

- Pass 1 Results for 81 Labs - - Pass 2 Results for 81 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	5	11.49	0.17	0.14	5	11.49	0.17	0.14
Ammoniacal Nitrogen, Other		001.99	9	11.50	0.22	0.10	8	11.50	0.19	0.02
Method Group 001.XX PCT			14	11.50	0.20	0.11	13	11.50	0.18	0.07
Nitrate Nitrogen, Robertson	930.01	002.10	1	2.85	0.07	0.10	1	2.85	0.07	0.10
Nitrate Nitrogen, Other		002.99	1	0.84	0.01	0.01	1	0.84	0.01	0.01
Method Group 002.XX PCT			2	1.85	1.16	0.06	2	1.85	1.16	0.06
Water Insoluble Nitrogen, Meth I	945.01	003.10	1	0.76	0.04	0.05	1	0.76	0.04	0.05
Ammon & Nitrate N, Devarda	892.01	009.10	9	12.41	0.80	0.06	9	12.41	0.80	0.06
Method Group 009.XX PCT			9	12.41	0.80	0.06	9	12.41	0.80	0.06
Total Nitrogen, Modified Comprehensive	978.02	010.11	6	12.53	0.17	0.11	6	12.53	0.17	0.11
Total Nitrogen, Salicylic	955.04D	010.12	2	12.65	0.32	0.03	2	12.65	0.32	0.03
Total Nitrogen, Combustion		010.60	51	12.57	0.20	0.10	49	12.58	0.19	0.09
Total Nitrogen, Other		010.99	4	12.43	0.10	0.07	4	12.43	0.10	0.07
Method Group 010.XX PCT			63	12.56	0.20	0.09	62	12.56	0.20	0.09
Total Phosphate, Grav Quimociac	962.02	020.10	9	13.21	0.12	0.04	9	13.21	0.12	0.04
Total Phosphate, Spectrometric	958.01	020.20	9	13.36	0.20	0.07	9	13.36	0.20	0.07
Total Phosphate, Automated	978.01	020.40	7	13.20	0.20	0.09	7	13.20	0.20	0.09
Total Phosphate, ICP		020.50	15	13.10	0.32	0.20	15	13.10	0.32	0.20
Total Phosphate, Other		020.99	4	13.10	0.40	0.04	4	13.10	0.40	0.04
Method Group 020.XX PCT			44	13.19	0.27	0.11	41	13.20	0.24	0.08
Insoluble Phosphate, Automated	978.01	030.40	1	0.07	0.04	0.05	1	0.07	0.04	0.05
Insoluble Phosphate, Other		030.99	1	0.05	0.01	0.01	1	0.05	0.01	0.01
Method Group 030.XX PCT			2	0.06	0.02	0.03	2	0.06	0.02	0.03
InDir Available Phosphate, Grav Quim ..	960.02	040.10	1	13.05	0.07	0.10	1	13.05	0.07	0.10
InDir Available Phosphate, Spectrometri	960.02	040.20	1	13.42	0.18	0.26	1	13.42	0.18	0.26
InDir Available Phosphate, Automated ..	960.02	040.40	2	13.04	0.04	0.07	2	13.04	0.04	0.07
InDir Available Phosphate, ICP		040.50	2	13.09	0.19	0.19	2	13.09	0.19	0.19
InDir Available Phosphate, Other		040.99	2	13.22	0.33	0.05	2	13.22	0.33	0.05
Method Group 040.XX PCT			8	13.14	0.22	0.12	8	13.14	0.22	0.12
Dir Available Phosphate, Grav Quimociac	960.03E	041.10	11	13.16	0.09	0.09	10	13.16	0.08	0.06
Dir Available Phosphate, Automated ....	978.01	041.40	2	13.51	0.15	0.25	2	13.51	0.15	0.25
Dir Available Phosphate, ICP		041.50	11	13.08	0.36	0.18	11	13.08	0.36	0.18
Dir Available Phosphate, EDTA Extract .	993.01	041.60	6	13.23	0.05	0.02	6	13.23	0.05	0.02
Dir Available Phosphate, Other		041.99	1	13.21	0.01	0.01	1	13.21	0.01	0.01
Method Group 041.XX PCT			33	13.17	0.26	0.12	32	13.18	0.24	0.11
Water Soluble Phosphate, Spectrometric	970.01	048.20	4	11.53	0.87	0.21	4	11.53	0.87	0.21
Water Soluble Phosphate, ICP		048.50	2	11.90	0.23	0.15	2	11.90	0.23	0.15
Water Soluble Phosphate, Other		048.99	1	11.42	0.05	0.07	1	11.42	0.05	0.07
Method Group 048.XX PCT			7	11.62	0.68	0.18	7	11.62	0.68	0.18

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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
Soluble Potash, STPB Oxalate	958.02	050.00	14	13.31	0.22	0.13	13	13.31	0.21	0.09
Soluble Potash, STPB Citrate	969.04	050.10	2	13.15	0.04	0.05	2	13.15	0.04	0.05
Soluble Potash, AA (Oxalate)		050.30	4	13.15	0.09	0.10	4	13.15	0.09	0.10
Soluble Potash, AA (Citrate)		050.31	1	13.60	0.71	1.00	1	13.60	0.71	1.00
Soluble Potash, ICP (Oxalate)		050.50	8	13.40	0.51	0.20	8	13.40	0.51	0.20
Soluble Potash, ICP (Citrate)		050.51	12	13.48	0.58	0.14	11	13.42	0.56	0.10
Soluble Potash, Flame (Oxalate)	983.02(a)	050.60	3	13.19	0.10	0.09	3	13.19	0.10	0.09
Soluble Potash, Flame (Citrate)	983.02(b)	050.61	6	13.42	0.28	0.17	6	13.42	0.28	0.17
Soluble Potash, Other		050.99	24	13.20	0.46	0.18	23	13.22	0.44	0.15
Method Group 050.XX PCT			75	13.29	0.44	0.17	72	13.29	0.43	0.14
Free Water, Vacuum Oven	965.08B	060.00	5	0.75	0.23	0.09	5	0.75	0.23	0.09
Free Water, Vacuum Desiccate	965.08A	060.10	1	0.59	0.01	0.02	1	0.59	0.01	0.02
Free Water, Other		060.99	1	1.76	0.01	0.02	1	1.76	0.01	0.02
Method Group 060.XX PCT			7	0.87	0.43	0.07	6	0.90	0.45	0.04
Acid Soluble Calcium, AA	945.04	101.00	1	0.74	0.01	0.02	1	0.74	0.01	0.02
Acid Soluble Calcium, ICP		101.30	15	0.67	0.04	0.02	14	0.67	0.04	0.02
Acid Soluble Calcium, Other		101.99	1	0.70	0.00	0.00	1	0.70	0.00	0.00
Method Group 101.XX PCT			17	0.67	0.04	0.02	16	0.67	0.04	0.02
Acid Soluble Magnesium, AA	984.01	121.00	7	2.09	0.04	0.03	7	2.09	0.04	0.03
Acid Soluble Magnesium, ICP		121.30	32	2.11	0.15	0.04	31	2.12	0.14	0.03
Acid Soluble Magnesium, Other		121.99	2	2.05	0.13	0.07	2	2.05	0.13	0.07
Method Group 121.XX PCT			43	2.10	0.14	0.04	41	2.10	0.14	0.03
Water Soluble Magnesium, AA		131.00	1	1.89	0.18	0.25	1	1.89	0.18	0.25
Water Soluble Magnesium, ICP		131.30	6	1.53	0.40	0.10	6	1.53	0.40	0.10
Water Soluble Magnesium, Other		131.99	2	1.13	0.27	0.06	2	1.13	0.27	0.06
Method Group 131.XX PCT			9	1.48	0.41	0.11	9	1.48	0.41	0.11
Sulfur, Gravimetric	980.02a	144.01	12	12.26	0.24	0.07	12	12.26	0.24	0.07
Sulfur, Gravimetric	980.02b	144.02	2	11.85	0.74	0.02	2	11.85	0.74	0.02
Sulfur, Spectrometric		144.70	1	13.05	0.03	0.04	1	13.05	0.03	0.04
Sulfur, Other		144.99	27	11.58	0.65	0.29	25	11.69	0.53	0.23
Method Group 144.XX PCT			44	11.85	0.72	0.21	39	11.96	0.64	0.13
Arsenic, Atomic Absorption		151.00	2	6.57	0.26	0.35	2	6.57	0.26	0.35
Arsenic, ICP		151.30	6	5.74	0.40	0.26	5	5.80	0.36	0.13
Arsenic, Other		151.99	1	6.10	0.14	0.20	1	6.10	0.14	0.20
Method Group 151.XX PPM			9	5.96	0.49	0.27	9	5.96	0.49	0.27
Acid Soluble Boron, Spectrometric	982.01	165.00	6	0.133	0.008	0.004	6	0.133	0.008	0.004
Acid Soluble Boron, Other		165.99	26	0.141	0.008	0.005	25	0.141	0.008	0.005
Method Group 165.XX PCT			32	0.139	0.009	0.005	31	0.139	0.009	0.005
Water Soluble Boron, Other		171.99	3	1.591	2.276	0.335	3	1.591	2.276	0.335

