

- Pass 1 Results for 84 Labs - - Pass 2 Results for 84 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	1	4.02	0.03	0.04	1	4.02	0.03	0.04
Ammoniacal Nitrogen, Other		001.99	3	3.86	0.42	0.08	3	3.86	0.42	0.08
Method Group 001.XX PCT			4	3.90	0.36	0.07	4	3.90	0.36	0.07
Ammon & Nitrate N, Devarda	892.01	009.10	3	4.26	0.05	0.05	3	4.26	0.05	0.05
Total Nitrogen, Reduced Iron		010.10	1	3.79	0.01	0.02	1	3.79	0.01	0.02
Total Nitrogen, Modified Comprehensive	978.02	010.11	7	4.09	0.13	0.03	7	4.09	0.13	0.03
Total Nitrogen, Salicylic	955.04D	010.12	4	4.21	0.12	0.02	4	4.21	0.12	0.02
Total Nitrogen, Combustion		010.60	56	4.20	0.11	0.05	53	4.20	0.11	0.05
Total Nitrogen, Other		010.99	4	4.18	0.09	0.00	4	4.18	0.09	0.00
Method Group 010.XX PCT			73	4.18	0.13	0.05	66	4.19	0.12	0.04
Total Phosphate, Grav Quimociac	962.02	020.10	11	14.94	0.17	0.06	11	14.94	0.17	0.06
Total Phosphate, Spectrometric	958.01	020.20	14	14.90	0.21	0.10	14	14.90	0.21	0.10
Total Phosphate, Alka Quimociac	969.02	020.30	1	14.95	0.03	0.04	1	14.95	0.03	0.04
Total Phosphate, Automated	978.01	020.40	9	14.91	0.31	0.16	9	14.91	0.31	0.16
Total Phosphate, ICP		020.50	10	15.12	0.49	0.08	10	15.12	0.49	0.08
Total Phosphate, Other		020.99	2	15.22	0.39	0.04	2	15.22	0.39	0.04
Method Group 020.XX PCT			49	14.96	0.35	0.10	47	14.98	0.32	0.08
Insoluble Phosphate, Grav Quimociac	963.03C	030.10	1	0.02	0.00	0.00	1	0.02	0.00	0.00
Insoluble Phosphate, Spectrometric	963.03C	030.20	1	0.06	0.01	0.01	1	0.06	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, Other		030.99	1	0.04	0.00	0.00	1	0.04	0.00	0.00
Method Group 030.XX PCT			4	0.04	0.02	0.01	4	0.04	0.02	0.01
InDir Available Phosphate, Grav Quim	960.02	040.10	2	15.02	0.07	0.09	2	15.02	0.07	0.09
InDir Available Phosphate, Spectrometri	960.02	040.20	1	14.89	0.09	0.13	1	14.89	0.09	0.13
InDir Available Phosphate, Automated	960.02	040.40	1	15.00	0.05	0.07	1	15.00	0.05	0.07
InDir Available Phosphate, ICP		040.50	1	14.59	0.09	0.13	1	14.59	0.09	0.13
InDir Available Phosphate, Other		040.99	1	15.10	0.01	0.02	1	15.10	0.01	0.02
Method Group 040.XX PCT			6	14.93	0.18	0.09	6	14.93	0.18	0.09
Dir Available Phosphate, Grav Quimociac	960.03E	041.10	10	14.94	0.08	0.05	10	14.94	0.08	0.05
Dir Available Phosphate, Automated	978.01	041.40	3	14.85	0.35	0.03	3	14.85	0.35	0.03
Dir Available Phosphate, ICP		041.50	8	14.98	0.20	0.18	8	14.98	0.20	0.18
Dir Available Phosphate, EDTA Extract	993.01	041.60	10	15.02	0.16	0.13	9	15.02	0.14	0.09
Dir Available Phosphate, Other		041.99	1	14.77	0.35	0.49	1	14.77	0.35	0.49
Method Group 041.XX PCT			33	14.95	0.20	0.12	29	14.95	0.19	0.07
Water Soluble Phosphate, Spectrometric	970.01	048.20	2	13.61	0.14	0.06	2	13.61	0.14	0.06
Water Soluble Phosphate, ICP		048.50	1	14.01	0.06	0.09	1	14.01	0.06	0.09
Water Soluble Phosphate, Other		048.99	1	13.67	0.04	0.05	1	13.67	0.04	0.05
Method Group 048.XX PCT			4	13.72	0.20	0.07	4	13.72	0.20	0.07
Soluble Potash, STPB Oxalate	958.02	050.00	15	31.10	0.60	0.19	14	31.05	0.57	0.12

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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 Citrate	969.04	050.10	1	31.95	0.07	0.10	1	31.95	0.07	0.10
Soluble Potash, AA (Oxalate)		050.30	8	30.45	0.83	0.82	7	30.42	0.64	0.50
Soluble Potash, AA (Citrate)		050.31	2	29.50	0.28	0.34	2	29.50	0.28	0.34
Soluble Potash, ICP (Oxalate)		050.50	7	30.74	0.85	0.76	6	30.89	0.63	0.47
Soluble Potash, ICP (Citrate)		050.51	12	30.81	0.67	0.37	11	30.75	0.61	0.25
Soluble Potash, Flame (Oxalate)	983.02(a)	050.60	5	30.55	0.56	0.34	4	30.67	0.41	0.07
Soluble Potash, Flame (Citrate)	983.02(b)	050.61	9	31.21	0.61	0.31	9	31.21	0.61	0.31
Soluble Potash, Other		050.99	21	30.79	0.95	0.54	20	30.77	0.95	0.47
Method Group 050.XX PCT			81	30.81	0.82	0.45	76	30.81	0.79	0.34
Free Water, Vacuum Oven	965.08B	060.00	5	0.58	0.10	0.05	5	0.58	0.10	0.05
Free Water, Karl Fischer	972.01	060.20	1	1.07	0.02	0.03	1	1.07	0.02	0.03
Method Group 060.XX PCT			6	0.66	0.21	0.04	6	0.66	0.21	0.04
Acid Soluble Calcium, ICP		101.30	15	2.08	0.07	0.06	15	2.08	0.07	0.06
Method Group 101.XX PCT			16	2.10	0.11	0.06	15	2.11	0.11	0.05
Acid Soluble Magnesium, AA	984.01	121.00	12	1.36	0.10	0.03	12	1.36	0.10	0.03
Acid Soluble Magnesium, ICP		121.30	33	1.37	0.10	0.04	31	1.36	0.10	0.03
Acid Soluble Magnesium, Other		121.99	2	1.38	0.05	0.06	2	1.38	0.05	0.06
Method Group 121.XX PCT			47	1.37	0.10	0.04	45	1.36	0.10	0.03
Water Soluble Magnesium, AA		131.00	2	1.18	0.08	0.02	2	1.18	0.08	0.02
Water Soluble Magnesium, ICP		131.30	5	1.19	0.07	0.05	5	1.19	0.07	0.05
Method Group 131.XX PCT			7	1.19	0.07	0.04	7	1.19	0.07	0.04
Sulfur, Gravimetric	980.02a	144.01	18	5.51	0.21	0.05	17	5.50	0.21	0.04
Sulfur, Gravimetric	980.02b	144.02	1	5.34	0.02	0.03	1	5.34	0.02	0.03
Sulfur, Spectrometric		144.70	1	6.00	0.00	0.00	1	6.00	0.00	0.00
Sulfur, Other		144.99	31	5.48	0.36	0.18	30	5.49	0.35	0.15
Method Group 144.XX PCT			52	5.48	0.34	0.12	48	5.49	0.31	0.08
Arsenic, Atomic Absorption		151.00	1	8.30	0.14	0.20	1	8.30	0.14	0.20
Arsenic, ICP		151.30	10	7.29	1.78	0.43	10	7.29	1.78	0.43
Method Group 151.XX PPM			11	7.38	1.72	0.41	11	7.38	1.72	0.41
Acid Soluble Boron, Spectrometric	982.01	165.00	9	0.198	0.013	0.006	8	0.198	0.013	0.004
Acid Soluble Boron, Other		165.99	19	0.206	0.015	0.007	18	0.206	0.015	0.006
Method Group 165.XX PCT			28	0.204	0.015	0.007	26	0.203	0.015	0.005
Water Soluble Boron, Other		171.99	2	0.193	0.005	0.006	2	0.193	0.005	0.006
Cadmium, Atomic Absorption		181.00	1	6.05	0.07	0.10	1	6.05	0.07	0.10
Cadmium, ICP		181.30	12	5.81	0.83	0.10	12	5.81	0.83	0.10
Method Group 181.XX PPM			13	5.82	0.80	0.10	13	5.82	0.80	0.10
Chromium, Atomic Absorption		191.00	1	56.86	2.93	4.14	1	56.86	2.93	4.14
Chromium, ICP		191.30	12	48.69	6.11	0.75	12	48.69	6.11	0.75
Method Group 191.XX PPM			13	49.32	6.29	1.01	12	48.69	6.11	0.75

