

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Analyte Proficiency From All Labs

Sample # 201211

Magnesium 36

Statistical Summary

Analytes: 32

Labs Reporting: 92

Issue Date : 01/31/2021

Analyte Code	Analyte Sample # 201211	# 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 N (%)	3	3	0.4458	0.0688	0.4458		0.0688	0.0496	15.43%		0.0071	4.52%
002	Nitrate N (%)	1		0.0265									
005	Urea N (%)	2	2	1.141	1.052								
010	Total N (1%)	80	77	2.185	0.4431	2.264	0.4900	0.1498	0.0213	6.62%	0.71	0.0586	3.54%
020	Total P2O5 (%)	9	7	1.355	0.1970	1.355		0.2235	0.1056	16.49%		0.0221	3.82%
041	Direct Available P2O5 (%)	7	7	1.147	0.5054	1.282	0.6700	0.1881	0.0889	14.67%	0.65	0.0243	3.85%
050	Soluble K2O (%)	14	13	0.4269	0.1776	0.4321	0.4100	0.1496	0.0519	34.61%	0.85	0.0258	4.54%
060	Water (Free) (%)	2	2	1.606	0.1991								
101	Acid Soluble Ca (%)	15	13	0.9107	0.2110	0.8685	0.2434	0.0890	0.0308	10.24%	0.85	0.0443	4.09%
121	Acid Soluble Mg (36%)	74	71	36.82	3.819	36.42	1.0000	1.801	0.2671	4.94%	4.20	0.6938	2.33%
131	Water Soluble Mg (%)	3	3	40.69	7.230	40.69		7.230	5.218	17.77%		0.4439	2.29%
143	Elemental S (%)	7	7	4.802	0.3076	4.802		0.3488	0.1648	7.26%		0.1628	3.16%
145	Sulfate S, HCl soluble (%)	9	9	4.899	0.3915	4.851		0.3217	0.1340	6.63%		0.1117	3.15%
146	Total S in Liquid (6%)	1		4.925									
148	Total S (6%)	50	49	5.002	0.4675	4.936	0.4468	0.3734	0.0667	7.57%	1.95	0.0792	3.15%
149	S - HNO3 soluble (%)	4	4	5.133	0.5540	5.133		0.5540	0.3463	10.79%		0.1141	3.13%
151	Acid Soluble As (ppm)	19	16	2.404	0.5860	2.366		0.5676	0.1774	23.99%		0.2800	14.05%
165	Acid Soluble B (%)	15	14	0.1604	0.0197	0.1594	0.0269	0.0160	0.0054	10.06%	1.39	0.0070	5.27%
181	Acid Soluble Cd (ppm)	21	19	1.773	2.636	1.095		0.3880	0.1113	35.42%		0.0812	15.78%
190	Water Soluble Cl (%)	1		0.6250									
191	Acid Soluble Cr (ppm)	19	19	61.41	25.60	58.42		14.02	4.021	24.00%		4.148	8.67%
202	Acid Soluble Co (ppm)	19	19	15.53	4.997	15.58	5.6744	5.476	1.570	35.14%	2.25	1.184	10.58%
221	Acid Soluble Cu (%)	30	28	0.0732	0.0497	0.0602	0.0110	0.0050	0.0012	8.36%	1.06	0.0239	6.11%
241	Acid Soluble Fe (%)	19	18	0.8426	0.0679	0.8406	0.0891	0.0671	0.0198	7.99%	1.76	0.0804	4.11%
251	Acid Soluble Pb (ppm)	23	21	12.11	8.421	10.57		3.453	0.9419	32.67%		0.7192	11.22%
261	Acid Soluble Mn (%)	19	19	0.3921	0.0408	0.3876	0.0438	0.0345	0.0099	8.91%	1.84	0.0313	4.61%
281	Acid Soluble Hg (ppm)	10	6	0.1673	0.1652	0.1175		0.0558	0.0285	47.52%		0.0099	22.08%
289	Acid Soluble Mo (ppm)	15	13	7.601	5.066	6.544	2.9632	2.173	0.7532	33.20%	1.71	0.8752	12.06%
291	Acid Soluble Ni (ppm)	20	19	41.18	11.26	40.04		8.949	2.566	22.35%		2.186	9.18%
301	Acid Soluble Se (ppm)	13	7	1.753	1.572	1.621		1.466	0.6924	90.44%		0.3817	14.88%
311	Sodium (%)	7	7	0.2090	0.0183	0.2090	0.0259	0.0207	0.0098	9.90%	1.86	0.0069	5.06%
321	Acid Soluble Zn (%)	33	31	0.6683	0.0665	0.6650	0.0715	0.0569	0.0128	8.55%	1.85	0.0219	4.25%

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 # 201211	# 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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STRIVING FOR EXCELLENCE IN ANALYSIS

