

- Pass 1 Results for 73 Labs - - Pass 2 Results for 72 Labs -

Method	AOAC Ref.	Method Code	No. of Labs	Grand Avg.	Std. Dev.	Average Range of Dups	No. of Labs	Grand Avg.	Std. Dev.	Average Range of Dups
Ammoniacal Nitrogen, MgO Distillation .	920.03	001.10	4	0.15	0.08	0.02	4	0.15	0.08	0.02
Ammoniacal Nitrogen, Other		001.99	6	1.65	2.04	0.06	5	1.87	2.19	0.03
Method Group 001.XX PCT			10	1.05	1.73	0.04	9	1.10	1.82	0.02
Nitrate Nitrogen, Jones Modified	930.02	002.20	2	2.48	2.87	0.00	2	2.48	2.87	0.00
Nitrate Nitrogen, Other		002.99	4	1.85	2.17	0.00	3	0.83	1.29	0.00
Method Group 002.XX PCT			6	2.06	2.31	0.00	6	2.06	2.31	0.00
Nitrogen From Urea, Other		005.99	1	3.89	0.05	0.07	1	3.89	0.05	0.07
Ammon & Nitrate N, Devarda	892.01	009.10	2	3.03	2.42	0.02	2	3.03	2.42	0.02
Ammon & Nitrate N, Other		009.99	1	1.00	0.16	0.23	1	1.00	0.16	0.23
Method Group 009.XX PCT			3	2.35	2.15	0.09	3	2.35	2.15	0.09
Total Nitrogen, Reduced Iron		010.10	1	4.91	0.01	0.02	1	4.91	0.01	0.02
Total Nitrogen, Modified Comprehensive	978.02	010.11	6	4.83	0.14	0.08	6	4.83	0.14	0.08
Total Nitrogen, Salicylic	955.04D	010.12	3	4.97	0.13	0.01	3	4.97	0.13	0.01
Total Nitrogen, Combustion		010.60	45	4.92	0.25	0.08	44	4.93	0.25	0.07
Total Nitrogen, Other		010.99	1	4.92	0.01	0.01	1	4.92	0.01	0.01
Method Group 010.XX PCT			56	4.92	0.24	0.07	55	4.92	0.23	0.07
Total Phosphate, Grav Quimociac	962.02	020.10	9	3.28	0.06	0.02	9	3.28	0.06	0.02
Total Phosphate, Spectrometric	958.01	020.20	11	3.32	0.18	0.01	11	3.32	0.18	0.01
Total Phosphate, Alka Quimociac	969.02	020.30	1	3.25	0.00	0.00	1	3.25	0.00	0.00
Total Phosphate, Automated	978.01	020.40	7	3.22	0.11	0.05	7	3.22	0.11	0.05
Total Phosphate, ICP		020.50	12	3.21	0.18	0.12	11	3.22	0.17	0.08
Total Phosphate, Other		020.99	2	3.10	0.13	0.02	2	3.10	0.13	0.02
Method Group 020.XX PCT			42	3.25	0.15	0.05	38	3.25	0.12	0.03
Insoluble Phosphate, ICP		030.50	1	0.01	0.01	0.01	1	0.01	0.01	0.01
InDir Available Phosphate, ICP		040.50	2	3.40	0.27	0.08	2	3.40	0.27	0.08
Dir Available Phosphate, Grav Quimociac	960.03E	041.10	6	3.27	0.02	0.03	6	3.27	0.02	0.03
Dir Available Phosphate, Automated	978.01	041.40	1	2.98	0.04	0.05	1	2.98	0.04	0.05
Dir Available Phosphate, ICP		041.50	11	3.17	0.13	0.08	11	3.17	0.13	0.08
Dir Available Phosphate, EDTA Extract .	993.01	041.60	9	3.28	0.10	0.06	9	3.28	0.10	0.06
Dir Available Phosphate, Other		041.99	1	3.37	0.04	0.05	1	3.37	0.04	0.05
Method Group 041.XX PCT			29	3.22	0.12	0.06	29	3.22	0.12	0.06
Water Soluble Phosphate, Grav Quimociac	962.03	048.10	1	1.39	0.08	0.11	1	1.39	0.08	0.11
Water Soluble Phosphate, Spectrometric	970.01	048.20	1	0.08	0.00	0.00	1	0.08	0.00	0.00
Water Soluble Phosphate, ICP		048.50	1	3.67	0.07	0.10	1	3.67	0.07	0.10
Method Group 048.XX PCT			3	1.71	1.63	0.07	3	1.71	1.63	0.07
Soluble Potash, STPB Oxalate	958.02	050.00	12	4.48	0.18	0.10	13	4.52	0.23	0.09
Soluble Potash, AA (Oxalate)		050.30	5	4.14	0.21	0.09	5	4.14	0.21	0.09
Soluble Potash, ICP (Oxalate)		050.50	6	4.45	0.16	0.13	6	4.45	0.16	0.13
Soluble Potash, ICP (Citrate)		050.51	12	4.42	0.17	0.07	12	4.42	0.17	0.07

