0157	4.065	0.0300	4.131	0.2610	0.0828	80	-0.25	050.50	0
050	Soluble Potassium as K2O (4%)	0027	4.070	0.0600	4.131	0.2610	0.0828	80	-0.23	050.99	0
050	Soluble Potassium as K2O (4%)	0360	4.080	0.0400	4.131	0.2610	0.0828	80	-0.20	050.52	0
050	Soluble Potassium as K2O (4%)	0402	4.085	0.0100	4.131	0.2610	0.0828	80	-0.18	050.99	0
050	Soluble Potassium as K2O (4%)	0420	4.097	0.0650	4.131	0.2610	0.0828	80	-0.13	050.50	0
050	Soluble Potassium as K2O (4%)	0102	4.100	0.0000	4.131	0.2610	0.0828	80	-0.12	050.00	0
050	Soluble Potassium as K2O (4%)	0025	4.120	0.0000	4.131	0.2610	0.0828	80	-0.04	050.52	0
050	Soluble Potassium as K2O (4%)	0211	4.130	0.0600	4.131	0.2610	0.0828	80	0.00	050.00	0
050	Soluble Potassium as K2O (4%)	0482	4.130	0.0400	4.131	0.2610	0.0828	80	0.00	050.99	0
050	Soluble Potassium as K2O (4%)	0023	4.135	0.2300	4.131	0.2610	0.0828	80	0.02	050.52	0
050	Soluble Potassium as K2O (4%)	0131	4.135	0.0900	4.131	0.2610	0.0828	80	0.02	050.61	0
050	Soluble Potassium as K2O (4%)	0506	4.135	0.1900	4.131	0.2610	0.0828	80	0.02	050.99	0
050	Soluble Potassium as K2O (4%)	0105	4.140	0.0000	4.131	0.2610	0.0828	80	0.03	050.62	0
050	Soluble Potassium as K2O (4%)	0105	4.150	0.0200	4.131	0.2610	0.0828	80	0.07	050.60	0
050	Soluble Potassium as K2O (4%)	0421	4.170	0.0800	4.131	0.2610	0.0828	80	0.15	050.99	0
050	Soluble Potassium as K2O (4%)	0485	4.180	0.0200	4.131	0.2610	0.0828	80	0.19	050.00	0
050	Soluble Potassium as K2O (4%)	0501	4.180	0.0600	4.131	0.2610	0.0828	80	0.19	050.99	0
050	Soluble Potassium as K2O (4%)	0105	4.185	0.1300	4.131	0.2610	0.0828	80	0.21	050.99	0
050	Soluble Potassium as K2O (4%)	0494	4.220	0.1200	4.131	0.2610	0.0828	80	0.34	050.00	0
050	Soluble Potassium as K2O (4%)	0177	4.223	0.0115	4.131	0.2610	0.0828	80	0.35	050.99	0
050	Soluble Potassium as K2O (4%)	0397	4.230	0.0040	4.131	0.2610	0.0828	80	0.38	050.50	0
050	Soluble Potassium as K2O (4%)	0511	4.240	0.0000	4.131	0.2610	0.0828	80	0.42	050.51	0
050	Soluble Potassium as K2O (4%)	0090	4.250	0.2200	4.131	0.2610	0.0828	80	0.46	050.00	0
050	Soluble Potassium as K2O (4%)	0325	4.250	0.1000	4.131	0.2610	0.0828	80	0.46	050.99	0
050	Soluble Potassium as K2O (4%)	0377	4.270	0.0800	4.131	0.2610	0.0828	80	0.53	050.52	0
050	Soluble Potassium as K2O (4%)	0231	4.280	0.0600	4.131	0.2610	0.0828	80	0.57	050.00	0
050	Soluble Potassium as K2O (4%)	0510	4.290	0.0000	4.131	0.2610	0.0828	80	0.61	050.60	0
050	Soluble Potassium as K2O (4%)	0483	4.295	0.0100	4.131	0.2610	0.0828	80	0.63	050.51	0
050	Soluble Potassium as K2O (4%)	0095	4.295	0.2300	4.131	0.2610	0.0828	80	0.63	050.62	0
050	Soluble Potassium as K2O (4%)	0487	4.300	0.0000	4.131	0.2610	0.0828	80	0.65	050.99	0
050	Soluble Potassium as K2O (4%)	0493	4.300	0.2000	4.131	0.2610	0.0828	80	0.65	050.99	0
050	Soluble Potassium as K2O (4%)	0234	4.335	0.0500	4.131	0.2610	0.0828	80	0.78	050.99	0
050	Soluble Potassium as K2O (4%)	0073	4.350	0.2600	4.131	0.2610	0.0828	80	0.84	050.30	0
050	Soluble Potassium as K2O (4%)	0291	4.375	0.0100	4.131	0.2610	0.0828	80	0.93	050.51	0
050	Soluble Potassium as K2O (4%)	0452	4.400	0.0400	4.131	0.2610	0.0828	80	1.03	050.51	0
050	Soluble Potassium as K2O (4%)	0494	4.425	0.1100	4.131	0.2610	0.0828	80	1.13	050.52	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
050	Soluble Potassium as K2O (4%)	0185	4.435	0.3300	4.131	0.2610	0.0828	80	1.16	050.32	0
050	Soluble Potassium as K2O (4%)	0086	4.441	0.1730	4.131	0.2610	0.0828	80	1.19	050.50	0
050	Soluble Potassium as K2O (4%)	0451	4.450	0.1000	4.131	0.2610	0.0828	80	1.22	050.99	0
050	Soluble Potassium as K2O (4%)	0519	4.480	0.1600	4.131	0.2610	0.0828	80	1.34	050.61	0
050	Soluble Potassium as K2O (4%)	0049	4.485	0.1100	4.131	0.2610	0.0828	80	1.36	050.00	0
050	Soluble Potassium as K2O (4%)	0055	4.485	0.0300	4.131	0.2610	0.0828	80	1.36	050.00	0