Analyte Proficiency From All Labs

Sample # 201211

Magnesium 36

Lab Values

Analytes: 32

Labs Reporting: 92

Issue Date : 01/31/2021

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 N (%)	0524	0.3709	0.0163	0.4458	0.0688	0.0071	3	-1.09	001.99	0
001	Ammoniacal N (%)	0506	0.4605	0.0010	0.4458	0.0688	0.0071	3	0.21	001.99	0
001	Ammoniacal N (%)	0553	0.5060	0.0040	0.4458	0.0688	0.0071	3	0.88	001.99	0
002	Nitrate N (%)	0553	0.0265	0.0010				1		002.99	0
005	Urea N (%)	0524	0.3970	0.0020				2		005.99	0
005	Urea N (%)	0506	1.885	0.0100				2		005.99	0
010	Total N (1%)	0568	0.00730†	0.0042	2.264	0.1498	0.0586	77	-15.06	010.12	0
010	Total N (1%)	0551	1.175†	0.0500	2.264	0.1498	0.0586	77	-7.27	010.11	0
010	Total N (1%)	0551	1.175†	0.0500	2.264	0.1498	0.0586	77	-7.27	010.99	0
010	Total N (1%)	0522	1.220†	0.0800	2.264	0.1498	0.0586	77	-6.97	010.11	0
010	Total N (1%)	0537	1.240†	0.2200	2.264	0.1498	0.0586	77	-6.83	010.99	0
010	Total N (1%)	0556	1.400†	0.0200	2.264	0.1498	0.0586	77	-5.76	010.99	0
010	Total N (1%)	0420	1.490†	0.0400	2.264	0.1498	0.0586	77	-5.16	010.60	0
010	Total N (1%)	0456	1.550†	0.1000	2.264	0.1498	0.0586	77	-4.76	010.11	0
010	Total N (1%)	0476	1.687†	0.1817	2.264	0.1498	0.0586	77	-3.85	010.99	0
010	Total N (1%)	0394	1.897	0.0100	2.264	0.1498	0.0586	77	-2.45	010.99	0
010	Total N (1%)	0234	1.899	0.0219	2.264	0.1498	0.0586	77	-2.43	010.60	0
010	Total N (1%)	0185	1.900	0.0200	2.264	0.1498	0.0586	77	-2.43	010.60	0
010	Total N (1%)	0510	2.033	0.0550	2.264	0.1498	0.0586	77	-1.54	010.11	0
010	Total N (1%)	0558	2.045	0.0300	2.264	0.1498	0.0586	77	-1.46	010.99	0
010	Total N (1%)	0072	2.125	0.3900	2.264	0.1498	0.0586	77	-0.92	010.60	0
010	Total N (1%)	0539	2.160	0.0600	2.264	0.1498	0.0586	77	-0.69	010.99	0
010	Total N (1%)	0049	2.168	0.0210	2.264	0.1498	0.0586	77	-0.64	010.60	0
010	Total N (1%)	0546	2.180	0.0400	2.264	0.1498	0.0586	77	-0.56	010.11	0
010	Total N (1%)	0524	2.199	0.0797	2.264	0.1498	0.0586	77	-0.43	010.99	0
010	Total N (1%)	0452	2.200	0.0000	2.264	0.1498	0.0586	77	-0.42	010.60	0
010	Total N (1%)	0451	2.227	0.0020	2.264	0.1498	0.0586	77	-0.24	010.60	0
010	Total N (1%)	0472	2.230	0.0000	2.264	0.1498	0.0586	77	-0.22	010.60	0
010	Total N (1%)	0521	2.232	0.0000	2.264	0.1498	0.0586	77	-0.21	010.60	0
010	Total N (1%)	0377	2.235	0.0500	2.264	0.1498	0.0586	77	-0.19	010.60	0
010	Total N (1%)	0481	2.235	0.0700	2.264	0.1498	0.0586	77	-0.19	010.12	0
010	Total N (1%)	0220	2.235	0.0700	2.264	0.1498	0.0586	77	-0.19	010.60	0
010	Total N (1%)	0106	2.240	0.0200	2.264	0.1498	0.0586	77	-0.16	010.60	0
010	Total N (1%)	0390	2.240	0.1000	2.264	0.1498	0.0586	77	-0.16	010.60	0
010	Total N (1%)	0423	2.246	0.0480	2.264	0.1498	0.0586	77	-0.12	010.60	0
010	Total N (1%)	0389	2.250	0.0400	2.264	0.1498	0.0586	77	-0.09	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 N (1%)	0450	2.250	0.1000	2.264	0.1498	0.0586	77	-0.09	010.60	0
010	Total N (1%)	0043	2.265	0.0100	2.264	0.1498	0.0586	77	0.01	010.60	0
010	Total N (1%)	0516	2.265	0.1100	2.264	0.1498	0.0586	77	0.01	010.60	0
010	Total N (1%)	0527	2.277	0.0090	2.264	0.1498	0.0586	77	0.09	010.60	0
010	Total N (1%)	0231	2.280	0.0000	2.264	0.1498	0.0586	77	0.11	010.60	0
010	Total N (1%)	0035	2.280	0.0600	2.264	0.1498	0.0586	77	0.11	010.60	0
010	Total N (1%)	0086	2.284	0.0877	2.264	0.1498	0.0586	77	0.13	010.60	0
010	Total N (1%)	0136	2.285	0.1100	2.264	0.1498	0.0586	77	0.14	010.60	0
010	Total N (1%)	0486	2.285	0.0100	2.264	0.1498	0.0586	77	0.14	010.60	0
010	Total N (1%)	0360	2.290	0.0200	2.264	0.1498	0.0586	77	0.18	010.60	0
010	Total N (1%)	0481	2.290	0.0200	2.264	0.1498	0.0586	77	0.18	010.60	0
010	Total N (1%)	0055	2.295	0.0900	2.264	0.1498	0.0586	77	0.21	010.60	0
010	Total N (1%)	0095	2.295	0.0500	2.264	0.1498	0.0586	77	0.21	010.60	0
010	Total N (1%)	0354	2.295	0.0100	2.264	0.1498	0.0586	77	0.21	010.60	0
010	Total N (1%)	0177	2.297	0.0290	2.264	0.1498	0.0586	77	0.22	010.60	0
010	Total N (1%)	0523	2.300	0.0000	2.264	0.1498	0.0586	77	0.24	010.60	0
010	Total N (1%)	0493	2.300	0.1000	2.264	0.1498	0.0586	77	0.24	010.99	0
010	Total N (1%)	0562	2.300	0.1000	2.264	0.1498	0.0586	77	0.24	010.99	0
010	Total N (1%)	0421	2.309	0.0230	2.264	0.1498	0.0586	77	0.30	010.60	0
010	Total N (1%)	0037	2.310	0.0600	2.264	0.1498	0.0586	77	0.31	010.60	0
010	Total N (1%)	0547	2.310	0.0400	2.264	0.1498	0.0586	77	0.31	010.60	0
010	Total N (1%)	0561	2.310	0.0000	2.264	0.1498	0.0586	77	0.31	010.60	0
010	Total N (1%)	0405	2.320	0.0400	2.264	0.1498	0.0586	77	0.38	010.60	0
010	Total N (1%)	0157	2.330	0.0000	2.264	0.1498	0.0586	77	0.44	010.60	0
010	Total N (1%)	0292	2.330	0.0000	2.264	0.1498	0.0586	77	0.44	010.60	0
010	Total N (1%)	0324	2.330	0.0200	2.264	0.1498	0.0586	77	0.44	010.60	0
010	Total N (1%)	0073	2.335	0.0300	2.264	0.1498	0.0586	77	0.48	010.60	0
010	Total N (1%)	0506	2.345	0.0100	2.264	0.1498	0.0586	77	0.54	010.99	0
010	Total N (1%)	0230	2.350	0.0000	2.264	0.1498	0.0586	77	0.58	010.60	0
010	Total N (1%)	0325	2.355	0.0500	2.264	0.1498	0.0586	77	0.61	010.60	0
010	Total N (1%)	0371	2.360	0.0600	2.264	0.1498	0.0586	77	0.64	010.60	0
010	Total N (1%)	0029	2.369	0.0940	2.264	0.1498	0.0586	77	0.70	010.60	0
010	Total N (1%)	0114	2.370	0.0200	2.264	0.1498	0.0586	77	0.71	010.60	0
010	Total N (1%)	0550	2.380	0.3800	2.264	0.1498	0.0586	77	0.78	010.60	0
010	Total N (1%)	0559	2.390	0.0200	2.264	0.1498	0.0586	77	0.84	010.99	0
010	Total N (1%)	0023	2.400	0.0000	2.264	0.1498	0.0586	77	0.91	010.60	0
010	Total N (1%)	0040	2.400	0.0000	2.264	0.1498	0.0586	77	0.91	010.60	0
010	Total N (1%)	0560	2.415	0.0500	2.264	0.1498	0.0586	77	1.01	010.99	0
010	Total N (1%)	0564	2.420	0.0600	2.264	0.1498	0.0586	77	1.04	010.99	0
010	Total N (1%)	0494	2.425	0.2100	2.264	0.1498	0.0586	77	1.08	010.60	0
010	Total N (1%)	0565	2.450	0.0600	2.264	0.1498	0.0586	77	1.24	010.99	0
010	Total N (1%)	0291	2.455	0.0100	2.264	0.1498	0.0586	77	1.28	010.60	0
010	Total N (1%)	0368	2.508	0.0180	2.264	0.1498	0.0586	77	1.63	010.60	0
010	Total N (1%)	0027	2.525	0.1100	2.264	0.1498	0.0586	77	1.75	010.60	0
010	Total N (1%)	0402	2.655	0.0300	2.264	0.1498	0.0586	77	2.61	010.60	0
010	Total N (1%)	0255	2.784‡	0.3040	2.264	0.1498	0.0586	77	3.47	010.60	0
010	Total N (1%)	0041	3.745‡	0.0240	2.264	0.1498	0.0586	77	9.89	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 N (1%)	0309	1.775	0.6900	2.264	0.1498	0.0586	77	-3.26	010.11	1
010	Total N (1%)	0042	1.940	0.4600	2.264	0.1498	0.0586	77	-2.16	010.60	1
010	Total N (1%)	0444	2.460	0.5600	2.264	0.1498	0.0586	77	1.31	010.60	1
020	Total P2O5 (%)	0524	1.084	0.0016	1.355	0.2235	0.0221	7	-1.10	020.50	0
020	Total P2O5 (%)	0389	1.220	0.0600	1.355	0.2235	0.0221	7	-0.55	020.50	0
020	Total P2O5 (%)	0472	1.275	0.0100	1.355	0.2235	0.0221	7	-0.32	020.50	0
020	Total P2O5 (%)	0423	1.285	0.0040	1.355	0.2235	0.0221	7	-0.28	020.50	0
020	Total P2O5 (%)	0368	1.409	0.0181	1.355	0.2235	0.0221	7	0.22	020.50	0
020	Total P2O5 (%)	0523	1.575	0.0500	1.355	0.2235	0.0221	7	0.89	020.50	0
020	Total P2O5 (%)	0527	1.636	0.0110	1.355	0.2235	0.0221	7	1.14	020.50	0
020	Total P2O5 (%)	0515	1.610	0.3912	1.355	0.2235	0.0221	7	1.03	020.99	1
020	Total P2O5 (%)	0552	0.0000	0.0000	1.355	0.2235	0.0221	7		020.50	4
041	Direct Available P2O5 (%)	0568	0.0350	0.0100	1.282	0.1881	0.0243	7	-6.00	041.21	0
041	Direct Available P2O5 (%)	0354	1.180	0.0400	1.282	0.1881	0.0243	7	-0.49	041.21	0
041	Direct Available P2O5 (%)	0472	1.260	0.0600	1.282	0.1881	0.0243	7	-0.11	041.21	0
041	Direct Available P2O5 (%)	0423	1.302	0.0170	1.282	0.1881	0.0243	7	0.09	041.51	0
041	Direct Available P2O5 (%)	0553	1.327	0.0040	1.282	0.1881	0.0243	7	0.22	041.20	0
041	Direct Available P2O5 (%)	0421	1.342	0.0191	1.282	0.1881	0.0243	7	0.29	041.50	0
041	Direct Available P2O5 (%)	0325	1.580	0.0200	1.282	0.1881	0.0243	7	1.43	041.50	0
050	Soluble K2O (%)	0472	0.1000	0.0000	0.4321	0.1496	0.0258	13	-2.22	050.31	0
050	Soluble K2O (%)	0568	0.1350	0.0100	0.4321	0.1496	0.0258	13	-1.99	050.51	0
050	Soluble K2O (%)	0325	0.3500	0.0400	0.4321	0.1496	0.0258	13	-0.55	050.99	0
050	Soluble K2O (%)	0354	0.3870	0.0520	0.4321	0.1496	0.0258	13	-0.30	050.52	0
050	Soluble K2O (%)	0421	0.3999	0.0295	0.4321	0.1496	0.0258	13	-0.22	050.99	0
050	Soluble K2O (%)	0524	0.4120	0.0011	0.4321	0.1496	0.0258	13	-0.13	050.99	0
050	Soluble K2O (%)	0521	0.4362	0.0000	0.4321	0.1496	0.0258	13	0.03	050.99	0
050	Soluble K2O (%)	0389	0.4400	0.0000	0.4321	0.1496	0.0258	13	0.05	050.99	0
050	Soluble K2O (%)	0368	0.4766	0.0239	0.4321	0.1496	0.0258	13	0.30	050.51	0
050	Soluble K2O (%)	0423	0.4780	0.0580	0.4321	0.1496	0.0258	13	0.31	050.52	0
050	Soluble K2O (%)	0527	0.5096	0.0089	0.4321	0.1496	0.0258	13	0.52	050.99	0
050	Soluble K2O (%)	0553	0.6750	0.0120	0.4321	0.1496	0.0258	13	1.62	050.99	0
050	Soluble K2O (%)	0523	0.7500	0.1000	0.4321	0.1496	0.0258	13	2.13	050.99	0
050	Soluble K2O (%)	0552	0.0000	0.0000	0.4321	0.1496	0.0258	13		050.99	4
