

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Analyte Proficiency From All Labs

Sample # 150811

Grade 25-5-15

Statistical Summary

Analytes: 36

Labs Reporting: 87

Issue Date : 09/30/2015

Analyte Code	Analyte	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Analyte Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	IA %RSD	Average Range (R-bar)	Horwitz %RSD
001	Ammoniacal Nitrogen (%)	20	20	10.41	1.201	10.15		0.3809	0.0602	3.75%		0.1505	2.82%
002	Nitrate Nitrogen (%)	12	12	14.10	1.357	14.00		1.287	0.2628	9.20%		0.1549	2.69%
009	Ammoniacal Plus Nitrate Nitrogen (%)	8	8	18.93	6.567	22.50		1.879	0.4697	8.35%		0.1275	2.50%
010	Total Nitrogen (25%)	67	66	23.41	1.544	23.68	0.7753	0.9339	0.0813	3.94%	1.64%	0.2910	2.48%
020	Total Phosphorus as P2O5 (%)	51	49	5.783	0.5129	5.787		0.2446	0.0247	4.23%		0.1817	3.07%
040	Indirect Available Phosphorus as P2O5 (5%)	4	4	5.605	0.1680	5.605	0.6700	0.1680	0.0594	3.00%	5.98%	0.0750	3.09%
041	Direct Available Phosphorus as P2O5 (5%)	33	32	5.809	0.3152	5.831	0.6700	0.2749	0.0344	4.71%	5.75%	0.1856	3.07%
048	Water Soluble Phosphorus as P2O5 (%)	5	5	5.709	0.1769	5.709		0.1769	0.0559	3.10%		0.0700	3.08%
050	Soluble Potassium as K2O (15%)	82	80	15.03	1.719	15.08	0.9077	0.6334	0.0501	4.20%	3.01%	0.2445	2.66%
060	Water (Free) (%)	6	6	0.9782	0.4617	1.013		0.4666	0.1347	46.07%		0.0649	3.99%
101	Acid Soluble Calcium (%)	13	13	0.0271	0.0180	0.0227		0.0113	0.0022	49.76%		0.0122	7.07%
121	Acid Soluble Magnesium (0.1%)	51	50	0.3702	0.0804	0.3601	0.2180	0.0211	0.0021	5.86%	30.27%	0.0185	4.66%
131	Water Soluble Magnesium (%)	8	7	0.3658	0.0232	0.3685		0.0196	0.0052	5.31%		0.0153	4.65%
143	Elemental Sulfur (%)	2	2	0.3233	0.0265								
145	Sulfate Sulfur, HCl soluble (%)	5	5	0.1998	0.1261	0.1998		0.1261	0.0399	63.10%		0.0141	5.10%
146	Total Sulfur in Liquid (%)	1		0.3400									
148	Total Sulfur (0.13%)	30	29	0.2751	0.1138	0.2921	0.2146	0.0654	0.0086	22.38%	36.73%	0.0222	4.81%
151	Acid Soluble Arsenic (ppm)	7	5	0.8644	1.398	0.8644		1.398	0.4420	161.70%		0.3387	16.35%
165	Acid Soluble Boron (0.025%)	37	35	0.0304	0.0051	0.0298	0.0075	0.0034	0.0004	11.50%	12.54%	0.0021	6.79%
171	Water Soluble Boron (%)	2	2	0.0288	0.0018								
181	Acid Soluble Cadmium (ppm)	9	7	0.1764	0.2784	0.0817		0.0565	0.0151	69.18%		0.0178	23.32%
190	Water Soluble Chlorine (%)	1		0.1950									
191	Acid Soluble Chromium (ppm)	14	13	2.046	1.322	1.920		1.175	0.2305	61.22%		0.3237	14.50%
202	Acid Soluble Cobalt (ppm)	17	17	16.54	2.459	16.49		2.327	0.3991	14.12%		0.6350	10.49%
221	Acid Soluble Copper (0.0125%)	52	51	0.0153	0.0042	0.0149	0.0065	0.0023	0.0002	15.52%	21.79%	0.0006	7.53%
241	Acid Soluble Iron (0.125%)	53	52	0.1301	0.0360	0.1282	0.0178	0.0121	0.0012	9.41%	6.95%	0.0054	5.45%
251	Acid Soluble Lead (ppm)	17	16	2.347	0.6140	2.235		0.4583	0.0810	20.51%		0.2394	14.17%
261	Acid Soluble Manganese (0.063%)	53	52	0.0641	0.0083	0.0647	0.0115	0.0056	0.0006	8.72%	8.87%	0.0029	6.04%
271	Water Soluble Manganese (%)	1		0.0630									
281	Acid Soluble Mercury (ppm)	4	2	0.0134	0.0115	0.0134		0.0115	0.0057	85.59%		0.0023	30.60%
289	Acid Soluble Molybdenum (125ppm)	17	13	119.8	28.95	124.0	38.2091	23.22	4.553	18.72%	15.40%	10.80	7.74%

Analyte Code	Analyte	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Analyte Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	IA %RSD	Average Range (R-bar)	Horwitz %RSD
291	Acid Soluble Nickel (ppm)	10	8	4.163	7.703	1.103		0.8133	0.2033	73.75%		0.3069	15.76%
301	Acid Soluble Selenium (ppm)	5	3	0.0997	0.0355	0.0997		0.0355	0.0145	35.62%		0.0586	22.63%
311	Sodium (%)	7	6	0.2548	0.0204	0.2548		0.0229	0.0066	8.99%		0.0114	4.91%
321	Acid Soluble Zinc (0.063%)	57	55	0.0807	0.0340	0.0737	0.0124	0.0066	0.0006	9.01%	8.39%	0.0040	5.92%
325	Water Soluble Zinc (%)	1		0.0690									

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Analyte Proficiency From All Labs