050	Soluble Potassium as K2O (4%)	0368	4.506	0.0934	4.131	0.2610	0.0828	80	1.44	050.99	0
050	Soluble Potassium as K2O (4%)	0486	4.510	0.1800	4.131	0.2610	0.0828	80	1.45	050.52	0
050	Soluble Potassium as K2O (4%)	0354	4.515	0.0640	4.131	0.2610	0.0828	80	1.47	050.52	0
050	Soluble Potassium as K2O (4%)	0292	4.620	0.0000	4.131	0.2610	0.0828	80	1.87	050.50	0
050	Soluble Potassium as K2O (4%)	0230	4.920	0.2200	4.131	0.2610	0.0828	80	3.02	050.50	0
050	Soluble Potassium as K2O (4%)	0260	6.060	0.0000	4.131	0.2610	0.0828	80	7.39	050.99	0
050	Soluble Potassium as K2O (4%)	0307	4.060	0.5070	4.131	0.2610	0.0828	80	-0.27	050.99	1
050	Soluble Potassium as K2O (4%)	0042	4.335	0.6100	4.131	0.2610	0.0828	80	0.78	050.99	1
060	Water (Free) (%)	0456	0.7650	0.0300	1.728	0.8398	0.0229	7	-1.07	060.00	0
060	Water (Free) (%)	0096	1.130	0.0400	1.728	0.8398	0.0229	7	-0.67	060.00	0
060	Water (Free) (%)	0007	1.340	0.0000	1.728	0.8398	0.0229	7	-0.43	060.00	0
060	Water (Free) (%)	0510	1.795	0.0100	1.728	0.8398	0.0229	7	0.07	060.99	0
060	Water (Free) (%)	0394	1.855	0.0500	1.728	0.8398	0.0229	7	0.14	060.20	0
060	Water (Free) (%)	0513	2.225	0.0300	1.728	0.8398	0.0229	7	0.55	060.99	0
060	Water (Free) (%)	0394	4.500	0.0000	1.728	0.8398	0.0229	7	3.09	060.30	0
060	Water (Free) (%)	0513	3.625	0.1700	1.728	0.8398	0.0229	7	2.11	060.30	1
101	Acid Soluble Calcium (%)	0307	0.3135	0.0070	0.3586	0.0229	0.0145	17	-1.97	101.99	0
101	Acid Soluble Calcium (%)	0035	0.3395	0.0230	0.3586	0.0229	0.0145	17	-0.83	101.30	0
101	Acid Soluble Calcium (%)	0494	0.3399	0.0063	0.3586	0.0229	0.0145	17	-0.82	101.33	0
101	Acid Soluble Calcium (%)	0420	0.3448	0.0024	0.3586	0.0229	0.0145	17	-0.60	101.30	0
101	Acid Soluble Calcium (%)	0482	0.3450	0.0100	0.3586	0.0229	0.0145	17	-0.59	101.30	0
101	Acid Soluble Calcium (%)	0086	0.3459	0.0058	0.3586	0.0229	0.0145	17	-0.55	101.33	0
101	Acid Soluble Calcium (%)	0421	0.3485	0.0470	0.3586	0.0229	0.0145	17	-0.44	101.33	0
101	Acid Soluble Calcium (%)	0474	0.3500	0.0000	0.3586	0.0229	0.0145	17	-0.38	101.30	0
101	Acid Soluble Calcium (%)	0102	0.3530	0.0000	0.3586	0.0229	0.0145	17	-0.24	101.30	0
101	Acid Soluble Calcium (%)	0096	0.3550	0.0100	0.3586	0.0229	0.0145	17	-0.16	101.30	0
101	Acid Soluble Calcium (%)	0511	0.3600	0.0000	0.3586	0.0229	0.0145	17	0.06	101.30	0
101	Acid Soluble Calcium (%)	0025	0.3638	0.0079	0.3586	0.0229	0.0145	17	0.22	101.33	0
101	Acid Soluble Calcium (%)	0472	0.3730	0.0040	0.3586	0.0229	0.0145	17	0.63	101.30	0
101	Acid Soluble Calcium (%)	0105	0.3828	0.0355	0.3586	0.0229	0.0145	17	1.05	101.03	0
101	Acid Soluble Calcium (%)	0501	0.3850	0.0100	0.3586	0.0229	0.0145	17	1.15	101.99	0
101	Acid Soluble Calcium (%)	0354	0.4035	0.0510	0.3586	0.0229	0.0145	17	1.96	101.30	0
101	Acid Soluble Calcium (%)	0483	0.6135	0.0270	0.3586	0.0229	0.0145	17	11.12	101.30	0
121	Acid Soluble Magnesium (%)	0420	0.3310	0.0059	0.3719	0.0303	0.0096	17	-1.35	121.30	0
121	Acid Soluble Magnesium (%)	0474	0.3350	0.0100	0.3719	0.0303	0.0096	17	-1.22	121.30	0
121	Acid Soluble Magnesium (%)	0105	0.3360	0.0170	0.3719	0.0303	0.0096	17	-1.18	121.03	0
121	Acid Soluble Magnesium (%)	0105	0.3366	0.0202	0.3719	0.0303	0.0096	17	-1.16	121.00	0

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121	Acid Soluble Magnesium (%)	0494	0.3637	0.0031	0.3719	0.0303	0.0096	17	-0.27	121.33	0
121	Acid Soluble Magnesium (%)	0086	0.3637	0.0014	0.3719	0.0303	0.0096	17	-0.27	121.33	0
121	Acid Soluble Magnesium (%)	0035	0.3650	0.0040	0.3719	0.0303	0.0096	17	-0.23	121.30	0
121	Acid Soluble Magnesium (%)	0421	0.3695	0.0150	0.3719	0.0303	0.0096	17	-0.08	121.33	0
121	Acid Soluble Magnesium (%)	0096	0.3700	0.0000	0.3719	0.0303	0.0096	17	-0.06	121.30	0
121	Acid Soluble Magnesium (%)	0482	0.3750	0.0100	0.3719	0.0303	0.0096	17	0.10	121.30	0
