

- Pass 1 Results for 81 Labs - - Pass 2 Results for 78 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	6	17.28	0.26	0.04	5	17.25	0.27	0.01
Ammoniacal Nitrogen, Other		001.99	9	17.59	0.42	0.09	9	17.59	0.42	0.09
Method Group 001.XX PCT			15	17.47	0.39	0.07	14	17.41	0.33	0.05
Ammon & Nitrate N, Devarda	892.01	009.10	3	17.70	0.16	0.08	3	17.70	0.16	0.08
Total Nitrogen, Modified Comprehensive	978.02	010.11	10	17.60	0.28	0.06	9	17.54	0.22	0.04
Total Nitrogen, Salicylic	955.04D	010.12	2	17.88	0.05	0.05	2	17.88	0.05	0.05
Total Nitrogen, Comprehensive	970.02	010.17	1	17.95	0.07	0.10	1	17.95	0.07	0.10
Total Nitrogen, Combustion		010.60	44	17.78	0.23	0.10	43	17.77	0.22	0.09
Total Nitrogen, Other		010.99	6	17.77	0.17	0.10	6	17.77	0.17	0.10
Method Group 010.XX PCT			63	17.75	0.24	0.09	61	17.75	0.23	0.08
Total Phosphate, Grav Quimociac	962.02	020.10	7	46.95	0.22	0.11	7	46.95	0.22	0.11
Total Phosphate, Spectrometric	958.01	020.20	16	46.48	0.51	0.27	14	46.40	0.44	0.13
Total Phosphate, Automated	978.01	020.40	6	46.67	0.26	0.08	6	46.67	0.26	0.08
Total Phosphate, ICP		020.50	10	46.31	0.71	0.27	10	46.31	0.71	0.27
Total Phosphate, Other		020.99	3	46.18	0.62	0.14	3	46.18	0.62	0.14
Method Group 020.XX PCT			44	46.54	0.59	0.21	41	46.52	0.58	0.14
Insoluble Phosphate, Spectrometric	963.03C	030.20	1	0.07	0.01	0.01	1	0.07	0.01	0.01
Insoluble Phosphate, Automated	978.01	030.40	1	0.04	0.01	0.02	1	0.04	0.01	0.02
Insoluble Phosphate, ICP		030.50	1	0.08	0.01	0.01	1	0.08	0.01	0.01
Method Group 030.XX PCT			3	0.06	0.02	0.01	3	0.06	0.02	0.01
InDir Available Phosphate, Spectrometri	960.02	040.20	1	46.38	0.05	0.07	1	46.38	0.05	0.07
InDir Available Phosphate, Automated ..	960.02	040.40	2	46.74	0.07	0.06	2	46.74	0.07	0.06
InDir Available Phosphate, ICP		040.50	1	46.74	0.05	0.07	1	46.74	0.05	0.07
Method Group 040.XX PCT			4	46.65	0.18	0.07	4	46.65	0.18	0.07
Dir Available Phosphate, Grav Quimociac	960.03E	041.10	8	46.60	0.30	0.14	8	46.60	0.30	0.14
Dir Available Phosphate, Spectrometric	960.03D	041.20	3	46.96	1.51	0.40	3	46.96	1.51	0.40
Dir Available Phosphate, Automated	978.01	041.40	1	46.00	0.06	0.09	1	46.00	0.06	0.09
Dir Available Phosphate, ICP		041.50	11	46.15	1.23	0.39	10	46.29	1.18	0.28
Dir Available Phosphate, EDTA Extract .	993.01	041.60	9	46.72	0.83	0.23	9	46.72	0.83	0.23
Dir Available Phosphate, Other		041.99	3	47.14	1.19	0.16	3	47.14	1.19	0.16
Method Group 041.XX PCT			35	46.55	1.02	0.26	32	46.73	0.81	0.20
Water Soluble Phosphate, Spectrometric	970.01	048.20	2	42.69	0.47	0.21	2	42.69	0.47	0.21
Water Soluble Phosphate, Other		048.99	1	43.68	0.03	0.04	1	43.68	0.03	0.04
Method Group 048.XX PCT			3	43.02	0.63	0.15	3	43.02	0.63	0.15
Soluble Potash, AA (Oxalate)		050.30	1	0.08	0.10	0.14	1	0.08	0.10	0.14
Soluble Potash, AA (Citrate)		050.31	1	0.41	0.03	0.04	1	0.41	0.03	0.04
Soluble Potash, ICP (Oxalate)		050.50	2	0.21	0.03	0.00	2	0.21	0.03	0.00
Soluble Potash, ICP (Citrate)		050.51	4	0.21	0.04	0.02	4	0.21	0.04	0.02
Soluble Potash, Flame (Citrate)	983.02(b)	050.61	1	0.23	0.04	0.06	1	0.23	0.04	0.06

