

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Methods: 35

Sample # 180811

Statistical Summary

Labs Reporting: 80

32-0-0 UAN Liquid

Issue Date : 09/30/2018

Method Code	Analyte & Method Sample # 180811	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Method Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	Method IA Ratio	Average Range (R-bar)	Hornitz %RSD
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	4	4	9.673	3.764	9.673		3.764	2.353	38.92%		0.1000	2.84%
001.99	Ammoniacal Nitrogen, Other (%)	18	17	8.205	1.076	8.002		0.4546	0.1378	5.68%		0.0712	2.92%
002.10	Nitrate Nitrogen, Robertson (%)	1		7.800									
002.99	Nitrate Nitrogen, Other (%)	14	14	7.813	0.9187	7.618		0.4692	0.1567	6.16%		0.1061	2.95%
005.00	Urea Nitrogen, Urease (as N) (%)	2	2	16.11	0.5929								
005.99	Urea Nitrogen, Other (%)	10	10	16.26	1.484	16.61		0.4609	0.1822	2.77%		0.1280	2.62%
006.00	Biuret Nitrogen, AA (as N) (%)	1		0.2950									
006.10	Biuret Nitrogen, Spectrophotometric (as N) (%)	1		0.2707									
006.99	Biuret Nitrogen, Other (%)	2	2	0.6550	0.4384								
007.00	Urea, Urease (as Urea) (%)	1		16.99									
007.99	Urea, Other (%)	3	3	22.06	12.07	22.06		12.07	8.713	54.73%		0.1103	2.51%
008.00	Biuret, AA (as Biuret) (%)	1		0.0850									
008.10	Biuret, Spectrophotometric (as Biuret) (%)	3	3	1.052	0.1794	1.052		0.1794	0.1295	17.06%		0.0936	3.97%
008.99	Biuret, Other (%)	1		0.3600									
009.10	Ammoniacal Plus Nitrate Nitrogen, Devarda (%)	2	2	15.84	0.4667								
009.99	Ammoniacal Plus Nitrate Nitrogen, Other (%)	2	2	23.28	10.92								
010.11	Total Nitrogen, Modified Comprehensive (32%)	8	8	31.77	0.7257	31.82	0.8782	0.7103	0.3139	2.23%	1.88	0.1231	2.38%
010.12	Total Nitrogen, Salicylic (32%)	3	3	31.80	0.1718	31.80	0.8780	0.1718	0.1240	0.54%	0.46	0.0767	2.38%
010.60	Total Nitrogen, Combustion (32%)	57	55	32.12	0.4854	32.10	0.8800	0.3648	0.0615	1.14%	0.97	0.2322	2.37%
010.99	Total Nitrogen, Other (32%)	10	9	31.40	1.323	31.74	0.8774	0.4671	0.1946	1.47%	1.24	0.0570	2.38%
020.50	Total Phosphorus as P2O5, ICP (%)	1		0.0000									
041.50	Direct Available Phosphorus as P2O5, ICP (%)	1		0.1000									
041.60	Direct Available Phosphorus as P2O5, Citrate-EDTA ..	1		0.0330									
050.51	Soluble Potassium as K2O, ICP (Citrate) (%)	1		0.0450									
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (%)	1		0.0165									
050.99	Soluble Potassium as K2O, Other (%)	1		0.1000									
101.30	Acid Soluble Calcium, ICP, test portion inorganic ... (%)	1		0.0450									
121.30	Acid Soluble Magnesium, ICP, test portion inorgani... (1		0.0100									
148.99	Total Sulfur, Other (%)	1		0.1000									
165.30	Acid Soluble Boron , ICP, test portion in 982.01 (%)	1		0.0100									
221.30	Acid Soluble Copper , ICP, test portion inorganic... (%)	1		0.0100									

