

- Pass 1 Results for 72 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	1	0.12	0.01	0.01	1	0.12	0.01	0.01
Ammoniacal Nitrogen, Other		001.99	5	1.00	1.29	0.03	4	1.23	1.34	0.01
Method Group 001.XX PCT			6	0.85	1.21	0.03	5	1.01	1.28	0.01
Nitrate Nitrogen, Other		002.99	1	0.00	0.00	0.00	1	0.00	0.00	0.00
Nitrogen From Urea, Urease (as N)	959.03	005.00	1	2.89	0.05	0.06	1	2.89	0.05	0.06
Nitrogen From Urea, Other		005.99	2	3.01	0.26	0.02	2	3.01	0.26	0.02
Method Group 005.XX PCT			3	2.97	0.21	0.04	3	2.97	0.21	0.04
Percent Urea, Other		007.99	1	3.06	0.00	0.00	1	3.06	0.00	0.00
Ammon & Nitrate N, Devarda	892.01	009.10	1	3.08	0.01	0.02	1	3.08	0.01	0.02
Total Nitrogen, Modified Comprehensive	978.02	010.11	9	3.19	0.08	0.02	9	3.19	0.08	0.02
Total Nitrogen, Salicylic	955.04D	010.12	5	3.25	0.10	0.05	5	3.25	0.10	0.05
Total Nitrogen, Combustion		010.60	45	3.20	0.13	0.04	43	3.19	0.12	0.04
Total Nitrogen, Other		010.99	3	3.21	0.03	0.05	3	3.21	0.03	0.05
Method Group 010.XX PCT			63	3.21	0.12	0.04	61	3.20	0.12	0.04
Total Phosphate, Grav Quimociac	962.02	020.10	8	6.16	0.20	0.05	8	6.16	0.20	0.05
Total Phosphate, Spectrometric	958.01	020.20	13	6.05	0.12	0.06	12	6.07	0.10	0.05
Total Phosphate, Automated	978.01	020.40	5	6.14	0.14	0.09	4	6.15	0.12	0.03
Total Phosphate, ICP		020.50	7	6.13	0.15	0.11	7	6.13	0.15	0.11
Total Phosphate, Other		020.99	2	6.04	0.40	0.01	2	6.04	0.40	0.01
Method Group 020.XX PCT			35	6.10	0.17	0.07	33	6.10	0.17	0.05
InDir Available Phosphate, Spectrometri	960.02	040.20	1	6.00	0.01	0.02	1	6.00	0.01	0.02
Dir Available Phosphate, Grav Quimociac	960.03E	041.10	13	6.08	0.06	0.04	12	6.08	0.06	0.03
Dir Available Phosphate, Automated	978.01	041.40	3	6.05	0.11	0.03	3	6.05	0.11	0.03
Dir Available Phosphate, ICP		041.50	9	6.02	0.13	0.05	8	6.03	0.13	0.04
Dir Available Phosphate, EDTA Extract	993.01	041.60	10	6.03	0.17	0.05	9	6.04	0.18	0.04
Method Group 041.XX PCT			36	6.06	0.13	0.05	33	6.07	0.11	0.04
Soluble Potash, STPB Oxalate	958.02	050.00	13	9.07	0.26	0.14	13	9.07	0.26	0.14
Soluble Potash, STPB Citrate	969.04	050.10	2	9.00	0.08	0.07	2	9.00	0.08	0.07
Soluble Potash, AA (Oxalate)		050.30	9	8.84	0.32	0.09	9	8.84	0.32	0.09
Soluble Potash, AA (Citrate)		050.31	1	8.54	0.11	0.15	1	8.54	0.11	0.15
Soluble Potash, ICP (Oxalate)		050.50	7	8.91	0.37	0.13	6	8.96	0.37	0.08
Soluble Potash, ICP (Citrate)		050.51	9	9.20	0.36	0.09	9	9.20	0.36	0.09
Soluble Potash, Flame (Oxalate)	983.02(a)	050.60	7	8.77	0.34	0.05	7	8.77	0.34	0.05
Soluble Potash, Flame (Citrate)	983.02(b)	050.61	8	9.16	0.21	0.11	8	9.16	0.21	0.11
Soluble Potash, Other		050.99	14	9.01	0.18	0.16	13	9.01	0.14	0.11
Method Group 050.XX PCT			71	9.01	0.32	0.12	67	9.02	0.32	0.09
Acid Soluble Calcium, ICP		101.30	8	0.10	0.16	0.01	7	0.07	0.14	0.00
Acid Soluble Magnesium, ICP		121.30	7	0.02	0.05	0.00	6	0.02	0.05	0.00
Sulfur, Gravimetric	980.02a	144.01	6	0.47	0.27	0.04	5	0.43	0.27	0.01

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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