121	Acid Soluble Magnesium (%)	0354	0.3775	0.0310	0.3719	0.0303	0.0096	17	0.19	121.30	0
121	Acid Soluble Magnesium (%)	0501	0.3850	0.0100	0.3719	0.0303	0.0096	17	0.43	121.99	0
121	Acid Soluble Magnesium (%)	0025	0.3894	0.0207	0.3719	0.0303	0.0096	17	0.58	121.33	0
121	Acid Soluble Magnesium (%)	0102	0.3925	0.0030	0.3719	0.0303	0.0096	17	0.68	121.30	0
121	Acid Soluble Magnesium (%)	0511	0.4000	0.0000	0.3719	0.0303	0.0096	17	0.93	121.30	0
121	Acid Soluble Magnesium (%)	0472	0.4150	0.0100	0.3719	0.0303	0.0096	17	1.42	121.30	0
121	Acid Soluble Magnesium (%)	0483	0.4520	0.0020	0.3719	0.0303	0.0096	17	2.64	121.30	0
121	Acid Soluble Magnesium (%)	0307	0.3950	0.0480	0.3719	0.0303	0.0096	17	0.76	121.99	1
143	Elemental Sulfur (%)	0472	0.8800	0.0200				1		143.99	0
145	Sulfate Sulfur, HCl soluble (%)	0511	0.7700	0.0000				1		145.00	0
148	Total Sulfur (%)	0307	0.6885	0.0250	0.8671	0.0782	0.0163	13	-2.28	148.99	0
148	Total Sulfur (%)	0421	0.7520	0.0460	0.8671	0.0782	0.0163	13	-1.47	148.07	0
148	Total Sulfur (%)	0501	0.7900	0.0200	0.8671	0.0782	0.0163	13	-0.99	148.99	0
148	Total Sulfur (%)	0096	0.8150	0.0100	0.8671	0.0782	0.0163	13	-0.67	148.99	0
148	Total Sulfur (%)	0474	0.8700	0.0200	0.8671	0.0782	0.0163	13	0.04	148.99	0
148	Total Sulfur (%)	0354	0.8715	0.0170	0.8671	0.0782	0.0163	13	0.06	148.99	0
148	Total Sulfur (%)	0494	0.8930	0.0011	0.8671	0.0782	0.0163	13	0.33	148.07	0
148	Total Sulfur (%)	0474	0.8985	0.0030	0.8671	0.0782	0.0163	13	0.40	148.00	0
148	Total Sulfur (%)	0292	0.9000	0.0000	0.8671	0.0782	0.0163	13	0.42	148.07	0
148	Total Sulfur (%)	0102	0.9070	0.0020	0.8671	0.0782	0.0163	13	0.51	148.07	0
148	Total Sulfur (%)	0482	0.9300	0.0000	0.8671	0.0782	0.0163	13	0.81	148.99	0
148	Total Sulfur (%)	0086	0.9401	0.0238	0.8671	0.0782	0.0163	13	0.93	148.07	0
148	Total Sulfur (%)	0483	0.9550	0.0440	0.8671	0.0782	0.0163	13	1.12	148.07	0
148	Total Sulfur (%)	0422	4.135	0.3100	0.8671	0.0782	0.0163	13	41.80	148.99	2
151	Acid Soluble Arsenic (ppm)	0515	3.282	1.477	6.316	1.378	0.3809	17	-2.20	151.34	0
151	Acid Soluble Arsenic (ppm)	0042	3.770	0.0800	6.316	1.378	0.3809	17	-1.85	151.99	0
151	Acid Soluble Arsenic (ppm)	0220	4.450	0.1000	6.316	1.378	0.3809	17	-1.35	151.34	0
151	Acid Soluble Arsenic (ppm)	0230	5.315	0.1500	6.316	1.378	0.3809	17	-0.73	151.34	0
151	Acid Soluble Arsenic (ppm)	0515	5.763	1.230	6.316	1.378	0.3809	17	-0.40	151.33	0
151	Acid Soluble Arsenic (ppm)	0511	5.940	0.0000	6.316	1.378	0.3809	17	-0.27	151.30	0
151	Acid Soluble Arsenic (ppm)	0096	6.050	0.1000	6.316	1.378	0.3809	17	-0.19	151.30	0
151	Acid Soluble Arsenic (ppm)	0300	6.582	0.3300	6.316	1.378	0.3809	17	0.19	151.30	0
151	Acid Soluble Arsenic (ppm)	0394	6.600	0.0000	6.316	1.378	0.3809	17	0.21	151.30	0
151	Acid Soluble Arsenic (ppm)	0102	6.670	0.3330	6.316	1.378	0.3809	17	0.26	151.30	0
151	Acid Soluble Arsenic (ppm)	0481	6.740	0.4200	6.316	1.378	0.3809	17	0.31	151.99	0
151	Acid Soluble Arsenic (ppm)	0494	6.921	0.0554	6.316	1.378	0.3809	17	0.44	151.33	0
151	Acid Soluble Arsenic (ppm)	0368	7.000	0.2000	6.316	1.378	0.3809	17	0.50	151.30	0

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151	Acid Soluble Arsenic (ppm)	0136	7.050	0.3000	6.316	1.378	0.3809	17	0.53	151.00	0
151	Acid Soluble Arsenic (ppm)	0037	7.460	0.1600	6.316	1.378	0.3809	17	0.83	151.33	0
151	Acid Soluble Arsenic (ppm)	0519	7.950	1.340	6.316	1.378	0.3809	17	1.19	151.30	0
151	Acid Soluble Arsenic (ppm)	0474	8.500	0.2000	6.316	1.378	0.3809	17	1.58	151.30	0
165	Acid Soluble Boron (%)	0421	0.0024	0.0006	0.0175	0.0112	0.0035	5	-1.35	165.99	0
165	Acid Soluble Boron (%)	0472	0.0100	0.0000	0.0175	0.0112	0.0035	5	-0.67	165.99	0
165	Acid Soluble Boron (%)	0482	0.0200	0.0000	0.0175	0.0112	0.0035	5	0.22	165.99	0
165	Acid Soluble Boron (%)	0483	0.0256	0.0078	0.0175	0.0112	0.0035	5	0.72	165.99	0
