

- Pass 1 Results for 89 Labs - - Pass 2 Results for 89 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	3	3.75	0.05	0.03	3	3.75	0.05	0.03
Ammoniacal Nitrogen, Other		001.99	9	3.77	0.17	0.04	9	3.77	0.17	0.04
Method Group 001.XX PCT			12	3.77	0.15	0.04	11	3.75	0.15	0.03
Nitrate Nitrogen, Other		002.99	4	0.00	0.00	0.00	4	0.00	0.00	0.00
Nitrogen From Urea, Urease (as N)	959.03	005.00	1	0.20	0.01	0.02	1	0.20	0.01	0.02
Ammon & Nitrate N, Devarda	892.01	009.10	4	3.86	0.12	0.03	4	3.86	0.12	0.03
Total Nitrogen, Modified Comprehensive	978.02	010.11	9	3.80	0.13	0.02	9	3.80	0.13	0.02
Total Nitrogen, Salicylic	955.04D	010.12	2	3.75	0.08	0.01	2	3.75	0.08	0.01
Total Nitrogen, Combustion		010.60	57	3.81	0.10	0.06	52	3.81	0.09	0.04
Total Nitrogen, Other		010.99	4	3.75	0.15	0.07	4	3.75	0.15	0.07
Method Group 010.XX PCT			74	3.79	0.12	0.05	65	3.80	0.10	0.03
Total Phosphate, Grav Quimociac	962.02	020.10	6	15.05	0.17	0.08	6	15.05	0.17	0.08
Total Phosphate, Spectrometric	958.01	020.20	15	15.01	0.23	0.08	14	15.00	0.24	0.06
Total Phosphate, Automated	978.01	020.40	4	14.98	0.19	0.11	4	14.98	0.19	0.11
Total Phosphate, ICP		020.50	8	15.00	0.49	0.25	9	15.07	0.52	0.29
Total Phosphate, Other		020.99	7	14.94	0.19	0.08	7	14.94	0.19	0.08
Method Group 020.XX PCT			41	14.98	0.30	0.13	37	14.99	0.23	0.09
Insoluble Phosphate, Grav Quimociac	963.03C	030.10	1	0.03	0.00	0.00	1	0.03	0.00	0.00
Insoluble Phosphate, Spectrometric	963.03C	030.20	1	0.02	0.01	0.01	1	0.02	0.01	0.01
Insoluble Phosphate, Automated	978.01	030.40	1	0.04	0.01	0.01	1	0.04	0.01	0.01
Insoluble Phosphate, ICP		030.50	1	0.00	0.00	0.00	1	0.00	0.00	0.00
Method Group 030.XX PCT			4	0.02	0.01	0.01	4	0.02	0.01	0.01
InDir Available Phosphate, Grav Quim	960.02	040.10	1	14.87	0.05	0.07	1	14.87	0.05	0.07
InDir Available Phosphate, Spectrometri	960.02	040.20	1	14.93	0.13	0.19	1	14.93	0.13	0.19
InDir Available Phosphate, Automated	960.02	040.40	1	15.15	0.06	0.09	1	15.15	0.06	0.09
InDir Available Phosphate, Other		040.99	1	15.01	0.01	0.01	1	15.01	0.01	0.01
Method Group 040.XX PCT			4	14.99	0.13	0.09	4	14.99	0.13	0.09
Dir Available Phosphate, Grav Quimociac	960.03E	041.10	14	14.91	0.11	0.05	13	14.91	0.11	0.04
Dir Available Phosphate, Spectrometric	960.03D	041.20	2	15.10	0.29	0.27	2	15.10	0.29	0.27
Dir Available Phosphate, Automated	978.01	041.40	4	15.04	0.30	0.04	4	15.04	0.30	0.04
Dir Available Phosphate, ICP		041.50	11	14.99	0.25	0.19	10	14.97	0.23	0.14
Dir Available Phosphate, EDTA Extract	993.01	041.60	11	14.92	0.18	0.12	11	14.92	0.18	0.12
Method Group 041.XX PCT			42	14.96	0.20	0.12	39	14.94	0.18	0.09
Water Soluble Phosphate, Spectrometric	970.01	048.20	3	13.02	0.60	0.06	3	13.02	0.60	0.06
Water Soluble Phosphate, ICP		048.50	1	12.62	0.04	0.05	1	12.62	0.04	0.05
Method Group 048.XX PCT			4	12.92	0.54	0.06	4	12.92	0.54	0.06
Soluble Potash, STPB Oxalate	958.02	050.00	16	30.99	0.66	0.24	15	31.01	0.67	0.21
Soluble Potash, STPB Citrate	969.04	050.10	1	31.11	0.14	0.20	1	31.11	0.14	0.20
Soluble Potash, AA (Oxalate)		050.30	7	30.84	1.01	0.34	6	30.47	0.30	0.21

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Soluble Potash, AA (Citrate) .....		050.31	1	28.58	0.06	0.08	1	28.58	0.06	0.08
Soluble Potash, ICP (Oxalate) .....		050.50	9	31.13	0.66	0.43	8	31.02	0.54	0.29
Soluble Potash, ICP (Citrate) .....		050.51	10	31.13	0.77	0.12	9	30.97	0.64	0.05
Soluble Potash, Flame (Oxalate) .....	983.02(a)	050.60	5	30.89	0.56	0.13	5	30.89	0.56	0.13
Soluble Potash, Flame (Citrate) .....	983.02(b)	050.61	12	31.13	0.55	0.34	12	31.13	0.55	0.34
Soluble Potash, Other .....		050.99	20	31.04	1.03	0.25	19	30.98	1.01	0.18
Method Group 050.XX PCT			81	31.01	0.83	0.26	77	30.95	0.78	0.21
Free Water, Vacuum Oven .....	965.08B	060.00	5	0.49	0.12	0.04	5	0.49	0.12	0.04
Free Water, Vacuum Desiccate .....	965.08A	060.10	1	0.29	0.00	0.00	1	0.29	0.00	0.00
Free Water, Other .....		060.99	1	0.70	0.06	0.09	1	0.70	0.06	0.09
Method Group 060.XX PCT			7	0.49	0.15	0.04	7	0.49	0.15	0.04
Acid Soluble Calcium, ICP .....		101.30	18	2.57	0.18	0.06	16	2.54	0.13	0.04
Acid Soluble Magnesium, AA .....	984.01	121.00	10	1.38	0.07	0.04	9	1.39	0.07	0.03
Acid Soluble Magnesium, ICP .....		121.30	37	1.36	0.10	0.03	35	1.36	0.10	0.03
Acid Soluble Magnesium, Other .....		121.99	4	1.36	0.02	0.01	4	1.36	0.02	0.01
Method Group 121.XX PCT			51	1.36	0.09	0.03	47	1.36	0.09	0.02
Water Soluble Magnesium, AA .....		131.00	1	1.18	0.01	0.02	1	1.18	0.01	0.02
Water Soluble Magnesium, ICP .....		131.30	3	1.19	0.10	0.02	3	1.19	0.10	0.02
Water Soluble Magnesium, Other .....		131.99	1	1.12	0.01	0.01	1	1.12	0.01	0.01
Method Group 131.XX PCT			5	1.17	0.08	0.02	5	1.17	0.08	0.02
Sulfur, Gravimetric .....	980.02a	144.01	15	5.23	0.17	0.07	14	5.24	0.17	0.05
Sulfur, Gravimetric .....	980.02b	144.02	1	5.64	0.06	0.09	1	5.64	0.06	0.09
Sulfur, Other .....		144.99	27	5.08	0.29	0.10	26	5.07	0.29	0.09
Method Group 144.XX PCT			43	5.15	0.27	0.09	41	5.14	0.27	0.08
Arsenic, Atomic Absorption .....		151.00	1	2.83	0.04	0.05	1	2.83	0.04	0.05
Arsenic, ICP .....		151.30	7	3.13	0.64	0.42	6	2.97	0.42	0.22
Arsenic, Other .....		151.99	1	2.84	0.04	0.05	1	2.84	0.04	0.05
Method Group 151.XX PPM			10	2.86	0.82	0.31	9	2.73	0.70	0.17
Acid Soluble Boron, Spectrometric .....	982.01	165.00	6	0.198	0.016	0.014	6	0.198	0.016	0.014
Acid Soluble Boron, Other .....		165.99	27	0.199	0.018	0.007	26	0.199	0.018	0.006
Method Group 165.XX PCT			33	0.199	0.017	0.008	30	0.200	0.017	0.005
Water Soluble Boron, Other .....		171.99	1	0.204	0.001	0.001	1	0.204	0.001	0.001
Cadmium, Atomic Absorption .....		181.00	1	8.15	0.21	0.30	1	8.15	0.21	0.30
Cadmium, ICP .....		181.30	13	8.02	0.64	0.29	12	8.03	0.63	0.19
Cadmium, Other .....		181.99	1	8.66	0.04	0.05	1	8.66	0.04	0.05
Method Group 181.XX PPM			15	8.07	0.62	0.27	14	8.08	0.61	0.19
Water Soluble Chlorine, Titrimetric ...	928.02	190.00	3	21.85	0.74	0.22	3	21.85	0.74	0.22
Water Soluble Chlorine, Other .....		190.99	1	22.91	0.29	0.41	1	22.91	0.29	0.41
Method Group 190.XX PCT			4	22.11	0.80	0.27	4	22.11	0.80	0.27

