

- Pass 1 Results for 77 Labs - - Pass 2 Results for 73 Labs -

Method	AOAC Ref.	Method Code	No. of Labs	Grand Avg.	Std. Dev.	Average Range of Dups	No. of Labs	Grand Avg.	Std. Dev.	Average Range of Dups
Ammoniacal Nitrogen, MgO Distillation .	920.03	001.10	4	7.64	0.09	0.05	4	7.64	0.09	0.05
Ammoniacal Nitrogen, Other .....		001.99	7	8.61	1.51	0.03	7	8.61	1.51	0.03
Method Group 001.XX PCT			11	8.26	1.28	0.04	11	8.26	1.28	0.04
Nitrate Nitrogen, Other .....		002.99	7	7.69	0.72	0.04	7	7.69	0.72	0.04
Method Group 002.XX PCT			7	7.69	0.72	0.04	7	7.69	0.72	0.04
Nitrogen From Urea, Urease (as N) .....	959.03	005.00	2	16.87	0.22	0.04	2	16.87	0.22	0.04
Nitrogen From Urea, Other .....		005.99	3	18.36	0.93	0.04	3	18.36	0.93	0.04
Method Group 005.XX PCT			5	17.76	1.04	0.04	5	17.76	1.04	0.04
Percent Urea, Other .....		007.99	1	23.65	0.07	0.10	1	23.65	0.07	0.10
Ammon & Nitrate N, Devarda .....	892.01	009.10	1	15.21	0.08	0.12	1	15.21	0.08	0.12
Ammon & Nitrate N, Other .....		009.99	2	16.05	1.65	0.02	2	16.05	1.65	0.02
Method Group 009.XX PCT			3	15.77	1.35	0.05	3	15.77	1.35	0.05
Total Nitrogen, Modified Comprehensive	978.02	010.11	5	32.16	0.25	0.05	5	32.16	0.25	0.05
Total Nitrogen, Salicylic .....	955.04D	010.12	1	31.14	0.16	0.23	1	31.14	0.16	0.23
Total Nitrogen, Combustion .....		010.60	56	32.26	0.33	0.13	54	32.27	0.32	0.11
Total Nitrogen, Other .....		010.99	3	31.92	0.60	0.13	3	31.92	0.60	0.13
Method Group 010.XX PCT			66	32.21	0.39	0.13	62	32.24	0.34	0.10
Total Phosphate, Grav Quimociac .....	962.02	020.10	8	16.39	8.29	0.29	7	15.64	8.63	0.16
Total Phosphate, Spectrometric .....	958.01	020.20	9	16.89	9.22	0.10	9	16.89	9.22	0.10
Total Phosphate, Automated .....	978.01	020.40	3	8.84	7.33	0.49	3	8.84	7.33	0.49
Total Phosphate, ICP .....		020.50	12	21.93	0.83	0.33	10	21.98	0.87	0.17
Total Phosphate, Other .....		020.99	2	11.18	12.91	0.01	2	11.18	12.91	0.01
Method Group 020.XX PCT			37	17.40	8.03	0.29	32	16.74	8.36	0.12
Insoluble Phosphate, ICP .....		030.50	1	0.00	0.00	0.00	1	0.00	0.00	0.00
InDir Available Phosphate, ICP .....		040.50	1	21.09	0.07	0.10	1	21.09	0.07	0.10
Dir Available Phosphate, Grav Quimociac	960.03E	041.10	4	0.32	0.04	0.05	4	0.32	0.04	0.05
Dir Available Phosphate, ICP .....		041.50	4	20.91	1.06	0.11	4	20.91	1.06	0.11
Dir Available Phosphate, EDTA Extract .	993.01	041.60	3	0.25	0.15	0.16	3	0.25	0.15	0.16
Dir Available Phosphate, Other .....		041.99	2	10.56	12.18	0.41	2	10.56	12.18	0.41
Method Group 041.XX PCT			13	8.22	10.28	0.15	12	7.14	9.96	0.09
Soluble Potash, STPB Oxalate .....	958.02	050.00	14	20.28	0.58	0.17	13	20.34	0.53	0.08
Soluble Potash, STPB Citrate .....	969.04	050.10	1	20.86	0.13	0.18	1	20.86	0.13	0.18
Soluble Potash, AA (Oxalate) .....		050.30	8	20.23	0.40	0.17	7	20.27	0.39	0.11
Soluble Potash, ICP (Oxalate) .....		050.50	4	19.86	0.37	0.16	4	19.86	0.37	0.16
Soluble Potash, ICP (Citrate) .....		050.51	10	20.36	0.88	0.26	9	20.38	0.90	0.15
Soluble Potash, Flame (Oxalate) .....	983.02(a)	050.60	4	20.45	0.17	0.10	4	20.45	0.17	0.10
Soluble Potash, Flame (Citrate) .....	983.02(b)	050.61	8	20.08	0.37	0.29	8	20.08	0.37	0.29
Soluble Potash, Other .....		050.99	12	19.91	0.76	0.18	12	19.78	0.94	0.09
Method Group 050.XX PCT			61	20.18	0.63	0.20	56	20.25	0.56	0.13

