



Analyte PT For All Labs

Magruder Fertilizer Proficiency Testing Program

# Analytes: 31

Sample # 250511

Regular PT Scheme

# Labs Reporting: 69

Grade 5-0-20

Statistical Summary

Issue Date : 06/30/2025

Analyte Code	Analyte Sample # 250511	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Analyte Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	Analyte IA Ratio	Average Range (R-bar)	Hornitz %RSD
001	Ammoniacal N (%)	3	3	0.0625	0.0202	0.0625		0.0202	0.0146	32.25%		0.0068	6.07%
002	Nitrate N (%)	1		0.1100									
005	Urea N (%)	13	12	3.544	0.5104	3.380		0.2410	0.0870	7.13%		0.0369	3.33%
007	Urea (%)	1		3.250									
010	Total N (5%)	63	61	5.584	1.091	5.453	0.5145	0.1312	0.0210	2.41%	0.59	0.0649	3.10%
020	Total P2O5 (%)	4	2	0.0052	0.0055	0.0054		0.0064	0.0057	119.06%		0.0001	8.78%
041	Direct Available P2O5 (%)	1		0.0100									
050	Soluble K2O (20%)	68	67	20.02	0.8186	19.94	1.0780	0.4707	0.0719	2.36%	1.02	0.2009	2.24%
101	Acid Soluble Ca (%)	3	1	0.0650	0.0996	19.94	1.0000	0.4707	0.5883	2.36%	1.10	0.0000	2.24%
121	Acid Soluble Mg (%)	5	3	0.0106	0.0084	0.0127	0.2006	0.0110	0.0079	86.28%	0.13	0.0000	7.72%
143	Elemental S (%)	3	3	13.65	0.2552	13.65		0.2552	0.1842	1.87%		0.7275	2.70%
145	Sulfate S, HCl soluble (%)	1		13.48									
146	Total S in Liquid (13%)	7	7	13.34	0.4588	13.34	0.8670	0.5203	0.2458	3.90%	1.40	0.2000	2.71%
148	Total S (13%)	35	33	13.40	1.167	13.23	0.8615	0.3000	0.0653	2.27%	0.81	0.1705	2.71%
149	S - HNO3 soluble (%)	4	4	12.41	1.016	12.41		1.016	0.6348	8.18%		0.0891	2.74%
151	Acid Soluble As (ppm)	15	5	1.731	2.813	0.8338		0.7849	0.4388	94.14%		0.6928	16.44%
165	Acid Soluble B (%)	3	1	0.0040	0.0052	0.8338	0.1281	0.7849	0.9811	94.14%	14.28	0.0001	4.11%
181	Acid Soluble Cd (ppm)	16	4	0.8890	2.450	0.2186		0.1666	0.1041	76.21%		0.0217	20.11%
191	Acid Soluble Cr (ppm)	16	6	2.425	5.288	0.1997		0.1904	0.0972	95.33%		0.1313	20.39%
202	Acid Soluble Co (ppm)	15	5	1.689	3.030	1.965	1.5894	3.280	1.833	166.93%	4.81	0.7947	14.45%
221	Acid Soluble Cu (%)	14	3	0.0343	0.0829	0.0012	0.0051	0.0008	0.0006	65.47%	0.35	0.0000	11.05%
241	Acid Soluble Fe (%)	4	1	0.0030	0.0047	0.0012	0.0051	0.0008	0.0010	65.47%	0.35	0.0000	11.05%
251	Acid Soluble Pb (ppm)	16	4	1.844	2.795	0.9444		0.8551	0.5344	90.54%		0.4281	16.14%
261	Acid Soluble Mn (%)	3	1	0.0102	0.0102	0.9444	0.0994	0.8551	1.069	90.54%	20.04	0.0100	4.03%
281	Acid Soluble Hg (ppm)	8	1	0.4833	0.7515	0.9444		0.8551	1.069	90.54%		0.0100	16.14%
289	Acid Soluble Mo (ppm)	14	2	0.8718	1.135	0.5238	1.1571	0.6734	0.5953	128.57%	1.36	0.0082	17.63%
291	Acid Soluble Ni (ppm)	15	6	2.321	3.876	0.5033		0.5483	0.2798	108.93%		0.2703	17.74%
301	Acid Soluble Se (ppm)	15	4	2.180	3.553	0.9485		1.091	0.6818	115.02%		0.4488	16.12%
311	Sodium (%)	4	3	0.0388	0.0236	0.0500	0.0100	0.0087	0.0063	17.35%	2.02	0.0099	6.28%

Analyte Code	Analyte Sample # 250511	# 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
321	Acid Soluble Zn (%)	15	2	0.3572	1.286	0.0023	0.0052	0.0031	0.0028	135.27%	1.39	0.0010	9.98%
325	Water Soluble Zn (%)	1		0.0000									

The Analyte IA Ratio =  $2.33 * \text{Robust SD} / \text{IA at the Analyte Assigned Value}$ . IA ratios of 1 and less indicate participant data dispersion is as good or less than the IA. Red indicates the IA ratio is significantly greater than 1, Orange indicates marginally greater than 1, Green indicates IA ratio is not significantly greater than 1 and Grey indicates < 6 labs reporting. The Horwitz %RSD is calculated using the Thompson Modification, Analyst,2000,125,385-386.