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Acid Soluble Cobalt, AA		202.00	1	1.50	0.71	1.00	1	1.50	0.71	1.00
Acid Soluble Cobalt, ICP	965.11	202.30	10	1.45	0.33	0.08	10	1.45	0.33	0.08
Acid Soluble Cobalt, Other		202.99	1	1.45	0.39	0.55	1	1.45	0.39	0.55
Method Group 202.XX PPM			12	1.45	0.35	0.20	11	1.45	0.33	0.12
Acid Soluble Copper, Atomic Absorption	975.01	221.00	1	0.0023	0.0000	0.0001	1	0.0023	0.0000	0.0001
Acid Soluble Copper, ICP		221.30	16	0.0025	0.0003	0.0002	15	0.0025	0.0003	0.0001
Acid Soluble Copper, Other		221.99	1	0.0027	0.0000	0.0000	1	0.0027	0.0000	0.0000
Method Group 221.XX PCT			18	0.0025	0.0003	0.0002	17	0.0025	0.0003	0.0001
Acid Soluble Iron, Atomic Absorption ..	980.01	241.00	7	0.32	0.04	0.00	7	0.32	0.04	0.00
Acid Soluble Iron, ICP		241.30	38	0.34	0.04	0.01	36	0.34	0.04	0.01
Acid Soluble Iron, Other		241.99	4	0.31	0.07	0.01	4	0.31	0.07	0.01
Method Group 241.XX PCT			49	0.33	0.05	0.01	47	0.33	0.05	0.01
Lead, Atomic Absorption		251.00	1	16.50	0.71	1.00	1	16.50	0.71	1.00
Lead, ICP		251.30	15	15.87	3.21	0.77	15	15.87	3.21	0.77
Method Group 251.XX PPM			16	15.91	3.11	0.78	16	15.91	3.11	0.78
Acid Soluble Manganese, ICP	972.02a	261.30	15	0.015	0.002	0.001	14	0.015	0.002	0.001
Acid Soluble Manganese, Other		261.99	1	0.020	0.000	0.000	1	0.020	0.000	0.000
Method Group 261.XX PCT			16	0.015	0.003	0.001	15	0.015	0.003	0.001
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	0.03	0.00	0.01	1	0.03	0.00	0.01
Mercury, ICP		281.30	1	0.04	0.03	0.04	1	0.04	0.03	0.04
Mercury, Other		281.99	3	0.03	0.00	0.00	3	0.03	0.00	0.00
Method Group 281.XX PPM			5	0.03	0.01	0.01	4	0.03	0.00	0.00
Molybdenum, ICP		289.30	12	5.71	2.04	0.23	11	5.20	1.14	0.16
Method Group 289.XX PPM			12	5.71	2.04	0.23	11	5.20	1.14	0.16
Nickel, Atomic Absorption		291.00	1	10.50	0.71	1.00	1	10.50	0.71	1.00
Nickel, ICP		291.30	13	10.13	2.03	0.23	12	10.02	2.07	0.17
Method Group 291.XX PPM			14	10.16	1.96	0.29	12	10.02	2.07	0.17
Selenium, Other		301.99	1	2.58	0.05	0.07	1	2.58	0.05	0.07
Sodium, Other		311.99	6	0.57	0.02	0.01	6	0.57	0.02	0.01
Acid Soluble Zinc, Atomic Absorption ..	975.02	321.00	10	0.133	0.009	0.003	9	0.132	0.009	0.002
Acid Soluble Zinc, ICP		321.30	37	0.135	0.013	0.005	37	0.135	0.013	0.005
Acid Soluble Zinc, Other		321.99	3	0.123	0.015	0.020	3	0.123	0.015	0.020
Method Group 321.XX PCT			51	0.135	0.014	0.005	48	0.134	0.013	0.004
Water Soluble Zinc, ICP		325.30	1	0.036	0.000	0.000	1	0.036	0.000	0.000
Water Soluble Zinc, Other		325.99	1	0.265	0.064	0.090	1	0.265	0.064	0.090
Method Group 325.XX PCT			2	0.151	0.137	0.045	2	0.151	0.137	0.045

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 001.10 PCT			Meth: 010.11 PCT			Meth: 010.60 PCT			Meth: 010.60 PCT			Meth: 010.XX PCT		
Ammoniacal Nitrogen			Total Nitrogen			Total Nitrogen			Total Nitrogen			Total Nitrogen		
<u>MgO Distillation</u>			<u>Modified Comprehensi</u>			<u>Combustion</u>			<u>Combustion</u>			<u>042</u>		
456	4.02	.71	456	4.15	.51	292	4.26	.49	009	4.02	-1.62	325	4.25	.68
			114	4.14	.40	131	4.25	.48	027	3.91	-2.63	041	4.26	.57
Meth: 001.99 PCT			Avg 4.09			324 4.22 .40			472 3.90 s -2.84			292 4.26 .57		
Ammoniacal Nitrogen			211 3.90 -1.48			377 4.24 .40			368 3.88 -2.89			131 4.25 .55		
<u>Other</u>			309 3.90 -1.52			105 4.22 .32			406 3.65 s -4.99			377 4.24 .47		
096	4.27	.97	137 3.92 S -1.76			231 4.24 .32			489 3.40 s -7.19			324 4.22 .44		
027	3.97	.26	Meth: 010.12 PCT			095 4.21 .20			Meth: 010.99 PCT			231 4.24 .40		
Avg	3.86		Total Nitrogen			247 4.21 .20			Total Nitrogen			105 4.22 .37		
455	3.35	-1.22	<u>Salicylic</u>			177 4.22 .18			<u>Other</u>			177 4.22 .27		
Meth: 001.XX PCT			254 4.40 1.55			488 4.22 .14			493 4.33 1.60			247 4.21 .25		
<u>Ammoniacal Nitrogen</u>			Avg 4.21			485 4.21 .13			Avg 4.18			095 4.21 .25		
096	4.27	1.01	481 4.18 -.33			450 4.20 .00			487 4.15 -.30			488 4.22 .23		
456	4.02	.33	185 4.15 -.47			025 4.20 -.02			255 4.12 -.63			485 4.21 .20		
027	3.97	.19	117 4.10 -.87			029 4.20 -.03			474 4.12 -.67			351 4.20 .12		
Avg	3.90		Meth: 010.60 PCT			351 4.20 -.09			460 3.45 S -7.72			450 4.20 .10		
455	3.35	-1.53	Total Nitrogen			360 4.19 -.14			Meth: 010.XX PCT			025 4.20 .09		
Meth: 009.10 PCT			<u>Combustion</u>			073 4.19 -.19			<u>Total Nitrogen</u>			371 4.19 .09		
Ammon & Nitrate N			255 4.58 s 3.70			035 4.19 -.26			255 4.58 s 3.60			029 4.20 .08		
<u>Devarda</u>			072 4.47 2.42			390 4.17 -.32			072 4.47 2.40			Avg 4.19		
090	4.31	1.06	451 4.41 R 2.03			421 4.19 -.34			451 4.41 R 2.02			360 4.19 -.05		
Avg	4.26		291 4.42 1.93			037 4.17 -.34			291 4.42 1.93			220 4.18 -.12		
169	4.23	-.81	354 4.36 1.39			482 4.16 -.41			254 4.40 1.80			105 4.19 -.13		
258	4.25	-.85	402 4.34 1.33			136 4.16 -.45			354 4.36 1.42			073 4.19 -.13		
Meth: 010.10 PCT			444 4.33 1.32			234 4.15 -.46			402 4.34 1.36			390 4.17 -.20		
Total Nitrogen			262 4.34 1.26			233 4.13 -.61			444 4.33 1.35			035 4.19 -.21		
<u>Reduced Iron</u>			055 4.31 .99			102 4.15 -.64			262 4.34 1.29			037 4.17 -.23		
470	3.79	-.71	422 4.31 .99			022 4.15 -.64			493 4.33 1.21			481 4.18 -.26		
			007 4.30 .90			049 4.14 -.66			055 4.31 1.04			482 4.16 -.29		
			483 4.30 .85			426 4.14 -.79			422 4.31 1.04			421 4.19 -.30		
Meth: 010.11 PCT			307 4.20 R .80			443 4.20 R -.90			007 4.30 .95			487 4.15 -.32		
Total Nitrogen			096 4.29 .76			040 4.10 -.90			483 4.30 .91			185 4.15 -.34		
<u>Modified Comprehensi</u>			057 4.26 .76			023 4.14 -.90			443 4.20 R .86			234 4.15 -.34		
371	4.19	.78	042 4.22 .74			043 4.11 -.97			096 4.29 .83			136 4.16 -.35		
105	4.19	.75	325 4.25 .63			157 4.09 -1.06			057 4.26 .80			114 4.14 -.42		
220	4.18	.66	041 4.26 .49			486 4.06 -1.37			307 4.20 R .76			456 4.15 -.47		
						230 4.05 -1.45						233 4.13 -.47		
												022 4.15 -.54		