Sulfur, Gravimetric	980.02b	144.02	2	0.52	0.07	0.02	2	0.52	0.07	0.02
Sulfur, Other		144.99	19	0.53	0.18	0.01	17	0.52	0.19	0.01
Method Group 144.XX PCT			27	0.51	0.20	0.02	26	0.51	0.20	0.02
Arsenic, ICP		151.30	1	6.37	0.19	0.27	1	6.37	0.19	0.27
Acid Soluble Boron, Spectrometric	982.01	165.00	7	0.023	0.002	0.001	7	0.023	0.002	0.001
Acid Soluble Boron, Other		165.99	19	0.024	0.003	0.001	18	0.024	0.003	0.001
Method Group 165.XX PCT			27	0.024	0.003	0.001	25	0.024	0.003	0.001
Water Soluble Boron, Other		171.99	1	0.022	0.000	0.000	1	0.022	0.000	0.000
Cadmium, ICP		181.30	2	0.05	0.01	0.01	2	0.05	0.01	0.01
Water Soluble Chlorine, Other		190.99	1	0.21	0.01	0.01	1	0.21	0.01	0.01
Chromium, ICP		191.30	3	1.20	0.54	0.07	3	1.20	0.54	0.07
Acid Soluble Cobalt, ICP	965.11	202.30	1	0.08	0.01	0.01	1	0.08	0.01	0.01
Acid Soluble Cobalt, Other		202.99	1	0.12	0.01	0.02	1	0.12	0.01	0.02
Method Group 202.XX PPM			2	0.10	0.03	0.02	2	0.10	0.03	0.02
Acid Soluble Copper, Atomic Absorption	975.01	221.00	11	0.0375	0.0024	0.0006	10	0.0372	0.0023	0.0004
Acid Soluble Copper, ICP		221.30	30	0.0379	0.0023	0.0008	28	0.0380	0.0023	0.0007
Acid Soluble Copper, Other		221.99	2	0.0387	0.0015	0.0002	2	0.0387	0.0015	0.0002
Method Group 221.XX PCT			43	0.0378	0.0023	0.0008	40	0.0378	0.0023	0.0006
Acid Soluble Iron, Atomic Absorption	980.01	241.00	9	0.06	0.00	0.00	8	0.06	0.00	0.00
Acid Soluble Iron, ICP		241.30	32	0.06	0.01	0.00	29	0.06	0.01	0.00
Acid Soluble Iron, Other		241.99	2	0.07	0.01	0.00	2	0.07	0.01	0.00
Method Group 241.XX PCT			43	0.06	0.01	0.00	38	0.06	0.01	0.00
Lead, ICP		251.30	2	1.50	1.42	0.17	2	1.50	1.42	0.17
Acid Soluble Manganese, AA	972.02a	261.00	8	0.051	0.002	0.001	8	0.051	0.002	0.001
Acid Soluble Manganese, ICP		261.30	29	0.051	0.003	0.001	26	0.051	0.003	0.001
Acid Soluble Manganese, Other		261.31	1	0.055	0.000	0.001	1	0.055	0.000	0.001
Acid Soluble Manganese, Atomic Absorption	972.02b	261.99	4	0.052	0.005	0.001	4	0.052	0.005	0.001
Method Group 261.XX PCT			42	0.051	0.003	0.001	40	0.051	0.003	0.001
Water Soluble Manganese, ICP	972.03	271.30	1	0.054	0.003	0.004	1	0.054	0.003	0.004
Mercury, ICP		281.30	1	3.71	0.21	0.30	1	3.71	0.21	0.30
Molybdenum, ICP		289.30	13	11.96	1.03	0.35	13	11.96	1.03	0.35
Molybdenum, Other		289.99	1	11.25	0.07	0.10	1	11.25	0.07	0.10
Method Group 289.XX PPM			14	11.91	1.00	0.33	14	11.91	1.00	0.33
Nickel, ICP		291.30	1	0.02	0.00	0.01	1	0.02	0.00	0.01
Selenium, ICP		301.30	1	1.14	0.08	0.11	1	1.14	0.08	0.11
Sodium, Other		311.99	7	0.06	0.04	0.00	6	0.06	0.05	0.00
Acid Soluble Zinc, Atomic Absorption	975.02	321.00	10	0.048	0.002	0.001	10	0.048	0.002	0.001
Acid Soluble Zinc, ICP		321.30	30	0.049	0.003	0.001	27	0.049	0.002	0.001
Method Group 321.XX PCT			40	0.049	0.003	0.001	38	0.048	0.002	0.001

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			No. of Labs	Grand Avg.	Std. Dev.	Average Range of Dups	No. of Labs	Grand Avg.
