



Analyte PT For All Labs

### Magruder Fertilizer Proficiency Testing Program

# Analytes: 28

Sample # 240611

Regular PT Scheme

# Labs Reporting: 68

Calcium Nitrate

Statistical Summary

Issue Date : 07/31/2024

Analyte Code	Analyte Sample # 240611	# 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 (%)	28	27	1.858	2.798	1.156		0.1340	0.0322	11.59%		0.0297	3.91%
002	Nitrate N (%)	18	17	14.08	0.8121	14.23		0.4067	0.1233	2.86%		0.0917	2.65%
009	Ammoniacal Plus Nitrate N (%)	4	4	15.39	0.3115	15.39		0.3115	0.1947	2.02%		0.2475	2.55%
010	Total N (15.5%)	51	49	14.84	3.075	14.75	0.6449	0.9185	0.1640	6.23%	3.32	0.1489	2.60%
020	Total P2O5 (%)	7	5	0.3024	0.6667	0.4034		0.7880	0.4405	195.34%		0.0207	4.59%
041	Direct Available P2O5 (%)	3	2	0.0633	0.0322	0.0450	0.6700	0.0071	0.0063	15.71%	0.02	0.0000	6.38%
048	Water Soluble P2O5 (%)	1		0.0100									
050	Soluble K2O (%)	6	4	0.0277	0.0248	0.0290	0.4100	0.0245	0.0153	84.41%	0.14	0.0047	6.81%
060	Water (Free) (%)	1		3.600									
101	Acid Soluble Ca (19%)	60	58	18.73	1.636	18.87	1.0000	0.7173	0.1177	3.80%	1.67	0.3226	2.30%
121	Acid Soluble Mg (%)	10	9	0.0712	0.1618	0.0176	0.2009	0.0145	0.0061	82.74%	0.17	0.0036	7.35%
148	Total S (%)	5	5	2.119	4.505	2.119	0.3059	4.505	2.518	212.60%	34.31	0.0946	3.57%
149	S - HNO3 soluble (%)	1		0.0500									
151	Acid Soluble As (ppm)	11	4	3.256	6.453	6.229		10.47	6.547	168.16%		1.838	12.15%
165	Acid Soluble B (%)	7	6	22.92	59.72	0.0599	0.0120	0.0819	0.0418	136.69%	15.92	0.0855	6.11%
181	Acid Soluble Cd (ppm)	13	5	0.6133	0.6848	0.6999		0.8002	0.4473	114.33%		0.4123	16.88%
191	Acid Soluble Cr (ppm)	12	8	1.971	2.786	2.235		3.526	1.558	157.79%		0.4737	14.17%
202	Acid Soluble Co (ppm)	13	5	2.806	5.972	6.416	2.9249	8.903	4.977	138.75%	7.09	1.377	12.09%
221	Acid Soluble Cu (%)	12	4	0.3680	1.224	1.088	0.1138	2.112	1.320	194.21%	43.26	0.1037	3.95%
241	Acid Soluble Fe (%)	8	6	1.438	3.490	0.0393	0.0089	0.0621	0.0317	157.97%	16.20	0.0040	6.51%
251	Acid Soluble Pb (ppm)	14	6	1.360	1.619	0.8041		1.100	0.5615	136.85%		0.2167	16.53%
261	Acid Soluble Mn (%)	7	3	1.003	1.909	0.6580	0.0708	1.139	0.8222	173.15%	37.49	0.0327	4.26%
281	Acid Soluble Hg (ppm)	5	1	0.6940	0.8911	0.6580		1.139	1.424	173.15%		0.0001	17.04%
289	Acid Soluble Mo (ppm)	15	5	1.474	2.000	2.953	1.8858	2.715	1.518	91.95%	3.35	0.2334	13.59%
291	Acid Soluble Ni (ppm)	15	9	3.875	7.946	1.183		1.428	0.5951	120.69%		0.3947	15.60%
301	Acid Soluble Se (ppm)	10	5	2.130	2.994	1.811		1.303	0.7283	71.96%		0.9029	14.63%
311	Sodium (%)	6	5	0.4258	0.9772	0.0269	0.0077	0.0092	0.0051	34.13%	2.78	0.0009	6.89%
321	Acid Soluble Zn (%)	15	8	0.5335	1.442	0.0036	0.0054	0.0066	0.0029	182.13%	2.86	0.0043	9.32%

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

Analyte Code	Analyte Sample # 240611	# 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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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: 28