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Chromium, ICP .....		191.30	14	62.17	4.35	1.61	14	62.17	4.35	1.61
Chromium, Other .....		191.99	1	51.02	1.70	2.41	1	51.02	1.70	2.41
Method Group 191.XX PPM			15	61.43	5.07	1.66	15	61.43	5.07	1.66
Acid Soluble Cobalt, AA .....		202.00	1	2.00	0.00	0.00	1	2.00	0.00	0.00
Acid Soluble Cobalt, ICP .....	965.11	202.30	11	2.10	0.28	0.23	11	2.10	0.28	0.23
Acid Soluble Cobalt, Other .....		202.99	1	1.57	0.05	0.07	1	1.57	0.05	0.07
Method Group 202.XX PPM			13	2.05	0.30	0.20	13	2.05	0.30	0.20
Acid Soluble Copper, Atomic Absorption	975.01	221.00	3	0.0011	0.0008	0.0001	3	0.0011	0.0008	0.0001
Acid Soluble Copper, ICP .....		221.30	19	0.0018	0.0007	0.0003	17	0.0016	0.0004	0.0002
Acid Soluble Copper, Other .....		221.99	1	0.0016	0.0000	0.0000	1	0.0016	0.0000	0.0000
Method Group 221.XX PCT			23	0.0017	0.0007	0.0003	20	0.0015	0.0004	0.0002
Acid Soluble Iron, Atomic Absorption ..	980.01	241.00	10	0.45	0.03	0.01	9	0.45	0.03	0.01
Acid Soluble Iron, ICP .....		241.30	39	0.44	0.04	0.02	37	0.44	0.04	0.01
Acid Soluble Iron, Other .....		241.99	1	0.58	0.00	0.00	1	0.58	0.00	0.00
Method Group 241.XX PCT			50	0.45	0.04	0.01	47	0.44	0.04	0.01
Lead, ICP .....		251.30	7	2.61	0.66	0.16	6	2.41	0.44	0.05
Lead, Other .....		251.99	1	2.28	0.08	0.12	1	2.28	0.08	0.12
Method Group 251.XX PPM			8	2.57	0.63	0.16	7	2.40	0.41	0.06
Acid Soluble Manganese, AA .....	972.02a	261.00	6	0.011	0.001	0.001	6	0.011	0.001	0.001
Acid Soluble Manganese, ICP .....	972.02a	261.30	27	0.011	0.001	0.000	26	0.011	0.001	0.000
Acid Soluble Manganese, ICP .....	972.02b	261.31	1	0.012	0.000	0.000	1	0.012	0.000	0.000
Acid Soluble Manganese, Other .....		261.99	4	0.012	0.002	0.000	4	0.012	0.002	0.000
Method Group 261.XX PCT			38	0.011	0.001	0.000	35	0.011	0.001	0.000
Water Soluble Manganese, ICP .....	972.03	271.30	1	0.010	0.000	0.000	1	0.010	0.000	0.000
Mercury, Atomic Absorption .....		281.00	1	0.02	0.00	0.00	1	0.02	0.00	0.00
Mercury, ICP .....		281.30	2	0.15	0.18	0.00	2	0.15	0.18	0.00
Method Group 281.XX PPM			3	0.11	0.15	0.00	3	0.11	0.15	0.00
Molybdenum, ICP .....		289.30	13	4.63	0.52	0.33	13	4.63	0.52	0.33
Molybdenum, Other .....		289.99	2	5.18	0.45	0.05	2	5.18	0.45	0.05
Method Group 289.XX PPM			15	4.70	0.54	0.29	14	4.65	0.49	0.24
Nickel, ICP .....		291.30	12	11.99	1.77	0.64	12	11.99	1.77	0.64
Nickel, Other .....		291.99	1	8.28	0.50	0.71	1	8.28	0.50	0.71
Method Group 291.XX PPM			13	11.70	1.98	0.64	13	11.70	1.98	0.64
Selenium, ICP .....		301.30	2	0.00	0.00	0.00	2	0.00	0.00	0.00
Selenium, Other .....		301.99	2	2.20	2.21	0.20	2	2.20	2.21	0.20
Method Group 301.XX PPM			5	0.98	1.68	0.28	4	1.10	1.86	0.10
Sodium, Flame Photometric .....	974.01	311.30	1	0.57	0.01	0.02	1	0.57	0.01	0.02
Sodium, Other .....		311.99	10	0.57	0.04	0.02	10	0.57	0.04	0.02
Method Group 311.XX PCT			11	0.57	0.04	0.02	11	0.57	0.04	0.02

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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 Zinc, Atomic Absorption ..	975.02	321.00	10	0.238	0.015	0.007	10	0.238	0.015	0.007
Acid Soluble Zinc, ICP .....		321.30	38	0.228	0.017	0.010	36	0.227	0.015	0.007
Acid Soluble Zinc, Other .....		321.99	3	0.232	0.015	0.009	3	0.232	0.015	0.009
Method Group 321.XX PCT			51	0.230	0.017	0.009	48	0.230	0.016	0.007

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: 002.99 PCT Nitrate Nitrogen <u>Other</u>			Meth: 010.12 PCT Total Nitrogen <u>Salicylic</u>			Meth: 010.60 PCT Total Nitrogen <u>Combustion</u>			Meth: 010.99 PCT Total Nitrogen <u>Other</u>		
117	3.82	1.27	232	0.01	1.62	185	3.83	.87	428	3.83	.18	300	3.90	1.10
Avg	3.75		Avg	0.00		Avg	3.75		095	3.83	.18	371	3.85	.66
232	3.73	-.54	393	0.00 X	-.54	254	3.68	-.86	Avg	3.81		Avg	3.75	
456	3.71	-.77	477	0.00	-.54	455	3.25 S	-6.02	450	3.80	-.10	420	3.69	-.47
			027	0.00	-.54				040	3.80	-.10	072	3.56	-1.28
Meth: 001.99 PCT Ammoniacal Nitrogen <u>Other</u>			Meth: 005.00 PCT Nitrogen From Urea <u>Urease (as N)</u>			Meth: 010.60 PCT Total Nitrogen <u>Combustion</u>			029			Meth: 010.XX PCT Total Nitrogen		
393	4.04	1.57	232	0.20	-.71	262	4.28 s	5.36	028	3.80	-.41	262	4.28 s	4.88
096	3.91	.92				043	4.28 s	5.18	073	3.77	-.44	043	4.28 s	4.72
460	3.85	.55	Meth: 009.10 PCT Ammon & Nitrate N <u>Devarda</u>			255	4.00	2.22	275	3.80	-.51	309	4.02	2.12
371	3.83	.35	393	4.04	1.53	055	3.96	1.63	057	3.76	-.59	255	4.00	2.05
473	3.83	.32	Avg	3.86		330	3.90 R	1.47	324	3.76	-.59	055	3.96	1.51
477	3.80	.14	200	3.86	-.13	232	3.94	1.37	390	3.75	-.70	330	3.90 R	1.35
Avg	3.77		090	3.78	-.75	096	3.93	1.31	102	3.74	-.75	456	3.94	1.33
420	3.63	-.88	477	3.77	-.76	230	3.91	1.26	034	3.74	-.86	232	3.94	1.28
027	3.56	-1.28				389	3.92	1.22	136	3.72	-.97	096	3.93	1.23
137	3.52	-1.49				296	3.92	1.15	177	3.72	-.99	230	3.91	1.17
Meth: 001.XX PCT Ammoniacal Nitrogen			Meth: 010.11 PCT Total Nitrogen <u>Modified Comprehensi</u>			443	3.91	1.05	035	3.77	-1.06	389	3.92	1.15
393	4.04	1.94	309	4.02	1.67	354	3.89	.88	009	3.70	-1.20	300	3.90	1.11
096	3.91 R	1.18	456	3.94	1.06	360	3.89	.88	307	3.74	-1.22	296	3.92	1.09
460	3.85	.75	114	3.85	.34	131	3.88	.83	042	3.80 R	-1.31	443	3.91	1.00
371	3.83	.53	474	3.81	.19	419	3.88	.73	444	3.77 R	-1.34	354	3.89	.85
473	3.83	.49	Avg	3.80		402	3.88	.73	405	3.69	-1.36	360	3.89	.84
117	3.82	.45	260	3.79	-.13	233	3.87	.71	022	3.68	-1.50	131	3.88	.80
477	3.80	.29	105	3.77	-.27	027	3.86	.64	325	3.65	-1.76	402	3.88	.71
Avg	3.75		470	3.76	-.35	292	3.86	.55	037	3.70 R	-1.76	419	3.88	.71
232	3.73	-.22	416	3.75	-.39	049	3.85	.55	157	3.68 R	-1.77	233	3.87	.69
456	3.71	-.30	211	3.54	-2.02	072	3.85	.49	041	3.64	-1.91	027	3.86	.62
420	3.63	-.90				231	3.85	.39	042	3.57	-2.62	292	3.86	.55
027	3.56	-1.36				422	3.84	.39	368	3.57	-2.62	049	3.85	.54
137	3.52	-1.60				234	3.84	.39	007	3.45 s	-3.93	072	3.85	.49
						291	3.83	.31	023	3.42 s	-4.28	371	3.85	.43
						086	3.83	.28	475	3.16 s	-7.11	231	3.85	.40
						393	3.83	.25				114	3.85	.40
						162	3.83	.25				234	3.84	.39
						024	3.83	.23						