Analytes: 36

Sample # 150811

Lab Values

Labs Reporting: 87

Grade 25-5-15

Issue Date : 09/30/2015

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
001	Ammoniacal Nitrogen (%)	0456	9.345	0.1700	10.15	0.3809	0.1505	20	-2.11	001.10	0
001	Ammoniacal Nitrogen (%)	0500	9.720	0.0000	10.15	0.3809	0.1505	20	-1.12	001.99	0
001	Ammoniacal Nitrogen (%)	0200	9.760	0.0800	10.15	0.3809	0.1505	20	-1.02	001.99	0
001	Ammoniacal Nitrogen (%)	0487	9.800	0.0000	10.15	0.3809	0.1505	20	-0.91	001.99	0
001	Ammoniacal Nitrogen (%)	0420	9.840	0.1200	10.15	0.3809	0.1505	20	-0.81	001.99	0
001	Ammoniacal Nitrogen (%)	0027	9.855	0.2750	10.15	0.3809	0.1505	20	-0.77	001.99	0
001	Ammoniacal Nitrogen (%)	0117	9.985	0.6300	10.15	0.3809	0.1505	20	-0.43	001.99	0
001	Ammoniacal Nitrogen (%)	0481	10.06	0.0900	10.15	0.3809	0.1505	20	-0.24	001.10	0
001	Ammoniacal Nitrogen (%)	0397	10.06	0.2140	10.15	0.3809	0.1505	20	-0.22	001.99	0
001	Ammoniacal Nitrogen (%)	0177	10.09	0.0011	10.15	0.3809	0.1505	20	-0.15	001.10	0
001	Ammoniacal Nitrogen (%)	0444	10.13	0.6300	10.15	0.3809	0.1505	20	-0.06	001.10	0
001	Ammoniacal Nitrogen (%)	0510	10.18	0.0400	10.15	0.3809	0.1505	20	0.09	001.99	0
001	Ammoniacal Nitrogen (%)	0220	10.28	0.0900	10.15	0.3809	0.1505	20	0.33	001.99	0
001	Ammoniacal Nitrogen (%)	0090	10.35	0.0000	10.15	0.3809	0.1505	20	0.53	001.10	0
001	Ammoniacal Nitrogen (%)	0394	10.35	0.1000	10.15	0.3809	0.1505	20	0.53	001.99	0
001	Ammoniacal Nitrogen (%)	0096	10.41	0.0400	10.15	0.3809	0.1505	20	0.69	001.99	0
001	Ammoniacal Nitrogen (%)	0405	10.45	0.0700	10.15	0.3809	0.1505	20	0.78	001.10	0
001	Ammoniacal Nitrogen (%)	0513	10.77	0.0300	10.15	0.3809	0.1505	20	1.62	001.10	0
001	Ammoniacal Nitrogen (%)	0506	11.75	0.1000	10.15	0.3809	0.1505	20	4.21	001.99	0
001	Ammoniacal Nitrogen (%)	0486	15.08	0.3300	10.15	0.3809	0.1505	20	12.94	001.10	0
002	Nitrate Nitrogen (%)	0500	12.28	0.0000	14.00	1.287	0.1549	12	-1.34	002.99	0
002	Nitrate Nitrogen (%)	0029	13.05	0.0400	14.00	1.287	0.1549	12	-0.74	002.20	0
002	Nitrate Nitrogen (%)	0029	13.07	0.1200	14.00	1.287	0.1549	12	-0.72	002.99	0
002	Nitrate Nitrogen (%)	0513	13.09	0.0900	14.00	1.287	0.1549	12	-0.71	002.99	0
002	Nitrate Nitrogen (%)	0027	13.19	0.0590	14.00	1.287	0.1549	12	-0.63	002.99	0
002	Nitrate Nitrogen (%)	0486	13.90	0.1400	14.00	1.287	0.1549	12	-0.08	002.99	0
002	Nitrate Nitrogen (%)	0394	14.10	0.0000	14.00	1.287	0.1549	12	0.08	002.99	0
002	Nitrate Nitrogen (%)	0200	14.30	0.0000	14.00	1.287	0.1549	12	0.23	002.99	0
002	Nitrate Nitrogen (%)	0231	14.34	0.6600	14.00	1.287	0.1549	12	0.27	002.99	0
002	Nitrate Nitrogen (%)	0506	15.00	0.2000	14.00	1.287	0.1549	12	0.78	002.99	0
002	Nitrate Nitrogen (%)	0420	15.74	0.0500	14.00	1.287	0.1549	12	1.35	002.99	0
002	Nitrate Nitrogen (%)	0117	17.15	0.5000	14.00	1.287	0.1549	12	2.45	002.20	0
009	Ammoniacal Plus Nitrate Nitrogen (%)	0169	10.14	0.0600	22.50	1.879	0.1275	8	-6.58	009.99	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				
009	Ammoniacal Plus Nitrate Nitrogen (%)	0309	10.39	0.3800	22.50	1.879	0.1275	8	-6.44	009.10	0
009	Ammoniacal Plus Nitrate Nitrogen (%)	0481	12.70	0.1300	22.50	1.879	0.1275	8	-5.22	009.10	0
009	Ammoniacal Plus Nitrate Nitrogen (%)	0444	22.47	0.1700	22.50	1.879	0.1275	8	-0.02	009.10	0
009	Ammoniacal Plus Nitrate Nitrogen (%)	0397	23.57	0.0100	22.50	1.879	0.1275	8	0.57	009.10	0
009	Ammoniacal Plus Nitrate Nitrogen (%)	0169	23.97	0.0700	22.50	1.879	0.1275	8	0.78	009.10	0
009	Ammoniacal Plus Nitrate Nitrogen (%)	0200	24.06	0.0800	22.50	1.879	0.1275	8	0.83	009.10	0
009	Ammoniacal Plus Nitrate Nitrogen (%)	0090	24.14	0.1200	22.50	1.879	0.1275	8	0.87	009.10	0
010	Total Nitrogen (25%)	0230	18.70*	0.4000	23.68	0.9339	0.2910	66	-5.34	010.60	0
010	Total Nitrogen (25%)	0510	18.83*	0.1200	23.68	0.9339	0.2910	66	-5.20	010.11	0
010	Total Nitrogen (25%)	0483	19.04*	1.230	23.68	0.9339	0.2910	66	-4.98	010.60	0
010	Total Nitrogen (25%)	0307	19.38*	0.4380	23.68	0.9339	0.2910	66	-4.61	010.60	0
010	Total Nitrogen (25%)	0117	20.50*	0.8000	23.68	0.9339	0.2910	66	-3.41	010.60	0
010	Total Nitrogen (25%)	0516	21.35*	0.3000	23.68	0.9339	0.2910	66	-2.50	010.60	0
010	Total Nitrogen (25%)	0035	21.42*	0.3200	23.68	0.9339	0.2910	66	-2.42	010.60	0
010	Total Nitrogen (25%)	0500	22.00*	0.0000	23.68	0.9339	0.2910	66	-1.80	010.11	0
010	Total Nitrogen (25%)	0356	22.14*	0.5500	23.68	0.9339	0.2910	66	-1.66	010.60	0
010	Total Nitrogen (25%)	0389	22.15*	0.7000	23.68	0.9339	0.2910	66	-1.64	010.60	0
010	Total Nitrogen (25%)	0234	22.26*	0.3100	23.68	0.9339	0.2910	66	-1.53	010.60	0
010	Total Nitrogen (25%)	0042	22.35*	0.1000	23.68	0.9339	0.2910	66	-1.43	010.60	0
010	Total Nitrogen (25%)	0324	22.40*	0.2000	23.68	0.9339	0.2910	66	-1.37	010.60	0
010	Total Nitrogen (25%)	0472	22.41*	0.0200	23.68	0.9339	0.2910	66	-1.36	010.60	0
010	Total Nitrogen (25%)	0451	22.61*	0.3100	23.68	0.9339	0.2910	66	-1.15	010.60	0
010	Total Nitrogen (25%)	0481	22.83*	0.2200	23.68	0.9339	0.2910	66	-0.91	010.60	0
010	Total Nitrogen (25%)	0025	22.89*	0.0900	23.68	0.9339	0.2910	66	-0.85	010.60	0
010	Total Nitrogen (25%)	0102	23.00	0.7700	23.68	0.9339	0.2910	66	-0.74	010.60	0
010	Total Nitrogen (25%)	0157	23.00	0.4000	23.68	0.9339	0.2910	66	-0.73	010.60	0
010	Total Nitrogen (25%)	0406	23.08	0.0400	23.68	0.9339	0.2910	66	-0.65	010.60	0
010	Total Nitrogen (25%)	0416	23.18	0.8000	23.68	0.9339	0.2910	66	-0.54	010.12	0
010	Total Nitrogen (25%)	0292	23.23	0.1400	23.68	0.9339	0.2910	66	-0.49	010.60	0
010	Total Nitrogen (25%)	0162	23.26	0.2500	23.68	0.9339	0.2910	66	-0.46	010.60	0
010	Total Nitrogen (25%)	0402	23.38	0.0580	23.68	0.9339	0.2910	66	-0.33	010.60	0
010	Total Nitrogen (25%)	0482	23.40	0.6000	23.68	0.9339	0.2910	66	-0.30	010.60	0
010	Total Nitrogen (25%)	0444	23.41	0.3100	23.68	0.9339	0.2910	66	-0.30	010.60	0
010	Total Nitrogen (25%)	0377	23.42	0.0800	23.68	0.9339	0.2910	66	-0.28	010.60	0
010	Total Nitrogen (25%)	0043	23.46	0.0700	23.68	0.9339	0.2910	66	-0.24	010.60	0
010	Total Nitrogen (25%)	0231	23.56	0.0900	23.68	0.9339	0.2910	66	-0.14	010.60	0
010	Total Nitrogen (25%)	0073	23.57	0.9000	23.68	0.9339	0.2910	66	-0.12	010.60	0
010	Total Nitrogen (25%)	0397	23.75	0.3900	23.68	0.9339	0.2910	66	0.07	010.12	0
010	Total Nitrogen (25%)	0029	23.82	0.7000	23.68	0.9339	0.2910	66	0.15	010.60	0
010	Total Nitrogen (25%)	0117	23.85	0.1000	23.68	0.9339	0.2910	66	0.18	010.12	0
010	Total Nitrogen (25%)	0513	23.85	0.0600	23.68	0.9339	0.2910	66	0.18	010.99	0
010	Total Nitrogen (25%)	0233	23.90	0.0200	23.68	0.9339	0.2910	66	0.23	010.60	0
010	Total Nitrogen (25%)	0049	23.91	0.0000	23.68	0.9339	0.2910	66	0.24	010.60	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
010	Total Nitrogen (25%)	0041	23.92	0.3200	23.68	0.9339	0.2910	66	0.25	010.60	0
010	Total Nitrogen (25%)	0455	23.95	0.1000	23.68	0.9339	0.2910	66	0.29	010.12	0
010	Total Nitrogen (25%)	0220	24.00	0.5700	23.68	0.9339	0.2910	66	0.33	010.99	0
010	Total Nitrogen (25%)	0291	24.01	0.0100	23.68	0.9339	0.2910	66	0.34	010.60	0
010	Total Nitrogen (25%)	0177	24.12	0.1700	23.68	0.9339	0.2910	66	0.46	010.60	0
010	Total Nitrogen (25%)	0007	24.15	0.7000	23.68	0.9339	0.2910	66	0.50	010.60	0
010	Total Nitrogen (25%)	0055	24.16	0.0500	23.68	0.9339	0.2910	66	0.51	010.60	0
010	Total Nitrogen (25%)	0105	24.16	0.0190	23.68	0.9339	0.2910	66	0.51	010.60	0
010	Total Nitrogen (25%)	0300	24.19	0.5500	23.68	0.9339	0.2910	66	0.54	010.99	0
010	Total Nitrogen (25%)	0040	24.25	0.1000	23.68	0.9339	0.2910	66	0.61	010.60	0
010	Total Nitrogen (25%)	0325	24.25	0.3000	23.68	0.9339	0.2910	66	0.61	010.60	0
010	Total Nitrogen (25%)	0452	24.25	0.0200	23.68	0.9339	0.2910	66	0.61	010.60	0
010	Total Nitrogen (25%)	0390	24.30	0.2000	23.68	0.9339	0.2910	66	0.66	010.60	0
010	Total Nitrogen (25%)	0105	24.32	0.0900	23.68	0.9339	0.2910	66	0.68	010.11	0
010	Total Nitrogen (25%)	0309	24.35	0.4300	23.68	0.9339	0.2910	66	0.71	010.11	0
010	Total Nitrogen (25%)	0211	24.37	0.1300	23.68	0.9339	0.2910	66	0.73	010.11	0
010	Total Nitrogen (25%)	0136	24.37	0.1700	23.68	0.9339	0.2910	66	0.73	010.60	0
010	Total Nitrogen (25%)	0360	24.38	0.3500	23.68	0.9339	0.2910	66	0.74	010.60	0
010	Total Nitrogen (25%)	0095	24.39	0.6600	23.68	0.9339	0.2910	66	0.76	010.60	0
010	Total Nitrogen (25%)	0494	24.43	0.0100	23.68	0.9339	0.2910	66	0.79	010.60	0
010	Total Nitrogen (25%)	0023	24.45	0.1110	23.68	0.9339	0.2910	66	0.82	010.60	0
010	Total Nitrogen (25%)	0394	24.61	0.1500	23.68	0.9339	0.2910	66	0.99	010.60	0
010	Total Nitrogen (25%)	0096	24.66	0.0200	23.68	0.9339	0.2910	66	1.05	010.60	0
010	Total Nitrogen (25%)	0443	24.80	0.5800	23.68	0.9339	0.2910	66	1.20	010.60	0
010	Total Nitrogen (25%)	0498	24.90	0.2000	23.68	0.9339	0.2910	66	1.30	010.12	0
010	Total Nitrogen (25%)	0485	25.18	0.8400	23.68	0.9339	0.2910	66	1.60	010.60	0
010	Total Nitrogen (25%)	0354	25.18	0.2580	23.68	0.9339	0.2910	66	1.60	010.60	0
010	Total Nitrogen (25%)	0275	25.22	0.0000	23.68	0.9339	0.2910	66	1.65	010.60	0
010	Total Nitrogen (25%)	0034	25.66	0.2100	23.68	0.9339	0.2910	66	2.11	010.60	0
010	Total Nitrogen (25%)	0506	26.70	0.0000	23.68	0.9339	0.2910	66	3.23	010.99	0
010	Total Nitrogen (25%)	0394	23.30	1.400	23.68	0.9339	0.2910	66	-0.41	010.99	1
020	Total Phosphorus as P2O5 (%)	0506	3.180	0.3000	5.787	0.2446	0.1817	49	-10.66	020.20	0
020	Total Phosphorus as P2O5 (%)	0455	5.200	0.0200	5.787	0.2446	0.1817	49	-2.40	020.99	0
020	Total Phosphorus as P2O5 (%)	0457	5.280	0.0600	5.787	0.2446	0.1817	49	-2.07	020.20	0
020	Total Phosphorus as P2O5 (%)	0157	5.320	0.7400	5.787	0.2446	0.1817	49	-1.91	020.50	0
020	Total Phosphorus as P2O5 (%)	0472	5.355	0.0700	5.787	0.2446	0.1817	49	-1.77	020.50	0
020	Total Phosphorus as P2O5 (%)	0389	5.475	0.0300	5.787	0.2446	0.1817	49	-1.27	020.50	0
020	Total Phosphorus as P2O5 (%)	0096	5.530	0.1000	5.787	0.2446	0.1817	49	-1.05	020.40	0
020	Total Phosphorus as P2O5 (%)	0300	5.545	0.0700	5.787	0.2446	0.1817	49	-0.99	020.20	0
020	Total Phosphorus as P2O5 (%)	0157	5.580	0.6200	5.787	0.2446	0.1817	49	-0.85	020.10	0
020	Total Phosphorus as P2O5 (%)	0402	5.605	0.0100	5.787	0.2446	0.1817	49	-0.74	020.50	0
020	Total Phosphorus as P2O5 (%)	0035	5.610	0.5800	5.787	0.2446	0.1817	49	-0.72	020.40	0
020	Total Phosphorus as P2O5 (%)	0042	5.615	0.5500	5.787	0.2446	0.1817	49	-0.70	020.40	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
020	Total Phosphorus as P2O5 (%)	0444	5.625	0.1300	5.787	0.2446	0.1817	49	-0.66	020.50	0
020	Total Phosphorus as P2O5 (%)	0169	5.630	0.0800	5.787	0.2446	0.1817	49	-0.64	020.20	0
020	Total Phosphorus as P2O5 (%)	0307	5.653	0.3740	5.787	0.2446	0.1817	49	-0.55	020.50	0
020	Total Phosphorus as P2O5 (%)	0055	5.660	0.0200	5.787	0.2446	0.1817	49	-0.52	020.20	0
020	Total Phosphorus as P2O5 (%)	0420	5.670	0.1200	5.787	0.2446	0.1817	49	-0.48	020.20	0
020	Total Phosphorus as P2O5 (%)	0451	5.690	0.2400	5.787	0.2446	0.1817	49	-0.40	020.50	0
020	Total Phosphorus as P2O5 (%)	0394	5.700	0.0000	5.787	0.2446	0.1817	49	-0.35	020.20	0
020	Total Phosphorus as P2O5 (%)	0416	5.705	0.2500	5.787	0.2446	0.1817	49	-0.33	020.20	0
020	Total Phosphorus as P2O5 (%)	0324	5.730	0.0000	5.787	0.2446	0.1817	49	-0.23	020.20	0
020	Total Phosphorus as P2O5 (%)	0055	5.765	0.1900	5.787	0.2446	0.1817	49	-0.09	020.10	0
020	Total Phosphorus as P2O5 (%)	0177	5.766	0.0079	5.787	0.2446	0.1817	49	-0.08	020.20	0
020	Total Phosphorus as P2O5 (%)	0105	5.780	0.0800	5.787	0.2446	0.1817	49	-0.03	020.10	0
020	Total Phosphorus as P2O5 (%)	0444	5.785	0.1700	5.787	0.2446	0.1817	49	-0.01	020.10	0