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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
Cadmium, Atomic Absorption		181.00	2	3.96	0.04	0.05	2	3.96	0.04	0.05
Cadmium, ICP		181.30	11	3.91	0.39	0.26	10	3.95	0.35	0.18
Method Group 181.XX PPM			13	3.92	0.36	0.22	12	3.95	0.32	0.16
Water Soluble Chlorine, Titrimetric	928.02	190.00	1	7.55	0.07	0.10	1	7.55	0.07	0.10
Chromium, ICP		191.30	14	68.47	12.57	3.72	13	69.20	12.43	2.46
Acid Soluble Cobalt, ICP	965.11	202.30	12	11.79	3.27	1.52	11	11.77	3.26	1.06
Acid Soluble Copper, Atomic Absorption	975.01	221.00	4	0.0079	0.0014	0.0004	4	0.0079	0.0014	0.0004
Acid Soluble Copper, ICP		221.30	23	0.0074	0.0012	0.0005	22	0.0074	0.0012	0.0004
Acid Soluble Copper, Other		221.99	1	0.0065	0.0007	0.0010	1	0.0065	0.0007	0.0010
Method Group 221.XX PCT			28	0.0074	0.0012	0.0005	27	0.0074	0.0012	0.0004
Acid Soluble Iron, Atomic Absorption	980.01	241.00	6	0.41	0.04	0.01	6	0.41	0.04	0.01
Acid Soluble Iron, ICP		241.30	38	0.40	0.03	0.01	37	0.40	0.03	0.01
Acid Soluble Iron, Other		241.99	3	0.41	0.02	0.02	3	0.41	0.02	0.02
Method Group 241.XX PCT			48	0.40	0.03	0.01	45	0.40	0.03	0.01
Lead, Atomic Absorption		251.00	1	22.00	1.41	2.00	1	22.00	1.41	2.00
Lead, ICP		251.30	12	17.68	3.19	1.54	12	17.68	3.19	1.54
Lead, Other		251.99	1	19.20	1.13	1.60	1	19.20	1.13	1.60
Method Group 251.XX PPM			14	18.10	3.18	1.57	14	18.10	3.18	1.57
Acid Soluble Manganese, AA	972.02a	261.00	7	0.441	0.052	0.015	6	0.435	0.051	0.007
Acid Soluble Manganese, ICP	972.02a	261.30	32	0.438	0.025	0.013	31	0.439	0.025	0.012
Acid Soluble Manganese, ICP	972.02b	261.31	1	0.535	0.007	0.010	1	0.535	0.007	0.010
Acid Soluble Manganese, Other		261.99	6	0.456	0.030	0.010	6	0.456	0.030	0.010
Method Group 261.XX PCT			48	0.446	0.036	0.014	45	0.444	0.034	0.011
Water Soluble Manganese, Atomic Abs	972.03	271.00	2	0.070	0.020	0.014	2	0.070	0.020	0.014
Water Soluble Manganese, ICP	972.03	271.30	5	0.038	0.019	0.006	5	0.038	0.019	0.006
Water Soluble Manganese, Other		271.99	1	0.010	0.000	0.000	1	0.010	0.000	0.000
Method Group 271.XX PCT			8	0.043	0.026	0.008	8	0.043	0.026	0.008
Molybdenum, ICP		289.30	11	5.28	1.03	0.12	10	5.30	1.07	0.08
Nickel, Atomic Absorption		291.00	1	31.50	0.71	1.00	1	31.50	0.71	1.00
Nickel, ICP		291.30	14	26.22	3.99	1.16	14	26.22	3.99	1.16
Method Group 291.XX PPM			15	26.57	4.08	1.15	15	26.57	4.08	1.15
Selenium, ICP		301.30	2	1.02	0.70	0.64	2	1.02	0.70	0.64
Sodium, Atomic Absorption	983.04	311.00	1	0.37	0.00	0.00	1	0.37	0.00	0.00
Sodium, Other		311.99	7	0.36	0.02	0.01	7	0.36	0.02	0.01
Method Group 311.XX PCT			8	0.36	0.02	0.01	8	0.36	0.02	0.01
Acid Soluble Zinc, Atomic Absorption	975.02	321.00	8	0.201	0.016	0.012	8	0.201	0.016	0.012
Acid Soluble Zinc, ICP		321.30	33	0.211	0.022	0.014	31	0.209	0.019	0.010
Acid Soluble Zinc, Other		321.99	3	0.240	0.038	0.020	3	0.240	0.038	0.020
Method Group 321.XX PCT			44	0.211	0.024	0.014	42	0.210	0.022	0.011

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 001.10 PCT			Meth: 001.XX PCT			Meth: 009.99 PCT			Meth: 010.60 PCT			Meth: 010.60 PCT		
<u>Ammoniacal Nitrogen</u>			<u>Ammoniacal Nitrogen</u>			<u>Ammon &amp; Nitrate N</u>			<u>Total Nitrogen</u>			<u>Total Nitrogen</u>		
<u>MgO Distillation</u>			<u>Other</u>			<u>Other</u>			<u>Combustion</u>			<u>Combustion</u>		
486	11.53	.97	500	11.21	-1.60	493	0.79 S	.00	102	13.57 s	5.36	234	12.49	-.47
405	11.65	.90	Meth: 002.10 PCT			Meth: 009.XX PCT			426	13.27 s	3.75	405	12.49	-.52
444	11.62	.83	Nitrate Nitrogen			Ammon & Nitrate N			023	13.05	2.59	292	12.48	-.53
Avg	11.49		<u>Robertson</u>			Avg			423	12.95	2.02	368	12.49	-.54
498	11.35	-.84	498	2.85	.71	498	14.20	2.23	072	12.89	1.71	482	12.45	-.74
105	11.30	-1.15	Meth: 002.99 PCT			090			029	12.86	1.55	325	12.45	-.74
Meth: 001.99 PCT			Nitrate Nitrogen			Avg			351	12.64 R	1.30	472	12.45	-.74
<u>Ammoniacal Nitrogen</u>			<u>Other</u>			169			501	12.79 X	1.23	049	12.44	-.79
<u>Other</u>			027	0.84	-.71	497	12.06	-.43	055	12.76	1.14	421	12.53 X	-.83
258	11.78	1.48	Meth: 002.XX PCT			309			035	12.78	1.12	028	12.44	-.92
096	11.69	1.00	Nitrate Nitrogen			493			307	12.78	1.09	157	12.40	-.96
371	11.59	.47	Avg			452			483	12.76	.99	043	12.33	-1.34
220	11.56	.31	498	2.85	.87	493			136	12.71	.75	422	12.30	-1.59
Avg	11.50		Avg	1.85		452			095	12.69	.69	402	12.25	-1.79
420	11.49	-.16	027	0.84	-.87	493			177	12.70	.66	485	12.22	-1.94
474	11.42	-.44	Meth: 003.10 PCT			Meth: 010.11 PCT			025	12.69	.65	444	12.16	-2.28
027	11.29	-1.17	Water Insoluble Nitr			Total Nitrogen			360	12.66	.51	034	12.04 A	-2.91
500	11.21	-1.56	<u>Meth I</u>			<u>Modified Comprehensi</u>			486	12.61	.42	Meth: 010.99 PCT		
368	11.50 R	-1.92	498	0.76	.71	455			390	12.64	.37	Total Nitrogen		
Meth: 001.XX PCT			Meth: 009.10 PCT			211			451	12.61	.37	<u>Other</u>		
<u>Ammoniacal Nitrogen</u>			Ammon & Nitrate N			137			354	12.60	.28	300	12.55	1.20
368	11.50 R	2.01	<u>Devarda</u>			470			096	12.59	.28	460	12.45	.22
258	11.78	1.58	498	14.20	2.23	Avg			231	12.62	.22	Avg	12.43	
096	11.69	1.08	444	12.88	.59	220			443	12.60	.12	500	12.38	-.52
486	11.53	.93	258	12.78	.46	105			377	12.59	.07	487	12.34	-1.32
405	11.65	.83	090	12.47	.09	493			Avg	12.58		420	11.12 S	-12.96
444	11.62	.76	Avg	12.41		416			291	12.57	-.07	Meth: 010.XX PCT		
371	11.59	.52	169	12.32	-.11	114			105	12.54	-.24	Total Nitrogen		
220	11.56	.36	497	12.06	-.43	Meth: 010.12 PCT			389	12.54	-.27	<u>Other</u>		
Avg	11.50		309	11.87	-.67	Total Nitrogen			247	12.55	-.31	498	14.05 s	7.57
420	11.49	-.15	493	11.55	-1.07	<u>Salicylic</u>			488	12.55	-.31	455	13.55 s	5.49
474	11.42	-.43	452	11.54	-1.09	498			042	12.55	-.31	102	13.57 s	5.14
498	11.35	-.87	Meth: 009.10 PCT			254			007	12.55	-.31	426	13.27 s	3.63
105	11.30	-1.17	Ammon & Nitrate N			Avg			275	12.54	-.34	023	13.05	2.54
027	11.29	-1.19	<u>Devarda</u>			185			406	12.52	-.35	423	12.95	2.00
			Avg			12.37			041	12.53 X	-.46	254	12.92	1.85