Method Code	Analyte & Method Sample # 180811	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Method Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	Method IA Ratio	Average Range (R-bar)	Howitz %RSD
241.30	Acid Soluble Iron , ICP, test portion inorganic 96... (%)	1		0.0100									
261.30	Acid Soluble Manganese , ICP, test portion 972.02a ('	1		0.0100									
311.99	Sodium, Other (%)	1		0.0500									
321.30	Acid Soluble Zinc , ICP, test portion inorganic 9... (%)	1		0.0250									

The Method IA Ratio = $2.33 * \text{Robust SD} / \text{IA at the Method Assigned Value}$. IA ratios of 1 and less indicate participant data dispersion is as good or less than the IA. Red indicates the IA ratio is significantly greater than 1, Orange indicates marginally greater than 1, Green indicates IA ratio is not significantly greater than 1 and Grey indicates < 6 labs reporting.

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STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 180811
32-0-0 UAN Liquid

Method Precision Report

Issue Date : 09/30/2018

Method Code	Analyte & Method	# Tests Submitted	# Tests Used in Precision Calcs	Mean	SD	Between Labs sL	Within Labs sr	Reproducibility sR	Between Labs %RSD	Within Labs %rsd	Reproducibility %RSD	sR/sr
001.99	Ammoniacal Nitrogen, Other (%)	18	15	8.030	0.6648	0.6638	0.0510	0.6658	8.27%	0.63%	8.29%	13.06
002.99	Nitrate Nitrogen, Other (%)	14	13	7.634	0.6560	0.6536	0.0800	0.6584	8.56%	1.05%	8.62%	8.226
005.99	Urea Nitrogen, Other (%)	10	9	16.71	0.3950	0.3870	0.1122	0.4029	2.32%	0.67%	2.41%	3.590
010.11	Total Nitrogen, Modified Comprehensive (32%)	8	8	31.77	0.7257	0.7212	0.1143	0.7302	2.27%	0.36%	2.30%	6.386
010.60	Total Nitrogen, Combustion (32%)	57	52	32.10	0.4057	0.3825	0.1909	0.4275	1.19%	0.59%	1.33%	2.239
010.99	Total Nitrogen, Other (32%)	10	8	31.83	0.3391	0.3371	0.0516	0.3411	1.06%	0.16%	1.07%	6.610

Notes: Precision data calculated when 8 or more Tests included.

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STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Methods: 35