020	Total Phosphorus as P2O5 (%)	0481	5.805	0.0700	5.787	0.2446	0.1817	49	0.07	020.20	0
020	Total Phosphorus as P2O5 (%)	0516	5.810	0.0200	5.787	0.2446	0.1817	49	0.09	020.20	0
020	Total Phosphorus as P2O5 (%)	0500	5.850	0.0000	5.787	0.2446	0.1817	49	0.26	020.10	0
020	Total Phosphorus as P2O5 (%)	0405	5.855	0.0900	5.787	0.2446	0.1817	49	0.28	020.20	0
020	Total Phosphorus as P2O5 (%)	0090	5.860	0.1400	5.787	0.2446	0.1817	49	0.30	020.10	0
020	Total Phosphorus as P2O5 (%)	0500	5.860	0.0000	5.787	0.2446	0.1817	49	0.30	020.40	0
020	Total Phosphorus as P2O5 (%)	0515	5.863	0.5498	5.787	0.2446	0.1817	49	0.31	020.99	0
020	Total Phosphorus as P2O5 (%)	0482	5.870	0.0000	5.787	0.2446	0.1817	49	0.34	020.50	0
020	Total Phosphorus as P2O5 (%)	0211	5.885	0.0500	5.787	0.2446	0.1817	49	0.40	020.10	0
020	Total Phosphorus as P2O5 (%)	0510	5.885	0.0300	5.787	0.2446	0.1817	49	0.40	020.20	0
020	Total Phosphorus as P2O5 (%)	0390	5.890	0.1400	5.787	0.2446	0.1817	49	0.42	020.50	0
020	Total Phosphorus as P2O5 (%)	0105	5.895	0.1300	5.787	0.2446	0.1817	49	0.44	020.40	0
020	Total Phosphorus as P2O5 (%)	0406	5.905	0.0100	5.787	0.2446	0.1817	49	0.48	020.20	0
020	Total Phosphorus as P2O5 (%)	0231	5.940	0.0200	5.787	0.2446	0.1817	49	0.63	020.20	0
020	Total Phosphorus as P2O5 (%)	0322	6.001	0.0020	5.787	0.2446	0.1817	49	0.88	020.10	0
020	Total Phosphorus as P2O5 (%)	0049	6.070	0.0800	5.787	0.2446	0.1817	49	1.16	020.10	0
020	Total Phosphorus as P2O5 (%)	0456	6.080	0.0800	5.787	0.2446	0.1817	49	1.20	020.40	0
020	Total Phosphorus as P2O5 (%)	0356	6.315	0.0300	5.787	0.2446	0.1817	49	2.16	020.20	0
020	Total Phosphorus as P2O5 (%)	0443	6.330	0.6600	5.787	0.2446	0.1817	49	2.22	020.99	0
020	Total Phosphorus as P2O5 (%)	0309	6.335	0.2100	5.787	0.2446	0.1817	49	2.24	020.20	0
020	Total Phosphorus as P2O5 (%)	0292	6.435	0.7300	5.787	0.2446	0.1817	49	2.65	020.20	0
020	Total Phosphorus as P2O5 (%)	0234	6.465	0.4500	5.787	0.2446	0.1817	49	2.77	020.50	0
020	Total Phosphorus as P2O5 (%)	0487	6.800	0.2000	5.787	0.2446	0.1817	49	4.14	020.99	0
020	Total Phosphorus as P2O5 (%)	0371	6.900	0.4000	5.787	0.2446	0.1817	49	4.55	020.50	0
020	Total Phosphorus as P2O5 (%)	0483	7.795	1.970	5.787	0.2446	0.1817	49	8.21	020.50	1
020	Total Phosphorus as P2O5 (%)	0428	11.26	0.5352	5.787	0.2446	0.1817	49	22.36	020.20	2
040	Indirect Available Phosphorus as P2O5 (5%)	0513	5.500	0.1200	5.605	0.1680	0.0750	4	-0.63	040.20	0
040	Indirect Available Phosphorus as P2O5 (5%)	0096	5.515	0.0900	5.605	0.1680	0.0750	4	-0.54	040.40	0
040	Indirect Available Phosphorus as P2O5 (5%)	0300	5.550	0.0000	5.605	0.1680	0.0750	4	-0.33	040.20	0
040	Indirect Available Phosphorus as P2O5 (5%)	0405	5.855	0.0900	5.605	0.1680	0.0750	4	1.49	040.20	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
041	Direct Available Phosphorus as P2O5 (5%)	0498	4.850*	0.1000	5.831	0.2749	0.1856	32	-3.57	041.20	0
041	Direct Available Phosphorus as P2O5 (5%)	0325	5.210	0.1400	5.831	0.2749	0.1856	32	-2.26	041.50	0
041	Direct Available Phosphorus as P2O5 (5%)	0513	5.315	0.0300	5.831	0.2749	0.1856	32	-1.88	041.60	0
041	Direct Available Phosphorus as P2O5 (5%)	0397	5.545	0.2650	5.831	0.2749	0.1856	32	-1.04	041.60	0
041	Direct Available Phosphorus as P2O5 (5%)	0007	5.550	0.3000	5.831	0.2749	0.1856	32	-1.02	041.50	0
041	Direct Available Phosphorus as P2O5 (5%)	0025	5.595	0.1100	5.831	0.2749	0.1856	32	-0.86	041.51	0
041	Direct Available Phosphorus as P2O5 (5%)	0220	5.620	0.0000	5.831	0.2749	0.1856	32	-0.77	041.31	0
041	Direct Available Phosphorus as P2O5 (5%)	0493	5.650	0.1000	5.831	0.2749	0.1856	32	-0.66	041.10	0
041	Direct Available Phosphorus as P2O5 (5%)	0029	5.670	0.0600	5.831	0.2749	0.1856	32	-0.59	041.60	0
041	Direct Available Phosphorus as P2O5 (5%)	0200	5.720	0.0200	5.831	0.2749	0.1856	32	-0.40	041.21	0
041	Direct Available Phosphorus as P2O5 (5%)	0485	5.725	0.1100	5.831	0.2749	0.1856	32	-0.39	041.11	0
041	Direct Available Phosphorus as P2O5 (5%)	0027	5.725	0.0100	5.831	0.2749	0.1856	32	-0.39	041.40	0
041	Direct Available Phosphorus as P2O5 (5%)	0131	5.730	0.1400	5.831	0.2749	0.1856	32	-0.37	041.51	0
041	Direct Available Phosphorus as P2O5 (5%)	0377	5.735	0.0300	5.831	0.2749	0.1856	32	-0.35	041.51	0
041	Direct Available Phosphorus as P2O5 (5%)	0472	5.795	0.0500	5.831	0.2749	0.1856	32	-0.13	041.60	0
041	Direct Available Phosphorus as P2O5 (5%)	0034	5.816	0.1236	5.831	0.2749	0.1856	32	-0.05	041.60	0
041	Direct Available Phosphorus as P2O5 (5%)	0043	5.820	0.2400	5.831	0.2749	0.1856	32	-0.04	041.50	0
041	Direct Available Phosphorus as P2O5 (5%)	0040	5.850	0.1000	5.831	0.2749	0.1856	32	0.07	041.10	0
041	Direct Available Phosphorus as P2O5 (5%)	0136	5.860	0.0800	5.831	0.2749	0.1856	32	0.11	041.60	0
041	Direct Available Phosphorus as P2O5 (5%)	0023	5.885	0.1700	5.831	0.2749	0.1856	32	0.20	041.51	0
041	Direct Available Phosphorus as P2O5 (5%)	0043	5.910	0.0400	5.831	0.2749	0.1856	32	0.29	041.60	0
041	Direct Available Phosphorus as P2O5 (5%)	0360	5.960	0.3200	5.831	0.2749	0.1856	32	0.47	041.51	0
041	Direct Available Phosphorus as P2O5 (5%)	0102	6.000	0.0000	5.831	0.2749	0.1856	32	0.61	041.10	0
041	Direct Available Phosphorus as P2O5 (5%)	0105	6.025	0.5900	5.831	0.2749	0.1856	32	0.71	041.10	0
041	Direct Available Phosphorus as P2O5 (5%)	0095	6.025	0.3900	5.831	0.2749	0.1856	32	0.71	041.40	0
041	Direct Available Phosphorus as P2O5 (5%)	0105	6.065	0.4100	5.831	0.2749	0.1856	32	0.85	041.21	0
041	Direct Available Phosphorus as P2O5 (5%)	0185	6.070	0.1000	5.831	0.2749	0.1856	32	0.87	041.11	0
041	Direct Available Phosphorus as P2O5 (5%)	0105	6.080	0.6400	5.831	0.2749	0.1856	32	0.91	041.99	0
041	Direct Available Phosphorus as P2O5 (5%)	0105	6.205	0.4500	5.831	0.2749	0.1856	32	1.36	041.11	0
041	Direct Available Phosphorus as P2O5 (5%)	0354	6.226	0.7420	5.831	0.2749	0.1856	32	1.44	041.60	0
041	Direct Available Phosphorus as P2O5 (5%)	0231	6.275	0.0700	5.831	0.2749	0.1856	32	1.61	041.60	0
041	Direct Available Phosphorus as P2O5 (5%)	0452	6.385	0.0100	5.831	0.2749	0.1856	32	2.01	041.50	0
041	Direct Available Phosphorus as P2O5 (5%)	0230	12.70	0.2000	5.831	0.2749	0.1856	32	24.98	041.99	2
048	Water Soluble Phosphorus as P2O5 (%)	0096	5.535	0.1700	5.709	0.1769	0.0700	5	-0.98	048.40	0
048	Water Soluble Phosphorus as P2O5 (%)	0394	5.600	0.0000	5.709	0.1769	0.0700	5	-0.62	048.20	0
048	Water Soluble Phosphorus as P2O5 (%)	0420	5.610	0.1600	5.709	0.1769	0.0700	5	-0.56	048.20	0
048	Water Soluble Phosphorus as P2O5 (%)	0444	5.890	0.0000	5.709	0.1769	0.0700	5	1.02	048.50	0
048	Water Soluble Phosphorus as P2O5 (%)	0444	5.910	0.0200	5.709	0.1769	0.0700	5	1.14	048.10	0
050	Soluble Potassium as K2O (15%)	0291	5.865*	0.0100	15.08	0.6334	0.2445	80	-14.54	050.51	0
050	Soluble Potassium as K2O (15%)	0506	11.00*	0.2000	15.08	0.6334	0.2445	80	-6.44	050.99	0
050	Soluble Potassium as K2O (15%)	0516	12.15*	0.1300	15.08	0.6334	0.2445	80	-4.63	050.30	0
050	Soluble Potassium as K2O (15%)	0325	12.20*	0.4000	15.08	0.6334	0.2445	80	-4.54	050.99	0
050	Soluble Potassium as K2O (15%)	0117	13.00*	0.6000	15.08	0.6334	0.2445	80	-3.28	050.50	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
050	Soluble Potassium as K2O (15%)	0034	13.68*	0.1515	15.08	0.6334	0.2445	80	-2.20	050.61	0
050	Soluble Potassium as K2O (15%)	0472	13.70*	0.1700	15.08	0.6334	0.2445	80	-2.18	050.31	0
050	Soluble Potassium as K2O (15%)	0309	13.78*	0.1800	15.08	0.6334	0.2445	80	-2.05	050.60	0
050	Soluble Potassium as K2O (15%)	0292	13.79*	0.0300	15.08	0.6334	0.2445	80	-2.04	050.50	0
050	Soluble Potassium as K2O (15%)	0500	14.10*	0.2000	15.08	0.6334	0.2445	80	-1.54	050.30	0
050	Soluble Potassium as K2O (15%)	0390	14.15*	1.100	15.08	0.6334	0.2445	80	-1.46	050.50	0
050	Soluble Potassium as K2O (15%)	0230	14.20	0.8000	15.08	0.6334	0.2445	80	-1.38	050.00	0
050	Soluble Potassium as K2O (15%)	0420	14.30	0.4840	15.08	0.6334	0.2445	80	-1.22	050.50	0
050	Soluble Potassium as K2O (15%)	0042	14.36	0.3500	15.08	0.6334	0.2445	80	-1.14	050.99	0
050	Soluble Potassium as K2O (15%)	0185	14.42	0.2100	15.08	0.6334	0.2445	80	-1.04	050.32	0
050	Soluble Potassium as K2O (15%)	0096	14.44	0.3300	15.08	0.6334	0.2445	80	-1.01	050.99	0
050	Soluble Potassium as K2O (15%)	0485	14.57	0.1800	15.08	0.6334	0.2445	80	-0.80	050.52	0
050	Soluble Potassium as K2O (15%)	0307	14.58	0.7890	15.08	0.6334	0.2445	80	-0.78	050.99	0
050	Soluble Potassium as K2O (15%)	0300	14.70	0.0900	15.08	0.6334	0.2445	80	-0.60	050.99	0
050	Soluble Potassium as K2O (15%)	0481	14.70	0.3700	15.08	0.6334	0.2445	80	-0.60	050.99	0
050	Soluble Potassium as K2O (15%)	0102	14.70	0.0000	15.08	0.6334	0.2445	80	-0.59	050.00	0
050	Soluble Potassium as K2O (15%)	0394	14.70	0.2000	15.08	0.6334	0.2445	80	-0.59	050.99	0
050	Soluble Potassium as K2O (15%)	0498	14.70	0.2000	15.08	0.6334	0.2445	80	-0.59	050.99	0
050	Soluble Potassium as K2O (15%)	0486	14.72	0.1300	15.08	0.6334	0.2445	80	-0.57	050.52	0
050	Soluble Potassium as K2O (15%)	0457	14.76	0.5100	15.08	0.6334	0.2445	80	-0.51	050.99	0
050	Soluble Potassium as K2O (15%)	0157	14.80	0.6000	15.08	0.6334	0.2445	80	-0.44	050.50	0
050	Soluble Potassium as K2O (15%)	0494	14.83	0.9200	15.08	0.6334	0.2445	80	-0.39	050.00	0
050	Soluble Potassium as K2O (15%)	0360	14.83	0.0200	15.08	0.6334	0.2445	80	-0.39	050.52	0
050	Soluble Potassium as K2O (15%)	0007	14.90	0.4000	15.08	0.6334	0.2445	80	-0.28	050.51	0
050	Soluble Potassium as K2O (15%)	0055	14.91	0.0400	15.08	0.6334	0.2445	80	-0.26	050.50	0
050	Soluble Potassium as K2O (15%)	0513	14.92	0.0200	15.08	0.6334	0.2445	80	-0.25	050.61	0
050	Soluble Potassium as K2O (15%)	0131	14.94	0.1300	15.08	0.6334	0.2445	80	-0.22	050.52	0
050	Soluble Potassium as K2O (15%)	0090	15.01	0.0900	15.08	0.6334	0.2445	80	-0.11	050.00	0
050	Soluble Potassium as K2O (15%)	0405	15.02	0.0500	15.08	0.6334	0.2445	80	-0.10	050.00	0
050	Soluble Potassium as K2O (15%)	0220	15.02	0.0200	15.08	0.6334	0.2445	80	-0.09	050.00	0
050	Soluble Potassium as K2O (15%)	0041	15.04	0.0000	15.08	0.6334	0.2445	80	-0.06	050.60	0
050	Soluble Potassium as K2O (15%)	0416	15.06	0.2100	15.08	0.6334	0.2445	80	-0.03	050.00	0
050	Soluble Potassium as K2O (15%)	0402	15.06	0.0034	15.08	0.6334	0.2445	80	-0.02	050.99	0
050	Soluble Potassium as K2O (15%)	0322	15.08	0.0140	15.08	0.6334	0.2445	80	0.00	050.10	0
050	Soluble Potassium as K2O (15%)	0451	15.08	0.4600	15.08	0.6334	0.2445	80	0.01	050.99	0
050	Soluble Potassium as K2O (15%)	0377	15.09	0.2800	15.08	0.6334	0.2445	80	0.02	050.52	0
050	Soluble Potassium as K2O (15%)	0389	15.10	0.2000	15.08	0.6334	0.2445	80	0.04	050.99	0
050	Soluble Potassium as K2O (15%)	0040	15.15	0.3000	15.08	0.6334	0.2445	80	0.12	050.30	0
050	Soluble Potassium as K2O (15%)	0169	15.18	0.0700	15.08	0.6334	0.2445	80	0.16	050.60	0
050	Soluble Potassium as K2O (15%)	0510	15.19	0.0400	15.08	0.6334	0.2445	80	0.18	050.60	0
050	Soluble Potassium as K2O (15%)	0157	15.20	1.200	15.08	0.6334	0.2445	80	0.19	050.30	0
050	Soluble Potassium as K2O (15%)	0444	15.22	0.2100	15.08	0.6334	0.2445	80	0.22	050.50	0
050	Soluble Potassium as K2O (15%)	0043	15.24	0.1400	15.08	0.6334	0.2445	80	0.26	050.51	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
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050	Soluble Potassium as K2O (15%)	0324	15.25	0.5000	15.08	0.6334	0.2445	80	0.27	050.50	0
050	Soluble Potassium as K2O (15%)	0482	15.25	0.3000	15.08	0.6334	0.2445	80	0.27	050.99	0
050	Soluble Potassium as K2O (15%)	0136	15.27	0.0300	15.08	0.6334	0.2445	80	0.30	050.30	0