060	Water (Free) (%)	0456	1.465	0.0300				2		060.00	0
060	Water (Free) (%)	0510	1.747	0.0076				2		060.99	0
101	Acid Soluble Ca (%)	0106	0.7005	0.0419	0.8685	0.0890	0.0443	13	-1.89	101.33	0
101	Acid Soluble Ca (%)	0389	0.7650	0.0100	0.8685	0.0890	0.0443	13	-1.16	101.99	0
101	Acid Soluble Ca (%)	0035	0.7885	0.1170	0.8685	0.0890	0.0443	13	-0.90	101.30	0
101	Acid Soluble Ca (%)	0368	0.8488	0.0033	0.8685	0.0890	0.0443	13	-0.22	101.33	0
101	Acid Soluble Ca (%)	0421	0.8623	0.0217	0.8685	0.0890	0.0443	13	-0.07	101.33	0
101	Acid Soluble Ca (%)	0494	0.8674	0.0480	0.8685	0.0890	0.0443	13	-0.01	101.33	0
101	Acid Soluble Ca (%)	0472	0.8700	0.0200	0.8685	0.0890	0.0443	13	0.02	101.30	0
101	Acid Soluble Ca (%)	0025	0.8710	0.0740	0.8685	0.0890	0.0443	13	0.03	101.33	0
101	Acid Soluble Ca (%)	0423	0.8785	0.0150	0.8685	0.0890	0.0443	13	0.11	101.32	0
101	Acid Soluble Ca (%)	0553	0.8800	0.0200	0.8685	0.0890	0.0443	13	0.13	101.00	0
101	Acid Soluble Ca (%)	0354	0.9200	0.0000	0.8685	0.0890	0.0443	13	0.58	101.30	0
101	Acid Soluble Ca (%)	0527	1.023	0.0149	0.8685	0.0890	0.0443	13	1.73	101.33	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				
101	Acid Soluble Ca (%)	0402	1.565	0.1900	0.8685	0.0890	0.0443	13	7.83	101.30	0
101	Acid Soluble Ca (%)	0552	1.355	0.3700	0.8685	0.0890	0.0443	13	5.47	101.99	1
101	Acid Soluble Ca (%)	0568	15.00	0.0000	0.8685	0.0890	0.0443	13	158.85	101.30	2
121	Acid Soluble Mg (36%)	0106	30.52†	3.305	36.42	1.801	0.6938	71	-3.27	121.33	0
121	Acid Soluble Mg (36%)	0402	30.62†	0.5600	36.42	1.801	0.6938	71	-3.22	121.30	0
121	Acid Soluble Mg (36%)	0523	31.15†	2.100	36.42	1.801	0.6938	71	-2.92	121.99	0
121	Acid Soluble Mg (36%)	0095	31.82†	0.3600	36.42	1.801	0.6938	71	-2.55	121.32	0
121	Acid Soluble Mg (36%)	0055	33.12†	0.9600	36.42	1.801	0.6938	71	-1.83	121.33	0
121	Acid Soluble Mg (36%)	0451	33.42†	0.3900	36.42	1.801	0.6938	71	-1.67	121.30	0
121	Acid Soluble Mg (36%)	0073	34.07†	0.7100	36.42	1.801	0.6938	71	-1.31	121.30	0
121	Acid Soluble Mg (36%)	0377	34.40†	0.6500	36.42	1.801	0.6938	71	-1.12	121.30	0
121	Acid Soluble Mg (36%)	0506	34.58†	0.1200	36.42	1.801	0.6938	71	-1.02	121.99	0
121	Acid Soluble Mg (36%)	0117	34.67†	1.000	36.42	1.801	0.6938	71	-0.97	121.33	0
121	Acid Soluble Mg (36%)	0035	34.80†	2.800	36.42	1.801	0.6938	71	-0.90	121.30	0
121	Acid Soluble Mg (36%)	0157	35.00†	0.8000	36.42	1.801	0.6938	71	-0.79	121.30	0
121	Acid Soluble Mg (36%)	0231	35.01†	0.5500	36.42	1.801	0.6938	71	-0.78	121.30	0
121	Acid Soluble Mg (36%)	0157	35.05†	0.3000	36.42	1.801	0.6938	71	-0.76	121.00	0
121	Acid Soluble Mg (36%)	0292	35.07†	0.0700	36.42	1.801	0.6938	71	-0.75	121.32	0
121	Acid Soluble Mg (36%)	0390	35.10†	1.000	36.42	1.801	0.6938	71	-0.73	121.30	0
121	Acid Soluble Mg (36%)	0371	35.38†	0.6800	36.42	1.801	0.6938	71	-0.58	121.30	0
121	Acid Soluble Mg (36%)	0040	35.44	0.6700	36.42	1.801	0.6938	71	-0.55	121.00	0
121	Acid Soluble Mg (36%)	0177	35.59	0.0677	36.42	1.801	0.6938	71	-0.46	121.33	0
121	Acid Soluble Mg (36%)	0524	35.61	1.306	36.42	1.801	0.6938	71	-0.45	121.99	0
121	Acid Soluble Mg (36%)	0220	35.62	0.6500	36.42	1.801	0.6938	71	-0.45	121.32	0
121	Acid Soluble Mg (36%)	0516	35.65	0.9630	36.42	1.801	0.6938	71	-0.43	121.99	0
121	Acid Soluble Mg (36%)	0037	35.65	0.0330	36.42	1.801	0.6938	71	-0.43	121.33	0
121	Acid Soluble Mg (36%)	0552	35.74	0.1500	36.42	1.801	0.6938	71	-0.38	121.99	0
121	Acid Soluble Mg (36%)	0389	35.87	0.6400	36.42	1.801	0.6938	71	-0.30	121.99	0
121	Acid Soluble Mg (36%)	0536	35.88	0.1500	36.42	1.801	0.6938	71	-0.30	121.00	0
121	Acid Soluble Mg (36%)	0368	35.97	0.0472	36.42	1.801	0.6938	71	-0.25	121.33	0
121	Acid Soluble Mg (36%)	0420	35.98	0.8200	36.42	1.801	0.6938	71	-0.24	121.30	0
121	Acid Soluble Mg (36%)	0518	35.99	0.2600	36.42	1.801	0.6938	71	-0.24	121.70	0
121	Acid Soluble Mg (36%)	0043	36.00	1.520	36.42	1.801	0.6938	71	-0.23	121.33	0
121	Acid Soluble Mg (36%)	0539	36.01	0.0800	36.42	1.801	0.6938	71	-0.23	121.00	0
121	Acid Soluble Mg (36%)	0535	36.05	0.1000	36.42	1.801	0.6938	71	-0.20	121.00	0
121	Acid Soluble Mg (36%)	0444	36.05	0.0200	36.42	1.801	0.6938	71	-0.20	121.30	0
121	Acid Soluble Mg (36%)	0551	36.06	0.1100	36.42	1.801	0.6938	71	-0.20	121.00	0
121	Acid Soluble Mg (36%)	0486	36.07	0.5700	36.42	1.801	0.6938	71	-0.20	121.33	0
121	Acid Soluble Mg (36%)	0531	36.08	0.0500	36.42	1.801	0.6938	71	-0.19	121.00	0
121	Acid Soluble Mg (36%)	0027	36.19	0.2750	36.42	1.801	0.6938	71	-0.13	121.99	0
121	Acid Soluble Mg (36%)	0561	36.21	0.1300	36.42	1.801	0.6938	71	-0.12	121.33	0
121	Acid Soluble Mg (36%)	0169	36.26	0.2100	36.42	1.801	0.6938	71	-0.09	121.33	0
121	Acid Soluble Mg (36%)	0558	36.40	1.200	36.42	1.801	0.6938	71	-0.01	121.99	0
121	Acid Soluble Mg (36%)	0423	36.40	0.6000	36.42	1.801	0.6938	71	-0.01	121.32	0
121	Acid Soluble Mg (36%)	0360	36.42	0.0300	36.42	1.801	0.6938	71	0.00	121.30	0
121	Acid Soluble Mg (36%)	0029	36.44	1.500	36.42	1.801	0.6938	71	0.01	121.00	0
121	Acid Soluble Mg (36%)	0494	36.49	0.1712	36.42	1.801	0.6938	71	0.04	121.33	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
121	Acid Soluble Mg (36%)	0200	36.55	0.6100	36.42	1.801	0.6938	71	0.07	121.70	0
121	Acid Soluble Mg (36%)	0136	36.55	0.1000	36.42	1.801	0.6938	71	0.07	121.33	0
121	Acid Soluble Mg (36%)	0255	36.97	0.4760	36.42	1.801	0.6938	71	0.30	121.30	0
121	Acid Soluble Mg (36%)	0560	37.05	0.3000	36.42	1.801	0.6938	71	0.35	121.99	0
121	Acid Soluble Mg (36%)	0433	37.09	1.090	36.42	1.801	0.6938	71	0.37	121.30	0
121	Acid Soluble Mg (36%)	0564	37.18	0.0500	36.42	1.801	0.6938	71	0.42	121.70	0
121	Acid Soluble Mg (36%)	0565	37.19	0.0800	36.42	1.801	0.6938	71	0.43	121.70	0
121	Acid Soluble Mg (36%)	0493	37.30	0.1000	36.42	1.801	0.6938	71	0.49	121.70	0
121	Acid Soluble Mg (36%)	0481	37.30	0.2000	36.42	1.801	0.6938	71	0.49	121.99	0
121	Acid Soluble Mg (36%)	0546	37.43‡	0.1003	36.42	1.801	0.6938	71	0.56	121.03	0
121	Acid Soluble Mg (36%)	0422	37.56‡	0.0900	36.42	1.801	0.6938	71	0.63	121.99	0
121	Acid Soluble Mg (36%)	0547	37.70‡	0.4000	36.42	1.801	0.6938	71	0.71	121.99	0
121	Acid Soluble Mg (36%)	0421	37.86‡	0.2284	36.42	1.801	0.6938	71	0.80	121.33	0
121	Acid Soluble Mg (36%)	0354	38.25‡	0.1000	36.42	1.801	0.6938	71	1.02	121.30	0
121	Acid Soluble Mg (36%)	0291	38.32‡	0.2200	36.42	1.801	0.6938	71	1.06	121.30	0
121	Acid Soluble Mg (36%)	0394	38.54‡	0.7110	36.42	1.801	0.6938	71	1.18	121.32	0
121	Acid Soluble Mg (36%)	0042	38.58‡	0.2200	36.42	1.801	0.6938	71	1.20	121.99	0
121	Acid Soluble Mg (36%)	0324	38.90‡	2.400	36.42	1.801	0.6938	71	1.38	121.30	0
121	Acid Soluble Mg (36%)	0025	38.95‡	4.100	36.42	1.801	0.6938	71	1.41	121.33	0
121	Acid Soluble Mg (36%)	0553	39.05‡	0.1000	36.42	1.801	0.6938	71	1.46	121.00	0
121	Acid Soluble Mg (36%)	0325	40.20‡	4.000	36.42	1.801	0.6938	71	2.10	121.30	0
121	Acid Soluble Mg (36%)	0452	40.21‡	0.1700	36.42	1.801	0.6938	71	2.10	121.30	0
121	Acid Soluble Mg (36%)	0527	41.38‡	0.2047	36.42	1.801	0.6938	71	2.76	121.33	0
121	Acid Soluble Mg (36%)	0515	43.69‡	1.082	36.42	1.801	0.6938	71	4.04	121.99	0
121	Acid Soluble Mg (36%)	0472	43.76‡	0.3900	36.42	1.801	0.6938	71	4.08	121.30	0
121	Acid Soluble Mg (36%)	0450	44.22‡	1.270	36.42	1.801	0.6938	71	4.33	121.99	0
121	Acid Soluble Mg (36%)	0550	60.77‡	1.790	36.42	1.801	0.6938	71	13.52	121.00	0
121	Acid Soluble Mg (36%)	0234	38.17‡	5.358	36.42	1.801	0.6938	71	0.97	121.30	1
121	Acid Soluble Mg (36%)	0515	41.24‡	6.317	36.42	1.801	0.6938	71	2.68	121.33	1
121	Acid Soluble Mg (36%)	0568	0.3650†	0.0100	36.42	1.801	0.6938	71	-20.02	121.30	2
131	Water Soluble Mg (%)	0510	36.06	0.0218	40.69	7.230	0.4439	3	-0.64	131.70	0
131	Water Soluble Mg (%)	0559	36.99	0.0200	40.69	7.230	0.4439	3	-0.51	131.99	0
131	Water Soluble Mg (%)	0309	49.03	1.290	40.69	7.230	0.4439	3	1.15	131.00	0
143	Elemental S (%)	0472	4.455	0.0100	4.802	0.3488	0.1628	7	-0.90	143.99	0
143	Elemental S (%)	0255	4.521	0.0860	4.802	0.3488	0.1628	7	-0.73	143.99	0
143	Elemental S (%)	0390	4.595	0.4700	4.802	0.3488	0.1628	7	-0.54	143.99	0
143	Elemental S (%)	0368	4.755	0.1535	4.802	0.3488	0.1628	7	-0.12	143.99	0
143	Elemental S (%)	0291	4.975	0.0500	4.802	0.3488	0.1628	7	0.45	143.99	0
143	Elemental S (%)	0389	5.015	0.1700	4.802	0.3488	0.1628	7	0.55	143.99	0
143	Elemental S (%)	0325	5.300	0.2000	4.802	0.3488	0.1628	7	1.29	143.99	0
145	Sulfate S, HCl soluble (%)	0444	4.445	0.0900	4.851	0.3217	0.1117	9	-1.16	145.99	0
145	Sulfate S, HCl soluble (%)	0200	4.585	0.0700	4.851	0.3217	0.1117	9	-0.76	145.99	0
145	Sulfate S, HCl soluble (%)	0562	4.700	0.1000	4.851	0.3217	0.1117	9	-0.43	145.00	0
145	Sulfate S, HCl soluble (%)	0106	4.715	0.0900	4.851	0.3217	0.1117	9	-0.39	145.00	0
145	Sulfate S, HCl soluble (%)	0522	4.823	0.1150	4.851	0.3217	0.1117	9	-0.08	145.00	0
145	Sulfate S, HCl soluble (%)	0561	4.920	0.2400	4.851	0.3217	0.1117	9	0.20	145.00	0
145	Sulfate S, HCl soluble (%)	0550	4.935	0.0100	4.851	0.3217	0.1117	9	0.24	145.00	0