Analyte PT For All Labs

### Magruder Fertilizer Proficiency Testing Program

# Analytes: 31

Sample # 250511

Regular PT Scheme

# Labs Reporting: 69

Grade 5-0-20

Lab Values

Issue Date : 06/30/2025

Analyte Group	Analyte (Units)	Lab Code	Lab Data		*Robust Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Rob R-bar				
001	Ammoniacal N (%)	0547	0.0460	0.0100	0.0625	0.0202	0.0068	3	-0.82	001.10	0
001	Ammoniacal N (%)	0524	0.0566	0.0004	0.0625	0.0202	0.0068	3	-0.29	001.99	0
001	Ammoniacal N (%)	0452	0.0850	0.0100	0.0625	0.0202	0.0068	3	1.11	001.10	0
002	Nitrate N (%)	0452	0.1100	0.0000				1		002.99	0
005	Urea N (%)	0545	3.110	0.0600	3.380	0.2410	0.0369	12	-1.12	005.99	0
005	Urea N (%)	0559	3.185	0.0100	3.380	0.2410	0.0369	12	-0.81	005.99	0
005	Urea N (%)	0653	3.185	0.0100	3.380	0.2410	0.0369	12	-0.81	005.99	0
005	Urea N (%)	0136	3.250	0.1000	3.380	0.2410	0.0369	12	-0.54	005.00	0
005	Urea N (%)	0029	3.285	0.0100	3.380	0.2410	0.0369	12	-0.39	005.99	0
005	Urea N (%)	0538	3.305	0.0300	3.380	0.2410	0.0369	12	-0.31	005.99	0
005	Urea N (%)	0547	3.335	0.0300	3.380	0.2410	0.0369	12	-0.19	005.99	0
005	Urea N (%)	0389	3.385	0.0100	3.380	0.2410	0.0369	12	0.02	005.00	0
005	Urea N (%)	0027	3.430	0.1000	3.380	0.2410	0.0369	12	0.21	005.99	0
005	Urea N (%)	0394	3.605	0.0010	3.380	0.2410	0.0369	12	0.94	005.10	0
005	Urea N (%)	0524	3.870	0.0500	3.380	0.2410	0.0369	12	2.03	005.99	0
005	Urea N (%)	0476	4.877	0.0506	3.380	0.2410	0.0369	12	6.21	005.99	0
005	Urea N (%)	0368	4.251	0.2932	3.380	0.2410	0.0369	12	3.61	005.00	1
007	Urea (%)	0220	3.250	0.0200				1		007.20	0
010	Total N (5%)	0548	4.780†	0.0400	5.453	0.1312	0.0649	61	-5.13	010.11	0
010	Total N (5%)	0389	4.885†	0.2300	5.453	0.1312	0.0649	61	-4.33	010.60	0
010	Total N (5%)	0538	5.005	0.0300	5.453	0.1312	0.0649	61	-3.42	010.99	0
010	Total N (5%)	0423	5.125	0.0100	5.453	0.1312	0.0649	61	-2.50	010.60	0
010	Total N (5%)	0498	5.150	0.3000	5.453	0.1312	0.0649	61	-2.31	010.12	0
010	Total N (5%)	0602	5.165	0.0300	5.453	0.1312	0.0649	61	-2.20	010.12	0
010	Total N (5%)	0602	5.165	0.0300	5.453	0.1312	0.0649	61	-2.20	010.99	0
010	Total N (5%)	0605	5.265	0.0700	5.453	0.1312	0.0649	61	-1.44	010.99	0
010	Total N (5%)	0577	5.270	0.0600	5.453	0.1312	0.0649	61	-1.40	010.99	0
010	Total N (5%)	0234	5.280	0.0400	5.453	0.1312	0.0649	61	-1.32	010.60	0
010	Total N (5%)	0136	5.300	0.6000	5.453	0.1312	0.0649	61	-1.17	010.60	0
010	Total N (5%)	0521	5.340	0.0000	5.453	0.1312	0.0649	61	-0.86	010.60	0
010	Total N (5%)	0042	5.345	0.0900	5.453	0.1312	0.0649	61	-0.83	010.60	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		*Robust Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Rob R-bar				
010	Total N (5%)	0034	5.359	0.1971	5.453	0.1312	0.0649	61	-0.72	010.60	0
010	Total N (5%)	0055	5.360	0.2100	5.453	0.1312	0.0649	61	-0.71	010.60	0
010	Total N (5%)	0527	5.375	0.0300	5.453	0.1312	0.0649	61	-0.60	010.60	0
010	Total N (5%)	0543	5.387	0.0010	5.453	0.1312	0.0649	61	-0.51	010.60	0
010	Total N (5%)	0572	5.395	0.1100	5.453	0.1312	0.0649	61	-0.45	010.60	0
010	Total N (5%)	0542	5.415	0.1100	5.453	0.1312	0.0649	61	-0.29	010.60	0
010	Total N (5%)	0513	5.425	0.0100	5.453	0.1312	0.0649	61	-0.22	010.99	0
010	Total N (5%)	0169	5.430	0.0200	5.453	0.1312	0.0649	61	-0.18	010.60	0
010	Total N (5%)	0451	5.438	0.1000	5.453	0.1312	0.0649	61	-0.12	010.60	0
010	Total N (5%)	0023	5.440	0.2570	5.453	0.1312	0.0649	61	-0.11	010.60	0
010	Total N (5%)	0117	5.440	0.0200	5.453	0.1312	0.0649	61	-0.10	010.12	0
010	Total N (5%)	0025	5.440	0.1200	5.453	0.1312	0.0649	61	-0.10	010.60	0
010	Total N (5%)	0360	5.450	0.0800	5.453	0.1312	0.0649	61	-0.03	010.60	0
010	Total N (5%)	0394	5.455	0.0100	5.453	0.1312	0.0649	61	0.01	010.99	0
010	Total N (5%)	0472	5.465	0.0100	5.453	0.1312	0.0649	61	0.09	010.60	0
010	Total N (5%)	0049	5.470	0.0000	5.453	0.1312	0.0649	61	0.13	010.60	0
010	Total N (5%)	0220	5.470	0.0000	5.453	0.1312	0.0649	61	0.13	010.60	0
010	Total N (5%)	0452	5.470	0.0000	5.453	0.1312	0.0649	61	0.13	010.60	0
010	Total N (5%)	0307	5.480	0.0000	5.453	0.1312	0.0649	61	0.20	010.60	0
010	Total N (5%)	0233	5.485	0.0900	5.453	0.1312	0.0649	61	0.24	010.60	0
010	Total N (5%)	0177	5.490	0.1160	5.453	0.1312	0.0649	61	0.28	010.60	0
010	Total N (5%)	0524	5.491	0.3215	5.453	0.1312	0.0649	61	0.29	010.99	0
010	Total N (5%)	0368	5.497	0.0430	5.453	0.1312	0.0649	61	0.33	010.60	0
010	Total N (5%)	0040	5.500	0.0000	5.453	0.1312	0.0649	61	0.36	010.60	0
010	Total N (5%)	0422	5.500	0.0000	5.453	0.1312	0.0649	61	0.36	010.60	0
010	Total N (5%)	0615	5.500	0.2000	5.453	0.1312	0.0649	61	0.36	010.99	0
010	Total N (5%)	0324	5.505	0.0900	5.453	0.1312	0.0649	61	0.39	010.60	0
010	Total N (5%)	0043	5.505	0.0500	5.453	0.1312	0.0649	61	0.39	010.60	0
010	Total N (5%)	0559	5.515	0.0100	5.453	0.1312	0.0649	61	0.47	010.99	0
010	Total N (5%)	0653	5.515	0.0100	5.453	0.1312	0.0649	61	0.47	010.99	0
010	Total N (5%)	0095	5.520	0.0600	5.453	0.1312	0.0649	61	0.51	010.60	0
010	Total N (5%)	0231	5.520	0.0400	5.453	0.1312	0.0649	61	0.51	010.60	0
010	Total N (5%)	0377	5.520	0.0800	5.453	0.1312	0.0649	61	0.51	010.60	0
010	Total N (5%)	0405	5.520	0.0000	5.453	0.1312	0.0649	61	0.51	010.60	0
010	Total N (5%)	0007	5.525	0.0500	5.453	0.1312	0.0649	61	0.55	010.60	0
010	Total N (5%)	0027	5.530	0.0200	5.453	0.1312	0.0649	61	0.58	010.60	0
010	Total N (5%)	0102	5.530	0.0600	5.453	0.1312	0.0649	61	0.58	010.60	0
010	Total N (5%)	0029	5.553	0.1320	5.453	0.1312	0.0649	61	0.76	010.60	0
010	Total N (5%)	0563	5.570	0.0400	5.453	0.1312	0.0649	61	0.89	010.12	0
010	Total N (5%)	0106	5.575	0.0500	5.453	0.1312	0.0649	61	0.93	010.60	0
010	Total N (5%)	0309	5.600	0.0600	5.453	0.1312	0.0649	61	1.12	010.11	0
010	Total N (5%)	0481	5.605	0.0300	5.453	0.1312	0.0649	61	1.16	010.60	0
010	Total N (5%)	0354	5.620	0.0000	5.453	0.1312	0.0649	61	1.27	010.60	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		*Robust Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Rob R-bar				
010	Total N (5%)	0255	5.628	0.0450	5.453	0.1312	0.0649	61	1.33	010.60	0
010	Total N (5%)	0086	5.630	0.0298	5.453	0.1312	0.0649	61	1.34	010.60	0
010	Total N (5%)	0523	5.685	0.0080	5.453	0.1312	0.0649	61	1.77	010.60	0
010	Total N (5%)	0481	5.815	0.0100	5.453	0.1312	0.0649	61	2.76	010.12	0
010	Total N (5%)	0561	6.120‡	0.0600	5.453	0.1312	0.0649	61	5.08	010.60	0
010	Total N (5%)	0260	6.050‡	1.700	5.453	0.1312	0.0649	61	4.55	010.60	1
010	Total N (5%)	0035	13.95‡	0.1000	5.453	0.1312	0.0649	61	64.76	010.60	2