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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, Flame (Oxalate)	983.02(a)	050.60	3	4.43	0.07	0.03	3	4.43	0.07	0.03
Soluble Potash, Flame (Citrate)	983.02(b)	050.61	8	4.37	0.10	0.04	7	4.35	0.07	0.02
Soluble Potash, Other		050.99	16	4.34	0.19	0.09	15	4.35	0.17	0.06
Method Group 050.XX PCT			62	4.38	0.19	0.08	58	4.40	0.17	0.07
Acid Soluble Calcium, ICP		101.30	4	0.03	0.03	0.01	3	0.02	0.03	0.00
Acid Soluble Magnesium, AA	984.01	121.00	1	0.00	0.00	0.00	1	0.00	0.00	0.00
Acid Soluble Magnesium, ICP		121.30	3	0.00	0.00	0.00	3	0.00	0.00	0.00
Method Group 121.XX PCT			4	0.00	0.00	0.00	3	0.00	0.00	0.00
Sulfur, Gravimetric	980.02a	144.01	1	0.02	0.01	0.01	1	0.02	0.01	0.01
Sulfur, Gravimetric	980.02b	144.02	1	0.01	0.00	0.00	1	0.01	0.00	0.00
Sulfur, Spectrometric		144.70	1	0.02	0.00	0.00	1	0.02	0.00	0.00
Sulfur, Other		144.99	7	0.01	0.00	0.00	6	0.01	0.00	0.00
Method Group 144.XX PCT			10	0.01	0.00	0.00	8	0.01	0.00	0.00
Arsenic, ICP		151.30	1	0.10	0.00	0.00	1	0.10	0.00	0.00
Acid Soluble Boron, Spectrometric	982.01	165.00	3	0.016	0.002	0.001	3	0.016	0.002	0.001
Acid Soluble Boron, Other		165.99	15	0.013	0.001	0.001	14	0.013	0.001	0.001
Method Group 165.XX PCT			18	0.013	0.002	0.001	17	0.013	0.002	0.001
Water Soluble Boron, Other		171.99	1	0.012	0.001	0.001	1	0.012	0.001	0.001
Cadmium, ICP		181.30	2	0.08	0.02	0.00	2	0.08	0.02	0.00
Chromium, ICP		191.30	3	0.51	0.14	0.09	3	0.51	0.14	0.09
Acid Soluble Cobalt, ICP	965.11	202.30	2	0.09	0.08	0.02	2	0.09	0.08	0.02
Acid Soluble Copper, Atomic Absorption	975.01	221.00	1	0.0198	0.0004	0.0006	1	0.0198	0.0004	0.0006
Acid Soluble Copper, ICP		221.30	23	0.0211	0.0011	0.0006	21	0.0209	0.0010	0.0005
Method Group 221.XX PCT			24	0.0210	0.0011	0.0006	22	0.0209	0.0010	0.0005
Acid Soluble Iron, Atomic Absorption ..	980.01	241.00	2	0.03	0.00	0.00	2	0.03	0.00	0.00
Acid Soluble Iron, ICP		241.30	23	0.03	0.00	0.00	22	0.03	0.00	0.00
Acid Soluble Iron, Other		241.99	1	0.03	0.00	0.00	1	0.03	0.00	0.00
Method Group 241.XX PCT			26	0.03	0.00	0.00	24	0.03	0.00	0.00
Lead, ICP		251.30	1	1.23	0.02	0.03	1	1.23	0.02	0.03
Acid Soluble Manganese, AA	972.02a	261.00	2	0.031	0.001	0.002	2	0.031	0.001	0.002
Acid Soluble Manganese, ICP	972.02a	261.30	19	0.029	0.002	0.001	17	0.029	0.002	0.000
Acid Soluble Manganese, ICP	972.02b	261.31	2	0.029	0.001	0.001	2	0.029	0.001	0.001
Acid Soluble Manganese, Other		261.99	3	0.027	0.002	0.001	3	0.027	0.002	0.001
Method Group 261.XX PCT			26	0.029	0.002	0.001	25	0.029	0.002	0.001
Water Soluble Manganese, ICP	972.03	271.30	1	0.029	0.000	0.000	1	0.029	0.000	0.000
Molybdenum, Atomic Absorption		289.00	1	3.15	0.20	0.28	1	3.15	0.20	0.28
Molybdenum, ICP		289.30	12	5.40	0.50	0.15	11	5.39	0.51	0.09
Method Group 289.XX PPM			13	5.23	0.78	0.16	12	5.20	0.80	0.10
Nickel, ICP		291.30	2	0.10	0.03	0.03	2	0.10	0.03	0.03

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Sodium, Flame Photometric	974.01	311.30	1	0.02	0.00	0.00	1	0.02	0.00	0.00
Sodium, Other		311.99	3	0.02	0.00	0.00	3	0.02	0.00	0.00
Method Group 311.XX PCT			4	0.02	0.00	0.00	4	0.02	0.00	0.00
Acid Soluble Zinc, Atomic Absorption ..	975.02	321.00	2	0.025	0.002	0.001	2	0.025	0.002	0.001
Acid Soluble Zinc, ICP		321.30	22	0.028	0.002	0.001	20	0.028	0.002	0.000
Method Group 321.XX PCT			24	0.027	0.002	0.001	22	0.027	0.002	0.000
Water Soluble Zinc, ICP		325.30	2	0.025	0.000	0.000	2	0.025	0.000	0.000