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145	Sulfate S, HCl soluble (%)	0405	5.200	0.1200	4.851	0.3217	0.1117	9	1.00	145.00	0
145	Sulfate S, HCl soluble (%)	0553	5.765	0.1700	4.851	0.3217	0.1117	9	2.62	145.99	0
146	Total S in Liquid (6%)	0324	4.925‡	0.0300				1		146.00	0
148	Total S (6%)	0421	4.442‡	0.0237	4.936	0.3734	0.0792	49	-1.32	148.07	0
148	Total S (6%)	0559	4.505	0.0100	4.936	0.3734	0.0792	49	-1.15	148.99	0
148	Total S (6%)	0450	4.510	0.1800	4.936	0.3734	0.0792	49	-1.14	148.99	0
148	Total S (6%)	0292	4.560	0.1200	4.936	0.3734	0.0792	49	-1.01	148.07	0
148	Total S (6%)	0433	4.565	0.0500	4.936	0.3734	0.0792	49	-0.99	148.99	0
148	Total S (6%)	0402	4.590	0.1000	4.936	0.3734	0.0792	49	-0.93	148.07	0
148	Total S (6%)	0394	4.606	0.0146	4.936	0.3734	0.0792	49	-0.88	148.07	0
148	Total S (6%)	0444	4.625	0.0500	4.936	0.3734	0.0792	49	-0.83	148.07	0
148	Total S (6%)	0230	4.645	0.2100	4.936	0.3734	0.0792	49	-0.78	148.01	0
148	Total S (6%)	0420	4.660	0.0800	4.936	0.3734	0.0792	49	-0.74	148.00	0
148	Total S (6%)	0117	4.670	0.0198	4.936	0.3734	0.0792	49	-0.71	148.07	0
148	Total S (6%)	0049	4.685	0.0680	4.936	0.3734	0.0792	49	-0.67	148.00	0
148	Total S (6%)	0037	4.697	0.0550	4.936	0.3734	0.0792	49	-0.64	148.07	0
148	Total S (6%)	0564	4.700	0.0400	4.936	0.3734	0.0792	49	-0.63	148.01	0
148	Total S (6%)	0481	4.700	0.0200	4.936	0.3734	0.0792	49	-0.63	148.01	0
148	Total S (6%)	0565	4.710	0.0200	4.936	0.3734	0.0792	49	-0.60	148.01	0
148	Total S (6%)	0547	4.740	0.0800	4.936	0.3734	0.0792	49	-0.52	148.99	0
148	Total S (6%)	0377	4.745	0.0100	4.936	0.3734	0.0792	49	-0.51	148.99	0
148	Total S (6%)	0546	4.747	0.0624	4.936	0.3734	0.0792	49	-0.51	148.07	0
148	Total S (6%)	0451	4.749	0.1630	4.936	0.3734	0.0792	49	-0.50	148.00	0
148	Total S (6%)	0494	4.760	0.0842	4.936	0.3734	0.0792	49	-0.47	148.07	0
148	Total S (6%)	0560	4.780	0.0400	4.936	0.3734	0.0792	49	-0.42	148.99	0
148	Total S (6%)	0516	4.784	0.1880	4.936	0.3734	0.0792	49	-0.41	148.99	0
148	Total S (6%)	0493	4.850	0.1000	4.936	0.3734	0.0792	49	-0.23	148.01	0
148	Total S (6%)	0072	4.858	0.1274	4.936	0.3734	0.0792	49	-0.21	148.99	0
148	Total S (6%)	0073	4.890	0.1200	4.936	0.3734	0.0792	49	-0.12	148.01	0
148	Total S (6%)	0157	4.895	0.1100	4.936	0.3734	0.0792	49	-0.11	148.01	0
148	Total S (6%)	0029	4.900	0.0400	4.936	0.3734	0.0792	49	-0.10	148.01	0
148	Total S (6%)	0506	4.900	0.0200	4.936	0.3734	0.0792	49	-0.10	148.99	0
148	Total S (6%)	0055	4.945	0.0500	4.936	0.3734	0.0792	49	0.02	148.01	0
148	Total S (6%)	0177	4.995	0.0149	4.936	0.3734	0.0792	49	0.16	148.07	0
148	Total S (6%)	0040	5.000	0.0000	4.936	0.3734	0.0792	49	0.17	148.07	0
148	Total S (6%)	0029	5.020	0.0010	4.936	0.3734	0.0792	49	0.22	148.00	0
148	Total S (6%)	0114	5.025	0.0700	4.936	0.3734	0.0792	49	0.24	148.00	0
148	Total S (6%)	0354	5.035	0.0100	4.936	0.3734	0.0792	49	0.27	148.99	0
148	Total S (6%)	0371	5.060	0.1200	4.936	0.3734	0.0792	49	0.33	148.00	0
148	Total S (6%)	0476	5.077	0.1092	4.936	0.3734	0.0792	49	0.38	148.01	0
148	Total S (6%)	0136	5.125	0.0100	4.936	0.3734	0.0792	49	0.51	148.00	0
148	Total S (6%)	0452	5.230	0.0400	4.936	0.3734	0.0792	49	0.79	148.99	0
148	Total S (6%)	0558	5.435‡	0.0700	4.936	0.3734	0.0792	49	1.34	148.99	0
148	Total S (6%)	0220	5.470‡	0.1600	4.936	0.3734	0.0792	49	1.43	148.99	0
148	Total S (6%)	0043	5.655‡	0.0500	4.936	0.3734	0.0792	49	1.93	148.07	0
148	Total S (6%)	0562	5.725‡	0.1500	4.936	0.3734	0.0792	49	2.11	148.99	0
148	Total S (6%)	0486	5.775‡	0.2100	4.936	0.3734	0.0792	49	2.25	148.07	0