020	Total P2O5 (%)	0524	0.0009	0.0001				2		020.50	0
020	Total P2O5 (%)	0422	0.0099	0.0000				2		020.50	0
020	Total P2O5 (%)	0542	0.0000	0.0000				2		020.50	4
020	Total P2O5 (%)	0527	< 0.01					2		020.50	5
041	Direct Available P2O5 (%)	0354	< 0.01					0		041.21	5
050	Soluble K2O (20%)	0025	17.90†	0.2000	19.94	0.4707	0.2009	67	-4.34	050.52	0
050	Soluble K2O (20%)	0543	18.28†	0.2240	19.94	0.4707	0.2009	67	-3.53	050.52	0
050	Soluble K2O (20%)	0389	18.95	0.3000	19.94	0.4707	0.2009	67	-2.11	050.99	0
050	Soluble K2O (20%)	0472	19.03	0.0500	19.94	0.4707	0.2009	67	-1.95	050.32	0
050	Soluble K2O (20%)	0422	19.20	0.1084	19.94	0.4707	0.2009	67	-1.58	050.50	0
050	Soluble K2O (20%)	0055	19.20	0.1150	19.94	0.4707	0.2009	67	-1.57	050.50	0
050	Soluble K2O (20%)	0043	19.37	0.1700	19.94	0.4707	0.2009	67	-1.23	050.52	0
050	Soluble K2O (20%)	0027	19.38	0.1300	19.94	0.4707	0.2009	67	-1.21	050.99	0
050	Soluble K2O (20%)	0377	19.41	0.0600	19.94	0.4707	0.2009	67	-1.13	050.52	0
050	Soluble K2O (20%)	0324	19.45	0.3000	19.94	0.4707	0.2009	67	-1.05	050.50	0
050	Soluble K2O (20%)	0481	19.47	0.2200	19.94	0.4707	0.2009	67	-1.00	050.99	0
050	Soluble K2O (20%)	0559	19.48	0.0100	19.94	0.4707	0.2009	67	-0.99	050.99	0
050	Soluble K2O (20%)	0653	19.48	0.0100	19.94	0.4707	0.2009	67	-0.99	050.99	0
050	Soluble K2O (20%)	0106	19.50	0.1900	19.94	0.4707	0.2009	67	-0.95	050.50	0
050	Soluble K2O (20%)	0476	19.51	0.2002	19.94	0.4707	0.2009	67	-0.92	050.60	0
050	Soluble K2O (20%)	0615	19.55	0.7000	19.94	0.4707	0.2009	67	-0.83	050.99	0
050	Soluble K2O (20%)	0523	19.60	0.0000	19.94	0.4707	0.2009	67	-0.73	050.99	0
050	Soluble K2O (20%)	0260	19.64	0.5100	19.94	0.4707	0.2009	67	-0.64	050.99	0
050	Soluble K2O (20%)	0233	19.78	0.0500	19.94	0.4707	0.2009	67	-0.36	050.00	0
050	Soluble K2O (20%)	0049	19.78	0.2200	19.94	0.4707	0.2009	67	-0.35	050.00	0
050	Soluble K2O (20%)	0494	19.79	0.4400	19.94	0.4707	0.2009	67	-0.32	050.00	0
050	Soluble K2O (20%)	0007	19.80	0.0000	19.94	0.4707	0.2009	67	-0.30	050.51	0
050	Soluble K2O (20%)	0577	19.80	0.2400	19.94	0.4707	0.2009	67	-0.30	050.99	0
050	Soluble K2O (20%)	0360	19.82	0.5900	19.94	0.4707	0.2009	67	-0.27	050.52	0
050	Soluble K2O (20%)	0354	19.85	0.1000	19.94	0.4707	0.2009	67	-0.20	050.52	0
050	Soluble K2O (20%)	0231	19.88	0.3200	19.94	0.4707	0.2009	67	-0.13	050.50	0
050	Soluble K2O (20%)	0602	19.90	0.0900	19.94	0.4707	0.2009	67	-0.10	050.00	0
050	Soluble K2O (20%)	0602	19.90	0.0900	19.94	0.4707	0.2009	67	-0.10	050.60	0
050	Soluble K2O (20%)	0602	19.90	0.0900	19.94	0.4707	0.2009	67	-0.10	050.99	0
050	Soluble K2O (20%)	0234	19.91	0.0200	19.94	0.4707	0.2009	67	-0.07	050.99	0
050	Soluble K2O (20%)	0521	19.93	0.0000	19.94	0.4707	0.2009	67	-0.03	050.51	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		*Robust Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Rob R-bar				
050	Soluble K2O (20%)	0169	19.94	0.0300	19.94	0.4707	0.2009	67	-0.02	050.60	0
050	Soluble K2O (20%)	0231	19.94	0.0600	19.94	0.4707	0.2009	67	-0.01	050.00	0
050	Soluble K2O (20%)	0095	19.96	1.110	19.94	0.4707	0.2009	67	0.03	050.62	0
050	Soluble K2O (20%)	0023	19.96	0.0520	19.94	0.4707	0.2009	67	0.03	050.52	0
050	Soluble K2O (20%)	0309	19.96	0.3000	19.94	0.4707	0.2009	67	0.04	050.60	0
050	Soluble K2O (20%)	0605	19.96	0.1400	19.94	0.4707	0.2009	67	0.04	050.99	0
050	Soluble K2O (20%)	0136	20.00	0.0000	19.94	0.4707	0.2009	67	0.12	050.52	0
050	Soluble K2O (20%)	0538	20.00	0.0400	19.94	0.4707	0.2009	67	0.12	050.99	0
050	Soluble K2O (20%)	0394	20.02	0.0000	19.94	0.4707	0.2009	67	0.16	050.99	0
050	Soluble K2O (20%)	0513	20.06	0.1000	19.94	0.4707	0.2009	67	0.25	050.99	0
050	Soluble K2O (20%)	0055	20.06	0.3750	19.94	0.4707	0.2009	67	0.25	050.00	0
050	Soluble K2O (20%)	0451	20.07	0.5600	19.94	0.4707	0.2009	67	0.27	050.99	0
050	Soluble K2O (20%)	0545	20.12	0.0400	19.94	0.4707	0.2009	67	0.38	050.99	0
050	Soluble K2O (20%)	0177	20.13	0.0014	19.94	0.4707	0.2009	67	0.39	050.52	0
050	Soluble K2O (20%)	0368	20.13	0.2396	19.94	0.4707	0.2009	67	0.40	050.51	0
050	Soluble K2O (20%)	0423	20.13	0.1990	19.94	0.4707	0.2009	67	0.40	050.52	0
050	Soluble K2O (20%)	0548	20.14	0.1400	19.94	0.4707	0.2009	67	0.42	050.99	0
050	Soluble K2O (20%)	0220	20.15	0.0200	19.94	0.4707	0.2009	67	0.44	050.00	0
050	Soluble K2O (20%)	0029	20.15	0.2000	19.94	0.4707	0.2009	67	0.44	050.62	0
050	Soluble K2O (20%)	0040	20.18	0.2400	19.94	0.4707	0.2009	67	0.50	050.30	0
050	Soluble K2O (20%)	0102	20.23	0.4700	19.94	0.4707	0.2009	67	0.60	050.00	0
050	Soluble K2O (20%)	0034	20.23	0.0215	19.94	0.4707	0.2009	67	0.61	050.62	0
050	Soluble K2O (20%)	0405	20.29	0.1300	19.94	0.4707	0.2009	67	0.73	050.00	0
050	Soluble K2O (20%)	0255	20.33	0.4390	19.94	0.4707	0.2009	67	0.82	050.99	0
050	Soluble K2O (20%)	0563	20.35	0.1000	19.94	0.4707	0.2009	67	0.87	050.99	0
050	Soluble K2O (20%)	0452	20.39	0.0700	19.94	0.4707	0.2009	67	0.94	050.50	0
050	Soluble K2O (20%)	0035	20.40	0.2000	19.94	0.4707	0.2009	67	0.97	050.61	0
050	Soluble K2O (20%)	0561	20.48	0.0000	19.94	0.4707	0.2009	67	1.14	050.00	0
050	Soluble K2O (20%)	0494	20.64	0.5500	19.94	0.4707	0.2009	67	1.47	050.52	0
050	Soluble K2O (20%)	0498	20.70	0.2000	19.94	0.4707	0.2009	67	1.61	050.99	0
050	Soluble K2O (20%)	0524	20.81	0.3533	19.94	0.4707	0.2009	67	1.84	050.99	0
050	Soluble K2O (20%)	0527	21.00	0.1308	19.94	0.4707	0.2009	67	2.26	050.99	0
050	Soluble K2O (20%)	0572	21.27‡	0.0100	19.94	0.4707	0.2009	67	2.81	050.99	0
050	Soluble K2O (20%)	0042	22.03‡	0.5900	19.94	0.4707	0.2009	67	4.42	050.99	0
050	Soluble K2O (20%)	0542	22.21‡	1.036	19.94	0.4707	0.2009	67	4.81	050.99	0
050	Soluble K2O (20%)	0515	24.03‡	0.3300	19.94	0.4707	0.2009	67	8.67	050.99	0
050	Soluble K2O (20%)	0553	20.40	2.210	19.94	0.4707	0.2009	67	0.96	050.99	1
101	Acid Soluble Ca (%)	0354	0.1800	0.0400				1		101.30	0
101	Acid Soluble Ca (%)	0423	< 0.005					1		101.32	5
101	Acid Soluble Ca (%)	0527	< 0.01					1		101.33	5
121	Acid Soluble Mg (%)	0524	0.0001	0.0000	0.0127	0.0110	0.0000	3	-1.15	121.99	0
121	Acid Soluble Mg (%)	0035	0.0180	0.0000	0.0127	0.0110	0.0000	3	0.48	121.30	0
121	Acid Soluble Mg (%)	0354	0.0200	0.0000	0.0127	0.0110	0.0000	3	0.67	121.30	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		*Robust Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Rob R-bar				
121	Acid Soluble Mg (%)	0423	< 0.005		0.0127	0.0110	0.0000	3		121.32	5
121	Acid Soluble Mg (%)	0527	< 0.01		0.0127	0.0110	0.0000	3		121.33	5