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Method	AOAC Ref.	Method Code	No. of Labs	Grand Avg.	Std. Dev.	Average Range of Dups	No. of Labs	Grand Avg.	Std. Dev.	Average Range of Dups
Acid Soluble Calcium, ICP .....		101.30	4	0.01	0.00	0.00	4	0.01	0.00	0.00
Acid Soluble Magnesium, ICP .....		121.30	5	0.03	0.04	0.00	4	0.01	0.01	0.00
Sulfur, Other .....		144.99	4	0.03	0.04	0.00	3	0.01	0.01	0.00
Arsenic, Atomic Absorption .....		151.00	2	2.23	2.44	0.17	2	2.23	2.44	0.17
Arsenic, ICP .....		151.30	5	3.06	1.03	0.25	4	3.02	1.15	0.10
Method Group 151.XX PPM			7	2.83	1.50	0.22	6	2.75	1.61	0.13
Acid Soluble Boron, Spectrometric .....	982.01	165.00	1	0.000	0.000	0.000	1	0.000	0.000	0.000
Acid Soluble Boron, Other .....		165.99	3	0.002	0.001	0.000	3	0.002	0.001	0.000
Method Group 165.XX PCT			4	0.001	0.001	0.000	4	0.001	0.001	0.000
Cadmium, Atomic Absorption .....		181.00	1	0.11	0.02	0.03	1	0.11	0.02	0.03
Cadmium, ICP .....		181.30	5	0.12	0.10	0.02	5	0.12	0.10	0.02
Method Group 181.XX PPM			6	0.12	0.09	0.02	6	0.12	0.09	0.02
Water Soluble Chlorine, Titrimetric ...	928.02	190.00	1	0.02	0.00	0.00	1	0.02	0.00	0.00
Chromium, ICP .....		191.30	12	3.37	1.53	0.32	11	3.24	1.53	0.25
Acid Soluble Cobalt, AA .....		202.00	1	4.10	0.14	0.20	1	4.10	0.14	0.20
Acid Soluble Cobalt, ICP .....	965.11	202.30	4	0.06	0.07	0.00	4	0.06	0.07	0.00
Method Group 202.XX PPM			6	1.55	2.23	0.12	5	0.87	1.71	0.04
Acid Soluble Copper, Atomic Absorption	975.01	221.00	2	0.0002	0.0000	0.0000	2	0.0002	0.0000	0.0000
Acid Soluble Copper, ICP .....		221.30	9	0.0004	0.0008	0.0001	8	0.0001	0.0001	0.0000
Acid Soluble Copper, Other .....		221.99	1	0.0001	0.0000	0.0000	1	0.0001	0.0000	0.0000
Method Group 221.XX PCT			12	0.0003	0.0007	0.0001	11	0.0001	0.0001	0.0000
Acid Soluble Iron, ICP .....		241.30	5	0.00	0.00	0.00	5	0.00	0.00	0.00
Lead, Atomic Absorption .....		251.00	1	8.45	1.06	1.50	1	8.45	1.06	1.50
Lead, ICP .....		251.30	5	0.96	1.57	0.03	5	0.96	1.57	0.03
Method Group 251.XX PPM			6	2.21	3.26	0.27	5	0.96	1.57	0.03
Acid Soluble Manganese, ICP .....	972.02a	261.30	7	0.001	0.000	0.000	6	0.001	0.000	0.000
Mercury, ICP .....		281.30	1	0.00	0.00	0.00	1	0.00	0.00	0.00
Molybdenum, ICP .....		289.30	5	0.29	0.35	0.01	5	0.29	0.35	0.01
Nickel, Atomic Absorption .....		291.00	1	3.85	0.07	0.10	1	3.85	0.07	0.10
Nickel, ICP .....		291.30	4	0.39	0.21	0.08	4	0.39	0.21	0.08
Method Group 291.XX PPM			6	1.14	1.34	0.16	5	1.08	1.47	0.08
Selenium, ICP .....		301.30	1	0.00	0.00	0.00	1	0.00	0.00	0.00
Sodium, Other .....		311.99	4	0.09	0.08	0.00	4	0.09	0.08	0.00
Acid Soluble Zinc, Atomic Absorption ..	975.02	321.00	3	0.001	0.001	0.000	3	0.001	0.001	0.000
Acid Soluble Zinc, ICP .....		321.30	10	0.000	0.000	0.000	8	0.000	0.000	0.000
Acid Soluble Zinc, Other .....		321.99	1	0.003	0.000	0.000	1	0.003	0.000	0.000
Method Group 321.XX PCT			15	0.001	0.001	0.000	14	0.001	0.001	0.000
Water Soluble Zinc, ICP .....		325.30	2	0.427	0.493	0.002	2	0.427	0.493	0.002