050	Soluble Potassium as K2O (15%)	0444	15.27	0.0100	15.08	0.6334	0.2445	80	0.30	050.99	0
050	Soluble Potassium as K2O (15%)	0043	15.28	0.0500	15.08	0.6334	0.2445	80	0.31	050.99	0
050	Soluble Potassium as K2O (15%)	0105	15.29	0.4800	15.08	0.6334	0.2445	80	0.34	050.60	0
050	Soluble Potassium as K2O (15%)	0354	15.30	0.2960	15.08	0.6334	0.2445	80	0.35	050.52	0
050	Soluble Potassium as K2O (15%)	0105	15.34	0.2900	15.08	0.6334	0.2445	80	0.41	050.62	0
050	Soluble Potassium as K2O (15%)	0029	15.36	0.1500	15.08	0.6334	0.2445	80	0.44	050.62	0
050	Soluble Potassium as K2O (15%)	0177	15.39	0.1044	15.08	0.6334	0.2445	80	0.49	050.99	0
050	Soluble Potassium as K2O (15%)	0055	15.40	0.0200	15.08	0.6334	0.2445	80	0.51	050.00	0
050	Soluble Potassium as K2O (15%)	0105	15.57	0.3200	15.08	0.6334	0.2445	80	0.78	050.99	0
050	Soluble Potassium as K2O (15%)	0291	15.58	0.0200	15.08	0.6334	0.2445	80	0.79	050.31	0
050	Soluble Potassium as K2O (15%)	0231	15.60	0.0500	15.08	0.6334	0.2445	80	0.82	050.00	0
050	Soluble Potassium as K2O (15%)	0406	15.64	0.0700	15.08	0.6334	0.2445	80	0.88	050.50	0
050	Soluble Potassium as K2O (15%)	0023	15.64	0.0200	15.08	0.6334	0.2445	80	0.89	050.52	0
050	Soluble Potassium as K2O (15%)	0095	15.64	0.4200	15.08	0.6334	0.2445	80	0.89	050.62	0
050	Soluble Potassium as K2O (15%)	0200	15.65	0.0100	15.08	0.6334	0.2445	80	0.90	050.60	0
050	Soluble Potassium as K2O (15%)	0027	15.65	0.1580	15.08	0.6334	0.2445	80	0.91	050.99	0
050	Soluble Potassium as K2O (15%)	0035	15.66	0.2400	15.08	0.6334	0.2445	80	0.92	050.61	0
050	Soluble Potassium as K2O (15%)	0211	15.73	0.0700	15.08	0.6334	0.2445	80	1.02	050.00	0
050	Soluble Potassium as K2O (15%)	0049	15.89	0.2000	15.08	0.6334	0.2445	80	1.28	050.00	0
050	Soluble Potassium as K2O (15%)	0455	15.89	0.0200	15.08	0.6334	0.2445	80	1.28	050.99	0
050	Soluble Potassium as K2O (15%)	0114	15.97	0.0600	15.08	0.6334	0.2445	80	1.41	050.00	0
050	Soluble Potassium as K2O (15%)	0452	16.05	0.0200	15.08	0.6334	0.2445	80	1.54	050.51	0
050	Soluble Potassium as K2O (15%)	0456	16.25	0.1400	15.08	0.6334	0.2445	80	1.85	050.61	0
050	Soluble Potassium as K2O (15%)	0234	16.27	0.1900	15.08	0.6334	0.2445	80	1.88	050.99	0
050	Soluble Potassium as K2O (15%)	0443	16.30	0.6200	15.08	0.6334	0.2445	80	1.93	050.60	0
050	Soluble Potassium as K2O (15%)	0371	17.50	0.4000	15.08	0.6334	0.2445	80	3.83	050.99	0
050	Soluble Potassium as K2O (15%)	0356	18.48	0.5100	15.08	0.6334	0.2445	80	5.37	050.30	0
050	Soluble Potassium as K2O (15%)	0487	20.60	0.2000	15.08	0.6334	0.2445	80	8.72	050.99	0
050	Soluble Potassium as K2O (15%)	0483	21.26	0.3600	15.08	0.6334	0.2445	80	9.76	050.51	0
050	Soluble Potassium as K2O (15%)	0117	13.80*	1.400	15.08	0.6334	0.2445	80	-2.02	050.52	1
050	Soluble Potassium as K2O (15%)	0025	14.05*	2.500	15.08	0.6334	0.2445	80	-1.62	050.52	1
060	Water (Free) (%)	0007	0.3850	0.0100	1.013	0.4666	0.0649	6	-1.35	060.00	0
060	Water (Free) (%)	0456	0.4600	0.0200	1.013	0.4666	0.0649	6	-1.18	060.00	0
060	Water (Free) (%)	0096	1.080	0.1800	1.013	0.4666	0.0649	6	0.14	060.00	0
060	Water (Free) (%)	0416	1.164	0.0792	1.013	0.4666	0.0649	6	0.32	060.00	0
060	Water (Free) (%)	0009	1.215	0.0500	1.013	0.4666	0.0649	6	0.43	060.99	0
060	Water (Free) (%)	0510	1.565	0.0500	1.013	0.4666	0.0649	6	1.18	060.99	0
101	Acid Soluble Calcium (%)	0105	0.0111	0.0007	0.0227	0.0113	0.0122	13	-1.03	101.00	0
101	Acid Soluble Calcium (%)	0105	0.0114	0.0008	0.0227	0.0113	0.0122	13	-1.00	101.03	0
101	Acid Soluble Calcium (%)	0102	0.0115	0.0010	0.0227	0.0113	0.0122	13	-0.99	101.30	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				
101	Acid Soluble Calcium (%)	0420	0.0150	0.0000	0.0227	0.0113	0.0122	13	-0.68	101.30	0
101	Acid Soluble Calcium (%)	0482	0.0150	0.0100	0.0227	0.0113	0.0122	13	-0.68	101.30	0
101	Acid Soluble Calcium (%)	0494	0.0177	0.0025	0.0227	0.0113	0.0122	13	-0.45	101.33	0
101	Acid Soluble Calcium (%)	0096	0.0185	0.0050	0.0227	0.0113	0.0122	13	-0.37	101.30	0
101	Acid Soluble Calcium (%)	0035	0.0255	0.0130	0.0227	0.0113	0.0122	13	0.25	101.30	0
101	Acid Soluble Calcium (%)	0389	0.0325	0.0050	0.0227	0.0113	0.0122	13	0.87	101.99	0
101	Acid Soluble Calcium (%)	0324	0.0345	0.0090	0.0227	0.0113	0.0122	13	1.04	101.30	0
101	Acid Soluble Calcium (%)	0041	0.0350	0.0500	0.0227	0.0113	0.0122	13	1.09	101.30	0
101	Acid Soluble Calcium (%)	0049	0.0550	0.0100	0.0227	0.0113	0.0122	13	2.86	101.30	0
101	Acid Soluble Calcium (%)	0354	0.0690	0.0520	0.0227	0.0113	0.0122	13	4.10	101.30	0
121	Acid Soluble Magnesium (0.1%)	0131	0.2312	0.0840	0.3601	0.0211	0.0185	50	-6.11	121.30	0
121	Acid Soluble Magnesium (0.1%)	0420	0.3083	0.0121	0.3601	0.0211	0.0185	50	-2.46	121.30	0
121	Acid Soluble Magnesium (0.1%)	0498	0.3200	0.0000	0.3601	0.0211	0.0185	50	-1.90	121.00	0
121	Acid Soluble Magnesium (0.1%)	0291	0.3215	0.0010	0.3601	0.0211	0.0185	50	-1.83	121.30	0
121	Acid Soluble Magnesium (0.1%)	0105	0.3241	0.0095	0.3601	0.0211	0.0185	50	-1.71	121.03	0
121	Acid Soluble Magnesium (0.1%)	0515	0.3249	0.0155	0.3601	0.0211	0.0185	50	-1.67	121.33	0
121	Acid Soluble Magnesium (0.1%)	0042	0.3250	0.0500	0.3601	0.0211	0.0185	50	-1.66	121.99	0
121	Acid Soluble Magnesium (0.1%)	0157	0.3320	0.0080	0.3601	0.0211	0.0185	50	-1.33	121.30	0
121	Acid Soluble Magnesium (0.1%)	0494	0.3326	0.0651	0.3601	0.0211	0.0185	50	-1.31	121.33	0
121	Acid Soluble Magnesium (0.1%)	0105	0.3344	0.0085	0.3601	0.0211	0.0185	50	-1.22	121.00	0
121	Acid Soluble Magnesium (0.1%)	0486	0.3350	0.0100	0.3601	0.0211	0.0185	50	-1.19	121.33	0
121	Acid Soluble Magnesium (0.1%)	0457	0.3420	0.0360	0.3601	0.0211	0.0185	50	-0.86	121.00	0
121	Acid Soluble Magnesium (0.1%)	0515	0.3425	0.0513	0.3601	0.0211	0.0185	50	-0.84	121.99	0
121	Acid Soluble Magnesium (0.1%)	0485	0.3448	0.0205	0.3601	0.0211	0.0185	50	-0.73	121.00	0
121	Acid Soluble Magnesium (0.1%)	0444	0.3450	0.0100	0.3601	0.0211	0.0185	50	-0.72	121.30	0
121	Acid Soluble Magnesium (0.1%)	0035	0.3480	0.0140	0.3601	0.0211	0.0185	50	-0.57	121.30	0
121	Acid Soluble Magnesium (0.1%)	0394	0.3480	0.0160	0.3601	0.0211	0.0185	50	-0.57	121.32	0
121	Acid Soluble Magnesium (0.1%)	0516	0.3525	0.0250	0.3601	0.0211	0.0185	50	-0.36	121.00	0
121	Acid Soluble Magnesium (0.1%)	0049	0.3550	0.0100	0.3601	0.0211	0.0185	50	-0.24	121.30	0
121	Acid Soluble Magnesium (0.1%)	0231	0.3550	0.0100	0.3601	0.0211	0.0185	50	-0.24	121.30	0
121	Acid Soluble Magnesium (0.1%)	0512	0.3566	0.0443	0.3601	0.0211	0.0185	50	-0.17	121.99	0
121	Acid Soluble Magnesium (0.1%)	0500	0.3600	0.0000	0.3601	0.0211	0.0185	50	-0.01	121.03	0
121	Acid Soluble Magnesium (0.1%)	0041	0.3600	0.0400	0.3601	0.0211	0.0185	50	-0.01	121.30	0
121	Acid Soluble Magnesium (0.1%)	0354	0.3640	0.0080	0.3601	0.0211	0.0185	50	0.18	121.30	0
121	Acid Soluble Magnesium (0.1%)	0234	0.3650	0.0300	0.3601	0.0211	0.0185	50	0.23	121.30	0
121	Acid Soluble Magnesium (0.1%)	0324	0.3650	0.0360	0.3601	0.0211	0.0185	50	0.23	121.30	0
121	Acid Soluble Magnesium (0.1%)	0482	0.3650	0.0100	0.3601	0.0211	0.0185	50	0.23	121.30	0
121	Acid Soluble Magnesium (0.1%)	0029	0.3652	0.0069	0.3601	0.0211	0.0185	50	0.24	121.00	0
121	Acid Soluble Magnesium (0.1%)	0037	0.3660	0.0040	0.3601	0.0211	0.0185	50	0.28	121.33	0
121	Acid Soluble Magnesium (0.1%)	0157	0.3680	0.0080	0.3601	0.0211	0.0185	50	0.37	121.00	0
121	Acid Soluble Magnesium (0.1%)	0300	0.3680	0.0200	0.3601	0.0211	0.0185	50	0.37	121.32	0
121	Acid Soluble Magnesium (0.1%)	0055	0.3700	0.0200	0.3601	0.0211	0.0185	50	0.47	121.30	0
121	Acid Soluble Magnesium (0.1%)	0095	0.3700	0.0000	0.3601	0.0211	0.0185	50	0.47	121.30	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				
121	Acid Soluble Magnesium (0.1%)	0096	0.3700	0.0000	0.3601	0.0211	0.0185	50	0.47	121.30	0
121	Acid Soluble Magnesium (0.1%)	0220	0.3700	0.0000	0.3601	0.0211	0.0185	50	0.47	121.99	0
121	Acid Soluble Magnesium (0.1%)	0177	0.3702	0.0013	0.3601	0.0211	0.0185	50	0.48	121.33	0
121	Acid Soluble Magnesium (0.1%)	0433	0.3704	0.0153	0.3601	0.0211	0.0185	50	0.48	121.30	0
121	Acid Soluble Magnesium (0.1%)	0360	0.3705	0.0010	0.3601	0.0211	0.0185	50	0.49	121.30	0
121	Acid Soluble Magnesium (0.1%)	0390	0.3705	0.0070	0.3601	0.0211	0.0185	50	0.49	121.30	0
121	Acid Soluble Magnesium (0.1%)	0389	0.3730	0.0140	0.3601	0.0211	0.0185	50	0.61	121.99	0
121	Acid Soluble Magnesium (0.1%)	0481	0.3750	0.0100	0.3601	0.0211	0.0185	50	0.71	121.00	0
121	Acid Soluble Magnesium (0.1%)	0023	0.3770	0.0140	0.3601	0.0211	0.0185	50	0.80	121.33	0
121	Acid Soluble Magnesium (0.1%)	0136	0.3800	0.0200	0.3601	0.0211	0.0185	50	0.94	121.33	0
121	Acid Soluble Magnesium (0.1%)	0102	0.3825	0.0230	0.3601	0.0211	0.0185	50	1.06	121.30	0
121	Acid Soluble Magnesium (0.1%)	0452	0.3835	0.0030	0.3601	0.0211	0.0185	50	1.11	121.30	0
121	Acid Soluble Magnesium (0.1%)	0472	0.4050	0.0300	0.3601	0.0211	0.0185	50	2.13	121.30	0
121	Acid Soluble Magnesium (0.1%)	0230	0.4165	0.0250	0.3601	0.0211	0.0185	50	2.67	121.30	0
121	Acid Soluble Magnesium (0.1%)	0483	0.4615	0.0350	0.3601	0.0211	0.0185	50	4.80	121.30	0
121	Acid Soluble Magnesium (0.1%)	0307	0.5095	0.0350	0.3601	0.0211	0.0185	50	7.08	121.30	0
121	Acid Soluble Magnesium (0.1%)	0043	0.8600	0.0100	0.3601	0.0211	0.0185	50	23.69	121.00	0
121	Acid Soluble Magnesium (0.1%)	0487	1.100	0.4000	0.3601	0.0211	0.0185	50	35.06	121.99	2
131	Water Soluble Magnesium (%)	0394	0.3200	0.0200	0.3685	0.0196	0.0153	7	-2.48	131.30	0
131	Water Soluble Magnesium (%)	0485	0.3580	0.0240	0.3685	0.0196	0.0153	7	-0.54	131.00	0
131	Water Soluble Magnesium (%)	0231	0.3650	0.0100	0.3685	0.0196	0.0153	7	-0.18	131.30	0
131	Water Soluble Magnesium (%)	0444	0.3650	0.0100	0.3685	0.0196	0.0153	7	-0.18	131.30	0
131	Water Soluble Magnesium (%)	0275	0.3800	0.0200	0.3685	0.0196	0.0153	7	0.59	131.30	0
131	Water Soluble Magnesium (%)	0027	0.3825	0.0030	0.3685	0.0196	0.0153	7	0.71	131.30	0
131	Water Soluble Magnesium (%)	0371	0.3900	0.0200	0.3685	0.0196	0.0153	7	1.10	131.30	0
131	Water Soluble Magnesium (%)	0230	0.0000	0.0000	0.3685	0.0196	0.0153	7	-18.85	131.30	4
143	Elemental Sulfur (%)	0390	0.3045	0.0030	0.3233	0.0265	0.0085	2	-0.71	143.99	0
143	Elemental Sulfur (%)	0389	0.3420	0.0140	0.3233	0.0265	0.0085	2	0.71	143.99	0
145	Sulfate Sulfur, HCl soluble (%)	0485	0.0140	0.0006	0.1998	0.1261	0.0141	5	-1.47	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0405	0.1250	0.0100	0.1998	0.1261	0.0141	5	-0.59	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0043	0.2650	0.0300	0.1998	0.1261	0.0141	5	0.52	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0231	0.2900	0.0000	0.1998	0.1261	0.0141	5	0.72	145.99	0
145	Sulfate Sulfur, HCl soluble (%)	0444	0.3050	0.0300	0.1998	0.1261	0.0141	5	0.83	145.99	0
146	Total Sulfur in Liquid (%)	0220	0.3400	0.0000			0.0000	1			0
148	Total Sulfur (0.13%)	0105	0.0030*	0.0040	0.2921	0.0654	0.0222	29	-4.42	148.01	0
148	Total Sulfur (0.13%)	0485	0.0140*	0.0006	0.2921	0.0654	0.0222	29	-4.25	148.01	0
148	Total Sulfur (0.13%)	0095	0.1250	0.0100	0.2921	0.0654	0.0222	29	-2.56	148.01	0
148	Total Sulfur (0.13%)	0405	0.1250	0.0100	0.2921	0.0654	0.0222	29	-2.56	148.01	0
148	Total Sulfur (0.13%)	0513	0.1285	0.0001	0.2921	0.0654	0.0222	29	-2.50	148.99	0
148	Total Sulfur (0.13%)	0506	0.1800	0.0000	0.2921	0.0654	0.0222	29	-1.71	148.99	0
148	Total Sulfur (0.13%)	0292	0.2400	0.0000	0.2921	0.0654	0.0222	29	-0.80	148.07	0
148	Total Sulfur (0.13%)	0486	0.2450	0.0100	0.2921	0.0654	0.0222	29	-0.72	148.07	0
148	Total Sulfur (0.13%)	0324	0.2620	0.0200	0.2921	0.0654	0.0222	29	-0.46	148.01	0