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Soluble Potash, Other		050.99	4	0.22	0.07	0.09	4	0.22	0.07	0.09
Method Group 050.XX PCT			13	0.22	0.08	0.05	12	0.22	0.08	0.04
Free Water, Vacuum Oven	965.08B	060.00	4	1.29	0.08	0.05	3	1.26	0.05	0.01
Free Water, Vacuum Desiccate	965.08A	060.10	1	1.14	0.02	0.03	1	1.14	0.02	0.03
Free Water, Karl Fischer	972.01	060.20	1	0.80	0.01	0.01	1	0.80	0.01	0.01
Free Water, Other		060.99	1	1.20	0.01	0.01	1	1.20	0.01	0.01
Method Group 060.XX PCT			7	1.18	0.19	0.04	6	1.15	0.18	0.01
Acid Soluble Calcium, ICP		101.30	9	0.43	0.05	0.01	9	0.43	0.05	0.01
Acid Soluble Calcium, Other		101.99	1	0.45	0.00	0.00	1	0.45	0.00	0.00
Method Group 101.XX PCT			11	0.45	0.06	0.03	10	0.44	0.04	0.01
Acid Soluble Magnesium, AA	984.01	121.00	1	1.13	0.01	0.01	1	1.13	0.01	0.01
Acid Soluble Magnesium, ICP		121.30	10	1.07	0.07	0.02	10	1.07	0.07	0.02
Acid Soluble Magnesium, Other		121.99	1	1.08	0.01	0.02	1	1.08	0.01	0.02
Method Group 121.XX PCT			12	1.08	0.06	0.02	12	1.08	0.06	0.02
Water Soluble Magnesium, Titrimetric ..		131.70	1	1.53	0.06	0.08	1	1.53	0.06	0.08
Sulfur, Gravimetric	980.02b	144.02	1	2.24	0.01	0.01	1	2.24	0.01	0.01
Sulfur, Spectrometric		144.70	1	2.17	0.01	0.01	1	2.17	0.01	0.01
Sulfur, Other		144.99	8	2.10	0.06	0.02	8	2.10	0.06	0.02
Method Group 144.XX PCT			10	2.12	0.07	0.02	9	2.12	0.07	0.01
Arsenic, Atomic Absorption		151.00	3	1.65	0.30	0.10	3	1.65	0.30	0.10
Arsenic, ICP		151.30	4	2.77	1.19	0.03	3	3.04	1.28	0.01
Method Group 151.XX PPM			7	2.29	1.06	0.06	7	2.29	1.06	0.06
Acid Soluble Boron, Spectrometric	982.01	165.00	1	0.015	0.001	0.002	1	0.015	0.001	0.002
Acid Soluble Boron, Other		165.99	3	0.022	0.012	0.001	3	0.022	0.012	0.001
Method Group 165.XX PCT			4	0.020	0.011	0.001	4	0.020	0.011	0.001
Cadmium, Atomic Absorption		181.00	3	28.06	3.60	0.60	3	28.06	3.60	0.60
Cadmium, ICP		181.30	13	29.14	4.13	0.51	12	28.98	4.25	0.33
Cadmium, Other		181.99	1	29.60	0.00	0.00	1	29.60	0.00	0.00
Method Group 181.XX PPM			17	28.97	3.89	0.50	16	28.84	3.96	0.36
Chromium, Atomic Absorption		191.00	2	239.67	9.64	12.59	2	239.67	9.64	12.59
Chromium, ICP		191.30	10	237.32	13.42	6.26	10	237.32	13.42	6.26
Method Group 191.XX PPM			12	237.72	12.71	7.32	12	237.72	12.71	7.32
Acid Soluble Cobalt, ICP	965.11	202.30	4	1.43	0.48	0.03	4	1.43	0.48	0.03
Acid Soluble Copper, ICP		221.30	4	0.8788	1.2077	0.3326	3	0.2884	0.4468	0.0101
Acid Soluble Copper, Other		221.99	2	1.9250	0.4272	0.2500	2	1.9250	0.4272	0.2500
Method Group 221.XX PCT			6	1.2275	1.1150	0.3050	5	0.9430	0.9413	0.1060
Acid Soluble Iron, Atomic Absorption ..	980.01	241.00	1	0.62	0.00	0.01	1	0.62	0.00	0.01
Acid Soluble Iron, ICP		241.30	12	0.63	0.04	0.01	12	0.63	0.04	0.01
Acid Soluble Iron, Other		241.99	1	0.61	0.01	0.01	1	0.61	0.01	0.01

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Method Group 241.XX PCT			14	0.63	0.04	0.01	14	0.63	0.04	0.01
Lead, Atomic Absorption		251.00	2	2.25	1.45	0.10	2	2.25	1.45	0.10
Lead, ICP		251.30	3	4.63	4.24	0.80	3	4.63	4.24	0.80
Method Group 251.XX PPM			5	3.68	3.50	0.52	4	2.13	1.22	0.05
Acid Soluble Manganese, AA	972.02b	261.11	1	0.005	0.000	0.000	1	0.005	0.000	0.000
Acid Soluble Manganese, ICP	972.02a	261.30	8	0.005	0.001	0.000	8	0.005	0.001	0.000
Acid Soluble Manganese, Other		261.99	1	0.005	0.000	0.000	1	0.005	0.000	0.000
Method Group 261.XX PCT			10	0.005	0.001	0.000	10	0.005	0.001	0.000
Mercury, Atomic Absorption		281.00	1	189.50	0.71	1.00	1	189.50	0.71	1.00
Molybdenum, Atomic Absorption		289.00	2	4.27	0.95	0.31	2	4.27	0.95	0.31
Molybdenum, ICP		289.30	7	3.74	1.46	0.32	7	3.74	1.46	0.32
Method Group 289.XX PPM			9	3.86	1.36	0.32	9	3.86	1.36	0.32
Nickel, Atomic Absorption		291.00	5	21.10	4.71	0.81	5	21.10	4.71	0.81
Nickel, ICP		291.30	10	21.30	1.91	0.63	9	21.50	1.87	0.47
Method Group 291.XX PPM			16	20.72	3.57	0.65	16	20.72	3.57	0.65
Selenium, Other		301.99	1	0.03	0.00	0.00	1	0.03	0.00	0.00
Sodium, Flame Photometric	974.01	311.30	1	0.23	0.00	0.00	1	0.23	0.00	0.00
Sodium, Other		311.99	6	0.22	0.02	0.00	6	0.22	0.02	0.00
Method Group 311.XX PCT			7	0.22	0.02	0.00	7	0.22	0.02	0.00
Acid Soluble Zinc, Atomic Absorption ..	975.02	321.00	5	0.043	0.003	0.001	5	0.043	0.003	0.001
Acid Soluble Zinc, ICP		321.30	14	0.042	0.003	0.000	14	0.042	0.003	0.000
Acid Soluble Zinc, Other		321.99	2	0.040	0.000	0.000	2	0.040	0.000	0.000
Method Group 321.XX PCT			21	0.042	0.003	0.001	20	0.042	0.003	0.000