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	
Meth: 001.10 PCT Ammoniacal Nitrogen <u>MgO Distillation</u>			Meth: 002.20 PCT Nitrate Nitrogen <u>Jones Modified</u>			Meth: 005.99 PCT Nitrogen From Urea <u>Other</u>			Meth: 010.11 PCT Total Nitrogen <u>Modified Comprehensi</u>			Meth: 010.60 PCT Total Nitrogen <u>Combustion</u>			
090	7.75	1.23	230	11.20 S	.00	Avg	18.36		090	32.61	1.80	136	32.38	.36	
444	7.68	.46				394	17.88	-.51	Avg	32.16		040	32.37	.35	
Avg	7.64		Meth: 002.99 PCT Nitrate Nitrogen <u>Other</u>			372	17.64	-.77	211	32.13	-.15	131	32.32	.27	
291	7.58	-.69	419	9.34	2.28	Meth: 005.XX PCT <u>Nitrogen From Urea</u>			105	32.13	-.20	296	32.35	.25	
232	7.55	-1.14	Avg	7.69		309	19.55	1.72	309	32.03	-.56	023	32.35	.25	
230	0.75 s	-78.02	291	7.68	-.08	394	17.88	.11	322	31.93	-.95	233	32.32	.20	
Meth: 001.99 PCT Ammoniacal Nitrogen <u>Other</u>			232	7.65	-.09	Avg	17.76		Meth: 010.12 PCT Total Nitrogen <u>Salicylic</u>			009	32.31	.14	
409	10.98	1.57	027	7.41	-.40	372	17.64	-.11	185	31.14	.71	043	32.31	.13	
393	10.36	1.16	394	7.35	-.48	027	17.06	-.67	Meth: 010.17 PCT Total Nitrogen <u>Comprehensive</u>			231	32.27	.03	
419	9.26	.43	372	7.32	-.52	232	16.68	-1.04	169	17.55 S	.00	Avg	32.27		
Avg	8.61		393	7.13	-.79	Meth: 007.99 PCT Percent Urea <u>Other</u>			372	32.26	-.04	291	32.26	-.12	
096	7.54	-.71	Meth: 002.XX PCT <u>Nitrate Nitrogen</u>			419	23.65	.71	Meth: 010.60 PCT Total Nitrogen <u>Combustion</u>			177	32.22	-.18	
394	7.45	-.77	230	11.20 s	4.89	Meth: 009.10 PCT Ammon & Nitrate N <u>Devarda</u>			096	32.21	-.20	096	32.21	-.20	
027	7.37	-.82	419	9.34	2.28	444	15.21	-.71	452	32.20	-.23	393	32.19	-.25	
372	7.31	-.86	Avg	7.69		Meth: 009.99 PCT Ammon & Nitrate N <u>Other</u>			369	32.18	-.41	057	32.19	-.32	
Meth: 001.XX PCT <u>Ammoniacal Nitrogen</u>			291	7.68	-.08	393	17.48	.87	025	32.14	-.42	369	32.18	-.41	
409	10.98	2.13	232	7.65	-.09	Avg	16.05		422	33.01	2.27	025	32.14	-.42	
393	10.36	1.64	027	7.41	-.40	372	14.62	-.87	292	32.94	2.07	394	32.12	-.51	
419	9.26	.78	394	7.35	-.48	Meth: 009.XX PCT <u>Ammon &amp; Nitrate N</u>			114	32.92	2.01	377	32.13	-.63	
Avg	8.26		372	7.32	-.52	393	17.48	1.27	443	32.76	1.50	102	32.17	-.66	
090	7.75	-.40	393	7.13	-.79	Avg	15.77		330	32.75	1.49	095	32.07	-.67	
444	7.68	-.45	Meth: 005.00 PCT Nitrogen From Urea <u>Urease (as N)</u>			390	32.75	1.49	390	32.75	1.49	361	32.05	-.68	
291	7.58	-.53	027	17.06	.86	072	32.66	1.20	072	32.66	1.20	041	32.06	-.70	
232	7.55	-.55	Avg	16.87		389	32.55	.98	389	32.55	.98	035	32.04	-.72	
096	7.54	-.56	232	16.68	-.87	037	32.58	.95	037	32.58	.95	426	32.01	-.80	
394	7.45	-.63	Meth: 005.99 PCT Nitrogen From Urea <u>Other</u>			055	32.52	.90	049	32.51	.89	234	32.01	-.80	
027	7.37	-.69	309	19.55	1.28	Meth: 009.XX PCT <u>Ammon &amp; Nitrate N</u>	324	32.55	.88	324	32.55	.88	162	31.96	-.98
372	7.31	-.74	Meth: 005.99 PCT Nitrogen From Urea <u>Other</u>			393	17.48	1.27	444	32.55	.87	425	31.95	-.98	
230	0.75 s	-5.85	444	15.21	-.42	Avg	15.77		351	32.53	.81	307	32.08 R	-1.06	
			372	14.62	-.85	444	15.21	-.42	451	32.49 X	.70	230	31.90	-1.18	
						372	14.62	-.85	325	32.40	.51	232	31.88	-1.22	
									360	32.29	.36	007	32.20 R	-1.25	
												022	31.81	-1.44	
												028	31.80	-1.46	