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148	Total Sulfur (0.13%)	0515	0.2631	0.0560	0.2921	0.0654	0.0222	29	-0.44	148.07	0
148	Total Sulfur (0.13%)	0291	0.2665	0.0010	0.2921	0.0654	0.0222	29	-0.39	148.99	0
148	Total Sulfur (0.13%)	0481	0.2700	0.0400	0.2921	0.0654	0.0222	29	-0.34	148.01	0
148	Total Sulfur (0.13%)	0300	0.2855	0.0230	0.2921	0.0654	0.0222	29	-0.10	148.99	0
148	Total Sulfur (0.13%)	0096	0.2900	0.0100	0.2921	0.0654	0.0222	29	-0.03	148.99	0
148	Total Sulfur (0.13%)	0394	0.3000	0.0200	0.2921	0.0654	0.0222	29	0.12	148.04	0
148	Total Sulfur (0.13%)	0360	0.3050	0.0300	0.2921	0.0654	0.0222	29	0.20	148.00	0
148	Total Sulfur (0.13%)	0177	0.3079	0.0098	0.2921	0.0654	0.0222	29	0.24	148.07	0
148	Total Sulfur (0.13%)	0452	0.3130	0.0060	0.2921	0.0654	0.0222	29	0.32	148.99	0
148	Total Sulfur (0.13%)	0354	0.3210	0.0340	0.2921	0.0654	0.0222	29	0.44	148.99	0
148	Total Sulfur (0.13%)	0102	0.3220	0.0380	0.2921	0.0654	0.0222	29	0.46	148.07	0
148	Total Sulfur (0.13%)	0444	0.3300	0.0600	0.2921	0.0654	0.0222	29	0.58	148.07	0
148	Total Sulfur (0.13%)	0055	0.3300	0.0000	0.2921	0.0654	0.0222	29	0.58	148.01	0
148	Total Sulfur (0.13%)	0482	0.3400	0.0200	0.2921	0.0654	0.0222	29	0.73	148.99	0
148	Total Sulfur (0.13%)	0023	0.3475	0.0130	0.2921	0.0654	0.0222	29	0.85	148.07	0
148	Total Sulfur (0.13%)	0275	0.3500	0.0200	0.2921	0.0654	0.0222	29	0.88	148.99	0
148	Total Sulfur (0.13%)	0494	0.3504	0.0599	0.2921	0.0654	0.0222	29	0.89	148.07	0
148	Total Sulfur (0.13%)	0371	0.3900	0.0200	0.2921	0.0654	0.0222	29	1.50	148.99	0
148	Total Sulfur (0.13%)	0483	0.4425	0.0430	0.2921	0.0654	0.0222	29	2.30	148.07	0
148	Total Sulfur (0.13%)	0029	0.5310	0.0840	0.2921	0.0654	0.0222	29	3.65	148.00	0
148	Total Sulfur (0.13%)	0230	0.0000*	0.0000	0.2921	0.0654	0.0222	29	-4.47	148.01	4
151	Acid Soluble Arsenic (ppm)	0136	0.0400	0.0200	0.8644	1.398	0.3387	5	-0.59	151.00	0
151	Acid Soluble Arsenic (ppm)	0394	0.0527	0.0067	0.8644	1.398	0.3387	5	-0.58	151.30	0
151	Acid Soluble Arsenic (ppm)	0230	0.1295	0.0670	0.8644	1.398	0.3387	5	-0.53	151.30	0
151	Acid Soluble Arsenic (ppm)	0220	0.8000	0.6000	0.8644	1.398	0.3387	5	-0.05	151.99	0
151	Acid Soluble Arsenic (ppm)	0389	3.300	1.000	0.8644	1.398	0.3387	5	1.74	151.30	0
151	Acid Soluble Arsenic (ppm)	0515	0.0000	0.0000	0.8644	1.398	0.3387	5	-0.62	151.33	4
151	Acid Soluble Arsenic (ppm)	0515	0.0000	0.0000	0.8644	1.398	0.3387	5	-0.62	151.34	4
165	Acid Soluble Boron (0.025%)	0037	0.0210*	0.0040	0.0298	0.0034	0.0021	35	-2.56	165.00	0
165	Acid Soluble Boron (0.025%)	0457	0.0220*	0.0020	0.0298	0.0034	0.0021	35	-2.27	165.99	0
165	Acid Soluble Boron (0.025%)	0433	0.0235	0.0012	0.0298	0.0034	0.0021	35	-1.83	165.30	0
165	Acid Soluble Boron (0.025%)	0506	0.0250	0.0100	0.0298	0.0034	0.0021	35	-1.40	165.00	0
165	Acid Soluble Boron (0.025%)	0023	0.0250	0.0100	0.0298	0.0034	0.0021	35	-1.40	165.30	0
165	Acid Soluble Boron (0.025%)	0486	0.0265	0.0010	0.0298	0.0034	0.0021	35	-0.96	165.99	0
165	Acid Soluble Boron (0.025%)	0300	0.0274	0.0001	0.0298	0.0034	0.0021	35	-0.71	165.99	0
165	Acid Soluble Boron (0.025%)	0090	0.0275	0.0050	0.0298	0.0034	0.0021	35	-0.67	165.30	0
165	Acid Soluble Boron (0.025%)	0444	0.0280	0.0040	0.0298	0.0034	0.0021	35	-0.52	165.30	0
165	Acid Soluble Boron (0.025%)	0220	0.0280	0.0020	0.0298	0.0034	0.0021	35	-0.52	165.00	0
165	Acid Soluble Boron (0.025%)	0291	0.0280	0.0000	0.0298	0.0034	0.0021	35	-0.52	165.30	0
165	Acid Soluble Boron (0.025%)	0515	0.0283	0.0023	0.0298	0.0034	0.0021	35	-0.45	165.99	0
165	Acid Soluble Boron (0.025%)	0324	0.0284	0.0034	0.0298	0.0034	0.0021	35	-0.40	165.30	0
165	Acid Soluble Boron (0.025%)	0494	0.0286	0.0001	0.0298	0.0034	0.0021	35	-0.36	165.30	0
165	Acid Soluble Boron (0.025%)	0485	0.0287	0.0002	0.0298	0.0034	0.0021	35	-0.32	165.30	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				
165	Acid Soluble Boron (0.025%)	0513	0.0293	0.0015	0.0298	0.0034	0.0021	35	-0.15	165.99	0
165	Acid Soluble Boron (0.025%)	0029	0.0295	0.0010	0.0298	0.0034	0.0021	35	-0.08	165.00	0
165	Acid Soluble Boron (0.025%)	0394	0.0295	0.0030	0.0298	0.0034	0.0021	35	-0.08	165.30	0
165	Acid Soluble Boron (0.025%)	0095	0.0300	0.0000	0.0298	0.0034	0.0021	35	0.06	165.99	0
165	Acid Soluble Boron (0.025%)	0231	0.0300	0.0020	0.0298	0.0034	0.0021	35	0.06	165.99	0
165	Acid Soluble Boron (0.025%)	0472	0.0300	0.0000	0.0298	0.0034	0.0021	35	0.06	165.99	0
165	Acid Soluble Boron (0.025%)	0482	0.0300	0.0000	0.0298	0.0034	0.0021	35	0.06	165.99	0
165	Acid Soluble Boron (0.025%)	0360	0.0305	0.0010	0.0298	0.0034	0.0021	35	0.21	165.99	0
165	Acid Soluble Boron (0.025%)	0452	0.0310	0.0000	0.0298	0.0034	0.0021	35	0.36	165.30	0
165	Acid Soluble Boron (0.025%)	0389	0.0313	0.0008	0.0298	0.0034	0.0021	35	0.44	165.30	0
165	Acid Soluble Boron (0.025%)	0397	0.0321	0.0002	0.0298	0.0034	0.0021	35	0.68	165.30	0
165	Acid Soluble Boron (0.025%)	0028	0.0330	0.0000	0.0298	0.0034	0.0021	35	0.94	165.00	0
165	Acid Soluble Boron (0.025%)	0043	0.0349	0.0023	0.0298	0.0034	0.0021	35	1.48	165.99	0
165	Acid Soluble Boron (0.025%)	0402	0.0359	0.0001	0.0298	0.0034	0.0021	35	1.77	165.30	0
165	Acid Soluble Boron (0.025%)	0483	0.0359	0.0023	0.0298	0.0034	0.0021	35	1.77	165.99	0
165	Acid Soluble Boron (0.025%)	0354	0.0360	0.0040	0.0298	0.0034	0.0021	35	1.82	165.30	0
165	Acid Soluble Boron (0.025%)	0136	0.0365	0.0030	0.0298	0.0034	0.0021	35	1.96	165.30	0
165	Acid Soluble Boron (0.025%)	0481	0.0370	0.0000	0.0298	0.0034	0.0021	35	2.11	165.00	0
165	Acid Soluble Boron (0.025%)	0105	0.0380	0.0031	0.0298	0.0034	0.0021	35	2.39	165.00	0
165	Acid Soluble Boron (0.025%)	0042	0.0470	0.0040	0.0298	0.0034	0.0021	35	5.03	165.99	0
165	Acid Soluble Boron (0.025%)	0230	0.0486	0.0288	0.0298	0.0034	0.0021	35	5.50	165.99	1
165	Acid Soluble Boron (0.025%)	0055	0.1950	0.0100	0.0298	0.0034	0.0021	35	48.26	165.00	2
171	Water Soluble Boron (%)	0444	0.0275	0.0030	0.0288	0.0018	0.0025	2	-0.71	171.99	0
171	Water Soluble Boron (%)	0027	0.0300	0.0020	0.0288	0.0018	0.0025	2	0.71	171.99	0
181	Acid Soluble Cadmium (ppm)	0220	0.0100	0.0000	0.0817	0.0565	0.0178	7	-1.27	181.99	0
181	Acid Soluble Cadmium (ppm)	0102	0.0480	0.0120	0.0817	0.0565	0.0178	7	-0.60	181.30	0
181	Acid Soluble Cadmium (ppm)	0230	0.0625	0.0094	0.0817	0.0565	0.0178	7	-0.34	181.30	0
181	Acid Soluble Cadmium (ppm)	0452	0.0645	0.0030	0.0817	0.0565	0.0178	7	-0.30	181.30	0
181	Acid Soluble Cadmium (ppm)	0498	0.1000	0.0000	0.0817	0.0565	0.0178	7	0.32	181.99	0
181	Acid Soluble Cadmium (ppm)	0136	0.1500	0.1000	0.0817	0.0565	0.0178	7	1.21	181.00	0
181	Acid Soluble Cadmium (ppm)	0500	0.8000	0.0000	0.0817	0.0565	0.0178	7	12.71	181.00	0
181	Acid Soluble Cadmium (ppm)	0515	1.770	0.7690	0.0817	0.0565	0.0178	7	29.86	181.33	1
181	Acid Soluble Cadmium (ppm)	0515	0.0000	0.0000	0.0817	0.0565	0.0178	7	-1.45	181.34	4
190	Water Soluble Chlorine (%)	0105	0.1950	0.0100			0.0100	1			0
191	Acid Soluble Chromium (ppm)	0230	0.1477	0.0073	1.920	1.175	0.3237	13	-1.51	191.30	0
191	Acid Soluble Chromium (ppm)	0452	0.8720	0.0140	1.920	1.175	0.3237	13	-0.89	191.30	0
191	Acid Soluble Chromium (ppm)	0394	1.025	0.0300	1.920	1.175	0.3237	13	-0.76	191.30	0
191	Acid Soluble Chromium (ppm)	0102	1.188	0.0210	1.920	1.175	0.3237	13	-0.62	191.30	0
191	Acid Soluble Chromium (ppm)	0220	1.400	0.4000	1.920	1.175	0.3237	13	-0.44	191.99	0
191	Acid Soluble Chromium (ppm)	0482	1.405	0.1900	1.920	1.175	0.3237	13	-0.44	191.30	0
191	Acid Soluble Chromium (ppm)	0389	1.850	0.1000	1.920	1.175	0.3237	13	-0.06	191.30	0
191	Acid Soluble Chromium (ppm)	0444	2.015	0.2900	1.920	1.175	0.3237	13	0.08	191.30	0
191	Acid Soluble Chromium (ppm)	0515	2.100	0.8200	1.920	1.175	0.3237	13	0.15	191.33	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				
191	Acid Soluble Chromium (ppm)	0515	2.557	1.966	1.920	1.175	0.3237	13	0.54	191.34	0
191	Acid Soluble Chromium (ppm)	0035	3.420	0.3600	1.920	1.175	0.3237	13	1.28	191.30	0
191	Acid Soluble Chromium (ppm)	0494	3.617	0.0101	1.920	1.175	0.3237	13	1.44	191.33	0
191	Acid Soluble Chromium (ppm)	0500	5.000	0.0000	1.920	1.175	0.3237	13	2.62	191.00	0
191	Acid Soluble Chromium (ppm)	0512	7.940	15.88	1.920	1.175	0.3237	13	5.12	191.99	4
202	Acid Soluble Cobalt (ppm)	0500	12.00	0.0000	16.49	2.327	0.6350	17	-1.93	202.00	0
202	Acid Soluble Cobalt (ppm)	0037	13.61	0.7700	16.49	2.327	0.6350	17	-1.24	202.33	0
202	Acid Soluble Cobalt (ppm)	0512	13.77	0.2000	16.49	2.327	0.6350	17	-1.17	202.99	0
202	Acid Soluble Cobalt (ppm)	0515	14.10	1.226	16.49	2.327	0.6350	17	-1.03	202.33	0
202	Acid Soluble Cobalt (ppm)	0035	15.20	0.4000	16.49	2.327	0.6350	17	-0.55	202.30	0
202	Acid Soluble Cobalt (ppm)	0300	15.35	0.9000	16.49	2.327	0.6350	17	-0.49	202.32	0
202	Acid Soluble Cobalt (ppm)	0482	15.60	0.2000	16.49	2.327	0.6350	17	-0.38	202.30	0
202	Acid Soluble Cobalt (ppm)	0095	16.50	1.000	16.49	2.327	0.6350	17	0.01	202.30	0
202	Acid Soluble Cobalt (ppm)	0494	16.54	0.8849	16.49	2.327	0.6350	17	0.02	202.33	0