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148	Total S (6%)	0515	5.812‡	0.2818	4.936	0.3734	0.0792	49	2.35	148.07	0
148	Total S (6%)	0169	5.825‡	0.0500	4.936	0.3734	0.0792	49	2.38	148.07	0
148	Total S (6%)	0537	5.915‡	0.1300	4.936	0.3734	0.0792	49	2.62	148.99	0
148	Total S (6%)	0539	5.940‡	0.0600	4.936	0.3734	0.0792	49	2.69	148.99	0
148	Total S (6%)	0527	6.561‡	0.0876	4.936	0.3734	0.0792	49	4.35	148.07	0
148	Total S (6%)	0523	4.993	0.7050	4.936	0.3734	0.0792	49	0.15	148.99	1
149	S - HNO3 soluble (%)	0423	4.523	0.0850	5.133	0.5540	0.1141	4	-1.10	149.04	0
149	S - HNO3 soluble (%)	0231	4.995	0.0300	5.133	0.5540	0.1141	4	-0.25	149.04	0
149	S - HNO3 soluble (%)	0524	5.155	0.2213	5.133	0.5540	0.1141	4	0.04	149.04	0
149	S - HNO3 soluble (%)	0518	5.860	0.1200	5.133	0.5540	0.1141	4	1.31	149.99	0
151	Acid Soluble As (ppm)	0550	1.545	0.3100	2.366	0.5676	0.2800	16	-1.45	151.00	0
151	Acid Soluble As (ppm)	0481	1.815	0.0300	2.366	0.5676	0.2800	16	-0.97	151.99	0
151	Acid Soluble As (ppm)	0506	1.910	0.0000	2.366	0.5676	0.2800	16	-0.80	151.99	0
151	Acid Soluble As (ppm)	0255	1.993	0.0740	2.366	0.5676	0.2800	16	-0.66	151.30	0
151	Acid Soluble As (ppm)	0405	2.000	0.0000	2.366	0.5676	0.2800	16	-0.65	151.99	0
151	Acid Soluble As (ppm)	0220	2.050	0.7000	2.366	0.5676	0.2800	16	-0.56	151.32	0
151	Acid Soluble As (ppm)	0136	2.180	0.0200	2.366	0.5676	0.2800	16	-0.33	151.33	0
151	Acid Soluble As (ppm)	0523	2.261	0.1680	2.366	0.5676	0.2800	16	-0.19	151.30	0
151	Acid Soluble As (ppm)	0524	2.267	0.0383	2.366	0.5676	0.2800	16	-0.17	151.30	0
151	Acid Soluble As (ppm)	0450	2.300	0.0000	2.366	0.5676	0.2800	16	-0.12	151.30	0
151	Acid Soluble As (ppm)	0037	2.590	0.0880	2.366	0.5676	0.2800	16	0.39	151.33	0
151	Acid Soluble As (ppm)	0415	2.700	0.0000	2.366	0.5676	0.2800	16	0.59	151.30	0
151	Acid Soluble As (ppm)	0515	2.935	2.590	2.366	0.5676	0.2800	16	1.00	151.34	0
151	Acid Soluble As (ppm)	0494	3.045	0.3300	2.366	0.5676	0.2800	16	1.20	151.33	0
151	Acid Soluble As (ppm)	0220	3.050	0.1000	2.366	0.5676	0.2800	16	1.20	151.99	0
151	Acid Soluble As (ppm)	0527	3.829	0.0311	2.366	0.5676	0.2800	16	2.58	151.33	0
151	Acid Soluble As (ppm)	0515	1.753	3.506	2.366	0.5676	0.2800	16		151.33	4
151	Acid Soluble As (ppm)	0368	< 0.4		2.366	0.5676	0.2800	16		151.34	5
151	Acid Soluble As (ppm)	0117	< 10		2.366	0.5676	0.2800	16		151.33	5
165	Acid Soluble B (%)	0524	0.1249	0.0019	0.1594	0.0160	0.0070	14	-2.15	165.99	0
165	Acid Soluble B (%)	0106	0.1426	0.0268	0.1594	0.0160	0.0070	14	-1.05	165.30	0
165	Acid Soluble B (%)	0423	0.1440	0.0020	0.1594	0.0160	0.0070	14	-0.96	165.99	0
165	Acid Soluble B (%)	0421	0.1457	0.0019	0.1594	0.0160	0.0070	14	-0.86	165.99	0
165	Acid Soluble B (%)	0444	0.1500	0.0000	0.1594	0.0160	0.0070	14	-0.58	165.30	0
165	Acid Soluble B (%)	0553	0.1550	0.0040	0.1594	0.0160	0.0070	14	-0.27	165.00	0
165	Acid Soluble B (%)	0354	0.1600	0.0000	0.1594	0.0160	0.0070	14	0.04	165.30	0
165	Acid Soluble B (%)	0546	0.1660	0.0006	0.1594	0.0160	0.0070	14	0.41	165.30	0
165	Acid Soluble B (%)	0494	0.1676	0.0049	0.1594	0.0160	0.0070	14	0.51	165.99	0
165	Acid Soluble B (%)	0527	0.1676	0.0035	0.1594	0.0160	0.0070	14	0.51	165.99	0
165	Acid Soluble B (%)	0368	0.1692	0.0063	0.1594	0.0160	0.0070	14	0.61	165.99	0
165	Acid Soluble B (%)	0389	0.1700	0.0000	0.1594	0.0160	0.0070	14	0.66	165.30	0
165	Acid Soluble B (%)	0472	0.1750	0.0100	0.1594	0.0160	0.0070	14	0.97	165.99	0
165	Acid Soluble B (%)	0515	0.2084	0.0360	0.1594	0.0160	0.0070	14	3.06	165.99	0
165	Acid Soluble B (%)	0552	0.4050	0.2700	0.1594	0.0160	0.0070	14	15.31	165.99	1
181	Acid Soluble Cd (ppm)	0481	0.6450	0.0100	1.095	0.3880	0.0812	19	-1.16	181.99	0
181	Acid Soluble Cd (ppm)	0444	0.6700	0.0600	1.095	0.3880	0.0812	19	-1.10	181.30	0
181	Acid Soluble Cd (ppm)	0524	0.6713	0.0031	1.095	0.3880	0.0812	19	-1.09	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 Cd (ppm)	0220	0.7000	0.0000	1.095	0.3880	0.0812	19	-1.02	181.32	0
181	Acid Soluble Cd (ppm)	0220	0.7500	0.1000	1.095	0.3880	0.0812	19	-0.89	181.99	0
181	Acid Soluble Cd (ppm)	0255	0.8560	0.0100	1.095	0.3880	0.0812	19	-0.62	181.30	0
181	Acid Soluble Cd (ppm)	0389	0.9200	0.0400	1.095	0.3880	0.0812	19	-0.45	181.30	0
181	Acid Soluble Cd (ppm)	0394	1.052	0.0770	1.095	0.3880	0.0812	19	-0.11	181.30	0
181	Acid Soluble Cd (ppm)	0136	1.090	0.0200	1.095	0.3880	0.0812	19	-0.01	181.33	0
181	Acid Soluble Cd (ppm)	0415	1.100	0.0000	1.095	0.3880	0.0812	19	0.01	181.30	0
181	Acid Soluble Cd (ppm)	0450	1.100	0.0000	1.095	0.3880	0.0812	19	0.01	181.30	0
181	Acid Soluble Cd (ppm)	0523	1.125	0.1010	1.095	0.3880	0.0812	19	0.07	181.30	0
181	Acid Soluble Cd (ppm)	0405	1.135	0.0300	1.095	0.3880	0.0812	19	0.10	181.99	0
181	Acid Soluble Cd (ppm)	0368	1.293	0.0379	1.095	0.3880	0.0812	19	0.51	181.34	0
181	Acid Soluble Cd (ppm)	0035	1.300	0.0000	1.095	0.3880	0.0812	19	0.53	181.30	0
181	Acid Soluble Cd (ppm)	0527	1.375	0.0066	1.095	0.3880	0.0812	19	0.72	181.33	0
181	Acid Soluble Cd (ppm)	0494	1.780	0.4800	1.095	0.3880	0.0812	19	1.76	181.33	0
181	Acid Soluble Cd (ppm)	0550	3.880	0.1000	1.095	0.3880	0.0812	19	7.18	181.00	0
181	Acid Soluble Cd (ppm)	0515	12.25	0.4670	1.095	0.3880	0.0812	19	28.76	181.34	0
181	Acid Soluble Cd (ppm)	0515	1.126	2.252	1.095	0.3880	0.0812	19		181.33	4
181	Acid Soluble Cd (ppm)	0117	< 5		1.095	0.3880	0.0812	19		181.33	5
190	Water Soluble Cl (%)	0553	0.6250	0.0300				1		190.00	0
191	Acid Soluble Cr (ppm)	0550	21.73	0.1500	58.42	14.02	4.148	19	-2.62	191.00	0
191	Acid Soluble Cr (ppm)	0389	39.35	2.170	58.42	14.02	4.148	19	-1.36	191.30	0
191	Acid Soluble Cr (ppm)	0136	43.86	2.420	58.42	14.02	4.148	19	-1.04	191.33	0
191	Acid Soluble Cr (ppm)	0444	43.92	3.910	58.42	14.02	4.148	19	-1.03	191.30	0
191	Acid Soluble Cr (ppm)	0035	45.85	11.70	58.42	14.02	4.148	19	-0.90	191.30	0
191	Acid Soluble Cr (ppm)	0524	48.38	1.588	58.42	14.02	4.148	19	-0.72	191.30	0
191	Acid Soluble Cr (ppm)	0394	53.25	3.900	58.42	14.02	4.148	19	-0.37	191.30	0
191	Acid Soluble Cr (ppm)	0368	58.87	2.420	58.42	14.02	4.148	19	0.03	191.34	0
