

- Pass 1 Results for 81 Labs - - Pass 2 Results for 79 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	7	12.06	0.18	0.06	7	12.06	0.18	0.06
Ammoniacal Nitrogen, Other		001.99	9	12.08	0.12	0.11	9	12.08	0.12	0.11
Method Group 001.XX PCT			16	12.07	0.15	0.09	15	12.07	0.14	0.07
Nitrate Nitrogen, Other		002.99	1	0.00	0.00	0.00	1	0.00	0.00	0.00
Ammon & Nitrate N, Devarda	892.01	009.10	2	12.00	0.17	0.21	2	12.00	0.17	0.21
Ammon & Nitrate N, Other		009.99	1	12.15	0.08	0.12	1	12.15	0.08	0.12
Method Group 009.XX PCT			3	12.05	0.16	0.18	3	12.05	0.16	0.18
Total Nitrogen, Modified Comprehensive	978.02	010.11	7	12.07	0.09	0.06	6	12.07	0.08	0.03
Total Nitrogen, Salicylic	955.04D	010.12	3	12.23	0.11	0.04	3	12.23	0.11	0.04
Total Nitrogen, Combustion		010.60	58	12.06	0.19	0.08	55	12.06	0.19	0.07
Total Nitrogen, Other		010.99	2	12.01	0.09	0.11	2	12.01	0.09	0.11
Method Group 010.XX PCT			70	12.07	0.18	0.08	65	12.08	0.16	0.06
Total Phosphate, Grav Quimociac	962.02	020.10	9	61.57	0.35	0.13	8	61.59	0.36	0.09
Total Phosphate, Spectrometric	958.01	020.20	12	61.40	0.40	0.26	11	61.35	0.34	0.18
Total Phosphate, Alka Quimociac	969.02	020.30	1	61.86	0.29	0.41	1	61.86	0.29	0.41
Total Phosphate, Automated	978.01	020.40	8	61.57	0.56	0.15	7	61.54	0.58	0.09
Total Phosphate, ICP		020.50	9	61.15	1.17	0.52	8	61.09	1.19	0.36
Total Phosphate, Other		020.99	2	61.28	0.35	0.23	2	61.28	0.35	0.23
Method Group 020.XX PCT			43	61.41	0.74	0.29	40	61.42	0.71	0.20
Insoluble Phosphate, Spectrometric	963.03C	030.20	1	0.02	0.01	0.01	1	0.02	0.01	0.01
Insoluble Phosphate, Automated	978.01	030.40	2	0.05	0.05	0.02	2	0.05	0.05	0.02
Method Group 030.XX PCT			3	0.04	0.04	0.02	3	0.04	0.04	0.02
InDir Available Phosphate, Spectrometri	960.02	040.20	2	61.03	0.06	0.00	2	61.03	0.06	0.00
InDir Available Phosphate, Automated	960.02	040.40	2	61.49	0.38	0.08	2	61.49	0.38	0.08
InDir Available Phosphate, ICP		040.50	2	59.54	1.19	0.31	2	59.54	1.19	0.31
InDir Available Phosphate, Other		040.99	1	61.40	0.18	0.25	1	61.40	0.18	0.25
Method Group 040.XX PCT			7	60.79	1.03	0.15	7	60.79	1.03	0.15
Dir Available Phosphate, Grav Quimociac	960.03E	041.10	11	61.67	0.48	0.45	11	61.67	0.48	0.45
Dir Available Phosphate, Automated	978.01	041.40	2	61.47	0.39	0.33	2	61.47	0.39	0.33
Dir Available Phosphate, ICP		041.50	7	60.86	1.03	0.45	6	60.68	0.94	0.27
Dir Available Phosphate, EDTA Extract	993.01	041.60	14	61.66	0.59	0.38	14	61.66	0.59	0.38
Dir Available Phosphate, Other		041.99	1	61.80	0.14	0.20	1	61.80	0.14	0.20
Method Group 041.XX PCT			36	61.46	0.75	0.43	34	61.51	0.65	0.40
Water Soluble Phosphate, Grav Quimociac	962.03	048.10	2	60.39	1.05	0.14	2	60.39	1.05	0.14
Water Soluble Phosphate, Spectrometric	970.01	048.20	3	60.96	0.20	0.13	3	60.96	0.20	0.13
