

- Pass 1 Results for 85 Labs - - Pass 2 Results for 85 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	2	11.51	0.06	0.05	2	11.51	0.06	0.05
Ammoniacal Nitrogen, Other		001.99	4	11.52	0.29	0.13	4	11.52	0.29	0.13
Method Group 001.XX PCT			6	11.52	0.23	0.10	5	11.52	0.24	0.05
Nitrate Nitrogen, Other		002.99	2	0.83	0.02	0.02	2	0.83	0.02	0.02
Ammon & Nitrate N, Devarda	892.01	009.10	3	12.84	0.19	0.05	3	12.84	0.19	0.05
Ammon & Nitrate N, Other		009.99	1	11.99	0.04	0.06	1	11.99	0.04	0.06
Method Group 009.XX PCT			4	12.63	0.43	0.05	4	12.63	0.43	0.05
Total Nitrogen, Modified Comprehensive	978.02	010.11	5	12.74	0.24	0.04	5	12.74	0.24	0.04
Total Nitrogen, Salicylic	955.04D	010.12	3	12.73	0.24	0.06	3	12.73	0.24	0.06
Total Nitrogen, Combustion		010.60	55	12.62	0.16	0.10	51	12.61	0.13	0.08
Total Nitrogen, Other		010.99	5	12.58	0.21	0.08	5	12.58	0.21	0.08
Method Group 010.XX PCT			69	12.62	0.18	0.10	65	12.63	0.17	0.08
Total Phosphate, Grav Quimociac	962.02	020.10	6	13.38	0.25	0.11	6	13.38	0.25	0.11
Total Phosphate, Spectrometric	958.01	020.20	17	13.47	0.33	0.13	16	13.44	0.32	0.11
Total Phosphate, Automated	978.01	020.40	5	13.52	0.16	0.11	5	13.52	0.16	0.11
Total Phosphate, ICP		020.50	10	13.40	0.40	0.28	10	13.40	0.40	0.28
Total Phosphate, Other		020.99	4	13.10	0.65	0.22	3	12.82	0.39	0.03
Method Group 020.XX PCT			43	13.42	0.38	0.18	40	13.40	0.36	0.14
Insoluble Phosphate, Grav Quimociac	963.03C	030.10	1	0.04	0.00	0.00	1	0.04	0.00	0.00
Insoluble Phosphate, Spectrometric	963.03C	030.20	2	0.07	0.04	0.00	2	0.07	0.04	0.00
Insoluble Phosphate, Automated	978.01	030.40	1	0.07	0.01	0.01	1	0.07	0.01	0.01
Insoluble Phosphate, ICP		030.50	2	0.03	0.04	0.00	2	0.03	0.04	0.00
Insoluble Phosphate, Other		030.99	1	0.06	0.01	0.01	1	0.06	0.01	0.01
Method Group 030.XX PCT			7	0.05	0.03	0.00	7	0.05	0.03	0.00
InDir Available Phosphate, Grav Quim	960.02	040.10	1	13.53	0.06	0.09	1	13.53	0.06	0.09
InDir Available Phosphate, Spectrometri	960.02	040.20	1	13.54	0.16	0.22	1	13.54	0.16	0.22
InDir Available Phosphate, Automated	960.02	040.40	1	13.38	0.06	0.09	1	13.38	0.06	0.09
InDir Available Phosphate, ICP		040.50	1	13.89	0.03	0.04	1	13.89	0.03	0.04
InDir Available Phosphate, Other		040.99	3	13.66	0.21	0.20	3	13.66	0.21	0.20
Method Group 040.XX PCT			7	13.61	0.21	0.15	7	13.61	0.21	0.15
Dir Available Phosphate, Grav Quimociac	960.03E	041.10	15	13.33	0.16	0.15	15	13.33	0.16	0.15
Dir Available Phosphate, Spectrometric	960.03D	041.20	2	13.06	0.11	0.13	2	13.06	0.11	0.13
Dir Available Phosphate, Automated	978.01	041.40	4	13.61	0.21	0.08	4	13.61	0.21	0.08
Dir Available Phosphate, ICP		041.50	9	13.32	0.20	0.18	8	13.32	0.18	0.12
Dir Available Phosphate, EDTA Extract	993.01	041.60	14	13.43	0.19	0.13	14	13.43	0.19	0.13
Dir Available Phosphate, Other		041.99	3	13.61	0.34	0.36	3	13.61	0.34	0.36
Method Group 041.XX PCT			47	13.39	0.22	0.16	45	13.39	0.21	0.13
Water Soluble Phosphate, Spectrometric	970.01	048.20	3	11.83	0.42	0.07	3	11.83	0.42	0.07
Water Soluble Phosphate, ICP		048.50	1	11.97	0.02	0.03	1	11.97	0.02	0.03

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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
Method Group 048.XX PCT			4	11.86	0.36	0.06	4	11.86	0.36	0.06
Soluble Potash, STPB Oxalate	958.02	050.00	14	13.27	0.21	0.08	13	13.24	0.18	0.06
Soluble Potash, AA (Oxalate)		050.30	9	12.95	0.43	0.16	9	12.95	0.43	0.16
Soluble Potash, AA (Citrate)		050.31	1	13.03	0.10	0.14	1	13.03	0.10	0.14
Soluble Potash, ICP (Oxalate)		050.50	7	13.03	0.44	0.18	6	13.12	0.38	0.11
Soluble Potash, ICP (Citrate)		050.51	12	13.38	0.40	0.18	11	13.36	0.39	0.12
Soluble Potash, Flame (Oxalate)	983.02(a)	050.60	5	13.12	0.14	0.06	5	13.12	0.14	0.06
Soluble Potash, Flame (Citrate)	983.02(b)	050.61	10	13.23	0.22	0.14	10	13.23	0.22	0.14
Soluble Potash, Other		050.99	18	13.07	0.38	0.14	18	13.07	0.38	0.14
Method Group 050.XX PCT			77	13.16	0.36	0.14	74	13.15	0.35	0.12
Free Water, Vacuum Oven	965.08B	060.00	6	0.96	0.10	0.03	5	0.95	0.10	0.01
Acid Soluble Calcium, AA	945.04	101.00	1	0.34	0.02	0.03	1	0.34	0.02	0.03
Acid Soluble Calcium, ICP		101.30	18	0.49	0.07	0.02	16	0.47	0.03	0.01
Method Group 101.XX PCT			19	0.48	0.07	0.02	17	0.47	0.05	0.01
Acid Soluble Magnesium, AA	984.01	121.00	13	2.15	0.11	0.05	12	2.16	0.11	0.03
Acid Soluble Magnesium, ICP		121.30	34	2.16	0.13	0.05	33	2.16	0.13	0.05
Acid Soluble Magnesium, Other		121.99	2	2.14	0.04	0.03	2	2.14	0.04	0.03
Method Group 121.XX PCT			49	2.16	0.12	0.05	47	2.16	0.12	0.04
Water Soluble Magnesium, AA		131.00	3	1.69	0.22	0.08	3	1.69	0.22	0.08
Water Soluble Magnesium, ICP		131.30	2	1.68	0.20	0.01	2	1.68	0.20	0.01
Water Soluble Magnesium, Other		131.99	1	2.28	0.00	0.00	1	2.28	0.00	0.00
Method Group 131.XX PCT			6	1.79	0.29	0.04	5	1.80	0.32	0.02
Sulfur, Gravimetric	980.02a	144.01	15	12.25	0.25	0.21	15	12.25	0.25	0.21
Sulfur, Gravimetric	980.02b	144.02	1	12.04	0.13	0.19	1	12.04	0.13	0.19
Sulfur, Spectrometric		144.70	1	12.59	0.08	0.11	1	12.59	0.08	0.11
Sulfur, Other		144.99	26	11.79	0.55	0.21	25	11.83	0.49	0.18
Method Group 144.XX PCT			45	11.92	0.55	0.20	44	11.95	0.51	0.18
Arsenic, Atomic Absorption		151.00	1	7.85	0.35	0.50	1	7.85	0.35	0.50
Arsenic, ICP		151.30	6	7.78	1.04	0.66	6	7.78	1.04	0.66
Arsenic, Other		151.99	2	8.08	1.80	1.34	2	8.08	1.80	1.34
Method Group 151.XX PPM			9	7.85	1.14	0.79	9	7.85	1.14	0.79
Acid Soluble Boron, Spectrometric	982.01	165.00	7	0.124	0.006	0.006	7	0.124	0.006	0.006
Acid Soluble Boron, Other		165.99	22	0.125	0.017	0.005	20	0.124	0.017	0.003
Method Group 165.XX PCT			30	0.125	0.015	0.005	28	0.125	0.015	0.004
Water Soluble Boron, Other		171.99	1	0.117	0.005	0.007	1	0.117	0.005	0.007
Cadmium, Atomic Absorption		181.00	2	3.78	0.10	0.05	2	3.78	0.10	0.05
Cadmium, ICP		181.30	11	3.99	0.41	0.23	11	3.99	0.41	0.23
Method Group 181.XX PPM			13	3.95	0.39	0.20	13	3.95	0.39	0.20
Water Soluble Chlorine, Titrimetric ...	928.02	190.00	2	8.60	1.09	0.35	2	8.60	1.09	0.35