\* X=Excluded from lab performance    S/s=Screened Outlier    R=Duplicate Range too large    A=Analysis beyond 3-s limits

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 010.60 PCT			Meth: 010.XX PCT			Meth: 010.XX PCT			Meth: 020.20 PCT			Meth: 020.XX PCT		
Total Nitrogen			Total Nitrogen			Total Nitrogen			Total Phosphate			Total Phosphate		
<u>Combustion</u>			<u>040 32.37 .40</u>			<u>007 32.20 R -1.18</u>			<u>Spectrometric</u>			<u>117 26.40 R 1.16</u>		
073	31.71	-1.76	360	32.29	.36	255	31.84	-1.20	428	0.20	-1.81	422	23.61	.82
262	31.70	-1.78	296	32.35	.31	022	31.81	-1.29				232	23.25	.78
255	31.60	-2.08	023	32.35	.31	028	31.80	-1.31	Meth: 020.40 PCT			330	22.55	.69
409	31.10 s	-3.64	131	32.32	.30	073	31.71	-1.59	Total Phosphate			324	22.55	.69
027	30.51 s	-5.44	233	32.32	.25	262	31.70	-1.61	<u>Automated</u>			090	22.55	.69
			043	32.31	.20	255	31.60	-1.89	105	16.61	1.06	393	22.54	.69
			009	32.31	.19	416	31.31	-2.74	027	9.60	.10	361	22.50	.69
Meth: 010.99 PCT			0291 32.26 .11			185 31.14 A -3.26			Avg 8.84			444 22.44 .68		
Total Nitrogen			231 32.27 .08			409 31.10 A -3.38			096 0.31 -1.16			057 22.37 .67		
<u>Other</u>			372 32.26 .06			027 30.51 s -5.08						416 22.37 .67		
419	42.25 S	17.16	Avg	32.24		169	17.55 s	-42.96	Meth: 020.50 PCT			049 22.36 .67		
354	32.63	1.19	177	32.22	-.11	Meth: 020.10 PCT			Total Phosphate			452 22.31 .67		
Avg	31.92		096	32.21	-.11	Total Phosphate			<u>ICP</u>			231 22.28 .66		
255	31.84	-.17	452	32.20	-.15	090 22.55 .80			117 26.40 s 5.20			444 21.90 .62		
416	31.31	-1.02	393	32.19	-.17	<u>Grav Quimociac</u>			422 23.61 1.88			169 21.83 .61		
			057	32.19	-.26	090 22.55 .80			330 22.55 .68			390 21.75 R .60		
Meth: 010.XX PCT			025 32.14 -.32			444 22.44 .79			393 22.54 .66			307 21.64 R .59		
Total Nitrogen			369 32.18 -.35			057 22.37 .78			361 22.50 .60			117 21.62 R .59		
419	42.25 s	29.24	211	32.13	-.35	049 22.36 .78			452 22.31 .42			371 21.62 .58		
422	33.01	2.23	105	32.13	-.36	117 21.62 R .70			Avg 21.98			354 21.43 .56		
292	32.94	2.04	394	32.12	-.41	Avg 15.64			444 21.90 -.14			255 21.09 .52		
114	32.92	1.98	247	32.07	-.52	043 9.61 -.70			354 21.43 -.63			291 21.04 .51		
443	32.76	1.50	377	32.13	-.55	105 9.55 -.71			390 21.75 R -.68			389 20.80 .49		
390	32.75	1.49	095	32.07	-.57	041 0.59 -1.74			307 21.64 R -.78			262 20.66 .47		
330	32.75	1.49	361	32.05	-.57	Meth: 020.20 PCT			255 21.09 -1.02			351 19.33 .31		
072	32.66	1.21	102	32.17	-.60	Total Phosphate			291 21.04 -1.08			Avg 16.74		
354	32.63	1.19	041	32.06	-.60	<u>Spectrometric</u>			389 20.80 -1.37			105 16.61 R -.09		
090	32.61	1.07	035	32.04	-.61	232 23.25 .69			372 13.34 s -9.94			372 13.34 -.41		
389	32.55	1.00	309	32.03	-.64	324 22.55 .61			114 8.86 s -15.11			043 9.61 -.85		
037	32.58	.97	426	32.01	-.68	231 22.28 .58			Meth: 020.99 PCT			027 9.60 -.85		
055	32.52	.92	234	32.01	-.68	169 21.83 .54			Total Phosphate			105 9.55 -.86		
324	32.55	.91	162	31.96	-.86	371 21.62 .51			<u>Other</u>			114 8.86 -.94		
049	32.51	.90	425	31.95	-.86	262 20.66 .41			416 22.37 .87			041 0.59 -1.93		
444	32.55	.90	322	31.93	-.93	351 19.33 .27			Avg 11.18			096 0.31 -1.97		
351	32.53	.84	307	32.08 R	-.97	Avg 16.89			443 0.00 -.87			309 0.30 -1.97		
451	32.49 X	.74	230	31.90	-1.05	309 0.30 -1.80						428 0.20 -1.98		
325	32.40	.54	232	31.88	-1.08							443 0.00 -2.00		
136	32.38	.41												