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 001.10 PCT			Meth: 001.XX PCT			Meth: 010.17 PCT			Meth: 010.60 PCT			Meth: 010.XX PCT		
Ammoniacal Nitrogen			Ammoniacal Nitrogen			Total Nitrogen			Total Nitrogen			Total Nitrogen		
<u>MgO Distillation</u>			<u>Comprehensive</u>			<u>Combustion</u>			<u>Combustion</u>			<u>Combustion</u>		
416	17.60	1.30	420	17.05	-1.10	117	17.95	.71	028	17.70	-.44	055	18.04	1.23
090	17.50	.93	258	17.01	-1.21	444	16.97	-1.32	423	17.64	-.67	485	17.99	1.04
169	17.42 R	.71	Meth: 009.10 PCT			Meth: 010.60 PCT			482	17.75	-.68	025	17.96	.89
Avg	17.25		Ammon & Nitrate N			Total Nitrogen			325	17.60	-.76	117	17.95	.89
456	17.17	-.29	<u>Devarda</u>			<u>Combustion</u>			390	17.60	-.88	040	17.95	.89
258	17.01	-.90	497	17.90	1.24	162	18.19 R	2.31	086	17.59	-.96	029	17.90	.89
444	16.97	-1.03	Avg	17.70		351	18.21	2.00	489	17.54	-1.05	452	17.95	.84
Meth: 001.99 PCT			444	17.65	-.40	472	18.17	1.83	356	17.47	-1.36	291	17.92	.71
Ammoniacal Nitrogen			090	17.56	-.89	354	18.03	1.27	157	17.45	-1.45	481	17.91	.70
<u>Other</u>			Meth: 010.11 PCT			Total Nitrogen			402	17.45	-1.59	451	17.85	.64
307	18.26	1.64	Modified <u>Comprehensi</u>			Total Nitrogen			444	17.42	-1.60	368	17.88 X	.57
506	18.05	1.10	510	18.15 R	2.84	485	17.99	1.02	095	17.46	-1.60	324	17.80	.48
510	17.89	.71	470	17.83	1.31	029	17.90	.88	049	17.17	-2.71	230	17.80	.48
096	17.79	.48	371	17.72	.85	040	17.95	.86	102	16.85 s	-4.16	300	17.79	.48
Avg	17.59		452	17.95	.81	025	17.96	.86	Meth: 010.99 PCT			504	17.85	.41
500	17.50	-.22	023	17.94	.79	452	17.95	.81	Total Nitrogen			377	17.76	.39
397	17.39	-.51	291	17.92	.67	023	17.94	.79	<u>Other</u>			096	17.84	.39
027	17.27	-.81	451	17.85	.63	291	17.92	.67	487	18.57 S	4.58	504	17.82	.37
487	17.14	-1.08	368	17.88 X	.53	451	17.85	.63	506	18.05	1.62	360	17.83	.37
420	17.05	-1.31	324	17.80	.48	368	17.88 X	.53	300	17.79	.61	483	17.84	.36
Meth: 001.XX PCT			211	17.53	-.10	324	17.80	.48	504	17.82	.39	470	17.83	.32
Ammoniacal Nitrogen			114	17.49	-.25	230	17.80	.48	504	17.82	.39	493	17.80	.30
307	18.26 R	2.59	455	17.45	-.47	096	17.84	.34	493	17.80	.33	233	17.82	.30
506	18.05	1.93	309	17.04	-2.29	360	17.83	.32	Avg	17.77		494	17.81	.27
510	17.89	1.44	415	16.58 S	-4.42	483	17.84	.31	500	17.60	-1.00	035	17.79	.19
096	17.79	1.14	Meth: 010.12 PCT			233	17.82	.25	420	17.59	-1.13	292	17.79	.15
416	17.60	.57	Total Nitrogen			494	17.81	.22	Meth: 010.XX PCT			Avg	17.75	
090	17.50	.27	<u>Salicylic</u>			035	17.79	.14	Total Nitrogen			105	17.75	-.04
500	17.50	.27	481	17.91	1.07	292	17.79	.09	487	18.57 s	3.57	043	17.74	-.10
169	17.42	.27	Avg	17.88		Avg	17.77		162	18.19 R	2.28	371	17.72	-.22
Avg	17.41		504	17.85	-.60	105	17.75	-.10	351	18.21	1.99	443	17.70	-.23
397	17.39	-.15	498	17.00 S	-17.38	043	17.74	-.16	472	18.17	1.82	007	17.70	-.23
027	17.27	-.50	Meth: 010.12 PCT			443	17.70	-.30	510	18.15	1.80	247	17.70	-.25
456	17.17	-.72	Total Nitrogen			007	17.70	-.30	506	18.05	1.32	405	17.71	-.25
487	17.14	-.81	<u>Salicylic</u>			405	17.71	-.32	354	18.03	1.28	105	17.68	-.32
			Avg			247	17.70	-.33	136	18.04	1.24	028	17.70	-.38
			498			377	17.76	-.41				423	17.64	-.58