202	Acid Soluble Cobalt (ppm)	0096	16.81	0.1800	16.49	2.327	0.6350	17	0.14	202.30	0
202	Acid Soluble Cobalt (ppm)	0515	17.63	0.5520	16.49	2.327	0.6350	17	0.49	202.34	0
202	Acid Soluble Cobalt (ppm)	0102	17.94	0.4620	16.49	2.327	0.6350	17	0.62	202.30	0
202	Acid Soluble Cobalt (ppm)	0481	18.00	2.000	16.49	2.327	0.6350	17	0.65	202.99	0
202	Acid Soluble Cobalt (ppm)	0220	18.30	0.2000	16.49	2.327	0.6350	17	0.78	202.99	0
202	Acid Soluble Cobalt (ppm)	0452	18.77	0.0200	16.49	2.327	0.6350	17	0.98	202.30	0
202	Acid Soluble Cobalt (ppm)	0389	19.10	1.000	16.49	2.327	0.6350	17	1.12	202.30	0
202	Acid Soluble Cobalt (ppm)	0230	22.00	0.8000	16.49	2.327	0.6350	17	2.37	202.30	0
221	Acid Soluble Copper (0.0125%)	0516	0.0086	0.0005	0.0149	0.0023	0.0006	51	-2.74	221.00	0
221	Acid Soluble Copper (0.0125%)	0131	0.0086	0.0027	0.0149	0.0023	0.0006	51	-2.74	221.30	0
221	Acid Soluble Copper (0.0125%)	0095	0.0100	0.0000	0.0149	0.0023	0.0006	51	-2.12	221.30	0
221	Acid Soluble Copper (0.0125%)	0506	0.0100	0.0000	0.0149	0.0023	0.0006	51	-2.12	221.99	0
221	Acid Soluble Copper (0.0125%)	0037	0.0110	0.0000	0.0149	0.0023	0.0006	51	-1.68	221.33	0
221	Acid Soluble Copper (0.0125%)	0512	0.0119	0.0028	0.0149	0.0023	0.0006	51	-1.29	221.99	0
221	Acid Soluble Copper (0.0125%)	0397	0.0122	0.0013	0.0149	0.0023	0.0006	51	-1.19	221.33	0
221	Acid Soluble Copper (0.0125%)	0513	0.0129	0.0002	0.0149	0.0023	0.0006	51	-0.86	221.00	0
221	Acid Soluble Copper (0.0125%)	0041	0.0130	0.0000	0.0149	0.0023	0.0006	51	-0.82	221.30	0
221	Acid Soluble Copper (0.0125%)	0486	0.0130	0.0000	0.0149	0.0023	0.0006	51	-0.82	221.33	0
221	Acid Soluble Copper (0.0125%)	0433	0.0131	0.0002	0.0149	0.0023	0.0006	51	-0.77	221.30	0
221	Acid Soluble Copper (0.0125%)	0300	0.0135	0.0001	0.0149	0.0023	0.0006	51	-0.62	221.32	0
221	Acid Soluble Copper (0.0125%)	0090	0.0135	0.0010	0.0149	0.0023	0.0006	51	-0.60	221.30	0
221	Acid Soluble Copper (0.0125%)	0042	0.0135	0.0010	0.0149	0.0023	0.0006	51	-0.60	221.99	0
221	Acid Soluble Copper (0.0125%)	0487	0.0135	0.0002	0.0149	0.0023	0.0006	51	-0.60	221.99	0
221	Acid Soluble Copper (0.0125%)	0360	0.0138	0.0003	0.0149	0.0023	0.0006	51	-0.49	221.30	0
221	Acid Soluble Copper (0.0125%)	0324	0.0138	0.0005	0.0149	0.0023	0.0006	51	-0.49	221.30	0
221	Acid Soluble Copper (0.0125%)	0291	0.0140	0.0000	0.0149	0.0023	0.0006	51	-0.38	221.30	0
221	Acid Soluble Copper (0.0125%)	0452	0.0140	0.0000	0.0149	0.0023	0.0006	51	-0.38	221.30	0
221	Acid Soluble Copper (0.0125%)	0220	0.0140	0.0000	0.0149	0.0023	0.0006	51	-0.38	221.99	0
221	Acid Soluble Copper (0.0125%)	0515	0.0143	0.0004	0.0149	0.0023	0.0006	51	-0.25	221.33	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				
221	Acid Soluble Copper (0.0125%)	0055	0.0145	0.0005	0.0149	0.0023	0.0006	51	-0.19	221.30	0
221	Acid Soluble Copper (0.0125%)	0307	0.0145	0.0010	0.0149	0.0023	0.0006	51	-0.17	221.30	0
221	Acid Soluble Copper (0.0125%)	0096	0.0149	0.0005	0.0149	0.0023	0.0006	51	-0.02	221.30	0
221	Acid Soluble Copper (0.0125%)	0500	0.0149	0.0000	0.0149	0.0023	0.0006	51	0.00	221.03	0
221	Acid Soluble Copper (0.0125%)	0481	0.0150	0.0000	0.0149	0.0023	0.0006	51	0.05	221.00	0
221	Acid Soluble Copper (0.0125%)	0105	0.0150	0.0004	0.0149	0.0023	0.0006	51	0.05	221.03	0
221	Acid Soluble Copper (0.0125%)	0035	0.0150	0.0002	0.0149	0.0023	0.0006	51	0.05	221.30	0
221	Acid Soluble Copper (0.0125%)	0394	0.0150	0.0020	0.0149	0.0023	0.0006	51	0.05	221.32	0
221	Acid Soluble Copper (0.0125%)	0029	0.0151	0.0004	0.0149	0.0023	0.0006	51	0.09	221.00	0
221	Acid Soluble Copper (0.0125%)	0034	0.0151	0.0006	0.0149	0.0023	0.0006	51	0.09	221.33	0
221	Acid Soluble Copper (0.0125%)	0105	0.0154	0.0002	0.0149	0.0023	0.0006	51	0.22	221.00	0
221	Acid Soluble Copper (0.0125%)	0494	0.0154	0.0000	0.0149	0.0023	0.0006	51	0.22	221.33	0
221	Acid Soluble Copper (0.0125%)	0231	0.0155	0.0010	0.0149	0.0023	0.0006	51	0.26	221.30	0
221	Acid Soluble Copper (0.0125%)	0485	0.0156	0.0005	0.0149	0.0023	0.0006	51	0.29	221.00	0
221	Acid Soluble Copper (0.0125%)	0390	0.0157	0.0002	0.0149	0.0023	0.0006	51	0.35	221.99	0
221	Acid Soluble Copper (0.0125%)	0177	0.0158	0.0001	0.0149	0.0023	0.0006	51	0.37	221.33	0
221	Acid Soluble Copper (0.0125%)	0023	0.0160	0.0000	0.0149	0.0023	0.0006	51	0.48	221.03	0
221	Acid Soluble Copper (0.0125%)	0049	0.0160	0.0018	0.0149	0.0023	0.0006	51	0.48	221.30	0
221	Acid Soluble Copper (0.0125%)	0515	0.0161	0.0004	0.0149	0.0023	0.0006	51	0.52	221.99	0
221	Acid Soluble Copper (0.0125%)	0402	0.0166	0.0007	0.0149	0.0023	0.0006	51	0.72	221.30	0
221	Acid Soluble Copper (0.0125%)	0102	0.0170	0.0000	0.0149	0.0023	0.0006	51	0.91	221.30	0
221	Acid Soluble Copper (0.0125%)	0027	0.0170	0.0000	0.0149	0.0023	0.0006	51	0.91	221.99	0
221	Acid Soluble Copper (0.0125%)	0444	0.0180	0.0060	0.0149	0.0023	0.0006	51	1.35	221.30	0
221	Acid Soluble Copper (0.0125%)	0354	0.0185	0.0010	0.0149	0.0023	0.0006	51	1.56	221.30	0
221	Acid Soluble Copper (0.0125%)	0389	0.0190	0.0015	0.0149	0.0023	0.0006	51	1.76	221.99	0
221	Acid Soluble Copper (0.0125%)	0230	0.0200	0.0012	0.0149	0.0023	0.0006	51	2.21	221.30	0
221	Acid Soluble Copper (0.0125%)	0472	0.0200	0.0000	0.0149	0.0023	0.0006	51	2.21	221.30	0
221	Acid Soluble Copper (0.0125%)	0482	0.0200	0.0000	0.0149	0.0023	0.0006	51	2.21	221.30	0
221	Acid Soluble Copper (0.0125%)	0483	0.0215	0.0006	0.0149	0.0023	0.0006	51	2.86	221.30	0
221	Acid Soluble Copper (0.0125%)	0043	0.0380	0.0010	0.0149	0.0023	0.0006	51	10.00	221.00	0
221	Acid Soluble Copper (0.0125%)	0498	7.508	14.98	0.0149	0.0023	0.0006	51	3242.51	221.00	2
241	Acid Soluble Iron (0.125%)	0324	0.0145*	0.0006	0.1282	0.0121	0.0054	52	-9.42	241.30	0
241	Acid Soluble Iron (0.125%)	0037	0.0800*	0.0040	0.1282	0.0121	0.0054	52	-3.99	241.33	0
241	Acid Soluble Iron (0.125%)	0512	0.0884*	0.0195	0.1282	0.0121	0.0054	52	-3.30	241.99	0
241	Acid Soluble Iron (0.125%)	0481	0.0980*	0.0000	0.1282	0.0121	0.0054	52	-2.50	241.00	0
241	Acid Soluble Iron (0.125%)	0486	0.1000*	0.0000	0.1282	0.0121	0.0054	52	-2.34	241.33	0
241	Acid Soluble Iron (0.125%)	0506	0.1050*	0.0100	0.1282	0.0121	0.0054	52	-1.92	241.99	0
241	Acid Soluble Iron (0.125%)	0515	0.1111	0.0075	0.1282	0.0121	0.0054	52	-1.42	241.33	0
241	Acid Soluble Iron (0.125%)	0291	0.1125	0.0010	0.1282	0.0121	0.0054	52	-1.30	241.30	0
241	Acid Soluble Iron (0.125%)	0300	0.1160	0.0000	0.1282	0.0121	0.0054	52	-1.01	241.32	0
241	Acid Soluble Iron (0.125%)	0433	0.1162	0.0103	0.1282	0.0121	0.0054	52	-1.00	241.30	0
241	Acid Soluble Iron (0.125%)	0516	0.1175	0.0010	0.1282	0.0121	0.0054	52	-0.89	241.00	0
241	Acid Soluble Iron (0.125%)	0394	0.1180	0.0040	0.1282	0.0121	0.0054	52	-0.84	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 Iron (0.125%)	0420	0.1208	0.0032	0.1282	0.0121	0.0054	52	-0.61	241.30	0
241	Acid Soluble Iron (0.125%)	0157	0.1235	0.0010	0.1282	0.0121	0.0054	52	-0.39	241.30	0
241	Acid Soluble Iron (0.125%)	0389	0.1235	0.0010	0.1282	0.0121	0.0054	52	-0.39	241.99	0
241	Acid Soluble Iron (0.125%)	0498	0.1250	0.0100	0.1282	0.0121	0.0054	52	-0.26	241.00	0
241	Acid Soluble Iron (0.125%)	0041	0.1250	0.0100	0.1282	0.0121	0.0054	52	-0.26	241.30	0
241	Acid Soluble Iron (0.125%)	0095	0.1250	0.0100	0.1282	0.0121	0.0054	52	-0.26	241.30	0
241	Acid Soluble Iron (0.125%)	0444	0.1250	0.0100	0.1282	0.0121	0.0054	52	-0.26	241.30	0
241	Acid Soluble Iron (0.125%)	0485	0.1259	0.0033	0.1282	0.0121	0.0054	52	-0.19	241.00	0
241	Acid Soluble Iron (0.125%)	0090	0.1260	0.0060	0.1282	0.0121	0.0054	52	-0.18	241.30	0
241	Acid Soluble Iron (0.125%)	0402	0.1264	0.0051	0.1282	0.0121	0.0054	52	-0.15	241.30	0
241	Acid Soluble Iron (0.125%)	0494	0.1265	0.0037	0.1282	0.0121	0.0054	52	-0.14	241.33	0
241	Acid Soluble Iron (0.125%)	0105	0.1268	0.0131	0.1282	0.0121	0.0054	52	-0.12	241.03	0
241	Acid Soluble Iron (0.125%)	0500	0.1270	0.0000	0.1282	0.0121	0.0054	52	-0.10	241.03	0
241	Acid Soluble Iron (0.125%)	0513	0.1276	0.0001	0.1282	0.0121	0.0054	52	-0.05	241.00	0
241	Acid Soluble Iron (0.125%)	0105	0.1280	0.0020	0.1282	0.0121	0.0054	52	-0.02	241.00	0
241	Acid Soluble Iron (0.125%)	0220	0.1285	0.0010	0.1282	0.0121	0.0054	52	0.03	241.99	0
241	Acid Soluble Iron (0.125%)	0035	0.1290	0.0020	0.1282	0.0121	0.0054	52	0.07	241.30	0
241	Acid Soluble Iron (0.125%)	0177	0.1296	0.0030	0.1282	0.0121	0.0054	52	0.12	241.33	0
241	Acid Soluble Iron (0.125%)	0096	0.1300	0.0000	0.1282	0.0121	0.0054	52	0.15	241.30	0
241	Acid Soluble Iron (0.125%)	0390	0.1300	0.0060	0.1282	0.0121	0.0054	52	0.15	241.30	0
241	Acid Soluble Iron (0.125%)	0472	0.1300	0.0000	0.1282	0.0121	0.0054	52	0.15	241.30	0
241	Acid Soluble Iron (0.125%)	0029	0.1311	0.0016	0.1282	0.0121	0.0054	52	0.24	241.00	0
241	Acid Soluble Iron (0.125%)	0231	0.1325	0.0010	0.1282	0.0121	0.0054	52	0.36	241.30	0
241	Acid Soluble Iron (0.125%)	0360	0.1330	0.0060	0.1282	0.0121	0.0054	52	0.40	241.30	0
241	Acid Soluble Iron (0.125%)	0457	0.1345	0.0210	0.1282	0.0121	0.0054	52	0.52	241.00	0
241	Acid Soluble Iron (0.125%)	0102	0.1350	0.0020	0.1282	0.0121	0.0054	52	0.56	241.30	0