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Chromium, Atomic Absorption		191.00	1	73.00	7.07	10.00	1	73.00	7.07	10.00
Chromium, ICP		191.30	13	68.88	6.04	1.20	12	69.03	6.25	0.96
Chromium, Other		191.99	1	53.61	0.14	0.20	1	53.61	0.14	0.20
Method Group 191.XX PPM			16	66.72	8.81	1.68	15	66.30	8.85	1.12
Acid Soluble Cobalt, AA		202.00	1	6.50	0.71	1.00	1	6.50	0.71	1.00
Acid Soluble Cobalt, ICP	965.11	202.30	12	14.91	2.54	0.86	12	14.91	2.54	0.86
Acid Soluble Cobalt, Other		202.99	1	8.00	2.63	3.73	1	8.00	2.63	3.73
Method Group 202.XX PPM			15	12.90	4.97	1.01	14	13.25	4.93	0.81
Acid Soluble Copper, Atomic Absorption	975.01	221.00	3	0.0050	0.0003	0.0004	3	0.0050	0.0003	0.0004
Acid Soluble Copper, ICP		221.30	21	0.0044	0.0006	0.0001	19	0.0044	0.0005	0.0001
Acid Soluble Copper, Other		221.99	1	0.0050	0.0001	0.0001	1	0.0050	0.0001	0.0001
Method Group 221.XX PCT			25	0.0045	0.0006	0.0002	22	0.0045	0.0005	0.0001
Acid Soluble Iron, Atomic Absorption	980.01	241.00	10	0.43	0.03	0.01	9	0.42	0.03	0.01
Acid Soluble Iron, ICP		241.30	40	0.43	0.05	0.01	38	0.43	0.04	0.01
Acid Soluble Iron, Other		241.99	2	0.44	0.02	0.01	2	0.44	0.02	0.01
Method Group 241.XX PCT			52	0.43	0.04	0.01	50	0.43	0.04	0.01
Lead, Atomic Absorption		251.00	1	10.40	0.99	1.40	1	10.40	0.99	1.40
Lead, ICP		251.30	12	13.03	2.36	2.05	11	13.03	2.14	1.51
Lead, Other		251.99	1	11.57	1.24	1.76	1	11.57	1.24	1.76
Method Group 251.XX PPM			14	12.74	2.32	1.98	13	12.72	2.13	1.52
Acid Soluble Manganese, AA	972.02a	261.00	9	0.428	0.054	0.039	8	0.427	0.048	0.022
Acid Soluble Manganese, ICP	972.02a	261.30	32	0.417	0.030	0.013	31	0.416	0.029	0.012
Acid Soluble Manganese, ICP	972.02b	261.31	1	0.437	0.018	0.026	1	0.437	0.018	0.026
Acid Soluble Manganese, Other		261.99	6	0.420	0.041	0.014	6	0.420	0.041	0.014
Method Group 261.XX PCT			50	0.417	0.041	0.022	48	0.418	0.037	0.015
Mercury, Atomic Absorption		281.00	1	0.01	0.00	0.01	1	0.01	0.00	0.01
Mercury, ICP		281.30	1	1.20	0.04	0.05	1	1.20	0.04	0.05
Method Group 281.XX PPM			2	0.60	0.68	0.03	2	0.60	0.68	0.03
Molybdenum, ICP		289.30	18	9.25	1.92	0.84	17	9.17	1.92	0.73
Molybdenum, Other		289.99	1	9.40	0.25	0.35	1	9.40	0.25	0.35
Method Group 289.XX PPM			19	9.26	1.87	0.82	18	9.18	1.87	0.71
Nickel, Atomic Absorption		291.00	2	26.25	7.23	0.50	2	26.25	7.23	0.50
Nickel, ICP		291.30	13	25.55	3.11	0.84	13	25.55	3.11	0.84
Nickel, Other		291.99	1	19.08	0.43	0.61	1	19.08	0.43	0.61
Method Group 291.XX PPM			17	24.78	4.33	1.15	16	25.23	3.94	0.78
Selenium, ICP		301.30	2	2.08	1.24	0.03	2	2.08	1.24	0.03
Selenium, Other		301.99	1	0.12	0.02	0.03	1	0.12	0.02	0.03
Method Group 301.XX PPM			3	1.42	1.40	0.03	3	1.42	1.40	0.03
Sodium, Flame Photometric	974.01	311.30	2	0.33	0.03	0.03	2	0.33	0.03	0.03

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Sodium, Other		311.99	8	0.34	0.03	0.01	7	0.34	0.03	0.01
Method Group 311.XX PCT			10	0.34	0.03	0.01	10	0.34	0.03	0.01
Acid Soluble Zinc, Atomic Absorption ..	975.02	321.00	12	0.270	0.020	0.015	12	0.270	0.020	0.015
Acid Soluble Zinc, ICP		321.30	37	0.282	0.036	0.022	35	0.280	0.033	0.019
Acid Soluble Zinc, Other		321.99	2	0.263	0.010	0.005	2	0.263	0.010	0.005
Method Group 321.XX PCT			52	0.280	0.034	0.020	49	0.277	0.030	0.017
Water Soluble Zinc, ICP		325.30	1	0.310	0.016	0.023	1	0.310	0.016	0.023
Water Soluble Zinc, Other		325.99	1	0.273	0.015	0.021	1	0.273	0.015	0.021
Method Group 325.XX PCT			2	0.291	0.025	0.022	2	0.291	0.025	0.022