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>		
360	4.93	.03	<u>Grav Quimociac</u>			<u>Automated</u>			483	3.60	2.81	421	3.05 X	-1.65
Avg	4.92		041	3.33	.80	035	3.25	.28	324	3.44	1.53	255	3.04 R	-1.84
493	4.92	-.03	211	3.30	.37	Avg	3.22		489	3.42	1.38	487	2.99	-2.13
389	4.91	-.06	Avg	3.28		096	3.19	-.33	470	3.41	1.25	488	3.15 R	-2.44
470	4.91	-.06	105	3.27	-.23	486	3.11	-1.03	470	3.40	1.17	Meth: 030.50 PCT		
231	4.90	-.11	493	3.26	-.33	456	3.07	-1.36	451	3.38	1.07	Insoluble Phosphate		
324	4.90	-.15	049	3.26	-.48	Meth: 020.50 PCT			428	3.36	.86	<u>ICP</u>		
137	4.91	-.18	322	3.25	-.59	<u>Total Phosphate</u>			292	3.35	.77	255 0.01 .71		
390	4.88	-.19	090	3.27	-.65	<u>ICP</u>			452	3.34	.77			
486	4.86	-.26	157	3.19	-1.58	474	4.28 s	6.30	041	3.33	.61			
043	4.87	-.27	Meth: 020.20 PCT			426	3.74 S	3.14	231	3.31	.49	Meth: 040.50 PCT		
220	4.86	-.30	<u>Total Phosphate</u>			483	3.60	2.26	211	3.30	.41	InDir Available Phos		
452	4.84	-.34	<u>Spectrometric</u>			451	3.38	.98	105	3.30	.37	<u>ICP</u>		
481	4.82	-.41	484	3.74	2.36	452	3.34	.76	090	3.27	.31	072 3.63 .86		
027	4.91	-.47	324	3.44	.66	Avg	3.22		481	3.27	.18	Avg 3.40		
035	4.80	-.54	489	3.42	.55	389	3.21	-.07	105	3.27	.18	488 3.17 -.88		
351	4.78	-.59	428	3.36	.20	025	3.16	-.33	049	3.26	.18			
255	4.76	-.71	292	3.35	.13	368	3.16	-.36	371	3.27	.17	Meth: 041.10 PCT		
421	4.77 X	-.72	Avg	3.32		291	3.15	-.39	493	3.26	.09	Dir Available Phosph		
488	4.75	-.73	231	3.31	-.09	307	3.14	-.51	035	3.25	.08	<u>Grav Quimociac</u>		
090	4.75	-.76	371	3.27	-.30	390	3.16	-.89	095	3.25	.00	040 3.30 1.13		
177	4.74	-.77	481	3.27	-.30	421	3.05 X	-1.01	Avg	3.25		Avg 3.27		
426	4.68	-1.15	177	3.23	-.52	255	3.04	-1.17	322	3.25	-.05	072 3.27 -.36		
230	4.65	-1.20	416	3.11	-1.20	488	3.15 R	-1.74	177	3.23	-.16	009 3.27 -.68		
029	4.65	-1.23	309	3.06	-1.49	Meth: 020.99 PCT			258	3.22	-.30	105 3.27 -.68		
233	4.71 R	-1.32	Meth: 020.30 PCT			<u>Total Phosphate</u>			389	3.21	-.36	055 3.27 -.68		
211	4.60	-1.37	<u>Total Phosphate</u>			<u>Other</u>			157	3.19	-.50	185 3.27 -1.64		
489	4.52	-1.73	<u>Alka Quimociac</u>			258	3.22	.87	096	3.19	-.53	254 3.08 s -8.25		
042	4.45	-2.07	095	3.25	.00	Avg	3.10		247	3.23	-.58			
483	4.40	-2.27	Meth: 020.40 PCT			487	2.99	-.86	025	3.16	-.72	Meth: 041.40 PCT		
428	4.37	-2.35	<u>Total Phosphate</u>			Meth: 020.XX PCT			368	3.16	-.75	Dir Available Phosph		
377	4.16 s	-3.25	<u>Automated</u>			<u>Total Phosphate</u>			291	3.15	-.80	<u>Automated</u>		
393	4.07 s	-3.64	470	3.41	1.62	474	4.28 s	8.30	307	3.14	-.95	027 2.98 .71		
Meth: 020.10 PCT			105	3.30	.66	426	3.74 s	4.01	416	3.11	-1.12	Meth: 041.50 PCT		
<u>Total Phosphate</u>			247	3.23	.62	484	3.74 A	3.95	390	3.16 R	-1.34	Dir Available Phosph		
<u>Grav Quimociac</u>									456	3.07	-1.48	<u>ICP</u>		
470	3.40	2.01							309	3.06	-1.53	452 3.34 1.34		