\* 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.XX PCT			Meth: 010.XX PCT			Meth: 020.20 PCT			Meth: 020.99 PCT			Meth: 020.XX PCT		
<u>Total Nitrogen</u>			<u>Total Nitrogen</u>			<u>Total Phosphate</u>			<u>Total Phosphate</u>			<u>Total Phosphate</u>		
422	3.84	.39	420	3.69	-1.22	<u>Spectrometric</u>			<u>Other</u>			041	14.95	-.18
291	3.83	.32	022	3.68	-1.31	Avg	15.00		137	15.28	1.75	157	14.95	-.26
086	3.83	.30	325	3.65	-1.54	309	14.96	-.18	460	15.00	.60	477	14.94	-.29
393	3.83	.27	037	3.70 R	-1.55	324	14.90	-.42	322	15.01	.34	324	14.90	-.37
162	3.83	.27	157	3.68 R	-1.56	474	14.95	-.43	041	14.95	.11	474	14.95	-.41
024	3.83	.25	041	3.64	-1.67	416	14.87	-.56	Avg	14.94		393	14.89	-.42
474	3.81	.24	368	3.57	-2.31	231	14.85	-.66	477	14.87	-.45	090	14.90	-.42
185	3.83	.21	072	3.56	-2.45	371	14.79	-.90	443	14.83	-.68	416	14.87	-.51
095	3.83	.21	211	3.54	-2.63	200	14.78	-.95	455	14.65	-1.52	477	14.87	-.54
428	3.83	.21	007	3.45 A	-3.50	420	14.60	-1.70	Meth: 020.XX PCT			231	14.85	-.62
Avg	3.80		023	3.42 A	-3.81	Meth: 020.40 PCT			<u>Total Phosphate</u>			443	14.83	-.73
450	3.80	-.04	455	3.25 s	-5.44	Total Phosphate			432	32.82 s	75.88	371	14.79	-.86
040	3.80	-.04	030	3.16 s	-6.35	<u>Automated</u>			330	15.60 s	3.96	200	14.78	-.91
260	3.79	-.19	475	3.16 s	-6.36	096	15.18	1.10	389	15.75 A	3.31	035	14.75	-1.20
406	3.78	-.29	Meth: 020.10 PCT			095	15.02	.22	422	15.65 s	3.09	455	14.65	-1.45
029	3.78	-.32	Total Phosphate			Avg	14.98		428	15.49	2.18	420	14.60	-1.67
073	3.77	-.35	<u>Grav Quimociac</u>			456	14.98	-.14	390	15.20 R	1.57	042	14.43 R	-2.67
028	3.80	-.35	114	15.31	1.46	035	14.75	-1.49	114	15.31	1.35	255	14.41 R	-2.71
105	3.77	-.39	444	15.23	1.24	042	14.43 s	-3.36	368	15.24	1.31	444	14.31	-2.91
377	3.77	-.39	Avg	15.05		Meth: 020.50 PCT			232	15.28	1.26	117	14.41 s	-3.20
275	3.80	-.45	022	14.99	-.40	Total Phosphate			137	15.28	1.25	307	14.41 s	-3.83
470	3.76	-.48	470	14.95	-.59	<u>ICP</u>			406	15.28	1.23	262	6.60 s	-35.70
324	3.76	-.48	157	14.95	-.66	432	32.82 s	34.45	444	15.23	1.15	Meth: 030.10 PCT		
057	3.76	-.48	090	14.90	-.93	330	15.60 S	1.71	402	15.25	1.10	Insoluble Phosphate		
416	3.75	-.53	117	14.41 S	-4.65	389	15.75	1.35	096	15.18	.84	<u>Grav Quimociac</u>		
390	3.75	-.58	262	6.60 s	-48.92	422	15.65 S	1.27	292	15.17	.78	090	0.03	.00
102	3.74	-.63	Meth: 020.20 PCT			390	15.20	.64	234	15.10	.77	Meth: 030.20 PCT		
034	3.74	-.73	Total Phosphate			368	15.24	.48	460	15.00	.43	Insoluble Phosphate		
136	3.72	-.83	<u>Spectrometric</u>			402	15.25	.34	450	15.05	.25	<u>Spectrometric</u>		
177	3.72	-.85	428	15.49	2.10	Avg	15.00		473	15.04	.23	474 0.02 .71		
035	3.77 R	-.94	232	15.28	1.20	477	14.94	-.27	095	15.02	.15	Meth: 030.40 PCT		
009	3.70	-1.04	406	15.28	1.16	393	14.89	-.35	322	15.01	.08	Insoluble Phosphate		
351	3.71	-1.07	234	15.10 R	.72	255	14.41	-1.38	Avg	14.99		<u>Automated</u>		
307	3.74 R	-1.07	292	15.17	.72	444	14.31	-1.49	022	14.99	-.06	096 0.04 -.71		
042	3.80 R	-1.17	450	15.05	.20	307	14.41 S	-1.85	456	14.98	-.12			
405	3.69	-1.18	473	15.04	.18				309	14.96	-.14			
444	3.77 R	-1.19							470	14.95	-.16			
254	3.68	-1.21												

\* 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			Meth: 040.XX PCT			Meth: 041.40 PCT			Meth: 041.60 PCT			Meth: 041.XX PCT		
<u>Insoluble Phosphate</u>			<u>InDir Available Phos</u>			<u>Dir Available Phosph</u>			<u>Dir Available Phosph</u>			<u>Dir Available Phosph</u>		
ICP			096	15.15	1.31	Automated			EDTA Extract			260	14.90	-.27
255	0.00	.00	405	15.01	.16	Avg	15.04		057	14.67	-1.76	009	14.89	-.28
Meth: 030.XX PCT			474			131			Meth: 041.99 PCT			177		
<u>Insoluble Phosphate</u>			14.93			14.93			<u>Dir Available Phosph</u>			14.88		
096	0.04	.95	-.89			-.38			0105			14.88		
090	0.03	.54	-0.99			-1.11			Other			14.88		
474	0.02	.45	-5.02			Meth: 041.50 PCT			230			14.92		
Avg	0.02		Meth: 041.10 PCT			<u>Dir Available Phosph</u>			296			14.88		
255	0.00	-1.45	<u>Grav Quimociac</u>			ICP			Avg			14.88		
Meth: 040.10 PCT			211			368			0.00			185		
<u>InDir Available Phos</u>			15.11			15.19 R			Meth: 041.XX PCT			009		
<u>Grav Quim</u>			1.80			1.58			<u>Dir Available Phosph</u>			14.89		
090	14.87	.71	254			1.04			028			14.80		
Meth: 040.20 PCT			15.08			.93			027			14.72		
<u>InDir Available Phos</u>			1.52			.73			368			14.71		
<u>Spectrometri</u>			.85			.53			419			-1.18		
474	14.93	-.71	.57			.48			007			-1.27		
Meth: 040.40 PCT			.48			Meth: 041.60 PCT			105			-1.54		
<u>InDir Available Phos</u>			14.91			<u>Dir Available Phosph</u>			15.18			043		
<u>Automated</u>			-.10			EDTA Extract			2.13			14.64		
096	15.15	.71	-.30			028			1.44			-1.65		
Meth: 040.50 PCT			14.90			3.51			325			-1.76		
<u>InDir Available Phos</u>			-.33			3.51			15.10 R			-3.49		
<u>ICP</u>			-.33			3.51			291			-3.52		
255	14.41 S	.00	-.67			3.51			15.18			-5.86		
Meth: 040.99 PCT			.08			3.51			475			-5.90		
<u>InDir Available Phos</u>			-1.08			3.51			211					
<u>Other</u>			-1.11			3.51			043					
405	15.01	.71	-1.84			3.51			360					
Meth: 041.20 PCT			Meth: 041.40 PCT			Meth: 041.60 PCT			Meth: 048.20 PCT					
<u>Dir Available Phosph</u>			<u>Dir Available Phosph</u>			<u>Dir Available Phosph</u>			<u>Water Soluble Phosph</u>					
<u>Spectrometric</u>			<u>Spectrometric</u>			<u>EDTA Extract</u>			<u>Spectrometric</u>					
419			419			028			420					
15.30			15.30			15.55 s			13.70					
.98			.98			3.51			1.13					
Avg			Avg			105			Avg					
15.10			15.10			15.18			13.02					
030			030			043			474					
14.91			14.91			15.09			13.01					
-.73			-.73			.96			-.08					
Meth: 041.40 PCT			Meth: 041.60 PCT			Meth: 041.60 PCT			Meth: 048.50 PCT					
<u>Dir Available Phosph</u>			<u>Dir Available Phosph</u>			<u>Dir Available Phosph</u>			<u>Water Soluble Phosph</u>					
<u>Automated</u>			<u>Automated</u>			<u>EDTA Extract</u>			<u>ICP</u>					
027			027			028			393					
15.48			15.48			15.55 s			12.62					
1.45			1.45			3.51			.71					
095			095			105								
15.05			15.05			15.18								
.07			.07			15.09								
						.96								
						.57								
						.43								
						.30								
						.14								
						14.92								
						233								
						14.90								
						-.17								
						024								
						14.92								
						-.37								
						296								
						14.88								
						-.42								
						034								
						14.63								
						-1.76								