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 001.10 PCT			Meth: 009.99 PCT			Meth: 010.60 PCT			Meth: 010.60 PCT			Meth: 010.XX PCT		
Ammoniacal Nitrogen			Ammon & Nitrate N			Total Nitrogen			Total Nitrogen			Total Nitrogen		
<u>MgO Distillation</u>			<u>Other</u>			<u>Combustion</u>			<u>Combustion</u>			<u>035</u>		
232	11.54	.56	027	11.99	.71	422	13.17 s	4.59	009	12.60	-.29	422	13.17 s	3.44
Avg	11.51					255	13.11 A	3.87	162	12.57	-.34	309	13.14	3.01
456	11.48	-1.09	Meth: 009.XX PCT			450	12.80 R	2.07	247	12.56	-.53	255	13.11	2.88
Meth: 001.99 PCT			<u>Ammon & Nitrate N</u>			117	12.85	1.90	389	12.55	-.58	481	13.02	2.34
Ammoniacal Nitrogen			090	13.04	.99	043	12.82	1.71	034	12.54	-.62	030	12.90	1.59
<u>Other</u>			169	12.86	.54	055	12.82	1.69	037	12.52	-.79	450	12.80 R	1.52
393	11.80 X	.96	Avg	12.63		452	12.76	1.18	102	12.49	-.98	479	12.85	1.35
096	11.66	.49	393	12.62	-.03	351	12.71	1.18	157	12.50	-1.13	117	12.85	1.35
Avg	11.52		027	11.99	-1.49	007	12.75	1.16	307	12.46	-1.16	043	12.82	1.21
420	11.50	-.67	Meth: 010.11 PCT			233	12.63	1.12	483	12.46	-1.17	055	12.82	1.19
027	11.13	-1.37	Total Nitrogen			330	12.70	1.04	368	12.46	-1.19	351	12.71	.83
Meth: 001.XX PCT			<u>Modified Comprehensi</u>			405	12.74	1.04	232	12.45	-1.21	452	12.76	.79
Ammoniacal Nitrogen			260	13.21 S	1.97	057	12.72	1.00	234	12.45	-1.21	007	12.75	.78
393	11.80 X	1.16	049	12.69	.99	049	12.69	.99	230	12.45	-1.27	330	12.70	.73
096	11.66	.59	309	13.14	1.63	360	12.71	.99	095	12.41	-1.55	049	12.69	.70
232	11.54	.08	479	12.85	.50	086	12.66	.91	018	12.40	-1.59	405	12.74	.68
Avg	11.52		Avg	12.74		072	12.72	.89	406	12.40	-1.63	057	12.72	.68
456	11.48	-.30	105	12.63	-.47	136	12.71	.86	451	12.56 R	-1.85	360	12.71	.68
420	11.50 R	-.80	470	12.59	-.64	296	12.71	.78	029	12.33	-2.19	086	12.66	.66
027	11.13	-1.65	211	12.50	-.99	377	12.70	.71	324	12.45 R	-2.27	072	12.72	.57
Meth: 002.99 PCT			114	11.82 S	-3.81	231	12.69	.62	041	12.20 s	-3.47	136	12.71	.56
Nitrate Nitrogen			474	11.56 S	-4.88	354	12.67	.54	Meth: 010.99 PCT			296	12.71	.48
<u>Other</u>			416	11.16 S	-6.51	325	12.65	.50	Total Nitrogen			377	12.70	.43
232	0.85	.95	Meth: 010.12 PCT			262	12.65	.50	Other			397	12.64	.39
Avg	0.83		Total Nitrogen			402	12.67	.45	030	12.90	1.49	231	12.69	.36
393	0.82	-.78	<u>Salicylic</u>			291	12.66	.37	397	12.64	.40	262	12.65	.32
Meth: 009.10 PCT			455	13.25 S	2.21	131	12.65	.31	Avg	12.58		325	12.65	.32
Ammon & Nitrate N			481	13.02	1.25	106	12.62	.25	137	12.58	-.01	354	12.67	.31
<u>Devarda</u>			Avg	12.73		420	12.61	.21	460	12.50	-.62	402	12.67	.23
090	13.04	1.09	254	12.65	-.33	023	12.63	.21	200	12.31	-1.32	105	12.63	.18
169	12.86	.12	185	12.52	-.91	177	12.62	.09	072	11.50 s	-5.61	291	12.66	.16
Avg	12.84		Meth: 010.60 PCT			Avg	12.61		Meth: 010.XX PCT			254	12.65	.14
393	12.62	-1.14	Total Nitrogen			040	12.60	-.06	Total Nitrogen			131	12.65	.13
<u>Combustion</u>			<u>Combustion</u>			292	12.60	-.06	455			13.25 s	3.70	
035	13.21 s	4.62	035	13.21 s	4.62	073	12.58	-.25	260			13.21 s	3.50	
						027	12.61	-.27	040			12.60	-.17	
						096	12.58	-.28						

* 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: 020.10 PCT			Meth: 020.40 PCT			Meth: 020.XX PCT			Meth: 020.XX PCT				
<u>Total Nitrogen</u>			<u>Total Phosphate</u>			<u>Total Phosphate</u>			<u>Total Phosphate</u>			<u>Total Phosphate</u>				
292	12.60	-.17	<u>Grav Quimociac</u>			<u>Automated</u>			307	13.97 R	1.79	255	12.88	-1.45		
106	12.62	-.19	041	13.60	.89	096	13.44	-.59	027	13.94	1.67	322	12.86	-1.50		
420	12.61	-.19	090	13.57	.76	105	13.45	-.93	405	13.88 X	1.45	234	12.88	-1.51		
027	12.61	-.25	105	13.42	.43	035	13.36	-1.07	452	13.92	1.44	455	12.36	-2.90		
470	12.59	-.26	470	13.46	.30	Meth: 020.50 PCT			371	13.71	.93	389	12.08 s	-3.67		
009	12.60	-.29	Avg	13.38		<u>Total Phosphate</u>			422	13.43	.81	Meth: 030.10 PCT				
137	12.58	-.29	157	13.35	-.23	<u>ICP</u>			393	13.69	.80	<u>Insoluble Phosphate</u>				
073	12.58	-.32	114	12.89	-1.95	483	15.41 s	4.98	456	13.69	.80	<u>Grav Quimociac</u>				
096	12.58	-.33	Meth: 020.20 PCT			307	13.97	1.61	292	13.67	.73	090			0.04	.00
162	12.57	-.39	<u>Total Phosphate</u>			452	13.92	1.29	474	13.64	.73	Meth: 030.20 PCT				
247	12.56	-.52	<u>Spectrometric</u>			422	13.43	.72	247	13.66	.72	<u>Insoluble Phosphate</u>				
389	12.55	-.56	324	14.20	2.36	393	13.69	.72	041	13.60	.56	<u>Spectrometric</u>				
034	12.54	-.60	405	13.88 R	1.52	Avg	13.40		479	13.59	.53	474			0.10	.87
185	12.52	-.71	371	13.71	.93	291	13.36	-.11	090	13.57	.47	Avg			0.07	
037	12.52	-.73	474	13.64	.70	402	13.32	-.25	450	13.50	.45	405			0.03	-.87
211	12.50	-.77	292	13.67	.69	451	13.28	-.47	169	13.54	.38	Meth: 030.40 PCT				
233	12.63	-.86	479	13.59	.47	368	13.00	-1.05	105	13.45	.37	<u>Insoluble Phosphate</u>				
102	12.49	-.88	450	13.50	.45	330	13.15	-1.06	105	13.42	.28	<u>Automated</u>				
157	12.50	-.97	169	13.54	.30	255	12.88	-1.29	231	13.45	.19	096			0.07	.71
460	12.50	-.97	231	13.45	.16	389	12.08 S	-3.28	096	13.44	.17	406			13.46	.17
307	12.46	-1.02	406	13.46	.08	Meth: 020.99 PCT			470	13.46	.15	470			13.46	.15
483	12.46	-1.04	Avg	13.44		<u>Total Phosphate</u>			416	13.44	.10	232			13.41	.06
368	12.46	-1.05	416	13.44	-.05	<u>Other</u>			232	13.41	.06	Avg			13.40	
232	12.45	-1.07	232	13.41	-.12	460	15.30 S	6.31	291	13.36	-.13	291			13.36	-.13
234	12.45	-1.07	420	13.30	-.48	007	13.94 R	3.02	035	13.36	-.16	035			13.36	-.16
230	12.45	-1.11	481	13.22	-.75	137	13.23	1.05	157	13.35	-.20	157			13.35	-.20
095	12.41	-1.33	200	13.19	-.78	322	12.86	.12	402	13.32	-.28	402			13.32	-.28
018	12.40	-1.36	309	12.90	-1.69	Avg	12.82		420	13.30	-.33	420			13.30	-.33
406	12.40	-1.40	234	12.88	-1.82	455	12.36	-1.17	137	13.23	-.47	137			13.23	-.47
451	12.56 R	-1.47	Meth: 020.40 PCT			Meth: 020.XX PCT			451	13.28	-.53	Meth: 030.99 PCT				
029	12.33	-1.83	<u>Total Phosphate</u>			<u>Total Phosphate</u>			481	13.22	-.56	<u>Insoluble Phosphate</u>				
324	12.45 R	-1.83	<u>Automated</u>			<u>Automated</u>			200	13.19	-.59	<u>Other</u>				
200	12.31	-1.93	027	13.94 s	3.25	483	15.41 s	5.55	368	13.00	-1.18	247			0.06	.71
041	12.20 R	-2.81	456	13.69	1.11	460	15.30 s	5.26	330	13.15 R	-1.19	330			13.15 R	-1.19
114	11.82 s	-4.84	247	13.66	.96	324	14.20	2.21	309	12.90	-1.39	309			12.90	-1.39
474	11.56 s	-6.39	Avg	13.52		007	13.94 R	1.84	114	12.89	-1.42	114			12.89	-1.42
072	11.50 s	-7.27														
416	11.16 s	-8.74														