165	Acid Soluble Boron (%)	0354	0.0295	0.0090	0.0175	0.0112	0.0035	5	1.07	165.30	0
181	Acid Soluble Cadmium (ppm)	0481	1.020	0.0200	1.871	0.3623	0.0675	20	-2.35	181.99	0
181	Acid Soluble Cadmium (ppm)	0230	1.390	0.0000	1.871	0.3623	0.0675	20	-1.33	181.34	0
181	Acid Soluble Cadmium (ppm)	0368	1.450	0.1000	1.871	0.3623	0.0675	20	-1.16	181.30	0
181	Acid Soluble Cadmium (ppm)	0042	1.490	0.0800	1.871	0.3623	0.0675	20	-1.05	181.99	0
181	Acid Soluble Cadmium (ppm)	0474	1.575	0.0700	1.871	0.3623	0.0675	20	-0.82	181.30	0
181	Acid Soluble Cadmium (ppm)	0444	1.645	0.0900	1.871	0.3623	0.0675	20	-0.62	181.30	0
181	Acid Soluble Cadmium (ppm)	0096	1.650	0.1000	1.871	0.3623	0.0675	20	-0.61	181.30	0
181	Acid Soluble Cadmium (ppm)	0511	1.800	0.0000	1.871	0.3623	0.0675	20	-0.20	181.30	0
181	Acid Soluble Cadmium (ppm)	0494	1.868	0.1029	1.871	0.3623	0.0675	20	-0.01	181.33	0
181	Acid Soluble Cadmium (ppm)	0394	1.920	0.0600	1.871	0.3623	0.0675	20	0.14	181.30	0
181	Acid Soluble Cadmium (ppm)	0300	1.979	0.0280	1.871	0.3623	0.0675	20	0.30	181.30	0
181	Acid Soluble Cadmium (ppm)	0037	1.980	0.0400	1.871	0.3623	0.0675	20	0.30	181.33	0
181	Acid Soluble Cadmium (ppm)	0102	1.990	0.0280	1.871	0.3623	0.0675	20	0.33	181.30	0
181	Acid Soluble Cadmium (ppm)	0086	2.004	0.0243	1.871	0.3623	0.0675	20	0.37	181.33	0
181	Acid Soluble Cadmium (ppm)	0515	2.086	0.0577	1.871	0.3623	0.0675	20	0.59	181.33	0
181	Acid Soluble Cadmium (ppm)	0035	2.100	0.2600	1.871	0.3623	0.0675	20	0.63	181.30	0
181	Acid Soluble Cadmium (ppm)	0136	2.200	0.0000	1.871	0.3623	0.0675	20	0.91	181.00	0
181	Acid Soluble Cadmium (ppm)	0220	2.200	0.0000	1.871	0.3623	0.0675	20	0.91	181.99	0
181	Acid Soluble Cadmium (ppm)	0482	2.350	0.1000	1.871	0.3623	0.0675	20	1.32	181.30	0
181	Acid Soluble Cadmium (ppm)	0200	2.895	0.1900	1.871	0.3623	0.0675	20	2.83	181.00	0
181	Acid Soluble Cadmium (ppm)	0519	2.055	0.3300	1.871	0.3623	0.0675	20	0.51	181.30	1
190	Water Soluble Chlorine (%)	0511	2.970	0.0000				1		190.99	0
191	Acid Soluble Chromium (ppm)	0042	22.63	1.220	41.40	4.623	1.156	21	-4.06	191.99	0
191	Acid Soluble Chromium (ppm)	0506	26.75	1.100	41.40	4.623	1.156	21	-3.17	191.99	0
191	Acid Soluble Chromium (ppm)	0230	34.90	0.0000	41.40	4.623	1.156	21	-1.41	191.34	0
191	Acid Soluble Chromium (ppm)	0444	37.37	1.190	41.40	4.623	1.156	21	-0.87	191.30	0
191	Acid Soluble Chromium (ppm)	0394	37.85	0.3000	41.40	4.623	1.156	21	-0.77	191.30	0
191	Acid Soluble Chromium (ppm)	0511	39.00	0.0000	41.40	4.623	1.156	21	-0.52	191.30	0
191	Acid Soluble Chromium (ppm)	0035	39.95	1.300	41.40	4.623	1.156	21	-0.31	191.30	0
191	Acid Soluble Chromium (ppm)	0474	40.00	0.0000	41.40	4.623	1.156	21	-0.30	191.30	0
191	Acid Soluble Chromium (ppm)	0220	40.60	0.0000	41.40	4.623	1.156	21	-0.17	191.99	0
191	Acid Soluble Chromium (ppm)	0515	41.34	1.078	41.40	4.623	1.156	21	-0.01	191.33	0
191	Acid Soluble Chromium (ppm)	0494	41.46	2.889	41.40	4.623	1.156	21	0.01	191.33	0
191	Acid Soluble Chromium (ppm)	0482	42.40	3.000	41.40	4.623	1.156	21	0.22	191.30	0

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191	Acid Soluble Chromium (ppm)	0096	42.60	0.6000	41.40	4.623	1.156	21	0.26	191.30	0
191	Acid Soluble Chromium (ppm)	0368	43.05	1.100	41.40	4.623	1.156	21	0.36	191.30	0
191	Acid Soluble Chromium (ppm)	0037	44.10	1.070	41.40	4.623	1.156	21	0.58	191.33	0
191	Acid Soluble Chromium (ppm)	0300	44.46	0.1100	41.40	4.623	1.156	21	0.66	191.30	0
191	Acid Soluble Chromium (ppm)	0481	44.50	3.000	41.40	4.623	1.156	21	0.67	191.99	0
191	Acid Soluble Chromium (ppm)	0086	44.94	0.0538	41.40	4.623	1.156	21	0.77	191.33	0
191	Acid Soluble Chromium (ppm)	0102	45.22	0.1710	41.40	4.623	1.156	21	0.83	191.30	0
191	Acid Soluble Chromium (ppm)	0519	49.25	5.890	41.40	4.623	1.156	21	1.70	191.30	0
191	Acid Soluble Chromium (ppm)	0200	49.77	0.2100	41.40	4.623	1.156	21	1.81	191.00	0