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Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 048.XX PCT			Meth: 050.30 PCT			Meth: 050.51 PCT			Meth: 050.99 PCT			Meth: 050.XX PCT		
<u>Water Soluble Phosph</u>			<u>Soluble Potash</u>			<u>Soluble Potash</u>			<u>Soluble Potash</u>			<u>Soluble Potash</u>		
420	13.70	1.44	AA (Oxalate)			ICP (Citrate)			Other			009	31.99	1.35
474	13.01	.18	073	33.08 R	8.81	007	31.07	.14	027	33.22	2.23	177	31.87	1.19
Avg	12.92		136	30.75	.97	Avg	30.97		042	32.21 R	1.43	354	31.75	1.08
393	12.62	-.57	234	30.70	.82	393	30.83	-.24	137	32.33	1.35	406	31.75	1.03
096	12.36	-1.04	040	30.60	.78	043	30.71	-.42	260	32.10	1.12	029	31.56	.92
			Avg	30.47		009	30.22	-1.19	177	31.87	.89	377	31.65	.91
			185	30.45	-.18	296	29.90	-1.68	405	31.53	.55	057	31.40 R	.81
Meth: 050.00 PCT			043			Meth: 050.60 PCT			131			292		
<u>Soluble Potash</u>			262			<u>Soluble Potash</u>			360			057		
<u>STPB Oxalate</u>			29.96			Flame (Oxalate)			450			324		
009	31.99	1.47				406	31.75	1.53	477	31.06	.10	405	31.53	.75
057	31.56	.83	Meth: 050.31 PCT			105	31.24	.63	325	31.05	.09	131	31.50	.72
114	31.19	.58	<u>Soluble Potash</u>			Avg	30.89		Avg	30.98		105	31.34	.62
233	31.37	.56	<u>AA (Citrate)</u>			200	30.61	-.50	402	30.77	-.21	233	31.37	.56
211	31.30	.44	254	28.58	.71	309	30.51	-.69	232	30.69	-.29	360	31.34	.54
022	31.30	.44	Meth: 050.50 PCT			443	30.35	-1.03	368	30.54	-.46	114	31.19	.54
049	31.22	.41	<u>Soluble Potash</u>			Meth: 050.61 PCT			307	30.50	-.62	291	31.34	.51
416	31.23	.33	<u>ICP (Oxalate)</u>			<u>Soluble Potash</u>			072	30.12	-.85	095	31.32	.49
072	31.20	.33	419	32.00 R	2.34	Flame (Citrate)			444	30.09	-.91	450	31.32	.47
470	31.21	.31	354	31.75	1.43	028	32.17	1.88	322	29.79	-1.18	022	31.30	.45
Avg	31.01		292	31.58	1.03	029	31.56	1.03	371	29.50	-1.48	211	31.30	.45
231	30.99	-.09	324	31.40	1.02	057	31.40	.94	255	29.26	-1.71	041	31.20	.41
397	30.70	-.55	477	31.12	.19	105	31.34	.64	330	28.00 S	-2.98	049	31.22	.41
230	30.70 R	-.75	Avg	31.02		041	31.20	.39	455	23.55 s	-8.88	105	31.24	.38
102	30.56	-.84	390	30.80	-.55	095	31.32	.37	Meth: 050.XX PCT			416	31.23	.36
090	30.07	-1.40	055	30.72	-.56	024	31.20	.25	<u>Soluble Potash</u>			024	31.20	.36
055	29.22	-2.68	420	30.50	-1.01	Avg	31.13		157	35.05 s	5.33	072	31.20	.35
			422	30.33	-1.30	456	31.04	-.19	389	34.85 s	5.05	470	31.21	.34
Meth: 050.10 PCT			Meth: 050.51 PCT			035	30.93	-.52	027	33.22	2.92	300	31.11	.25
<u>Soluble Potash</u>			<u>Soluble Potash</u>			034	30.82	-.57	073	33.08 R	2.84	477	31.12	.22
<u>STPB Citrate</u>			<u>ICP (Citrate)</u>			131	30.41	-1.30	475	32.48	2.02	023	31.07	.16
300	31.11	.71	389	34.85 s	6.07	030	30.18	-1.72	042	32.21 R	1.88	477	31.06	.16
Avg	31.11		475	32.48 R	2.41	Meth: 050.30 PCT			137	32.33	1.78	007	31.07	.15
117	21.73 S	-66.37	096	32.00	1.60	<u>Soluble Potash</u>			419	32.00 R	1.70	325	31.05	.15
			377	31.65	1.06	<u>AA (Oxalate)</u>			028	32.17	1.57	456	31.04	.14
Meth: 050.30 PCT			291			157			260	32.10	1.49	231	30.99	.09
<u>Soluble Potash</u>			023			35.05 s			096	32.00	1.36	Avg	30.95	
<u>AA (Oxalate)</u>			31.07			15.26			Meth: 050.XX PCT			393	30.83	-.16
157	35.05 s	15.26							<u>Soluble Potash</u>					