\* 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: 020.10 PCT			Meth: 020.50 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>		
072	12.89	1.71	405	12.49	-.38	<u>Grav Quimociac</u>			<u>ICP</u>			025	13.50	1.32
029	12.86	1.56	292	12.48	-.39	105	13.17	-.69	426	13.56	1.68	258	13.46	1.10
351	12.64 R	1.25	368	12.49	-.41	322	12.99	-1.91	025	13.50	1.28	169	13.43	.96
501	12.79 X	1.25	460	12.45	-.57	Meth: 020.20 PCT			307	13.21	1.06	291	13.39	.80
055	12.76	1.16	325	12.45	-.60	<u>Total Phosphate</u>			291	13.39	.90	497	13.37	.76
035	12.78	1.16	472	12.45	-.60	<u>Spectrometric</u>			368	13.20	.56	114	13.37	.73
307	12.78	1.12	482	12.45	-.60	406	13.70	1.75	389	13.21	.38	090	13.36	.65
483	12.76	1.03	049	12.44	-.64	292	13.54	.91	402	13.19	.30	368	13.20	.61
211	12.75	.98	421	12.53 X	-.75	258	13.46	.56	474	13.19	.27	300	13.33	.54
136	12.71	.80	028	12.44	-.78	169	13.43	.41	Avg	13.10		470	13.31	.44
095	12.69	.74	157	12.40	-.79	497	13.37	.31	234	13.08	-.09	211	13.27	.30
177	12.70	.73	220	12.39	-.86	Avg	13.36		444	13.08	-.17	470	13.27	.28
137	12.61	.73	500	12.38	-.90	231	13.25	-.58	157	13.00	-.31	389	13.21	.21
025	12.69	.71	105	12.41	-.93	405	13.24	-.61	451	12.97	-.41	231	13.25	.20
360	12.66	.57	185	12.37	-.95	371	13.19	-.97	472	12.75	-1.18	405	13.24	.19
390	12.64	.45	493	12.35	-1.08	420	13.06	-1.55	483	12.66	-1.40	500	13.22	.10
470	12.65	.45	043	12.33	-1.15	309	12.23 S	-5.89	482	12.50	-1.96	157	13.20	.01
486	12.61	.45	487	12.34	-1.21	498	12.20 S	-6.10	421	11.92 S	-3.70	Avg	13.20	
451	12.61	.41	422	12.30	-1.39	416	11.66 S	-8.66	Meth: 020.99 PCT			474	13.19	-.08
452	12.63	.37	402	12.25	-1.57	Meth: 020.40 PCT			<u>Total Phosphate</u>			402	13.19	-.13
354	12.60	.33	485	12.22	-1.71	<u>Total Phosphate</u>			<u>Other</u>			444	13.17	-.14
231	12.62	.31	444	12.16	-2.03	<u>Automated</u>			460	13.64	1.36	493	13.15	-.29
096	12.59	.31	034	12.04	-2.63	247	13.55	1.73	500	13.22	.32	105	13.17	-.30
443	12.60	.22	416	11.53 s	-5.23	300	13.33	.63	Avg	13.10		371	13.19	-.38
377	12.59	.17	114	11.18 s	-7.18	470	13.31	.53	455	12.86	-.60	096	13.09	-.45
291	12.57	.05	420	11.12 s	-7.29	Avg	13.20		487	12.67	-1.09	234	13.08	-.50
Avg	12.56		Meth: 020.10 PCT			096	13.09	-.53	Meth: 020.XX PCT			105	13.09	-.51
300	12.55	-.03	<u>Total Phosphate</u>			105	13.09	-.60	<u>Total Phosphate</u>			444	13.08	-.53
105	12.54	-.13	<u>Grav Quimociac</u>			042	13.04	-.81	390	14.43 s	5.12	420	13.06	-.60
389	12.54	-.17	114	13.37	1.36	035	12.99	-1.23	422	14.05 s	3.69	042	13.04	-.69
406	12.52	-.22	090	13.36	1.20	Meth: 020.50 PCT			406	13.70	2.09	157	13.00	-.82
488	12.55	-.26	211	13.27	.48	<u>Total Phosphate</u>			426	13.56 R	1.92	322	12.99	-.87
247	12.55	-.26	470	13.27	.44	<u>ICP</u>			460	13.64	1.82	451	12.97	-.95
042	12.55	-.26	Avg	13.21		390	14.43 S	4.13	247	13.55	1.47	035	12.99	-1.05
007	12.55	-.26	157	13.20	-.12	422	14.05 S	3.05	292	13.54	1.40	455	12.86	-1.41
275	12.54	-.27	444	13.17	-.41				487	12.67	-2.21	472	12.75	-1.96
234	12.49	-.34	493	13.15	-.68				307	13.21 R	1.34	487	12.67	-2.21
041	12.53 X	-.38										483	12.66	-2.27