\* X=Excluded from lab performance      S/s=Screened Outlier      R=Duplicate Range too large      A=Analysis beyond 3-s limits

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 030.50 PCT Insoluble Phosphate <u>ICP</u>			Meth: 041.99 PCT Dir Available Phosph <u>Other</u>			Meth: 050.00 PCT Soluble Potash <u>STPB Oxalate</u>			Meth: 050.51 PCT Soluble Potash <u>ICP (Citrate)</u>			Meth: 050.99 PCT Soluble Potash <u>Other</u>		
255	0.00	.00	Avg	10.56		043	18.82	-2.86	452	21.79	1.55	027	22.43 S	2.81
			322	0.02	-.87	230	13.45 s	-12.98	361	20.53	.16	131	20.87	1.15
Meth: 040.50 PCT InDir Available Phosph <u>ICP</u>			Meth: 041.XX PCT Dir Available Phosph			Meth: 050.10 PCT Soluble Potash <u>STPB Citrate</u>			Avg			247		
255	21.09	.71	393	22.01	1.49	444	20.86	.71	393	20.31	-.09	360	20.67	.94
			360	21.59	1.45	444	20.86	.71	444	20.27	-.14	232	20.38	.63
Meth: 041.10 PCT Dir Available Phosph <u>Grav Quimociac</u>			230			Meth: 050.30 PCT Soluble Potash <u>AA (Oxalate)</u>			007			072		
105	0.34	1.66	377	20.61	1.35	369	20.82	1.39	009	20.19 R	-.74	416	20.16	.39
028	0.33	.44	325	19.45	1.24	234	20.57	.83	377	19.64	-.83	255	19.88	.28
Avg	0.32		Avg	7.14		351	20.36	.25	023	19.59	-.89	260	19.82	.06
009	0.32	-.41	105	0.34	-.68	040	20.28	.07	291	19.43	-1.06	Avg	19.97	
296	0.30	-.63	028	0.33	-.68	Avg	20.27					322	19.41	-.40
			009	0.32	-.69	425	20.25	-.28	Meth: 050.60 PCT Soluble Potash <u>Flame (Oxalate)</u>			354		
Meth: 041.50 PCT Dir Available Phosph <u>ICP</u>			296			136			055			307		
393	22.01	1.03	024	0.25	-.69	20.08	-.52	105	20.57	.80	390			
360	21.59	.64	105	0.23	-.69	451	19.94 R	-1.12	Avg	20.45		325		
Avg	20.91		322	0.02	-.72	428	19.54	-1.86	169	20.33	-.73	Meth: 050.XX PCT <u>Soluble Potash</u>		
377	20.61	-.29	Meth: 050.00 PCT Soluble Potash <u>STPB Oxalate</u>			262			309			419		
325	19.45	-1.39	073	21.16	1.53	11.50 s	-22.33	451	20.28	-1.02	432			
			114	20.70	.68	Meth: 050.50 PCT Soluble Potash <u>ICP (Oxalate)</u>			Meth: 050.61 PCT Soluble Potash <u>Flame (Citrate)</u>			422		
Meth: 041.60 PCT Dir Available Phosph <u>EDTA Extract</u>			022			419			024			422		
296	0.30	.28	022	20.69	.67	26.05 S	16.53	105	20.61	1.41	027			
Avg	0.25		090	20.54	.39	422	22.74 S	7.68	105	20.24	.73	389		
024	0.25	-.08	057	20.52	.34	324	20.15	.87	041	20.22	.41	452		
105	0.23	-1.55	211	20.45	.20	426	20.01	.44	037	20.19	.41	073		
			049	20.35	.12	292	20.00	.42	Avg	20.08		444		
Meth: 041.99 PCT Dir Available Phosph <u>Other</u>			131			Avg			025			131		
230	21.10	.87	20.39	.10	420	19.86		034	20.07	-.06	369			
			Avg	20.34		19.29	-1.54	035	20.87	-.79	114			
			231	20.33	-.02	Meth: 050.51 PCT Soluble Potash <u>ICP (Citrate)</u>			028			022		
			055	20.34	-.13	399			19.44			247		
			296	20.22	-.23	21.95			-1.83			360		
			102	19.94	-.79	1.73			4.19			055		
			009	19.53 R	-1.93				4.19			024		
									4.19			234		
									4.19			105		
									4.19			090		
									4.19			20.54		
									4.19			.53		