241	Acid Soluble Iron (0.125%)	0452	0.1355	0.0010	0.1282	0.0121	0.0054	52	0.61	241.30	0
241	Acid Soluble Iron (0.125%)	0023	0.1355	0.0010	0.1282	0.0121	0.0054	52	0.61	241.33	0
241	Acid Soluble Iron (0.125%)	0055	0.1380	0.0200	0.1282	0.0121	0.0054	52	0.81	241.30	0
241	Acid Soluble Iron (0.125%)	0025	0.1392	0.0073	0.1282	0.0121	0.0054	52	0.91	241.30	0
241	Acid Soluble Iron (0.125%)	0049	0.1400	0.0000	0.1282	0.0121	0.0054	52	0.98	241.30	0
241	Acid Soluble Iron (0.125%)	0027	0.1425	0.0010	0.1282	0.0121	0.0054	52	1.19	241.99	0
241	Acid Soluble Iron (0.125%)	0354	0.1425	0.0050	0.1282	0.0121	0.0054	52	1.19	241.30	0
241	Acid Soluble Iron (0.125%)	0515	0.1433	0.0051	0.1282	0.0121	0.0054	52	1.25	241.99	0
241	Acid Soluble Iron (0.125%)	0482	0.1450	0.0100	0.1282	0.0121	0.0054	52	1.39	241.30	0
241	Acid Soluble Iron (0.125%)	0136	0.1450	0.0100	0.1282	0.0121	0.0054	52	1.39	241.33	0
241	Acid Soluble Iron (0.125%)	0230	0.1695	0.0050	0.1282	0.0121	0.0054	52	3.42	241.30	0
241	Acid Soluble Iron (0.125%)	0483	0.1780	0.0060	0.1282	0.0121	0.0054	52	4.13	241.30	0
241	Acid Soluble Iron (0.125%)	0234	0.1900	0.0200	0.1282	0.0121	0.0054	52	5.12	241.30	0
241	Acid Soluble Iron (0.125%)	0043	0.3180	0.0100	0.1282	0.0121	0.0054	52	15.73	241.00	0
241	Acid Soluble Iron (0.125%)	0042	0.1250	0.0300	0.1282	0.0121	0.0054	52	-0.26	241.99	1
251	Acid Soluble Lead (ppm)	0444	1.570	0.0400	2.235	0.4583	0.2394	16	-1.45	251.30	0
251	Acid Soluble Lead (ppm)	0300	1.805	0.1300	2.235	0.4583	0.2394	16	-0.94	251.32	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				
251	Acid Soluble Lead (ppm)	0515	1.818	2.150	2.235	0.4583	0.2394	16	-0.91	251.33	0
251	Acid Soluble Lead (ppm)	0481	1.930	0.0000	2.235	0.4583	0.2394	16	-0.66	251.99	0
251	Acid Soluble Lead (ppm)	0394	1.955	0.0100	2.235	0.4583	0.2394	16	-0.61	251.30	0
251	Acid Soluble Lead (ppm)	0136	2.000	0.0000	2.235	0.4583	0.2394	16	-0.51	251.00	0
251	Acid Soluble Lead (ppm)	0506	2.000	0.0000	2.235	0.4583	0.2394	16	-0.51	251.99	0
251	Acid Soluble Lead (ppm)	0230	2.070	0.2800	2.235	0.4583	0.2394	16	-0.36	251.30	0
251	Acid Soluble Lead (ppm)	0498	2.155	0.2100	2.235	0.4583	0.2394	16	-0.17	251.99	0
251	Acid Soluble Lead (ppm)	0494	2.326	0.0809	2.235	0.4583	0.2394	16	0.20	251.33	0
251	Acid Soluble Lead (ppm)	0102	2.430	0.1380	2.235	0.4583	0.2394	16	0.43	251.30	0
251	Acid Soluble Lead (ppm)	0096	2.650	0.1000	2.235	0.4583	0.2394	16	0.91	251.30	0
251	Acid Soluble Lead (ppm)	0220	2.700	0.0000	2.235	0.4583	0.2394	16	1.02	251.99	0
251	Acid Soluble Lead (ppm)	0452	2.930	0.0600	2.235	0.4583	0.2394	16	1.52	251.30	0
251	Acid Soluble Lead (ppm)	0515	3.406	0.3510	2.235	0.4583	0.2394	16	2.55	251.34	0
251	Acid Soluble Lead (ppm)	0035	3.800	0.2800	2.235	0.4583	0.2394	16	3.42	251.30	0
251	Acid Soluble Lead (ppm)	0512	41.20	54.24	2.235	0.4583	0.2394	16	85.02	251.99	2
261	Acid Soluble Manganese (0.063%)	0131	0.0401*	0.0061	0.0647	0.0056	0.0029	52	-4.37	261.30	0
261	Acid Soluble Manganese (0.063%)	0512	0.0464*	0.0057	0.0647	0.0056	0.0029	52	-3.25	261.99	0
261	Acid Soluble Manganese (0.063%)	0037	0.0470*	0.0000	0.0647	0.0056	0.0029	52	-3.13	261.33	0
261	Acid Soluble Manganese (0.063%)	0515	0.0478*	0.0086	0.0647	0.0056	0.0029	52	-2.99	261.35	0
261	Acid Soluble Manganese (0.063%)	0515	0.0536	0.0034	0.0647	0.0056	0.0029	52	-1.96	261.99	0
261	Acid Soluble Manganese (0.063%)	0433	0.0547	0.0044	0.0647	0.0056	0.0029	52	-1.77	261.30	0
261	Acid Soluble Manganese (0.063%)	0506	0.0550	0.0100	0.0647	0.0056	0.0029	52	-1.71	261.99	0
261	Acid Soluble Manganese (0.063%)	0157	0.0570	0.0040	0.0647	0.0056	0.0029	52	-1.36	261.30	0
261	Acid Soluble Manganese (0.063%)	0042	0.0575	0.0050	0.0647	0.0056	0.0029	52	-1.27	261.99	0
261	Acid Soluble Manganese (0.063%)	0300	0.0575	0.0010	0.0647	0.0056	0.0029	52	-1.27	261.34	0
261	Acid Soluble Manganese (0.063%)	0420	0.0599	0.0020	0.0647	0.0056	0.0029	52	-0.84	261.30	0
261	Acid Soluble Manganese (0.063%)	0513	0.0600	0.0020	0.0647	0.0056	0.0029	52	-0.83	261.12	0
261	Acid Soluble Manganese (0.063%)	0472	0.0600	0.0000	0.0647	0.0056	0.0029	52	-0.83	261.30	0
261	Acid Soluble Manganese (0.063%)	0394	0.0605	0.0030	0.0647	0.0056	0.0029	52	-0.74	261.34	0
261	Acid Soluble Manganese (0.063%)	0486	0.0605	0.0010	0.0647	0.0056	0.0029	52	-0.74	261.35	0
261	Acid Soluble Manganese (0.063%)	0444	0.0610	0.0040	0.0647	0.0056	0.0029	52	-0.65	261.32	0
261	Acid Soluble Manganese (0.063%)	0105	0.0633	0.0007	0.0647	0.0056	0.0029	52	-0.25	261.15	0
261	Acid Soluble Manganese (0.063%)	0498	0.0635	0.0050	0.0647	0.0056	0.0029	52	-0.20	261.11	0
261	Acid Soluble Manganese (0.063%)	0090	0.0635	0.0030	0.0647	0.0056	0.0029	52	-0.20	261.30	0
261	Acid Soluble Manganese (0.063%)	0220	0.0640	0.0020	0.0647	0.0056	0.0029	52	-0.12	261.99	0
261	Acid Soluble Manganese (0.063%)	0096	0.0642	0.0001	0.0647	0.0056	0.0029	52	-0.09	261.30	0
261	Acid Soluble Manganese (0.063%)	0291	0.0645	0.0010	0.0647	0.0056	0.0029	52	-0.03	261.30	0
261	Acid Soluble Manganese (0.063%)	0023	0.0645	0.0010	0.0647	0.0056	0.0029	52	-0.03	261.35	0
261	Acid Soluble Manganese (0.063%)	0485	0.0648	0.0014	0.0647	0.0056	0.0029	52	0.03	261.12	0
261	Acid Soluble Manganese (0.063%)	0136	0.0650	0.0020	0.0647	0.0056	0.0029	52	0.06	261.35	0
261	Acid Soluble Manganese (0.063%)	0095	0.0650	0.0100	0.0647	0.0056	0.0029	52	0.06	261.99	0
261	Acid Soluble Manganese (0.063%)	0105	0.0651	0.0018	0.0647	0.0056	0.0029	52	0.08	261.12	0
261	Acid Soluble Manganese (0.063%)	0041	0.0655	0.0030	0.0647	0.0056	0.0029	52	0.15	261.30	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				
261	Acid Soluble Manganese (0.063%)	0049	0.0655	0.0050	0.0647	0.0056	0.0029	52	0.15	261.32	0
261	Acid Soluble Manganese (0.063%)	0177	0.0659	0.0001	0.0647	0.0056	0.0029	52	0.21	261.35	0
261	Acid Soluble Manganese (0.063%)	0457	0.0665	0.0050	0.0647	0.0056	0.0029	52	0.33	261.12	0
261	Acid Soluble Manganese (0.063%)	0231	0.0665	0.0010	0.0647	0.0056	0.0029	52	0.33	261.30	0
261	Acid Soluble Manganese (0.063%)	0354	0.0665	0.0030	0.0647	0.0056	0.0029	52	0.33	261.30	0
261	Acid Soluble Manganese (0.063%)	0055	0.0668	0.0076	0.0647	0.0056	0.0029	52	0.38	261.30	0
261	Acid Soluble Manganese (0.063%)	0494	0.0669	0.0024	0.0647	0.0056	0.0029	52	0.40	261.35	0
261	Acid Soluble Manganese (0.063%)	0035	0.0670	0.0003	0.0647	0.0056	0.0029	52	0.41	261.30	0
261	Acid Soluble Manganese (0.063%)	0481	0.0670	0.0020	0.0647	0.0056	0.0029	52	0.42	261.11	0
261	Acid Soluble Manganese (0.063%)	0452	0.0670	0.0000	0.0647	0.0056	0.0029	52	0.42	261.30	0
261	Acid Soluble Manganese (0.063%)	0360	0.0675	0.0010	0.0647	0.0056	0.0029	52	0.51	261.31	0
261	Acid Soluble Manganese (0.063%)	0500	0.0678	0.0001	0.0647	0.0056	0.0029	52	0.55	261.15	0
261	Acid Soluble Manganese (0.063%)	0402	0.0678	0.0001	0.0647	0.0056	0.0029	52	0.55	261.32	0
261	Acid Soluble Manganese (0.063%)	0102	0.0685	0.0010	0.0647	0.0056	0.0029	52	0.68	261.30	0
261	Acid Soluble Manganese (0.063%)	0324	0.0686	0.0002	0.0647	0.0056	0.0029	52	0.70	261.31	0
261	Acid Soluble Manganese (0.063%)	0390	0.0700	0.0014	0.0647	0.0056	0.0029	52	0.95	261.30	0
261	Acid Soluble Manganese (0.063%)	0040	0.0705	0.0010	0.0647	0.0056	0.0029	52	1.04	261.12	0
261	Acid Soluble Manganese (0.063%)	0389	0.0710	0.0011	0.0647	0.0056	0.0029	52	1.12	261.99	0
261	Acid Soluble Manganese (0.063%)	0027	0.0730	0.0020	0.0647	0.0056	0.0029	52	1.48	261.99	0
261	Acid Soluble Manganese (0.063%)	0029	0.0737	0.0015	0.0647	0.0056	0.0029	52	1.60	261.12	0
261	Acid Soluble Manganese (0.063%)	0025	0.0744	0.0034	0.0647	0.0056	0.0029	52	1.73	261.30	0
261	Acid Soluble Manganese (0.063%)	0482	0.0750	0.0100	0.0647	0.0056	0.0029	52	1.84	261.31	0
261	Acid Soluble Manganese (0.063%)	0483	0.0800	0.0053	0.0647	0.0056	0.0029	52	2.71	261.32	0
261	Acid Soluble Manganese (0.063%)	0230	0.0898	0.0072	0.0647	0.0056	0.0029	52	4.46	261.30	0
261	Acid Soluble Manganese (0.063%)	0043	0.1666	0.0008	0.0647	0.0056	0.0029	52	18.09	261.00	2
271	Water Soluble Manganese (%)	0444	0.0630	0.0020			0.0020	1			0
281	Acid Soluble Mercury (ppm)	0230	0.0053	0.0010	0.0134	0.0115	0.0023	2	-0.71	281.00	0
281	Acid Soluble Mercury (ppm)	0394	0.0216	0.0035	0.0134	0.0115	0.0023	2	0.71	281.30	0
281	Acid Soluble Mercury (ppm)	0009	0.0000	0.0000	0.0134	0.0115	0.0023	2	-1.17	281.30	4
281	Acid Soluble Mercury (ppm)	0515	0.0000	0.0000	0.0134	0.0115	0.0023	2	-1.17	281.30	4
289	Acid Soluble Molybdenum (125ppm)	0433	54.66*	10.60	124.0	23.22	10.80	13	-2.99	289.30	0
289	Acid Soluble Molybdenum (125ppm)	0515	73.45*	30.15	124.0	23.22	10.80	13	-2.18	289.33	0
289	Acid Soluble Molybdenum (125ppm)	0515	104.1	24.43	124.0	23.22	10.80	13	-0.86	289.34	0
289	Acid Soluble Molybdenum (125ppm)	0035	111.0	10.00	124.0	23.22	10.80	13	-0.56	289.30	0
289	Acid Soluble Molybdenum (125ppm)	0300	114.0	6.900	124.0	23.22	10.80	13	-0.43	289.32	0
289	Acid Soluble Molybdenum (125ppm)	0049	125.5	15.00	124.0	23.22	10.80	13	0.06	289.30	0