* 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: 041.50 PCT			Meth: 041.XX PCT			Meth: 048.20 PCT			Meth: 050.30 PCT			Meth: 050.51 PCT		
<u>Dir Available Phosph</u>			<u>Dir Available Phosph</u>			<u>Water Soluble Phosph</u>			<u>Soluble Potash</u>			<u>Soluble Potash</u>		
<u>ICP</u>			<u>ICP (Citrate)</u>			<u>Spectrometric</u>			<u>AA (Oxalate)</u>			<u>ICP (Citrate)</u>		
360	3.30	.99	105	3.37	1.16	309	0.08	.00	157	4.15	.32	072	4.19	-1.30
009	3.28	.87	452	3.34	.98	029	3.33	.90	Avg	4.14		486	4.09	-1.89
023	3.25	.61	029	3.33	.90	360	3.30	.65	309	3.97	-.86	Meth: 050.60 PCT		
043	3.18	.35	040	3.30	.62	040	3.30	.62	185	3.90	-1.27	<u>Soluble Potash</u>		
377	3.21	.30	009	3.28	.55	009	3.28	.55	484	3.43 S	-3.46	<u>Flame (Oxalate)</u>		
Avg	3.17		185	3.27	.50	185	3.27	.50	Meth: 050.31 PCT			470	4.51	1.12
325	3.15	-.43	034	3.26	.48	034	3.26	.48	<u>Soluble Potash</u>			Avg	4.43	
368	3.14	-.46	072	3.27	.38	072	3.27	.38	<u>AA (Citrate)</u>			105	4.43	-.52
393	3.10	-.60	105	3.27	.36	105	3.27	.36	254	3.28 S	.00	169	4.37	-.99
255	3.03	-1.33	055	3.27	.36	055	3.27	.36	Meth: 050.50 PCT			Meth: 050.61 PCT		
137	2.93	-1.96	009	3.27	.36	009	3.27	.36	<u>Soluble Potash</u>			<u>Soluble Potash</u>		
Meth: 041.60 PCT			028	3.26	.34	028	3.26	.34	<u>ICP (Oxalate)</u>			<u>Flame (Citrate)</u>		
<u>Dir Available Phosph</u>			023	3.25	.23	023	3.25	.23	426	4.63	1.21	029	4.53 R	2.64
<u>EDTA Extract</u>			136	3.25	.22	136	3.25	.22	444	4.58	.84	456	4.43	1.17
351	3.47	1.86	Avg	3.22		Avg	3.22		Avg	4.45		035	4.42	.96
043	3.38	1.01	220	3.22	-.03	220	3.22	-.03	324	4.44	-.06	028	4.40	.73
029	3.33	.64	377	3.21	-.13	377	3.21	-.13	292	4.37	-.53	105	4.35	.28
Avg	3.28		117	3.17	-.48	117	3.17	-.48	055	4.41	-.73	Avg	4.35	
028	3.26	-.27	043	3.18	-.53	043	3.18	-.53	488	4.26	-1.59	041	4.32	-.43
136	3.25	-.29	325	3.15	-.71	325	3.15	-.71	Meth: 050.51 PCT			095	4.26	-1.14
034	3.26	-.52	368	3.14	-.76	368	3.14	-.76	<u>Soluble Potash</u>			034	4.24	-1.46
220	3.22	-.58	105	3.19	-.77	105	3.19	-.77	<u>ICP (Citrate)</u>			Meth: 050.99 PCT		
117	3.17	-1.13	393	3.10	-1.01	393	3.10	-1.01	096	11.97 s	43.18	<u>Soluble Potash</u>		
105	3.19	-1.25	254	3.08	-1.25	254	3.08	-1.25	483	4.79	2.14	<u>Other</u>		
Meth: 041.99 PCT			255	3.03	-1.71	255	3.03	-1.71	009	4.46	.62	451	4.71	2.08
<u>Dir Available Phosph</u>			027	2.98	-2.01	027	2.98	-2.01	483	4.79	2.14	177	4.52	.97
<u>Other</u>			137	2.93	-2.41	137	2.93	-2.41	009	4.46	.62	390	4.46	.88
Avg	3.37		230	2.36 s	-7.07	230	2.36 s	-7.07	137	4.43	.61	325	4.50	.85
105	3.37	-.71	Meth: 048.10 PCT			Meth: 048.10 PCT			023	4.49	.48	360	4.48	.71
230	2.36 S	-28.74	<u>Water Soluble Phosph</u>			<u>Water Soluble Phosph</u>			389	4.48	.37	444	4.44	.54
			<u>Grav Quimociac</u>			<u>Grav Quimociac</u>			452	4.47	.32	105	4.42	.36
			444	1.39	.71	444	1.39	.71	377	4.42	.06	258	4.37	.10
Meth: 041.XX PCT			Meth: 050.30 PCT			Meth: 050.30 PCT			Meth: 050.51 PCT			Meth: 050.99 PCT		
<u>Dir Available Phosph</u>			<u>Soluble Potash</u>			<u>Soluble Potash</u>			<u>Soluble Potash</u>			<u>Soluble Potash</u>		
<u>AA (Oxalate)</u>			<u>AA (Oxalate)</u>			<u>AA (Oxalate)</u>			<u>ICP (Citrate)</u>			<u>ICP (Citrate)</u>		
351	3.47	1.97	040	4.35	1.01	040	4.35	1.01	291	4.42	-.09	393	4.36	-.33
043	3.38	1.26	351	4.35	1.01	351	4.35	1.01	043	4.40	-.55	Avg	4.35	