143	Elemental S (%)	0255	13.43	0.6700	13.65	0.2552	0.7275	3	-0.89	143.99	0
143	Elemental S (%)	0389	13.61	0.0300	13.65	0.2552	0.7275	3	-0.19	143.99	0
143	Elemental S (%)	0368	13.93	1.482	13.65	0.2552	0.7275	3	1.08	143.99	0
145	Sulfate S, HCl soluble (%)	0561	13.48	0.0300				1		145.00	0
146	Total S in Liquid (13%)	0559	12.76	0.0100	13.34	0.5203	0.2000	7	-1.02	146.99	0
146	Total S in Liquid (13%)	0653	12.76	0.0100	13.34	0.5203	0.2000	7	-1.02	146.99	0
146	Total S in Liquid (13%)	0027	13.20	0.4700	13.34	0.5203	0.2000	7	-0.25	146.00	0
146	Total S in Liquid (13%)	0177	13.39	0.0000	13.34	0.5203	0.2000	7	0.09	146.00	0
146	Total S in Liquid (13%)	0231	13.65	0.1700	13.34	0.5203	0.2000	7	0.53	146.00	0
146	Total S in Liquid (13%)	0324	13.80	0.4000	13.34	0.5203	0.2000	7	0.80	146.00	0
146	Total S in Liquid (13%)	0220	13.84	0.1400	13.34	0.5203	0.2000	7	0.87	146.00	0
148	Total S (13%)	0543	12.51	0.1800	13.23	0.3000	0.1705	33	-2.40	148.07	0
148	Total S (13%)	0523	12.68	0.0600	13.23	0.3000	0.1705	33	-1.83	148.99	0
148	Total S (13%)	0451	12.75	0.2100	13.23	0.3000	0.1705	33	-1.62	148.00	0
148	Total S (13%)	0472	12.85	0.1000	13.23	0.3000	0.1705	33	-1.27	148.07	0
148	Total S (13%)	0035	13.00	0.0000	13.23	0.3000	0.1705	33	-0.77	148.07	0
148	Total S (13%)	0354	13.00	0.0000	13.23	0.3000	0.1705	33	-0.77	148.99	0
148	Total S (13%)	0538	13.01	0.0300	13.23	0.3000	0.1705	33	-0.75	148.01	0
148	Total S (13%)	0602	13.05	0.1400	13.23	0.3000	0.1705	33	-0.60	148.02	0
148	Total S (13%)	0602	13.05	0.1400	13.23	0.3000	0.1705	33	-0.60	148.03	0
148	Total S (13%)	0602	13.05	0.1400	13.23	0.3000	0.1705	33	-0.60	148.99	0
148	Total S (13%)	0025	13.10	0.4540	13.23	0.3000	0.1705	33	-0.45	148.00	0
148	Total S (13%)	0534	13.10	0.0300	13.23	0.3000	0.1705	33	-0.45	148.01	0
148	Total S (13%)	0605	13.16	0.1000	13.23	0.3000	0.1705	33	-0.24	148.99	0
148	Total S (13%)	0029	13.17	0.4500	13.23	0.3000	0.1705	33	-0.22	148.00	0
148	Total S (13%)	0577	13.19	0.0500	13.23	0.3000	0.1705	33	-0.15	148.99	0
148	Total S (13%)	0220	13.22	0.0800	13.23	0.3000	0.1705	33	-0.04	148.99	0
148	Total S (13%)	0043	13.26	0.0500	13.23	0.3000	0.1705	33	0.08	148.07	0
148	Total S (13%)	0106	13.26	0.3600	13.23	0.3000	0.1705	33	0.10	148.07	0
148	Total S (13%)	0260	13.26	0.5690	13.23	0.3000	0.1705	33	0.10	148.07	0
148	Total S (13%)	0028	13.27	0.3500	13.23	0.3000	0.1705	33	0.11	148.01	0
148	Total S (13%)	0177	13.27	0.0020	13.23	0.3000	0.1705	33	0.12	148.07	0
148	Total S (13%)	0498	13.30	0.2000	13.23	0.3000	0.1705	33	0.23	148.01	0
148	Total S (13%)	0563	13.30	0.2000	13.23	0.3000	0.1705	33	0.23	148.07	0
148	Total S (13%)	0023	13.30	0.1270	13.23	0.3000	0.1705	33	0.24	148.99	0
148	Total S (13%)	0136	13.35	0.1000	13.23	0.3000	0.1705	33	0.40	148.07	0
148	Total S (13%)	0527	13.38	0.0951	13.23	0.3000	0.1705	33	0.49	148.07	0
148	Total S (13%)	0055	13.53	0.1350	13.23	0.3000	0.1705	33	1.01	148.01	0
148	Total S (13%)	0040	13.60	0.0000	13.23	0.3000	0.1705	33	1.23	148.07	0
148	Total S (13%)	0494	13.63	1.169	13.23	0.3000	0.1705	33	1.33	148.07	0
148	Total S (13%)	0452	13.65	0.0500	13.23	0.3000	0.1705	33	1.38	148.07	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		*Robust Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Rob R-bar				
148	Total S (13%)	0102	13.65	0.5000	13.23	0.3000	0.1705	33	1.40	148.01	0
148	Total S (13%)	0422	13.67	0.1800	13.23	0.3000	0.1705	33	1.46	148.99	0
148	Total S (13%)	0572	13.77	0.0500	13.23	0.3000	0.1705	33	1.78	148.99	0
148	Total S (13%)	0377	12.96	1.450	13.23	0.3000	0.1705	33	-0.92	148.99	1
148	Total S (13%)	0515	19.90‡	1.260	13.23	0.3000	0.1705	33	22.23	148.07	2
149	S - HNO3 soluble (%)	0524	10.90	0.1294	12.41	1.016	0.0891	4	-1.49	149.04	0
149	S - HNO3 soluble (%)	0521	12.78	0.0000	12.41	1.016	0.0891	4	0.37	149.04	0
149	S - HNO3 soluble (%)	0231	12.90	0.0800	12.41	1.016	0.0891	4	0.48	149.04	0
149	S - HNO3 soluble (%)	0423	13.06	0.0580	12.41	1.016	0.0891	4	0.64	149.04	0
151	Acid Soluble As (ppm)	0524	0.0010	0.0001	0.8338	0.7849	0.6928	5	-1.06	151.30	0
151	Acid Soluble As (ppm)	0548	0.0455	0.0690	0.8338	0.7849	0.6928	5	-1.00	151.33	0
151	Acid Soluble As (ppm)	0515	1.011	1.598	0.8338	0.7849	0.6928	5	0.23	151.34	0
151	Acid Soluble As (ppm)	0515	1.362	0.8970	0.8338	0.7849	0.6928	5	0.67	151.33	0
151	Acid Soluble As (ppm)	0368	1.750	0.9000	0.8338	0.7849	0.6928	5	1.17	151.34	0
151	Acid Soluble As (ppm)	0255	0.0000	0.0000	0.8338	0.7849	0.6928	5		151.30	4
151	Acid Soluble As (ppm)	0527	< 0.0001		0.8338	0.7849	0.6928	5		151.33	5
151	Acid Soluble As (ppm)	0572	< 0.05		0.8338	0.7849	0.6928	5		151.99	5
151	Acid Soluble As (ppm)	0220	< 0.5		0.8338	0.7849	0.6928	5		151.32	5
151	Acid Soluble As (ppm)	0220	< 0.5		0.8338	0.7849	0.6928	5		151.99	5
151	Acid Soluble As (ppm)	0481	< 0.5		0.8338	0.7849	0.6928	5		151.99	5
151	Acid Soluble As (ppm)	0136	< 1		0.8338	0.7849	0.6928	5		151.33	5
151	Acid Soluble As (ppm)	0405	< 3		0.8338	0.7849	0.6928	5		151.32	5
151	Acid Soluble As (ppm)	0605	< 6.25		0.8338	0.7849	0.6928	5		151.30	5
151	Acid Soluble As (ppm)	0027	< 10		0.8338	0.7849	0.6928	5		151.30	5
165	Acid Soluble B (%)	0423	0.0010	0.0000				1		165.99	0
165	Acid Soluble B (%)	0527	< 0.001					1		165.99	5
165	Acid Soluble B (%)	0354	< 0.01					1		165.30	5
181	Acid Soluble Cd (ppm)	0524	0.0089	0.0039	0.2186	0.1666	0.0217	4	-1.26	181.30	0
181	Acid Soluble Cd (ppm)	0255	0.1605	0.0530	0.2186	0.1666	0.0217	4	-0.35	181.30	0
181	Acid Soluble Cd (ppm)	0220	0.3500	0.0200	0.2186	0.1666	0.0217	4	0.79	181.99	0
181	Acid Soluble Cd (ppm)	0220	0.3550	0.0100	0.2186	0.1666	0.0217	4	0.82	181.32	0
181	Acid Soluble Cd (ppm)	0527	< 0.0001		0.2186	0.1666	0.0217	4		181.33	5
181	Acid Soluble Cd (ppm)	0572	< 0.03		0.2186	0.1666	0.0217	4		181.99	5
181	Acid Soluble Cd (ppm)	0548	< 0.05		0.2186	0.1666	0.0217	4		181.33	5
181	Acid Soluble Cd (ppm)	0394	< 0.1		0.2186	0.1666	0.0217	4		181.30	5
181	Acid Soluble Cd (ppm)	0368	< 0.1		0.2186	0.1666	0.0217	4		181.34	5
181	Acid Soluble Cd (ppm)	0515	< 0.13		0.2186	0.1666	0.0217	4		181.34	5
181	Acid Soluble Cd (ppm)	0515	< 0.19		0.2186	0.1666	0.0217	4		181.33	5
181	Acid Soluble Cd (ppm)	0605	< 0.25		0.2186	0.1666	0.0217	4		181.30	5
181	Acid Soluble Cd (ppm)	0481	< 0.5		0.2186	0.1666	0.0217	4		181.99	5
181	Acid Soluble Cd (ppm)	0405	< 1		0.2186	0.1666	0.0217	4		181.32	5
181	Acid Soluble Cd (ppm)	0136	< 1		0.2186	0.1666	0.0217	4		181.33	5
181	Acid Soluble Cd (ppm)	0027	< 10		0.2186	0.1666	0.0217	4		181.30	5