* 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>		
102	4.15	-.54	<u>Grav Quimociac</u>			<u>Automated</u>			422	18.02 s	9.46	043	14.89	-.39
049	4.14	-.54	157	14.90	-.63	Avg	14.91		443	16.94 s	6.12	157	14.90	-.39
255	4.12	-.58	262	14.53	-2.41	035	14.91	-.39	482	16.85 s	5.87	105	14.84	-.43
474	4.12	-.62	Meth: 020.20 PCT			042	14.49	-1.45	255	16.84 s	5.79	035	14.91	-.43
426	4.14	-.69	<u>Total Phosphate</u>			484	14.36	-1.78	483	15.83	2.64	324	14.80	-.63
040	4.10	-.75	<u>Spectrometric</u>			Meth: 020.50 PCT			390	15.73	2.34	450	14.74	-.76
117	4.10	-.75	489	15.18	1.33	<u>Total Phosphate</u>			460	15.55	1.79	234	14.65	-1.03
023	4.14 R	-.80	292	15.14	1.14	<u>ICP</u>			493	15.47	1.54	481	14.62	-1.19
043	4.11	-.84	371	15.04	.77	422	18.02 S	5.87	291	15.35	1.14	262	14.53	-1.39
157	4.09	-.90	169	15.03	.63	482	16.85 S	3.54	486	15.25 R	1.13	309	14.52	-1.44
486	4.06	-1.20	406	15.03	.61	255	16.84 S	3.48	444	15.33	1.10	472	14.49	-1.53
230	4.05	-1.28	258	15.00	.54	483	15.83	1.43	426	15.23	.80	042	14.49	-1.59
009	4.02	-1.43	474	14.95	.42	390	15.73	1.24	368	15.21	.76	307	14.45	-1.63
027	3.91	-2.39	220	14.97	.42	291	15.35	.46	489	15.18	.62	402	14.44	-1.69
211	3.90	-2.45	231	14.95	.35	444	15.33	.43	421	15.15	.56	484	14.36	-1.92
309	3.90	-2.50	Avg	14.90		426	15.23	.25	114	15.13	.52	230	14.05 A	-2.92
472	3.90 R	-2.60	324	14.80	-.68	368	15.21	.22	247	15.14	.51	488	13.67 s	-4.38
137	3.92 s	-2.61	450	14.74	-.82	421	15.15	.12	292	15.14	.49	157	13.50 s	-4.63
368	3.88	-2.63	234	14.65	-1.22	Avg	15.12		322	15.11	.41	451	13.07 s	-5.94
470	3.79 A	-3.39	481	14.62	-1.49	472	14.49	-1.29	470	15.10	.38	455	5.57 s	-29.22
406	3.65 s	-4.62	309	14.52	-1.85	307	14.45	-1.35	371	15.04	.32	Meth: 030.10 PCT		
460	3.45 s	-6.30	230	14.05 s	-4.15	402	14.44	-1.39	096	15.03	.19	Insoluble Phosphate		
489	3.40 s	-6.71	Meth: 020.30 PCT			488	13.67 S	-3.12	258	15.00	.17	<u>Grav Quimociac</u>		
Meth: 020.10 PCT			<u>Total Phosphate</u>			157	13.50 S	-3.30	169	15.03	.17	090	0.02	.00
<u>Total Phosphate</u>			<u>Alka Quimociac</u>			451	13.07 S	-4.16	090	15.01	.16	Meth: 030.20 PCT		
<u>Grav Quimociac</u>			095	14.95	.71	Meth: 020.99 PCT			406	15.03	.15	Insoluble Phosphate		
493	15.47 s	3.14	Meth: 020.40 PCT			<u>Total Phosphate</u>			211	14.98	.01	<u>Spectrometric</u>		
114	15.13	1.18	<u>Total Phosphate</u>			<u>Other</u>			Avg	14.98		474	0.06	.71
322	15.11	1.00	486	15.25	1.34	443	16.94 S	4.49	095	14.95	-.10	Meth: 030.40 PCT		
470	15.10	.92	247	15.14	.74	460	15.55	.87	041	14.94	-.12	Insoluble Phosphate		
090	15.01	.47	470	15.10	.61	Avg	15.22		105	14.97	-.16	<u>Automated</u>		
211	14.98	.24	456	14.96	.40	487	14.89	-.86	220	14.97	-.16	096 0.04 -.71		
041	14.94	.06	096	15.03	.40	455	5.57 S	-25.02	231	14.95	-.18			
Avg	14.94		105	14.97	.25				444	14.92	-.19			
444	14.92	-.14							474	14.95	-.25			
105	14.84	-.58							487	14.89	-.29			
043	14.89	-.60							456	14.96	-.36			