Method Group 048.XX PCT			5	60.73	0.69	0.13	5	60.73	0.69	0.13
Soluble Potash, STPB Oxalate	958.02	050.00	1	0.00	0.00	0.00	1	0.00	0.00	0.00
Soluble Potash, ICP (Oxalate)		050.50	2	0.01	0.02	0.01	2	0.01	0.02	0.01
Soluble Potash, ICP (Citrate)		050.51	6	0.05	0.06	0.00	5	0.03	0.05	0.00

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Soluble Potash, Flame (Citrate) .....	983.02(b)	050.61	1	0.00	0.00	0.00	1	0.00	0.00	0.00
Soluble Potash, Other .....		050.99	2	0.51	0.59	0.01	2	0.51	0.59	0.01
Method Group 050.XX PCT			12	0.11	0.29	0.00	9	0.02	0.04	0.00
Free Water, Vacuum Oven .....	965.08B	060.00	5	0.09	0.06	0.02	5	0.09	0.06	0.02
Acid Soluble Calcium, AA .....	945.04	101.00	1	0.00	0.00	0.00	1	0.00	0.00	0.00
Acid Soluble Calcium, ICP .....		101.30	9	0.02	0.03	0.00	8	0.02	0.03	0.00
Method Group 101.XX PCT			10	0.02	0.03	0.00	9	0.02	0.03	0.00
Acid Soluble Magnesium, ICP .....		121.30	6	0.01	0.01	0.00	5	0.01	0.01	0.00
Sulfur, Gravimetric .....	980.02b	144.02	1	0.02	0.00	0.00	1	0.02	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	5	0.03	0.00	0.00	5	0.03	0.00	0.00
Method Group 144.XX PCT			7	0.02	0.00	0.00	6	0.02	0.00	0.00
Arsenic, ICP .....		151.30	6	1.94	2.01	0.14	5	1.52	1.93	0.07
Arsenic, Other .....		151.99	2	0.76	0.03	0.03	2	0.76	0.03	0.03
Method Group 151.XX PPM			8	1.64	1.80	0.11	7	1.30	1.65	0.06
Acid Soluble Boron, Spectrometric .....	982.01	165.00	1	0.002	0.000	0.000	1	0.002	0.000	0.000
Acid Soluble Boron, Other .....		165.99	3	0.004	0.002	0.001	3	0.004	0.002	0.001
Method Group 165.XX PCT			4	0.004	0.002	0.001	4	0.004	0.002	0.001
Cadmium, ICP .....		181.30	5	0.20	0.13	0.01	4	0.15	0.10	0.00
Cadmium, Other .....		181.99	2	0.02	0.00	0.00	2	0.02	0.00	0.00
Method Group 181.XX PPM			7	0.15	0.14	0.00	6	0.11	0.10	0.00
Chromium, ICP .....		191.30	7	8.64	4.10	0.92	6	8.12	4.14	0.45
Chromium, Other .....		191.99	2	0.57	0.11	0.12	2	0.57	0.11	0.12
Method Group 191.XX PPM			9	6.85	4.98	0.74	8	6.23	4.90	0.37
Acid Soluble Cobalt, ICP .....	965.11	202.30	5	0.29	0.22	0.14	5	0.29	0.22	0.14
Acid Soluble Cobalt, Other .....		202.99	2	0.01	0.00	0.00	2	0.01	0.00	0.00
Method Group 202.XX PPM			7	0.21	0.23	0.10	6	0.15	0.16	0.06
Acid Soluble Copper, Atomic Absorption	975.01	221.00	2	0.0001	0.0000	0.0001	2	0.0001	0.0000	0.0001
Acid Soluble Copper, ICP .....		221.30	7	0.2280	0.2987	0.0560	6	0.1410	0.2087	0.0153
Acid Soluble Copper, Other .....		221.99	1	0.2900	0.1131	0.1600	1	0.2900	0.1131	0.1600
Method Group 221.XX PCT			10	0.1886	0.2673	0.0552	9	0.1262	0.1897	0.0280
Acid Soluble Iron, Atomic Absorption ..	980.01	241.00	1	0.00	0.00	0.00	1	0.00	0.00	0.00
Acid Soluble Iron, ICP .....		241.30	6	0.00	0.00	0.00	5	0.00	0.00	0.00
Method Group 241.XX PCT			7	0.00	0.00	0.00	6	0.00	0.00	0.00
Lead, ICP .....		251.30	3	0.84	0.68	0.26	3	0.84	0.68	0.26