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191	Acid Soluble Cr (ppm)	0523	0.0095	0.0010	0.1997	0.1904	0.1313	6	-1.00	191.30	0
191	Acid Soluble Cr (ppm)	0524	0.0599	0.0010	0.1997	0.1904	0.1313	6	-0.73	191.30	0
191	Acid Soluble Cr (ppm)	0548	0.0750	0.0100	0.1997	0.1904	0.1313	6	-0.66	191.33	0
191	Acid Soluble Cr (ppm)	0220	0.3300	0.2000	0.1997	0.1904	0.1313	6	0.68	191.32	0
191	Acid Soluble Cr (ppm)	0515	0.3590	0.4160	0.1997	0.1904	0.1313	6	0.84	191.34	0
191	Acid Soluble Cr (ppm)	0220	0.3650	0.1700	0.1997	0.1904	0.1313	6	0.87	191.99	0
191	Acid Soluble Cr (ppm)	0515	0.5960	0.5880	0.1997	0.1904	0.1313	6	2.08	191.33	1
191	Acid Soluble Cr (ppm)	0527	< 0.0001		0.1997	0.1904	0.1313	6		191.33	5
191	Acid Soluble Cr (ppm)	0368	< 0.1		0.1997	0.1904	0.1313	6		191.34	5
191	Acid Soluble Cr (ppm)	0572	< 0.15		0.1997	0.1904	0.1313	6		191.99	5
191	Acid Soluble Cr (ppm)	0405	< 1		0.1997	0.1904	0.1313	6		191.32	5
191	Acid Soluble Cr (ppm)	0605	< 1.25		0.1997	0.1904	0.1313	6		191.30	5
191	Acid Soluble Cr (ppm)	0394	< 2		0.1997	0.1904	0.1313	6		191.30	5
191	Acid Soluble Cr (ppm)	0136	< 2.5		0.1997	0.1904	0.1313	6		191.33	5
191	Acid Soluble Cr (ppm)	0027	< 10		0.1997	0.1904	0.1313	6		191.30	5
191	Acid Soluble Cr (ppm)	0481	< 20		0.1997	0.1904	0.1313	6		191.99	5
202	Acid Soluble Co (ppm)	0524	0.1128	0.0053	1.965	3.280	0.7947	5	-0.56	202.30	0
202	Acid Soluble Co (ppm)	0515	0.2110	0.0600	1.965	3.280	0.7947	5	-0.53	202.33	0
202	Acid Soluble Co (ppm)	0368	0.3500	0.1000	1.965	3.280	0.7947	5	-0.49	202.34	0
202	Acid Soluble Co (ppm)	0423	1.390	0.0200	1.965	3.280	0.7947	5	-0.18	202.32	0
202	Acid Soluble Co (ppm)	0255	7.760	3.788	1.965	3.280	0.7947	5	1.77	202.99	0
202	Acid Soluble Co (ppm)	0527	< 0.0001		1.965	3.280	0.7947	5		202.33	5
202	Acid Soluble Co (ppm)	0548	< 0.05		1.965	3.280	0.7947	5		202.33	5
202	Acid Soluble Co (ppm)	0220	< 0.1		1.965	3.280	0.7947	5		202.32	5
202	Acid Soluble Co (ppm)	0220	< 0.1		1.965	3.280	0.7947	5		202.99	5
202	Acid Soluble Co (ppm)	0515	< 0.139		1.965	3.280	0.7947	5		202.34	5
202	Acid Soluble Co (ppm)	0572	< 0.37		1.965	3.280	0.7947	5		202.99	5
202	Acid Soluble Co (ppm)	0405	< 1		1.965	3.280	0.7947	5		202.32	5
202	Acid Soluble Co (ppm)	0605	< 1.25		1.965	3.280	0.7947	5		202.30	5
202	Acid Soluble Co (ppm)	0136	< 2.5		1.965	3.280	0.7947	5		202.33	5
202	Acid Soluble Co (ppm)	0027	< 10		1.965	3.280	0.7947	5		202.30	5
221	Acid Soluble Cu (%)	0234	0.0005	0.0000	0.0012	0.0008	0.0000	3	-0.87	221.30	0
221	Acid Soluble Cu (%)	0255	0.0010	0.0000	0.0012	0.0008	0.0000	3	-0.22	221.30	0
221	Acid Soluble Cu (%)	0523	0.0020	0.0000	0.0012	0.0008	0.0000	3	1.09	221.99	0
221	Acid Soluble Cu (%)	0106	0.0000	0.0000	0.0012	0.0008	0.0000	3		221.33	4
221	Acid Soluble Cu (%)	0527	< 0.0001		0.0012	0.0008	0.0000	3		221.33	5
221	Acid Soluble Cu (%)	0405	< 0.0002		0.0012	0.0008	0.0000	3		221.32	5
221	Acid Soluble Cu (%)	0136	< 0.0002		0.0012	0.0008	0.0000	3		221.33	5
221	Acid Soluble Cu (%)	0394	< 0.0002		0.0012	0.0008	0.0000	3		221.33	5
221	Acid Soluble Cu (%)	0548	< 0.0005		0.0012	0.0008	0.0000	3		221.33	5
221	Acid Soluble Cu (%)	0027	< 0.001		0.0012	0.0008	0.0000	3		221.99	5
221	Acid Soluble Cu (%)	0354	< 0.01		0.0012	0.0008	0.0000	3		221.30	5
221	Acid Soluble Cu (%)	0481	< 0.01		0.0012	0.0008	0.0000	3		221.99	5