Sample # 240611

Regular PT Scheme

# Labs Reporting: 68

Calcium Nitrate

Lab Values

Issue Date : 07/31/2024

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 (%)	0498	0.9800	0.0200	1.156	0.1340	0.0297	27	-1.31	001.10	0
001	Ammoniacal N (%)	0584	0.9950	0.0300	1.156	0.1340	0.0297	27	-1.20	001.99	0
001	Ammoniacal N (%)	0220	1.000	0.0600	1.156	0.1340	0.0297	27	-1.16	001.99	0
001	Ammoniacal N (%)	0389	1.025	0.0300	1.156	0.1340	0.0297	27	-0.98	001.10	0
001	Ammoniacal N (%)	0553	1.035	0.0500	1.156	0.1340	0.0297	27	-0.90	001.99	0
001	Ammoniacal N (%)	0368	1.046	0.0530	1.156	0.1340	0.0297	27	-0.83	001.99	0
001	Ammoniacal N (%)	0423	1.065	0.0100	1.156	0.1340	0.0297	27	-0.68	001.99	0
001	Ammoniacal N (%)	0537	1.090	0.0400	1.156	0.1340	0.0297	27	-0.49	001.99	0
001	Ammoniacal N (%)	0169	1.105	0.0100	1.156	0.1340	0.0297	27	-0.38	001.99	0
001	Ammoniacal N (%)	0255	1.115	0.0100	1.156	0.1340	0.0297	27	-0.31	001.99	0
001	Ammoniacal N (%)	0600	1.120	0.0400	1.156	0.1340	0.0297	27	-0.27	001.99	0
001	Ammoniacal N (%)	0451	1.125	0.0300	1.156	0.1340	0.0297	27	-0.23	001.10	0
001	Ammoniacal N (%)	0619	1.125	0.0100	1.156	0.1340	0.0297	27	-0.23	001.10	0
001	Ammoniacal N (%)	0619	1.125	0.0100	1.156	0.1340	0.0297	27	-0.23	001.99	0
001	Ammoniacal N (%)	0513	1.135	0.0300	1.156	0.1340	0.0297	27	-0.16	001.99	0
001	Ammoniacal N (%)	0452	1.140	0.0000	1.156	0.1340	0.0297	27	-0.12	001.10	0
001	Ammoniacal N (%)	0027	1.150	0.0400	1.156	0.1340	0.0297	27	-0.05	001.99	0
001	Ammoniacal N (%)	0136	1.150	0.0200	1.156	0.1340	0.0297	27	-0.05	001.99	0
001	Ammoniacal N (%)	0394	1.190	0.0670	1.156	0.1340	0.0297	27	0.25	001.99	0
001	Ammoniacal N (%)	0605	1.235	0.0300	1.156	0.1340	0.0297	27	0.59	001.99	0
001	Ammoniacal N (%)	0405	1.260	0.0000	1.156	0.1340	0.0297	27	0.78	001.99	0
001	Ammoniacal N (%)	0510	1.264	0.0291	1.156	0.1340	0.0297	27	0.80	001.99	0
001	Ammoniacal N (%)	0517	1.315	0.0500	1.156	0.1340	0.0297	27	1.19	001.99	0
001	Ammoniacal N (%)	0559	1.355	0.0100	1.156	0.1340	0.0297	27	1.48	001.99	0
001	Ammoniacal N (%)	0444	1.360	0.0400	1.156	0.1340	0.0297	27	1.52	001.10	0
001	Ammoniacal N (%)	0549	1.415	0.0100	1.156	0.1340	0.0297	27	1.93	001.99	0
001	Ammoniacal N (%)	0524	7.269	0.0261	1.156	0.1340	0.0297	27	45.61	001.99	0
001	Ammoniacal N (%)	0612	14.85	0.0020	1.156	0.1340	0.0297	27	102.16	001.99	2
002	Nitrate N (%)	0368	11.75	0.2970	14.23	0.4067	0.0917	17	-6.09	002.99	0
002	Nitrate N (%)	0452	12.32	0.0000	14.23	0.4067	0.0917	17	-4.68	002.99	0
002	Nitrate N (%)	0029	13.52	0.0500	14.23	0.4067	0.0917	17	-1.75	002.99	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				
002	Nitrate N (%)	0605	13.80	0.0800	14.23	0.4067	0.0917	17	-1.05	002.99	0
002	Nitrate N (%)	0553	14.08	0.3400	14.23	0.4067	0.0917	17	-0.36	002.99	0
002	Nitrate N (%)	0513	14.20	0.0500	14.23	0.4067	0.0917	17	-0.07	002.99	0
002	Nitrate N (%)	0394	14.22	0.1160	14.23	0.4067	0.0917	17	-0.02	002.99	0
002	Nitrate N (%)	0444	14.25	0.1000	14.23	0.4067	0.0917	17	0.06	002.99	0
002	Nitrate N (%)	0498	14.35	0.1000	14.23	0.4067	0.0917	17	0.31	002.99	0
002	Nitrate N (%)	0423	14.40	0.0300	14.23	0.4067	0.0917	17	0.42	002.99	0
002	Nitrate N (%)	0600	14.45	0.2000	14.23	0.4067	0.0917	17	0.55	002.99	0
002	Nitrate N (%)	0537	14.48	0.1100	14.23	0.4067	0.0917	17	0.61	002.99	0
002	Nitrate N (%)	0549	14.48	0.0100	14.23	0.4067	0.0917	17	0.61	002.99	0
002	Nitrate N (%)	0517	14.49	0.0700	14.23	0.4067	0.0917	17	0.64	002.99	0
002	Nitrate N (%)	0584	14.54	0.1200	14.23	0.4067	0.0917	17	0.77	002.99	0
002	Nitrate N (%)	0559	14.55	0.0100	14.23	0.4067	0.0917	17	0.79	002.99	0
002	Nitrate N (%)	0220	14.73	0.0100	14.23	0.4067	0.0917	17	1.23	002.99	0
002	Nitrate N (%)	0136	14.85	0.5900	14.23	0.4067	0.0917	17	1.52	002.99	1
009	Ammoniacal Plus Nitrate N (%)	0619	15.15	0.3000	15.39	0.3115	0.2475	4	-0.77	009.10	0
009	Ammoniacal Plus Nitrate N (%)	0619	15.15	0.3000	15.39	0.3115	0.2475	4	-0.77	009.99	0
009	Ammoniacal Plus Nitrate N (%)	0444	15.45	0.3000	15.39	0.3115	0.2475	4	0.20	009.10	0
009	Ammoniacal Plus Nitrate N (%)	0517	15.81	0.0900	15.39	0.3115	0.2475	4	1.34	009.10	0