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Meth: 050.99 PCT			Meth: 050.XX PCT			Meth: 050.XX PCT			Meth: 144.01 PCT			Meth: 144.XX PCT		
<u>Soluble Potash</u>			<u>Soluble Potash</u>			<u>Soluble Potash</u>			<u>Sulfur</u>			<u>Sulfur</u>		
<u>Other</u>			211	4.46	.37	185	3.90 A	-2.94	<u>Gravimetric</u>			Avg 0.01		
421	4.27 X	-.52	444	4.44	.35	481	3.75 s	-3.78	416	1.58 S	222.08	292	0.01	-.70
322	4.24	-.64	105	4.43	.26	484	3.43 s	-5.64	105	0.02	.71	096	0.01	-.70
474	4.21	-.85	324	4.44	.26	254	3.28 s	-6.51	Avg 0.02			009	0.01	-.70
025	4.20	-.91	456	4.43	.23	Meth: 101.30 PCT			Meth: 144.02 PCT			Meth: 151.30 PPM		
307	4.12	-1.45	220	4.43	.22	Acid Soluble Calcium			Sulfur			Arsenic		
368	4.09	-1.51	377	4.42	.15	<u>ICP</u>			<u>Gravimetric</u>			<u>ICP</u>		
255	4.11 R	-1.83	035	4.42	.14	096	0.06 R	1.68	292	0.01	.00	474 0.10 .00		
481	3.75 S	-3.49	291	4.42	.14	483	0.05	1.29	Meth: 144.70 PCT			Meth: 165.00 PCT		
Meth: 050.XX PCT			105	4.42	.11	Avg 0.02			Sulfur			Acid Soluble Boron		
<u>Soluble Potash</u>			028	4.40	.02	474	0.00	-.64	<u>Spectrometric</u>			<u>Spectrometric</u>		
096	11.97 s	43.96	Avg	4.40		421	0.00 X	-.65	474	0.02	.00	494	0.019	1.04
055	4.99 s	3.48	258	4.37	-.15	Meth: 121.00 PCT			Meth: 144.99 PCT			220	0.017	.26
483	4.79	2.29	169	4.37	-.18	Acid Soluble Magnesi			Sulfur			Avg 0.016		
230	4.75	2.13	393	4.36	-.22	<u>AA</u>			<u>Other</u>			393 0.014 -1.17		
489	4.73	1.94	292	4.37	-.23	043	0.00	.00	220	2.40 s	1523.76	Meth: 165.99 PCT		
451	4.71	1.86	351	4.35	-.24	Meth: 121.30 PCT			483	0.01 R	2.34	Acid Soluble Boron		
416	4.65	1.45	105	4.35	-.29	Acid Soluble Magnesi			389	0.01	1.20	<u>Other</u>		
426	4.63	1.42	040	4.35	-.39	<u>ICP</u>			102	0.01	1.01	421	0.120 s	85.40
494	4.57 R	1.26	041	4.32	-.44	483	0.00	1.30	452	0.01	.76	043	0.015	1.62
444	4.58	1.08	231	4.37	-.64	Avg 0.00			Avg 0.01			090	0.014	1.29
029	4.53	.88	043	4.29	-.66	474	0.00	-.61	096	0.01	-.91	433	0.014	1.02
390	4.46	.75	421	4.27 X	-.77	Meth: 121.XX PCT			009	0.01	-.91	371	0.013	.82
177	4.52	.73	095	4.26	-.79	<u>Acid Soluble Magnesi</u>			421	0.01 X	-.91	483	0.013	.50
009	4.46	.69	322	4.24	-.90	483	0.00 R	67.83	Meth: 144.XX PCT			368	0.013	.34
470	4.51	.66	034	4.24	-.93	474	0.00	1.29	Sulfur			389	0.013	.22
137	4.43	.65	090	4.21	-1.10	Avg 0.00			220	2.40 s	717.46	255	0.013	.22
055	4.41	.64	474	4.21	-1.11	421	0.00 X	-.65	416	1.58 s	473.65	Avg 0.013		
325	4.50	.60	025	4.20	-1.17	043	0.00	-.65	474	0.02	2.31	230	0.012	-.38
023	4.49	.59	049	4.20	-1.19	Meth: 121.XX PCT			105	0.02 R	1.71	452	0.013	-.44
043	4.40	.55	072	4.19	-1.20	<u>Acid Soluble Magnesi</u>			483	0.01 R	1.06	486	0.012	-.58
470	4.49	.52	488	4.26 R	-1.26	483	0.00		389	0.01	.37	324	0.012	-.73
389	4.48	.48	157	4.15	-1.45	421	0.00 X	-.65	102	0.01	.21	009	0.012	-1.06
360	4.48	.47	307	4.12	-1.70	043	0.00	-.65	452	0.01	.16	258	0.011 R	-2.14
072	4.48	.46	368	4.09	-1.78	Avg 0.00								
452	4.47	.44	486	4.09	-1.81	Meth: 144.XX PCT								
009	4.45	.39	255	4.11 R	-2.05	Sulfur								
			309	3.97	-2.50	Avg 0.00								