* 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 Total Nitrogen			Meth: 020.20 PCT Total Phosphate			Meth: 020.50 PCT Total Phosphate			Meth: 020.XX PCT Total Phosphate			Meth: 030.40 PCT Insoluble Phosphate		
482	17.75	-.65	<u>Spectrometric</u>			<u>ICP</u>			470	46.81	.48	<u>Automated</u>		
500	17.60	-.66	027	47.95 s	3.60	Avg	46.31		324	46.70	.46	096	0.04	.71
325	17.60	-.66	258	46.99 R	2.21	472	46.22	-.16	470	46.77	.41	Meth: 030.50 PCT		
420	17.59	-.77	497	47.04 R	1.84	389	46.03	-.42	096	46.74	.37	Insoluble Phosphate		
390	17.60	-.79	292	47.03	1.42	451	46.22	-.44	444	46.58	.32	<u>ICP</u>		
474	17.57	-.82	489	46.92	1.18	025	45.90	-.59	500	46.60	.22	247	0.08	.71
137	17.57	-.83	416	46.85	1.03	482	45.85	-.65	169	46.56	.09	Meth: 030.XX PCT		
086	17.59	-.87	324	46.70	.82	307	46.09	-.67	487	46.55	.07	<u>Insoluble Phosphate</u>		
489	17.54	-.94	169	46.56	.37	402	45.16	-1.63	Avg	46.52		247	0.08	1.03
211	17.53	-.99	506	46.50	.32	390	44.00 s	-3.80	510	46.48	-.10	405	0.07	.24
114	17.49	-1.16	510	46.48	.20	Meth: 020.99 PCT			405	46.46	-.12	405	0.07	.24
356	17.47	-1.24	405	46.46	.14	Total Phosphate			506	46.50	-.18	Avg	0.06	
455	17.45	-1.33	Avg	46.40		<u>Other</u>			456	46.38	-.27	096	0.04	-1.18
157	17.45	-1.33	356	46.34	-.15	500	46.60	.70	356	46.34	-.33	Meth: 040.20 PCT		
402	17.45	-1.47	474	46.28	-.41	487	46.55	.60	035	46.30	-.39	InDir Available Phos		
444	17.42	-1.47	481	46.25	-.49	Avg	46.18		474	46.28	-.48	<u>Spectrometri</u>		
095	17.46 R	-1.48	371	46.03	-.86	455	45.38	-1.29	481	46.25	-.54	405	46.38	.71
049	17.17	-2.54	420	45.83	-1.32	Meth: 020.XX PCT			472	46.22	-.54	Meth: 040.40 PCT		
309	17.04	-3.10	309	45.41	-2.26	<u>Total Phosphate</u>			451	46.22	-.73	InDir Available Phos		
498	17.00 s	-3.31	Meth: 020.40 PCT			483	46.97 s	2.87	371	46.03	-.86	<u>Automated</u>		
102	16.85 s	-3.94	Total Phosphate			027	47.95	2.50	389	46.03	-.87	247	46.78	.65
415	16.58 s	-5.13	<u>Automated</u>			258	46.99 R	1.55	307	46.09 R	-1.05	Avg	46.74	
Meth: 020.10 PCT			105	46.91	.99	291	47.42	1.54	025	45.90	-1.09	096	46.70	-1.04
Total Phosphate			247	46.91	.96	368	47.37 X	1.45	482	45.85	-1.16	Meth: 040.50 PCT		
<u>Grav Quimociac</u>			470	46.77	.39	157	47.25	1.25	420	45.83	-1.21	InDir Available Phos		
157	47.25	1.42	096	46.74	.32	497	47.04 R	1.22	322	45.80	-1.24	<u>Automated</u>		
105	47.05	.49	Avg	46.67		105	47.05	.91	309	45.41	-1.92	247	46.78	.65
090	46.99	.35	456	46.38	-1.14	292	47.03	.86	455	45.38	-1.97	Avg	46.74	
211	47.01	.29	035	46.30	-1.43	211	47.01	.84	402	45.16	-2.36	096	46.70	.42
493	46.95	.23	Meth: 020.50 PCT			090	46.99	.80	390	44.00 s	-4.96	247	46.74	.71
Avg	46.95		Total Phosphate			493	46.95	.74	Meth: 030.20 PCT			Meth: 040.XX PCT		
470	46.81	-.66	<u>ICP</u>			489	46.92	.68	Insoluble Phosphate			InDir Available Phos		
444	46.58	-1.89	483	46.97 S	2.45	105	46.91	.67	<u>Spectrometric</u>			247	46.78	.77
322	45.80 s	-5.27	291	47.42	1.57	247	46.91	.66	405	0.07	.71	247	46.74	.54
			368	47.37 X	1.50	416	46.85	.57				096	46.70	.42
			247	46.82	.73	247	46.82	.51				Avg	46.65	