010	Total N (15.5%)	0542	6.660†	0.2400	14.75	0.9185	0.1489	49	-8.80	010.60	0
010	Total N (15.5%)	0422	9.245†	0.2100	14.75	0.9185	0.1489	49	-5.99	010.60	0
010	Total N (15.5%)	0523	11.73†	0.7400	14.75	0.9185	0.1489	49	-3.28	010.60	0
010	Total N (15.5%)	0588	11.75†	0.7000	14.75	0.9185	0.1489	49	-3.26	010.60	0
010	Total N (15.5%)	0234	12.88†	0.4000	14.75	0.9185	0.1489	49	-2.03	010.60	0
010	Total N (15.5%)	0035	13.30†	0.0000	14.75	0.9185	0.1489	49	-1.58	010.60	0
010	Total N (15.5%)	0185	13.37†	0.0300	14.75	0.9185	0.1489	49	-1.50	010.60	0
010	Total N (15.5%)	0452	13.42†	0.0100	14.75	0.9185	0.1489	49	-1.45	010.60	0
010	Total N (15.5%)	0095	13.55†	0.0100	14.75	0.9185	0.1489	49	-1.31	010.60	0
010	Total N (15.5%)	0324	13.70†	0.6000	14.75	0.9185	0.1489	49	-1.14	010.60	0
010	Total N (15.5%)	0117	13.74†	0.0467	14.75	0.9185	0.1489	49	-1.10	010.12	0
010	Total N (15.5%)	0106	13.93†	0.0700	14.75	0.9185	0.1489	49	-0.89	010.60	0
010	Total N (15.5%)	0521	14.39	0.0000	14.75	0.9185	0.1489	49	-0.39	010.60	0
010	Total N (15.5%)	0377	14.55	0.1600	14.75	0.9185	0.1489	49	-0.21	010.60	0
010	Total N (15.5%)	0389	14.56	0.0600	14.75	0.9185	0.1489	49	-0.20	010.60	0
010	Total N (15.5%)	0025	14.57	0.2500	14.75	0.9185	0.1489	49	-0.20	010.60	0
010	Total N (15.5%)	0102	14.59	0.1100	14.75	0.9185	0.1489	49	-0.18	010.60	0
010	Total N (15.5%)	0451	14.62	0.1600	14.75	0.9185	0.1489	49	-0.14	010.60	0
010	Total N (15.5%)	0368	14.65	0.0550	14.75	0.9185	0.1489	49	-0.10	010.60	0
010	Total N (15.5%)	0561	14.84	0.0400	14.75	0.9185	0.1489	49	0.10	010.60	0
010	Total N (15.5%)	0027	14.85	0.3900	14.75	0.9185	0.1489	49	0.11	010.60	0
010	Total N (15.5%)	0405	14.88	0.0200	14.75	0.9185	0.1489	49	0.15	010.60	0
010	Total N (15.5%)	0177	14.93	0.3370	14.75	0.9185	0.1489	49	0.20	010.60	0
010	Total N (15.5%)	0220	14.96	0.0200	14.75	0.9185	0.1489	49	0.23	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 (15.5%)	0043	14.97	0.2800	14.75	0.9185	0.1489	49	0.24	010.60	0
010	Total N (15.5%)	0023	15.02	0.0500	14.75	0.9185	0.1489	49	0.29	010.60	0
010	Total N (15.5%)	0292	15.05	0.0100	14.75	0.9185	0.1489	49	0.32	010.60	0
010	Total N (15.5%)	0543	15.08	0.0000	14.75	0.9185	0.1489	49	0.36	010.60	0
010	Total N (15.5%)	0040	15.10	0.2000	14.75	0.9185	0.1489	49	0.38	010.60	0
010	Total N (15.5%)	0291	15.20	0.0100	14.75	0.9185	0.1489	49	0.49	010.60	0
010	Total N (15.5%)	0568	15.20	0.0000	14.75	0.9185	0.1489	49	0.49	010.12	0
010	Total N (15.5%)	0055	15.20	0.0200	14.75	0.9185	0.1489	49	0.49	010.60	0
010	Total N (15.5%)	0494	15.22	0.0700	14.75	0.9185	0.1489	49	0.51	010.60	0
010	Total N (15.5%)	0510	15.23	0.0503	14.75	0.9185	0.1489	49	0.53	010.11	0
010	Total N (15.5%)	0255	15.24	0.2360	14.75	0.9185	0.1489	49	0.53	010.60	0
010	Total N (15.5%)	0073	15.31	0.0100	14.75	0.9185	0.1489	49	0.61	010.60	0
010	Total N (15.5%)	0513	15.33	0.0800	14.75	0.9185	0.1489	49	0.63	010.99	0
010	Total N (15.5%)	0136	15.37	0.3000	14.75	0.9185	0.1489	49	0.68	010.60	0
010	Total N (15.5%)	0472	15.39	0.1200	14.75	0.9185	0.1489	49	0.70	010.60	0
010	Total N (15.5%)	0260	15.40‡	0.1300	14.75	0.9185	0.1489	49	0.71	010.60	0
010	Total N (15.5%)	0029	15.41‡	0.0300	14.75	0.9185	0.1489	49	0.72	010.60	0
010	Total N (15.5%)	0394	15.41‡	0.1830	14.75	0.9185	0.1489	49	0.72	010.99	0
010	Total N (15.5%)	0485	15.50‡	0.2000	14.75	0.9185	0.1489	49	0.82	010.60	0
010	Total N (15.5%)	0169	15.51‡	0.0200	14.75	0.9185	0.1489	49	0.83	010.60	0
010	Total N (15.5%)	0537	15.56‡	0.0800	14.75	0.9185	0.1489	49	0.89	010.99	0
010	Total N (15.5%)	0421	15.77‡	0.5700	14.75	0.9185	0.1489	49	1.11	010.60	0
010	Total N (15.5%)	0527	15.86‡	0.4230	14.75	0.9185	0.1489	49	1.21	010.60	0
010	Total N (15.5%)	0559	15.90‡	0.0100	14.75	0.9185	0.1489	49	1.25	010.99	0
010	Total N (15.5%)	0423	16.75‡	0.0000	14.75	0.9185	0.1489	49	2.18	010.60	0
010	Total N (15.5%)	0612	15.15	0.8900	14.75	0.9185	0.1489	49	0.43	010.60	1
010	Total N (15.5%)	0524	32.96‡	0.0620	14.75	0.9185	0.1489	49	19.82	010.99	2
020	Total P2O5 (%)	0524	0.0050	0.0000	0.4034	0.7880	0.0207	5	-0.44	020.50	0