Sample # 180811

Lab Values

Labs Reporting: 80

32-0-0 UAN Liquid

Issue Date : 09/30/2018

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0309	7.515	0.2100	9.673	3.764	0.1000	4	-0.57		0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0498	7.650	0.1000	9.673	3.764	0.1000	4	-0.54		0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0444	8.225	0.0700	9.673	3.764	0.1000	4	-0.38		0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0405	15.30	0.0200	9.673	3.764	0.1000	4	1.49		0
001.99	Ammoniacal Nitrogen, Other (%)	0231	6.680	0.0200	8.002	0.4546	0.0712	17	-2.91	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0546	7.465	0.4300	8.002	0.4546	0.0712	17	-1.18	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0220	7.660	0.0200	8.002	0.4546	0.0712	17	-0.75	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0371	7.750	0.1000	8.002	0.4546	0.0712	17	-0.56	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0513	7.773	0.0150	8.002	0.4546	0.0712	17	-0.51	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0169	7.840	0.0200	8.002	0.4546	0.0712	17	-0.36	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0096	7.900	0.0400	8.002	0.4546	0.0712	17	-0.23	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0482	7.900	0.0000	8.002	0.4546	0.0712	17	-0.23	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0476	7.913	0.0174	8.002	0.4546	0.0712	17	-0.20	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0481	7.915	0.0500	8.002	0.4546	0.0712	17	-0.19	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0027	7.960	0.2400	8.002	0.4546	0.0712	17	-0.09	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0510	8.030	0.0080	8.002	0.4546	0.0712	17	0.06	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0522	8.275	0.0300	8.002	0.4546	0.0712	17	0.60	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0550	8.330	0.0200	8.002	0.4546	0.0712	17	0.72	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0255	8.640	0.0400	8.002	0.4546	0.0712	17	1.40	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0527	9.890	0.0400	8.002	0.4546	0.0712	17	4.15	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0540	11.57	0.1200	8.002	0.4546	0.0712	17	7.85	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0368	7.596	0.5300	8.002	0.4546	0.0712	17	-0.89	NA	1
002.10	Nitrate Nitrogen, Robertson (%)	0498	7.800	0.2000				1			0
002.99	Nitrate Nitrogen, Other (%)	0368	6.657	0.2410	7.618	0.4692	0.1061	14	-2.05	NA	0
002.99	Nitrate Nitrogen, Other (%)	0482	7.160	0.0200	7.618	0.4692	0.1061	14	-0.98	NA	0
002.99	Nitrate Nitrogen, Other (%)	0029	7.210	0.0000	7.618	0.4692	0.1061	14	-0.87	NA	0
002.99	Nitrate Nitrogen, Other (%)	0220	7.330	0.1200	7.618	0.4692	0.1061	14	-0.61	NA	0
002.99	Nitrate Nitrogen, Other (%)	0550	7.355	0.0100	7.618	0.4692	0.1061	14	-0.56	NA	0
002.99	Nitrate Nitrogen, Other (%)	0540	7.505	0.0900	7.618	0.4692	0.1061	14	-0.24	NA	0
002.99	Nitrate Nitrogen, Other (%)	0476	7.627	0.2197	7.618	0.4692	0.1061	14	0.02	NA	0