Lead, Other .....		251.99	1	0.03	0.00	0.00	1	0.03	0.00	0.00
Method Group 251.XX PPM			4	0.64	0.68	0.20	3	0.36	0.50	0.03
Acid Soluble Manganese, AA .....	972.02a	261.00	1	0.000	0.000	0.000	1	0.000	0.000	0.000
Acid Soluble Manganese, ICP .....	972.02a	261.30	3	0.000	0.000	0.000	3	0.000	0.000	0.000

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Method	AOAC Ref.	Method Code	No. of Labs	Grand Avg.	Std. Dev.	Average Range of Dups	No. of Labs	Grand Avg.	Std. Dev.	Average Range of Dups
Method Group 261.XX PCT			4	0.000	0.000	0.000	3	0.000	0.000	0.000
Mercury, Other .....		281.99	1	0.09	0.02	0.03	1	0.09	0.02	0.03
Molybdenum, ICP .....		289.30	10	2.02	0.81	0.09	10	2.02	0.81	0.09
Molybdenum, Other .....		289.99	2	1.57	0.15	0.02	2	1.57	0.15	0.02
Method Group 289.XX PPM			12	1.95	0.76	0.08	12	1.95	0.76	0.08
Nickel, ICP .....		291.30	5	1.23	1.47	0.11	5	1.23	1.47	0.11
Nickel, Other .....		291.99	2	0.24	0.06	0.03	2	0.24	0.06	0.03
Method Group 291.XX PPM			7	0.94	1.31	0.09	7	0.94	1.31	0.09
Selenium, ICP .....		301.30	2	0.55	0.47	0.12	2	0.55	0.47	0.12
Selenium, Other .....		301.99	2	0.05	0.05	0.01	2	0.05	0.05	0.01
Method Group 301.XX PPM			4	0.30	0.41	0.07	4	0.30	0.41	0.07
Sodium, Other .....		311.99	6	0.03	0.02	0.01	5	0.02	0.01	0.00
Acid Soluble Zinc, Atomic Absorption ..	975.02	321.00	3	0.000	0.000	0.000	3	0.000	0.000	0.000
Acid Soluble Zinc, ICP .....		321.30	10	0.501	0.865	0.010	9	0.463	0.906	0.000
Acid Soluble Zinc, Other .....		321.99	1	3.265	1.025	1.450	1	3.265	1.025	1.450
Method Group 321.XX PCT			15	0.839	1.409	0.107	14	0.666	1.275	0.011

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: 010.11 PCT			Meth: 010.60 PCT			Meth: 010.60 PCT		
<u>Ammoniacal Nitrogen</u>			<u>Ammoniacal Nitrogen</u>			<u>Total Nitrogen</u>			<u>Total Nitrogen</u>			<u>Total Nitrogen</u>		
<u>MgO Distillation</u>						<u>Modified Comprehensi</u>			<u>Combustion</u>			<u>Combustion</u>		
481	12.24	1.06	409	12.07	-.03	Avg	12.07		040	12.10	.58	406	11.71	-1.89
456	12.15	.59	489	12.01	-.42	211	12.05	-.27	482	12.10	.58	027	11.70	-1.96
444	12.14	.45	486	11.96	-.75	493	12.06	-.36	177	12.15	.49	131	11.69	-1.99
105	12.11	.35	027	11.95	-.84	105	12.00	-.96	035	12.15	.47	389	11.50	-3.02
416	12.11	.31	420	11.97	-.96	114	11.99	-1.04	247	12.08	.31			
Avg	12.06		231	11.69	-2.67	476	12.03 R	-1.28	377	12.11	.28	Meth: 010.99 PCT		
486	11.96	-.54	230	7.00 s	-35.45				489	12.11	.26	<u>Total Nitrogen</u>		
231	11.69	-2.07	Meth: 002.99 PCT			Meth: 010.12 PCT			494	12.11	.26	<u>Other</u>		
230	7.00 s	-28.19	<u>Nitrate Nitrogen</u>			<u>Total Nitrogen</u>			231	12.10	.25	487	13.93 S	22.59
			<u>Other</u>			<u>Salicylic</u>			157	12.10	.22	460	12.05	.41
			393	0.00	.00	481	12.35	1.08	018	12.10	.22	Avg	12.01	