Water Soluble Zinc, Atomic Absorption .		325.00	1	0.049	0.000	1	0.049	0.000
Water Soluble Zinc, ICP		325.30	2	0.049	0.002	2	0.049	0.002
Water Soluble Zinc, Other		325.99	1	0.048	0.001	1	0.048	0.001
Method Group 325.XX PCT			4	0.049	0.002	4	0.049	0.002

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index				
Meth: 001.10 PCT															
Ammoniacal Nitrogen															
MgO Distillation	232	0.12	.71												
Meth: 001.99 PCT															
Ammoniacal Nitrogen															
Other	137	3.13	1.41												
	393	1.61	.28												
Avg	1.23														
Meth: 007.99 PCT															
Percent Urea															
Other	105	0.05	R - .88												
Meth: 002.99 PCT															
Nitrate Nitrogen															
Other	393	0.00	X .00												
Meth: 005.00 PCT															
Nitrogen From Urea															
Urease (as N)	232	2.89	-.71												
Meth: 005.99 PCT															
Nitrogen From Urea															
Other	444	3.24	.87												
Avg	3.01														
Meth: 005.99 PCT															
Nitrogen From Urea															
Other	309	2.79	-.87												
Avg	2.89		-.41												
Meth: 005.99 PCT															
Nitrogen From Urea															
Other	309	2.79	-.87												
Avg	2.97		1.25												
Meth: 005.99 PCT															
Nitrogen From Urea															
Other	444	3.24	1.25												
Avg	3.24		1.25												
Meth: 010.12 PCT															
Total Nitrogen															
Salicylic	254	3.38	1.50												
Avg	455	3.32	.70												
Meth: 010.60 PCT															
Total Nitrogen															
Combustion	233	3.13	-.46												
Avg	453	3.14	-.49												
Meth: 010.60 PCT															
Total Nitrogen															
Combustion	157	3.13	-.52												
Avg	369	3.12	-.58												
Meth: 010.60 PCT															
Total Nitrogen															
Combustion	361	3.12	-.63												
Avg	440	3.13	-.64												
Meth: 010.12 PCT															
Total Nitrogen															
Salicylic	102	19.22	s 133.15												
Avg	390	3.68	S 4.08												
Meth: 007.99 PCT															
Percent Urea															
Other	027	3.06	.00												
Meth: 009.10 PCT															
Ammon & Nitrate N															
Devarda	200	3.08	-.71												
Meth: 010.11 PCT															
Total Nitrogen															
Modified Comprehensi	309	3.53	s 4.24												
Avg	090	3.31	1.44												
Meth: 010.99 PCT															
Total Nitrogen															
Other	114	3.24	.67												
Avg	416	3.24	.62												
Meth: 010.99 PCT															
Total Nitrogen															
Other	105	3.23	.47												
Avg	456	3.22	.36												
Meth: 010.99 PCT															
Nitrogen From Urea															
Urease (as N)	460	3.18	-.29												
Avg	211	3.17	-.34												
Meth: 010.99 PCT															
Nitrogen From Urea															
Other	029	3.12	-.94												
Avg	260	3.03	-2.04												
Meth: 010.99 PCT															
Total Nitrogen															
Other	057	3.21	.25												
Avg	291	3.22	.22												
Meth: 010.99 PCT															
Total Nitrogen															
Other	025	3.21	.18												
Avg	177	3.20	.11												
Meth: 010.99 PCT															
Total Nitrogen															
Other	025	3.20	.35												
Avg	105	3.19	-1.35												
Meth: 010.99 PCT															
Total Nitrogen															
Other	255	3.22	.65												
Avg	371	3.23	.52												
Meth: 010.99 PCT															
Total Nitrogen															
Other	291	3.22	.13												
Avg	025	3.21	.08												
Meth: 010.99 PCT															
Total Nitrogen															
Other	177	3.20	-.05												
Avg	460	3.18	-.25												
Meth: 010.99 PCT															
Total Nitrogen															
Other	185	3.18	-.25												
Avg	211	3.17	-.31												

* 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	
Meth: 010.XX PCT												
Total Nitrogen												
035	3.20	- .34										
105	3.19	- .35										
428	3.20 X	- .39										
009	3.15	- .43										
117	3.16	- .44										
233	3.13	- .58										
453	3.14	- .60										
157	3.13	- .63										
034	3.13	- .66										
369	3.12	- .69										
029	3.12	- .71										
040	3.13	- .74										
361	3.12	- .74										
018	3.10	- .86										
055	3.09	- .99										
023	3.09	- .99										