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Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 030.XX 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>		
474	0.10	1.59	405	13.85 X	1.56	405	13.85 X	1.56	397	13.14	-1.93	211	13.46	.35
479	0.07	.58	452	13.89	1.34	027	13.92	1.51	351	13.04	-2.13	233	13.43	.22
096	0.07	.47	Avg	13.61		Avg	13.61		018	11.85 s	-9.95	Avg	13.39	
247	0.06	.20	247	13.60	-.25	072	13.60	-.37	095	13.45	-.78	393	13.36	-.16
Avg	0.05		479	13.52	-.47	131	13.47	-.69	Meth: 041.99 PCT			177	13.33	-.28
090	0.04	-.37	090	13.53	-.48	095	13.45	-.78	<u>Dir Available Phosph</u>			177	13.33	-.30
405	0.03	-.69	474	13.54	-.64	Meth: 041.50 PCT			<u>Other</u>			254	13.38	-.34
255	0.00	-1.66	096	13.38	-1.17	<u>Dir Available Phosph</u>			230	13.80	.57	055	13.36	-.35
			255	12.88 s	-3.55	<u>ICP</u>			Avg	13.61		037	13.33	-.39
Meth: 040.10 PCT			Meth: 041.10 PCT			325	13.55	1.51	105	13.52	-.31	049	13.31	-.40
<u>InDir Available Phos</u>			<u>Dir Available Phosph</u>			377	13.52	1.08	296	13.50	-1.44	043	13.32	-.46
<u>Grav Quim</u>			<u>Grav Quimociac</u>			055	13.36	.41	Meth: 041.XX PCT			360	13.29	-.49
090	13.53	.71	072	13.47	1.10	393	13.36	.24	<u>Dir Available Phosph</u>			131	13.28	-.53
Meth: 040.20 PCT			260	13.43	1.01	Avg	13.32		027	13.92	2.56	040	13.30	-.63
<u>InDir Available Phos</u>			057	13.43	1.00	360	13.29	-.20	296	13.50 R	2.37	102	13.25	-.70
<u>Spectrometri</u>			055	13.46	.87	043	13.32	-.36	230	13.80	1.98	086	13.24	-1.21
474	13.54	.71	211	13.46	.83	009	13.13	-1.21	034	13.61	1.10	030	13.12	-1.31
Meth: 040.40 PCT			105	13.42	.82	023	13.06	-1.48	325	13.55	1.06	009	13.13	-1.34
<u>InDir Available Phos</u>			254	13.38	.55	368	13.29 R	-1.81	072	13.60	1.06	185	13.10	-1.37
<u>Automated</u>			Avg	13.33		354	12.58 S	-4.14	106	13.57	.99	397	13.14	-1.55
096	13.38	.71	177	13.33	-.08	Meth: 041.60 PCT			136	13.59	.97	023	13.06	-1.60
Meth: 040.50 PCT			049	13.31	-.19	<u>Dir Available Phosph</u>			105	13.55	.82	009	13.11	-1.60
<u>InDir Available Phos</u>			131	13.28	-.38	<u>EDTA Extract</u>			231	13.55	.82	368	13.29 R	-1.64
<u>ICP</u>			102	13.25	-.61	034	13.61	1.02	105	13.52	.67	351	13.04	-1.69
Avg	13.89		040	13.30	-.67	106	13.57	.93	296	13.52	.67	262	13.00	-1.91
452	13.89	-.71	086	13.24	-1.45	106	13.57	.93	260	13.43	.63	354	12.58 s	-3.91
255	12.88 S	-35.78	185	13.10	-1.49	136	13.59	.87	072	13.47	.63	018	11.85 s	-8.67
Meth: 040.99 PCT			009	13.11	-1.87	105	13.55	.71	377	13.52	.62	Meth: 048.20 PCT		
<u>InDir Available Phos</u>			Meth: 041.20 PCT			231	13.55	.71	057	13.43	.61	<u>Water Soluble Phosph</u>		
<u>Other</u>			<u>Spectrometric</u>			029	13.43	.59	029	13.43	.57	<u>Spectrometric</u>		
405	13.85 X	1.40	030	13.12	.58	296	13.52	.55	057	13.49	.48	420	12.25	1.02
Avg	13.66		Avg	13.06		057	13.49	.32	057	13.49	.48	096	11.90	.21
247	13.60	-.35	262	13.00	-1.08	043	13.45	.29	105	13.42	.46	Avg	11.83	
479	13.52	-.66				Avg	13.43		055	13.46	.40	474	11.33	-1.19
						233	13.43	-.14	043	13.45	.39			
						177	13.33	-.56	131	13.47	.38			
						037	13.33	-.62	095	13.45	.36			

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Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 048.50 PCT			Meth: 050.30 PCT			Meth: 050.51 PCT			Meth: 050.99 PCT			Meth: 050.XX PCT		
Water Soluble Phosph			Soluble Potash			Soluble Potash			Soluble Potash			Soluble Potash		
<u>ICP</u>			<u>AA (Oxalate)</u>			<u>ICP (Citrate)</u>			<u>Other</u>					
393	11.97	.71	136	13.10	.35	389	13.15	-.54	450	13.38	.81	177	13.40	.70
			262	13.06	.26	296	12.86	-1.40	247	13.37	.78	291	13.39	.67
Meth: 048.XX PCT			043			009			232			247		
Water Soluble Phosph			Avg			Meth: 050.60 PCT			325			232		
420	12.25	1.09	351	12.31	-1.51	Soluble Potash			131			456		
393	11.97	.30	481	12.22	-1.71	<u>Flame (Oxalate)</u>			Avg			105		
096	11.90	.18	Meth: 050.31 PCT			105			322			114		
Avg	11.86		Soluble Potash			406			027			325		
474	11.33	-1.48	<u>AA (Citrate)</u>			Avg			330			397		
Meth: 050.00 PCT			030			200			455			292		
Soluble Potash			Meth: 050.50 PCT			309			255			072		
<u>STPB Oxalate</u>			Soluble Potash			169			368			106		
233	13.62 R	2.22	<u>ICP (Oxalate)</u>			Meth: 050.61 PCT			137			009		
057	13.55	1.67	422			Soluble Potash			307			090		
049	13.47	1.25	292			<u>Flame (Citrate)</u>			072			131		
397	13.32	.53	420			029			Meth: 050.XX PCT			096		
072	13.29	.50	106			041			<u>Soluble Potash</u>			416		
114	13.33	.48	Avg			095			460			211		
090	13.27	.27	055			456			452			470		
009	13.27	.24	324			Avg			483			023		
Avg	13.24		354			035			007			035		
416	13.22	-.12	Meth: 050.51 PCT			037			451			406		
211	13.21	-.18	Soluble Potash			018			233			Avg		
470	13.21	-.21	<u>ICP (Citrate)</u>			034			057			389		
231	13.15	-.61	452			131			422			136		
102	13.10	-.77	483			057			029			102		
055	12.79	-2.48	007			Meth: 050.99 PCT			095			231		
230	12.55 s	-3.76	043			Soluble Potash			041			037		
Meth: 050.30 PCT			393			<u>Other</u>			043			200		
Soluble Potash			377			460			049			034		
<u>AA (Oxalate)</u>			185			451			157			262		
185	13.45	1.17	291			402			393			131		
157	13.40	1.15	Avg			360			185			018		
040	13.00	.48	023			177			377			322		
254	13.04	.35	096						402			055		
									360			309		
									360			030		