* 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: 030.99 PCT</u>			<u>Meth: 040.99 PCT</u>			<u>Meth: 041.50 PCT</u>			<u>Meth: 041.XX PCT</u>			<u>Meth: 048.20 PCT</u>		
<u>Insoluble Phosphate</u>			<u>InDir Available Phos</u>			<u>Dir Available Phosph</u>			<u>Dir Available Phosph</u>			<u>Water Soluble Phosph</u>		
<u>Other</u>			<u>Other</u>			<u>ICP</u>			<u>360 15.24 1.52</u>			<u>Spectrometric</u>		
247	0.04	.00	488	13.29	S-151.37	360	15.24	1.30	009	15.11	R 1.40	096	13.73	.83
<u>Meth: 030.XX PCT</u>			<u>Meth: 040.XX PCT</u>			009 15.11 1.26			057 15.02 R 1.32			Avg 13.61		
<u>Insoluble Phosphate</u>			<u>InDir Available Phos</u>			007 14.99 .54			043 15.17 1.18			474 13.49 -.90		
474	0.06	1.40	247	15.10	.91	377 15.08 .49			095 15.14 .99			<u>Meth: 048.50 PCT</u>		
247	0.04	.06	022	15.05	.69	055 15.02 .20			105 15.10 .91			<u>Water Soluble Phosph</u>		
Avg	0.04		096	15.00	.39	Avg 14.98			377 15.08 .68			<u>ICP</u>		
096	0.04	-.39	090	14.99	.37	043 14.80 -.96			007 14.99 .59			444 14.01 .71		
090	0.02	-1.17	Avg	14.93		137 14.82 -1.06			177 15.04 .49			<u>Meth: 048.99 PCT</u>		
<u>Meth: 040.10 PCT</u>			474 14.89 -.44			023 14.82 -1.27			009 15.02 .40			<u>Water Soluble Phosph</u>		
<u>InDir Available Phos</u>			072 14.59 -1.93			325 14.05 S -4.81			055 15.02 .38			<u>Other</u>		
<u>Grav Quim</u>			488 13.29 s -10.89			354 13.19 s -9.43			254 15.02 .36			247 13.67 .71		
022	15.05	.90	<u>Meth: 041.10 PCT</u>			<u>Meth: 041.60 PCT</u>			233 15.01 .33			<u>Meth: 048.XX PCT</u>		
Avg	15.02		<u>Dir Available Phosph</u>			<u>Dir Available Phosph</u>			102 15.00 .28			<u>Water Soluble Phosph</u>		
090	14.99	-.83	<u>Grav Quimociac</u>			<u>EDTA Extract</u>			072 14.99 .27			444 14.01 1.42		
<u>Meth: 040.20 PCT</u>			009 15.02 1.07			029 15.24 1.98			185 14.97 .20			096 13.73 .08		
<u>InDir Available Phos</u>			254 15.02 .98			057 15.02 R 1.67			Avg 14.95			Avg 13.72		
<u>Spectrometri</u>			102 15.00 .79			043 15.17 1.07			131 14.94 -.07			247 13.67 -.31		
474	14.89	.71	072 14.99 .76			105 15.10 .79			037 14.93 -.12			474 13.49 -1.17		
<u>Meth: 040.40 PCT</u>			185 14.97 .56			177 15.04 .16			136 14.92 -.22			<u>Meth: 050.00 PCT</u>		
<u>InDir Available Phos</u>			131 14.94 .13			Avg 15.02			040 14.90 -.25			<u>Soluble Potash</u>		
<u>Automated</u>			Avg 14.94			233 15.01 -.20			117 14.90 -.25			<u>STPB Oxalate</u>		
096	15.00	-.71	040 14.90 -.49			037 14.93 -.65			177 14.90 -.30			230 32.40 2.37		
<u>Meth: 040.50 PCT</u>			177 14.90 -.62			136 14.92 -.74			351 14.88 -.47			022 31.80 R 1.68		
<u>InDir Available Phos</u>			105 14.87 -1.17			117 14.90 -.82			105 14.87 -.52			258 31.89 1.46		
<u>ICP</u>			049 14.79 -1.96			351 14.88 -1.05			043 14.80 -.81			220 31.39 .59		
072	14.59	-.71	<u>Meth: 041.40 PCT</u>			073 14.46 s -3.88			049 14.79 -.86			009 31.30 .43		
<u>InDir Available Phos</u>			<u>Meth: 041.99 PCT</u>			<u>Dir Available Phosph</u>			137 14.82 -.96			211 31.14 .15		
<u>Automated</u>			<u>Dir Available Phosph</u>			<u>Other</u>			023 14.82 R -1.21			Avg 31.05		
027	15.33	S 1.89	<u>Automated</u>			<u>Other</u>			105 14.77 R -1.61			090 30.94 -.20		
095	15.14	.82	027 15.33 S 1.89			105 14.77 -.71			073 14.46 -2.57			049 30.91 -.31		
<u>Meth: 040.99 PCT</u>			095 15.14 .82			<u>Meth: 041.XX PCT</u>			472 14.41 -2.86			489 30.81 -.43		
<u>InDir Available Phos</u>			131 15.01 .46			<u>Dir Available Phosph</u>			325 14.05 s -4.79			114 30.78 -.49		
<u>Other</u>			Avg 14.85			<u>Dir Available Phosph</u>			354 13.19 s -9.57			072 30.96 -.51		
247	15.10	.71	472 14.41 -1.27			027 15.33 s 3.11								
Avg	15.10		029 15.24 1.80			029 15.24 1.80								

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

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 050.00 PCT			Meth: 050.50 PCT			Meth: 050.61 PCT			Meth: 050.99 PCT			Meth: 050.XX PCT		
Soluble Potash			Soluble Potash			Soluble Potash			Soluble Potash			Soluble Potash		
<u>STPB Oxalate</u>			<u>ICP (Oxalate)</u>			<u>Flame (Citrate)</u>			<u>Other</u>					
231	30.77	-.54	324	31.00	.51	028	32.07	1.44	325	28.50 S	-2.66	211	31.14	.42
057	30.77	-.54	Avg	30.89		456	31.77	1.20	474	26.80 s	-4.33	072	30.96	.40
470	30.71	-.60	426	30.57	-.77	029	31.77	.94	484	20.60 s	-10.75	483	30.84	.31
322	30.00	-1.85	444	30.43	-.83	035	31.33	.21				023	30.97	.24
102	29.45 s	-2.89	055	30.21	-1.08	Avg	31.21		Meth: 050.XX PCT			137	30.95	.18
			488	29.85 R	-2.58	131	31.16	-.15	<u>Soluble Potash</u>			049	30.91	.18
			157	28.25 S	-4.35	037	30.80	-.68	422	38.24 s	9.48	090	30.94	.17
Meth: 050.10 PCT			Meth: 050.51 PCT			0105 30.80			493	33.03	2.82	043	30.88	.14
Soluble Potash			Soluble Potash			041 30.96			230	32.40	2.03	105	30.83	.05
<u>STPB Citrate</u>			<u>ICP (Citrate)</u>			095 30.23			028	32.07	1.62	489	30.81	.01
117	31.95	.71	377	31.88	1.87	Meth: 050.99 PCT			022	31.80	1.47	Avg	30.81	
			233	31.52 R	1.81	Soluble Potash			117	31.95	1.45	037	30.80	-.05
			291	31.22	.77	<u>Other</u>			377	31.88	1.38	114	30.78	-.06
Meth: 050.30 PCT			009 31.07			493 33.03			258	31.89	1.37	105	30.80	-.10
Soluble Potash			483 30.84			390 31.14 R			233	31.52 R	1.36	470	30.71	-.13
<u>AA (Oxalate)</u>			023 30.97			307 31.63			456	31.77	1.36	231	30.77	-.16
157	30.65 R	2.45	137	30.95	.33	247 31.68			029	31.77	1.23	057	30.77	-.16
040	30.95	1.43	Avg	30.75		177 31.61			292	31.76	1.22	105	30.73	-.16
351	31.32	1.41	043	30.68	-.18	360 31.53			390	31.14 R	1.22	043	30.68	-.20
185	30.45	.09	096	30.67	-.61	421 31.10			307	31.63	1.12	402	30.62	-.24
Avg	30.42		072	30.26	-.80	451 31.12			247	31.68	1.11	470	30.60	-.27
309	30.12	-.47	007	29.97	-1.27	043 30.88			177	31.61	1.01	444	30.77	-.28
073	30.09	-.62	486	29.72	-1.68	105 30.83			040	30.95 R	.97	185	30.45	-.46
234	30.29	-.75				Avg			360	31.53	.96	255	30.55	-.47
262	29.73	-1.14				402 30.62			354	31.37	.82	096	30.67	-.50
						444 30.77			220	31.39	.74	450	30.64	-.54
						255 30.55			035	31.33	.67	426	30.57	-.56
						450 30.64			351	31.32	.65	444	30.43	-.58
						455 30.35			421	31.10	.63	455	30.35	-.59
						482 30.50			009	31.30	.62	072	30.26	-.71
						460 30.05			451	31.12	.62	482	30.50	-.75
						487 30.28			291	31.22	.52	055	30.21	-.76
						042 30.15			169	31.21	.51	406	30.14	-.85
						368 29.09			009	31.07	.50	309	30.12	-.88
						481 29.01			041	30.96	.49	234	30.29	-.88
						027 29.25 S			324	31.00	.45	073	30.09	-.96
									131	31.16	.45	487	30.28	-.97