232	3.10	- 1.01										
426	3.09	- 1.06										
106	3.08	- 1.11										
377	3.07	- 1.14										
028	3.05	- 1.31										
096	3.04	- 1.37										
260	3.03	- 1.45										
444	3.02	- 1.54										
230	2.97	- 1.96										
131	2.93	- 2.35										
234	2.75 s	- 3.84										
042	2.65 s	- 4.70										
247	1.98 s	- 10.42										
Meth: 020.10 PCT												
Total Phosphate												
035	6.07	- .47										
105	6.06	- .51										
117	5.98	- .92										
041	5.97	- 1.00										
Meth: 020.20 PCT												
Total Phosphate												
428	6.28 X	2.15										
292	6.18	1.08										
234	6.13	.74										
177	6.09	.26										
231	6.09	.20										
232	6.07	.18										
Avg	6.07											
Spectrometric												
426	6.05	- .18										
371	6.05	- .33										
309	6.00	- .69										
416	5.99	- .79										
460	5.95	- 1.23										
369	5.93	- 1.52										
324	5.84 R	- 2.46										
Meth: 020.40 PCT												
Total Phosphate												
035	9.25 s	24.90										
247	6.35	1.58										
Avg	6.15											
096	6.12	- .28										
105	6.08	- .64										
456	6.07	- .72										
042	6.06 R	- 1.56										
Meth: 020.50 PCT												
Total Phosphate												
426	7.59 S	9.66										
432	6.94 S	5.32										
361	6.38	1.61										
422	6.22	.66										
444	6.14	.27										
393	6.15	.15										
Avg	6.13											
255	6.01	- .95										
291	5.97	- 1.08										
390	6.07	- 1.14										
453	5.49 S	- 4.40										
Meth: 020.99 PCT												
Total Phosphate												
137	6.39	.87										
Avg	6.04											
455	5.69	- .87										
Meth: 020.XX PCT												
Total Phosphate												
035	9.25 s	18.17										
426	7.59 s	8.61										
432	6.94 s	4.82										
057	6.53	2.48										
137	6.39	1.66										
114	6.39	1.63										
361	6.38	1.58										
247	6.35	1.43										
428	6.28 X	1.05										
422	6.22	.72										
292	6.18	.41										
444	6.14	.31										
157	6.15	.31										
393	6.15	.29										
234	6.13	.29										
090	6.12	.16										
Meth: 020.XX PCT												
Total Phosphate												
096	6.12	.11										
Avg	6.10											
231	6.09	- .11										
177	6.09	- .14										
105	6.08	- .17										
232	6.07	- .19										
444	6.07	- .24										
456	6.07	- .26										
105	6.06	- .28										
200	6.05	- .31										
371	6.05	- .35										
309	6.00	- .63										
255	6.01	- .69										
416	5.99	- .69										
117	5.98	- .75										
291	5.97	- .78										
041	5.97	- .84										
460	5.95	- .93										
390	6.07 R	- .95										
042	6.06 R	- 1.01										
369	5.93	- 1.10										
324	5.84	- 1.65										
455	5.69	- 2.39										
453	5.49 s	- 3.68										
Meth: 040.20 PCT												
InDir Available Phos												
Spectrometri												
300	6.00	.71										
Meth: 041.10 PCT												
Dir Available Phosph												
254	6.28 s	3.40										
105	6.13 R	1.47										
055	6.14	1.01										
211	6.13	.83										
029	6.13	.75										
Meth: 041.50 PCT												
Dir Available Phosph												
007	6.28	1.95										
325	6.10	.57										
360	6.08	.51										
377	6.03	.40										
Avg	6.03											
393	6.01	- .20										
023	5.98	- .37										
043	5.90	- 1.03										
009	5.93 R	- 1.07										
354	5.87	- 1.31										

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Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 041.60 PCT														
Dir Available Phosph														
EDTA Extract														
034	6.29	1.43												
105	6.18	.81												
296	6.15	.61												
018	6.09	.34												
351	6.07	.18												
073	6.06	.15												
Avg	6.04													
106	5.97	-.37												
043	6.00 R	-.54												
231	5.85	-1.06												
028	5.68	-2.00												
397	0.39 s	-31.25												
Meth: 041.99 PCT														
Dir Available Phosph														
Other														
230	1.73 S	.00												
Meth: 041.XX PCT														
Dir Available Phosph														
Other														
034	6.29	2.02												
254	6.28	1.91												
007	6.28	1.84												
105	6.18	1.02												
029	6.17	.90												
105	6.13	.83												
296	6.15	.66												