020	Total P2O5 (%)	0588	0.0505	0.0210	0.4034	0.7880	0.0207	5	-0.39	020.50	0
020	Total P2O5 (%)	0422	0.0595	0.0010	0.4034	0.7880	0.0207	5	-0.38	020.50	0
020	Total P2O5 (%)	0472	0.0900	0.0200	0.4034	0.7880	0.0207	5	-0.35	020.50	0
020	Total P2O5 (%)	0572	1.812	0.0409	0.4034	0.7880	0.0207	5	1.56	020.99	0
020	Total P2O5 (%)	0552	0.0000	0.0000	0.4034	0.7880	0.0207	5		020.50	4
020	Total P2O5 (%)	0423	< 0.1		0.4034	0.7880	0.0207	5		020.50	5
041	Direct Available P2O5 (%)	0472	0.0400	0.0000				2		041.21	0
041	Direct Available P2O5 (%)	0568	0.0500	0.0000				2		041.21	0
041	Direct Available P2O5 (%)	0423	< 0.1					2		041.51	5
048	Water Soluble P2O5 (%)	0472	0.0100	0.0000				1		048.20	0
050	Soluble K2O (%)	0524	0.0035	0.0010	0.0290	0.0245	0.0047	4	-0.88	050.99	0
050	Soluble K2O (%)	0588	0.0170	0.0100	0.0290	0.0245	0.0047	4	-0.42	050.99	0
050	Soluble K2O (%)	0422	0.0355	0.0030	0.0290	0.0245	0.0047	4	0.23	050.50	0
050	Soluble K2O (%)	0568	0.0600	0.0000	0.0290	0.0245	0.0047	4	1.07	050.51	0
050	Soluble K2O (%)	0552	0.0000	0.0000	0.0290	0.0245	0.0047	4		050.99	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				
050	Soluble K2O (%)	0423	< 0.05		0.0290	0.0245	0.0047	4		050.52	5
060	Water (Free) (%)	0510	3.600	0.0170				1		060.99	0
101	Acid Soluble Ca (19%)	0568	17.40†	0.0000	18.87	0.7173	0.3226	58	-2.04	101.30	0
101	Acid Soluble Ca (19%)	0177	17.43†	0.0325	18.87	0.7173	0.3226	58	-2.00	101.33	0
101	Acid Soluble Ca (19%)	0055	17.45†	0.4250	18.87	0.7173	0.3226	58	-1.97	101.33	0
101	Acid Soluble Ca (19%)	0049	17.53†	0.8806	18.87	0.7173	0.3226	58	-1.86	101.30	0
101	Acid Soluble Ca (19%)	0102	17.58†	0.7300	18.87	0.7173	0.3226	58	-1.80	101.33	0
101	Acid Soluble Ca (19%)	0106	17.58†	0.6523	18.87	0.7173	0.3226	58	-1.80	101.33	0
101	Acid Soluble Ca (19%)	0542	17.84†	0.5700	18.87	0.7173	0.3226	58	-1.44	101.99	0
101	Acid Soluble Ca (19%)	0498	18.10	0.2000	18.87	0.7173	0.3226	58	-1.07	101.02	0
101	Acid Soluble Ca (19%)	0255	18.15	0.1400	18.87	0.7173	0.3226	58	-1.00	101.30	0
101	Acid Soluble Ca (19%)	0402	18.16	0.0180	18.87	0.7173	0.3226	58	-0.98	101.30	0
101	Acid Soluble Ca (19%)	0040	18.40	0.6300	18.87	0.7173	0.3226	58	-0.66	101.33	0
101	Acid Soluble Ca (19%)	0485	18.40	1.200	18.87	0.7173	0.3226	58	-0.65	101.00	0
101	Acid Soluble Ca (19%)	0423	18.48	0.0600	18.87	0.7173	0.3226	58	-0.55	101.32	0
101	Acid Soluble Ca (19%)	0605	18.51	0.1100	18.87	0.7173	0.3226	58	-0.50	101.99	0
101	Acid Soluble Ca (19%)	0513	18.54	0.0400	18.87	0.7173	0.3226	58	-0.45	101.99	0
101	Acid Soluble Ca (19%)	0561	18.56	0.0000	18.87	0.7173	0.3226	58	-0.43	101.99	0
101	Acid Soluble Ca (19%)	0494	18.59	0.3100	18.87	0.7173	0.3226	58	-0.39	101.33	0
101	Acid Soluble Ca (19%)	0368	18.60	0.2895	18.87	0.7173	0.3226	58	-0.37	101.99	0
101	Acid Soluble Ca (19%)	0405	18.65	0.3000	18.87	0.7173	0.3226	58	-0.30	101.32	0
101	Acid Soluble Ca (19%)	0292	18.67	0.0400	18.87	0.7173	0.3226	58	-0.27	101.33	0
101	Acid Soluble Ca (19%)	0584	18.68	0.0800	18.87	0.7173	0.3226	58	-0.26	101.99	0
101	Acid Soluble Ca (19%)	0234	18.70	0.5500	18.87	0.7173	0.3226	58	-0.24	101.30	0
101	Acid Soluble Ca (19%)	0136	18.70	0.8000	18.87	0.7173	0.3226	58	-0.23	101.33	0
101	Acid Soluble Ca (19%)	0451	18.72	0.7100	18.87	0.7173	0.3226	58	-0.21	101.30	0
101	Acid Soluble Ca (19%)	0521	18.73	0.0000	18.87	0.7173	0.3226	58	-0.20	101.33	0
101	Acid Soluble Ca (19%)	0543	18.73	0.0210	18.87	0.7173	0.3226	58	-0.19	101.33	0
101	Acid Soluble Ca (19%)	0324	18.75	0.5000	18.87	0.7173	0.3226	58	-0.16	101.30	0
101	Acid Soluble Ca (19%)	0559	18.78	0.0100	18.87	0.7173	0.3226	58	-0.13	101.99	0
101	Acid Soluble Ca (19%)	0220	18.79	0.3100	18.87	0.7173	0.3226	58	-0.11	101.32	0
101	Acid Soluble Ca (19%)	0394	18.84	0.0770	18.87	0.7173	0.3226	58	-0.03	101.33	0
101	Acid Soluble Ca (19%)	0534	18.90	0.0000	18.87	0.7173	0.3226	58	0.05	101.00	0
101	Acid Soluble Ca (19%)	0517	18.90	0.1000	18.87	0.7173	0.3226	58	0.05	101.70	0
101	Acid Soluble Ca (19%)	0600	18.92	0.1300	18.87	0.7173	0.3226	58	0.07	101.99	0
101	Acid Soluble Ca (19%)	0307	18.95	1.100	18.87	0.7173	0.3226	58	0.12	101.99	0