* 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: 165.99 PCT			Meth: 191.30 PPM			Meth: 221.30 PCT			Meth: 221.XX PCT			Meth: 241.30 PCT		
Acid Soluble Boron			Chromium			Acid Soluble Copper			Acid Soluble Copper			Acid Soluble Iron		
<u>Other</u>			<u>ICP</u>			<u>ICP</u>			<u>ICP</u>			<u>ICP</u>		
231	0.010	-2.17	009	0.60	.97	433	0.0209	-.09	307	0.0199	-1.01	022	0.03	-1.18
			452	0.58	.51	494	0.0208	-.23	043	0.0198	-1.08	009	0.03	-1.18
Meth: 165.XX PCT			Avg 0.51			035 0.0207 - .24			255 0.0195 -1.42			483 0.03 -1.26		
<u>Acid Soluble Boron</u>			102 0.35 -1.14			090 0.0205 -.64			452 0.0150 s -5.70					
421	0.120 s	54.33	Meth: 202.30 PPM			022 0.0200 -.91			Meth: 241.00 PCT			Meth: 241.99 PCT		
494	0.019	2.63	Acid Soluble Cobalt			009 0.0200 -.91			Acid Soluble Iron			Acid Soluble Iron		
220	0.017	1.63	<u>ICP</u>			231 0.0200 -.91			<u>Atomic Absorption</u>			<u>Other</u>		
043	0.015	.73	393 0.16 .89			307 0.0199 -1.06			484 0.03 1.12			421 0.03 X .00		
090	0.014	.61	Avg 0.09			255 0.0195 -1.48			Avg 0.03			Meth: 241.XX PCT		
433	0.014	.34	474 0.02 -.84			474 0.0195 -1.48			043 0.03 -.50			<u>Acid Soluble Iron</u>		
393	0.014	.17	Meth: 221.00 PCT			452 0.0150 s -5.78						474 0.04 s 3.99		
Avg	0.013		Acid Soluble Copper			Meth: 221.XX PCT			Meth: 241.30 PCT			324 0.04 2.46		
368	0.013	-.16	<u>Atomic Absorption</u>			Acid Soluble Copper			Acid Soluble Iron			220 0.04 2.02		
389	0.013	-.17	484 0.0264 S 15.56			324 0.0287 s 7.59			474 0.04 s 3.89			035 0.03 R 1.23		
255	0.013	-.17	043 0.0198 .71			484 0.0264 s 5.35			324 0.04 2.37			090 0.03 .94		
483	0.013	-.18	Avg 0.0198			483 0.0239 2.88			220 0.04 1.93			027 0.03 .94		
452	0.013	-.50	Meth: 221.30 PCT			220 0.0230 R 2.27			035 0.03 R 1.16			452 0.03 .73		
371	0.013	-.54	Acid Soluble Copper			371 0.0220 R 1.46			090 0.03 .85			307 0.03 .54		
230	0.012	-.56	<u>ICP</u>			247 0.0221 1.16			027 0.03 .85			393 0.03 .54		
486	0.012	-.68	324 0.0287 s 7.58			444 0.0215 .77			452 0.03 .65			102 0.03 .43		
324	0.012	-.77	483 0.0239 2.85			027 0.0215 .77			307 0.03 .54			444 0.03 .43		
009	0.012	-.97	220 0.0230 R 2.24			389 0.0215 .77			393 0.03 .46			486 0.03 .43		
258	0.011 R	-1.64	393 0.0214 .64			102 0.0216 .69			102 0.03 .34			368 0.03 .41		
231	0.010	-1.70	371 0.0220 R 1.43			393 0.0214 .64			444 0.03 .34			230 0.03 .36		
Meth: 171.99 PCT			247 0.0221 1.12			096 0.0214 .48			486 0.03 .34			Avg 0.03		
Water Soluble Boron			230 0.0211 .24			486 0.0210 .12			230 0.03 .28			433 0.03 -.15		
<u>Other</u>			389 0.0215 .74			433 0.0209 .10			Avg 0.03			494 0.03 -.36		
444	0.012	.71	444 0.0215 .74			368 0.0209 .02			433 0.03 -.22			389 0.03 -.42		
Meth: 181.30 PPM			027 0.0215 .74			Avg 0.0209			494 0.03 -.37			043 0.03 -.71		
Cadmium			102 0.0216 .65			035 0.0207 -.20			368 0.03 -.41			371 0.03 -.78		
<u>ICP</u>			393 0.0214 .60			494 0.0208 -.20			389 0.03 -.49			484 0.03 R -.84		
474	0.10	.86	096 0.0214 .44			090 0.0205 -.61			371 0.03 -.84			255 0.03 -.88		
Avg	0.08		230 0.0211 .19			009 0.0200 -.85			255 0.03 -.96			096 0.03 -1.10		
452	0.07	-.87	486 0.0210 .07			231 0.0200 -.85			096 0.03 -1.18			421 0.03 X -1.10		
			Avg 0.0209			022 0.0200 -.85			231 0.03 -1.18			231 0.03 -1.10		
			368 0.0209 -.03									009 0.03 -1.10		