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

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 050.XX PCT			Meth: 060.XX PCT			Meth: 101.XX PCT			Meth: 121.30 PCT			Meth: 121.70 PCT		
<u>Soluble Potash</u>			<u>Free Water</u>			<u>Acid Soluble Calcium</u>			<u>Acid Soluble Magnesi</u>			<u>Acid Soluble Magnesi</u>		
460	30.05	-1.98	371	1.07	1.92	422	2.59 s	4.31	035	1.62 s	3.93	230	0.89 S	.00
322	30.00	-1.02	456	0.67	.14	483	2.44	2.92	255	1.72 s	3.58	Meth: 121.99 PCT		
007	29.97	-1.07	Avg	0.66		421	2.18	.61	472	1.55	1.91	Acid Soluble Magnesi		
042	30.15	-1.25	247	0.66	.00	131	2.14	.40	483	1.52	1.59	<u>Other</u>		
443	30.07	-1.31	096	0.60	-.35	027	2.14	.33	307	1.49	1.39	042	1.41	1.13
486	29.72	-1.39	007	0.56	-.51	482	2.13	.28	090	1.45 R	1.12	Avg	1.38	
262	29.73	-1.41	474	0.41	-1.19	472	2.11	.27	027	1.47	1.08	460	1.36	-.47
472	29.60	-1.59	Meth: 101.30 PCT			102	2.12	.25	390	1.46	.97	Meth: 121.XX PCT		
102	29.45	-1.79	<u>Acid Soluble Calcium</u>			057	2.11	.06	421	1.45	.83	<u>Acid Soluble Magnesi</u>		
254	29.39	-1.81	<u>ICP</u>			Avg	2.11		450	1.44	.77	035	1.62 s	4.05
157	30.65 R	-1.98	422	2.59 s	6.84	247	2.10	-.06	231	1.43	.67	255	1.72 s	3.69
488	29.85 R	-2.01	483	2.44 s	4.76	041	2.07	-.32	291	1.43	.62	472	1.55	1.97
368	29.09	-2.21	481	2.05	-.56	096	2.05	-.56	057	1.42	.59	483	1.52	1.64
481	29.01	-2.30	421	2.18	1.29	035	2.04	-.80	037	1.41	.47	157	1.51	1.55
027	29.25 s	-3.07	131	2.14	.90	022	2.03	-.90	023	1.40	.38	307	1.49	1.43
325	28.50 s	-3.26	027	2.14	.87	354	2.03	-.93	131	1.40	.34	028	1.50	1.37
157	28.25 s	-3.39	482	2.13	.71	488	2.01 R	-1.18	055	1.38	.26	090	1.45 R	1.16
474	26.80 s	-5.27	102	2.12	.64	474	1.94	-1.54	022	1.37	.23	027	1.47	1.11
484	20.60 s	-13.01	472	2.11	.58	484	1.03 s	-9.61	360	1.37	.12	390	1.46	1.00
Meth: 060.00 PCT			057	2.11	.43	Meth: 121.00 PCT			114	1.37	.05	421	1.45	.86
<u>Free Water</u>			247	2.10	.29	<u>Acid Soluble Magnesi</u>			Avg	1.36		177	1.44	.82
<u>Vacuum Oven</u>			Avg	2.08		<u>AA</u>			482	1.35	-.15	450	1.44	.80
456	0.67	.94	041	2.07	-.11	157	1.51	1.58	095	1.35	-.15	042	1.41	.71
247	0.66	.78	096	2.05	-.49	028	1.50	1.40	247	1.33	-.35	231	1.43	.69
096	0.60	.37	035	2.04	-.93	177	1.44	.85	368	1.33	-.36	291	1.43	.63
Avg	0.58		022	2.03	-1.11	177	1.44	.85	324	1.34	-.48	057	1.42	.61
007	0.56	-.43	354	2.03	-1.12	169	1.42	.61	096	1.32	-.51	169	1.42	.59
474	0.41	-1.64	488	2.01	-1.54	481	1.41	.47	102	1.31	-.52	037	1.41	.49
Meth: 060.20 PCT			474	1.94	-1.94	040	1.40	.35	444	1.32	-.62	481	1.41	.45
<u>Free Water</u>			Meth: 101.99 PCT			258	1.36	.01	488	1.31	-.71	023	1.40	.39
<u>Karl Fischer</u>			<u>Acid Soluble Calcium</u>			Avg	1.36		488	1.31	-.71	131	1.40	.35
371	1.07	.71	<u>Other</u>			262	1.28	-.93	354	1.36 R	-.92	040	1.40	.32
			484	1.03 S	.00	043	1.27	-1.02	041	1.25	-1.16	055	1.38	.26
						029	1.26	-1.08	157	1.24	-1.28	022	1.37	.24
						309	1.27	-1.10	474	1.22	-1.62	360	1.37	.12
						351	1.25	-1.13	433	1.20	-1.63			
									426	1.10	-2.64			
									486	1.01 s	-3.60			

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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>		
114	1.37	.05	ICP			Gravimetric			Other			029	5.60	.37
Avg	1.36		231	1.30	1.57	105	5.35	-.78	102	5.39	-.38	360	5.53	.19
258	1.36	-.01	027	1.20	.68	231	5.32	-.89	444	5.32	-.51	247	5.52	.10
460	1.36	-.12	Avg	1.19		481	5.29	-1.04	482	5.44	-.51	Avg	5.49	
482	1.35	-.16	137	1.18	-.25	157	5.04	-2.25	472	5.31	-.53	324	5.48	-.05
095	1.35	-.16	444	1.16	-.87	493	4.59 s	-4.44	096	5.31	-.57	027	5.45	-.12
247	1.33	-.37	230	1.14	-.88				291	5.29	-.58	233	5.46	-.15
368	1.33	-.37				Meth: 144.02 PCT			177	5.27	-.83	450	5.43	-.21
324	1.34	-.49	Meth: 131.XX PCT			<u>Sulfur</u>			029	5.20	-.87	102	5.41	-.24
096	1.32	-.53	<u>Water Soluble Magnes</u>			<u>Gravimetric</u>			488	5.17	-.91	023	5.44	-.25
102	1.31	-.54	484	1.58 s	5.89	292	5.34	.71	169	5.15	-.98	037	5.41	-.25
444	1.32	-.64	231	1.30	1.62				157	5.06	-1.24	489	5.40	-.29
488	1.31	-.74	029	1.24	.84	Meth: 144.70 PCT			255	5.06	-1.30	137	5.36	-.40
354	1.36 R	-.95	027	1.20	.68	<u>Sulfur</u>			368	5.23 R	-1.73	025	5.36	-.40
262	1.28	-.96	Avg	1.19		<u>Spectrometric</u>			354	4.82	-2.05	102	5.39	-.43
043	1.27	-1.05	137	1.18	-.19	474	6.00	.00	486	3.89 s	-4.58	105	5.35	-.47
029	1.26	-1.10	230	1.14	-.81	Meth: 144.99 PCT			Meth: 144.XX PCT			231	5.32	-.54
309	1.27	-1.12	444	1.16	-.82	<u>Sulfur</u>			<u>Sulfur</u>			444	5.32	-.57
351	1.25	-1.16	309	1.11	-1.16	<u>Other</u>			117	6.32	2.67	482	5.44	-.57
041	1.25	-1.20				117	6.32	2.38	422	6.12	2.07	472	5.31	-.60
157	1.24	-1.33	Meth: 144.01 PCT			422	6.12	1.84	390	5.98 R	1.75	096	5.31	-.64
474	1.22	-1.67	<u>Sulfur</u>			390	5.98	1.56	474	6.00	1.65	481	5.29	-.64
433	1.20	-1.69	<u>Gravimetric</u>			351	5.90	1.18	114	5.93	1.42	291	5.29	-.65
426	1.10	-2.73	114	5.93	2.08	483	5.84	.99	351	5.90	1.32	177	5.27	-.93
486	1.01 s	-3.72	230	5.71 R	1.31	220	5.83	.99	483	5.84	1.12	029	5.20	-.98
230	0.89 s	-4.94	095	5.74	1.16	049	5.76	.80	220	5.83	1.11	488	5.17	-1.02
			043	5.66	.76	421	5.74	.73	049	5.76	.90	169	5.15	-1.10
			041	5.65	.70	426	5.58	.73	230	5.71	.90	157	5.06	-1.40
			262	5.62	.61	307	5.70	.61	421	5.74	.83	157	5.04	-1.44
			055	5.62	.55	360	5.53	.17	426	5.58 R	.82	255	5.06	-1.45
			057	5.62	.55	247	5.52	.09	095	5.74	.81	368	5.23 R	-1.94
			029	5.60	.50	Avg	5.49		307	5.70	.69	354	4.82 R	-2.31
			Avg	5.50		027	5.45	-.11	043	5.66	.55	493	4.59	-2.89
			324	5.48	-.11	450	5.43	-.19	041	5.65	.50	486	3.89 s	-5.14
			233	5.46	-.27	023	5.44	-.23	262	5.62	.44			
			102	5.41	-.43	037	5.41	-.23	055	5.62	.41			
			489	5.40	-.51	025	5.36	-.36	057	5.62	.41			
			137	5.36	-.67									