055	6.14	.62												
211	6.13	.52												
029	6.13	.48												
136	6.12	.45												
296	6.12	.45												
086	6.11	.42												
360	6.08	.41												
018	6.09	.34												
009	6.09	.34												
325	6.10	.26												
Meth: 041.XX PCT														
Dir Available Phosph														
Other														
034	6.29	2.02												
254	6.28	1.91												
007	6.28	1.84												
105	6.18	1.02												
029	6.17	.90												
105	6.13	.83												
296	6.15	.66												
055	6.14	.62												
211	6.13	.52												
029	6.13	.48												
136	6.12	.45												
296	6.12	.45												
086	6.11	.42												
360	6.08	.41												
018	6.09	.34												
009	6.09	.34												
325	6.10	.26												
Meth: 041.XX PCT														
Dir Available Phosph														
Other														
034	6.29	2.02												
254	6.28	1.91												
007	6.28	1.84												
105	6.18	1.02												
029	6.17	.90												
105	6.13	.83												
296	6.15	.66												
055	6.14	.62												
211	6.13	.52												
029	6.13	.48												
136	6.12	.45												
296	6.12	.45												
086	6.11	.42												
360	6.08	.41												
018	6.09	.34												
009	6.09	.34												
325	6.10	.26												
Meth: 041.XX PCT														
Dir Available Phosph														
Other														
034	6.29	2.02												
254	6.28	1.91												
007	6.28	1.84												
105	6.18	1.02												
029	6.17	.90												
105	6.13	.83												
296	6.15	.66												
055	6.14	.62												
211	6.13	.52												
029	6.13	.48												
136	6.12	.45												
296	6.12	.45												
086	6.11	.42												
360	6.08	.41												
018	6.09	.34												
009	6.09	.34												
325	6.10	.26												
Meth: 050.00 PCT														
Soluble Potash														
STPB Oxalate														
230	8.90	-1.09												
416	8.77	-1.15												
102	8.77	-1.25												
Meth: 050.10 PCT														
Soluble Potash														
STPB Citrate														
117	9.06	.95												
Avg	9.00													
300	8.94	-.77												
Meth: 050.30 PCT														
Soluble Potash														
AA (Oxalate)														
369	9.45	1.93												
234	9.13	.94												
040	8.98	.63												
136	8.90	.19												
Avg	8.84													
351	8.77	-.19												
043	8.73	-.33												
073	8.64	-.64												
428	8.52 X	-1.01												
185	8.40	-1.37												
Meth: 050.50 PCT														
Soluble Potash														
ICP (Oxalate)														
292	9.06	.27												
Avg	8.96													
444	8.90	-.18												
390	8.63 R	-1.07												
422	8.25	-1.90												
Meth: 050.51 PCT														
Soluble Potash														
ICP (Citrate)														
361	9.72	1.44												
432	9.66	1.31												
007	9.39	.57												
009	9.38	.52												
453	9.24	.35												
Avg	9.20													
291	8.93	-.76												
023	8.91	-.81												
043	8.82	-1.06												
377	8.75	-1.27												
393	7.42 s	-4.97												
Meth: 050.60 PCT														
Soluble Potash														
Flame (Oxalate)														
105	9.11	.99												
131	9.02	.73												
157	8.99	.68												
460	8.90	.37												
055	8.83	.19												
Avg	8.77													
200	8.37	-1.21												
309	8.21	-1.70												
Meth: 050.61 PCT														
Soluble Potash														
Flame (Citrate)														
426	10.43 s	4.46												
137	9.75	2.30												
361	9.72	2.19												
432	9.66	2.04												
444	9.59	1.89												

* 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																	
<u>Soluble Potash</u>																	
028	9.56	1.75	397	8.96	-.26	Meth: 101.30 PCT									009	0.64	.65
369	9.45	1.37	291	8.93	-.29	Acid Soluble Calcium									296	0.64	.65
324	9.42	1.28	034	8.93	-.31	ICP									232	0.63	.59
009	9.40	1.23	023	8.91	-.35	Avg									360	0.63	.59
007	9.39	1.19	460	8.90	-.37	0.07									117	0.62	.54
009	9.38	1.15	255	8.97	-.38	0.06									028	0.60	.46
114	9.29	.95	136	8.90	-.38	0.01									390	0.60	.45
453	9.24	.80	444	8.90	-.39	0.01									453	0.60	.45
456	9.25	.75	360	8.91	-.42	0.00									255	0.59	.41
025	9.23	.66	040	8.98	-.44	0.00									292	0.58	.36