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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: 101.00 PCT			Meth: 101.XX PCT			Meth: 121.30 PCT			Meth: 121.30 PCT		
<u>Soluble Potash</u>			<u>Acid Soluble Calcium</u>			<u>Acid Soluble Calcium</u>			<u>Acid Soluble Magnesi</u>			<u>Acid Soluble Magnesi</u>		
057	13.02	-.41	AA			096	0.51	.83	ICP			230	1.68 s	-3.65
254	13.04	-.47	105	0.34	.71	009	0.49	.73	041	2.76 s	4.59	393	1.21 s	-7.19
420	13.15	-.48	Avg	0.34		057	0.50	.62	483	2.44	2.13			
169	12.99	-.49				474	0.49	.41	057	2.35	1.49			
043	12.98	-.57	Meth: 101.30 PCT			479	0.48	.36	389	2.33	1.30	Meth: 121.99 PCT		
027	12.99	-.59	<u>Acid Soluble Calcium</u>			389	0.48	.29	131	2.33	1.30	<u>Acid Soluble Magnesi</u>		
040	13.00	-.72	<u>ICP</u>			035	0.47	.11	231	2.33	1.28	<u>Other</u>		
330	12.85	-.96	483	4.48 s	116.84	102	0.47	.11	009	2.24 R	1.04	460	2.17 X	1.00
296	12.86	-1.05	422	1.42 s	27.57	Avg	0.47		023	2.26	.82	Avg	2.14	
055	12.79	-1.05	393	0.71 A	6.87	307	0.46	-.12	452	2.25	.75	137	2.11	-.71
009	12.78	-1.08	041	0.52 R	3.28	131	0.46	-.25	102	2.24	.68			
455	12.77	-1.10	354	0.55	2.09	232	0.45	-.33	106	2.23	.57	Meth: 121.XX PCT		
255	12.75	-1.14	106	0.51	1.03	086	0.45	-.35	291	2.22	.49	<u>Acid Soluble Magnesi</u>		
368	12.76	-1.17	096	0.51	.90	420	0.44	-.59	450	2.21	.47	041	2.76 s	4.92
137	12.68	-1.35	009	0.49	.82	027	0.39	-1.57	055	2.17	.42	483	2.44	2.28
230	12.55	-1.72	057	0.50	.60	105	0.34	-2.74	027	2.20	.39	057	2.35	1.60
307	12.56	-1.78	474	0.49	.33	Meth: 121.00 PCT			247	2.19	.29	177	2.35	1.55
324	12.50 R	-2.05	479	0.48	.33	<u>Acid Soluble Magnesi</u>			037	2.16	.23	389	2.33	1.40
354	12.40	-2.14	389	0.48	.16	<u>AA</u>			360	2.17	.20	131	2.33	1.40
072	12.40	-2.15	Avg	0.47		177	2.35	1.75	233	2.16	.14	231	2.33	1.38
351	12.31	-2.42	102	0.47	-.09	397	2.29	1.19	Avg	2.16		009	2.24 R	1.12
481	12.22	-2.66	035	0.47	-.12	028	2.27	1.03	035	2.14	-.14	397	2.29	1.06
			307	0.46	-.37	105	2.20	.41	096	2.14	-.19	028	2.27	.92
			131	0.46	-.54	296	2.19	.36	433	2.13	-.26	023	2.26	.89
			232	0.45	-.67	309	2.18	.22	300	2.15	-.35	452	2.25	.80
			086	0.45	-.69	Avg	2.16		324	2.11	-.40	102	2.24	.73
			420	0.44	-1.03	040	2.13	-.26	095	2.10	-.40	106	2.23	.61
			027	0.39	-2.35	043	2.12	-.34	307	2.08	-.60	291	2.22	.53
						169	2.08	-.76	368	2.15	-.63	450	2.21	.51
			Meth: 101.XX PCT			029	2.05	-1.08	255	2.07	-.68	055	2.17	.45
			<u>Acid Soluble Calcium</u>			262	2.05	-1.08	422	2.11	-.71	027	2.20	.43
			296	4.68 s	90.93	481	2.12 R	-1.39	354	2.03	-.96	105	2.20	.37
			483	4.48 s	86.75	351	1.98	-1.58	420	2.03	-.97	296	2.19	.33
			422	1.42 s	20.60				232	2.02	-1.08	247	2.19	.32
			393	0.71 A	5.26				114	1.95	-1.70	460	2.17 X	.27
			041	0.52 R	2.50				474	1.88	-2.13	037	2.16	.25
			354	0.55	1.72				086	1.86	-2.24	360	2.17	.22
			106	0.51	.93				479	1.70 s	-3.50	309	2.18	.20
			Meth: 101.00 PCT											
			<u>Acid Soluble Calcium</u>											
			296	4.68 S	192.15									

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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>		
233	2.16	.15	ICP			Gravimetric			Other			157	12.08	.24
Avg	2.16		230	1.85	.87	397	12.00	-1.26	368	11.45	-.80	360	12.08	.24
035	2.14	-.15	Avg	1.68		200	11.14 s	-4.38	450	11.48	-.83	105	12.04	.23
096	2.14	-.20	027	1.51	-.87	481	10.66 s	-6.29	422	11.34	-1.01	262	12.01	.11
040	2.13	-.22	Meth: 131.99 PCT			Meth: 144.02 PCT			Meth: 144.99 PCT			Meth: 144.XX PCT		
433	2.13	-.27	<u>Water Soluble Magnes</u>			<u>Sulfur</u>			<u>Sulfur</u>			Avg		
043	2.12	-.30	Other			Gravimetric			009			11.95		
137	2.11	-.37	200	2.28	.00	292	12.04	.71	354	10.63 R	-2.62	291	11.77	-.37
300	2.15	-.37	Meth: 131.XX PCT			Meth: 144.70 PCT			354			11.79		
324	2.11	-.43	<u>Water Soluble Magnes</u>			<u>Sulfur</u>			393			11.75		
095	2.10	-.43	200	2.28	1.51	Spectrometric			035			11.65		
307	2.08	-.64	296	1.91	.36	474			8.68 s			137		
169	2.08	-.66	230	1.85	.17	Meth: 144.99 PCT			Meth: 144.XX PCT			086		
368	2.15	-.68	Avg	1.80		<u>Sulfur</u>			<u>Sulfur</u>			368		
255	2.07	-.72	029	1.72 R	-.36	483			483			450		
422	2.11	-.75	027	1.51	-.90	117			13.10			450		
029	2.05	-.95	309	1.44	-1.12	389			12.72			422		
262	2.05	-.95	Meth: 144.01 PCT			117			12.60			300		
354	2.03	-1.02	<u>Sulfur</u>			232			12.59			009		
420	2.03	-1.03	Gravimetric			351			1.24			200		
232	2.02	-1.16	055	12.72	2.01	479			.97			255		
481	2.12 R	-1.22	296	12.60	1.81	037			.85			481		
351	1.98	-1.39	029	12.45	.80	452			.83			307		
114	1.95	-1.81	043	12.38	.60	157			.78			354		
474	1.88	-2.28	324	12.30	.45	360			.73			393		
086	1.86	-2.40	057	12.33	.34	027			.71			096		
479	1.70 s	-3.75	114	12.29	.21	177			.67			035		
230	1.68 s	-3.91	Avg	12.25		479			.65			Meth: 151.00 PPM		
393	1.21 s	-7.70	095	12.21	-.16	397			.63			Arsenic		
Meth: 131.00 PCT			095			12.21			.50			Atomic Absorption		
<u>Water Soluble Magnes</u>			233			12.12			.44			136		
AA			040			12.10			.41			7.85		
296	1.91	1.00	105			12.04			.40			Meth: 151.30 PPM		
029	1.72	.43	371			12.10			.37			Arsenic		
Avg	1.69		262			12.01			.36			ICP		
309	1.44	-1.14	230			12.05			.35			009		
			096			11.75			.35			9.20 s		
			023			11.65			.35			450		
			137			11.52			.28			8.38		
			086			11.52			.25			.58		
												096		
												8.10		
												.36		