* 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: 241.XX PCT</u>			<u>Meth: 261.31 PCT</u>			<u>Meth: 261.XX PCT</u>			<u>Meth: 289.XX PPM</u>			<u>Meth: 311.XX PCT</u>		
<u>Acid Soluble Iron</u>			<u>Acid Soluble Manganese</u>			<u>Acid Soluble Manganese</u>			<u>Molybdenum</u>			<u>Sodium</u>		
022	0.03	-1.10	ICP			390	0.027	-.94	035	5.54 R	.65	102	0.02	-.75
483	0.03	-1.18	421	0.030 X	.81	371	0.027	-1.15	096	5.65	.57	009	0.02	-.93
<u>Meth: 251.30 PPM</u>			<u>Meth: 261.99 PCT</u>			<u>Meth: 271.30 PCT</u>			<u>Meth: 321.00 PCT</u>			<u>Meth: 321.30 PCT</u>		
<u>Lead</u>			<u>Acid Soluble Manganese</u>			<u>Water Soluble Manganese</u>			<u>Acid Soluble Zinc</u>			<u>Acid Soluble Zinc</u>		
<u>ICP</u>			<u>Other</u>			<u>ICP</u>			<u>Atomic Absorption</u>			<u>Atomic Absorption</u>		
393	1.23	-.71	220	0.029	.97	444	0.029	.00	494	5.25	.23	043	0.026	.90
<u>Meth: 261.00 PCT</u>			<u>Meth: 289.00 PPM</u>			<u>Meth: 291.30 PPM</u>			<u>Meth: 311.30 PCT</u>			<u>Meth: 311.99 PCT</u>		
<u>Acid Soluble Manganese</u>			<u>Molybdenum</u>			<u>Molybdenum</u>			<u>Sodium</u>			<u>Sodium</u>		
<u>AA</u>			<u>Atomic Absorption</u>			<u>ICP</u>			<u>Flame Photometric</u>			<u>Other</u>		
484	0.031	.58	483	0.025	-1.21	484	3.15	-.71	102	4.72	-.60	494	0.02	1.14
Avg	0.031		<u>Meth: 261.XX PCT</u>			<u>Meth: 289.30 PPM</u>			<u>Meth: 311.30 PCT</u>			<u>Meth: 311.99 PCT</u>		
043	0.031	-1.08	<u>Acid Soluble Manganese</u>			<u>Molybdenum</u>			<u>Sodium</u>			<u>Sodium</u>		
<u>Meth: 261.30 PCT</u>			<u>Acid Soluble Manganese</u>			<u>ICP</u>			<u>Other</u>			<u>Other</u>		
<u>Acid Soluble Manganese</u>			<u>ICP</u>			<u>ICP</u>			<u>Other</u>			<u>Other</u>		
474	0.033	2.84	474	0.033	2.70	220	6.15	1.51	494	0.02	1.14	494	0.02	1.40
231	0.030	.84	043	0.031 R	1.41	230	5.89	.99	Avg	0.02		102	0.02	-.62
247	0.030	.84	484	0.031	1.30	035	5.54 R	.83	102	0.02	-.66	027	0.027	-.62
009	0.030	.84	247	0.030	.86	474	5.71	.67	452	0.08	-.95	022	0.027	-.62
090	0.029 R	.69	421	0.030 X	.86	096	5.65	.53	Meth: 311.30 PCT			433	0.026	-.65
494	0.029	.30	009	0.030	.86	452	5.60	.41	Sodium			090	0.028 R	-.79
096	0.029	.27	231	0.030	.86	368	5.50	.22	Flame Photometric			368	0.026	-.85
486	0.029	.17	090	0.029	.66	009	5.40	.02	452	0.02	.71	390	0.025	-1.20
027	0.029	.17	096	0.029	.35	Avg	5.39		Avg	0.02		255	0.025	-1.35
230	0.029	.12	494	0.029	.30	494	5.25	-.44	009	0.02	-.87	371	0.025	-1.63
Avg	0.029		027	0.029	.25	486	5.00	-.76	<u>Meth: 311.99 PCT</u>			<u>Meth: 311.XX PCT</u>		
452	0.029	-.37	486	0.029	.25	102	4.72	-1.31	<u>Sodium</u>			<u>Sodium</u>		
433	0.028	-.54	220	0.029	.25	255	4.40	-1.95	<u>Other</u>			<u>Other</u>		
035	0.028	-.56	230	0.029	.18	433	0.21 s	-10.21	<u>Other</u>			<u>Other</u>		
368	0.028	-.73	452	0.029	-.31	<u>Meth: 289.XX PPM</u>			<u>Meth: 311.99 PCT</u>			<u>Meth: 311.XX PCT</u>		
102	0.028	-.89	324	0.028	-.39	<u>Molybdenum</u>			<u>Sodium</u>			<u>Sodium</u>		
389	0.028	-.89	433	0.028	-.40	<u>ICP</u>			<u>Other</u>			<u>Other</u>		
390	0.027	-1.13	035	0.028	-.44	220	6.15	1.19	<u>Other</u>			<u>Other</u>		
371	0.027 R	-1.34	035	0.028	-.44	230	5.89	.86	<u>Other</u>			<u>Other</u>		
307	0.027	-1.40	368	0.028	-.57	474	5.71	.65	<u>Other</u>			<u>Other</u>		
<u>Meth: 261.30 PCT</u>			<u>Meth: 289.00 PPM</u>			<u>Meth: 291.30 PPM</u>			<u>Meth: 311.30 PCT</u>			<u>Meth: 311.99 PCT</u>		
<u>Acid Soluble Manganese</u>			<u>Molybdenum</u>			<u>Molybdenum</u>			<u>Sodium</u>			<u>Sodium</u>		
<u>ICP</u>			<u>Atomic Absorption</u>			<u>ICP</u>			<u>Flame Photometric</u>			<u>Other</u>		