Meth: 001.99 PCT			Meth: 009.10 PCT			Meth: 010.60 PCT			354	12.08	.19	420	11.97	-1.15
<u>Ammoniacal Nitrogen</u>			<u>Ammon &amp; Nitrate N</u>			<u>Total Nitrogen</u>			275	12.09	.15	Meth: 010.XX PCT		
<u>Other</u>			<u>Devarda</u>			<u>Combustion</u>			390	12.08	.13	<u>Total Nitrogen</u>		
307	12.13	1.55	258	12.08	1.12	472	12.27 s	2.58	037	12.08	.11	487	13.93 s	12.51
169	12.19	1.31	Avg	12.00		102	12.40 R	2.13	Avg	12.06		456	12.55 s	3.07
393	12.15	.78	090	11.93	-.49	351	12.38	1.71	025	12.05	-.05	472	12.27 s	2.91
474	12.16	.67	Meth: 009.99 PCT			Meth: 010.11 PCT			393	12.06	-.08	102	12.40 R	2.35
096	12.11	.30	<u>Ammon &amp; Nitrate N</u>			<u>Total Nitrogen</u>			041	12.04	-.24	351	12.38	1.85
Avg	12.08		<u>Other</u>			<u>Combustion</u>			421	12.04 X	-.27	481	12.35	1.66
409	12.07	-.13	393	12.15	.71	291	12.35	1.54	028	12.02	-.30	291	12.35	1.66
489	12.01	-.63	Meth: 009.XX PCT			Meth: 009.XX PCT			230	12.00	-.32	483	12.32	1.52
027	11.95	-1.13	<u>Ammon &amp; Nitrate N</u>			<u>Ammon &amp; Nitrate N</u>			486	12.01	-.42	488	12.30	1.51
420	11.97	-1.25	<u>Other</u>			<u>Ammon &amp; Nitrate N</u>			451	11.98	-.57	049	12.31	1.44
			393			258			402	11.98	-.61	095	12.28	1.26
			12.15			12.08			009	11.95	-.65	105	12.26	1.11
			.71			1.13			072	11.94	-.65	043	12.25	1.07
						.74			086	11.95	-.92	185	12.23	.92
						.90			073	11.89	-.95	055	12.23	.92
						.87			324	11.90	-1.01	029	12.22	.89
						.82			292	11.87	-1.03	470	12.22	.86
						.82			444	11.86	-1.11	136	12.21	.84
						.78			325	12.00 R	-1.12	096	12.21	.83
						.77			443	11.85 R	-1.39	360	12.20	.79
						.69			042	11.81	-1.43	106	12.20	.78
						.62			495	11.78	-1.54	409	12.19	.69
						.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			Meth: 010.XX PCT			Meth: 020.20 PCT			Meth: 020.50 PCT			Meth: 020.XX PCT		
<u>Total Nitrogen</u>			<u>Total Nitrogen</u>			<u>Total Phosphate</u>			<u>Total Phosphate</u>			<u>Total Phosphate</u>		
007	12.10	.63	233	11.91	-1.06	<u>Spectrometric</u>			<u>ICP</u>			231	61.66	.34
040	12.10	.63	086	11.95 R	-1.13	292	61.61	.77	402	61.82	.63	406	61.65	.32
482	12.10	.63	073	11.89	-1.19	169	61.40	.44	Avg	61.09		456	61.60	.29
485	12.15	.63	324	11.90	-1.25	476	61.38	.25	474	61.00	-.08	292	61.61	.27
177	12.15	.46	292	11.87	-1.28	Avg	61.35		389	60.25	-.71	136	61.61	.27
035	12.15	.43	325	12.00 R	-1.32	489	61.08	-.81	451	60.06	-.87	487	61.56	.27
371	12.13	.34	444	11.86	-1.37	371	61.08	-.81	421	60.00 X	-.95	470	61.60	.24
254	12.11	.33	443	11.85 R	-1.67	258	61.07	-1.03	390	60.15	-1.04	Avg	61.42	
377	12.11	.22	042	11.81	-1.73	420	61.24	-1.19	472	60.25 S	-1.27	211	61.35	-.10
489	12.11	.20	495	11.78	-1.86	481	60.86	-1.45	307	58.20 S	-2.60	322	61.34	-.11
494	12.11	.20	406	11.71	-2.27	Meth: 020.30 PCT			Meth: 020.99 PCT			476	61.38	-.13