\* 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
<u>Meth: 020.XX PCT</u>			<u>Meth: 040.50 PCT</u>			<u>Meth: 041.10 PCT</u>			<u>Meth: 041.60 PCT</u>			<u>Meth: 041.XX PCT</u>		
<u>Total Phosphate</u>			<u>InDir Available Phos</u>			<u>Dir Available Phosph</u>			<u>Dir Available Phosph</u>			<u>Dir Available Phosph</u>		
482	12.50 R	-3.02	<u>ICP</u>			<u>Grav Quimociac</u>			<u>EDTA Extract</u>			423	12.99	-.80
309	12.23 s	-4.15	072	13.22	.95	254	13.15 R	-1.87	136	13.16	-1.35	043	12.94	-1.02
498	12.20 s	-4.33	Avg	13.09		<u>Meth: 041.40 PCT</u>			472	12.70 s	-10.48	377	12.92	-1.07
421	11.92 s	-5.37	488	12.96	-.77	<u>Dir Available Phosph</u>			<u>Meth: 041.99 PCT</u>			325	12.80	-1.62
416	11.66 s	-6.39	<u>Meth: 040.99 PCT</u>			<u>Automated</u>			<u>Dir Available Phosph</u>			472	12.70	-2.14
<u>Meth: 030.40 PCT</u>			<u>InDir Available Phos</u>			095	13.52	1.12	<u>Other</u>			368	12.67 R	-2.33
<u>Insoluble Phosphate</u>			<u>Other</u>			Avg	13.51	-.50	105	13.21	.71	452	12.59	-2.45
<u>Automated</u>			247	13.51	.87	028	13.51	-.50	<u>Meth: 041.XX PCT</u>			027	12.29 s	-4.01
096	0.07	-.71	Avg	13.22		027	12.29 S	-8.47	<u>Dir Available Phosph</u>			354	10.10 s	-12.65
<u>Meth: 030.99 PCT</u>			275	12.94	-.87	<u>Meth: 041.50 PCT</u>			486	13.73	2.25	<u>Meth: 048.20 PCT</u>		
<u>Insoluble Phosphate</u>			<u>Meth: 040.XX PCT</u>			<u>Dir Available Phosph</u>			095	13.52	1.55	<u>Water Soluble Phosph</u>		
<u>Other</u>			<u>InDir Available Phos</u>			<u>ICP</u>			028	13.51	1.36	<u>Spectrometric</u>		
247	0.05	.71	247	13.51	1.64	486	13.73	1.81	029	13.47	1.23	Avg	11.53	
<u>Meth: 030.XX PCT</u>			220	13.42	1.38	360	13.44	1.06	360	13.44	1.17	096	11.36	-.21
<u>Insoluble Phosphate</u>			072	13.22	.65	055	13.35	.75	023	13.28	.78	309	11.41	-.28
096	0.07	1.13	Avg	13.14		023	13.28	.71	055	13.35	.69	498	10.55	-1.12
Avg	0.06		493	13.05	-.48	137	13.19	.41	034	13.31	.51	<u>Meth: 048.50 PCT</u>		
247	0.05	-.47	300	13.04	-.49	Avg	13.08		137	13.19	.41	<u>Water Soluble Phosph</u>		
<u>Meth: 040.10 PCT</u>			096	13.03	-.55	423	12.99	-.28	043	13.27	.37	<u>ICP</u>		
<u>InDir Available Phos</u>			488	12.96	-.90	043	12.94	-.42	485	13.24	.34	501 12.09 .89		
<u>Grav Quim</u>			275	12.94	-.95	377	12.92	-.45	041	13.21 x	.31	Avg 11.90		
493	13.05	-.71	<u>Meth: 041.10 PCT</u>			325	12.80	-.83	072	13.25	.29	444 11.72 -.85		
<u>InDir Available Phos</u>			<u>Dir Available Phosph</u>			368	12.67	-1.34	105	13.25	.27	<u>Meth: 048.99 PCT</u>		
<u>Grav Quimociac</u>			<u>Grav Quimociac</u>			452	12.59	-1.39	231	13.24	.24	<u>Water Soluble Phosph</u>		
485	13.24	1.19	485	13.24	1.19	354	10.10 s	-8.33	105	13.21	.24	71		
InDir Available Phos			072	13.25	1.08	<u>Meth: 041.60 PCT</u>			105	13.21	.10	Avg 11.42 .71		
<u>Spectrometri</u>			041	13.21 X	1.03	<u>Dir Available Phosph</u>			177	13.20	.09	<u>Other</u>		
220	13.42	.71	105	13.21	.83	<u>EDTA Extract</u>			055	13.19	.06	247 11.42 .71		
<u>Meth: 040.20 PCT</u>			177	13.20	.48	029 13.47 s 4.61			Avg	13.18		<u>Meth: 048.XX PCT</u>		
<u>InDir Available Phos</u>			055	13.19	.31	034 13.31 1.38			177	13.18	-.04	<u>Water Soluble Phosph</u>		
<u>Spectrometri</u>			Avg	13.16		043 13.27 .71			136	13.16	-.10	420 12.80 1.74		
220	13.42	.71	185	13.13	-.57	105 13.25 .36			185	13.13	-.24	501 12.09 .71		
<u>Meth: 040.40 PCT</u>			102	13.10	-.80	231 13.24 .13			102	13.10	-.33	444 11.72 .17		
<u>InDir Available Phos</u>			049	13.07	-1.20	Avg 13.23			049	13.07	-.46	Avg 11.62		
<u>Automated</u>			009	13.05	-1.55	177 13.18 -1.06			254	13.15	-.63	247 11.42 -.31		
300	13.04	.74												
Avg	13.04													
096	13.03	-.98												

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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>		
096	11.36	-.39	AA (Oxalate)			ICP (Citrate)			Other			055	13.46	.40
309	11.41	-.44	498	12.20 s	-10.24	485	12.59	-1.49	451	13.14	-.20	177	13.38	.39
498	10.55	-1.58							322	13.05	-.39	307	13.40	.36
Meth: 050.00 PCT			Meth: 050.31 PCT			Meth: 050.60 PCT			043			043		
<u>Soluble Potash</u>			<u>Soluble Potash</u>			<u>Soluble Potash</u>			460			368		
<u>STPB Oxalate</u>			<u>AA (Citrate)</u>			<u>Flame (Oxalate)</u>			234			137		
102	13.70	1.92	472	13.60	.71	470	13.30	1.01	105	13.00	-.61	034	13.31	.19
072	13.66	1.86				Avg	13.19		501	12.98 X	-.67	405	13.36	.15
422	13.35 R	1.72	Meth: 050.50 PCT			169			486			402		
055	13.46	.78	<u>Soluble Potash</u>			105			482			090		
405	13.36	.27	<u>ICP (Oxalate)</u>			050.61 PCT			500			211		
211	13.31	.02	406	14.35	1.87	<u>Soluble Potash</u>			027			470		
Avg	13.31		488	13.90	1.07	<u>Flame (Citrate)</u>			300			Avg		
114	13.29	-.08	426	13.56	.49	029			025			114		
090	13.30	-.18	Avg	13.40		028			Meth: 050.XX PCT			470		
470	13.25	-.30	055	13.28	-.32	028			455			13.23		
231	13.20	-.55	354	13.22	-.41	095			<u>Soluble Potash</u>			309		
416	13.16	-.71	420	13.03	-.78	Avg			291			275		
497	13.17	-.77	157	13.00	-.78	034			474			231		
220	13.06	-1.25	292	12.86	-1.07	035			406			055		
049	13.09	-1.26	390	12.20 S	-2.49	105			072			377		
			444	11.85 S	-3.06	Meth: 050.99 PCT			483			444		
						<u>Soluble Potash</u>			325			035		
						<u>Other</u>			488			354		
						474			023			416		
						325			472			157		
						421			029			497		
						042			452			185		
						360			102			451		
						487			072			169		
						177			421			041		
						307			028			105		
						368			422			389		
						402			426			423		
						455			095			043		
						Avg			042			322		
						275			360			460		
									487			220		