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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: 151.30 PPM</u>			<u>Meth: 165.00 PCT</u>			<u>Meth: 165.XX PCT</u>			<u>Meth: 181.00 PPM</u>			<u>Meth: 181.XX PPM</u>		
Arsenic			Acid Soluble Boron			Acid Soluble Boron			Cadmium			Cadmium		
<u>ICP</u>			<u>Spectrometric</u>			<u>Atomic Absorption</u>			<u>ICP</u>			<u>Titrimetric</u>		
102	7.95	.20	057	0.122	-.70	368	0.138	.96	136	3.85	.94	136	3.85	-.30
Avg	7.78		397	0.120	-.71	137	0.140	.95	136	3.78		232	3.76	-.55
230	6.76	-.98	037	0.120	-1.80	023	0.137	.89	Avg	3.70		481	3.70	-.66
474	6.50	-1.32				422	0.137	.74	481	3.70	-.78	368	3.80	-.87
368	4.60 s	-4.54	<u>Meth: 165.99 PCT</u>			043	0.130 R	.72	<u>Meth: 181.30 PPM</u>			096	3.50	-1.29
			Acid Soluble Boron			433	0.136	.66	Cadmium			230	3.24	-1.89
			<u>Other</u>			360	0.132	.40	<u>ICP</u>			086	2.50 s	-4.07
<u>Meth: 151.99 PPM</u>			200	0.220 s	5.55	117	0.130	.35	452	4.52	1.37	<u>Meth: 190.00 PCT</u>		
Arsenic			291	0.164	2.26	393	0.130	.33	035	4.51	1.31	Water Soluble Chlori		
<u>Other</u>			483	0.154	1.69	231	0.130	.30	009	4.21	.60	<u>Titrimetric</u>		
231	9.38	.98	137	0.140	.90	389	0.130	.30	393	4.17	.46	105	9.52	.89
Avg	8.08		368	0.138 R	.90	452	0.130	.27	102	4.15	.41	Avg	8.60	
086	6.77	-.73	422	0.137	.71	029	0.128	.14	106	4.00	.03	422	7.68	-.84
			043	0.130 R	.66	Avg	0.125		474	4.00	.03	<u>Meth: 191.00 PPM</u>		
<u>Meth: 151.XX PPM</u>			433	0.136	.64	055	0.125	-.13	<u>Chromium</u>			<u>Atomic Absorption</u>		
Arsenic			360	0.132	.41	057	0.122	-.32	232	3.76	-.59	481 73.00 .71		
009	9.20 s	1.95	117	0.130	.36	300	0.125	-.33	368	3.80	-.86	<u>Meth: 191.30 PPM</u>		
231	9.38	1.70	389	0.130	.32	481	0.125	-.33	096	3.50	-1.28	Chromium		
450	9.00	1.34	231	0.130	.32	106	0.120	-.36	230	3.24	-1.85	<u>ICP</u>		
393	8.38	.47	452	0.130	.29	397	0.120	-.36	086	2.50 s	-3.90	009	76.91	1.29
096	8.10	.28	300	0.125	.29	232	0.118	-.50	<u>Meth: 181.99 PPM</u>			106	76.00	1.12
102	7.95	.14	Avg	0.124		324	0.116	-.65	Cadmium			450	75.50	1.04
Avg	7.85		106	0.120	-.26	037	0.120 R	-.74	<u>Other</u>			096	74.40	.88
136	7.85	-.22	232	0.118	-.38	009	0.114	-.78	231	5.65 s	.00	393	70.00	.16
086	6.77	-.96	324	0.116	-.52	114	0.110	-1.01	<u>Meth: 181.XX PPM</u>			Avg	69.03	
230	6.76	-.96	009	0.114	-.63	354	0.108	-1.28	Cadmium			037	68.66	-.10
474	6.50	-1.27	114	0.110	-.83	296	0.105	-1.38	231	5.65 s	5.20	035	68.25	-.12
368	4.60 s	-4.20	354	0.108	-1.07	086	0.100	-1.70	452	4.52	1.53	452	67.95	-.17
			296	0.105	-1.15	230	0.094	-2.06	009	4.21	.71	102	66.69	-.37
<u>Meth: 165.00 PCT</u>			086	0.100	-1.44	<u>Meth: 171.99 PCT</u>			393	4.17	.58	368	67.15 R	-.44
Acid Soluble Boron			230	0.094	-1.75	Water Soluble Boron			102	4.15	.52	232	65.45	-.57
<u>Spectrometric</u>			<u>Meth: 165.XX PCT</u>			<u>Other</u>			106	4.00	.12	086	64.20	-.78
023	0.137 s	2.47	Acid Soluble Boron			027	0.117	.71	474	4.00	.12	230	54.30	-2.36
393	0.130	1.04	200	0.220 s	6.24				Avg	3.95		474	45.50 s	-3.77
481	0.125	.86	291	0.164	2.50									
029	0.128	.57	483	0.154	1.85									
055	0.125	.37												
Avg	0.124													

* 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: 191.99 PPM Chromium			Meth: 202.30 PPM Acid Soluble Cobalt			Meth: 221.00 PCT Acid Soluble Copper			Meth: 221.XX PCT Acid Soluble Copper			Meth: 241.00 PCT Acid Soluble Iron		
<u>Other</u>			<u>ICP</u>			<u>Atomic Absorption</u>			<u>Atomic Absorption</u>			<u>Atomic Absorption</u>		
231	53.61	.71	Avg	14.91		296	0.0050	-.18	354	0.0060	2.84	Avg	0.42	
			393	13.56	-.53	043	0.0049	-.61	433	0.0052 R	1.54	028	0.42	-.15
			232	12.50	-.96	105	0.0019 S	-10.94	474	0.0052 R	1.51	043	0.42	-.29
Meth: 191.XX PPM Chromium			086			Meth: 221.30 PCT Acid Soluble Copper			422			040		
009	76.91	1.21	230	12.74	-.99	<u>ICP</u>			231			0474		
106	76.00	1.10	102	11.75	-1.25	354	0.0060	2.93	296			0177		
450	75.50	1.04	422	11.29	-1.44	433	0.0052 R	1.64	043			296		
481	73.00 R	.94		0.00 S	-5.87	422	0.0050	1.10	037			030		
096	74.40	.92	Meth: 202.99 PPM Acid Soluble Cobalt			037	0.0049	.86	057			262		
393	70.00	.42	<u>Other</u>			057	0.0046 R	.68	368			Meth: 241.30 PCT Acid Soluble Iron		
037	68.66	.27	231	8.00	.71	368	0.0046	.45	232			<u>ICP</u>		
368	67.15	.25	Meth: 202.XX PPM Acid Soluble Cobalt			027	0.0045	.30	027			452		
035	68.25	.22	450	18.35	1.04	035	0.0045	.13	393			114		
452	67.95	.19	057	17.68	.92	450	0.0045	.13	086			422		
102	66.69	.05	009	17.78	.92	Avg	0.0044		402			483		
Avg	66.30		233	17.50	.86	027	0.0043	-.18	389			057		
232	65.45	-.10	368	15.45	.46	393	0.0043	-.26	106			055		
086	64.20	-.25	452	15.36	.43	086	0.0042	-.34	096			324		
230	54.30	-1.36	035	15.00	.36	106	0.0040	-.73	452			117		
231	53.61	-1.43	393	13.56	.06	402	0.0040	-.73	483			106		
474	45.50	-2.35	Avg	13.25		389	0.0040	-.73	230			231		
			232	12.50	-.16	096	0.0039	-.86	041			247		
			086	12.74	-.28	452	0.0039	-1.01	255			131		
			230	11.75	-.31	483	0.0038	-1.11	105			102		
			102	11.29	-.41	230	0.0037	-1.28	Meth: 241.00 PCT Acid Soluble Iron			479		
			231	8.00 R	-1.13	041	0.0035 S	-3.43	<u>Atomic Absorption</u>			360		
			474	6.50	-1.37	255	0.0021 S	-5.92	351			433		
			422	0.00	-2.68	Meth: 221.99 PCT Acid Soluble Copper			105			009		
			Meth: 221.00 PCT Acid Soluble Copper			<u>Other</u>			105			450		
			<u>Atomic Absorption</u>			231			029			450		
			474	0.0052	1.45	041			460			096		
			Avg	0.0050		255			397			023		
						041			460			037		
						041			460			233		
						041			460			291		
						041			460			Avg		
						041			460			0.43		