086	9.02 R	.59	232	8.84	-.56	Meth: 121.30 PCT									291	0.55	.21
041	9.20	.59	055	8.83	-.59	Acid Soluble Magnesi									Avg	0.51	
325	9.20	.57	043	8.89	-.62	ICP									035	0.48	-.13
455	9.17	.49	043	8.82	-.62	2.12									043	0.46	-.28
027	9.16	.47	260	8.79	-.71	0.02									137	0.28	-1.15
029	9.07	.43	351	8.77	-.76	0.02									096	0.28	-1.15
234	9.13	.39	416	8.77	-.77	0.01 R									086	0.21	-1.49
177	9.13	.38	230	8.90 R	-.80	-.25									444	0.12	-1.97
105	9.11	.30	377	8.75	-.86	-.49									057	0.11	-2.03
029	9.09	.23	102	8.77	-.87	-.50									230	0.03	-2.40
117	9.06	.21	043	8.73	-.90	-.50									Meth: 151.30 PPM		
354	9.07	.21	073	8.64	-1.21	Meth: 144.01 PCT									Arsenic		
231	9.08	.20	042	8.90 R	-1.39	Sulfur									ICP		
106	9.05	.16	390	8.63 R	-1.40	Gravimetric									393 6.37 X .71		
057	9.02	.16	254	8.54	-1.53	200 13.71 s 48.64									Meth: 165.00 PCT		
105	9.06	.14	428	8.52 X	-1.58	105 0.69 R .99									Acid Soluble Boron		
292	9.06	.12	185	8.40	-1.94	324 0.67 .90									Spectrometric		
211	9.06	.12	200	8.37	-2.03	296 0.64 .77									055 0.026 s 2.41		
090	9.03	.05	422	8.25	-2.40	028 0.60 .64									028 0.025 1.09		
131	9.02	.03	309	8.21	-2.55	Avg 0.43									023 0.025 .69		
Avg	9.02		393	7.42 s	-5.00	444 0.12 -1.14									397 0.024 .68		
247	9.02	-.11	035	6.02 s	-9.42	057 0.11 -1.18									393 0.024 .13		
371	9.01	-.13	Meth: 144.02 PCT												428 0.024 X .12		
055	8.97	-.15	Sulfur												Avg 0.023		
018	8.96	-.18	Acid Soluble Calcium												057 0.023 -.33		
131	9.00	-.20	ICP												292 0.020 -2.06		
157	8.99	-.24	422	0.39	2.34	292 0.58 .86											
300	8.94	-.25	041	0.36 R	2.18	Avg 0.52											

* 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														
Acid Soluble Boron														
Other														
432	0.285 s	80.06												
300	0.140 s	35.56												
200	0.105 s	24.87												
354	0.054 S	9.17												
106	0.030	1.81												
137	0.030	1.81												
422	0.025 R	1.56												
042	0.028	1.24												
086	0.027	1.06												
360	0.026	.58												
090	0.025	.20												
324	0.025	.18												
Avg	0.024													
040	0.024	-.17												
117	0.024	-.18												
255	0.023	-.37												
232	0.023	-.40												
009	0.024	-.43												
230	0.023	-.43												
444	0.023	-.51												
453	0.022	-.64												
291	0.022	-.81												
433	0.021	-1.06												
043	0.017	-2.16												
Meth: 171.99 PCT														
Water Soluble Boron														
Other														
114	0.022	.71												
Meth: 181.30 PPM														
Cadmium														
ICP														
102	0.06	.89												
Avg	0.05													
393	0.05	-.84												
Meth: 190.99 PCT														
Water Soluble Chlori														
Other														
009	0.21	-.71												
Meth: 191.30 PPM														
Chromium														
ICP														
393	1.81	1.11												
Avg	1.20													
009	1.20	-.18												
102	0.60	-1.11												
Meth: 202.30 PPM														
Acid Soluble Cobalt														
ICP														
102	0.08	-.71												
Meth: 202.99 PPM														
Acid Soluble Cobalt														
Other														
393	0.12	.71												
Meth: 202.XX PPM														
Acid Soluble Cobalt														
393	0.12	.89												
Avg	0.10													
102	0.08	-.84												
Meth: 221.00 PCT														
Acid Soluble Copper														
Atomic Absorption														
028	0.0401 R	1.38												
200	0.0395	1.03												
428	0.0395 X	1.03												
351	0.0387	.66												
034	0.0380	.35												
371	0.0380	.35												
296	0.0380	.35												
055	0.0375	.26												
Meth: 221.30 PCT														
Acid Soluble Copper														
ICP														
022	0.0372													
397	0.0360	-.51												
460	0.0346	-1.13												
043	0.0321	-2.23												
Meth: 221.99 PCT														
Acid Soluble Copper														
Other														
300	0.1350 s	41.93												
426	0.0464 s	3.65												
009	0.0415	1.53												
041	0.0410	1.30												
117	0.0399	.93												
292	0.0400	.87												
027	0.0400	.87												
422	0.0400	.87												
231	0.0400	.87												