Analyte Group	Analyte (Units)	Lab Code	Lab Data		*Robust Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
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221	Acid Soluble Cu (%)	0515	< 0.195		0.0012	0.0008	0.0000	3		221.99	5
221	Acid Soluble Cu (%)	0515	< 0.26		0.0012	0.0008	0.0000	3		221.33	5
241	Acid Soluble Fe (%)	0524	0.0001	0.0000				1		241.99	0
241	Acid Soluble Fe (%)	0423	< 0.001					1		241.32	5
241	Acid Soluble Fe (%)	0527	< 0.001					1		241.33	5
241	Acid Soluble Fe (%)	0354	< 0.01					1		241.30	5
251	Acid Soluble Pb (ppm)	0524	0.1379	0.0514	0.9444	0.8551	0.4281	4	-0.94	251.30	0
251	Acid Soluble Pb (ppm)	0220	0.3450	0.0100	0.9444	0.8551	0.4281	4	-0.70	251.99	0
251	Acid Soluble Pb (ppm)	0515	1.335	0.8910	0.9444	0.8551	0.4281	4	0.46	251.33	0
251	Acid Soluble Pb (ppm)	0515	1.960	0.7600	0.9444	0.8551	0.4281	4	1.19	251.34	0
251	Acid Soluble Pb (ppm)	0255	0.0000	0.0000	0.9444	0.8551	0.4281	4		251.30	4
251	Acid Soluble Pb (ppm)	0527	< 0.0001		0.9444	0.8551	0.4281	4		251.33	5
251	Acid Soluble Pb (ppm)	0572	< 0.02		0.9444	0.8551	0.4281	4		251.99	5
251	Acid Soluble Pb (ppm)	0548	< 0.05		0.9444	0.8551	0.4281	4		251.33	5
251	Acid Soluble Pb (ppm)	0220	< 0.3		0.9444	0.8551	0.4281	4		251.32	5
251	Acid Soluble Pb (ppm)	0481	< 0.5		0.9444	0.8551	0.4281	4		251.99	5
251	Acid Soluble Pb (ppm)	0368	< 0.6		0.9444	0.8551	0.4281	4		251.34	5
251	Acid Soluble Pb (ppm)	0394	< 1		0.9444	0.8551	0.4281	4		251.30	5
251	Acid Soluble Pb (ppm)	0136	< 3		0.9444	0.8551	0.4281	4		251.33	5
251	Acid Soluble Pb (ppm)	0405	< 4		0.9444	0.8551	0.4281	4		251.32	5
251	Acid Soluble Pb (ppm)	0605	< 6.25		0.9444	0.8551	0.4281	4		251.30	5
251	Acid Soluble Pb (ppm)	0027	< 10		0.9444	0.8551	0.4281	4		251.30	5
261	Acid Soluble Mn (%)	0423	0.0205	0.0010				1		261.34	0
261	Acid Soluble Mn (%)	0527	< 0.0001					1		261.35	5
261	Acid Soluble Mn (%)	0354	< 0.01					1		261.30	5
281	Acid Soluble Hg (ppm)	0524	0.0007	0.0001				1		281.99	0
281	Acid Soluble Hg (ppm)	0527	< 0.001					1		281.30	5
281	Acid Soluble Hg (ppm)	0572	< 0.005					1		281.99	5
281	Acid Soluble Hg (ppm)	0220	< 0.01					1		281.99	5
281	Acid Soluble Hg (ppm)	0515	< 0.1					1		281.30	5
281	Acid Soluble Hg (ppm)	0481	< 0.5					1		281.00	5
281	Acid Soluble Hg (ppm)	0605	< 1.25					1		281.30	5
281	Acid Soluble Hg (ppm)	0405	< 2					1		281.30	5
289	Acid Soluble Mo (ppm)	0524	0.0476	0.0082				2		289.30	0
289	Acid Soluble Mo (ppm)	0234	1.000	0.0000				2		289.30	0
289	Acid Soluble Mo (ppm)	0255	0.0000	0.0000				2		289.30	4
289	Acid Soluble Mo (ppm)	0106	3.500	7.000				2		289.33	4
289	Acid Soluble Mo (ppm)	0527	< 0.0001					2		289.33	5
289	Acid Soluble Mo (ppm)	0548	< 0.05					2		289.33	5
289	Acid Soluble Mo (ppm)	0515	< 0.178					2		289.34	5
289	Acid Soluble Mo (ppm)	0515	< 0.23					2		289.33	5
289	Acid Soluble Mo (ppm)	0220	< 0.3					2		289.32	5
289	Acid Soluble Mo (ppm)	0220	< 0.3					2		289.99	5