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

Acid Soluble Zinc

421	0.035 s	4.50
220	0.033 s	3.15
483	0.031	1.78
292	0.030	1.32
009	0.030	1.32
231	0.030	1.32
486	0.030	1.32
035	0.030	1.15
389	0.029 R	.96
090	0.028 R	.74
230	0.028	.55
324	0.028	.17
Avg	0.027	
247	0.027	-.11
494	0.027	-.13
452	0.027	-.16
474	0.027	-.16
102	0.027	-.47
022	0.027	-.47
027	0.027	-.47
433	0.026	-.49
368	0.026	-.67
043	0.026	-.70
390	0.025	-1.00
255	0.025	-1.14
371	0.025	-1.41
484	0.024	-1.88

Meth: 325.30 PCT

Water Soluble Zinc

ICP

393	0.026	1.12
Avg	0.025	
444	0.025	-.50

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Method Evaluation - Z Values Based on 1 Reports

Method Code	Number Of Labs	Avg Bias of Labs	Std Dev of Biases	Std Dev Within Labs	Method Code	Number Of Labs	Avg Bias of Labs	Std Dev of Biases	Std Dev Within Labs
001.10	4	0.00	1.07	0.15	144.99	8	190.56	538.70	1.40
001.99	6	- 0.10	0.98	0.02	144.XX	12	99.29	237.47	6.62
001.XX	10	- 0.03	0.98	0.02	165.00	3	0.000	1.101	0.159
002.20	2	0.00	1.22	0.00	165.99	16	5.227	21.403	0.447
002.99	4	0.78	1.82	0.00	165.XX	19	2.783	12.522	0.272
002.XX	5	0.18	1.07	0.00	181.30	2	0.00	1.22	0.08
009.10	2	0.00	1.22	0.01	181.XX	2	0.00	1.22	0.08
009.XX	3	0.00	1.12	0.03	191.30	3	0.00	0.99	0.43
010.11	6	0.00	0.96	0.39	191.XX	3	0.00	0.99	0.43
010.12	3	0.00	1.11	0.07	202.30	2	0.00	1.18	0.22
010.60	47	- 0.16	1.16	0.23	202.XX	2	0.00	1.18	0.22
010.XX	57	- 0.14	1.16	0.24	221.00	2	7.7782	11.000	0.5270
020.10	9	0.00	0.99	0.27	221.30	25	0.1943	2.1751	0.3955
020.20	11	0.00	1.02	0.06	221.XX	27	0.3845	2.3163	0.3830
020.40	7	0.00	0.99	0.29	241.00	2	0.00	0.58	0.76
020.50	14	0.64	2.02	0.56	241.30	24	0.20	1.24	0.27
020.99	2	0.00	1.22	0.08	241.XX	27	0.19	1.21	0.31
020.XX	42	0.27	1.82	0.46	261.00	2	0.000	0.059	0.865
040.50	2	0.00	1.21	0.15	261.30	19	- 0.052	0.978	0.280
040.XX	2	0.00	1.21	0.15	261.31	2	0.000	1.140	0.317
041.10	7	- 1.12	3.02	1.19	261.99	3	0.000	1.082	0.229
041.50	11	0.00	0.95	0.37	261.XX	26	0.045	0.981	0.303
041.60	9	0.00	0.94	0.39	289.30	13	- 0.76	2.99	0.25
041.99	2	- 14.21	20.10	3.04	289.XX	14	- 0.42	1.93	0.16
041.XX	26	- 0.33	1.65	0.43	291.30	2	0.00	1.07	0.42
048.XX	2	- 0.25	1.06	0.50	291.XX	2	0.00	1.07	0.42
050.00	13	0.00	0.98	0.28	311.99	3	0.00	1.02	0.38
050.30	6	- 0.58	1.68	0.26	311.XX	4	0.00	0.98	0.40
050.50	6	0.00	0.86	0.55	321.00	2	0.000	1.138	0.320
050.51	13	3.32	12.01	0.29	321.30	24	0.310	1.327	0.665
050.60	3	0.00	1.05	0.31	321.XX	26	0.287	1.289	0.604
050.61	8	0.31	1.28	0.38	325.30	2	0.000	0.707	0.707
050.99	17	- 0.29	1.28	0.38					
050.XX	59	0.41	5.98	0.43					
101.30	4	0.41	1.22	0.19					
101.XX	4	0.41	1.22	0.19					
121.30	3	0.00	1.10	0.16					
121.XX	4	16.78	33.58	4.84					
144.01	2	110.91	156.85	7.59					