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Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 050.XX PCT			Meth: 060.00 PCT			Meth: 101.30 PCT			Meth: 121.30 PCT			Meth: 121.99 PCT		
<u>Soluble Potash</u>			<u>Free Water</u>			<u>Acid Soluble Calcium</u>			<u>Acid Soluble Magnesi</u>			<u>Acid Soluble Magnesi</u>		
034	30.82	-.19	096	0.70	1.78	419	2.55	.23	096	1.54	1.83	444	1.38	1.05
402	30.77	-.23	<u>Vacuum Oven</u>			<u>ICP</u>			<u>ICP</u>			<u>Other</u>		
035	30.93	-.27	Avg	0.49		232	2.56	.15	027	1.51	1.52	137	1.37	.43
136	30.75	-.28	416	0.46	-.24	390	2.56	.09	475	1.50	1.44	Avg	1.36	
055	30.72	-.29	456	0.47	-.44	131	2.55	.04	117	1.45	.87	477	1.36	-.06
043	30.71	-.31	007	0.41	-.64	Avg	2.54		055	1.40 R	.73	460	1.34	-1.49
390	30.80	-.32	474	0.40	-.82	307	2.53	-.31	023	1.42	.57			
232	30.69	-.34	Meth: 060.10 PCT			389	2.49	-.41	009	1.41	.50	Meth: 121.XX PCT		
234	30.70	-.34	<u>Free Water</u>			102	2.52	-.48	233	1.40	.49	<u>Acid Soluble Magnesi</u>		
397	30.70	-.41	<u>Vacuum Desiccate</u>			474	2.48	-.60	390	1.41	.47	114	2.78 s	16.05
200	30.61	-.43	419	0.29	.71	354	2.44	-.77	057	1.37	.46	330	2.30 s	10.65
040	30.60	-.52	Meth: 060.99 PCT			009	2.44	-.80	368	1.40	.41	432	1.55	2.19
368	30.54	-.56	<u>Free Water</u>			420	2.43	-.88	450	1.40	.37	422	1.55	2.12
309	30.51	-.57	<u>Other</u>			035	2.42 R	-1.28	037	1.40	.37	096	1.54	2.03
230	30.70	-.61	443	0.70	-.71	086	2.33	-1.60	360	1.38	.24	157	1.51 R	1.82
420	30.50	-.61	Meth: 121.00 PCT			<u>AA</u>			131	1.38	.21	027	1.51	1.69
185	30.45	-.64	<u>Acid Soluble Magnesi</u>			419	1.38	.17	419	1.38	.17	475	1.50	1.59
102	30.56	-.66	<u>AA</u>			389	1.36	.01	Avg	1.36		177	1.45	1.04
131	30.41	-.69	Meth: 060.XX PCT			Avg	1.36		473	1.36	-.06	117	1.45	.95
043	30.38	-.74	<u>Free Water</u>			157	1.51	1.99	231	1.35	-.15	055	1.40 R	.81
307	30.50	-.77	443	0.70	1.41	177	1.45	.95	477	1.36	-.16	023	1.42	.62
422	30.33	-.80	096	0.70	1.38	Avg	1.39		393	1.34	-.20	009	1.41	.53
443	30.35	-.81	Avg	0.49		043	1.39	-.08	324	1.35	-.21	233	1.40	.53
009	30.22	-.95	416	0.46	-.20	200	1.38 X	-.11	474	1.31	-.60	057	1.37	.51
030	30.18	-.99	456	0.47	-.35	028	1.38	-.18	420	1.30	-.60	390	1.41	.50
072	30.12	-1.07	007	0.41	-.51	397	1.38	-.20	102	1.31	-.62	368	1.40	.43
090	30.07	-1.13	474	0.40	-.66	296	1.39	-.37	291	1.29	-.70	296	1.39	.39
444	30.09	-1.15	419	0.29	-1.32	371	1.36	-.48	095	1.28	-.77	450	1.40	.39
262	29.96	-1.29	Meth: 101.30 PCT			029	1.30 R	-1.61	307	1.29	-.83	037	1.40	.39
296	29.90	-1.35	<u>Acid Soluble Calcium</u>			262	1.27	-1.79	354	1.26	-1.01	043	1.39	.27
322	29.79	-1.49	<u>ICP</u>			Meth: 121.30 PCT			035	1.26 R	-1.17	444	1.38	.24
371	29.50	-1.88	422	3.46 s	6.84	<u>Acid Soluble Magnesi</u>			086	1.23	-1.27	028	1.38	.24
255	29.26	-2.18	393	3.07 A	3.89	<u>ICP</u>			232	1.22	-1.40	360	1.38	.24
055	29.22	-2.23	475	2.93	2.88	114	2.78 s	14.29	433	1.20	-1.61	200	1.38 X	.21
254	28.58	-3.05	096	2.67	.90	330	2.30 s	9.50	255	1.19	-1.69	131	1.38	.21
330	28.00 s	-3.81	027	2.65	.82	432	1.55	1.97	300	1.17	-1.91	419	1.38	.16
455	23.55 s	-11.46	057	2.59	.49	422	1.55	1.91	042	1.00 S	-3.62	397	1.38	.16
117	21.73 s	-11.87										137	1.37	.10

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Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 121.XX PCT <u>Acid Soluble Magnesi</u>			Meth: 131.30 PCT Water Soluble Magnes			Meth: 144.02 PCT Sulfur			Meth: 144.99 PCT Sulfur			Meth: 144.XX PCT Sulfur		
Avg	1.36		ICP			Gravimetric			Other			371	5.10	-.19
477	1.36	-.02	477	1.12	-.72	292	5.64	.71	393	4.43	-2.23	422	5.12	-.20
389	1.36	-.02	Meth: 131.99 PCT Water Soluble Magnes			Meth: 144.70 PCT Sulfur			035	3.97 s	-3.88	397	5.14	-.20
473	1.36	-.09	Other			Spectrometric			473	1.86 s	-11.06	096	5.06	-.31
371	1.36	-.09	477	1.12	-.71	474	5.96 S	.00	Meth: 144.XX PCT Sulfur			351	5.03	-.48
477	1.36	-.18	Meth: 131.XX PCT Water Soluble Magnes			Meth: 144.99 PCT Sulfur			474	5.96 s	3.00	307	5.00	-.57
231	1.35	-.19	475	1.32	1.81	Other			292	5.64	1.81	049	4.94	-.76
393	1.34	-.25	029	1.18	.13	360	5.58	1.73	360	5.58	1.58	291	4.91	-.86
324	1.35	-.25	Avg	1.17		117	5.48	1.43	114	5.56	1.53	368	4.89	-.96
460	1.34	-.34	027	1.14	-.48	157	5.32 R	1.14	117	5.48	1.27	230	4.83	-1.17
474	1.31	-.70	477	1.12	-.67	475	5.39	1.09	117	5.48	1.27	231	4.63	-1.89
420	1.30	-.71	477	1.12	-.72	300	5.32	.85	157	5.32 R	1.03	255	4.53	-2.30
102	1.31	-.72	Meth: 144.01 PCT Sulfur			137	5.28	.71	029	5.42	1.00	354	4.51	-2.32
291	1.29	-.82	Gravimetric			023	5.26	.64	475	5.39	.92	393	4.43	-2.63
095	1.28	-.90	114	5.56	1.92	389	5.20	.55	296	5.36	.77	035	3.97 s	-4.37
307	1.29	-.95	029	5.42	1.06	450	5.22	.51	296	5.36	.77	473	1.86 s	-12.01
029	1.30 R	-1.05	296	5.36	.70	419	5.18	.50	073	5.17 R	.70	Meth: 151.00 PPM Arsenic		
262	1.27	-1.10	200	5.30 X	.37	027	5.19	.40	300	5.32	.66	<u>Atomic Absorption</u>		
354	1.26	-1.16	324	5.28	.31	009	5.15	.37	200	5.30 X	.57	136	2.83	-.71
035	1.26 R	-1.34	043	5.28	.27	477	5.18	.35	137	5.28	.50	Meth: 151.30 PPM Arsenic		
086	1.23	-1.46	055	5.27	.23	390	5.15	.30	324	5.28	.50	<u>ICP</u>		
232	1.22	-1.60	095	5.27	.22	232	5.15	.26	043	5.28	.49	368	4.09 R	3.24
433	1.20	-1.84	Avg	5.24		422	5.12	.23	055	5.27	.47	393	3.52	1.31
255	1.19	-1.93	102	5.20	-.20	Avg	5.07		095	5.27	.43	474	3.20	.72
300	1.17	-2.18	233	5.22	-.20	096	5.06	-.06	389	5.20	.42	390	3.08	.26
042	1.00 s	-4.10	397	5.14	-.69	351	5.03	-.28	419	5.18	.39	450	3.00	.07
Meth: 131.00 PCT Water Soluble Magnes			444	5.12	-.73	307	5.00	-.31	450	5.22	.30	Avg	2.97	
AA			371	5.10	-.83	049	4.94	-.48	009	5.15	.28	096	2.65	-.77
029	1.18	.71	073	5.17 R	-1.19	291	4.91	-.57	102	5.20	.22	102	2.39	-1.61
Meth: 131.30 PCT Water Soluble Magnes			230	4.83	-2.45	368	4.89	-.67	027	5.19	.17	477	1.05 s	-4.57
ICP			Meth: 144.99 PCT Sulfur			231	4.63	-1.54	390	5.15	.15			
475	1.32	1.29	Meth: 144.99 PCT Sulfur			291	4.91	-.57	037	5.18	.14			
Avg	1.19		Meth: 144.99 PCT Sulfur			368	4.89	-.67	477	5.18	.13			
027	1.14	-.57	Meth: 144.99 PCT Sulfur			232	4.63	-1.54	232	5.15	.06			
			Meth: 144.99 PCT Sulfur			255	4.53	-1.93	Avg	5.14				
			Meth: 144.99 PCT Sulfur			354	4.51	-1.94	444	5.12	-.17			