191	Acid Soluble Chromium (ppm)	0515	61.85	6.998	41.40	4.623	1.156	21	4.42	191.34	1
202	Acid Soluble Cobalt (ppm)	0042	0.7850	0.0100	1.655	0.3453	0.0621	13	-2.52	202.99	0
202	Acid Soluble Cobalt (ppm)	0230	1.225	0.0100	1.655	0.3453	0.0621	13	-1.25	202.34	0
202	Acid Soluble Cobalt (ppm)	0096	1.430	0.0200	1.655	0.3453	0.0621	13	-0.65	202.30	0
202	Acid Soluble Cobalt (ppm)	0220	1.450	0.1000	1.655	0.3453	0.0621	13	-0.59	202.99	0
202	Acid Soluble Cobalt (ppm)	0511	1.470	0.0000	1.655	0.3453	0.0621	13	-0.54	202.30	0
202	Acid Soluble Cobalt (ppm)	0086	1.509	0.0408	1.655	0.3453	0.0621	13	-0.42	202.33	0
202	Acid Soluble Cobalt (ppm)	0494	1.766	0.0588	1.655	0.3453	0.0621	13	0.32	202.33	0
202	Acid Soluble Cobalt (ppm)	0102	1.771	0.0500	1.655	0.3453	0.0621	13	0.33	202.30	0
202	Acid Soluble Cobalt (ppm)	0482	1.845	0.1700	1.655	0.3453	0.0621	13	0.55	202.30	0
202	Acid Soluble Cobalt (ppm)	0368	1.900	0.0000	1.655	0.3453	0.0621	13	0.71	202.30	0
202	Acid Soluble Cobalt (ppm)	0300	1.907	0.0280	1.655	0.3453	0.0621	13	0.73	202.30	0
202	Acid Soluble Cobalt (ppm)	0474	2.000	0.0000	1.655	0.3453	0.0621	13	1.00	202.30	0
202	Acid Soluble Cobalt (ppm)	0035	2.110	0.3200	1.655	0.3453	0.0621	13	1.32	202.30	0
202	Acid Soluble Cobalt (ppm)	0515	0.1868	0.3735	1.655	0.3453	0.0621	13	-4.25	202.33	4
221	Acid Soluble Copper (%)	0230	0.0001	0.0000	0.0583	0.1135	0.0680	12	-0.51	221.30	0
221	Acid Soluble Copper (%)	0433	0.0002	0.0001	0.0583	0.1135	0.0680	12	-0.51	221.30	0
221	Acid Soluble Copper (%)	0394	0.0004	0.0001	0.0583	0.1135	0.0680	12	-0.51	221.32	0
221	Acid Soluble Copper (%)	0043	0.0008	0.0001	0.0583	0.1135	0.0680	12	-0.51	221.00	0
221	Acid Soluble Copper (%)	0515	0.0009	0.0004	0.0583	0.1135	0.0680	12	-0.51	221.33	0
221	Acid Soluble Copper (%)	0368	0.0012	0.0001	0.0583	0.1135	0.0680	12	-0.50	221.30	0
221	Acid Soluble Copper (%)	0354	0.0030	0.0020	0.0583	0.1135	0.0680	12	-0.49	221.30	0
221	Acid Soluble Copper (%)	0402	0.0060	0.0000	0.0583	0.1135	0.0680	12	-0.46	221.30	0
221	Acid Soluble Copper (%)	0483	0.0151	0.0036	0.0583	0.1135	0.0680	12	-0.38	221.30	0
221	Acid Soluble Copper (%)	0042	0.2150	0.0100	0.0583	0.1135	0.0680	12	1.38	221.99	0
221	Acid Soluble Copper (%)	0200	7.700	0.4000	0.0583	0.1135	0.0680	12	67.34	221.03	0
221	Acid Soluble Copper (%)	0519	21.50	0.4000	0.0583	0.1135	0.0680	12	188.94	221.99	0
221	Acid Soluble Copper (%)	0474	0.0000	0.0000	0.0583	0.1135	0.0680	12	-0.51	221.30	4
221	Acid Soluble Copper (%)	0515	0.0003	0.0006	0.0583	0.1135	0.0680	12	-0.51	221.99	4
241	Acid Soluble Iron (%)	0307	0.4970	0.0360	0.5502	0.0264	0.0123	16	-2.01	241.99	0
241	Acid Soluble Iron (%)	0354	0.5240	0.0320	0.5502	0.0264	0.0123	16	-0.99	241.30	0
241	Acid Soluble Iron (%)	0501	0.5300	0.0000	0.5502	0.0264	0.0123	16	-0.77	241.99	0
241	Acid Soluble Iron (%)	0420	0.5327	0.0022	0.5502	0.0264	0.0123	16	-0.66	241.30	0
241	Acid Soluble Iron (%)	0096	0.5350	0.0100	0.5502	0.0264	0.0123	16	-0.58	241.30	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
241	Acid Soluble Iron (%)	0474	0.5350	0.0100	0.5502	0.0264	0.0123	16	-0.58	241.30	0
241	Acid Soluble Iron (%)	0494	0.5356	0.0167	0.5502	0.0264	0.0123	16	-0.56	241.33	0
241	Acid Soluble Iron (%)	0421	0.5470	0.0420	0.5502	0.0264	0.0123	16	-0.12	241.33	0
241	Acid Soluble Iron (%)	0102	0.5520	0.0020	0.5502	0.0264	0.0123	16	0.07	241.30	0
241	Acid Soluble Iron (%)	0086	0.5565	0.0095	0.5502	0.0264	0.0123	16	0.23	241.33	0
241	Acid Soluble Iron (%)	0025	0.5583	0.0241	0.5502	0.0264	0.0123	16	0.30	241.33	0
241	Acid Soluble Iron (%)	0472	0.5600	0.0000	0.5502	0.0264	0.0123	16	0.37	241.30	0
241	Acid Soluble Iron (%)	0511	0.5700	0.0000	0.5502	0.0264	0.0123	16	0.75	241.30	0
241	Acid Soluble Iron (%)	0105	0.5776	0.0050	0.5502	0.0264	0.0123	16	1.03	241.03	0