191	Acid Soluble Cr (ppm)	0527	59.76	1.260	58.42	14.02	4.148	19	0.10	191.33	0
191	Acid Soluble Cr (ppm)	0481	60.25	2.500	58.42	14.02	4.148	19	0.13	191.99	0
191	Acid Soluble Cr (ppm)	0506	62.70	0.8000	58.42	14.02	4.148	19	0.31	191.99	0
191	Acid Soluble Cr (ppm)	0415	62.90	0.0000	58.42	14.02	4.148	19	0.32	191.30	0
191	Acid Soluble Cr (ppm)	0405	64.50	9.000	58.42	14.02	4.148	19	0.43	191.99	0
191	Acid Soluble Cr (ppm)	0515	65.21	5.263	58.42	14.02	4.148	19	0.48	191.34	0
191	Acid Soluble Cr (ppm)	0523	69.00	11.54	58.42	14.02	4.148	19	0.75	191.30	0
191	Acid Soluble Cr (ppm)	0494	69.00	3.400	58.42	14.02	4.148	19	0.75	191.33	0
191	Acid Soluble Cr (ppm)	0515	70.97	15.59	58.42	14.02	4.148	19	0.90	191.33	0
191	Acid Soluble Cr (ppm)	0037	75.38	1.204	58.42	14.02	4.148	19	1.21	191.33	0
191	Acid Soluble Cr (ppm)	0450	152.0	0.0000	58.42	14.02	4.148	19	6.67	191.30	0
202	Acid Soluble Co (ppm)	0389	6.070	0.2800	15.58	5.476	1.184	19	-1.74	202.30	0
202	Acid Soluble Co (ppm)	0136	8.295	0.2700	15.58	5.476	1.184	19	-1.33	202.33	0
202	Acid Soluble Co (ppm)	0506	9.915	0.3700	15.58	5.476	1.184	19	-1.03	202.99	0
202	Acid Soluble Co (ppm)	0368	9.950	1.645	15.58	5.476	1.184	19	-1.03	202.34	0
202	Acid Soluble Co (ppm)	0035	10.74	1.520	15.58	5.476	1.184	19	-0.88	202.30	0
202	Acid Soluble Co (ppm)	0524	12.11	0.1096	15.58	5.476	1.184	19	-0.63	202.30	0
202	Acid Soluble Co (ppm)	0220	14.00	2.000	15.58	5.476	1.184	19	-0.29	202.32	0
202	Acid Soluble Co (ppm)	0255	14.31	1.257	15.58	5.476	1.184	19	-0.23	202.99	0
202	Acid Soluble Co (ppm)	0423	15.70	0.5100	15.58	5.476	1.184	19	0.02	202.32	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				
202	Acid Soluble Co (ppm)	0527	15.93	0.2797	15.58	5.476	1.184	19	0.06	202.33	0
202	Acid Soluble Co (ppm)	0494	17.85	0.3000	15.58	5.476	1.184	19	0.41	202.33	0
202	Acid Soluble Co (ppm)	0405	18.15	0.1000	15.58	5.476	1.184	19	0.47	202.99	0
202	Acid Soluble Co (ppm)	0481	18.35	0.3000	15.58	5.476	1.184	19	0.51	202.99	0
202	Acid Soluble Co (ppm)	0037	18.49	0.9320	15.58	5.476	1.184	19	0.53	202.33	0
202	Acid Soluble Co (ppm)	0515	18.56	3.410	15.58	5.476	1.184	19	0.54	202.33	0
202	Acid Soluble Co (ppm)	0523	19.40	2.850	15.58	5.476	1.184	19	0.70	202.30	0
202	Acid Soluble Co (ppm)	0220	20.00	4.000	15.58	5.476	1.184	19	0.81	202.99	0
202	Acid Soluble Co (ppm)	0546	23.15	1.215	15.58	5.476	1.184	19	1.38	202.33	0
202	Acid Soluble Co (ppm)	0515	24.21	1.147	15.58	5.476	1.184	19	1.58	202.34	0
221	Acid Soluble Cu (%)	0043	0.0500	0.0000	0.0602	0.0050	0.0239	28	-2.03	221.33	0
221	Acid Soluble Cu (%)	0524	0.0528	0.0003	0.0602	0.0050	0.0239	28	-1.48	221.99	0
221	Acid Soluble Cu (%)	0433	0.0540	0.0040	0.0602	0.0050	0.0239	28	-1.23	221.30	0
221	Acid Soluble Cu (%)	0394	0.0549	0.0005	0.0602	0.0050	0.0239	28	-1.06	221.32	0
221	Acid Soluble Cu (%)	0035	0.0555	0.0070	0.0602	0.0050	0.0239	28	-0.93	221.30	0
221	Acid Soluble Cu (%)	0444	0.0560	0.0000	0.0602	0.0050	0.0239	28	-0.83	221.30	0
221	Acid Soluble Cu (%)	0234	0.0576	0.0005	0.0602	0.0050	0.0239	28	-0.53	221.30	0
221	Acid Soluble Cu (%)	0423	0.0580	0.0020	0.0602	0.0050	0.0239	28	-0.44	221.32	0
221	Acid Soluble Cu (%)	0481	0.0580	0.0060	0.0602	0.0050	0.0239	28	-0.44	221.99	0
221	Acid Soluble Cu (%)	0136	0.0580	0.0000	0.0602	0.0050	0.0239	28	-0.44	221.33	0
221	Acid Soluble Cu (%)	0515	0.0589	0.0039	0.0602	0.0050	0.0239	28	-0.27	221.99	0
221	Acid Soluble Cu (%)	0546	0.0593	0.0005	0.0602	0.0050	0.0239	28	-0.19	221.33	0
221	Acid Soluble Cu (%)	0405	0.0594	0.0021	0.0602	0.0050	0.0239	28	-0.17	221.99	0
221	Acid Soluble Cu (%)	0106	0.0595	0.0037	0.0602	0.0050	0.0239	28	-0.15	221.33	0
221	Acid Soluble Cu (%)	0472	0.0600	0.0000	0.0602	0.0050	0.0239	28	-0.04	221.30	0
221	Acid Soluble Cu (%)	0494	0.0600	0.0022	0.0602	0.0050	0.0239	28	-0.04	221.33	0
221	Acid Soluble Cu (%)	0515	0.0603	0.0115	0.0602	0.0050	0.0239	28	0.01	221.33	0
221	Acid Soluble Cu (%)	0553	0.0610	0.0000	0.0602	0.0050	0.0239	28	0.16	221.00	0
221	Acid Soluble Cu (%)	0550	0.0625	0.0005	0.0602	0.0050	0.0239	28	0.45	221.00	0
221	Acid Soluble Cu (%)	0095	0.0625	0.0102	0.0602	0.0050	0.0239	28	0.46	221.32	0
221	Acid Soluble Cu (%)	0527	0.0626	0.0005	0.0602	0.0050	0.0239	28	0.47	221.33	0
221	Acid Soluble Cu (%)	0506	0.0630	0.0020	0.0602	0.0050	0.0239	28	0.56	221.99	0
221	Acid Soluble Cu (%)	0220	0.0641	0.0057	0.0602	0.0050	0.0239	28	0.76	221.32	0
221	Acid Soluble Cu (%)	0368	0.0647	0.0011	0.0602	0.0050	0.0239	28	0.88	221.33	0
221	Acid Soluble Cu (%)	0523	0.0738	0.0195	0.0602	0.0050	0.0239	28	2.69	221.99	0
221	Acid Soluble Cu (%)	0402	0.0980	0.0000	0.0602	0.0050	0.0239	28	7.51	221.30	0
221	Acid Soluble Cu (%)	0552	0.1650	0.0900	0.0602	0.0050	0.0239	28	20.82	221.30	0
221	Acid Soluble Cu (%)	0389	0.3020	0.4960	0.0602	0.0050	0.0239	28	48.03	221.99	0
221	Acid Soluble Cu (%)	0354	0.5350	0.9500	0.0602	0.0050	0.0239	28	94.32	221.30	2
221	Acid Soluble Cu (%)	0255	0.0000	0.0000	0.0602	0.0050	0.0239	28		221.30	4
241	Acid Soluble Fe (%)	0472	0.7200	0.0000	0.8406	0.0671	0.0804	18	-1.80	241.30	0
241	Acid Soluble Fe (%)	0553	0.7475	0.0150	0.8406	0.0671	0.0804	18	-1.39	241.00	0
241	Acid Soluble Fe (%)	0035	0.7610	0.1360	0.8406	0.0671	0.0804	18	-1.19	241.30	0
241	Acid Soluble Fe (%)	0354	0.7900	0.7800	0.8406	0.0671	0.0804	18	-0.75	241.30	0
241	Acid Soluble Fe (%)	0515	0.7907	0.0251	0.8406	0.0671	0.0804	18	-0.74	241.99	0
241	Acid Soluble Fe (%)	0524	0.8129	0.0480	0.8406	0.0671	0.0804	18	-0.41	241.99	0
241	Acid Soluble Fe (%)	0423	0.8190	0.0080	0.8406	0.0671	0.0804	18	-0.32	241.32	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				
241	Acid Soluble Fe (%)	0494	0.8343	0.0028	0.8406	0.0671	0.0804	18	-0.09	241.33	0
241	Acid Soluble Fe (%)	0546	0.8367	0.0018	0.8406	0.0671	0.0804	18	-0.06	241.33	0
241	Acid Soluble Fe (%)	0389	0.8500	0.0000	0.8406	0.0671	0.0804	18	0.14	241.99	0
241	Acid Soluble Fe (%)	0515	0.8591	0.1393	0.8406	0.0671	0.0804	18	0.27	241.33	0
241	Acid Soluble Fe (%)	0106	0.8700	0.0067	0.8406	0.0671	0.0804	18	0.44	241.33	0