002.99	Nitrate Nitrogen, Other (%)	0481	7.670	0.1000	7.618	0.4692	0.1061	14	0.11	NA	0
002.99	Nitrate Nitrogen, Other (%)	0027	7.725	0.0100	7.618	0.4692	0.1061	14	0.23	NA	0
002.99	Nitrate Nitrogen, Other (%)	0371	7.750	0.1000	7.618	0.4692	0.1061	14	0.28	NA	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
002.99	Nitrate Nitrogen, Other (%)	0513	7.773	0.0150	7.618	0.4692	0.1061	14	0.33	NA	0
002.99	Nitrate Nitrogen, Other (%)	0231	7.995	0.1300	7.618	0.4692	0.1061	14	0.80	NA	0
002.99	Nitrate Nitrogen, Other (%)	0527	9.490	0.0000	7.618	0.4692	0.1061	14	3.99	NA	0
002.99	Nitrate Nitrogen, Other (%)	0518	10.14	0.4300	7.618	0.4692	0.1061	14	5.36	NA	0
005.00	Urea Nitrogen, Urease (as N) (%)	0444	15.69	0.0400				2			0
005.00	Urea Nitrogen, Urease (as N) (%)	0368	16.53	0.3790				2			0
005.99	Urea Nitrogen, Other (%)	0476	12.17	0.1503	16.61	0.4609	0.1280	10	-8.97	NA	0
005.99	Urea Nitrogen, Other (%)	0371	16.20	0.2000	16.61	0.4609	0.1280	10	-0.83	NA	0
005.99	Urea Nitrogen, Other (%)	0550	16.31	0.0200	16.61	0.4609	0.1280	10	-0.61	NA	0
005.99	Urea Nitrogen, Other (%)	0546	16.38	0.3600	16.61	0.4609	0.1280	10	-0.47	NA	0
005.99	Urea Nitrogen, Other (%)	0027	16.71	0.0900	16.61	0.4609	0.1280	10	0.19	NA	0
005.99	Urea Nitrogen, Other (%)	0513	16.77	0.0900	16.61	0.4609	0.1280	10	0.31	NA	0
005.99	Urea Nitrogen, Other (%)	0405	16.78	0.0600	16.61	0.4609	0.1280	10	0.34	NA	0
005.99	Urea Nitrogen, Other (%)	0029	16.79	0.0800	16.61	0.4609	0.1280	10	0.36	NA	0
005.99	Urea Nitrogen, Other (%)	0482	16.97	0.0700	16.61	0.4609	0.1280	10	0.71	NA	0
005.99	Urea Nitrogen, Other (%)	0309	17.51	0.1600	16.61	0.4609	0.1280	10	1.81	NA	0
006.00	Biuret Nitrogen, AA (as N) (%)	0220	0.2950	0.0100				1			0
006.10	Biuret Nitrogen, Spectrophotometric (as N) (%)	0476	0.2707	0.0851				1			0
006.99	Biuret Nitrogen, Other (%)	0220	0.3450	0.0300				2			0
006.99	Biuret Nitrogen, Other (%)	0481	0.9650	0.0100				2			0
007.00	Urea, Urease (as Urea) (%)	0231	16.99	0.1400				1			0
007.99	Urea, Other (%)	0527	13.93	0.1810	22.06	12.07	0.1103	3	-0.67		0
007.99	Urea, Other (%)	0220	16.32	0.0400	22.06	12.07	0.1103	3	-0.48		0
007.99	Urea, Other (%)	0513	35.94	0.1100	22.06	12.07	0.1103	3	1.15		0
008.00	Biuret, AA (as Biuret) (%)	0498	0.0850	0.0100				1			0
008.10	Biuret, Spectrophotometric (as Biuret) (%)	0510	0.8905	0.0507	1.052	0.1794	0.0936	3	-0.90		0
008.10	Biuret, Spectrophotometric (as Biuret) (%)	0405	1.020	0.0400	1.052	0.1794	0.0936	3	-0.18		0
008.10	Biuret, Spectrophotometric (as Biuret) (%)	0444	1.245	0.1900	1.052	0.1794	0.0936	3	1.08		0
008.99	Biuret, Other (%)	0527	0.3600	0.0000				1			0
009.10	Ammoniacal Plus Nitrate Nitrogen, Devarda (%)	0309	15.51	0.9300				2			0
009.10	Ammoniacal Plus Nitrate Nitrogen, Devarda (%)	0444	16.17	0.3300				2			0
009.99	Ammoniacal Plus Nitrate Nitrogen, Other (%)	0513	15.56	0.0300				2			0
009.99	Ammoniacal Plus Nitrate Nitrogen, Other (%)	0518	31.00	0.4000				2			0
010.11	Total Nitrogen, Modified Comprehensive (32%)	0522	30.38	0.2700	31.82	0.7103	0.1231	8	-1.86	Low	0