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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: 241.XX PCT			Meth: 251.99 PPM			Meth: 261.30 PCT		
<u>Acid Soluble Iron</u>			<u>Acid Soluble Iron</u>			<u>Acid Soluble Iron</u>			<u>Lead</u>			<u>Acid Soluble Manganese</u>		
<u>ICP</u>			<u>ICP</u>			<u>ICP</u>			<u>Other</u>			<u>ICP</u>		
157	0.43	-.08	117	0.46	.75	177	0.37	-1.33	231	11.57	.71	117	0.551 s	4.77
393	0.42	-.22	029	0.46	.62	041	0.37	-1.39				041	0.450 R	1.55
368	0.43	-.23	106	0.46	.58	086	0.37	-1.40	Meth: 251.XX PPM			360	0.458	1.51
095	0.42	-.25	231	0.45	.51	027	0.36	-1.55	<u>Lead</u>			422	0.455	1.34
255	0.42	-.27	247	0.45	.46	300	0.35	-1.86	136	26.00 s	6.30	009	0.452	1.25
307	0.42	-.38	137	0.45	.46	230	0.32	-2.48	474	13.00 R	1.88	450	0.452	1.24
035	0.40	-.60	131	0.45	.40	481	0.29 s	-3.36	232	15.80	1.67	055	0.445	1.11
354	0.40 R	-.73	102	0.44	.33	296	0.24 s	-4.41	450	15.00	1.42	231	0.445	1.00
402	0.40	-.76	479	0.44	.32	030	0.23 s	-4.61	233	15.31	1.22	131	0.444	.95
420	0.39	-.79	360	0.44	.29	262	0.10 s	-7.60	009	13.63	.63	057	0.443	.95
389	0.39	-1.00	433	0.44	.26	Meth: 251.00 PPM			035	14.00	.61	368	0.442	.91
232	0.38	-1.15	009	0.44	.24	<u>Lead</u>			102	12.85	.42	096	0.442	.89
041	0.37	-1.33	460	0.44	.23	<u>Atomic Absorption</u>			Avg	12.72		102	0.428	.57
086	0.37	-1.34	450	0.44	.20	136	26.00 S	15.89	393	12.45	-.16	105	0.427	.38
027	0.36	-1.49	023	0.43	.16	481	10.40	.71	368	12.30	-.46	452	0.427	.38
300	0.35	-1.79	096	0.44	.16	Avg	10.40		037	11.49	-.58	233	0.421	.17
230	0.32	-2.40	397	0.44	.14	Meth: 251.30 PPM			231	11.57	-.68	023	0.418	.09
			037	0.44	.13	<u>Lead</u>			230	10.50	-1.04	Avg	0.416	
			233	0.43	.11	<u>ICP</u>			481	10.40	-1.13	095	0.416	-.04
Meth: 241.99 PCT			291	0.43	.08	232	15.80	1.55	106	10.00	-1.36	247	0.415	-.18
<u>Acid Soluble Iron</u>			Avg	0.43		450	15.00	1.31	Meth: 261.00 PCT			433	0.409	-.35
<u>Other</u>			157	0.43	-.09	233	15.31	1.07	<u>Acid Soluble Manganese</u>			291	0.406	-.36
137	0.45	.78	368	0.43	-.24	009	13.63	.54	<u>AA</u>			402	0.406	-.37
Avg	0.44		393	0.42	-.25	035	14.00	.46	481	0.435 R	1.79	389	0.400	-.56
371	0.42	-.94	028	0.42	-.26	Avg	13.03		397	0.501	1.55	035	0.397	-.68
481	0.29 S	-7.87	095	0.42	-.28	393	12.45	-.29	043	0.465	.80	230	0.397	-.69
			255	0.42	-.29	102	12.85	-.43	351	0.440	.48	300	0.400	-.89
			371	0.42	-.33	368	12.30	-.54	029	0.431	.35	420	0.390	-.91
			043	0.42	-.37	037	11.49	-.72	Avg	0.427		307	0.391	-.93
			307	0.42	-.41	230	10.50	-1.19	460	0.420	-.26	354	0.385	-1.09
			040	0.42	-.49	106	10.00	-1.49	296	0.423	-.34	086	0.379	-1.46
			035	0.40	-.64	474	13.00 R	-1.87	040	0.400	-.59	114	0.365	-1.78
			354	0.40 R	-.77				177	0.338	-1.89	232	0.345	-2.49
			402	0.40	-.80				262	0.110 s	-6.65	027	0.319 s	-3.36
			420	0.39	-.83							106	0.385 s	-3.45
			389	0.39	-1.05									
			474	0.38	-1.16									
			232	0.38	-1.21									

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Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 261.31 PCT			Meth: 261.XX PCT			Meth: 281.30 PPM			Meth: 289.XX PPM			Meth: 291.30 PPM		
Acid Soluble Manganese			Acid Soluble Manganese			Mercury			Molybdenum			Nickel		
<u>ICP</u>			<u>ICP</u>			<u>ICP</u>			<u>ICP</u>			<u>ICP</u>		
324	0.437	.71	102	0.428	.42	393	1.20	.71	037	12.32	1.71	Avg	25.55	
			460	0.420	.28				433	11.97	1.51	232	25.45	-.18
			452	0.427	.26				368	10.60 R	1.07	393	24.93	-.20
Meth: 261.99 PCT			105 0.427 .26			Meth: 281.XX PPM			233 11.05 1.01			035 24.85 -.23		
Acid Soluble Manganese			393 0.421 .11			Mercury			393 10.56 .75			102 24.84 -.29		
<u>Other</u>			233 0.421 .09			393 1.20 .87			232 10.20 .56			106 25.00 -.37		
137	0.470	1.20	Avg	0.418		Avg	0.60		450	9.50	.32	037	24.26	-.42
483	0.465	1.08	095	0.416	-.05	230	0.01	-.87	035	9.72	.29	086	22.62	-.94
037	0.421	.39	023	0.418	-.07	Meth: 289.30 PPM			102	9.38	.25	230	19.55	-1.93
393	0.421	.07	247	0.415	-.15	Molybdenum			452	9.53	.19	474	17.50 s	-2.82
Avg	0.420		157	0.409	-.29	<u>ICP</u>			231	9.40	.15			
255	0.376	-1.09	433	0.409	-.31	037	12.32	1.67	057	9.35	.11	Meth: 291.99 PPM		
474	0.370	-1.24	291	0.406	-.32	433	11.97	1.48	009	9.38	.11	Nickel		
			402	0.406	-.33	368	10.60 R	1.04	Avg	9.18		<u>Other</u>		
Meth: 261.XX PCT			389	0.400	-.48	233	11.05	.99	086	8.76	-.37	231	19.08	.71
Acid Soluble Manganese			040	0.400	-.52	393	10.56	.73	230	7.65	-.90	Meth: 291.XX PPM		
117	0.551 s	3.70	035	0.397	-.57	232	10.20	.55	474	7.50	-.94	<u>Nickel</u>		
481	0.435 R	2.34	230	0.397	-.58	450	9.50	.31	106	7.50	-.94	096	33.00	1.97
397	0.501	2.25	300	0.400	-.72	035	9.72	.29	096	6.50	-1.44	136	32.50	1.85
137	0.470	1.41	420	0.390	-.75	102	9.38	.25	422	5.00	-2.30	009	28.25	.79
043	0.465	1.28	307	0.391	-.76	452	9.53	.19	255	0.93 s	-4.42	450	28.00	.70
483	0.465	1.27	354	0.385	-.89	009	9.38	.11	114	0.00 s	-4.92	233	25.77	.34
041	0.450	1.19	255	0.376	-1.15	057	9.35	.11	Meth: 291.00 PPM			368	25.65	.16
360	0.458	1.15	086	0.379	-1.18	Avg	9.17		Nickel			232	25.45	.15
422	0.455	1.01	474	0.370	-1.32	086	8.76	-.35	<u>Atomic Absorption</u>			Avg	25.23	
009	0.452	.94	114	0.365	-1.43	230	7.65	-.87	136	32.50	.87	393	24.93	-.08
450	0.452	.93	232	0.345	-1.99	474	7.50	-.91	Avg	26.25		035	24.85	-.10
055	0.445	.84	177	0.338	-2.19	106	7.50	-.91	481	20.00	-.86	102	24.84	-.17
351	0.440	.79	027	0.319	-2.67	096	6.50	-1.39	Meth: 291.30 PPM			037	24.26	-.26
231	0.445	.75	106	0.385 R	-2.71	422	5.00	-2.23	Nickel			106	25.00	-.26
131	0.444	.71	262	0.110 s	-8.31	255	0.93 s	-4.29	<u>ICP</u>			086	22.62	-.66
057	0.443	.70	Meth: 281.00 PPM			114	0.00 s	-4.77	096	33.00	2.39	481	20.00	-1.33
368	0.442	.67	Mercury			Meth: 289.99 PPM			009	28.25	.91	230	19.55	-1.45
096	0.442	.66	<u>Atomic Absorption</u>			Molybdenum			450	28.00	.79	231	19.08	-1.56
324	0.437	.63	230	0.01	-.71	<u>Other</u>			233	25.77	.40	474	17.50 R	-2.15
029	0.431	.56				231	9.40	.71	368	25.65	.15			
037	0.421	.44												
296	0.423	.44												