241	Acid Soluble Fe (%)	0368	0.8740	0.0100	0.8406	0.0671	0.0804	18	0.50	241.33	0
241	Acid Soluble Fe (%)	0535	0.8900	0.0200	0.8406	0.0671	0.0804	18	0.74	241.00	0
241	Acid Soluble Fe (%)	0539	0.8900	0.0200	0.8406	0.0671	0.0804	18	0.74	241.00	0
241	Acid Soluble Fe (%)	0444	0.9000	0.0000	0.8406	0.0671	0.0804	18	0.88	241.30	0
241	Acid Soluble Fe (%)	0527	0.9251	0.0165	0.8406	0.0671	0.0804	18	1.26	241.33	0
241	Acid Soluble Fe (%)	0523	0.9973	0.2185	0.8406	0.0671	0.0804	18	2.33	241.99	0
241	Acid Soluble Fe (%)	0552	1.290	1.020	0.8406	0.0671	0.0804	18	6.69	241.30	1
251	Acid Soluble Pb (ppm)	0506	5.740	0.0400	10.57	3.453	0.7192	21	-1.40	251.99	0
251	Acid Soluble Pb (ppm)	0481	5.865	0.0700	10.57	3.453	0.7192	21	-1.36	251.99	0
251	Acid Soluble Pb (ppm)	0524	6.135	0.1674	10.57	3.453	0.7192	21	-1.28	251.30	0
251	Acid Soluble Pb (ppm)	0444	6.660	0.5600	10.57	3.453	0.7192	21	-1.13	251.30	0
251	Acid Soluble Pb (ppm)	0255	7.579	0.8650	10.57	3.453	0.7192	21	-0.87	251.30	0
251	Acid Soluble Pb (ppm)	0394	8.593	0.3250	10.57	3.453	0.7192	21	-0.57	251.30	0
251	Acid Soluble Pb (ppm)	0389	9.115	0.1500	10.57	3.453	0.7192	21	-0.42	251.30	0
251	Acid Soluble Pb (ppm)	0415	9.300	0.0000	10.57	3.453	0.7192	21	-0.37	251.30	0
251	Acid Soluble Pb (ppm)	0136	10.25	0.5000	10.57	3.453	0.7192	21	-0.09	251.33	0
251	Acid Soluble Pb (ppm)	0523	10.77	0.4700	10.57	3.453	0.7192	21	0.06	251.30	0
251	Acid Soluble Pb (ppm)	0405	11.00	0.0000	10.57	3.453	0.7192	21	0.12	251.99	0
251	Acid Soluble Pb (ppm)	0037	11.32	0.6170	10.57	3.453	0.7192	21	0.22	251.33	0
251	Acid Soluble Pb (ppm)	0117	11.42	0.7160	10.57	3.453	0.7192	21	0.25	251.33	0
251	Acid Soluble Pb (ppm)	0220	11.75	0.5000	10.57	3.453	0.7192	21	0.34	251.32	0
251	Acid Soluble Pb (ppm)	0450	12.35	0.1000	10.57	3.453	0.7192	21	0.52	251.30	0
251	Acid Soluble Pb (ppm)	0220	12.50	1.000	10.57	3.453	0.7192	21	0.56	251.99	0
251	Acid Soluble Pb (ppm)	0527	12.50	0.2996	10.57	3.453	0.7192	21	0.56	251.33	0
251	Acid Soluble Pb (ppm)	0515	13.74	4.684	10.57	3.453	0.7192	21	0.92	251.33	0
251	Acid Soluble Pb (ppm)	0035	13.90	0.2000	10.57	3.453	0.7192	21	0.96	251.30	0
251	Acid Soluble Pb (ppm)	0494	17.30	1.000	10.57	3.453	0.7192	21	1.95	251.33	0
251	Acid Soluble Pb (ppm)	0550	46.50	2.840	10.57	3.453	0.7192	21	10.40	251.00	0
251	Acid Soluble Pb (ppm)	0515	22.85	26.86	10.57	3.453	0.7192	21	3.56	251.34	1
251	Acid Soluble Pb (ppm)	0368	< 0.8		10.57	3.453	0.7192	21		251.34	5
261	Acid Soluble Mn (%)	0515	0.3362	0.0386	0.3876	0.0345	0.0313	19	-1.49	261.35	0
261	Acid Soluble Mn (%)	0106	0.3495	0.0174	0.3876	0.0345	0.0313	19	-1.10	261.35	0
261	Acid Soluble Mn (%)	0553	0.3545	0.0150	0.3876	0.0345	0.0313	19	-0.96	261.00	0
261	Acid Soluble Mn (%)	0035	0.3545	0.0570	0.3876	0.0345	0.0313	19	-0.96	261.30	0
261	Acid Soluble Mn (%)	0444	0.3550	0.0100	0.3876	0.0345	0.0313	19	-0.94	261.30	0
261	Acid Soluble Mn (%)	0472	0.3700	0.0000	0.3876	0.0345	0.0313	19	-0.51	261.30	0
261	Acid Soluble Mn (%)	0546	0.3715	0.0034	0.3876	0.0345	0.0313	19	-0.47	261.35	0
261	Acid Soluble Mn (%)	0535	0.3850	0.0100	0.3876	0.0345	0.0313	19	-0.07	261.12	0
261	Acid Soluble Mn (%)	0494	0.3865	0.0090	0.3876	0.0345	0.0313	19	-0.03	261.35	0
261	Acid Soluble Mn (%)	0539	0.3900	0.0400	0.3876	0.0345	0.0313	19	0.07	261.12	0
261	Acid Soluble Mn (%)	0389	0.3900	0.0000	0.3876	0.0345	0.0313	19	0.07	261.99	0
261	Acid Soluble Mn (%)	0524	0.3928	0.0041	0.3876	0.0345	0.0313	19	0.15	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 Mn (%)	0354	0.3950	0.0100	0.3876	0.0345	0.0313	19	0.22	261.30	0
261	Acid Soluble Mn (%)	0423	0.3965	0.0070	0.3876	0.0345	0.0313	19	0.26	261.34	0
261	Acid Soluble Mn (%)	0368	0.4098	0.0046	0.3876	0.0345	0.0313	19	0.64	261.35	0
261	Acid Soluble Mn (%)	0515	0.4175	0.1316	0.3876	0.0345	0.0313	19	0.87	261.99	0
261	Acid Soluble Mn (%)	0527	0.4307	0.0004	0.3876	0.0345	0.0313	19	1.25	261.35	0
261	Acid Soluble Mn (%)	0523	0.4598	0.0875	0.3876	0.0345	0.0313	19	2.09	261.99	0
261	Acid Soluble Mn (%)	0552	0.5050	0.1500	0.3876	0.0345	0.0313	19	3.40	261.32	0
281	Acid Soluble Hg (ppm)	0550	0.0601	0.0192	0.1175	0.0558	0.0099	6	-0.92	281.99	0
281	Acid Soluble Hg (ppm)	0524	0.0837	0.0004	0.1175	0.0558	0.0099	6	-0.54	281.99	0
281	Acid Soluble Hg (ppm)	0405	0.1050	0.0100	0.1175	0.0558	0.0099	6	-0.20	281.99	0
281	Acid Soluble Hg (ppm)	0415	0.1150	0.0100	0.1175	0.0558	0.0099	6	-0.04	281.99	0
281	Acid Soluble Hg (ppm)	0220	0.1400	0.0200	0.1175	0.0558	0.0099	6	0.36	281.99	0
281	Acid Soluble Hg (ppm)	0415	0.5000	0.0000	0.1175	0.0558	0.0099	6	6.10	281.30	0
281	Acid Soluble Hg (ppm)	0515	0.0000	0.0000	0.1175	0.0558	0.0099	6		281.30	4
281	Acid Soluble Hg (ppm)	0527	< 0.001		0.1175	0.0558	0.0099	6		281.30	5
281	Acid Soluble Hg (ppm)	0481	< 0.5		0.1175	0.0558	0.0099	6		281.00	5
281	Acid Soluble Hg (ppm)	0450	< 0.5		0.1175	0.0558	0.0099	6		281.30	5
289	Acid Soluble Mo (ppm)	0515	3.468	0.6121	6.544	2.173	0.8752	13	-1.42	289.33	0
289	Acid Soluble Mo (ppm)	0524	3.893	0.0958	6.544	2.173	0.8752	13	-1.22	289.30	0
289	Acid Soluble Mo (ppm)	0423	4.850	0.2200	6.544	2.173	0.8752	13	-0.78	289.33	0
289	Acid Soluble Mo (ppm)	0035	5.460	0.4800	6.544	2.173	0.8752	13	-0.50	289.30	0
289	Acid Soluble Mo (ppm)	0494	5.925	0.2100	6.544	2.173	0.8752	13	-0.28	289.33	0
289	Acid Soluble Mo (ppm)	0136	5.985	0.6900	6.544	2.173	0.8752	13	-0.26	289.33	0
289	Acid Soluble Mo (ppm)	0546	6.093	2.173	6.544	2.173	0.8752	13	-0.21	289.33	0
289	Acid Soluble Mo (ppm)	0037	7.108	0.9930	6.544	2.173	0.8752	13	0.26	289.33	0
289	Acid Soluble Mo (ppm)	0527	7.232	0.4364	6.544	2.173	0.8752	13	0.32	289.33	0
289	Acid Soluble Mo (ppm)	0405	7.855	0.3300	6.544	2.173	0.8752	13	0.60	289.99	0
289	Acid Soluble Mo (ppm)	0368	8.402	0.6731	6.544	2.173	0.8752	13	0.86	289.34	0
289	Acid Soluble Mo (ppm)	0106	9.000	4.000	6.544	2.173	0.8752	13	1.13	289.33	0
289	Acid Soluble Mo (ppm)	0255	23.55	0.4650	6.544	2.173	0.8752	13	7.83	289.30	0
289	Acid Soluble Mo (ppm)	0515	5.728	9.471	6.544	2.173	0.8752	13	-0.38	289.34	1
289	Acid Soluble Mo (ppm)	0481	< 50		6.544	2.173	0.8752	13		289.99	5