010.11	Total Nitrogen, Modified Comprehensive (32%)	0309	31.18	0.1200	31.82	0.7103	0.1231	8	-0.83	OK	0
010.11	Total Nitrogen, Modified Comprehensive (32%)	0510	31.69	0.0446	31.82	0.7103	0.1231	8	-0.16	OK	0
010.11	Total Nitrogen, Modified Comprehensive (32%)	0549	31.71	0.1400	31.82	0.7103	0.1231	8	-0.14	OK	0
010.11	Total Nitrogen, Modified Comprehensive (32%)	0531	32.08	0.0500	31.82	0.7103	0.1231	8	0.33	OK	0
010.11	Total Nitrogen, Modified Comprehensive (32%)	0546	32.20	0.0100	31.82	0.7103	0.1231	8	0.48	OK	0
010.11	Total Nitrogen, Modified Comprehensive (32%)	0105	32.27	0.3100	31.82	0.7103	0.1231	8	0.57	OK	0
010.11	Total Nitrogen, Modified Comprehensive (32%)	0538	32.70	0.0400	31.82	0.7103	0.1231	8	1.13	OK	0
010.12	Total Nitrogen, Salicylic (32%)	0493	31.60	0.1000	31.80	0.1718	0.0767	3	-1.15		0
010.12	Total Nitrogen, Salicylic (32%)	0416	31.90	0.1300	31.80	0.1718	0.0767	3	0.56		0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
010.12	Total Nitrogen, Salicylic (32%)	0498	31.90	0.0000	31.80	0.1718	0.0767	3	0.59		0
010.60	Total Nitrogen, Combustion (32%)	0483	30.90	0.1500	32.10	0.3648	0.2322	55	-3.29	Low	0
010.60	Total Nitrogen, Combustion (32%)	0421	30.92	0.3900	32.10	0.3648	0.2322	55	-3.24	Low	0
010.60	Total Nitrogen, Combustion (32%)	0102	31.35	0.0290	32.10	0.3648	0.2322	55	-2.03	OK	0
010.60	Total Nitrogen, Combustion (32%)	0472	31.52	0.0250	32.10	0.3648	0.2322	55	-1.58	OK	0
010.60	Total Nitrogen, Combustion (32%)	0095	31.65	0.0800	32.10	0.3648	0.2322	55	-1.22	OK	0
010.60	Total Nitrogen, Combustion (32%)	0234	31.65	0.3000	32.10	0.3648	0.2322	55	-1.22	OK	0
010.60	Total Nitrogen, Combustion (32%)	0482	31.75	0.7000	32.10	0.3648	0.2322	55	-0.95	OK	0
010.60	Total Nitrogen, Combustion (32%)	0523	31.75	0.1000	32.10	0.3648	0.2322	55	-0.95	OK	0
010.60	Total Nitrogen, Combustion (32%)	0042	31.76	0.2100	32.10	0.3648	0.2322	55	-0.93	OK	0
010.60	Total Nitrogen, Combustion (32%)	0356	31.80	0.0600	32.10	0.3648	0.2322	55	-0.81	OK	0
010.60	Total Nitrogen, Combustion (32%)	0451	31.80	0.0000	32.10	0.3648	0.2322	55	-0.81	OK	0
010.60	Total Nitrogen, Combustion (32%)	0494	31.81	0.2300	32.10	0.3648	0.2322	55	-0.80	OK	0
010.60	Total Nitrogen, Combustion (32%)	0542	31.85	0.4020	32.10	0.3648	0.2322	55	-0.68	OK	0
010.60	Total Nitrogen, Combustion (32%)	0444	31.86	0.2900	32.10	0.3648	0.2322	55	-0.66	OK	0
010.60	Total Nitrogen, Combustion (32%)	0105	31.92	0.2400	32.10	0.3648	0.2322	55	-0.48	OK	0
010.60	Total Nitrogen, Combustion (32%)	0389	31.93	0.2500	32.10	0.3648	0.2322	55	-0.47	OK	0
010.60	Total Nitrogen, Combustion (32%)	0114	31.94	0.3400	32.10	0.3648	0.2322	55	-0.43	OK	0
010.60	Total Nitrogen, Combustion (32%)	0422	31.95	0.4400	32.10	0.3648	0.2322	55	-0.40	OK	0
010.60	Total Nitrogen, Combustion (32%)	0027	31.96	0.5700	32.10	0.3648	0.2322	55	-0.39	OK	0
010.60	Total Nitrogen, Combustion (32%)	0486	31.99	0.0500	32.10	0.3648	0.2322	55	-0.30	OK	0
010.60	Total Nitrogen, Combustion (32%)	0029	32.00	0.1500	32.10	0.3648	0.2322	55	-0.28	OK	0