101	Acid Soluble Ca (19%)	0537	18.95	0.1000	18.87	0.7173	0.3226	58	0.12	101.99	0
101	Acid Soluble Ca (19%)	0472	18.98	0.0500	18.87	0.7173	0.3226	58	0.15	101.33	0
101	Acid Soluble Ca (19%)	0527	18.98	0.1023	18.87	0.7173	0.3226	58	0.15	101.33	0
101	Acid Soluble Ca (19%)	0169	19.01	0.0200	18.87	0.7173	0.3226	58	0.20	101.33	0
101	Acid Soluble Ca (19%)	0389	19.03	0.0800	18.87	0.7173	0.3226	58	0.23	101.99	0
101	Acid Soluble Ca (19%)	0421	19.05	0.7800	18.87	0.7173	0.3226	58	0.26	101.33	0
101	Acid Soluble Ca (19%)	0510	19.06	0.0308	18.87	0.7173	0.3226	58	0.27	101.70	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				
101	Acid Soluble Ca (19%)	0073	19.10	0.0300	18.87	0.7173	0.3226	58	0.32	101.00	0
101	Acid Soluble Ca (19%)	0523	19.12	0.0080	18.87	0.7173	0.3226	58	0.35	101.99	0
101	Acid Soluble Ca (19%)	0553	19.17	0.1000	18.87	0.7173	0.3226	58	0.42	101.00	0
101	Acid Soluble Ca (19%)	0377	19.30	0.0800	18.87	0.7173	0.3226	58	0.60	101.30	0
101	Acid Soluble Ca (19%)	0619	19.40	0.4000	18.87	0.7173	0.3226	58	0.74	101.30	0
101	Acid Soluble Ca (19%)	0619	19.40	0.4000	18.87	0.7173	0.3226	58	0.74	101.99	0
101	Acid Soluble Ca (19%)	0552	19.57	1.130	18.87	0.7173	0.3226	58	0.97	101.99	0
101	Acid Soluble Ca (19%)	0023	19.61	0.1840	18.87	0.7173	0.3226	58	1.03	101.99	0
101	Acid Soluble Ca (19%)	0612	19.65	0.9900	18.87	0.7173	0.3226	58	1.09	101.33	0
101	Acid Soluble Ca (19%)	0035	19.90‡	0.4000	18.87	0.7173	0.3226	58	1.44	101.30	0
101	Acid Soluble Ca (19%)	0422	19.91‡	0.0800	18.87	0.7173	0.3226	58	1.46	101.30	0
101	Acid Soluble Ca (19%)	0291	19.94‡	0.0100	18.87	0.7173	0.3226	58	1.49	101.30	0
101	Acid Soluble Ca (19%)	0029	20.21‡	0.9700	18.87	0.7173	0.3226	58	1.87	101.00	0
101	Acid Soluble Ca (19%)	0444	20.45‡	0.2100	18.87	0.7173	0.3226	58	2.20	101.30	0
101	Acid Soluble Ca (19%)	0095	20.68‡	0.5600	18.87	0.7173	0.3226	58	2.53	101.32	0
101	Acid Soluble Ca (19%)	0452	20.74‡	0.0800	18.87	0.7173	0.3226	58	2.61	101.30	0
101	Acid Soluble Ca (19%)	0515	22.72‡	0.9700	18.87	0.7173	0.3226	58	5.37	101.99	0
101	Acid Soluble Ca (19%)	0515	18.20	2.710	18.87	0.7173	0.3226	58	-0.94	101.33	1
101	Acid Soluble Ca (19%)	0572	8.322‡	0.3194	18.87	0.7173	0.3226	58	-14.70	101.99	2
121	Acid Soluble Mg (%)	0422	0.0025	0.0010	0.0176	0.0145	0.0036	9	-0.96	121.30	0
121	Acid Soluble Mg (%)	0472	0.0100	0.0000	0.0176	0.0145	0.0036	9	-0.48	121.33	0
121	Acid Soluble Mg (%)	0542	0.0104	0.0011	0.0176	0.0145	0.0036	9	-0.46	121.99	0
121	Acid Soluble Mg (%)	0035	0.0105	0.0010	0.0176	0.0145	0.0036	9	-0.45	121.30	0
121	Acid Soluble Mg (%)	0423	0.0115	0.0050	0.0176	0.0145	0.0036	9	-0.39	121.32	0
121	Acid Soluble Mg (%)	0568	0.0120	0.0000	0.0176	0.0145	0.0036	9	-0.35	121.30	0
121	Acid Soluble Mg (%)	0515	0.0272	0.0004	0.0176	0.0145	0.0036	9	0.61	121.99	0
121	Acid Soluble Mg (%)	0515	0.0347	0.0355	0.0176	0.0145	0.0036	9	1.09	121.33	0
121	Acid Soluble Mg (%)	0572	0.5287	0.0069	0.0176	0.0145	0.0036	9	32.47	121.99	0
121	Acid Soluble Mg (%)	0552	0.0650	0.1100	0.0176	0.0145	0.0036	9	3.01	121.99	1
148	Total S (%)	0542	0.0105	0.0003	2.119	4.505	0.0946	5	-0.47	148.99	0
148	Total S (%)	0422	0.0795	0.0010	2.119	4.505	0.0946	5	-0.45	148.99	0
148	Total S (%)	0515	0.1184	0.0014	2.119	4.505	0.0946	5	-0.44	148.07	0
148	Total S (%)	0472	0.2100	0.0400	2.119	4.505	0.0946	5	-0.42	148.07	0
148	Total S (%)	0572	10.18	0.4303	2.119	4.505	0.0946	5	1.79	148.99	0
149	S - HNO3 soluble (%)	0423	< 0.05					0		149.04	5
151	Acid Soluble As (ppm)	0523	0.1461	0.0279	6.229	10.47	1.838	4	-0.49	151.30	0
151	Acid Soluble As (ppm)	0572	0.9793	0.0232	6.229	10.47	1.838	4	-0.42	151.99	0
151	Acid Soluble As (ppm)	0485	1.886	1.989	6.229	10.47	1.838	4	-0.35	151.32	0
151	Acid Soluble As (ppm)	0515	21.91	5.310	6.229	10.47	1.838	4	1.27	151.33	0
151	Acid Soluble As (ppm)	0255	0.0000	0.0000	6.229	10.47	1.838	4		151.30	4
151	Acid Soluble As (ppm)	0220	< 0.2		6.229	10.47	1.838	4		151.32	5
151	Acid Soluble As (ppm)	0220	< 0.2		6.229	10.47	1.838	4		151.99	5
151	Acid Soluble As (ppm)	0368	< 0.3		6.229	10.47	1.838	4		151.34	5