291	Acid Soluble Ni (ppm)	0550	25.63	0.8000	40.04	8.949	2.186	19	-1.61	291.00	0
291	Acid Soluble Ni (ppm)	0524	26.26	1.781	40.04	8.949	2.186	19	-1.54	291.30	0
291	Acid Soluble Ni (ppm)	0444	28.24	0.1400	40.04	8.949	2.186	19	-1.32	291.30	0
291	Acid Soluble Ni (ppm)	0035	33.10	4.400	40.04	8.949	2.186	19	-0.78	291.30	0
291	Acid Soluble Ni (ppm)	0394	33.60	4.200	40.04	8.949	2.186	19	-0.72	291.30	0
291	Acid Soluble Ni (ppm)	0255	33.67	3.241	40.04	8.949	2.186	19	-0.71	291.99	0
291	Acid Soluble Ni (ppm)	0415	36.60	0.0000	40.04	8.949	2.186	19	-0.38	291.30	0
291	Acid Soluble Ni (ppm)	0136	38.55	0.3000	40.04	8.949	2.186	19	-0.17	291.33	0
291	Acid Soluble Ni (ppm)	0405	42.50	5.000	40.04	8.949	2.186	19	0.27	291.99	0
291	Acid Soluble Ni (ppm)	0481	42.80	0.8000	40.04	8.949	2.186	19	0.31	291.99	0
291	Acid Soluble Ni (ppm)	0523	43.03	5.130	40.04	8.949	2.186	19	0.33	291.30	0
291	Acid Soluble Ni (ppm)	0527	43.77	0.1441	40.04	8.949	2.186	19	0.42	291.33	0
291	Acid Soluble Ni (ppm)	0494	44.10	0.8000	40.04	8.949	2.186	19	0.45	291.33	0
291	Acid Soluble Ni (ppm)	0506	45.00	1.000	40.04	8.949	2.186	19	0.55	291.99	0
291	Acid Soluble Ni (ppm)	0515	45.49	6.544	40.04	8.949	2.186	19	0.61	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 Ni (ppm)	0368	46.00	0.4870	40.04	8.949	2.186	19	0.67	291.34	0
291	Acid Soluble Ni (ppm)	0037	48.77	2.998	40.04	8.949	2.186	19	0.98	291.33	0
291	Acid Soluble Ni (ppm)	0117	48.87	0.7690	40.04	8.949	2.186	19	0.99	291.33	0
291	Acid Soluble Ni (ppm)	0450	76.50	3.000	40.04	8.949	2.186	19	4.07	291.30	0
291	Acid Soluble Ni (ppm)	0515	45.85	11.86	40.04	8.949	2.186	19	0.65	291.34	1
301	Acid Soluble Se (ppm)	0220	0.4500	0.1000	1.621	1.466	0.3817	7	-0.80	301.32	0
301	Acid Soluble Se (ppm)	0220	0.5000	0.0000	1.621	1.466	0.3817	7	-0.76	301.99	0
301	Acid Soluble Se (ppm)	0550	0.7850	0.4700	1.621	1.466	0.3817	7	-0.57	301.00	0
301	Acid Soluble Se (ppm)	0405	1.000	0.0000	1.621	1.466	0.3817	7	-0.42	301.99	0
301	Acid Soluble Se (ppm)	0523	2.021	0.1090	1.621	1.466	0.3817	7	0.27	301.30	0
301	Acid Soluble Se (ppm)	0037	2.770	0.0270	1.621	1.466	0.3817	7	0.78	301.33	0
301	Acid Soluble Se (ppm)	0255	4.745	1.966	1.621	1.466	0.3817	7	2.13	301.99	0
301	Acid Soluble Se (ppm)	0515	0.0024	0.0048	1.621	1.466	0.3817	7		301.33	4
301	Acid Soluble Se (ppm)	0515	8.201	16.40	1.621	1.466	0.3817	7		301.34	4
301	Acid Soluble Se (ppm)	0527	< 0.001		1.621	1.466	0.3817	7		301.33	5
301	Acid Soluble Se (ppm)	0481	< 0.15		1.621	1.466	0.3817	7		301.99	5
301	Acid Soluble Se (ppm)	0494	< 0.95		1.621	1.466	0.3817	7		301.33	5
301	Acid Soluble Se (ppm)	0368	< 1.4		1.621	1.466	0.3817	7		301.34	5
311	Sodium (%)	0035	0.1860	0.0200	0.2090	0.0207	0.0069	7	-1.00	311.33	0
311	Sodium (%)	0521	0.1918	0.0000	0.2090	0.0207	0.0069	7	-0.75	311.32	0
311	Sodium (%)	0423	0.1970	0.0040	0.2090	0.0207	0.0069	7	-0.52	311.33	0
311	Sodium (%)	0553	0.2100	0.0040	0.2090	0.0207	0.0069	7	0.04	311.00	0
311	Sodium (%)	0368	0.2177	0.0084	0.2090	0.0207	0.0069	7	0.38	311.33	0
311	Sodium (%)	0354	0.2250	0.0100	0.2090	0.0207	0.0069	7	0.70	311.99	0
311	Sodium (%)	0527	0.2354	0.0022	0.2090	0.0207	0.0069	7	1.15	311.33	0
321	Acid Soluble Zn (%)	0524	0.5169	0.0015	0.6650	0.0569	0.0219	31	-2.60	321.99	0
321	Acid Soluble Zn (%)	0394	0.5923	0.0032	0.6650	0.0569	0.0219	31	-1.28	321.32	0
321	Acid Soluble Zn (%)	0472	0.6000	0.0000	0.6650	0.0569	0.0219	31	-1.14	321.30	0
321	Acid Soluble Zn (%)	0402	0.6050	0.0100	0.6650	0.0569	0.0219	31	-1.05	321.30	0
321	Acid Soluble Zn (%)	0433	0.6090	0.0200	0.6650	0.0569	0.0219	31	-0.98	321.30	0
321	Acid Soluble Zn (%)	0043	0.6150	0.0100	0.6650	0.0569	0.0219	31	-0.88	321.33	0
321	Acid Soluble Zn (%)	0405	0.6192	0.0013	0.6650	0.0569	0.0219	31	-0.81	321.99	0
321	Acid Soluble Zn (%)	0106	0.6327	0.0653	0.6650	0.0569	0.0219	31	-0.57	321.33	0
321	Acid Soluble Zn (%)	0035	0.6340	0.0740	0.6650	0.0569	0.0219	31	-0.55	321.30	0
321	Acid Soluble Zn (%)	0535	0.6350	0.0100	0.6650	0.0569	0.0219	31	-0.53	321.00	0
321	Acid Soluble Zn (%)	0389	0.6350	0.0100	0.6650	0.0569	0.0219	31	-0.53	321.99	0
321	Acid Soluble Zn (%)	0481	0.6400	0.0200	0.6650	0.0569	0.0219	31	-0.44	321.99	0
321	Acid Soluble Zn (%)	0368	0.6451	0.0112	0.6650	0.0569	0.0219	31	-0.35	321.33	0
321	Acid Soluble Zn (%)	0494	0.6492	0.0387	0.6650	0.0569	0.0219	31	-0.28	321.33	0
321	Acid Soluble Zn (%)	0539	0.6500	0.0400	0.6650	0.0569	0.0219	31	-0.26	321.00	0
321	Acid Soluble Zn (%)	0136	0.6550	0.0100	0.6650	0.0569	0.0219	31	-0.18	321.33	0
321	Acid Soluble Zn (%)	0421	0.6561	0.0071	0.6650	0.0569	0.0219	31	-0.16	321.33	0
321	Acid Soluble Zn (%)	0234	0.6617	0.0079	0.6650	0.0569	0.0219	31	-0.06	321.30	0
321	Acid Soluble Zn (%)	0354	0.6800	0.0200	0.6650	0.0569	0.0219	31	0.26	321.30	0
321	Acid Soluble Zn (%)	0037	0.6843	0.0022	0.6650	0.0569	0.0219	31	0.34	321.33	0
321	Acid Soluble Zn (%)	0546	0.6846	0.0338	0.6650	0.0569	0.0219	31	0.34	321.33	0
321	Acid Soluble Zn (%)	0444	0.7000	0.0200	0.6650	0.0569	0.0219	31	0.62	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 Zn (%)	0523	0.7048	0.0795	0.6650	0.0569	0.0219	31	0.70	321.99	0
321	Acid Soluble Zn (%)	0527	0.7061	0.0017	0.6650	0.0569	0.0219	31	0.72	321.33	0
321	Acid Soluble Zn (%)	0550	0.7065	0.0190	0.6650	0.0569	0.0219	31	0.73	321.00	0
321	Acid Soluble Zn (%)	0095	0.7072	0.0863	0.6650	0.0569	0.0219	31	0.74	321.32	0
321	Acid Soluble Zn (%)	0506	0.7275	0.0050	0.6650	0.0569	0.0219	31	1.10	321.99	0
321	Acid Soluble Zn (%)	0255	0.7495	0.0110	0.6650	0.0569	0.0219	31	1.49	321.30	0
321	Acid Soluble Zn (%)	0553	0.7550	0.0400	0.6650	0.0569	0.0219	31	1.58	321.00	0
321	Acid Soluble Zn (%)	0515	0.8036	0.0067	0.6650	0.0569	0.0219	31	2.44	321.99	0
321	Acid Soluble Zn (%)	0423	0.8580	0.0140	0.6650	0.0569	0.0219	31	3.39	321.32	0
321	Acid Soluble Zn (%)	0515	0.7822	0.3001	0.6650	0.0569	0.0219	31	2.06	321.33	1
321	Acid Soluble Zn (%)	0552	0.8850	0.4300	0.6650	0.0569	0.0219	31	3.87	321.30	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, 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.