010.60	Total Nitrogen, Combustion (32%)	0157	32.00	0.2000	32.10	0.3648	0.2322	55	-0.26	OK	0
010.60	Total Nitrogen, Combustion (32%)	0324	32.00	0.2000	32.10	0.3648	0.2322	55	-0.26	OK	0
010.60	Total Nitrogen, Combustion (32%)	0041	32.01	0.2100	32.10	0.3648	0.2322	55	-0.25	OK	0
010.60	Total Nitrogen, Combustion (32%)	0550	32.01	0.0200	32.10	0.3648	0.2322	55	-0.23	OK	0
010.60	Total Nitrogen, Combustion (32%)	0307	32.04	0.8100	32.10	0.3648	0.2322	55	-0.17	OK	0
010.60	Total Nitrogen, Combustion (32%)	0037	32.06	0.0100	32.10	0.3648	0.2322	55	-0.11	OK	0
010.60	Total Nitrogen, Combustion (32%)	0055	32.06	0.0700	32.10	0.3648	0.2322	55	-0.11	OK	0
010.60	Total Nitrogen, Combustion (32%)	0452	32.07	0.0100	32.10	0.3648	0.2322	55	-0.08	OK	0
010.60	Total Nitrogen, Combustion (32%)	0292	32.08	0.0800	32.10	0.3648	0.2322	55	-0.04	OK	0
010.60	Total Nitrogen, Combustion (32%)	0405	32.08	0.0800	32.10	0.3648	0.2322	55	-0.04	OK	0
010.60	Total Nitrogen, Combustion (32%)	0230	32.10	0.2000	32.10	0.3648	0.2322	55	0.01	OK	0
010.60	Total Nitrogen, Combustion (32%)	0377	32.15	0.0300	32.10	0.3648	0.2322	55	0.14	OK	0
010.60	Total Nitrogen, Combustion (32%)	0231	32.15	0.0400	32.10	0.3648	0.2322	55	0.15	OK	0
010.60	Total Nitrogen, Combustion (32%)	0521	32.16	0.0000	32.10	0.3648	0.2322	55	0.17	OK	0
010.60	Total Nitrogen, Combustion (32%)	0390	32.20	0.0000	32.10	0.3648	0.2322	55	0.29	OK	0
010.60	Total Nitrogen, Combustion (32%)	0073	32.21	0.0500	32.10	0.3648	0.2322	55	0.30	OK	0
010.60	Total Nitrogen, Combustion (32%)	0136	32.21	0.0400	32.10	0.3648	0.2322	55	0.31	OK	0
010.60	Total Nitrogen, Combustion (32%)	0177	32.21	0.3800	32.10	0.3648	0.2322	55	0.31	OK	0
010.60	Total Nitrogen, Combustion (32%)	0035	32.22	0.3300	32.10	0.3648	0.2322	55	0.33	OK	0
010.60	Total Nitrogen, Combustion (32%)	0501	32.24	0.2200	32.10	0.3648	0.2322	55	0.40	OK	0
010.60	Total Nitrogen, Combustion (32%)	0547	32.28	0.1700	32.10	0.3648	0.2322	55	0.49	OK	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
010.60	Total Nitrogen, Combustion (32%)	0049	32.33	0.0900	32.10	0.3648	0.2322	55	0.63	OK	0
010.60	Total Nitrogen, Combustion (32%)	0043	32.36	0.0900	32.10	0.3648	0.2322	55	0.71	OK	0
010.60	Total Nitrogen, Combustion (32%)	0423	32.44	0.0870	32.10	0.3648	0.2322	55	0.93	OK	0
010.60	Total Nitrogen, Combustion (32%)	0040	32.45	0.1000	32.10	0.3648	0.2322	55	0.97	OK	0
010.60	Total Nitrogen, Combustion (32%)	0025	32.53	0.6800	32.10	0.3648	0.2322	55	1.19	OK	0
010.60	Total Nitrogen, Combustion (32%)	0354	32.65	0.1000	32.10	0.3648	0.2322	55	1.52	OK	0
010.60	Total Nitrogen, Combustion (32%)	0534	32.70	0.0000	32.10	0.3648	0.2322	55	1.66	OK	0
010.60	Total Nitrogen, Combustion (32%)	0007	32.80	0.4000	32.10	0.3648	0.2322	55	1.93	OK	0
010.60	Total Nitrogen, Combustion (32%)	0360	32.92	0.0700	32.10	0.3648	0.2322	55	2.25	OK	0
010.60	Total Nitrogen, Combustion (32%)	0368	32.99	0.2220	32.10	0.3648	0.2322	55	2.46	High	0
010.60	Total Nitrogen, Combustion (32%)	0255	33.12	1.276	32.10	0.3648	0.2322	55	2.82	High	0