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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: 060.99 PCT			Meth: 101.30 PCT			Meth: 121.00 PCT			Meth: 121.30 PCT		
<u>Soluble Potash</u>			Free Water			Acid Soluble Calcium			Acid Soluble Magnesi			Acid Soluble Magnesi		
049	13.09	-.58	<u>Other</u>			<u>ICP</u>			<u>AA</u>			<u>ICP</u>		
136	13.05	-.58	443	3.44 S	118.56	009	0.67	.08	029	2.22 s	3.57	096	2.06	-.43
234	13.01	-.66	500	1.76	.71	Avg	0.67		105	2.14	1.17	368	2.05	-.48
105	13.06	-.66	Avg	1.76		307	0.67	-.08	157	2.14	1.17	426	2.05	-.55
157	13.00	-.68	Meth: 060.XX PCT			389	0.65	-.62	028	2.11	.45	055	2.04	-.60
420	13.03	-.70	Free Water			482	0.64	-1.12	Avg	2.09		095	2.04	-.60
105	13.00	-.77	443	3.44 s	5.62	354	0.62	-1.25	169	2.09	-.25	009	2.00	-.82
501	12.98 X	-.83	500	1.76	1.90	102	0.59	-1.99	043	2.09	-.40	423	1.97	-1.07
486	12.90	-.92	096	1.09	.44	Meth: 101.99 PCT			485	2.07	-.67	157	1.96	-1.13
292	12.86	-1.02	Avg	0.90		Acid Soluble Calcium			258	2.03	-1.69	482	1.97 R	-1.17
096	12.72	-1.34	007	0.87	-.09	<u>Other</u>			498	1.85 s	-5.77	354	1.88	-1.64
482	12.70	-1.45	105	0.68 R	-.56	105	0.70	.00	Meth: 121.30 PCT			102	1.77	-2.43
485	12.59	-1.65	498	0.59	-.69	Meth: 101.XX PCT			Acid Soluble Magnesi			Meth: 121.99 PCT		
500	12.58	-1.66	416	0.57	-.74	Acid Soluble Calcium			<u>ICP</u>			Acid Soluble Magnesi		
027	12.76 R	-1.71	247	0.54	-.80	<u>Acid Soluble Calcium</u>			483	2.49 s	2.98	<u>Other</u>		
300	12.29	-2.33	Meth: 101.00 PCT			483	2.02 s	34.45	501	2.45	2.31	500	3.11 S	8.43
498	12.20	-2.55	Acid Soluble Calcium			041	0.87 s	4.88	472	2.45	2.29	042	2.60 S	4.38
390	12.20 s	-2.70	<u>AA</u>			105	0.74	1.71	421	2.31 X	1.32	105	2.15	.93
444	11.85 s	-3.37	105	0.74	.71	421	0.74 X	1.69	041	2.30 X	1.27	Avg	2.05	
025	11.30 s	-4.65	Avg	0.74		096	0.68 R	1.15	452	2.28	1.11	486	1.95	-.80
Meth: 060.00 PCT			498	0.26 S	-34.30	105	0.70	.67	390	2.25	.88	Meth: 121.XX PCT		
Free Water			Meth: 101.30 PCT			474	0.70	.60	231	2.22	.67	Acid Soluble Magnesi		
<u>Vacuum Oven</u>			Acid Soluble Calcium			472	0.68	.59	117	2.19	.47	500	3.11 s	7.36
096	1.09	1.54	<u>ICP</u>			501	0.69 X	.48	027	2.16	.33	042	2.60 s	3.63
007	0.87	.52	483	2.02 s	37.12	420	0.68	.24	035	2.13	.31	483	2.49 s	3.25
Avg	0.75		041	0.87 s	5.41	423	0.68	.24	137	2.15	.25	501	2.45	2.55
105	0.68	-.61	421	0.74 X	1.99	247	0.68	.13	023	2.15	.19	472	2.45	2.53
416	0.57	-.80	096	0.68 R	1.25	Avg	0.67		420	2.13	.11	421	2.31 X	1.51
247	0.54	-.92	474	0.70	.82	009	0.67	-.10	Avg	2.12		041	2.30 X	1.45
Meth: 060.10 PCT			472	0.68	.68	307	0.67	-.19	433	2.11	-.06	452	2.28	1.28
Free Water			501	0.69 X	.68	035	0.67	-.57	177	2.11	-.08	029	2.22 R	1.06
<u>Vacuum Desiccate</u>			035	0.67	.59	389	0.65	-.75	389	2.10	-.13	390	2.25	1.03
498	0.59	.71	423	0.68	.41	482	0.64	-1.18	444	2.10	-.14	231	2.22	.82
			420	0.68	.39	354	0.62	-1.33	307	2.09	-.18	117	2.19	.60
			247	0.68	.25	102	0.59	-2.03	300	2.09	-.29	105	2.15	.55
						498	0.26 s	-10.69	247	2.08	-.32	027	2.16	.45
									360	2.07	-.40			

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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			Meth: 131.30 PCT			Meth: 144.01 PCT			Meth: 144.99 PCT			Meth: 144.XX PCT		
<u>Acid Soluble Magnesi</u>			<u>Water Soluble Magnes</u>			<u>Sulfur</u>			<u>Sulfur</u>			<u>Sulfur</u>		
035	2.13	.36	ICP			<u>Gravimetric</u>			<u>Other</u>			177	12.03	.12
137	2.15	.36	027	1.90	.98	Avg	12.26		Avg	11.69		389	11.97	.12
023	2.15	.30	368	1.67	.37	028	12.22	-.19	023	11.60	-.17	102	12.03	.10
105	2.14	.30	452	1.56	.35	157	12.10	-.67	247	11.45	-.46	231	11.98	.09
157	2.14	.30	231	1.65	.32	029	12.09	-.74	096	11.42	-.50	105	11.97	.02
420	2.13	.19	300	1.65	.32	102	12.03	-.98	482	11.45	-.65	Avg	11.96	
177	2.11	.10	Avg	1.53		231	11.98	-1.20	472	11.30	-.75	300	11.96	-.04
028	2.11	.08	444	0.73	-2.02	105	11.97	-1.23	351	11.53	-.81	117	11.80	-.26
433	2.11	.05				444	11.05 s	-5.06	360	11.61	-.81	423	11.82	-.26
Avg	2.10		Meth: 131.99 PCT			Meth: 144.02 PCT			029	11.26	-.85	157	11.75	-.34
389	2.10	-.03	<u>Water Soluble Magnes</u>			<u>Sulfur</u>			422	11.25	-1.05	307	11.85	-.37
444	2.10	-.05	<u>Other</u>			<u>Gravimetric</u>			486	11.06	-1.18	023	11.60	-.57
307	2.09	-.09	486	1.36	.86	220	12.49	.87	009	11.00	-1.29	247	11.45	-.81
169	2.09	-.13	Avg	1.13		Avg	11.85		368	10.98	-1.41	096	11.42	-.85
043	2.09	-.18	498	0.90	-.87	292	11.21	-.87	072	10.91	-1.47	360	11.61 R	-.87
300	2.09	-.23	Meth: 131.XX PCT			Meth: 144.70 PCT			501	10.50 R	-2.41	482	11.45	-.89
247	2.08	-.24	<u>Water Soluble Magnes</u>			<u>Sulfur</u>			426	10.07 A	-3.15	351	11.53 R	-.93
485	2.07	-.29	027	1.90	1.06	<u>Spectrometric</u>			444	9.10 s	-4.85	472	11.30	-1.05
360	2.07	-.33	029	1.89	1.06	474	13.05	-.71	Meth: 144.XX PCT			029	11.26	-1.13
096	2.06	-.36	368	1.67	.47	<u>Sulfur</u>			421	13.83 X	2.93	292	11.21	-1.18
368	2.05	-.40	231	1.65	.42	Meth: 144.99 PCT			474	13.05	1.70	422	11.25 R	-1.24
426	2.05	-.49	300	1.65	.42	<u>Sulfur</u>			390	12.80	1.32	486	11.06	-1.42
055	2.04	-.54	452	1.56	.38	<u>Other</u>			114	12.66	1.10	444	11.05	-1.46
095	2.04	-.54	Avg	1.48		421	13.83 s	4.02	055	12.63	1.05	009	11.00	-1.51
258	2.03	-.61	486	1.36	-.29	390	12.80	2.09	220	12.55	.92	368	10.98	-1.59
009	2.00	-.76	498	0.90	-1.42	220	12.55	1.61	220	12.49	.82	072	10.91	-1.66
423	1.97	-1.03	444	0.73	-1.85	027	12.45	1.42	485	12.47	.78	501	10.50 R	-2.42
157	1.96	-1.09	Meth: 144.01 PCT			452	12.40	1.35	027	12.45	.75	426	10.07 R	-3.05
486	1.95	-1.13	<u>Sulfur</u>			354	12.05	.74	452	12.40	.70	444	9.10 s	-4.48
482	1.97 R	-1.14	<u>Gravimetric</u>			177	12.03	.65	095	12.39	.66	Meth: 151.00 PPM		
354	1.88	-1.63	114	12.66	1.71	389	11.97	.54	137	12.32	.57	Arsenic		
498	1.85	-1.90	055	12.63	1.58	300	11.96	.50	043	12.31	.53	<u>Atomic Absorption</u>		
102	1.77	-2.48	485	12.47	.84	307	11.85	.50	028	12.22	.39	136	6.70	.61
Meth: 131.00 PCT			095	12.39	.52	423	11.82	.27	354	12.05	.29	Avg	6.57	
<u>Water Soluble Magnes</u>			137	12.32	.38	117	11.80	.21	157	12.10	.21	498	6.45	-1.06
<u>AA</u>			043	12.31	.18	157	11.75	.15	029	12.09	.21			
029	1.89	-.71												