241	Acid Soluble Iron (%)	0482	0.5900	0.0000	0.5502	0.0264	0.0123	16	1.50	241.30	0
241	Acid Soluble Iron (%)	0483	0.7480	0.0080	0.5502	0.0264	0.0123	16	7.48	241.30	0
241	Acid Soluble Iron (%)	0035	0.5700	0.0980	0.5502	0.0264	0.0123	16	0.75	241.30	1
251	Acid Soluble Lead (ppm)	0102	0.5405	0.1190	1.694	1.109	0.3420	13	-1.04	251.30	0
251	Acid Soluble Lead (ppm)	0481	0.8100	0.0000	1.694	1.109	0.3420	13	-0.80	251.99	0
251	Acid Soluble Lead (ppm)	0042	0.9750	0.2100	1.694	1.109	0.3420	13	-0.65	251.99	0
251	Acid Soluble Lead (ppm)	0474	1.100	0.0000	1.694	1.109	0.3420	13	-0.54	251.30	0
251	Acid Soluble Lead (ppm)	0519	1.145	0.1300	1.694	1.109	0.3420	13	-0.49	251.30	0
251	Acid Soluble Lead (ppm)	0230	1.150	0.1600	1.694	1.109	0.3420	13	-0.49	251.34	0
251	Acid Soluble Lead (ppm)	0394	1.285	0.0500	1.694	1.109	0.3420	13	-0.37	251.30	0
251	Acid Soluble Lead (ppm)	0096	1.350	0.1000	1.694	1.109	0.3420	13	-0.31	251.30	0
251	Acid Soluble Lead (ppm)	0494	1.548	0.2680	1.694	1.109	0.3420	13	-0.13	251.33	0
251	Acid Soluble Lead (ppm)	0035	2.575	0.8100	1.694	1.109	0.3420	13	0.80	251.30	0
251	Acid Soluble Lead (ppm)	0482	2.825	0.0500	1.694	1.109	0.3420	13	1.02	251.30	0
251	Acid Soluble Lead (ppm)	0515	3.598	2.450	1.694	1.109	0.3420	13	1.72	251.33	0
251	Acid Soluble Lead (ppm)	0220	4.550	0.1000	1.694	1.109	0.3420	13	2.58	251.99	0
251	Acid Soluble Lead (ppm)	0095	11.50	3.000	1.694	1.109	0.3420	13	8.85	251.30	1
251	Acid Soluble Lead (ppm)	0200	0.0000	0.0000	1.694	1.109	0.3420	13	-1.53	251.00	4
251	Acid Soluble Lead (ppm)	0368	0.0000	0.0000	1.694	1.109	0.3420	13	-1.53	251.30	4
261	Acid Soluble Manganese (%)	0421	0.0159	0.0029	0.0186	0.0019	0.0009	15	-1.47	261.35	0
261	Acid Soluble Manganese (%)	0307	0.0165	0.0010	0.0186	0.0019	0.0009	15	-1.12	261.99	0
261	Acid Soluble Manganese (%)	0354	0.0175	0.0010	0.0186	0.0019	0.0009	15	-0.59	261.30	0
261	Acid Soluble Manganese (%)	0420	0.0178	0.0001	0.0186	0.0019	0.0009	15	-0.45	261.30	0
261	Acid Soluble Manganese (%)	0105	0.0180	0.0001	0.0186	0.0019	0.0009	15	-0.35	261.15	0
261	Acid Soluble Manganese (%)	0096	0.0180	0.0001	0.0186	0.0019	0.0009	15	-0.35	261.30	0
261	Acid Soluble Manganese (%)	0102	0.0180	0.0000	0.0186	0.0019	0.0009	15	-0.32	261.30	0
261	Acid Soluble Manganese (%)	0501	0.0180	0.0000	0.0186	0.0019	0.0009	15	-0.32	261.99	0
261	Acid Soluble Manganese (%)	0086	0.0181	0.0001	0.0186	0.0019	0.0009	15	-0.29	261.15	0
261	Acid Soluble Manganese (%)	0474	0.0184	0.0002	0.0186	0.0019	0.0009	15	-0.11	261.30	0
261	Acid Soluble Manganese (%)	0472	0.0200	0.0000	0.0186	0.0019	0.0009	15	0.75	261.30	0
261	Acid Soluble Manganese (%)	0482	0.0200	0.0000	0.0186	0.0019	0.0009	15	0.75	261.31	0
261	Acid Soluble Manganese (%)	0494	0.0203	0.0029	0.0186	0.0019	0.0009	15	0.88	261.35	0
261	Acid Soluble Manganese (%)	0105	0.0224	0.0017	0.0186	0.0019	0.0009	15	2.00	261.12	0
261	Acid Soluble Manganese (%)	0483	0.0466	0.0033	0.0186	0.0019	0.0009	15	14.90	261.32	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 (%)	0035	0.0241	0.0125	0.0186	0.0019	0.0009	15	2.90	261.30	1
281	Acid Soluble Mercury (ppm)	0394	0.0170	0.0000	38.54	76.97	0.0030	4	-0.50	281.30	0
281	Acid Soluble Mercury (ppm)	0042	0.0230	0.0020	38.54	76.97	0.0030	4	-0.50	281.99	0
281	Acid Soluble Mercury (ppm)	0519	0.1150	0.0100	38.54	76.97	0.0030	4	-0.50	281.30	0
281	Acid Soluble Mercury (ppm)	0506	154.0	0.0000	38.54	76.97	0.0030	4	1.50	281.00	0
281	Acid Soluble Mercury (ppm)	0515	0.0000	0.0000	38.54	76.97	0.0030	4	-0.50	281.30	4
289	Acid Soluble Molybdenum (ppm)	0515	2.396	2.268	5.908	1.105	0.5348	17	-3.18	289.34	0
289	Acid Soluble Molybdenum (ppm)	0230	4.705	0.0100	5.908	1.105	0.5348	17	-1.09	289.34	0
289	Acid Soluble Molybdenum (ppm)	0515	5.000	1.673	5.908	1.105	0.5348	17	-0.82	289.33	0
289	Acid Soluble Molybdenum (ppm)	0042	5.060	0.2200	5.908	1.105	0.5348	17	-0.77	289.99	0