* 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: 151.00 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>Atomic Absorption</u>			<u>Spectrometric</u>			<u>Other</u>			<u>Atomic Absorption</u>					
136	8.30	-.71	489	0.210	.97	482	0.355 s	10.12	Avg	0.193		035	5.53	-.38
			371	0.207	.70	422	0.235	2.14	444	0.191	-.43	368	5.55	-.39
			023	0.204	.51	483	0.226	1.52				486	5.13	-.88
Meth: 151.30 PPM			029			042			Meth: 181.00 PPM			230		
Arsenic			Avg			231			Cadmium			481		
<u>ICP</u>			029			368			<u>Atomic Absorption</u>					
096	9.55	1.27	258	0.196	-.53	043	0.218	.97	136	6.05	.71			
037	9.45	1.21	057	0.182	-1.19	433	0.215	.81				Meth: 191.00 PPM		
247	8.90	.90	220	0.175	-1.79	426	0.207	.61				Chromium		
368	8.55	.75	055	0.096 s	-7.86	255	0.209	.56				<u>Atomic Absorption</u>		
450	7.50	.21				481	0.210	.45				481	56.86	.71
Avg	7.29		Meth: 165.99 PCT			489	0.210	.45						
486	6.74	-.31	Acid Soluble Boron			090	0.207	.37						
444	6.61	-.41	<u>Other</u>			371	0.207	.24						
230	5.91	-.78	482	0.355 s	9.74	023	0.204	.08						
474	5.50	-1.04	422	0.235	1.94	291	0.204	.04						
481	4.18	-1.75	483	0.226	1.32	Avg	0.203							
			042	0.215 R	1.15	444	0.203	-.13						
			231	0.220	.93	486	0.200	-.21						
Meth: 151.XX PPM			368	0.219	.90	029	0.197	-.42						
<u>Arsenic</u>			043	0.218	.78	421	0.195	-.64						
096	9.55	1.26	433	0.215	.63	258	0.196	-.67						
037	9.45	1.20	426	0.207	.56	354	0.200	-.70						
247	8.90	.88	255	0.209	.45	037	0.202 R	-.91						
368	8.55	.73	090	0.207	.30	307	0.187	-1.12						
136	8.30	.54	Avg	0.206		057	0.182	-1.40						
450	7.50	.19	291	0.204	-.15	324	0.183	-1.43						
Avg	7.38		444	0.203	-.22	137	0.179	-1.65						
486	6.74	-.37	486	0.200	-.37	360	0.199	-1.91						
444	6.61	-.47	360	0.199	-.44	472	0.154 s	-3.52						
230	5.91	-.86	354	0.200	-.75	230	0.132 s	-4.78						
474	5.50	-1.13	421	0.195	-.77	055	0.096 s	-7.14						
481	4.18	-1.86	307	0.187	-1.26									
			324	0.183	-1.56	Meth: 171.99 PCT								
			137	0.179	-1.78	Water Soluble Boron								
			472	0.154 S	-3.59	<u>Other</u>								
			230	0.132 s	-4.84	027	0.196	1.15						

* 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: 191.XX PPM Chromium</u>			<u>Meth: 202.XX PPM Acid Soluble Cobalt</u>			<u>Meth: 221.30 PCT Acid Soluble Copper ICP</u>			<u>Meth: 241.00 PCT Acid Soluble Iron Atomic Absorption</u>			<u>Meth: 241.30 PCT Acid Soluble Iron ICP</u>		
Avg	48.69		450	1.65	.64	483	0.0022	-1.33	029	0.36	.85	291	0.33	-.19
474	48.50	-.09	096	1.64	.58	041	0.0020	-1.73	351	0.35	.73	402	0.32	-.40
486	48.00	-.14	102	1.63	.58	230	0.0022 R	-2.13	177	0.34	.44	035	0.32	-.56
035	46.65	-.33	368	1.60	.56				262	0.33	.16	433	0.31	-.56
482	44.80	-.67	057	1.59	.43	<u>Meth: 221.99 PCT Acid Soluble Copper Other</u>			258	0.33	.15	472	0.32	-.57
444	40.22	-1.39	482	1.45	.15	Avg	1.45		Avg	0.32		426	0.31	-.60
230	35.65	-2.13	486	1.00	-1.36	484	0.0027	.00	043	0.32	-.08	488	0.31	-.63
<u>Meth: 202.00 PPM Acid Soluble Cobalt AA</u>			<u>Meth: 221.00 PCT Acid Soluble Copper Atomic Absorption</u>			<u>Meth: 221.XX PCT Acid Soluble Copper ICP</u>			<u>Meth: 241.30 PCT Acid Soluble Iron ICP</u>			<u>Meth: 241.99 PCT Acid Soluble Iron Other</u>		
136	1.50	.71	Avg	0.0023		324	0.0108 s	28.49	422	0.46	2.95	474	0.29	-1.27
<u>Meth: 202.30 PPM Acid Soluble Cobalt ICP</u>			481	0.0023	-.71	354	0.0045 s	8.50	354	0.40 R	2.08	027	0.27	-1.52
035	1.94	1.51	262	0.0000 S	-46.94	402	0.0030 s	5.12	090	0.39	1.37	450	0.27 R	-1.77
450	1.65	.63				472	0.0030	1.66	055	0.38	1.02	486	0.26	-1.87
096	1.64	.57	<u>Meth: 221.30 PCT Acid Soluble Copper ICP</u>			096	0.0029	1.46	049	0.38	.99	230	0.22	-2.89
102	1.63	.57	324	0.0108 s	27.71	484	0.0027	.63	041	0.37	.78	157	0.13 s	-5.05
368	1.60	.55	354	0.0045 s	8.26	102	0.0027	.49	390	0.37	.70	<u>Meth: 241.99 PCT Acid Soluble Iron Other</u>		
057	1.59	.43	255	0.0038 s	4.97	057	0.0026	.21	324	0.36	.63	460	0.38	1.07
482	1.45	.15	402	0.0030	1.60	Avg	0.0025		102	0.36	.60	421	0.36	.78
Avg	1.45		472	0.0030	1.60	433	0.0025	-.05	482	0.36	.59	Avg	0.31	
486	1.00	-1.34	096	0.0029	1.40	247	0.0025	-.09	483	0.36	.58	484	0.25	-.79
474	1.00	-1.34	102	0.0027	.46	368	0.0025	-.17	037	0.36	.47	042	0.23	-1.06
230	0.97	-1.44	474	0.0024	-.52	450	0.0025	-.46	095	0.36	.42	<u>Meth: 241.XX PCT Acid Soluble Iron</u>		
<u>Meth: 202.99 PPM Acid Soluble Cobalt Other</u>			488	0.0024	-.76	474	0.0024	-.52	233	0.35	.30	422	0.46	2.80
255	1.45	.71	488	0.0024	-.76	488	0.0024	-.76	131	0.35	.30	354	0.40 R	1.98
<u>Meth: 202.XX PPM Acid Soluble Cobalt</u>			481	0.0023	-.89	488	0.0024	-.76	096	0.35	.30	090	0.39	1.36
136	1.50 R	1.54	486	0.0022	-1.15	481	0.0023	-.89	360	0.35	.28	460	0.38	1.07
035	1.94	1.53	483	0.0022	-1.35	486	0.0022	-1.15	057	0.35	.26	055	0.38	1.05
255	1.45	.83	041	0.0020	-1.76	483	0.0022	-1.35	022	0.34	.23	049	0.38	1.02
<u>Meth: 202.XX PPM Acid Soluble Cobalt</u>			230	0.0022 R	-2.18	041	0.0020	-1.76	231	0.35	.22	041	0.37	.83
136	1.50 R	1.54	262	0.0000 s	-8.60	230	0.0022 R	-2.18	023	0.34	.16	390	0.37	.75
035	1.94	1.53				450	0.0025	-.45	371	0.34	.08	324	0.36	.69
255	1.45	.83	474	0.0024	-.52	474	0.0024	-.52	368	0.34	.06	102	0.36	.67
<u>Meth: 202.XX PPM Acid Soluble Cobalt</u>			488	0.0024	-.76	488	0.0024	-.76	Avg	0.34		<u>Meth: 241.XX PCT Acid Soluble Iron</u>		
136	1.50 R	1.54	486	0.0022	-1.14	486	0.0022	-1.14	255	0.33	-.17	422	0.46	2.80
035	1.94	1.53										354	0.40 R	1.98
255	1.45	.83										090	0.39	1.36
<u>Meth: 202.XX PPM Acid Soluble Cobalt</u>												460	0.38	1.07
136	1.50 R	1.54										055	0.38	1.05
035	1.94	1.53										049	0.38	1.02
255	1.45	.83										041	0.37	.83
<u>Meth: 202.XX PPM Acid Soluble Cobalt</u>												390	0.37	.75
136	1.50 R	1.54										324	0.36	.69
035	1.94	1.53										102	0.36	.67
255	1.45	.83										<u>Meth: 241.XX PCT Acid Soluble Iron</u>		
<u>Meth: 202.XX PPM Acid Soluble Cobalt</u>												422	0.46	2.80
136	1.50 R	1.54										354	0.40 R	1.98
035	1.94	1.53										090	0.39	1.36
255	1.45	.83										460	0.38	1.07
<u>Meth: 202.XX PPM Acid Soluble Cobalt</u>												055	0.38	1.05
136	1.50 R	1.54										049	0.38	1.02
035	1.94	1.53										041	0.37	.83
255	1.45	.83										390	0.37	.75
<u>Meth: 202.XX PPM Acid Soluble Cobalt</u>												324	0.36	.69
136	1.50 R	1.54										102	0.36	.67
035	1.94	1.53										<u>Meth: 241.XX PCT Acid Soluble Iron</u>		
255	1.45	.83										422	0.46	2.80
<u>Meth: 202.XX PPM Acid Soluble Cobalt</u>												354	0.40 R	1.98
136	1.50 R	1.54										090	0.39	1.36
035	1.94	1.53										460	0.38	1.07
255	1.45	.83										055	0.38	1.05
<u>Meth: 202.XX PPM Acid Soluble Cobalt</u>												049	0.38	1.02
136	1.50 R	1.54										041	0.37	.83
035	1.94	1.53										390	0.37	.75
255	1.45	.83										324	0.36	.69
<u>Meth: 202.XX PPM Acid Soluble Cobalt</u>												102	0.36	.67
136	1.50 R	1.54										<u>Meth: 241.XX PCT Acid Soluble Iron</u>		
035	1.94	1.53										422	0.46	2.80
255	1.45	.83										354	0.40 R	1.98
<u>Meth: 202.XX PPM Acid Soluble Cobalt</u>												090	0.39	1.36
136	1.50 R	1.54										460	0.38	1.07
035	1.94	1.53										055	0.38	1.05
255	1.45	.83										049	0.38	1.02
<u>Meth: 202.XX PPM Acid Soluble Cobalt</u>												041	0.37	.83
136	1.50 R	1.54										390	0.37	.75
035	1.94	1.53										324	0.36	.69
255	1.45	.83										102	0.36	.67