\* 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: 151.99 PPM			Meth: 165.99 PCT			Meth: 165.XX PCT			Meth: 181.30 PPM			Meth: 190.00 PCT		
Arsenic			Acid Soluble Boron			Acid Soluble Boron			Cadmium			Water Soluble Chlori		
<u>Other</u>			<u>Other</u>			<u>Other</u>			<u>ICP</u>			<u>Titrimetric</u>		
231	2.84	.71	360	0.209	.54	029	0.204	.28	368	8.22	.41	105	22.42	.79
			043	0.207	.54	368	0.204	.25	419	8.24	.33	043	22.21	.52
			324	0.208	.51	009	0.203	.22	450	8.20	.27	Avg	21.85	
Meth: 151.XX PPM			291 0.205 .45			419 0.201 .11			Avg 8.03			422 20.92 -1.27		
Arsenic			477 0.205 .45			475 0.200 .03			037 8.01 -.10			023 1.32 S -27.92		
368	4.09 R	2.24	368 0.204 .27			042 0.200 .03			102 7.80 -.38					
393	3.52	1.13	009 0.203 .25			Avg 0.200			393 7.67 -.61			Meth: 190.99 PCT		
474	3.20	.73	419 0.201 .12			300 0.195 -.40			390 7.61 -.73			Water Soluble Chlori		
390	3.08	.50	475 0.200 .06			023 0.191 -.51			086 7.45 -.93			<u>Other</u>		
450	3.00	.39	042 0.200 .06			231 0.190 -.57			035 7.82 R -1.18			009 22.91 .71		
231	2.84	.16	Avg 0.199			296 0.187 -.76			232 6.75 -2.03					
136	2.83	.14	300 0.195 -.36			232 0.186 -.81						Meth: 190.XX PCT		
Avg	2.73		231 0.190 -.51			037 0.196 R -.86			Meth: 181.99 PPM			Water Soluble Chlori		
096	2.65	-.13	296 0.187 -.69			307 0.184 -1.08			Cadmium			009 22.91 1.03		
102	2.39	-.69	232 0.186 -.74			114 0.180 -1.16			<u>Other</u>			105 22.42 .40		
477	1.05	-2.40	307 0.184 -1.00			255 0.181 -1.17			231 8.66 -.71			043 22.21 .20		
			114 0.180 -1.08			086 0.172 -1.65			Meth: 181.XX PPM			Avg 22.11		
Meth: 165.00 PCT			255 0.181 -1.08			055 0.180 R -1.75			Meth: 181.XX PPM			422 20.92 -1.50		
Acid Soluble Boron			086 0.172 -1.54			389 0.170 -1.86			<u>Cadmium</u>			023 1.32 s -25.96		
<u>Spectrometric</u>			389 0.170 -1.74			354 0.165 -2.06			474 9.10 1.74					
397	0.217	1.14	354 0.165 -1.93						009 8.69 1.00			Meth: 191.30 PPM		
029	0.204	.35				Meth: 171.99 PCT			231 8.66 .94			Chromium		
393	0.203	.28				Water Soluble Boron			477 8.65 .93			<u>ICP</u>		
Avg	0.198		Meth: 165.XX PCT			<u>Other</u>			368 8.22 .37			096 69.00 1.59		
023	0.191	-.45	Acid Soluble Boron			027 0.204 -.71			136 8.15 .27			477 66.70 1.06		
037	0.196	-.87	137 0.230 1.81						419 8.24 .26			009 66.38 1.01		
055	0.180	-1.75	422 0.225 1.54						450 8.20 .19			450 66.00 .88		
			433 0.224 1.47						Avg 8.08			368 64.15 .46		
Meth: 165.99 PCT			473 0.220 1.22						037 8.01 -.16			037 63.64 .38		
Acid Soluble Boron			397 0.217 1.04						102 7.80 -.48			393 62.99 .19		
<u>Other</u>			200 0.215 X .97						393 7.67 -.72			419 62.25 .08		
137	0.230	1.77	444 0.205 R .95						390 7.61 -.84			Avg 62.17		
422	0.225	1.51	117 0.209 .67						086 7.45 -1.05			035 61.35 -.42		
433	0.224	1.44	043 0.207 .53						035 7.82 R -1.26			102 60.12 -.49		
473	0.220	1.20	360 0.209 .53						232 6.75 -2.20			086 59.06 -.91		
200	0.215 X .96		324 0.208 .50									474 58.50 -.91		
444	0.205 R .92		291 0.205 .44									027 57.00 -1.19		
117	0.209 .67		477 0.205 .44											

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Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
<u>Meth: 191.30 PPM</u>			<u>Meth: 202.30 PPM</u>			<u>Meth: 221.00 PCT</u>			<u>Meth: 221.XX PCT</u>			<u>Meth: 241.00 PCT</u>		
Chromium			Acid Soluble Cobalt			Acid Soluble Copper			Acid Soluble Copper			Acid Soluble Iron		
<u>ICP</u>			<u>ICP</u>			<u>Atomic Absorption</u>			<u>Atomic Absorption</u>			<u>Atomic Absorption</u>		
232	53.30	-2.04	009	2.51	1.48	043	0.0017	.68	324	0.0072 s	13.60	177	0.43	-.79
			393	2.32	.83	474	0.0016	.62	102	0.0055 s	10.26	474	0.42	-1.05
<u>Meth: 191.99 PPM</u>			035			Avg			422			028		
Chromium			2.31			0.0011			0.0035 R			0.42 R		
<u>Other</u>			368			0.0000			0.0035 R			262		
231	51.02	.71	2.26			-1.29			4.97			-1.69		
			.74						4.97					
			.49						2.71					
			102			<u>Meth: 221.30 PCT</u>			086			<u>Meth: 241.30 PCT</u>		
			2.18			Acid Soluble Copper			0.0018			Acid Soluble Iron		
			.34			<u>ICP</u>			1.21			<u>ICP</u>		
			Avg			324			0.0020			117		
			2.10			0.0072 s			1.15			0.53		
			390			15.40			1.06			2.35		
			1.99			11.55			.96			1.70		
			-.69			8.13			.65			1.56		
			057			5.42			.54			1.18		
			2.06			5.42			.41			1.11		
			-1.08			2.83			.36			1.00		
			419			1.19			.27			.93		
			1.80			.99			.27			.92		
			-1.12			.96			.15			.90		
			086			.42			.01			.82		
			1.85			.29			-0.13			.81		
			-1.12			.99			-0.18			.48		
			232			.96			-0.21			.39		
			1.68			.42			-0.21			.38		
			-1.55			.29			-0.23			.32		
			Meth: 202.99 PPM			.96			-0.35			.32		
			Acid Soluble Cobalt			.42			-0.74			.24		
			<u>Other</u>			.29			-3.56			.17		
			231			.99			Meth: 241.00 PCT			.16		
			1.57			.96			Acid Soluble Iron			.16		
			.71			.42			<u>Atomic Absorption</u>			.44		
			Meth: 202.XX PPM			.29			419			0.44		
			Acid Soluble Cobalt			.99			0.48			-0.06		
			136			.96			1.24			-0.09		
			14.50 s			.42			1.07			-0.10		
			41.80			.29			.68			-0.24		
			11.09 s			.96			.64			-0.46		
			30.31			.42			.37			-0.53		
			009			.96			Avg			-0.62		
			2.51			.42			0.45					
			1.57			.29			0.44					
			.94			.96			-0.50					
			.94			.42								
			.92			.29								
			.83			.96								
			.83			.42								
			.59			.29								
			.46			.96								
			.46			.42								
			-.18			.29								
			-.57			.96								
			-.85			.42								
			-.93			.29								
			-1.31			.96								
			-1.65			.42								
			Meth: 221.99 PCT			.29								
			Acid Soluble Copper			.96								
			<u>Other</u>			.42								
			231			.29								
			0.0016			.96								
			.00			.42								