\* 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: 151.30 PPM			Meth: 165.00 PCT			Meth: 165.XX PCT			Meth: 171.99 PCT			Meth: 181.XX PPM		
Arsenic			Acid Soluble Boron			Acid Soluble Boron			Water Soluble Boron			Cadmium		
<u>ICP</u>			<u>Spectrometric</u>			<u>Other</u>			<u>Other</u>			<u>ICP</u>		
368	6.30	1.44	258	0.120	-1.70	117	0.196 s	6.58	247	4.500	1.30	487	6.10 s	6.75
095	6.00	.56				433	0.154	1.64	Avg	1.591		035	5.36 s	4.91
Avg	5.80		Meth: 165.99 PCT			426	0.153	1.57	027	0.138	-.64	220	4.35	1.48
220	5.75	-.44	Acid Soluble Boron			231	0.150	1.23	444	0.135	-.64	482	4.35	1.34
102	5.59	-.58	<u>Other</u>			444	0.148	1.00				041	4.06 X	1.12
096	5.35	-1.25	117	0.196 s	6.75	137	0.148	.94	Meth: 181.00 PPM			452	4.08	.39
041	5.44 R	-1.58	433	0.154	1.54	421	0.145 X	.87	Cadmium			300	4.00	.16
474	2.50 S	-9.28	426	0.153	1.48	095	0.145	.87	<u>Atomic Absorption</u>			102	3.98	.11
			231	0.150	1.11	136	0.145	.87	300	3.96	.12	300	3.96	.03
			444	0.148	.86	307	0.145	.87	Avg	3.96		Avg	3.95	
			137	0.148	.80	483	0.146	.77	136	3.95	-1.22	136	3.95	-.16
			421	0.145 X	.79	023	0.146	.76	Meth: 181.30 PPM			368	3.95	-.16
			095	0.145	.79	371	0.145	.66	Cadmium			009	3.90	-.16
			136	0.145	.79	043	0.145	.66	<u>ICP</u>			444	3.53	-1.32
			307	0.145	.79	028	0.140	.52	035	5.36 s	4.47	096	3.30	-2.06
			023	0.146	.63	105	0.140	.24	220	4.35	1.35	095	3.50 R	-2.11
			483	0.146	.63	452	0.140	.07	482	4.35	1.22	474	2.00 s	-6.12
			043	0.145	.53	300	0.140	.07	041	4.06 X	1.02	Meth: 190.00 PCT		
			371	0.145	.51	501	0.140	.07	452	4.08	.36	Water Soluble Chlori		
			Avg	0.141		Avg	0.139		300	4.00	.14	<u>Titrimetric</u>		
			300	0.140	-.12	029	0.137	-.35	368	3.95	.14	498	7.55	.71
			501	0.140	-.12	360	0.135	-.56	102	3.98	.10	Meth: 191.30 PPM		
			452	0.140	-.12	482	0.135	-.78	Avg			Chromium		
			389	0.138	-.44	009	0.135	-.78	009	3.90	-.14	<u>ICP</u>		
			360	0.135	-.77	368	0.133	-.86	444	3.53	-1.20	220	82.50	1.07
			482	0.135	-.96	055	0.133	-.90	096	3.30	-1.88	096	82.45	1.07
			009	0.135	-.96	472	0.131	-1.04	474	2.00 S	-5.57	035	78.45	.86
			368	0.133	-1.09	423	0.130	-1.10	Meth: 181.99 PPM			247	78.00	.71
			472	0.131	-1.29	220	0.130	-1.16	Cadmium			368	75.10	.56
			423	0.130	-1.35	354	0.131	-1.16	<u>Other</u>			452	76.06	.55
			354	0.131	-1.40	042	0.130 R	-1.60	487	6.10 S	.00	009	73.00	.31
			042	0.130 R	-1.82	486	0.125	-1.78				102	70.64	.12
			486	0.125	-2.05	258	0.120	-2.26				Avg	69.20	
												482	69.15	-.01
												027	64.66	-.39
												444	58.65	-.90

\* 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: 191.30 PPM Chromium			Meth: 221.30 PCT Acid Soluble Copper			Meth: 221.XX PCT Acid Soluble Copper			Meth: 241.30 PCT Acid Soluble Iron			Meth: 241.30 PCT Acid Soluble Iron		
<u>ICP</u>			<u>ICP</u>			<u>ICP</u>			<u>ICP</u>			<u>ICP</u>		
041	58.88 R	-1.16	423	0.0084	.88	444	0.0078	.47	421	0.45 X	1.96	300	0.31 s	-3.46
474	47.00	-1.79	433	0.0083	.86	485	0.0075	.43	055	0.43 R	1.50	Meth: 241.99 PCT Acid Soluble Iron		
300	44.00	-2.03	035	0.0076	.55	041	0.0075 X	.43	501	0.44	1.48	<u>Other</u>		
Meth: 202.30 PPM Acid Soluble Cobalt			402	0.0080	.55	220	0.0075	.34	220	0.43	1.09	042	0.42	1.42
<u>ICP</u>			444	0.0078	.51	137	0.0078	.37	096	0.42	.96	Avg	0.41	
452	15.69	1.20	041	0.0075 X	.44	220	0.0075	.36	433	0.42	.94	500	0.40	-.28
095	15.50	1.15	137	0.0078	.37	Avg	0.0074		482	0.41	.62	105	0.40	-.64
035	12.11 R	1.01	220	0.0075	.36	102	0.0073	-.23	136	0.41	.62	Meth: 241.XX PCT Acid Soluble Iron		
220	14.40	.83	Avg	0.0074		307	0.0070	-.34	360	0.41	.58	041	0.47 X	2.48
009	14.00	.75	102	0.0073	-.23	105	0.0069	-.45	009	0.40	.40	390	0.46	2.24
368	11.95	.54	307	0.0070	-.31	096	0.0068	-.55	486	0.40	.40	485	0.45	1.90
482	12.10	.24	096	0.0068	-.53	300	0.0066	-.71	234	0.40	.40	421	0.45 X	1.81
096	11.83	.03	095	0.0066	-.65	389	0.0064	-.84	027	0.40	.35	029	0.45	1.80
Avg	11.77		300	0.0066	-.69	105	0.0065	-.86	420	0.40	.26	055	0.43 R	1.38
041	11.40 X	-.13	389	0.0064	-.82	452	0.0063	-.89	444	0.40	.23	501	0.44	1.35
247	9.45	-.72	452	0.0063	-.87	009	0.0064	-.89	Avg	0.40		042	0.42 R	1.08
102	8.11	-1.14	009	0.0064	-.87	368	0.0064	-.94	426	0.40	-.11	220	0.43	.98
474	5.00	-2.07	368	0.0064	-.93	474	0.0061	-1.10	371	0.40	-.12	096	0.42	.86
Meth: 221.00 PCT Acid Soluble Copper			474	0.0061	-1.09	483	0.0053	-1.77	117	0.39	-.20	433	0.42	.83
<u>Atomic Absorption</u>			483	0.0053	-1.77	Meth: 241.00 PCT Acid Soluble Iron			157	0.39	-.23	105	0.42	.77
498	0.0100	1.56	Meth: 221.99 PCT Acid Soluble Copper			<u>Atomic Absorption</u>			452	0.39	-.31	043	0.42	.63
Avg	0.0079		<u>Other</u>			485	0.45	1.11	389	0.39	-.42	136	0.41	.55
485	0.0075	-.45	105	0.0065	-.71	029	0.45	1.03	035	0.39	-.43	482	0.41	.55
043	0.0071	-.59	Meth: 221.XX PCT Acid Soluble Copper			105	0.42	.25	472	0.38	-.58	360	0.41	.49
105	0.0069	-.72	<u>Acid Soluble Copper</u>			043	0.42	.18	354	0.39	-.64	360	0.41	.49
Meth: 221.30 PCT Acid Soluble Copper			482	0.0100	2.17	Avg	0.41		368	0.38	-.66	234	0.40	.38
<u>ICP</u>			498	0.0100	2.17	028	0.38	-1.05	402	0.38	-.70	486	0.40	.38
482	0.0100	2.25	247	0.0096	1.85	169	0.36	-1.42	307	0.38	-.83	009	0.40	.38
247	0.0096	1.93	472	0.0085 R	1.55	498	0.21 S	-5.75	137	0.38	-.85	027	0.40	.32
472	0.0085 R	1.61	354	0.0085	1.01	Meth: 241.30 PCT Acid Soluble Iron			095	0.38	-.92	420	0.40	.21
354	0.0085	1.06	423	0.0084	.83	<u>ICP</u>			023	0.37	-.92	444	0.40	.20
Meth: 221.30 PCT Acid Soluble Iron			433	0.0083	.81	041	0.47 X	2.66	423	0.37	-.95	500	0.40	.02
<u>ICP</u>			035	0.0076	.53	390	0.46	2.41	474	0.37	-1.01	Avg	0.40	
482	0.0100	2.25	402	0.0080	.50	Meth: 241.30 PCT Acid Soluble Iron			231	0.37	-1.10	371	0.40	-.15
247	0.0096	1.93	Meth: 241.00 PCT Acid Soluble Iron			<u>ICP</u>			102	0.36	-1.35			
472	0.0085 R	1.61	<u>Atomic Absorption</u>			041	0.47 X	2.66	247	0.36	-1.49			
354	0.0085	1.06	485 0.45 1.11			390	0.46	2.41						