432	0.0400	.87												
102	0.0396	.72												
090	0.0395	.69												
086	0.0387	.58												
255	0.0382	.46												
037	0.0390	.44												
354	0.0380	.43												
230	0.0389	.42												
444	0.0385	.31												
232	0.0385	.23												
Meth: 221.30 PCT														
Acid Soluble Copper														
Atomic Absorption														
131	0.0377	-.16												
360	0.0375	-.30												
324	0.0373	-.32												
057	0.0368	-.50												
393	0.0363	-.74												
390	0.0375 R	-.75												
035	0.0360	-.86												
023	0.0365 R	-.91												
433	0.0353	-1.19												

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Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 261.30 PCT											
Acid Soluble Manganese											
ICP	027	0.053	48								
086	0.048	-1.37	48								
096	0.047	-1.46	36								
023	0.047 R	-1.66	31								
433	0.047 R	-1.72	26								
291	0.046	-2.03	19								
Meth: 261.31 PCT											
Acid Soluble Manganese											
ICP	131	0.051	-04								
324	0.055	.71	-22								
Avg	0.055		-24								
230	0.038 S	-48.66	-35								
Meth: 261.99 PCT											
Acid Soluble Manganese											
Other	102	0.050	-41								
137	0.060	1.46	-47								
255	0.053	.15	-47								
Avg	0.052		-56								
393	0.049	-.58	-56								
042	0.048	-1.00	-59								
Meth: 261.99 PCT											
Acid Soluble Manganese											
Other	022	0.050	-65								
300	0.290 s	75.63	-65								
292	0.075 s	7.63	-1.27								
137	0.060	2.70	-1.29								
041	0.058	2.07	-1.37								
426	0.058	2.00	-1.55								
009	0.056	1.44	-1.62								
351	0.055	1.00	-1.90								
324	0.055	.96	-5.82								
055	0.054	.80									
117	0.054	.72									
114	0.054	.69									
090	0.054	.66									
028	0.052	.54									
Meth: 261.30 PCT											
Acid Soluble Zinc											
ICP	300	0.270 s	103.29								
426	0.060 s	4.98									
086	0.058 s	4.91									
106	0.055 s	3.66									
114	0.053	1.97									
009	0.053	1.90									
057	0.052 R	1.69									
022	0.051	.94									
090	0.051	.94									
444	0.051	.75									
027	0.050	.47									
360	0.050	.47									
422	0.050	.47									
231	0.050	.47									
432	0.050	.47									
292	0.050	.47									
354	0.049	.47									
102	0.050	.45									
255	0.049	.28									
035	0.049	.17									
Meth: 289.99 PPM											
Molybdenum											
086	0.05 R	-.21									
057	0.05	-.35									
102	0.04	-.40									
232	0.04	-.43									
292	0.04	-.46									
009	0.04	-.50									
Meth: 289.99 PPM											
Molybdenum											
117	11.25	.71									
Meth: 289.99 PPM											
Molybdenum											
393	14.03	2.11									
230	12.75	.85									
009	12.65	.81									
255	12.68	.77									
035	12.45	.70									
037	12.33	.43									
Avg	11.91										
086	11.91	-.08									
232	11.65	-.30									
057	11.45	-.48									
Meth: 289.99 PPM											
Molybdenum											
117	11.25	.71									
Meth: 289.99 PPM											
Molybdenum											
393	14.03	2.11									
230	12.75	.85									
009	12.65	.81									
255	12.68	.77									
035	12.45	.70									
037	12.33	.43									
Avg	11.91										
086	11.91	-.08									
232	11.65	-.30									
057	11.45	-.48									
Meth: 289.99 PPM											
Molybdenum											
117	11.25	.71									
Meth: 289.99 PPM											
Molybdenum											
393	14.03	2.11									
230	12.75	.85									
009	12.65	.81									
255	12.68	.77									
035	12.45	.70									
037	12.33	.43									
Avg	11.91										
086	11.91	-.08									
232	11.65	-.30									
057	11.45	-.48									
Meth: 291.30 PPM											
Nickel											
ICP	393	0.02	.71								
Meth: 301.30 PPM											
Selenium											
ICP	393	1.14 X	.71								
Meth: 311.99 PCT											
Sodium											
Other	422	0.16	2.14								
Avg	0.06										
086	0.05 R	-.21									
057	0.05	-.35									
102	0.04	-.40									
232	0.04	-.43									
292	0.04	-.46									
009	0.04	-.50									
Meth: 321.00 PCT											
Acid Soluble Zinc											
ICP	300	0.270 s	103.29								
426	0.060 s	4.98									
086	0.058 s	4.91									
106	0.055 s	3.66									
114	0.053	1.97									
009	0.053	1.90									
057	0.052 R	1.69									
022	0.051	.94									
090	0.051	.94									