Analyte Group	Analyte (Units)	Lab Code	Lab Data		*Robust Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Rob R-bar				
289	Acid Soluble Mo (ppm)	0368	< 0.6					2		289.34	5
289	Acid Soluble Mo (ppm)	0405	< 1					2		289.32	5
289	Acid Soluble Mo (ppm)	0136	< 2.5					2		289.33	5
289	Acid Soluble Mo (ppm)	0423	< 2.5					2		289.33	5
291	Acid Soluble Ni (ppm)	0524	0.0881	0.0137	0.5033	0.5483	0.2703	6	-0.76	291.30	0
291	Acid Soluble Ni (ppm)	0220	0.1300	0.0200	0.5033	0.5483	0.2703	6	-0.68	291.32	0
291	Acid Soluble Ni (ppm)	0220	0.2150	0.1500	0.5033	0.5483	0.2703	6	-0.53	291.99	0
291	Acid Soluble Ni (ppm)	0368	0.4500	0.1000	0.5033	0.5483	0.2703	6	-0.10	291.34	0
291	Acid Soluble Ni (ppm)	0515	0.8110	0.6780	0.5033	0.5483	0.2703	6	0.56	291.33	0
291	Acid Soluble Ni (ppm)	0515	2.250	0.6600	0.5033	0.5483	0.2703	6	3.19	291.34	0
291	Acid Soluble Ni (ppm)	0255	13.09	6.599	0.5033	0.5483	0.2703	6	22.96	291.99	1
291	Acid Soluble Ni (ppm)	0527	< 0.0001		0.5033	0.5483	0.2703	6		291.33	5
291	Acid Soluble Ni (ppm)	0548	< 0.05		0.5033	0.5483	0.2703	6		291.33	5
291	Acid Soluble Ni (ppm)	0572	< 0.98		0.5033	0.5483	0.2703	6		291.99	5
291	Acid Soluble Ni (ppm)	0405	< 1		0.5033	0.5483	0.2703	6		291.32	5
291	Acid Soluble Ni (ppm)	0605	< 1.25		0.5033	0.5483	0.2703	6		291.30	5
291	Acid Soluble Ni (ppm)	0394	< 2		0.5033	0.5483	0.2703	6		291.30	5
291	Acid Soluble Ni (ppm)	0136	< 2.5		0.5033	0.5483	0.2703	6		291.33	5
291	Acid Soluble Ni (ppm)	0027	< 10		0.5033	0.5483	0.2703	6		291.30	5
301	Acid Soluble Se (ppm)	0523	0.0065	0.0010	0.9485	1.091	0.4488	4	-0.86	301.30	0
301	Acid Soluble Se (ppm)	0524	0.0324	0.0040	0.9485	1.091	0.4488	4	-0.84	301.30	0
301	Acid Soluble Se (ppm)	0515	1.635	0.8500	0.9485	1.091	0.4488	4	0.63	301.34	0
301	Acid Soluble Se (ppm)	0515	2.120	0.9400	0.9485	1.091	0.4488	4	1.07	301.33	0
301	Acid Soluble Se (ppm)	0255	0.0000	0.0000	0.9485	1.091	0.4488	4		301.99	4
301	Acid Soluble Se (ppm)	0527	< 0.001		0.9485	1.091	0.4488	4		301.33	5
301	Acid Soluble Se (ppm)	0548	< 0.05		0.9485	1.091	0.4488	4		301.33	5
301	Acid Soluble Se (ppm)	0220	< 0.3		0.9485	1.091	0.4488	4		301.32	5
301	Acid Soluble Se (ppm)	0220	< 0.3		0.9485	1.091	0.4488	4		301.99	5
301	Acid Soluble Se (ppm)	0572	< 0.4		0.9485	1.091	0.4488	4		301.99	5
301	Acid Soluble Se (ppm)	0481	< 0.5		0.9485	1.091	0.4488	4		301.99	5
301	Acid Soluble Se (ppm)	0368	< 1.1		0.9485	1.091	0.4488	4		301.34	5
301	Acid Soluble Se (ppm)	0605	< 6.25		0.9485	1.091	0.4488	4		301.30	5
301	Acid Soluble Se (ppm)	0027	< 10		0.9485	1.091	0.4488	4		301.30	5
301	Acid Soluble Se (ppm)	0405	< 10		0.9485	1.091	0.4488	4		301.32	5
311	Sodium (%)	0035	0.0445	0.0090	0.0500	0.0087	0.0099	3	-0.63	311.33	0
311	Sodium (%)	0527	0.0455	0.0006	0.0500	0.0087	0.0099	3	-0.52	311.33	0
311	Sodium (%)	0354	0.0600	0.0200	0.0500	0.0087	0.0099	3	1.15	311.99	0
311	Sodium (%)	0423	< 0.005		0.0500	0.0087	0.0099	3		311.33	5
321	Acid Soluble Zn (%)	0548	0.0001	0.0000				2		321.33	0
321	Acid Soluble Zn (%)	0523	0.0045	0.0010				2		321.99	0
321	Acid Soluble Zn (%)	0255	0.0000	0.0000				2		321.30	4
321	Acid Soluble Zn (%)	0106	0.0000	0.0000				2		321.33	4
321	Acid Soluble Zn (%)	0368	0.0000	0.0000				2		321.99	4