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Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 241.30 PCT			Meth: 241.XX PCT			Meth: 251.00 PPM			Meth: 261.00 PCT			Meth: 261.30 PCT		
<u>Acid Soluble Iron</u>			<u>Acid Soluble Iron</u>			<u>Lead</u>			<u>Acid Soluble Manganese</u>			<u>Acid Soluble Manganese</u>		
<u>ICP</u>			<u>ICP</u>			<u>Atomic Absorption</u>			<u>AA</u>			<u>ICP</u>		
444	0.43	-.63	371	0.46	.46	136	19.00 S	.00	Avg	0.011		231	0.010	-.79
354	0.42	-.72	360	0.46	.39	477	2.65	.55	296	0.011	-.12	086	0.010	-.87
450	0.42	-.84	037	0.46	.38	390	2.64	.52	460	0.010	-.53	232	0.009	-1.60
307	0.41	-.91	393	0.44	.33	393	2.44	.06	262	0.010	-.53	027	0.009	-1.94
255	0.40	-1.26	131	0.45	.32	Meth: 251.30 PPM			028	0.009	-1.25	300	0.006 s	-5.31
291	0.40	-1.28	023	0.45	.23	<u>Lead</u>			397	0.009 S	-1.87	432	0.000 s	-12.22
422	0.40	-1.28	095	0.45	.16	<u>ICP</u>			Meth: 261.30 PCT			Meth: 261.31 PCT		
027	0.39	-1.33	473	0.45	.15	419	3.80 R	3.28	<u>Acid Soluble Manganese</u>			<u>Acid Soluble Manganese</u>		
042	0.37	-1.95	231	0.45	.15	450	3.00	1.33	<u>ICP</u>			<u>ICP</u>		
232	0.37	-2.10	Avg	0.44		477	2.65	.55	117	0.107 s	110.31	324	0.012	.71
432	0.40 R	-2.63	419	0.44	-.08	390	2.64	.52	330	0.100 s	102.10	Meth: 261.99 PCT		
477	0.23 s	-5.87	368	0.44	-.11	393	2.44	.06	420	0.017 s	7.21	<u>Acid Soluble Manganese</u>		
Meth: 241.99 PCT			460	0.44	-.26	Avg	2.41		475	0.013	2.14	<u>Other</u>		
<u>Acid Soluble Iron</u>			389	0.44	-.26	Meth: 251.99 PPM			368	0.011 R	1.64	042	0.014	1.46
<u>Other</u>			177	0.43	-.49	<u>Lead</u>			096	0.012	1.61	474	0.012	.25
137	0.58	.00	433	0.43	-.50	<u>Other</u>			037	0.012	1.09	Avg	0.012	
Meth: 241.XX PCT			402	0.42	-.55	231	2.28	-.71	055	0.012	1.09	393	0.011	-.60
<u>Acid Soluble Iron</u>			035	0.43	-.56	Meth: 251.XX PPM			095	0.012	1.06	255	0.010	-.97
137	0.58 A	3.87	086	0.42	-.66	<u>Lead</u>			009	0.011	.92	Meth: 261.XX PCT		
117	0.53	2.43	444	0.43	-.67	136	19.00 s	40.77	057	0.011	.84	<u>Acid Soluble Manganese</u>		
114	0.51	1.76	474	0.42	-.70	419	3.80 R	3.58	402	0.011	.70	117	0.107 s	95.95
330	0.50	1.61	354	0.42	-.77	450	3.00	1.48	360	0.011	.55	330	0.100 s	88.79
324	0.49	1.22	450	0.42	-.89	028	0.42	-.91	354	0.011	.35	420	0.017 s	6.17
029	0.48	1.16	028	0.42	-.91	307	0.41	-.97	102	0.011	.35	042	0.014	3.18
055	0.47 R	1.14	262	0.40	-1.21	262	0.40	-1.21	035	0.011	.29	029	0.013 R	2.40
102	0.48	1.03	390	0.40	-1.34	255	0.40	-1.34	Avg	0.011		475	0.013	1.76
397	0.48	1.02	291	0.40	-1.36	422	0.40	-1.36	233	0.011	-.15	368	0.011 R	1.38
009	0.48	.95	422	0.40	-1.36	027	0.39	-1.41	433	0.010	-.49	096	0.012	1.29
057	0.48	.94	027	0.39	-1.41	042	0.37	-2.06	131	0.010	-.58	043	0.012	1.04
096	0.48	.92	042	0.37	-2.06	232	0.37	-2.21	307	0.011	-.61	043	0.012	1.04
390	0.47	.83	432	0.40 R	-2.75	432	0.40 R	-2.75	444	0.011	-.61	474	0.012	.98
233	0.47	.83	477	0.23 s	-6.15	Meth: 261.00 PCT			422	0.010	-.79	055	0.012	.85
296	0.47	.71				<u>Acid Soluble Manganese</u>			114	0.010	-.79	037	0.012	.85
043	0.47	.68				<u>AA</u>			291	0.010	-.79	095	0.012	.82
475	0.46	.48				029	0.013	1.68	450	0.010	-.79	324	0.012	.70
						043	0.012	.74	419	0.010	-.79			

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Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	
Meth: 261.XX PCT			Meth: 281.00 PPM			Meth: 289.99 PPM			Meth: 291.30 PPM			Meth: 301.99 PPM			
<u>Acid Soluble Manganese</u>			<u>Mercury</u>			<u>Molybdenum</u>			<u>Nickel</u>			<u>Selenium</u>			
009	0.011	.69	<u>Atomic Absorption</u>			<u>Other</u>			<u>ICP</u>			<u>Other</u>			
057	0.011	.63	232	0.02	.71	422	10.60 S	12.08	102	11.19	-.45	231	4.11	.87	
402	0.011	.50	Meth: 281.30 PPM			028	5.57	.86	049	11.62	-.50	Avg	2.20		
360	0.011	.37	<u>Mercury</u>			Avg	5.18		086	10.90	-.63	296	0.29	-.86	
102	0.011	.19	<u>ICP</u>			231	4.79	-.87	474	10.00	-1.12	Meth: 301.XX PPM			
354	0.011	.19	393	0.31	.87	Meth: 289.XX PPM			232	9.55	-1.39	<u>Selenium</u>			
Avg	0.011		Avg			0.15	<u>Molybdenum</u>			Meth: 291.99 PPM			231	4.11	1.62
296	0.011	-.20	450	0.00	-.87	037	12.00 s	15.00	<u>Nickel</u>			Avg	1.10		
233	0.011	-.21	Meth: 281.XX PPM			422	10.60 s	12.13	<u>Other</u>			450	0.50 R	-.42	
035	0.011	-.25	<u>Mercury</u>			450	5.50 R	2.02	231	8.28	.71	296	0.29	-.43	
393	0.011	-.29	393	0.31	1.29	028	5.57	1.87	Meth: 291.XX PPM			477	0.00	-.59	
433	0.010	-.52	Avg	0.11		393	5.39	1.52	<u>Nickel</u>			393	0.00 X	-.59	
444	0.011	-.58	232	0.02	-.58	390	5.17	1.34	477	16.10	2.23	Meth: 311.30 PCT			
307	0.011	-.58	450	0.00	-.71	057	5.00	.89	450	14.00	1.27	<u>Sodium</u>			
131	0.010	-.61	Meth: 289.30 PPM			231	4.79	.30	009	12.77	.57	<u>Flame Photometric</u>			
422	0.010	-.80	<u>Molybdenum</u>			Avg	4.65		419	12.25	.28	105	0.57	-.71	
262	0.010	-.80	<u>ICP</u>			232	4.53	-.25	368	12.10	.23	Meth: 311.99 PCT			
291	0.010	-.80	037	12.00 s	14.23	419	4.50	-.36	Avg	11.70		<u>Sodium</u>			
450	0.010	-.80	450	5.50	1.94	433	4.47	-.41	393	11.70	-.10	<u>Other</u>			
460	0.010	-.80	393	5.39	1.47	474	4.40	-.50	035	11.65	-.23	422	0.65	1.76	
231	0.010	-.80	390	5.17	1.30	086	4.54	-.70	102	11.19	-.26	475	0.61	.92	
419	0.010	-.80	057	5.00	.87	035	4.22	-.92	049	11.62	-.41	307	0.60	.81	
114	0.010	-.80	Avg	4.63		102	4.21	-.92	086	10.90	-.42	474	0.58	.31	
086	0.010	-.82	232	4.53	-.21	009	4.18	-.96	474	10.00	-.86	Avg	0.57		
255	0.010	-.89	419	4.50	-.32	368	4.10	-1.13	232	9.55	-1.10	057	0.56	-.33	
232	0.009	-1.50	433	4.47	-.36	Meth: 291.30 PPM			231	8.28	-1.74	102	0.57	-.47	
027	0.009	-1.80	474	4.40	-.44	<u>Nickel</u>			Meth: 301.30 PPM			086	0.56	-.55	
028	0.009 R	-1.83	086	4.54	-.65	<u>ICP</u>			<u>Selenium</u>			009	0.55	-.57	
397	0.009 s	-2.74	035	4.22	-.84	477	16.10	2.33	<u>ICP</u>			232	0.53	-1.08	
300	0.006 s	-4.73	102	4.21	-.84	450	14.00	1.27	393	0.00 X	.00	035	0.51	-1.64	
432	0.000 s	-10.76	009	4.18	-.88	009	12.77	.48	450	0.50 s	.00	Meth: 311.XX PCT			
Meth: 271.30 PCT			368	4.10	-1.04	368	12.10	.13	477	0.00	.00	<u>Sodium</u>			
<u>Water Soluble Mangan</u>			Avg			11.99	Avg			0.00		422	0.65	1.84	
<u>ICP</u>			393	11.70	-.20	393	11.70	-.20	Avg			475	0.61	.95	
475	0.010	.00	035	11.65	-.32	035	11.65	-.32							