\* X=Excluded from lab performance    S/s=Screened Outlier    R=Duplicate Range too large    A=Analysis beyond 3-s limits

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 050.XX PCT <u>Soluble Potash</u>			Meth: 050.XX PCT <u>Soluble Potash</u>			Meth: 144.99 PCT <u>Sulfur</u>			Meth: 165.99 PCT <u>Acid Soluble Boron</u>			Meth: 190.00 PCT <u>Water Soluble Chlori</u>		
361	20.53	.50	291	19.43	-1.47	<u>Other</u>			<u>Other</u>			<u>Titrimetric</u>		
057	20.52	.48	322	19.41	-1.49	Avg	0.01		422	0.003	.83	422	0.02	.00
211	20.45	.35	028	19.44	-1.49	009	0.01	-.56	232	0.002	.53	Meth: 191.30 PPM		
131	20.39	.25	009	19.53 R	-1.70	102	0.00	-.73	Avg	0.002		Chromium		
232	20.38	.23	420	19.29	-1.72	Meth: 151.00 PPM			433	0.000	-1.24	<u>ICP</u>		
351	20.36	.21	354	19.28	-1.74	Arsenic			Meth: 165.XX PCT			452	5.43	1.45
049	20.35	.21	307	19.33 R	-1.92	<u>Atomic Absorption</u>			<u>Acid Soluble Boron</u>			444	5.26	1.33
055	20.34	.21	043	18.82	-2.55	231	4.34	.87	422	0.003	1.09	009	4.75 R	1.05
425	20.25	.20	390	18.25 A	-3.56	Avg	2.23		232	0.002	.81	230	4.46	.79
231	20.33	.15	325	17.80 s	-4.36	136	0.13	-.86	Avg	0.001		324	4.30	.70
169	20.33	.14	230	13.45 s	-12.12	Meth: 151.30 PPM			393	0.000	-.80	393	3.68	.28
393	20.31	.12	262	11.50 s	-15.60	Arsenic			433	0.000	-1.00	Avg	3.24	
444	20.27	.07	Meth: 101.30 PCT			<u>ICP</u>			Meth: 181.00 PPM			232	3.15	-.12
309	20.28	.07	Acid Soluble Calcium			230	4.10	.94	Cadmium			372	2.95	-.19
040	20.28	.07	<u>ICP</u>			393	3.75	.64	<u>Atomic Absorption</u>			390	2.53	-.48
072	20.26	.02	422	0.38 s	87.58	102	3.25 R	.41	136	0.11	.71	102	2.04	-.79
Avg	20.25		420	0.02	1.56	Avg	3.02		Meth: 181.30 PPM			419	1.05	-1.44
296	20.22	-.07	Avg	0.01		444	2.90	-.17	Cadmium			231	0.85	-1.57
041	20.22	-.13	433	0.01	-.16	372	1.33	-1.47	<u>ICP</u>			Meth: 202.00 PPM		
416	20.16	-.17	009	0.01	-.56	Meth: 151.XX PPM			452	0.27	1.62	Acid Soluble Cobalt		
037	20.19	-.22	102	0.00	-.86	Arsenic			393	0.15	.35	<u>AA</u>		
324	20.15	-.32	Meth: 121.30 PCT			231	4.34	.99	Avg	0.12		136	4.10	.71
025	20.07	-.33	Acid Soluble Magnesi			230	4.10	.83	102	0.09	-.38	Meth: 202.30 PPM		
136	20.08	-.33	<u>ICP</u>			393	3.75	.61	372	0.08	-.42	Acid Soluble Cobalt		
105	20.24	-.40	422	0.11 R	7.57	102	3.25 R	.40	419	0.00	-1.20	<u>ICP</u>		
426	20.01	-.44	444	0.03	1.62	444	2.90	.13	Meth: 181.XX PPM			452	4.98 s	66.51
292	20.00	-.46	Avg	0.01		Avg	2.75		Cadmium			393	0.18	1.60
102	19.94	-.59	420	0.00	-.51	372	1.33	-.89	452	0.27	1.80	Avg	0.06	
035	20.04	-.65	433	0.00	-.55	136	0.13	-1.63	393	0.15	.40	102	0.03	-.31
451	19.94 X	-.75	102	0.00	-.56	Meth: 165.00 PCT			Avg	0.12		372	0.01	-.60
034	19.87	-.76	Meth: 144.99 PCT			Acid Soluble Boron			136	0.11	-.21	419	0.01	-.69
260	19.82	-.77	Sulfur			<u>Spectrometric</u>			102	0.09	-.40			
255	19.88	-.80	<u>Other</u>			393	0.000	.71	372	0.08	-.44			
007	19.97 R	-.88	422	0.11 R	15.36				419	0.00	-1.30			
377	19.64	-1.09	232	0.02	1.29									
009	20.19 R	-1.14												
023	19.59	-1.19												
428	19.54	-1.26												