* 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: 241.XX PCT			Meth: 241.XX PCT			Meth: 251.XX PPM			Meth: 261.XX PCT			Meth: 281.99 PPM		
<u>Acid Soluble Iron</u>			<u>Acid Soluble Iron</u>			<u>Lead</u>			<u>Acid Soluble Manganese</u>			<u>Mercury</u>		
482	0.36	.65	481	0.22	-2.46	136	16.50	.25	422	1.295 s	493.03	<u>Other</u>		
483	0.36	.64	230	0.22	-2.51	Avg	15.91		482	0.020	1.74	009	0.04	1.20
421	0.36	.61	157	0.13 s	-4.48	096	15.90	-.10	484	0.020	1.74	Avg	0.03	
029	0.36	.58	Meth: 251.00 PPM			035	15.15	-.28	474	0.017	.59	484	0.03	-.52
037	0.36	.54	<u>Lead</u>			482	15.30	-.43	444	0.016	.44	486	0.03	-.89
095	0.36	.50	<u>Atomic Absorption</u>			474	15.00	-.43	096	0.016	.41	Meth: 281.XX PPM		
351	0.35	.46	136	16.50	.71	444	13.81	-.68	247	0.016	.28	<u>Mercury</u>		
233	0.35	.39	Meth: 251.30 PPM			230	12.20	-1.19	402	0.016	.20	481	0.70 s	173.89
096	0.35	.39	<u>Lead</u>			486	11.70	-1.36	102	0.016	.20	450	0.04 R	5.49
131	0.35	.39	<u>ICP</u>			481	8.75	-2.30	Avg	0.015		009	0.04	1.12
360	0.35	.37	368	20.15	1.34	Meth: 261.30 PCT			041	0.015	-.18	230	0.03	.79
057	0.35	.33	027	19.81	1.23	<u>Acid Soluble Manganese</u>			057	0.015	-.30	Avg	0.03	
231	0.35	.30	247	18.50	.82	<u>ICP</u>			035	0.015	-.32	484	0.03	-.69
022	0.34	.30	450	18.20	.75	422	1.295 s	540.49	022	0.015	-.43	486	0.03	-1.07
023	0.34	.25	049	17.94	.65	482	0.020	2.05	488	0.014	-.56	Meth: 289.00 PPM		
371	0.34	.18	037	17.83	.63	474	0.017	.78	472	0.014 R	-.96	<u>Molybdenum</u>		
177	0.34	.17	102	17.77	.61	444	0.016	.55	027	0.012	-1.54	<u>Atomic Absorption</u>		
368	0.34	.14	096	15.90	.09	096	0.016	.51	354	0.010	-2.11	481 16.20 S .00		
255	0.33	.14	Avg	15.87		247	0.016	.44	Meth: 271.30 PCT			Meth: 289.30 PPM		
Avg	0.33		035	15.15	-.26	102	0.016	.36	<u>Water Soluble Mangan</u>			<u>Molybdenum</u>		
291	0.33	-.06	474	15.00	-.41	402	0.016	.36	<u>ICP</u>			444 0.010 .00		
258	0.33	-.12	482	15.30	-.41	Avg	0.015		444	0.010	.00	255 12.80 s 7.33		
262	0.33	-.19	444	13.81	-.64	041	0.015	-.06	Meth: 281.00 PPM			049 11.30 R 5.39		
402	0.32	-.25	230	12.20	-1.14	057	0.015	-.19	<u>Mercury</u>			433 8.11 2.56		
043	0.32	-.32	486	11.70	-1.30	035	0.015	-.26	<u>Atomic Absorption</u>			450 5.60 .40		
043	0.31	-.40	481	8.75	-2.22	022	0.015	-.43	230 0.03 .71			096 5.60 .35		
035	0.32	-.41	Meth: 251.XX PPM			488	0.014	-.48	Meth: 281.30 PPM			368 5.35 .19		
472	0.32	-.42	<u>Lead</u>			472	0.014 R	-.97	<u>Mercury</u>			247 5.20 .00		
426	0.31	-.43	368	20.15	1.37	027	0.012	-1.56	<u>ICP</u>			Avg 5.20		
488	0.31	-.47	027	19.81	1.26	354	0.010	-2.17	481 0.70 S 23.60			035 5.13 -.07		
137	0.30	-.61	247	18.50	.83	Meth: 261.99 PCT			Avg 0.04			057 5.13 -.07		
444	0.29	-.83	450	18.20	.76	<u>Acid Soluble Manganese</u>			450 0.04			474 5.00 -.17		
474	0.29	-1.04	049	17.94	.66	<u>Other</u>			484 0.020 .00			102 4.52 -.62		
027	0.27	-1.26	037	17.83	.64							486 3.85 -1.19		
450	0.27 R	-1.50	102	17.77	.62							230 3.69 -1.33		
486	0.26	-1.58												
484	0.25	-1.81												
042	0.23	-2.24												