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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.XX PCT			Meth: 251.30 PPM			Meth: 261.00 PCT			Meth: 261.30 PCT			Meth: 261.XX PCT		
<u>Acid Soluble Iron</u>			<u>Lead</u>			<u>Acid Soluble Manganese</u>			<u>Acid Soluble Manganese</u>			<u>Acid Soluble Manganese</u>		
426	0.40	-.15	ICP			AA			ICP			042	0.505	1.77
117	0.39	-.25	009	19.00	.52	029	0.479 R	1.08	Avg	0.439		029	0.479 R	1.41
105	0.40	-.26	452	18.16	.48	485	0.488	1.03	023	0.435	-.15	485	0.488	1.28
157	0.39	-.29	482	19.15	.46	028	0.475	.78	300	0.430	-.35	501	0.485	1.19
452	0.39	-.36	444	17.73	.40	105	0.460	.48	486	0.430	-.35	482	0.480	1.19
389	0.39	-.46	220	18.50	.30	043	0.453	.35	027	0.438	-.36	423	0.477	.96
035	0.39	-.48	Avg	17.68		Avg	0.435		368	0.426	-.54	028	0.475	.91
177	0.38	-.55	096	16.15	-.50	169	0.369	-1.30	137	0.424	-.64	117	0.464	.64
472	0.38	-.62	041	16.76 X	-.68	258	0.367	-1.34	041	0.420 X	-.75	402	0.464	.58
354	0.39	-.66	474	14.50	-1.01				354	0.419	-.80	096	0.462	.53
368	0.38	-.68	300	10.00	-2.41	Meth: 261.11 PCT			157	0.416	-.94	426	0.456	.49
402	0.38	-.73				<u>Acid Soluble Manganese</u>			009	0.420	-1.10	452	0.460	.46
307	0.38	-.86	Meth: 251.99 PPM			<u>AA</u>			472	0.425 R	-1.15	105	0.460	.46
137	0.38	-.88	<u>Lead</u>			498 0.300 S .00			177	0.406	-1.34	360	0.450	.44
095	0.38	-.95	<u>Other</u>			Meth: 261.30 PCT			307	0.407	-1.45	095	0.445	.44
028	0.38	-.95	487	19.20	.71	<u>Acid Soluble Manganese</u>			474	0.366	-2.95	136	0.450	.34
023	0.37	-.95				<u>ICP</u>						483	0.454	.27
423	0.37	-.98	Meth: 251.XX PPM			390 0.516 s 3.27			Meth: 261.31 PCT			043	0.453	.27
474	0.37	-1.03	<u>Lead</u>			055 0.505 s 2.73			<u>Acid Soluble Manganese</u>			231	0.445	.15
231	0.37	-1.12	368	28.30 s	3.50	501 0.485 1.87			<u>ICP</u>			105	0.445	.15
102	0.36	-1.35	136	22.00	1.27	482 0.480 1.85			421 0.535 X .71			420	0.447	.14
169	0.36	-1.44	035	21.00	1.01	117 0.464 1.08			Meth: 261.99 PCT			102	0.446	.14
247	0.36	-1.49	102	20.71	.82	402 0.464 1.02			<u>Acid Soluble Manganese</u>			433	0.446	.07
300	0.31 A	-3.38	095	20.50	.77	096 0.462 .95			<u>Other</u>			389	0.445	.06
498	0.21 s	-7.16	452	18.16	.46	452 0.460 .86			042 0.505 1.64			Avg	0.444	
			487	19.20	.43	426 0.456 .85			423 0.477 .71			247	0.439	-.19
			009	19.00	.42	360 0.450 .72			Avg			035	0.439	-.19
Meth: 251.00 PPM			482	19.15	.33	095 0.445 .65			483 0.454 -.08			444	0.443	-.25
<u>Lead</u>			220	18.50	.20	136 0.450 .61			105 0.445 -.40			023	0.435	-.27
<u>Atomic Absorption</u>			Avg	18.10		444 0.443 .37			220 0.435 -.85			027	0.438	-.32
136	22.00	.71	444	17.73	-.41	420 0.447 .37			500 0.420 -1.19			300	0.430	-.41
			096	16.15	-.63	102 0.446 .34			Meth: 261.XX PCT			486	0.430	-.41
Meth: 251.30 PPM			041	16.76 X	-.75	231 0.445 .32			<u>Acid Soluble Manganese</u>			220	0.435	-.51
<u>Lead</u>			474	14.50	-1.14	433 0.446 .31			421 0.535 X 2.64			368	0.426	-.54
<u>ICP</u>			300	10.00	-2.54	389 0.445 .26			390 0.516 R 2.21			137	0.424	-.61
368	28.30 s	3.62				247 0.439 .18			055 0.505 1.82			041	0.420 X	-.70
035	21.00	1.13				035 0.439 .16						500	0.420	-.70
102	20.71	.95										354	0.419	-.74
095	20.50	.90												

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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: 271.XX PCT			Meth: 291.30 PPM			Meth: 311.00 PCT			Meth: 321.00 PCT		
<u>Acid Soluble Mangan</u>			<u>Water Soluble Mangan</u>			<u>Nickel</u>			<u>Sodium</u>			<u>Acid Soluble Zinc</u>		
157	0.416	-.83	Avg	0.043		ICP			<u>Atomic Absorption</u>			<u>Atomic Absorption</u>		
009	0.420	-.91	300	0.037	-.22	368	27.30	.29	498	0.37	.00	498	0.175	-1.70
472	0.425 R	-.91	444	0.023	-.77	Avg	26.22		Meth: 311.99 PCT			Meth: 321.30 PCT		
177	0.406	-1.12	368	0.016	-1.03	452	25.44	-.20	<u>Sodium</u>			<u>Acid Soluble Zinc</u>		
307	0.407	-1.19	486	0.010	-1.28	041	25.40 X	-.21	<u>Other</u>			<u>ICP</u>		
169	0.369	-2.20	Meth: 289.30 PPM			027	23.36	-.72	354	0.39	1.56	501	0.435 s	11.91
258	0.367	-2.26	<u>Molybdenum</u>			482	23.30	-.77	474	0.38	1.05	472	0.296 s	4.66
474	0.366	-2.28	<u>ICP</u>			247	23.00	-.84	096	0.37	.37	486	0.295 s	4.54
498	0.300 s	-4.18	433	12.01 s	6.26	474	16.00	-2.56	Avg	0.36		360	0.253 R	2.84
Meth: 271.00 PCT			220	6.75	1.35	Meth: 291.XX PPM			035	0.36	-.57	027	0.240 R	2.67
<u>Water Soluble Mangan</u>			247	6.35	.98	<u>Nickel</u>			482	0.35	-.73	390	0.249	2.36
<u>Atomic Abs</u>			095	6.00	.65	096	32.00	1.35	423	0.34	-.86	307	0.245	1.96
498	0.085	.82	035	5.90	.57	136	31.50	1.21	102	0.34	-1.12	371	0.237	1.59
Avg	0.070		452	5.53	.22	444	31.00	1.08	Meth: 311.XX PCT			426	0.232	1.34
027	0.054	-.91	368	5.38	.08	035	28.15	.58	<u>Sodium</u>			247	0.230	1.11
Meth: 271.30 PCT			Avg	5.30		095	28.50	.49	354	0.39	1.58	421	0.225 X	.88
<u>Water Soluble Mangan</u>			009	5.20	-.10	220	28.00	.43	474	0.38	1.04	444	0.215	.75
<u>ICP</u>			041	5.04 R	-.33	102	28.11	.38	498	0.37	.48	389	0.221	.65
452	0.065	1.40	102	4.67	-.59	009	27.50	.26	096	0.37	.34	023	0.219	.54
231	0.050	.79	096	4.25	-.98	368	27.30	.20	Avg	0.36		136	0.215	.41
Avg	0.038		474	3.00	-2.15	Avg	26.57		035	0.36	-.63	102	0.216	.34
300	0.037	-.07	Meth: 291.00 PPM			452	25.44	-.28	482	0.35	-.83	423	0.213	.28
444	0.023	-.79	<u>Nickel</u>			041	25.40 X	-.29	423	0.34	-.97	483	0.214	.25
368	0.016	-1.13	<u>Atomic Absorption</u>			027	23.36	-.79	102	0.34	-1.25	433	0.210	.07
Meth: 271.99 PCT			136	31.50	.71	482	23.30	-.84	Meth: 321.00 PCT			452	0.210	.05
<u>Water Soluble Mangan</u>			Meth: 291.30 PPM			247	23.00	-.91	<u>Acid Soluble Zinc</u>			Avg	0.209	
<u>Other</u>			<u>Nickel</u>			474	16.00	-2.59	<u>Atomic Absorption</u>			177	0.206	-.20
486	0.010	.00	<u>ICP</u>			Meth: 301.30 PPM			028	0.220	1.39	482	0.205	-.34
Meth: 271.XX PCT			096	32.00	1.47	<u>Selenium</u>			485	0.215	.88	402	0.209	-.45
<u>Water Soluble Mangan</u>			444	31.00	1.20	<u>ICP</u>			105	0.210	.87	474	0.205	-.46
498	0.085	1.68	035	28.15	.65	095	1.50	.99	029	0.202	.28	300	0.200	-.47
452	0.065	.90	095	28.50	.58	Avg	1.02		Avg	0.201		072	0.200	-.47
027	0.054	.57	220	28.00	.51	041	0.54 X	-.72	029	0.202	.28	231	0.200	-.71
231	0.050	.49	102	28.11	.48	Meth: 301.30 PPM			043	0.200	-.33	041	0.195 X	-.78
Meth: 271.99 PCT			009	27.50	.34	<u>Selenium</u>			169	0.195	-.50	292	0.195	-.78
<u>Water Soluble Mangan</u>			<u>Nickel</u>			<u>ICP</u>			258	0.191	-.86	035	0.194	-.80
<u>Other</u>			<u>ICP</u>			<u>ICP</u>			Meth: 321.00 PCT			055	0.190	-1.00
<u>Atomic Absorption</u>			<u>Atomic Absorption</u>			<u>Atomic Absorption</u>			<u>Acid Soluble Zinc</u>			<u>Atomic Absorption</u>		