* 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: 040.XX PCT			Meth: 041.50 PCT			Meth: 041.XX PCT			Meth: 048.20 PCT			Meth: 050.51 PCT						
<u>InDir Available Phos</u>			Dir Available Phosph			<u>Dir Available Phosph</u>			Water Soluble Phosph			Soluble Potash						
405	46.38	-1.56	<u>ICP</u>			423	47.61	1.10	<u>Spectrometric</u>			<u>ICP (Citrate)</u>						
			360	46.29	-.27	023	47.53	.98	Avg	42.69		096	0.19	-.51				
Meth: 041.10 PCT			043	45.62	-.57	452	47.24	.63	420	42.30	-.91	389	0.19	-.51				
Dir Available Phosph			007	45.45	-.80	136	47.08	.43	Meth: 048.99 PCT			354			0.19	-.69		
<u>Grav Quimociac</u>			325	44.75 R	-1.45	117	47.00	.35	Water Soluble Phosph			Meth: 050.60 PCT						
102	47.00	1.31	368	43.58 X	-2.30	102	47.00	.33	<u>Other</u>			Soluble Potash						
040	46.80	.73	Meth: 041.60 PCT			485	46.83	.18	247	43.68	.71	<u>Flame (Oxalate)</u>						
105	46.75	.52	Dir Available Phosph			040	46.80	.15	Meth: 048.XX PCT			510			1.75 S	.00		
041	46.72 X	.43	<u>EDTA Extract</u>			105	46.75	.08	Water Soluble Phosph			Meth: 050.61 PCT						
086	46.62	.21	494	51.63 s	8.46	Avg	46.73		<u>Other</u>			Soluble Potash						
Avg	46.60		105	46.69	-.06	105	46.69	-.07	247	43.68	1.05	Flame (Citrate)						
185	46.53	-.46	034	48.54	2.22	041	46.72 X	-.08	096	43.08	.09	105			0.23	.71		
049	46.42	-.77	136	47.08	.43	086	46.62	-.16	Avg	43.02		Meth: 050.99 PCT						
055	46.01	-1.98	117	47.00	.35	377	46.60	-.21	420	42.30	-1.18	Soluble Potash						
Meth: 041.20 PCT			485	46.83	.18	105	46.63	-.22	Meth: 050.30 PCT			Other						
Dir Available Phosph			Avg	46.72		137	46.54	-.27	Soluble Potash			325			0.23	1.61		
<u>Spectrometric</u>			105	46.69	-.06	185	46.53	-.30	<u>AA (Oxalate)</u>			105			0.25	.78		
498	47.95	.68	029	46.61	-.40	055	46.43	-.39	185	0.08	-.71	Avg			0.22			
027	47.90	.65	043	46.26	-.56	029	46.61	-.42	Meth: 050.31 PCT			482			0.20	-.38		
Avg	46.96		397	45.81	-1.11	049	46.42	-.43	Soluble Potash			474			0.19	-.38		
504	45.03	-1.27	354	45.69	-1.24	043	46.26	-.59	<u>AA (Citrate)</u>			Meth: 050.XX PCT						
Meth: 041.40 PCT			472	40.40 s	-7.67	360	46.29	-.69	472			0.41	-.71	Soluble Potash				
Dir Available Phosph			Meth: 041.99 PCT			506	46.15	-.73	Meth: 050.50 PCT			510			1.75 s	19.12		
<u>Automated</u>			Dir Available Phosph			055	46.01	-.90	Soluble Potash			472			0.41	2.39		
095	46.00	-.71	Other			095	46.00	-.92	<u>ICP (Oxalate)</u>			325			0.23 R	1.38		
Meth: 041.50 PCT			230	48.65	1.27	397	45.81	-1.15	Avg			377			0.28	.76		
Dir Available Phosph			Avg	47.14		354	45.69	-1.29	420	0.24	.87	105			0.25	.65		
<u>ICP</u>			105	46.63	-.45	043	45.62	-1.38	292	0.19	-.87	105			0.23	.40		
423	47.61	1.13	506	46.15	-.84	007	45.45 R	-1.68	Meth: 050.51 PCT			420			0.24	.25		
023	47.53	1.05	Meth: 041.XX PCT			504	45.03	-2.11	Soluble Potash			Avg			0.22			
452	47.24	.81	Dir Available Phosph			325	44.75 R	-2.62	<u>ICP (Citrate)</u>			482			0.20	-.35		
377	46.60	.28	494	51.63 s	8.69	368	43.58 A	-3.91	377			0.28	1.58	096			0.19	-.37
137	46.54	.22	230	48.65	2.37	472	40.40 s	-7.90	Avg			292			0.19	-.37		
055	46.43	.13	034	48.54	2.27	Meth: 048.20 PCT			474			0.19	-.37	Meth: 050.51 PCT				
Avg	46.29		498	47.95	1.54	Water Soluble Phosph			Avg			474			0.19	-.37		
			027	47.90	1.48	<u>Spectrometric</u>			Avg									
						096	43.08	.82										