\* X=Excluded from lab performance      S/s=Screened Outlier      R=Duplicate Range too large      A=Analysis beyond 3-s limits

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 202.XX PPM			Meth: 221.XX PCT			Meth: 251.30 PPM			Meth: 289.30 PPM			Meth: 311.99 PCT		
<u>Acid Soluble Cobalt</u>			<u>Acid Soluble Copper</u>			<u>Lead</u>			<u>Molybdenum</u>			<u>Sodium</u>		
452	4.98 R	2.41	372	0.0855 s	974.55	<u>ICP</u>			<u>ICP</u>			<u>Other</u>		
136	4.10	1.90	354	0.0055 s	61.90	393	0.15	-.52	Avg	0.29		422	0.22	1.62
Avg	0.87		422	0.0025 R	27.99	419	0.14	-.52	419	0.05	-.69	Avg	0.09	
393	0.18	-.40	419	0.0002	1.63	372	0.01	-.61	433	0.03	-.73	102	0.05	-.53
102	0.03	-.49	452	0.0002	1.57	Meth: 251.XX PPM			372	0.03	-.74	009	0.05	-.54
372	0.01	-.50	428	0.0002	1.16	<u>Lead</u>			Meth: 291.00 PPM			232	0.05	-.55
419	0.01	-.50	043	0.0001	.48	136			Nickel			Meth: 321.00 PCT		
Meth: 221.00 PCT			Avg			452			<u>Atomic Absorption</u>			Acid Soluble Zinc		
<u>Acid Soluble Copper</u>			433			393			136			<u>Atomic Absorption</u>		
<u>Atomic Absorption</u>			231			324			428			428		
428	0.0002	.87	231	0.0001	-.54	393			Meth: 291.30 PPM			Avg		
Avg	0.0002		231	0.0001	-.54	419			Nickel			057		
043	0.0001	-.87	230	0.0000	-.77	372			<u>ICP</u>			043		
Meth: 221.30 PCT			255			419			452			Meth: 321.30 PCT		
<u>Acid Soluble Copper</u>			114			230			419			Acid Soluble Zinc		
<u>ICP</u>			Meth: 241.30 PCT			Meth: 261.30 PCT			230			<u>ICP</u>		
372	0.0855 s	917.33	<u>Acid Soluble Iron</u>			Acid Soluble Manganese			Avg			422		
354	0.0055 S	58.39	<u>ICP</u>			<u>ICP</u>			102			354		
422	0.0025 R	26.47	422	0.04 s	55.72	422			372			419		
419	0.0002	1.63	433	0.00	1.62	Avg			0.39			096		
452	0.0002	1.61	393	0.00	.50	009			Meth: 291.XX PPM			096		
393	0.0001	.15	Avg	0.00		096			<u>Nickel</u>			Avg		
Avg	0.0001		009	0.00	-.41	393			136			230		
433	0.0001	-.16	444	0.00	-.86	102			452			452		
231	0.0001	-.38	102	0.00	-.86	433			Avg			324		
230	0.0000	-.60	Meth: 251.00 PPM			Meth: 281.30 PPM			419			433		
114	0.0000	-.92	<u>Lead</u>			<u>Mercury</u>			230			009		
255	0.0000	-.92	<u>Atomic Absorption</u>			<u>ICP</u>			102			102		
Meth: 221.99 PCT			136			372			372			393		
<u>Acid Soluble Copper</u>			8.45			0.00			0.09			114		
<u>Other</u>			.71			-.71			-.67			0.000		
231	0.0001	.71	Meth: 251.30 PPM			Meth: 289.30 PPM			Meth: 301.30 PPM			Meth: 321.99 PCT		
Meth: 221.00 PCT			<u>Lead</u>			<u>Molybdenum</u>			Selenium			Acid Soluble Zinc		
<u>Acid Soluble Copper</u>			<u>ICP</u>			<u>ICP</u>			<u>ICP</u>			<u>Other</u>		
<u>Atomic Absorption</u>			452			232			372			231		
428	0.0002	.87	393			452			0.00			0.003		
Avg	0.0002		Avg			393			.71			.71		
043	0.0001	-.87	324			452								
Meth: 221.30 PCT			0.60			0.86								
<u>Acid Soluble Copper</u>			-.23			1.64								
<u>ICP</u>						.51								
372	0.0855 s	917.33												
354	0.0055 S	58.39												
422	0.0025 R	26.47												
419	0.0002	1.63												
452	0.0002	1.61												
393	0.0001	.15												
Avg	0.0001													
433	0.0001	-.16												
231	0.0001	-.38												
230	0.0000	-.60												
114	0.0000	-.92												
255	0.0000	-.92												