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Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 321.30 PCT			Meth: 321.XX PCT								
Acid Soluble Zinc			Acid Soluble Zinc								
<u>ICP</u>			<u>ICP</u>								
009	0.190	-1.00	423	0.213	.22						
368	0.190	-1.03	483	0.214	.19						
095	0.195	-1.08	433	0.210	.05						
157	0.181	-1.51	452	0.210	.02						
354	0.176	-1.79	Avg	0.210							
			177	0.206	-.20						
			482	0.205	-.31						
			402	0.209	-.39						
Meth: 321.99 PCT			029	0.202	-.39						
Acid Soluble Zinc			474	0.205	-.42						
<u>Other</u>			300	0.200	-.44						
500	0.280	1.04	072	0.200	-.44						
042	0.240	.26	043	0.200	-.50						
Avg	0.240		231	0.200	-.64						
105	0.200	-1.16	041	0.195 X	-.71						
			292	0.195	-.71						
Meth: 321.XX PCT			169	0.195	-.71						
Acid Soluble Zinc			035	0.194	-.72						
501	0.435 s	10.29	055	0.190	-.90						
472	0.296 s	4.01	009	0.190	-.90						
486	0.295 s	3.90	368	0.190	-.92						
500	0.280	3.21	258	0.191	-.96						
360	0.253 R	2.43	095	0.195	-.96						
027	0.240 R	2.29	105	0.200	-1.01						
390	0.249	2.02	157	0.181	-1.34						
307	0.245	1.67	354	0.176	-1.58						
042	0.240	1.46	498	0.175	-1.60						
371	0.237	1.35									
426	0.232	1.14									
247	0.230	.93									
421	0.225 X	.74									
028	0.220	.66									
444	0.215	.64									
389	0.221	.54									
105	0.210	.46									
023	0.219	.44									
136	0.215	.33									
102	0.216	.27									
485	0.215	.22									

\* 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	5	0.00	0.90	0.50	060.00	5	0.00	1.02	0.27
001.99	9	0.00	0.96	0.64	060.99	2	59.22	83.75	3.78
001.XX	14	0.00	0.93	0.61	060.XX	8	0.64	2.20	0.12
002.XX	2	0.00	1.22	0.03	101.00	2	- 17.15	24.25	0.56
009.10	9	0.00	1.03	0.05	101.30	17	2.51	9.03	0.79
009.XX	9	- 0.74	2.79	2.23	101.XX	19	1.44	8.47	0.71
010.11	9	- 0.84	3.95	1.13	121.00	9	- 0.32	2.41	0.76
010.12	3	1.47	2.69	0.10	121.30	33	0.05	1.08	0.32
010.60	53	0.12	1.35	0.34	121.99	4	3.20	4.10	0.25
010.99	5	- 2.59	5.84	0.60	121.XX	44	0.31	1.61	0.33
010.XX	69	0.04	2.12	0.47	131.30	6	0.00	1.03	0.17
020.10	9	0.00	0.99	0.28	131.99	2	0.00	1.21	0.12
020.20	12	- 1.70	3.26	0.59	131.XX	9	0.00	1.01	0.17
020.40	7	0.00	0.99	0.30	144.01	13	- 0.39	1.68	0.29
020.50	18	0.19	1.72	0.46	144.02	2	0.00	1.22	0.01
020.99	4	0.00	1.08	0.06	144.99	29	- 0.21	1.63	0.38
020.XX	46	- 0.26	2.03	0.48	144.XX	41	- 0.23	1.19	0.38
030.XX	2	0.00	0.59	0.76	151.00	2	0.00	0.67	0.72
040.40	2	0.00	0.17	0.86	151.30	7	- 1.45	3.53	0.73
040.50	2	0.00	0.97	0.53	151.XX	9	- 0.77	2.52	0.52
040.99	2	0.00	1.22	0.08	165.00	6	0.000	0.985	0.328
040.XX	8	0.00	0.97	0.33	165.99	27	0.200	1.608	0.437
041.10	11	- 0.02	0.85	0.73	165.XX	33	0.166	1.482	0.395
041.40	3	- 2.67	4.63	1.72	171.99	3	0.000	1.107	0.127
041.50	12	- 0.69	2.58	0.30	171.XX	3	0.000	1.107	0.127
041.60	8	- 0.68	4.09	1.41	181.00	2	0.00	0.17	0.86
041.XX	30	- 0.63	2.58	0.51	181.30	13	- 0.22	2.16	0.76
048.20	4	0.00	1.07	0.14	181.XX	15	0.24	2.84	0.78
048.50	2	0.00	1.13	0.33	191.30	14	- 0.06	0.99	0.27
048.XX	7	0.00	1.03	0.15	191.XX	14	- 0.06	0.99	0.27
050.00	14	0.02	0.93	0.55	202.30	12	0.01	0.95	0.36
050.10	2	0.00	0.86	0.61	202.XX	12	0.01	0.95	0.36
050.30	5	- 2.04	4.60	0.76	221.00	4	0.0000	1.0558	0.1972
050.50	10	- 0.54	1.45	0.34	221.30	23	0.0423	0.9782	0.3607
050.51	12	0.10	1.03	0.18	221.XX	27	0.0556	0.9841	0.3425
050.60	3	0.00	0.87	0.57	241.00	7	- 0.82	2.37	0.15
050.61	6	0.00	0.99	0.32	241.30	39	- 0.06	1.12	0.29
050.99	25	- 0.21	1.29	0.32	241.99	3	0.00	0.75	0.68
050.XX	70	- 0.13	1.18	0.38	241.XX	48	- 0.19	1.49	0.29

## 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
251.30	13	0.26	1.31	0.49					
251.XX	15	0.21	1.25	0.47					
261.00	7	0.122	1.007	0.259					
261.30	34	0.153	1.142	0.424					
261.99	6	0.000	1.017	0.233					
261.XX	48	- 0.040	1.176	0.308					
271.00	2	0.000	1.109	0.368					
271.30	5	0.000	1.020	0.259					
271.XX	8	0.000	1.010	0.211					
289.30	12	0.50	2.04	0.12					
289.XX	12	0.50	2.04	0.12					
291.30	14	0.00	1.00	0.19					
291.XX	15	0.00	1.00	0.18					
301.30	2	0.00	0.97	0.53					
301.XX	2	0.00	0.97	0.53					
311.99	7	0.00	1.01	0.25					
311.XX	8	0.00	1.00	0.25					
321.00	8	0.000	0.925	0.434					
321.30	36	0.694	2.392	0.584					
321.99	3	0.000	1.040	0.336					
321.XX	45	0.254	1.261	0.483					