* 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: 151.XX PPM</u>			<u>Meth: 181.30 PPM</u>			<u>Meth: 181.XX PPM</u>			<u>Meth: 191.XX PPM</u>			<u>Meth: 221.XX PCT</u>		
<u>Arsenic</u>			<u>Cadmium</u>			<u>Cadmium</u>			<u>Chromium</u>			<u>Acid Soluble Copper</u>		
474	4.00	1.61	ICP			481	25.05	-.96	009	235.00	-.45	433	0.8650	-.08
230	3.72	1.35	117	35.22	1.47	506	23.45	-1.36	504	234.34	-.65	041	0.0001 X	-1.00
Avg	2.29		247	33.35	1.03	096	19.00	-2.49	482	234.50	-.79	354	0.0000	-1.00
498	2.01	-.27	102	31.50	.59	498	0.29 s	-7.22	230	218.50	-1.52	<u>Meth: 241.00 PCT</u>		
368	1.95 X	-.32	482	31.05 R	.58	<u>Meth: 191.00 PPM</u>			444	211.50	-2.08	<u>Acid Soluble Iron</u>		
136	1.55	-.69	368	31.15 X	.51	<u>Chromium</u>			506	155.50 s	-6.47	<u>Atomic Absorption</u>		
096	1.40	-.83	474	31.00	.48	<u>Atomic Absorption</u>			<u>Meth: 202.30 PPM</u>			105	0.62	.71
025	1.38	-.86	095	30.50	.38	481 245.00 .76			<u>Acid Soluble Cobalt</u>			<u>Meth: 241.30 PCT</u>		
<u>Meth: 165.00 PCT</u>			009	30.00	.24	Avg 239.67			<u>ICP</u>			<u>Acid Soluble Iron</u>		
<u>Acid Soluble Boron</u>			Avg	28.98		504 234.34 -.96			474	2.00	1.20	<u>ICP</u>		
<u>Spectrometric</u>			035	28.30	-.17	506 155.50 S -8.73			102	1.51	.16	420	0.72	1.97
105	0.015	.71	230	27.00	-.47	<u>Meth: 191.30 PPM</u>			035	1.46	.07	472	0.66	.73
<u>Meth: 165.99 PCT</u>			444	25.66	-.78	<u>Chromium</u>			Avg	1.43		035	0.66	.66
<u>Acid Soluble Boron</u>			481	25.05	-.92	<u>ICP</u>			368	0.75 X	-1.43	041	0.66 X	.64
<u>Other</u>			096	19.00	-2.35	035 250.00 .97			<u>Meth: 221.30 PCT</u>			482	0.64	.22
354	0.037	1.20	<u>Meth: 181.99 PPM</u>			096 249.50 .91			<u>Acid Soluble Copper</u>			389	0.64	.20
Avg	0.022		<u>Cadmium</u>			474 247.00 .74			<u>ICP</u>			102	0.63	.10
389	0.020	-.20	<u>Other</u>			368 246.00 X .66			368	2.6500 R	5.48	Avg	0.63	
482	0.010	-1.01	487 29.60 .00			102 243.75 .48			433	0.8650	1.29	390	0.62	-.28
<u>Meth: 165.XX PCT</u>			<u>Meth: 181.XX PPM</u>			247 237.50 .11			Avg	0.2884		096	0.61	-.60
<u>Acid Soluble Boron</u>			<u>Cadmium</u>			Avg 237.32			041	0.0001 X	-.65	247	0.61	-.60
354	0.037	1.51	117	35.22	1.61	009 235.00 -.41			354	0.0000	-.65	474	0.60	-.71
Avg	0.020		247	33.35	1.14	482 234.50 -.74			<u>Meth: 221.99 PCT</u>			<u>Meth: 241.99 PCT</u>		
389	0.020	-.10	102	31.50	.67	230 218.50 -1.42			<u>Acid Soluble Copper</u>			<u>Acid Soluble Iron</u>		
105	0.015	-.49	482	31.05 R	.65	444 211.50 -1.94			<u>Other</u>			<u>Other</u>		
482	0.010	-.99	368	31.15 X	.58	<u>Meth: 191.XX PPM</u>			506	2.2500	.96	105	0.61	.71
<u>Meth: 181.00 PPM</u>			474	31.00	.54	<u>Chromium</u>			Avg	1.9250		<u>Meth: 241.XX PCT</u>		
<u>Cadmium</u>			504	30.53	.46	035 250.00 .99			487	1.6000	-.76	<u>Acid Soluble Iron</u>		
<u>Atomic Absorption</u>			095	30.50	.44	096 249.50 .93			<u>Meth: 221.XX PCT</u>			420 0.72 2.17		
504	30.53	.71	136	30.20	.35	474 247.00 .75			<u>Acid Soluble Copper</u>			472 0.66 .84		
136	30.20	.60	009	30.00	.29	481 245.00 .70			368	2.6500 R	1.94	035 0.66 .77		
Avg	28.06		487	29.60	.19	368 246.00 X .67			506	2.2500	1.41	041 0.66 X .75		
506	23.45	-1.28	Avg	28.84		102 243.75 .48			487	1.6000	.70	482 0.64 .30		
498	0.29 S	-7.72	035	28.30	-.16	Avg 237.72			<u>Meth: 221.99 PCT</u>					
			230	27.00	-.47	247 237.50 -.12			<u>Acid Soluble Copper</u>					
			444	25.66	-.80				<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