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151	Acid Soluble As (ppm)	0136	< 1		6.229	10.47	1.838	4		151.33	5
151	Acid Soluble As (ppm)	0405	< 3		6.229	10.47	1.838	4		151.32	5
151	Acid Soluble As (ppm)	0605	< 6.2		6.229	10.47	1.838	4		151.30	5
165	Acid Soluble B (%)	0515	0.0136	0.0018	0.0599	0.0819	0.0855	6	-0.50	165.99	0
165	Acid Soluble B (%)	0422	0.0140	0.0000	0.0599	0.0819	0.0855	6	-0.50	165.30	0
165	Acid Soluble B (%)	0542	0.0141	0.0001	0.0599	0.0819	0.0855	6	-0.50	165.99	0
165	Acid Soluble B (%)	0472	0.0200	0.0000	0.0599	0.0819	0.0855	6	-0.43	165.99	0
165	Acid Soluble B (%)	0552	0.1150	0.2100	0.0599	0.0819	0.0855	6	0.60	165.99	0
165	Acid Soluble B (%)	0572	1.889	0.1301	0.0599	0.0819	0.0855	6	19.91	165.99	0
165	Acid Soluble B (%)	0423	158.4	8.120	0.0599	0.0819	0.0855	6	1722.33	165.99	1
181	Acid Soluble Cd (ppm)	0394	0.0775	0.0030	0.6999	0.8002	0.4123	5	-0.78	181.30	0
181	Acid Soluble Cd (ppm)	0523	0.0795	0.0170	0.6999	0.8002	0.4123	5	-0.78	181.30	0
181	Acid Soluble Cd (ppm)	0485	0.2395	0.0150	0.6999	0.8002	0.4123	5	-0.58	181.32	0
181	Acid Soluble Cd (ppm)	0572	1.300	0.0364	0.6999	0.8002	0.4123	5	0.75	181.99	0
181	Acid Soluble Cd (ppm)	0255	1.803	1.990	0.6999	0.8002	0.4123	5	1.38	181.30	0
181	Acid Soluble Cd (ppm)	0220	< 0.1		0.6999	0.8002	0.4123	5		181.32	5
181	Acid Soluble Cd (ppm)	0368	< 0.1		0.6999	0.8002	0.4123	5		181.34	5
181	Acid Soluble Cd (ppm)	0220	< 0.1		0.6999	0.8002	0.4123	5		181.99	5
181	Acid Soluble Cd (ppm)	0515	< 0.133		0.6999	0.8002	0.4123	5		181.34	5
181	Acid Soluble Cd (ppm)	0515	< 0.19		0.6999	0.8002	0.4123	5		181.33	5
181	Acid Soluble Cd (ppm)	0405	< 1		0.6999	0.8002	0.4123	5		181.32	5
181	Acid Soluble Cd (ppm)	0136	< 1		0.6999	0.8002	0.4123	5		181.33	5
181	Acid Soluble Cd (ppm)	0605	< 1.85		0.6999	0.8002	0.4123	5		181.30	5
191	Acid Soluble Cr (ppm)	0394	0.2115	0.0230	2.235	3.526	0.4737	8	-0.57	191.30	0
191	Acid Soluble Cr (ppm)	0524	0.2291	0.0280	2.235	3.526	0.4737	8	-0.57	191.30	0
191	Acid Soluble Cr (ppm)	0523	0.2331	0.0858	2.235	3.526	0.4737	8	-0.57	191.30	0
191	Acid Soluble Cr (ppm)	0220	0.4500	0.1000	2.235	3.526	0.4737	8	-0.51	191.32	0
191	Acid Soluble Cr (ppm)	0220	0.4500	0.1000	2.235	3.526	0.4737	8	-0.51	191.99	0
191	Acid Soluble Cr (ppm)	0515	1.949	0.7340	2.235	3.526	0.4737	8	-0.08	191.34	0
191	Acid Soluble Cr (ppm)	0515	6.832	1.228	2.235	3.526	0.4737	8	1.30	191.33	0
191	Acid Soluble Cr (ppm)	0572	8.500	1.599	2.235	3.526	0.4737	8	1.78	191.99	0
191	Acid Soluble Cr (ppm)	0368	< 0.1		2.235	3.526	0.4737	8		191.34	5
191	Acid Soluble Cr (ppm)	0405	< 1		2.235	3.526	0.4737	8		191.32	5
191	Acid Soluble Cr (ppm)	0605	< 1.2		2.235	3.526	0.4737	8		191.30	5
191	Acid Soluble Cr (ppm)	0136	< 2.5		2.235	3.526	0.4737	8		191.33	5
202	Acid Soluble Co (ppm)	0523	0.0633	0.0118	6.416	8.903	1.377	5	-0.71	202.30	0
202	Acid Soluble Co (ppm)	0542	0.3625	0.0350	6.416	8.903	1.377	5	-0.68	202.30	0
202	Acid Soluble Co (ppm)	0423	0.3750	0.0100	6.416	8.903	1.377	5	-0.68	202.32	0
202	Acid Soluble Co (ppm)	0572	11.56	0.0592	6.416	8.903	1.377	5	0.58	202.99	0
202	Acid Soluble Co (ppm)	0255	19.73	6.770	6.416	8.903	1.377	5	1.49	202.99	0
202	Acid Soluble Co (ppm)	0220	< 0.1		6.416	8.903	1.377	5		202.32	5
202	Acid Soluble Co (ppm)	0368	< 0.1		6.416	8.903	1.377	5		202.34	5
202	Acid Soluble Co (ppm)	0220	< 0.1		6.416	8.903	1.377	5		202.99	5