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Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 311.XX PCT			Meth: 321.30 PCT			Meth: 321.99 PCT			Meth: 321.XX PCT					
<u>Sodium</u>			Acid Soluble Zinc			Acid Soluble Zinc			<u>Acid Soluble Zinc</u>					
307	0.60	.84	<u>ICP</u>			<u>Other</u>			114	0.230	.03			
474	0.58	.32	102	0.242	.98	137	0.250	1.18	Avg	0.230				
105	0.57	.20	475	0.240	.87	Avg	0.232		420	0.227	-.20			
Avg	0.57		096	0.238	.83	474	0.225	-.64	368	0.226	-.23			
057	0.56	-.35	095	0.237	.65	231	0.221	-.84	231	0.225	-.43			
102	0.57	-.50	450	0.235	.63				029	0.223	-.44			
086	0.56	-.58	477	0.235	.63	Meth: 321.XX PCT			131	0.224	-.48			
009	0.55	-.61	057	0.235	.56	<u>Acid Soluble Zinc</u>			474	0.225	-.52			
232	0.53	-1.14	324	0.234	.45	233	0.280 s	3.62	231	0.221	-.68			
035	0.51	-1.73	402	0.233	.41	330	0.250 s	3.46	035	0.221	-.79			
			037	0.232	.40	055	0.245 R	2.45	354	0.217	-.80			
Meth: 321.00 PCT			117	0.231	.38	042	0.260 R	2.33	023	0.216	-.90			
Acid Soluble Zinc			360	0.232	.32	049	0.262	2.06	389	0.216	-.90			
<u>Atomic Absorption</u>			114	0.230	.22	177	0.254	1.60	422	0.215	-.98			
177	0.254	1.16	Avg	0.227		292	0.250	1.46	291	0.215	-.98			
397	0.250	.89	420	0.227	-.03	397	0.250	1.34	086	0.221	-1.00			
043	0.245	.61	368	0.226	-.11	137	0.250	1.31	393	0.213	-1.04			
371	0.240	.60	231	0.225	-.34	009	0.246	1.06	232	0.212	-1.15			
028	0.245	.50	131	0.224	-.36	043	0.245	1.04	444	0.215 R	-1.34			
296	0.240	.26	354	0.217	-.63	028	0.245	.99	433	0.208	-1.38			
200	0.240 X	.16	035	0.221	-.68	473	0.240	.93	307	0.207	-1.48			
Avg	0.238		389	0.216	-.73	390	0.243	.88	262	0.205	-1.60			
460	0.235	-.39	023	0.216	-.74	371	0.240	.84	255	0.199	-1.96			
029	0.223	-1.01	422	0.215	-.82	102	0.242	.78	027	0.193	-2.37			
262	0.205	-2.26	291	0.215	-.82	296	0.240	.70	432	0.125 s	-10.44			
			393	0.213	-.87	200	0.240 X	.67	300	0.048 s	-11.63			
Meth: 321.30 PCT			086	0.221	-.92	475	0.240	.67	419	0.047 s	-11.69			
Acid Soluble Zinc			232	0.212	-.98	096	0.238	.65						
<u>ICP</u>			433	0.208	-1.22	450	0.235	.47						
233	0.280 s	3.84	444	0.215	-1.23	460	0.235	.47						
330	0.250 s	3.58	307	0.207	-1.31	477	0.235	.47						
055	0.245 R	2.56	255	0.199	-1.80	095	0.237	.46						
042	0.260 R	2.52	027	0.193	-2.22	057	0.235	.37						
049	0.262	2.27	432	0.125 s	-10.46	117	0.231	.29						
292	0.250	1.65	300	0.048 s	-11.59	324	0.234	.26						
009	0.246	1.26	419	0.047 s	-11.66	037	0.232	.25						
473	0.240	1.08				402	0.233	.25						
390	0.243	1.07				360	0.232	.13						

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

## 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	3	0.00	1.06	0.29	060.XX	7	0.00	1.02	0.19
001.99	9	0.00	1.01	0.19	101.30	19	0.51	1.99	0.37
001.XX	12	0.09	1.02	0.19	101.XX	19	0.51	1.99	0.37
002.99	4	0.00	1.08	0.00	121.00	10	- 0.12	0.99	0.45
002.XX	4	0.00	1.08	0.00	121.30	40	0.49	2.92	0.22
009.10	4	0.00	1.06	0.16	121.99	4	0.00	0.95	0.44
009.XX	4	0.00	1.06	0.16	121.XX	53	0.43	2.87	0.27
010.11	9	0.00	1.03	0.09	131.30	3	0.00	1.11	0.09
010.12	3	- 2.00	3.57	0.35	131.XX	4	0.17	1.13	0.10
010.60	62	- 0.12	1.75	0.51	144.01	15	- 0.03	0.97	0.34
010.99	5	- 0.79	1.97	0.23	144.99	29	- 0.48	2.36	0.26
010.XX	78	- 0.23	1.75	0.46	144.XX	46	- 0.27	2.15	0.26
020.10	8	- 6.58	17.18	1.01	151.30	8	- 0.24	2.14	0.74
020.20	15	0.03	0.97	0.23	151.XX	10	0.19	1.13	0.40
020.40	5	- 0.59	1.57	0.79	165.00	6	0.000	0.767	0.653
020.50	12	2.85	10.00	0.64	165.99	27	0.013	0.966	0.276
020.99	7	0.00	1.00	0.28	165.XX	33	- 0.032	0.960	0.378
020.XX	45	0.92	12.67	0.88	181.30	13	- 0.03	0.96	0.37
030.XX	4	0.00	1.03	0.28	181.XX	15	- 0.03	0.97	0.36
040.XX	5	- 0.91	2.19	1.04	190.00	4	- 6.98	13.99	0.13
041.10	14	- 0.01	0.93	0.42	190.XX	5	- 5.19	11.64	0.16
041.20	2	0.00	0.98	0.52	191.30	14	0.00	0.99	0.24
041.40	4	0.00	1.08	0.07	191.XX	15	0.00	0.99	0.21
041.50	13	- 0.52	1.76	0.57	202.00	2	0.00	0.00	0.00
041.60	12	0.29	1.34	0.43	202.30	12	2.65	9.21	0.45
041.99	2	0.00	0.00	0.00	202.XX	15	4.81	12.89	0.58
041.XX	39	- 0.19	1.81	0.71	221.00	3	0.0000	1.1141	0.0766
048.20	3	0.00	1.12	0.06	221.30	22	2.0279	4.3207	1.1566
048.XX	4	0.00	1.08	0.06	221.XX	26	1.6324	3.6243	0.9204
050.00	16	- 0.03	0.96	0.27	241.00	10	- 0.11	1.02	0.26
050.10	2	- 33.18	46.92	0.69	241.30	40	- 0.16	1.35	0.43
050.30	8	2.97	5.83	0.98	241.XX	51	- 0.06	1.41	0.41
050.50	9	0.20	1.09	0.60	251.30	7	0.45	1.53	0.35
050.51	11	0.76	2.10	0.24	251.XX	9	4.90	13.50	0.88
050.60	5	0.00	1.04	0.17	261.00	7	- 0.223	1.060	0.524
050.61	12	0.00	0.94	0.39	261.30	32	6.330	26.345	1.274
050.99	22	- 0.41	1.94	1.07	261.99	4	0.000	1.067	0.148
050.XX	78	- 0.10	2.21	0.80	261.XX	44	3.955	19.641	0.996
060.00	5	0.00	1.03	0.24	281.30	2	0.00	1.22	0.01



## Method Evaluation - Z Values Based on 1 Reports

<u>Method Code</u>	<u>Number Of Labs</u>	<u>Avg Bias of Labs</u>	<u>Std Dev of Biases</u>	<u>Std Dev Within Labs</u>	<u>Method Code</u>	<u>Number Of Labs</u>	<u>Avg Bias of Labs</u>	<u>Std Dev of Biases</u>	<u>Std Dev Within Labs</u>
281.XX	3	0.00	1.12	0.01					
289.30	14	1.02	3.90	0.43					
289.99	3	4.02	7.02	0.11					
289.XX	17	1.70	4.59	0.41					
291.30	12	0.00	0.99	0.24					
291.XX	13	0.00	1.00	0.22					
301.30	3	0.00	0.00	0.00					
301.99	2	0.00	1.22	0.06					
301.XX	5	- 0.06	0.94	0.13					
311.99	10	0.00	0.96	0.34					
311.XX	11	0.00	0.96	0.34					
321.00	10	0.000	0.978	0.298					
321.30	43	- 0.501	2.907	1.447					
321.99	3	0.000	1.033	0.348					
321.XX	54	- 0.433	2.633	1.281					