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Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 289.XX PPM			Meth: 291.XX PPM			Meth: 321.00 PCT			Meth: 321.30 PCT			Meth: 321.XX PCT		
<u>Molybdenum</u>			<u>Nickel</u>			<u>Acid Soluble Zinc</u>			<u>Acid Soluble Zinc</u>			<u>Acid Soluble Zinc</u>		
481	16.20 s	9.70	444	14.40	2.12	<u>Atomic Absorption</u>			<u>ICP</u>			096	0.171	2.91
255	12.80 s	7.33	450	11.50 R	.75	262	0.150	1.88	233	0.138	.25	022	0.155	1.68
049	11.30 R	5.39	037	11.44	.69	177	0.140	.82	247	0.138	.25	483	0.154	1.55
433	8.11	2.56	247	11.40	.67	040	0.138	.61	131	0.136	.12	049	0.153	1.49
450	5.60	.40	049	11.20	.58	028	0.135 R	.60	095	0.136	.06	262	0.150	1.26
096	5.60	.35	136	10.50 R	.33	Avg	0.132		Avg	0.135		090	0.145	.95
368	5.35	.19	102	10.57	.27	489	0.130	-.24	402	0.134	-.16	421	0.145	.95
247	5.20	.00	368	10.45	.22	043	0.130	-.26	472	0.133	-.20	390	0.146	.91
Avg	5.20		096	10.35	.16	169	0.130	-.30	474	0.130	-.36	102	0.145	.87
035	5.13	-.07	Avg	10.02		258	0.128	-.49	488	0.129	-.51	057	0.142	.76
057	5.13	-.07	035	9.94	-.09	029	0.130	-.51	137	0.128	-.60	324	0.140	.56
474	5.00	-.17	482	8.28	-.84	351	0.116	-1.79	291	0.127	-.62	037	0.141	.55
102	4.52	-.62	474	8.00	-.98	Meth: 321.30 PCT			307	0.126	-.74	023	0.140	.49
486	3.85	-1.19	230	7.12	-1.40	<u>Acid Soluble Zinc</u>			055	0.125	-.82	231	0.140	.46
230	3.69	-1.33	486	7.10	-1.41	<u>ICP</u>			433	0.124	-.84	360	0.140	.46
Meth: 291.00 PPM			Meth: 301.99 PPM			422	0.955 s	61.11	255	0.125	-.84	177	0.140	.46
<u>Nickel</u>			<u>Selenium</u>			157	0.336 s	14.99	035	0.124	-.88	028	0.135	.40
<u>Atomic Absorption</u>			<u>Other</u>			450	0.265 s	10.26	426	0.120	-1.11	292	0.135	.40
136	10.50	.71	255	2.58	-.71	368	0.173 S	3.00	444	0.115	-1.48	041	0.135	.40
Meth: 291.30 PPM			Meth: 311.99 PCT			096	0.171	2.66	027	0.109	-1.96	482	0.135	.40
<u>Nickel</u>			<u>Sodium</u>			022	0.155	1.52	486	0.100	-2.59	354	0.135	.40
<u>ICP</u>			<u>Other</u>			483	0.154	1.40	230	0.087 S	-3.59	247	0.138	.31
444	14.40	2.12	484	1.94 s	56.18	049	0.153	1.35	Meth: 321.99 PCT			233	0.138	.31
450	11.50 R	.75	102	0.60	1.02	421	0.145	.85	<u>Acid Soluble Zinc</u>			040	0.138	.30
037	11.44	.69	474	0.60	.96	090	0.145	.85	<u>Other</u>			131	0.136	.17
247	11.40	.67	057	0.58	.46	390	0.146	.80	481	0.130	.44	095	0.136	.11
049	11.20	.58	Avg	0.57		102	0.145	.77	Avg	0.123		Avg	0.134	
102	10.57	.27	035	0.57	-.47	057	0.142	.67	484	0.120	-.70	402	0.134	-.16
368	10.45	.22	482	0.56	-.73	324	0.140	.49	042	0.120	-1.35	472	0.133	-.19
096	10.35	.16	488	0.54	-1.60	037	0.141	.47	Meth: 321.XX PCT			481	0.130	-.34
Avg	10.02		354	0.52 s	-11.70	023	0.140	.41	<u>Acid Soluble Zinc</u>			489	0.130	-.34
035	9.94	-.09	Meth: 321.00 PCT			231	0.140	.39	422	0.955 s	65.65	474	0.130	-.34
482	8.28	-.84	<u>Acid Soluble Zinc</u>			360	0.140	.39	157	0.336 s	16.14	043	0.130	-.35
474	8.00	-.98	<u>Atomic Absorption</u>			041	0.135	.37	450	0.265 s	11.06	169	0.130	-.38
230	7.12	-1.40	460	0.180 s	5.06	354	0.135	.37	460	0.180 A	3.66	029	0.130	-.49
486	7.10	-1.41				482	0.135	.37	368	0.173 s	3.26	488	0.129	-.51
						292	0.135	.37				258	0.128	-.52
												137	0.128	-.61

* 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>
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Meth: 321.XX PCT

<u>Acid Soluble Zinc</u>		
291	0.127	-.62
307	0.126	-.75
055	0.125	-.84
433	0.124	-.85
255	0.125	-.86
035	0.124	-.90
426	0.120	-1.14
484	0.120 R	-1.39
351	0.116	-1.51
444	0.115	-1.54
042	0.120 R	-1.96
027	0.109	-2.06
486	0.100	-2.74
230	0.087 s	-3.80

Meth: 325.30 PCT

<u>Water Soluble Zinc</u>		
<u>ICP</u>		
444	0.036	.00

Meth: 325.99 PCT

<u>Water Soluble Zinc</u>		
<u>Other</u>		
450	0.265	-.71

Meth: 325.XX PCT

<u>Water Soluble Zinc</u>		
450	0.265	.90
Avg	0.151	
444	0.036	-.83

* 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
001.99	3	0.00	1.11	0.10	121.00	12	0.00	0.99	0.23
001.XX	4	0.00	1.07	0.11	121.30	36	0.09	1.33	0.56
009.10	3	0.00	0.89	0.55	121.99	2	0.00	0.61	0.75
009.XX	3	0.00	0.89	0.55	121.XX	50	- 0.03	1.41	0.55
010.11	8	- 0.17	1.06	0.43	131.00	3	1.75	3.14	0.18
010.12	4	0.00	1.07	0.13	131.30	5	0.00	0.94	0.44
010.60	60	- 0.16	1.57	0.41	131.XX	8	0.73	2.26	0.37
010.99	5	- 1.54	3.57	0.24	144.01	19	- 0.18	1.42	0.22
010.XX	76	- 0.29	1.59	0.42	144.99	32	- 0.17	1.24	0.40
020.10	12	0.26	1.30	0.28	144.XX	50	- 0.08	1.25	0.38
020.20	15	- 0.27	1.41	0.34	151.30	10	0.00	1.02	0.15
020.40	9	0.00	0.96	0.36	151.XX	11	0.00	1.01	0.15
020.50	16	0.15	2.64	0.33	165.00	10	- 0.755	2.650	0.391
020.99	4	- 5.14	13.44	0.26	165.99	22	0.096	2.635	0.425
020.XX	53	- 0.32	4.71	0.46	165.XX	32	- 0.138	2.607	0.407
030.XX	4	0.00	1.04	0.24	171.99	2	0.000	0.613	0.750
040.10	2	0.00	0.69	0.72	171.XX	2	0.000	0.613	0.750
040.99	2	- 64.17	90.75	56.75	181.30	13	- 0.23	1.29	0.08
040.XX	7	- 1.28	3.51	2.35	181.XX	14	- 0.23	1.29	0.08
041.10	10	0.00	0.95	0.38	191.30	12	0.00	1.02	0.09
041.40	4	0.34	1.14	0.65	191.XX	13	0.10	1.04	0.13
041.50	10	- 1.39	3.19	0.93	202.30	10	0.00	1.01	0.16
041.60	11	- 0.35	1.41	0.68	202.XX	12	0.01	0.93	0.52
041.XX	30	- 0.43	2.12	0.80	221.00	2	- 23.46	33.191	0.5000
048.20	2	0.00	1.17	0.26	221.30	19	1.9490	6.5054	1.5593
048.XX	4	0.00	1.06	0.18	221.XX	22	1.3415	6.6080	1.4889
050.00	16	- 0.09	1.23	0.34	241.00	7	0.00	1.04	0.06
050.30	8	0.04	0.80	1.00	241.30	39	- 0.13	1.31	0.27
050.31	2	0.00	0.54	0.78	241.99	4	0.00	1.07	0.10
050.50	9	0.65	4.43	0.88	241.XX	50	- 0.09	1.19	0.23
050.51	12	0.10	1.00	0.46	251.30	15	0.00	1.00	0.16
050.60	5	- 0.29	1.14	0.79	251.XX	16	0.00	1.00	0.16
050.61	9	0.00	0.96	0.35	261.30	16	33.750	135.13	0.603
050.99	25	- 0.74	2.46	0.62	261.XX	17	28.968	119.58	0.534
050.XX	79	- 0.19	2.17	0.60	281.30	2	11.67	16.50	2.55
060.00	5	0.00	1.02	0.26	281.99	3	0.00	1.05	0.31
060.XX	6	0.00	1.04	0.12	281.XX	6	28.98	70.06	10.73
101.30	17	0.68	2.11	0.53	289.30	13	0.93	2.46	0.84
101.XX	18	- 0.34	2.69	0.34	289.XX	14	1.55	3.33	0.83

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
291.30	13	0.06	1.00	0.08					
291.XX	14	0.07	0.96	0.10					
311.99	8	6.75	20.00	4.08					
311.XX	8	6.75	20.00	4.08					
321.00	11	0.486	1.768	0.224					
321.30	42	2.026	9.796	0.602					
321.99	3	0.000	0.383	0.857					
321.XX	56	1.660	9.154	0.613					