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Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 301.30 PPM			Meth: 311.XX PCT			Meth: 321.30 PCT			Meth: 321.99 PCT			Meth: 321.XX PCT		
Selenium			Sodium			Acid Soluble Zinc			Acid Soluble Zinc			Acid Soluble Zinc		
<u>ICP</u>			<u>ICP</u>			<u>ICP</u>			<u>Other</u>					
393	3.15	.87	422	0.41	2.26	057	0.322	1.26	231	0.398 S	18.11	137	0.270	-.24
Avg	2.08		057	0.36	.87	117	0.321	1.23	137	0.270	.78	105	0.275	-.33
450	1.00	-.87	105	0.36	.67	086	0.281 R	1.20	Avg	0.263		450	0.273	-.38
			Avg	0.34		023	0.308	1.10	474	0.255	-.94	043	0.270	-.41
Meth: 301.99 PPM			035	0.34	-.11	055	0.310	1.09				479	0.265	-.44
Selenium			102	0.33	-.36	422	0.305	1.07	Meth: 321.XX PCT			300	0.265	-.44
<u>Other</u>			474	0.32	-.55	324	0.301	1.04	<u>Acid Soluble Zinc</u>			433	0.265	-.45
086	0.12	.71	232	0.33	-.68	041	0.295	.88	231	0.398 s	5.31	360	0.272	-.48
			307	0.31	-.74	035	0.307	.83	483	0.372 A	3.21	028	0.271	-.50
Meth: 301.XX PPM			009	0.31	-.90	368	0.300	.79	452	0.340	2.08	037	0.274	-.52
Selenium			086	0.31	-.96	157	0.288	.39	114	0.340	2.08	040	0.262	-.56
393	3.15	1.24	Meth: 321.00 PCT			106	0.290	.31	397	0.335	1.99	233	0.260	-.65
Avg	1.42		Acid Soluble Zinc			231	0.285	.22	102	0.309 R	1.53	460	0.260	-.66
450	1.00	-.30	<u>Atomic Absorption</u>			247	0.281	.02	057	0.322	1.45	292	0.255	-.75
086	0.12	-.94	397	0.335 s	3.43	Avg	0.280		117	0.321	1.41	474	0.255	-.75
			177	0.302	1.69	009	0.275	-.18	086	0.281 R	1.31	354	0.259	-.76
Meth: 311.30 PCT			481	0.285	1.07	291	0.273	-.21	055	0.310	1.25	389	0.250	-.90
Sodium			029	0.286	.83	095	0.272	-.24	023	0.308	1.25	255	0.250	-.92
<u>Flame Photometric</u>			028	0.271	.72	402	0.272	-.25	422	0.305	1.22	232	0.249	-.96
105	0.36	.85	296	0.282	.69	450	0.273	-.39	324	0.301	1.18	307	0.252	-1.00
Avg	0.33		105	0.275	.56	300	0.265	-.47	041	0.295	1.00	351	0.243	-1.12
086	0.31	-.88	Avg	0.270		479	0.265	-.47	035	0.307	.98	200	0.240 X	-1.23
			371	0.270	-.02	360	0.272	-.48	368	0.300	.92	027	0.211	-2.18
Meth: 311.99 PCT			043	0.270	-.51	433	0.265	-.48	177	0.302	.88	230	0.208	-2.29
Sodium			040	0.262	-.56	037	0.274	-.51	481	0.285	.55	262	0.100 s	-5.82
<u>Other</u>			460	0.260	-.74	233	0.260	-.66	157	0.288	.48	Meth: 325.30 PCT		
422	0.41	2.02	351	0.243	-1.40	354	0.259	-.76	106	0.290	.41	Water Soluble Zinc		
057	0.36	.74	200	0.240 X	-1.55	292	0.255	-.77	029	0.286	.33	<u>ICP</u>		
Avg	0.34		262	0.100 s	-8.70	389	0.250	-.90	231	0.285	.30	393	0.310	.71
035	0.34	-.14	Meth: 321.30 PCT			255	0.250	-.92	296	0.282	.27	Meth: 325.99 PCT		
102	0.33	-.40	Acid Soluble Zinc			232	0.249	-.96	247	0.281	.10	Water Soluble Zinc		
474	0.32	-.57	<u>ICP</u>			307	0.252	-.99	Avg	0.277		<u>Other</u>		
232	0.33 R	-.64	483	0.372 A	2.88	027	0.211	-2.08	009	0.275	-.13	450	0.273	.71
307	0.31	-.75	452	0.340	1.84	230	0.208	-2.19	291	0.273	-.15			
009	0.31	-.89	114	0.340	1.84				095	0.272	-.18			
			102	0.309	1.36				402	0.272	-.19			
									371	0.270	-.24			

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

Laboratory Averages & 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>
Meth: 325.XX PCT											
<u>Water Soluble Zinc</u>											
393	0.310	.88									
Avg	0.291										
450	0.273	-.86									

* 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	2	0.00	0.79	0.66	050.99	19	0.42	2.08	0.24
001.99	4	0.00	1.01	0.34	050.XX	72	0.15	1.40	0.37
001.XX	6	- 0.01	0.94	0.35	060.00	6	0.09	0.97	0.24
002.99	2	0.00	0.86	0.62	060.XX	6	0.09	0.97	0.24
002.XX	2	0.00	0.86	0.62	101.00	2	96.07	135.87	0.69
009.10	3	0.00	1.10	0.18	101.30	20	7.62	26.46	0.97
009.XX	4	0.00	1.08	0.08	101.XX	22	9.30	26.15	0.69
010.11	9	- 1.47	2.95	0.13	121.00	13	- 0.03	0.96	0.42
010.12	4	0.55	1.42	0.17	121.30	38	- 0.24	1.85	0.30
010.60	58	0.16	1.38	0.62	121.99	2	0.00	1.00	0.50
010.99	6	- 0.86	2.29	0.94	121.XX	53	- 0.19	1.72	0.33
010.XX	76	- 0.17	1.87	0.64	131.00	3	0.00	1.08	0.25
020.10	6	0.00	1.01	0.24	131.30	2	0.00	1.22	0.04
020.20	17	0.08	1.01	0.29	131.XX	6	- 0.04	0.95	0.12
020.40	6	0.45	1.39	0.85	144.01	17	- 0.63	1.98	0.48
020.50	12	0.14	1.97	0.42	144.99	29	- 0.55	1.75	0.29
020.99	5	1.83	2.90	0.46	144.XX	48	- 0.34	1.53	0.27
020.XX	45	0.21	1.59	0.36	151.30	8	- 0.21	1.47	1.39
030.20	2	0.00	1.22	0.03	151.99	2	0.00	1.03	0.47
030.50	2	0.00	1.22	0.01	151.XX	11	- 0.15	1.25	1.13
030.XX	7	0.00	1.04	0.09	165.00	8	0.271	0.977	0.818
040.50	2	- 17.87	25.28	1.30	165.99	23	0.287	1.481	0.245
040.99	3	0.00	0.80	0.64	165.XX	31	0.197	1.458	0.289
040.XX	8	- 0.44	1.50	0.46	181.00	2	0.00	1.11	0.37
041.10	15	0.00	0.77	0.64	181.30	12	- 0.30	1.39	0.53
041.20	2	0.00	0.76	0.68	181.XX	15	0.04	1.78	0.88
041.40	4	0.00	1.05	0.21	190.00	2	0.00	1.19	0.20
041.50	10	- 0.43	1.54	0.70	190.XX	2	0.00	1.19	0.20
041.60	15	- 0.57	2.37	1.39	191.30	14	- 0.29	1.37	0.14
041.99	3	0.00	0.50	0.82	191.XX	16	0.05	1.00	0.17
041.XX	39	- 0.32	1.62	0.91	202.30	13	- 0.45	1.89	0.22
048.20	3	0.00	1.11	0.10	202.XX	15	- 0.07	1.01	0.14
048.XX	4	0.00	1.07	0.10	221.00	4	- 2.327	4.6706	2.9577
050.00	15	- 0.11	1.46	0.31	221.30	23	- 0.176	1.3559	0.6352
050.30	9	0.00	0.99	0.26	221.XX	28	- 0.290	1.5832	0.9003
050.50	7	- 0.23	1.12	0.35	241.00	13	- 1.59	3.50	0.28
050.51	12	0.07	0.98	0.38	241.30	40	0.04	1.04	0.14
050.60	5	0.00	1.02	0.26	241.99	3	- 2.61	4.59	0.54
050.61	10	0.00	0.92	0.43	241.XX	56	- 0.36	1.66	0.17

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
251.00	2	7.88	11.14	1.51					
251.30	12	0.00	0.86	0.70					
251.XX	15	0.42	1.81	0.69					
261.00	10	- 0.649	2.285	0.611					
261.30	35	0.039	1.366	0.664					
261.99	6	0.000	1.023	0.212					
261.XX	52	- 0.099	1.575	0.556					
281.XX	2	0.000	1.224	0.026					
289.30	20	- 0.42	1.68	0.27					
289.XX	21	- 0.41	1.69	0.27					
291.00	2	0.00	1.22	0.05					
291.30	14	- 0.18	1.19	0.35					
291.XX	17	- 0.12	1.08	0.25					
301.30	2	0.00	1.22	0.01					
301.XX	3	0.00	1.12	0.01					
311.30	2	0.00	1.04	0.46					
311.99	8	- 0.02	0.96	0.25					
311.XX	10	0.00	0.98	0.31					
321.00	14	- 0.388	2.679	0.510					
321.30	37	0.076	1.006	0.453					
321.99	3	4.709	8.193	6.547					
321.XX	53	0.005	1.320	0.617					