289	Acid Soluble Molybdenum (125ppm)	0102	126.9	3.224	124.0	23.22	10.80	13	0.12	289.30	0
289	Acid Soluble Molybdenum (125ppm)	0027	127.0	8.000	124.0	23.22	10.80	13	0.13	289.30	0
289	Acid Soluble Molybdenum (125ppm)	0096	133.4	18.70	124.0	23.22	10.80	13	0.40	289.30	0
289	Acid Soluble Molybdenum (125ppm)	0500	140.0	0.0000	124.0	23.22	10.80	13	0.69	289.00	0
289	Acid Soluble Molybdenum (125ppm)	0452	148.6	0.2000	124.0	23.22	10.80	13	1.06	289.30	0
289	Acid Soluble Molybdenum (125ppm)	0494	149.4	10.17	124.0	23.22	10.80	13	1.09	289.33	0
289	Acid Soluble Molybdenum (125ppm)	0220	149.5	3.000	124.0	23.22	10.80	13	1.10	289.99	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				
289	Acid Soluble Molybdenum (125ppm)	0230	196.0	62.00	124.0	23.22	10.80	13	3.10	289.30	1
289	Acid Soluble Molybdenum (125ppm)	0486	0.0110*	0.0000	124.0	23.22	10.80	13	-5.34	289.33	3
289	Acid Soluble Molybdenum (125ppm)	0444	0.0145*	0.0010	124.0	23.22	10.80	13	-5.34	289.30	3
289	Acid Soluble Molybdenum (125ppm)	0042	11.50*	1.000	124.0	23.22	10.80	13	-4.85	289.99	3
291	Acid Soluble Nickel (ppm)	0482	0.3800	0.0200	1.103	0.8133	0.3069	8	-0.89	291.30	0
291	Acid Soluble Nickel (ppm)	0230	0.3990	0.0880	1.103	0.8133	0.3069	8	-0.87	291.30	0
291	Acid Soluble Nickel (ppm)	0515	0.4857	0.1469	1.103	0.8133	0.3069	8	-0.76	291.34	0
291	Acid Soluble Nickel (ppm)	0394	0.8510	0.4380	1.103	0.8133	0.3069	8	-0.31	291.30	0
291	Acid Soluble Nickel (ppm)	0220	1.050	0.1000	1.103	0.8133	0.3069	8	-0.06	291.99	0
291	Acid Soluble Nickel (ppm)	0035	1.440	0.1000	1.103	0.8133	0.3069	8	0.41	291.30	0
291	Acid Soluble Nickel (ppm)	0500	6.050	0.1000	1.103	0.8133	0.3069	8	6.08	291.00	0
291	Acid Soluble Nickel (ppm)	0494	22.65	1.462	1.103	0.8133	0.3069	8	26.49	291.33	0
291	Acid Soluble Nickel (ppm)	0515	0.0458	0.0915	1.103	0.8133	0.3069	8	-1.30	291.33	4
291	Acid Soluble Nickel (ppm)	0512	4.960	9.920	1.103	0.8133	0.3069	8	4.74	291.99	4
301	Acid Soluble Selenium (ppm)	0485	0.0700	0.0018	0.0997	0.0355	0.0586	3	-0.84	301.99	0
301	Acid Soluble Selenium (ppm)	0394	0.0900	0.0200	0.0997	0.0355	0.0586	3	-0.27	301.30	0
301	Acid Soluble Selenium (ppm)	0230	0.1390	0.1540	0.0997	0.0355	0.0586	3	1.11	301.30	0
301	Acid Soluble Selenium (ppm)	0515	0.0000	0.0000	0.0997	0.0355	0.0586	3	-2.81	301.33	4
301	Acid Soluble Selenium (ppm)	0515	0.0000	0.0000	0.0997	0.0355	0.0586	3	-2.81	301.34	4
311	Sodium (%)	0494	0.2306	0.0213	0.2548	0.0229	0.0114	6	-1.06	311.33	0
311	Sodium (%)	0035	0.2385	0.0110	0.2548	0.0229	0.0114	6	-0.71	311.99	0
311	Sodium (%)	0096	0.2450	0.0100	0.2548	0.0229	0.0114	6	-0.43	311.99	0
311	Sodium (%)	0102	0.2650	0.0060	0.2548	0.0229	0.0114	6	0.45	311.33	0
311	Sodium (%)	0482	0.2650	0.0100	0.2548	0.0229	0.0114	6	0.45	311.99	0
311	Sodium (%)	0510	0.2850	0.0100	0.2548	0.0229	0.0114	6	1.32	311.30	0
311	Sodium (%)	0354	0.3390	0.0720	0.2548	0.0229	0.0114	6	3.68	311.99	1
321	Acid Soluble Zinc (0.063%)	0037	0.0530*	0.0000	0.0737	0.0066	0.0040	55	-3.12	321.33	0
321	Acid Soluble Zinc (0.063%)	0131	0.0536*	0.0265	0.0737	0.0066	0.0040	55	-3.03	321.30	0
321	Acid Soluble Zinc (0.063%)	0506	0.0550*	0.0100	0.0737	0.0066	0.0040	55	-2.82	321.99	0
321	Acid Soluble Zinc (0.063%)	0512	0.0568*	0.0111	0.0737	0.0066	0.0040	55	-2.55	321.99	0
321	Acid Soluble Zinc (0.063%)	0433	0.0572*	0.0037	0.0737	0.0066	0.0040	55	-2.49	321.30	0
321	Acid Soluble Zinc (0.063%)	0420	0.0590*	0.0000	0.0737	0.0066	0.0040	55	-2.21	321.30	0
321	Acid Soluble Zinc (0.063%)	0300	0.0620	0.0000	0.0737	0.0066	0.0040	55	-1.76	321.32	0
321	Acid Soluble Zinc (0.063%)	0513	0.0660	0.0040	0.0737	0.0066	0.0040	55	-1.16	321.00	0
321	Acid Soluble Zinc (0.063%)	0157	0.0660	0.0060	0.0737	0.0066	0.0040	55	-1.16	321.30	0
321	Acid Soluble Zinc (0.063%)	0487	0.0670	0.0020	0.0737	0.0066	0.0040	55	-1.01	321.99	0
321	Acid Soluble Zinc (0.063%)	0042	0.0675	0.0050	0.0737	0.0066	0.0040	55	-0.93	321.99	0
321	Acid Soluble Zinc (0.063%)	0055	0.0683	0.0002	0.0737	0.0066	0.0040	55	-0.81	321.30	0
321	Acid Soluble Zinc (0.063%)	0049	0.0695	0.0070	0.0737	0.0066	0.0040	55	-0.63	321.30	0
321	Acid Soluble Zinc (0.063%)	0095	0.0700	0.0000	0.0737	0.0066	0.0040	55	-0.56	321.30	0
321	Acid Soluble Zinc (0.063%)	0292	0.0700	0.0000	0.0737	0.0066	0.0040	55	-0.56	321.30	0
321	Acid Soluble Zinc (0.063%)	0472	0.0700	0.0000	0.0737	0.0066	0.0040	55	-0.56	321.30	0
321	Acid Soluble Zinc (0.063%)	0220	0.0700	0.0020	0.0737	0.0066	0.0040	55	-0.56	321.99	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				
321	Acid Soluble Zinc (0.063%)	0105	0.0702	0.0022	0.0737	0.0066	0.0040	55	-0.52	321.03	0
321	Acid Soluble Zinc (0.063%)	0105	0.0703	0.0033	0.0737	0.0066	0.0040	55	-0.52	321.00	0
321	Acid Soluble Zinc (0.063%)	0090	0.0705	0.0050	0.0737	0.0066	0.0040	55	-0.48	321.30	0
321	Acid Soluble Zinc (0.063%)	0515	0.0705	0.0002	0.0737	0.0066	0.0040	55	-0.48	321.33	0
321	Acid Soluble Zinc (0.063%)	0307	0.0710	0.0000	0.0737	0.0066	0.0040	55	-0.40	321.30	0
321	Acid Soluble Zinc (0.063%)	0498	0.0710	0.0040	0.0737	0.0066	0.0040	55	-0.40	321.00	0
321	Acid Soluble Zinc (0.063%)	0516	0.0712	0.0048	0.0737	0.0066	0.0040	55	-0.37	321.00	0
321	Acid Soluble Zinc (0.063%)	0402	0.0713	0.0006	0.0737	0.0066	0.0040	55	-0.36	321.30	0
321	Acid Soluble Zinc (0.063%)	0023	0.0725	0.0030	0.0737	0.0066	0.0040	55	-0.18	321.33	0
321	Acid Soluble Zinc (0.063%)	0394	0.0730	0.0040	0.0737	0.0066	0.0040	55	-0.10	321.32	0
321	Acid Soluble Zinc (0.063%)	0360	0.0740	0.0020	0.0737	0.0066	0.0040	55	0.05	321.30	0
321	Acid Soluble Zinc (0.063%)	0096	0.0747	0.0008	0.0737	0.0066	0.0040	55	0.15	321.30	0
321	Acid Soluble Zinc (0.063%)	0025	0.0750	0.0044	0.0737	0.0066	0.0040	55	0.20	321.30	0
321	Acid Soluble Zinc (0.063%)	0291	0.0750	0.0100	0.0737	0.0066	0.0040	55	0.20	321.30	0
321	Acid Soluble Zinc (0.063%)	0482	0.0750	0.0100	0.0737	0.0066	0.0040	55	0.20	321.30	0
321	Acid Soluble Zinc (0.063%)	0494	0.0753	0.0015	0.0737	0.0066	0.0040	55	0.24	321.33	0
321	Acid Soluble Zinc (0.063%)	0485	0.0754	0.0014	0.0737	0.0066	0.0040	55	0.26	321.00	0
321	Acid Soluble Zinc (0.063%)	0035	0.0756	0.0011	0.0737	0.0066	0.0040	55	0.28	321.30	0
321	Acid Soluble Zinc (0.063%)	0390	0.0760	0.0021	0.0737	0.0066	0.0040	55	0.34	321.30	0
321	Acid Soluble Zinc (0.063%)	0500	0.0770	0.0000	0.0737	0.0066	0.0040	55	0.50	321.03	0
321	Acid Soluble Zinc (0.063%)	0041	0.0770	0.0040	0.0737	0.0066	0.0040	55	0.50	321.30	0
321	Acid Soluble Zinc (0.063%)	0324	0.0771	0.0006	0.0737	0.0066	0.0040	55	0.51	321.30	0
321	Acid Soluble Zinc (0.063%)	0040	0.0775	0.0010	0.0737	0.0066	0.0040	55	0.58	321.00	0
321	Acid Soluble Zinc (0.063%)	0177	0.0775	0.0016	0.0737	0.0066	0.0040	55	0.58	321.33	0
321	Acid Soluble Zinc (0.063%)	0102	0.0780	0.0000	0.0737	0.0066	0.0040	55	0.65	321.30	0
321	Acid Soluble Zinc (0.063%)	0452	0.0785	0.0010	0.0737	0.0066	0.0040	55	0.73	321.30	0
321	Acid Soluble Zinc (0.063%)	0354	0.0790	0.0000	0.0737	0.0066	0.0040	55	0.80	321.30	0
321	Acid Soluble Zinc (0.063%)	0027	0.0795	0.0010	0.0737	0.0066	0.0040	55	0.88	321.99	0
321	Acid Soluble Zinc (0.063%)	0457	0.0800	0.0040	0.0737	0.0066	0.0040	55	0.95	321.00	0
321	Acid Soluble Zinc (0.063%)	0481	0.0810	0.0000	0.0737	0.0066	0.0040	55	1.10	321.00	0
321	Acid Soluble Zinc (0.063%)	0515	0.0845	0.0087	0.0737	0.0066	0.0040	55	1.62	321.99	0
321	Acid Soluble Zinc (0.063%)	0389	0.0895	0.0009	0.0737	0.0066	0.0040	55	2.38	321.99	0
321	Acid Soluble Zinc (0.063%)	0136	0.0925	0.0050	0.0737	0.0066	0.0040	55	2.84	321.33	0
321	Acid Soluble Zinc (0.063%)	0230	0.0981	0.0059	0.0737	0.0066	0.0040	55	3.67	321.30	0
321	Acid Soluble Zinc (0.063%)	0483	0.1100	0.0020	0.0737	0.0066	0.0040	55	5.47	321.30	0
321	Acid Soluble Zinc (0.063%)	0043	0.1770	0.0100	0.0737	0.0066	0.0040	55	15.57	321.00	0
321	Acid Soluble Zinc (0.063%)	0428	0.2141	0.0247	0.0737	0.0066	0.0040	55	21.15	321.00	0
321	Acid Soluble Zinc (0.063%)	0486	0.2450	0.0100	0.0737	0.0066	0.0040	55	25.82	321.33	0
321	Acid Soluble Zinc (0.063%)	0029	0.0449*	0.0619	0.0737	0.0066	0.0040	55	-4.34	321.00	1
321	Acid Soluble Zinc (0.063%)	0231	0.7500	0.0200	0.0737	0.0066	0.0040	55	101.91	321.30	2
325	Water Soluble Zinc (%)	0444	0.0690	0.0020			0.0020	1			0

Interpreting Z Scores: Red indicates a normally distributed Z value >3 or <-3 (requires action), Orange = Z between 2 and 3 or -2 and -3 (warning) and Green = Z < 2 and >-2 (OK at 95%). Flags indicate data usage: 0 = Used, 1 = rejected for duplicates too far apart, 2 = rejected as extreme outlier and a 4 flag indicates rejected due to 0 value submitted. Robust

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				

statistics not used if < 6 labs used in calculations, in this case the Z Scores are included for information only (Grey). An offset lab value with an astrix indicates that the value is lower than the Analyte value less the IA. Method or Analyte codes in light green indicate a guaranteed analyte. Individual lab values may be below detection limits but are reported solely for the purpose of this Proficiency Testing program.