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
<u>Meth: 241.XX PCT</u>			<u>Meth: 261.11 PCT</u>			<u>Meth: 281.00 PPM</u>			<u>Meth: 291.00 PPM</u>			<u>Meth: 291.XX PPM</u>		
<u>Acid Soluble Iron</u>			<u>Acid Soluble Mangane</u>			<u>Mercury</u>			<u>Nickel</u>			<u>Nickel</u>		
389	0.64	.27	AA			<u>Atomic Absorption</u>			<u>Atomic Absorption</u>			482	19.45	-.46
102	0.63	.14	105	0.005	.71	506	189.50	.71	506	29.10	1.70	230	18.55	-.61
Avg	0.63								504	22.20	.28	498	17.25	-.97
105	0.62	-.23	<u>Meth: 261.30 PCT</u>			<u>Meth: 289.00 PPM</u>			<u>Avg</u>			481	17.00	-1.08
390	0.62	-.23	<u>Acid Soluble Mangane</u>			<u>Molybdenum</u>			136	19.95	-.25	096	13.00	-2.16
105	0.61	-.57	<u>ICP</u>			<u>Atomic Absorption</u>			498	17.25	-.82	<u>Meth: 301.99 PPM</u>		
096	0.61	-.58	482	0.010 S	4.64	506	5.08	.87	481	17.00	-.90	<u>Selenium</u>		
247	0.61	-.58	041	0.007 X	1.29	<u>Avg</u>			<u>Meth: 291.30 PPM</u>			<u>Other</u>		
474	0.60	-.69	247	0.007	1.24	498	3.47	-.86	<u>Nickel</u>			485	0.03	.71
354	0.54	-2.27	035	0.006	.20	<u>Meth: 289.30 PPM</u>			<u>ICP</u>			<u>Meth: 311.30 PCT</u>		
			474	0.005	.14	<u>Molybdenum</u>			444	25.67	2.23	<u>Sodium</u>		
<u>Meth: 251.00 PPM</u>			Avg	0.005		<u>ICP</u>			095	22.50	.60	<u>Flame Photometric</u>		
Lead			389	0.005	-.19	035	5.27	1.07	035	21.95	.34	510	0.23	.00
<u>Atomic Absorption</u>			102	0.005	-.29	433	5.19	.99	Avg	21.50		<u>Meth: 311.99 PCT</u>		
506	3.51	.86	009	0.005	-.34	095	4.50	.62	368	21.20 X	-.17	<u>Sodium</u>		
Avg	2.25		096	0.003	-2.00	474	4.00	.18	474	21.00	-.27	<u>Other</u>		
136	1.00	-.87	354	0.000 S	-5.22	Avg	3.74		009	21.00	-.27	354	0.26	1.78
						230	3.52	-.16	102	20.81	-.38	035	0.24	.63
<u>Meth: 251.30 PPM</u>			<u>Meth: 261.99 PCT</u>			<u>Meth: 289.XX PPM</u>			<u>Meth: 291.30 PPM</u>			<u>Meth: 311.99 PCT</u>		
Lead			<u>Acid Soluble Mangane</u>			<u>Molybdenum</u>			<u>Nickel</u>			<u>Sodium</u>		
<u>ICP</u>			<u>Other</u>			<u>ICP</u>			<u>Atomic Absorption</u>			<u>Flame Photometric</u>		
247	9.90	1.27	105	0.005	.71	096	2.65	-.74	482	19.45 R	-1.24	Avg	0.22	
Avg	4.63					368	1.05 X	-1.84	230	18.55	-1.59	096	0.22	-.17
095	3.00	-.38	<u>Meth: 261.XX PCT</u>			<u>Meth: 289.XX PPM</u>			096	13.00 s	-4.56	102	0.22	-.34
474	1.00	-.86	<u>Acid Soluble Mangane</u>			<u>Molybdenum</u>			<u>Meth: 291.XX PPM</u>			482	0.21	-.85
			482	0.010 s	5.21	035	5.27	1.07	<u>Nickel</u>			474	0.20	-1.04
<u>Meth: 251.XX PPM</u>			041	0.007 X	1.50	433	5.19	.98	506	29.10	2.35	<u>Meth: 311.XX PCT</u>		
Lead			247	0.007	1.45	506	5.08	.91	444	25.67	1.39	<u>Sodium</u>		
247	9.90 R	6.45	035	0.006	.29	095	4.50	.60	095	22.50	.52	354	0.26	1.88
506	3.51	1.13	474	0.005	.21	474	4.00	.11	504	22.20	.46	035	0.24	.64
095	3.00	.72	Avg	0.005		Avg	3.86		035	21.95	.37	510	0.23	.25
Avg	2.13		389	0.005	-.14	230	3.52	-.26	368	21.20 X	.14	Avg	0.22	
474	1.00	-.92	102	0.005	-.25	498	3.47	-.30	247	20.85	.13	096	0.22	-.22
136	1.00	-.93	105	0.005	-.26	096	2.65	-.89	009	21.00	.08	102	0.22	-.41
			009	0.005	-.31	368	1.05 X	-2.06	474	21.00	.08	482	0.21	-.96
			105	0.005	-.42				102	20.81	.04	474	0.20	-1.17
			096	0.003	-2.14				Avg	20.72		<u>Meth: 311.XX PCT</u>		
			354	0.000 s	-5.72				136	19.95	-.22	<u>Sodium</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

Lab Average* Index

Meth: 321.00 PCT
 Acid Soluble Zinc
Atomic Absorption
 481 0.048 1.39
 504 0.045 .73
 Avg 0.043
 043 0.042 -.14
 105 0.040 -.75
 498 0.039 -1.20