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202	Acid Soluble Co (ppm)	0515	< 0.139		6.416	8.903	1.377	5		202.34	5
202	Acid Soluble Co (ppm)	0485	< 0.2		6.416	8.903	1.377	5		202.32	5
202	Acid Soluble Co (ppm)	0515	< 0.26		6.416	8.903	1.377	5		202.33	5
202	Acid Soluble Co (ppm)	0405	< 1		6.416	8.903	1.377	5		202.32	5
202	Acid Soluble Co (ppm)	0136	< 2.5		6.416	8.903	1.377	5		202.33	5
221	Acid Soluble Cu (%)	0515	0.0002	0.0000	1.088	2.112	0.1037	4	-0.51	221.99	0
221	Acid Soluble Cu (%)	0515	0.0003	0.0002	1.088	2.112	0.1037	4	-0.51	221.33	0
221	Acid Soluble Cu (%)	0572	0.0947	0.0010	1.088	2.112	0.1037	4	-0.47	221.99	0
221	Acid Soluble Cu (%)	0423	4.255	0.3100	1.088	2.112	0.1037	4	1.50	221.32	0
221	Acid Soluble Cu (%)	0422	0.0000	0.0000	1.088	2.112	0.1037	4		221.30	4
221	Acid Soluble Cu (%)	0106	0.0000	0.0000	1.088	2.112	0.1037	4		221.33	4
221	Acid Soluble Cu (%)	0637	0.0000	0.0000	1.088	2.112	0.1037	4		221.99	4
221	Acid Soluble Cu (%)	0368	0.0003	0.0005	1.088	2.112	0.1037	4		221.99	4
221	Acid Soluble Cu (%)	0255	0.0005	0.0010	1.088	2.112	0.1037	4		221.30	4
221	Acid Soluble Cu (%)	0552	0.0650	0.1300	1.088	2.112	0.1037	4		221.30	4
221	Acid Soluble Cu (%)	0405	< 0.0002		1.088	2.112	0.1037	4		221.32	5
221	Acid Soluble Cu (%)	0136	< 0.0002		1.088	2.112	0.1037	4		221.33	5
241	Acid Soluble Fe (%)	0422	0.0010	0.0000	0.0393	0.0621	0.0040	6	-0.55	241.30	0
241	Acid Soluble Fe (%)	0035	0.0011	0.0002	0.0393	0.0621	0.0040	6	-0.55	241.30	0
241	Acid Soluble Fe (%)	0542	0.0019	0.0003	0.0393	0.0621	0.0040	6	-0.54	241.99	0
241	Acid Soluble Fe (%)	0472	0.0200	0.0000	0.0393	0.0621	0.0040	6	-0.28	241.33	0
241	Acid Soluble Fe (%)	0515	0.0795	0.0100	0.0393	0.0621	0.0040	6	0.58	241.33	0
241	Acid Soluble Fe (%)	0572	1.343	0.0053	0.0393	0.0621	0.0040	6	18.69	241.99	0
241	Acid Soluble Fe (%)	0552	0.0600	0.1200	0.0393	0.0621	0.0040	6		241.30	4
241	Acid Soluble Fe (%)	0423	< 10		0.0393	0.0621	0.0040	6		241.32	5
251	Acid Soluble Pb (ppm)	0524	0.0656	0.0046	0.8041	1.100	0.2167	6	-0.67	251.30	0
251	Acid Soluble Pb (ppm)	0394	0.0770	0.0260	0.8041	1.100	0.2167	6	-0.66	251.30	0
251	Acid Soluble Pb (ppm)	0523	0.1179	0.0149	0.8041	1.100	0.2167	6	-0.62	251.30	0
251	Acid Soluble Pb (ppm)	0515	0.5455	0.6010	0.8041	1.100	0.2167	6	-0.23	251.34	0
251	Acid Soluble Pb (ppm)	0485	1.700	0.6200	0.8041	1.100	0.2167	6	0.81	251.32	0
251	Acid Soluble Pb (ppm)	0572	2.318	0.0339	0.8041	1.100	0.2167	6	1.38	251.99	0
251	Acid Soluble Pb (ppm)	0255	0.0000	0.0000	0.8041	1.100	0.2167	6		251.30	4
251	Acid Soluble Pb (ppm)	0515	< 0.21		0.8041	1.100	0.2167	6		251.33	5
251	Acid Soluble Pb (ppm)	0368	< 0.6		0.8041	1.100	0.2167	6		251.34	5
251	Acid Soluble Pb (ppm)	0220	< 0.7		0.8041	1.100	0.2167	6		251.32	5
251	Acid Soluble Pb (ppm)	0220	< 0.7		0.8041	1.100	0.2167	6		251.99	5
251	Acid Soluble Pb (ppm)	0136	< 3		0.8041	1.100	0.2167	6		251.33	5
251	Acid Soluble Pb (ppm)	0405	< 4		0.8041	1.100	0.2167	6		251.32	5
251	Acid Soluble Pb (ppm)	0605	< 5		0.8041	1.100	0.2167	6		251.30	5
261	Acid Soluble Mn (%)	0527	0.0002	0.0000	0.6580	1.139	0.0327	3	-0.47	261.35	0
261	Acid Soluble Mn (%)	0542	0.0003	0.0001	0.6580	1.139	0.0327	3	-0.47	261.99	0
261	Acid Soluble Mn (%)	0572	1.973	0.0653	0.6580	1.139	0.0327	3	0.94	261.99	0
261	Acid Soluble Mn (%)	0422	0.0000	0.0000	0.6580	1.139	0.0327	3		261.30	4