289	Acid Soluble Molybdenum (ppm)	0096	5.100	0.2000	5.908	1.105	0.5348	17	-0.73	289.30	0
289	Acid Soluble Molybdenum (ppm)	0501	5.200	0.2000	5.908	1.105	0.5348	17	-0.64	289.34	0
289	Acid Soluble Molybdenum (ppm)	0394	5.305	0.0300	5.908	1.105	0.5348	17	-0.55	289.32	0
289	Acid Soluble Molybdenum (ppm)	0220	5.500	0.2000	5.908	1.105	0.5348	17	-0.37	289.99	0
289	Acid Soluble Molybdenum (ppm)	0433	5.775	0.0663	5.908	1.105	0.5348	17	-0.12	289.30	0
289	Acid Soluble Molybdenum (ppm)	0474	6.250	0.1000	5.908	1.105	0.5348	17	0.31	289.30	0
289	Acid Soluble Molybdenum (ppm)	0506	6.575	1.130	5.908	1.105	0.5348	17	0.60	289.99	0
289	Acid Soluble Molybdenum (ppm)	0035	6.625	0.1300	5.908	1.105	0.5348	17	0.65	289.30	0
289	Acid Soluble Molybdenum (ppm)	0494	6.650	0.4368	5.908	1.105	0.5348	17	0.67	289.33	0
289	Acid Soluble Molybdenum (ppm)	0300	6.777	0.0230	5.908	1.105	0.5348	17	0.79	289.30	0
289	Acid Soluble Molybdenum (ppm)	0037	6.980	0.2000	5.908	1.105	0.5348	17	0.97	289.33	0
289	Acid Soluble Molybdenum (ppm)	0086	7.119	0.1128	5.908	1.105	0.5348	17	1.10	289.33	0
289	Acid Soluble Molybdenum (ppm)	0102	7.728	2.091	5.908	1.105	0.5348	17	1.65	289.30	0
289	Acid Soluble Molybdenum (ppm)	0368	0.0000	0.0000	5.908	1.105	0.5348	17	-5.35	289.30	4
291	Acid Soluble Nickel (ppm)	0042	4.120	0.0200	8.128	1.329	0.3039	20	-3.02	291.99	0
291	Acid Soluble Nickel (ppm)	0515	5.397	1.676	8.128	1.329	0.3039	20	-2.05	291.34	0
291	Acid Soluble Nickel (ppm)	0230	6.575	0.0300	8.128	1.329	0.3039	20	-1.17	291.34	0
291	Acid Soluble Nickel (ppm)	0096	6.900	0.0000	8.128	1.329	0.3039	20	-0.92	291.30	0
291	Acid Soluble Nickel (ppm)	0136	7.000	0.0000	8.128	1.329	0.3039	20	-0.85	291.00	0
291	Acid Soluble Nickel (ppm)	0482	7.300	0.4000	8.128	1.329	0.3039	20	-0.62	291.30	0
291	Acid Soluble Nickel (ppm)	0394	7.770	0.2600	8.128	1.329	0.3039	20	-0.27	291.30	0
291	Acid Soluble Nickel (ppm)	0474	8.000	0.0000	8.128	1.329	0.3039	20	-0.10	291.30	0
291	Acid Soluble Nickel (ppm)	0102	8.056	0.0710	8.128	1.329	0.3039	20	-0.05	291.30	0
291	Acid Soluble Nickel (ppm)	0117	8.145	0.4000	8.128	1.329	0.3039	20	0.01	291.00	0
291	Acid Soluble Nickel (ppm)	0086	8.342	0.1862	8.128	1.329	0.3039	20	0.16	291.33	0
291	Acid Soluble Nickel (ppm)	0035	8.455	0.1700	8.128	1.329	0.3039	20	0.25	291.30	0
291	Acid Soluble Nickel (ppm)	0368	8.650	0.1000	8.128	1.329	0.3039	20	0.39	291.30	0
291	Acid Soluble Nickel (ppm)	0494	8.674	0.4820	8.128	1.329	0.3039	20	0.41	291.33	0
291	Acid Soluble Nickel (ppm)	0037	8.800	0.3600	8.128	1.329	0.3039	20	0.51	291.33	0
291	Acid Soluble Nickel (ppm)	0300	9.027	0.0220	8.128	1.329	0.3039	20	0.68	291.30	0
291	Acid Soluble Nickel (ppm)	0519	9.100	1.080	8.128	1.329	0.3039	20	0.73	291.30	0
291	Acid Soluble Nickel (ppm)	0220	9.250	0.1000	8.128	1.329	0.3039	20	0.84	291.99	0
291	Acid Soluble Nickel (ppm)	0444	11.46	0.7200	8.128	1.329	0.3039	20	2.51	291.30	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
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291	Acid Soluble Nickel (ppm)	0501	11.60	0.0000	8.128	1.329	0.3039	20	2.61	291.34	0
291	Acid Soluble Nickel (ppm)	0515	7.296	2.011	8.128	1.329	0.3039	20	-0.63	291.33	1
301	Acid Soluble Selenium (ppm)	0394	0.0200	0.0200	1.426	1.667	0.1625	4	-0.75	301.30	0
301	Acid Soluble Selenium (ppm)	0519	0.2300	0.0800	1.426	1.667	0.1625	4	-0.64	301.30	0
301	Acid Soluble Selenium (ppm)	0368	1.850	0.5000	1.426	1.667	0.1625	4	0.23	301.30	0
301	Acid Soluble Selenium (ppm)	0042	3.605	0.0500	1.426	1.667	0.1625	4	1.17	301.99	0
301	Acid Soluble Selenium (ppm)	0230	0.0440	0.0880	1.426	1.667	0.1625	4	-0.74	301.34	4
301	Acid Soluble Selenium (ppm)	0515	0.3786	0.7572	1.426	1.667	0.1625	4	-0.56	301.33	4
311	Sodium (%)	0474	0.1050	0.0100	0.1165	0.0087	0.0035	9	-1.25	311.33	0
311	Sodium (%)	0482	0.1100	0.0000	0.1165	0.0087	0.0035	9	-0.70	311.99	0