\* X=Excluded from lab performance    S/s=Screened Outlier    R=Duplicate Range too large    A=Analysis beyond 3-s limits

## Laboratory Averages &amp; Accuracy Indexes

<u>Lab</u>	<u>Average*</u>	<u>Index</u>	<u>Lab</u>	<u>Average*</u>	<u>Index</u>	<u>Lab</u>	<u>Average*</u>	<u>Index</u>	<u>Lab</u>	<u>Average*</u>	<u>Index</u>
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Meth: 321.XX PCT

Acid Soluble Zinc

422	0.005 s	6.04
354	0.003 R	3.56
231	0.003	2.74
428	0.002	1.63
419	0.001	.53
096	0.001	.29
Avg	0.001	
057	0.000	-.22
324	0.000	-.43
452	0.000	-.43
230	0.000	-.43
433	0.000	-.48
009	0.000	-.53
043	0.000	-.56
102	0.000	-.57
393	0.000	-.71
114	0.000	-.84

Meth: 325.30 PCT

Water Soluble ZincICP

372	0.854	.87
Avg	0.427	
393	0.000	-.87

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## Method Evaluation - Z Values Based on 1 Reports

Method Code	Number Of Labs	Avg Bias of Labs	Std Dev of Biases	Std Dev Within Labs	Method Code	Number Of Labs	Avg Bias of Labs	Std Dev of Biases	Std Dev Within Labs
001.10	5	- 15.60	34.90	0.30	151.00	2	0.00	1.22	0.05
001.99	7	0.00	1.04	0.01	151.30	5	0.04	0.94	0.17
001.XX	12	- 0.49	1.95	0.02	151.XX	7	0.04	0.96	0.11
002.99	7	0.00	1.04	0.04	165.99	3	0.000	1.076	0.247
002.XX	8	0.61	1.97	0.15	165.XX	4	0.000	1.050	0.221
005.00	2	0.00	1.22	0.10	181.30	5	0.00	1.05	0.14
005.99	3	0.00	1.12	0.03	181.XX	6	0.00	1.03	0.16
005.XX	5	0.00	1.06	0.03	191.30	12	0.08	1.01	0.15
009.99	2	0.00	1.22	0.01	191.XX	12	0.08	1.01	0.15
009.XX	3	0.00	1.12	0.03	202.30	5	13.29	29.72	1.46
010.11	5	0.00	1.05	0.13	202.XX	6	0.40	1.37	0.06
010.60	58	- 0.17	1.27	0.29	221.00	2	0.0000	1.2247	0.0000
010.99	4	4.29	8.63	0.13	221.30	11	91.023	274.62	5.3791
010.XX	68	- 0.36	6.46	0.27	221.XX	13	81.844	268.78	5.2574
020.10	8	0.09	0.99	0.03	241.30	6	9.25	22.69	1.94
020.20	9	0.00	1.03	0.01	241.XX	6	9.25	22.69	1.94
020.40	3	0.00	1.12	0.06	251.30	5	0.00	1.06	0.01
020.50	15	- 1.37	4.89	0.37	251.XX	6	0.79	2.16	0.19
020.99	2	0.00	1.22	0.00	261.30	7	- 0.065	0.973	0.035
020.XX	34	0.05	0.98	0.09	261.XX	7	- 0.065	0.973	0.035
041.10	4	0.00	0.48	0.84	289.30	6	1.10	2.85	0.58
041.50	4	0.00	1.08	0.07	289.XX	6	1.10	2.85	0.58
041.60	3	0.00	0.25	0.89	291.30	5	1.04	2.51	0.64
041.99	2	0.00	1.22	0.02	291.XX	6	0.04	0.95	0.08
041.XX	11	0.25	1.09	0.01	311.99	4	0.00	1.08	0.01
050.00	15	- 0.97	3.47	0.33	311.XX	4	0.00	1.08	0.01
050.30	9	- 2.57	7.47	0.29	321.00	3	0.000	1.116	0.049
050.50	6	4.04	6.90	0.21	321.30	12	2.248	5.206	0.996
050.51	10	- 0.02	0.96	0.27	321.XX	16	0.583	1.920	0.347
050.60	4	0.00	1.01	0.32	325.30	2	0.000	1.225	0.003
050.61	8	0.00	0.90	0.47					
050.99	15	0.43	1.56	0.22					
050.XX	63	- 0.25	3.24	0.32					
101.30	5	17.51	39.17	0.54					
101.XX	5	17.51	39.17	0.54					
121.30	5	1.51	3.50	0.33					
121.XX	5	1.51	3.50	0.33					
144.99	4	3.84	7.73	0.40					
144.XX	4	3.84	7.73	0.40					