010.60	Total Nitrogen, Combustion (32%)	0527	33.31	0.1410	32.10	0.3648	0.2322	55	3.33	High	0
010.60	Total Nitrogen, Combustion (32%)	0485	33.46	1.360	32.10	0.3648	0.2322	55	3.74	High	0
010.60	Total Nitrogen, Combustion (32%)	0325	31.65	2.500	32.10	0.3648	0.2322	55	-1.22	OK	1
010.60	Total Nitrogen, Combustion (32%)	0023	33.16	2.867	32.10	0.3648	0.2322	55	2.92	High	1
010.99	Total Nitrogen, Other (32%)	0476	27.98	0.0331	31.74	0.4671	0.0570	9	-7.44	Low	0
010.99	Total Nitrogen, Other (32%)	0481	31.35	0.1000	31.74	0.4671	0.0570	9	-0.78	OK	0
010.99	Total Nitrogen, Other (32%)	0532	31.49	0.0700	31.74	0.4671	0.0570	9	-0.51	OK	0
010.99	Total Nitrogen, Other (32%)	0544	31.68	0.0100	31.74	0.4671	0.0570	9	-0.14	OK	0
010.99	Total Nitrogen, Other (32%)	0371	31.70	0.0000	31.74	0.4671	0.0570	9	-0.09	OK	0
010.99	Total Nitrogen, Other (32%)	0545	31.88	0.0400	31.74	0.4671	0.0570	9	0.27	OK	0
010.99	Total Nitrogen, Other (32%)	0531	32.10	0.1000	31.74	0.4671	0.0570	9	0.70	OK	0
010.99	Total Nitrogen, Other (32%)	0220	32.16	0.0400	31.74	0.4671	0.0570	9	0.82	OK	0
010.99	Total Nitrogen, Other (32%)	0513	32.31	0.1200	31.74	0.4671	0.0570	9	1.12	OK	0
010.99	Total Nitrogen, Other (32%)	0537	32.17	0.5500	31.74	0.4671	0.0570	9	0.83	OK	1
020.50	Total Phosphorus as P2O5, ICP (%)	0547	0.0000	0.0000				0			4
041.50	Direct Available Phosphorus as P2O5, ICP (%)	0325	0.1000	0.0000				1			0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (%)	0354	0.0330	0.0020				1			0
050.51	Soluble Potassium as K2O, ICP (Citrate) (%)	0547	0.0450	0.0500				1			0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (%)	0354	0.0165	0.0110				1			0
050.99	Soluble Potassium as K2O, Other (%)	0325	0.1000	0.0000				1			0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0354	0.0450	0.0100				1			0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0354	0.0100	0.0000				1			0
148.99	Total Sulfur, Other (%)	0354	0.1000	0.0000				1			0
165.30	Acid Soluble Boron , ICP, test portion in 98... (%)	0354	0.0100	0.0000				1			0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0354	0.0100	0.0000				1			0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (%)	0354	0.0100	0.0000				1			0
261.30	Acid Soluble Manganese , ICP, test portion 9... (%)	0354	0.0100	0.0000				1			0
311.99	Sodium, Other (%)	0354	0.0500	0.0200				1			0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (%)	0354	0.0250	0.0300				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, 3 = removed from stats, 4 = rejected due to 0s submitted and 5 = LOD. A 9 flag indicates a data problem - scores not calculated. Robust statistics not used if < 6 labs used in calculations, in this case the Z Scores are grey and included for

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				

information only. IA Status describes where your result is relative to the Assigned Value \pm IA. Red indicates Higher or Lower, Green indicates within the IA range. Method 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.