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			Value	Range	Rob Mean	Rob SD	Rob R-bar				
261	Acid Soluble Mn (%)	0552	0.0450	0.0900	0.6580	1.139	0.0327	3		261.32	4
261	Acid Soluble Mn (%)	0515	< 0.0011		0.6580	1.139	0.0327	3		261.99	5
261	Acid Soluble Mn (%)	0423	< 5		0.6580	1.139	0.0327	3		261.34	5
281	Acid Soluble Hg (ppm)	0572	0.1102	0.0011				1		281.99	0
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)	0605	< 1.25					1		281.30	5
281	Acid Soluble Hg (ppm)	0405	< 2					1		281.30	5
289	Acid Soluble Mo (ppm)	0220	0.1850	0.0300	2.953	2.715	0.2334	5	-1.02	289.32	0
289	Acid Soluble Mo (ppm)	0542	1.384	0.7950	2.953	2.715	0.2334	5	-0.58	289.30	0
289	Acid Soluble Mo (ppm)	0524	1.498	0.0283	2.953	2.715	0.2334	5	-0.54	289.30	0
289	Acid Soluble Mo (ppm)	0423	5.360	0.1600	2.953	2.715	0.2334	5	0.89	289.33	0
289	Acid Soluble Mo (ppm)	0572	6.337	0.1538	2.953	2.715	0.2334	5	1.25	289.99	0
289	Acid Soluble Mo (ppm)	0255	2.830	2.560	2.953	2.715	0.2334	5	-0.05	289.30	1
289	Acid Soluble Mo (ppm)	0106	0.0000	0.0000	2.953	2.715	0.2334	5		289.33	4
289	Acid Soluble Mo (ppm)	0637	< 0.001		2.953	2.715	0.2334	5		289.30	5
289	Acid Soluble Mo (ppm)	0368	< 0.1		2.953	2.715	0.2334	5		289.34	5
289	Acid Soluble Mo (ppm)	0515	< 0.178		2.953	2.715	0.2334	5		289.34	5
289	Acid Soluble Mo (ppm)	0485	< 0.2		2.953	2.715	0.2334	5		289.32	5
289	Acid Soluble Mo (ppm)	0515	< 0.23		2.953	2.715	0.2334	5		289.33	5
289	Acid Soluble Mo (ppm)	0220	< 0.3		2.953	2.715	0.2334	5		289.99	5
289	Acid Soluble Mo (ppm)	0405	< 1		2.953	2.715	0.2334	5		289.32	5
289	Acid Soluble Mo (ppm)	0136	< 2.5		2.953	2.715	0.2334	5		289.33	5
291	Acid Soluble Ni (ppm)	0524	0.0650	0.0300	1.183	1.428	0.3947	9	-0.78	291.30	0
291	Acid Soluble Ni (ppm)	0523	0.2815	0.0735	1.183	1.428	0.3947	9	-0.63	291.30	0
291	Acid Soluble Ni (ppm)	0394	0.4010	0.1040	1.183	1.428	0.3947	9	-0.55	291.30	0
291	Acid Soluble Ni (ppm)	0220	0.5500	0.1000	1.183	1.428	0.3947	9	-0.44	291.32	0
291	Acid Soluble Ni (ppm)	0485	0.6520	0.0420	1.183	1.428	0.3947	9	-0.37	291.32	0
291	Acid Soluble Ni (ppm)	0220	0.8000	0.0000	1.183	1.428	0.3947	9	-0.27	291.99	0
291	Acid Soluble Ni (ppm)	0542	1.249	0.3480	1.183	1.428	0.3947	9	0.05	291.30	0
291	Acid Soluble Ni (ppm)	0515	4.910	3.624	1.183	1.428	0.3947	9	2.61	291.33	0
291	Acid Soluble Ni (ppm)	0572	12.90	1.171	1.183	1.428	0.3947	9	8.20	291.99	0
291	Acid Soluble Ni (ppm)	0255	30.04	8.920	1.183	1.428	0.3947	9	20.21	291.99	1
291	Acid Soluble Ni (ppm)	0515	< 0.18		1.183	1.428	0.3947	9		291.34	5
291	Acid Soluble Ni (ppm)	0368	< 0.2		1.183	1.428	0.3947	9		291.34	5
291	Acid Soluble Ni (ppm)	0405	< 1		1.183	1.428	0.3947	9		291.32	5
291	Acid Soluble Ni (ppm)	0605	< 2.4		1.183	1.428	0.3947	9		291.30	5
291	Acid Soluble Ni (ppm)	0136	< 2.5		1.183	1.428	0.3947	9		291.33	5
301	Acid Soluble Se (ppm)	0523	0.0951	0.1171	1.811	1.303	0.9029	5	-1.15	301.30	0
301	Acid Soluble Se (ppm)	0515	1.095	0.1330	1.811	1.303	0.9029	5	-0.48	301.34	0
301	Acid Soluble Se (ppm)	0572	1.971	0.0563	1.811	1.303	0.9029	5	0.11	301.99	0
301	Acid Soluble Se (ppm)	0515	2.342	4.108	1.811	1.303	0.9029	5	0.36	301.33	0
301	Acid Soluble Se (ppm)	0368	3.550	0.1000	1.811	1.303	0.9029	5	1.17	301.34	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				
301	Acid Soluble Se (ppm)	0255	0.0000	0.0000	1.811	1.303	0.9029	5		301.99	4
301	Acid Soluble Se (ppm)	0220	< 0.3		1.811	1.303	0.9029	5		301.32	5
301	Acid Soluble Se (ppm)	0220	< 0.3		1.811	1.303	0.9029	5		301.99	5
301	Acid Soluble Se (ppm)	0605	< 1.65		1.811	1.303	0.9029	5		301.30	5
301	Acid Soluble Se (ppm)	0405	< 10		1.811	1.303	0.9029	5		301.32	5
311	Sodium (%)	0423	0.0135	0.0010	0.0269	0.0092	0.0009	5	-1.27	311.33	0
311	Sodium (%)	0527	0.0248	0.0003	0.0269	0.0092	0.0009	5	-0.20	311.33	0
311	Sodium (%)	0542	0.0282	0.0013	0.0269	0.0092	0.0009	5	0.12	311.99	0
311	Sodium (%)	0422	0.0290	0.0000	0.0269	0.0092	0.0009	5	0.20	311.32	0
311	Sodium (%)	0035	0.0390	0.0000	0.0269	0.0092	0.0009	5	1.15	311.33	0
311	Sodium (%)	0572	2.420	0.0172	0.0269	0.0092	0.0009	5	227.76	311.99	1
321	Acid Soluble Zn (%)	0485	0.0003	0.0001	0.0036	0.0066	0.0043	8	-0.51	321.32	0
321	Acid Soluble Zn (%)	0515	0.0003	0.0003	0.0036	0.0066	0.0043	8	-0.51	321.33	0
321	Acid Soluble Zn (%)	0368	0.0003	0.0003	0.0036	0.0066	0.0043	8	-0.51	321.99	0
321	Acid Soluble Zn (%)	0394	0.0003	0.0000	0.0036	0.0066	0.0043	8	-0.50	321.33	0
321	Acid Soluble Zn (%)	0220	0.0004	0.0000	0.0036	0.0066	0.0043	8	-0.49	321.32	0
321	Acid Soluble Zn (%)	0255	0.0015	0.0010	0.0036	0.0066	0.0043	8	-0.32	321.30	0
321	Acid Soluble Zn (%)	0523	0.0125	0.0090	0.0036	0.0066	0.0043	8	1.35	321.99	0
321	Acid Soluble Zn (%)	0572	2.891	0.0647	0.0036	0.0066	0.0043	8	437.97	321.99	0
321	Acid Soluble Zn (%)	0422	0.0000	0.0000	0.0036	0.0066	0.0043	8		321.30	4
321	Acid Soluble Zn (%)	0106	0.0000	0.0000	0.0036	0.0066	0.0043	8		321.33	4
321	Acid Soluble Zn (%)	0552	0.0950	0.1900	0.0036	0.0066	0.0043	8		321.30	4
321	Acid Soluble Zn (%)	0405	< 0.0003		0.0036	0.0066	0.0043	8		321.32	5
321	Acid Soluble Zn (%)	0136	< 0.0003		0.0036	0.0066	0.0043	8		321.33	5
321	Acid Soluble Zn (%)	0637	< 0.001		0.0036	0.0066	0.0043	8		321.99	5
321	Acid Soluble Zn (%)	0423	< 5		0.0036	0.0066	0.0043	8		321.32	5

**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.