Meth: 321.30 PCT
 Acid Soluble Zinc
ICP
 041 0.063 s 7.42
 420 0.059 s 5.50
 292 0.050 2.61
 433 0.044 .69
 096 0.044 .61
 035 0.043 .56
 247 0.043 .43
 368 0.043 X .38
 Avg 0.042
 389 0.042 -.17
 102 0.041 -.23
 474 0.041 -.36
 482 0.040 -.54
 095 0.040 -.54
 354 0.039 -.86
 009 0.039 -.86
 230 0.036 -1.70
 027 0.023 s -5.91

Meth: 321.99 PCT
 Acid Soluble Zinc
Other
 506 0.040 .86
 Avg 0.040
 105 0.040 -.88

Lab Average* Index

Meth: 321.XX PCT
Acid Soluble Zinc
 041 0.063 s 7.56
 420 0.059 s 5.62
 292 0.050 2.69
 481 0.048 1.90
 504 0.045 R 1.13
 433 0.044 .74
 096 0.044 .66
 035 0.043 .61
 247 0.043 .47
 368 0.043 X .42
 043 0.042 .20
 Avg 0.042
 389 0.042 -.16
 102 0.041 -.19
 474 0.041 -.32
 105 0.040 -.51
 095 0.040 -.51
 506 0.040 -.51
 482 0.040 -.51
 105 0.040 -.66
 009 0.039 -.83
 354 0.039 -.83
 498 0.039 -1.01
 230 0.036 -1.69
 027 0.023 s -5.95

Lab Average* Index

Lab Average* Index

Lab Average* Index

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

Method Evaluation - Z Values Based on 1 Reports

Method Code	Number Of Labs	Avg Bias of Labs	Std Dev of Biases	Std Dev Within Labs	Method Code	Number Of Labs	Avg Bias of Labs	Std Dev of Biases	Std Dev Within Labs
001.10	6	0.11	0.98	0.14	151.00	3	0.00	1.09	0.20
001.99	9	0.00	1.02	0.14	151.30	4	- 0.21	1.01	0.02
001.XX	15	0.17	1.18	0.16	151.XX	7	0.00	1.04	0.04
009.10	3	0.00	1.07	0.26	165.99	3	0.000	1.116	0.054
009.XX	3	0.00	1.07	0.26	165.XX	4	0.000	1.078	0.063
010.11	11	- 0.15	1.88	0.20	181.00	4	- 1.93	3.96	0.10
010.12	3	- 5.76	9.99	1.25	181.30	13	0.04	0.99	0.10
010.60	45	- 0.05	1.16	0.35	181.XX	18	- 0.37	1.96	0.10
010.99	7	0.65	1.95	0.32	191.00	3	- 2.91	5.07	0.55
010.XX	65	- 0.13	1.40	0.31	191.30	10	0.00	0.98	0.29
020.10	8	- 0.66	2.07	0.34	191.XX	13	- 0.50	2.01	0.34
020.20	17	0.37	1.30	0.56	202.30	4	0.00	1.08	0.05
020.40	6	0.00	1.03	0.18	202.XX	4	0.00	1.08	0.05
020.50	12	- 0.19	1.34	0.90	221.30	4	1.3215	2.7962	0.7277
020.99	3	0.00	1.11	0.12	221.99	2	0.0000	1.0759	0.4138
020.XX	43	- 0.10	1.19	0.64	221.XX	6	0.3022	1.1975	0.3021
030.XX	3	0.00	1.04	0.33	241.30	12	0.00	1.01	0.12
040.40	2	0.00	0.90	0.59	241.XX	13	0.03	1.04	0.14
040.XX	3	- 0.21	1.17	0.24	251.00	2	0.00	1.22	0.05
041.10	8	0.00	0.99	0.27	251.30	3	0.00	1.10	0.16
041.20	3	0.00	1.10	0.15	251.XX	5	1.27	3.00	0.44
041.50	11	- 0.12	1.04	0.25	261.30	10	- 0.058	2.499	0.070
041.60	11	- 0.16	3.17	1.86	261.XX	11	- 0.021	2.629	0.097
041.99	3	0.00	1.11	0.08	289.00	2	0.00	1.20	0.17
041.XX	33	- 0.24	2.16	1.13	289.30	7	0.00	1.03	0.16
048.20	2	0.00	1.16	0.28	289.XX	9	0.00	1.02	0.16
048.XX	3	0.00	1.10	0.18	291.00	5	0.00	1.05	0.12
050.50	2	0.00	1.22	0.00	291.30	11	- 0.51	1.65	0.22
050.51	4	0.00	0.98	0.39	291.XX	16	0.00	1.01	0.13
050.99	4	0.00	0.37	0.88	311.99	6	0.00	1.04	0.13
050.XX	13	1.46	5.38	0.57	311.XX	7	0.00	1.03	0.13
060.00	4	0.57	1.46	0.97	321.00	5	0.000	1.043	0.172
060.XX	6	0.36	0.77	0.51	321.30	17	0.376	2.765	0.730
101.30	11	0.71	1.92	0.59	321.99	2	0.000	1.210	0.134
101.XX	13	0.20	2.52	0.57	321.XX	22	0.398	2.502	0.657
121.30	11	0.37	1.56	0.19					
121.XX	12	0.32	1.58	0.23					
144.99	8	0.00	1.01	0.21					
144.XX	11	0.55	2.20	0.16					