Analyte Group	Analyte (Units)	Lab Code	Lab Data		*Robust Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Rob R-bar				
321	Acid Soluble Zn (%)	0527	< 0.0001					2		321.33	5
321	Acid Soluble Zn (%)	0394	< 0.0002					2		321.33	5
321	Acid Soluble Zn (%)	0405	< 0.0003					2		321.32	5
321	Acid Soluble Zn (%)	0136	< 0.0003					2		321.33	5
321	Acid Soluble Zn (%)	0027	< 0.001					2		321.99	5
321	Acid Soluble Zn (%)	0354	< 0.01					2		321.30	5
321	Acid Soluble Zn (%)	0481	< 0.01					2		321.99	5
321	Acid Soluble Zn (%)	0515	< 0.142					2		321.99	5
321	Acid Soluble Zn (%)	0515	< 0.19					2		321.33	5
321	Acid Soluble Zn (%)	0423	< 5					2		321.32	5
325	Water Soluble Zn (%)	0368	0.0000	0.0000				0		325.30	4

**Interpreting Z Scores and Flags:**

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.

**Notes:**

\*Robust statistics not used if < 6 labs used in calculations, in this case Values and Z Scores are grayed out and should be interpreted with extreme caution. Identical duplicates not included in calculation of Rob R-bar. 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.