311	Sodium (%)	0501	0.1100	0.0000	0.1165	0.0087	0.0035	9	-0.70	311.99	0
311	Sodium (%)	0494	0.1129	0.0015	0.1165	0.0087	0.0035	9	-0.39	311.33	0
311	Sodium (%)	0086	0.1155	0.0012	0.1165	0.0087	0.0035	9	-0.11	311.33	0
311	Sodium (%)	0025	0.1189	0.0011	0.1165	0.0087	0.0035	9	0.26	311.32	0
311	Sodium (%)	0035	0.1250	0.0060	0.1165	0.0087	0.0035	9	0.93	311.33	0
311	Sodium (%)	0096	0.1250	0.0100	0.1165	0.0087	0.0035	9	0.93	311.99	0
311	Sodium (%)	0102	0.1260	0.0020	0.1165	0.0087	0.0035	9	1.04	311.33	0
311	Sodium (%)	0354	0.2540	0.1000	0.1165	0.0087	0.0035	9	14.99	311.99	1
321	Acid Soluble Zinc (%)	0027	0.0031	0.0000	0.0075	0.0033	0.0256	27	-1.34	321.99	0
321	Acid Soluble Zinc (%)	0230	0.0045	0.0001	0.0075	0.0033	0.0256	27	-0.93	321.30	0
321	Acid Soluble Zinc (%)	0095	0.0049	0.0018	0.0075	0.0033	0.0256	27	-0.79	321.30	0
321	Acid Soluble Zinc (%)	0102	0.0050	0.0000	0.0075	0.0033	0.0256	27	-0.76	321.30	0
321	Acid Soluble Zinc (%)	0474	0.0050	0.0000	0.0075	0.0033	0.0256	27	-0.76	321.30	0
321	Acid Soluble Zinc (%)	0421	0.0052	0.0003	0.0075	0.0033	0.0256	27	-0.72	321.33	0
321	Acid Soluble Zinc (%)	0420	0.0053	0.0001	0.0075	0.0033	0.0256	27	-0.69	321.30	0
321	Acid Soluble Zinc (%)	0105	0.0054	0.0002	0.0075	0.0033	0.0256	27	-0.64	321.03	0
321	Acid Soluble Zinc (%)	0300	0.0055	0.0001	0.0075	0.0033	0.0256	27	-0.63	321.30	0
321	Acid Soluble Zinc (%)	0515	0.0055	0.0011	0.0075	0.0033	0.0256	27	-0.63	321.99	0
321	Acid Soluble Zinc (%)	0433	0.0059	0.0001	0.0075	0.0033	0.0256	27	-0.50	321.30	0
321	Acid Soluble Zinc (%)	0043	0.0060	0.0005	0.0075	0.0033	0.0256	27	-0.47	321.00	0
321	Acid Soluble Zinc (%)	0515	0.0065	0.0004	0.0075	0.0033	0.0256	27	-0.31	321.33	0
321	Acid Soluble Zinc (%)	0394	0.0066	0.0001	0.0075	0.0033	0.0256	27	-0.29	321.32	0
321	Acid Soluble Zinc (%)	0481	0.0066	0.0000	0.0075	0.0033	0.0256	27	-0.28	321.00	0
321	Acid Soluble Zinc (%)	0220	0.0067	0.0009	0.0075	0.0033	0.0256	27	-0.26	321.99	0
321	Acid Soluble Zinc (%)	0368	0.0078	0.0003	0.0075	0.0033	0.0256	27	0.07	321.30	0
321	Acid Soluble Zinc (%)	0096	0.0080	0.0000	0.0075	0.0033	0.0256	27	0.15	321.30	0
321	Acid Soluble Zinc (%)	0402	0.0080	0.0000	0.0075	0.0033	0.0256	27	0.15	321.30	0
321	Acid Soluble Zinc (%)	0086	0.0096	0.0075	0.0075	0.0033	0.0256	27	0.62	321.33	0
321	Acid Soluble Zinc (%)	0292	0.0100	0.0000	0.0075	0.0033	0.0256	27	0.75	321.30	0
321	Acid Soluble Zinc (%)	0482	0.0100	0.0000	0.0075	0.0033	0.0256	27	0.75	321.30	0
321	Acid Soluble Zinc (%)	0354	0.0125	0.0050	0.0075	0.0033	0.0256	27	1.51	321.30	0
321	Acid Soluble Zinc (%)	0483	0.0370	0.0069	0.0075	0.0033	0.0256	27	8.91	321.30	0
321	Acid Soluble Zinc (%)	0035	0.1765	0.0370	0.0075	0.0033	0.0256	27	51.16	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 (%)	0042	23.44	0.5300	0.0075	0.0033	0.0256	27	7092.54	321.99	0
321	Acid Soluble Zinc (%)	0037	58.04	0.1000	0.0075	0.0033	0.0256	27	17569.01	321.33	0
321	Acid Soluble Zinc (%)	0519	45.75	2.700	0.0075	0.0033	0.0256	27	13848.28	321.99	1

Interpreting Z Scores: Red indicates a normally distributed Z value >3 or <-3 (requires action), Orange = Z between 2 and 3 or -2 and -3 (warning) and Green = Z < 2 and >-2 (OK at 95%). Flags indicate data usage: 0 = Used, 1 = rejected for duplicates too far apart, 2 = rejected as extreme outlier and a 4 flag indicates rejected due to 0 value submitted. Robust statistics not used if < 6 labs used in calculations, in this case the Z Scores are included for information only (Grey). An offset lab value with an astrix indicates that the value is lower than the Analyte value less the IA. Method or Analyte codes in light green indicate a guaranteed analyte. Individual lab values may be below detection limits but are reported solely for the purpose of this Proficiency Testing program.