444	0.051	.75									
027	0.050	.47									
360	0.050	.47									
422	0.050	.47									
231	0.050	.47									
432	0.050	.47									
292	0.050	.47									
354	0.049	.47									
102	0.050	.45									
255	0.049	.28									
035	0.049	.17									
Meth: 321.00 PCT											
Acid Soluble Zinc											
Avg	0.049										
247	0.049	-.17									
324	0.048	-.34									
232	0.048	-.40									
042	0.048	-.46									
037	0.048	-.47									
117	0.048	-.59									
453	0.048	-.66									
131	0.047	-.79									

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Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 321.30 PCT											
Acid Soluble Zinc											
ICP			255	0.049	.40	Meth: 321.99 PCT					
390	0.048 R	-1.08	037	0.048	.34	Water Soluble Zinc					
433	0.046	-1.26	035	0.049	.34	Other					
041	0.046	-1.64	200	0.049	.20	Meth: 325.00 PCT					
096	0.045	-1.65	247	0.049	.10	Water Soluble Zinc					
023	0.044	-2.38	Avg	0.048		393	0.050	.57			
291	0.042 A	-3.51	324	0.048	-.15	428	0.049 X	.16			
230	0.039 s	-7.73	296	0.048	-.18	Avg	0.049				
Meth: 321.99 PCT											
Acid Soluble Zinc											
Other			042	0.048	-.18	453	0.048	-.79			
137	0.060 S	.00	232	0.048	-.21	157	0.049	-1.59			
Meth: 321.99 PCT											
Acid Soluble Zinc											
300	0.270 s	89.44	117	0.048	-.37	Meth: 325.30 PCT					
137	0.060 s	4.67	453	0.048	-.44	Water Soluble Zinc					
426	0.060 s	4.52	131	0.047	-.48	ICP					
086	0.058 s	4.43	371	0.048	-.72	393	0.050	.57			
106	0.055 s	3.33	040	0.048	-.72	428	0.049 X	.16			
114	0.053	1.92	433	0.046	-.87	Avg	0.049				
009	0.053	1.86	390	0.048 R	-.88	453	0.048	-.79			
057	0.052 R	1.63	043	0.046	-1.05	157	0.049	-1.59			
090	0.051	1.03	041	0.046	-1.20	Meth: 325.30 PCT					
022	0.051	1.03	397	0.046	-1.20	Water Soluble Zinc					
028	0.050	.94	096	0.045	-1.21	Atomic Absorption					
444	0.051	.85	055	0.044	-1.84	428	0.049 X	.00			
351	0.050	.67	023	0.044	-1.84	Meth: 325.30 PCT					
231	0.050	.63	291	0.042	-2.81	Water Soluble Zinc					
360	0.050	.63	230	0.039 s	-6.55	ICP					
422	0.050	.63	Meth: 325.00 PCT								
292	0.050	.63	Water Soluble Zinc								
432	0.050	.63	Avg								
027	0.050	.63	393 0.050 .33								
102	0.050	.60	Avg 0.049								
354	0.049	.46	157 0.049 -1.18								
460	0.049	.42									

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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
001.99	5	- 0.18	1.01	0.02	165.XX	31	5.458	17.967	0.601
001.XX	6	- 0.13	1.00	0.02	181.30	2	0.00	1.04	0.46
005.99	2	0.00	1.22	0.04	181.XX	2	0.00	1.04	0.46
005.XX	3	0.00	1.11	0.10	191.30	3	0.00	1.11	0.11
010.11	10	0.42	1.64	0.19	191.XX	3	0.00	1.11	0.11
010.12	5	0.00	0.99	0.35	202.XX	2	0.00	1.14	0.32
010.60	50	2.45	18.97	0.27	221.00	11	0.1149	1.0380	0.2126
010.99	3	0.00	0.62	0.76	221.30	33	1.3131	7.3696	0.5961
010.XX	66	1.89	16.88	0.27	221.99	2	0.0000	1.2205	0.0718
020.10	8	0.00	1.02	0.17	221.XX	46	0.9808	6.3344	0.5207
020.20	13	- 0.17	1.11	0.42	241.00	9	0.10	1.01	0.20
020.40	6	4.02	10.26	0.62	241.30	35	1.50	10.07	0.37
020.50	10	1.07	3.84	0.56	241.99	2	0.00	1.22	0.06
020.99	2	0.00	1.22	0.02	241.XX	46	1.71	12.00	0.44
020.XX	37	0.75	3.53	0.36	251.30	2	0.00	1.22	0.06
041.10	14	0.29	1.25	0.51	251.XX	2	0.00	1.22	0.06
041.40	4	- 4.11	8.28	0.24	261.00	8	0.000	0.955	0.373
041.50	9	- 0.09	0.99	0.29	261.30	31	2.794	14.746	0.402
041.60	11	- 2.86	9.46	0.20	261.31	2	- 19.09	27.000	21.339
041.XX	33	- 3.46	11.44	0.31	261.99	4	0.000	1.064	0.159
050.00	13	0.00	0.93	0.40	261.XX	45	1.722	11.381	0.694
050.10	2	0.00	1.03	0.46	289.30	13	0.00	0.99	0.23
050.30	9	0.00	1.01	0.18	289.XX	14	0.00	0.99	0.22
050.50	8	0.38	1.72	0.29	311.99	7	- 0.03	0.96	0.03
050.51	10	- 0.50	1.84	0.15	311.XX	7	- 0.03	0.96	0.03
050.60	7	0.00	1.04	0.10	321.00	10	0.000	0.936	0.402
050.61	9	- 1.68	5.11	0.32	321.30	35	3.088	17.527	1.262
050.99	15	0.29	1.58	0.90	321.XX	46	2.230	13.237	0.966
050.XX	66	- 0.19	1.71	0.32	325.30	2	0.000	0.327	0.835
101.30	8	0.27	1.23	0.13	325.XX	3	0.158	0.316	0.931
101.XX	8	0.27	1.23	0.13					
121.30	7	- 0.04	0.96	0.00					
121.XX	7	- 0.04	0.96	0.00					
144.01	7	7.08	18.35	0.12					
144.02	2	0.00	1.20	0.17					
144.99	19	0.07	0.98	0.06					
144.XX	28	2.40	12.55	0.10					
165.00	8	0.152	0.991	0.810					
165.99	23	6.517	18.356	0.570					