231	12.10	.19	027	11.70	-2.35	<u>Total Phosphate</u>			<u>Total Phosphate</u>			169	61.40	-.21
354	12.08	.16	131	11.69	-2.38	<u>Alka Quimociac</u>			<u>Other</u>			096	61.25	-.25
018	12.10	.15	389	11.50 A	-3.55	416	61.86	-.71	487	61.56	.88	494	61.36	-.32
157	12.10	.15	Meth: 020.10 PCT			Meth: 020.40 PCT			Meth: 020.99 PCT			247	61.16	-.38
390	12.08	.07	<u>Total Phosphate</u>			<u>Total Phosphate</u>			<u>Total Phosphate</u>			489	61.08	-.49
275	12.09	.06	<u>Grav Quimociac</u>			<u>Automated</u>			Meth: 020.99 PCT			371	61.08	-.49
037	12.08	.02	114	62.75 s	3.42	042	61.70 s	5.12	460	61.00	-.85	258	61.07	-.58
Avg	12.08		049	62.06	1.41	035	62.62	1.87	Meth: 020.XX PCT			474	61.00	-.60
393	12.06	-.16	090	61.95	.98	025	61.80 R	.69	<u>Total Phosphate</u>			420	61.24	-.61
025	12.05	-.16	493	61.80	.60	409	61.82	.48	495	67.45 s	8.55	460	61.00	-.61
211	12.05	-.16	470	61.68	.23	456	61.60	.21	483	66.00 s	6.95	157	60.95	-.67
460	12.05	-.19	136	61.61	.10	470	61.60	.10	042	61.70 s	4.18	481	60.86	-.80
493	12.06	-.20	Avg	61.59		Avg	61.54		114	62.75	1.96	486	60.72	-1.00
041	12.04	-.33	211	61.35	-.67	096	61.25	-.50	393	62.74	1.86	389	60.25	-1.65
247	12.08	-.34	322	61.34	-.69	247	61.16	-.66	291	62.74	1.85	451	60.06	-1.93
421	12.04 X	-.38	494	61.36 R	-.89	486	60.72	-1.42	035	62.62	1.68	421	60.00 X	-2.05
028	12.02	-.42	157	60.95	-1.79	Meth: 020.50 PCT			482	61.60 R	1.29	390	60.15 R	-2.12
230	12.00	-.47	095	59.63 s	-5.48	<u>Total Phosphate</u>			324	61.95 R	1.07	472	60.25 s	-2.42
105	12.00	-.52	Meth: 020.20 PCT			<u>ICP</u>			049	62.06	.94	095	59.63	-2.54
486	12.01	-.55	<u>Total Phosphate</u>			<u>Spectrometric</u>			090	61.95	.74	307	58.20 s	-4.80
114	11.99	-.56	<u>Spectrometric</u>			<u>Spectrometric</u>			025	61.80	.68	Meth: 030.20 PCT		
476	12.03	-.68	324	61.95 R	2.39	495	67.45 S	5.38	416	61.86	.68	<u>Insoluble Phosphate</u>		
451	11.98	-.73	230	61.85	1.47	483	66.00 S	4.40	402	61.82	.61	<u>Spectrometric</u>		
402	11.98	-.78	230	61.85	1.47	393	62.74	1.39	230	61.85	.61	474	0.02	.71
009	11.95	-.84	231	61.66	.91	291	62.74	1.38	409	61.82	.55			
072	11.94	-.85	406	61.65	.87	482	61.60 R	.87	493	61.80	.54			
420	11.97	-.90							470	61.68	.36			

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Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 030.40 PCT			Meth: 040.XX PCT			Meth: 041.50 PCT			Meth: 041.XX PCT			Meth: 041.XX PCT		
<u>Insoluble Phosphate</u>			<u>InDir Available Phos</u>			<u>Dir Available Phosph</u>			<u>Dir Available Phosph</u>			<u>Dir Available Phosph</u>		
<u>Automated</u>			409 61.82 .99			ICP			018 62.45 1.46			131 59.00 s -3.86		
096	0.09	.91	275	61.40	.61	040	61.95 R	1.57	040	61.95 R	1.33	325	45.00 s	-25.26
Avg	0.05		096	61.16	.37	043	61.71	1.09	029	62.25	1.29	Meth: 048.10 PCT		
409	0.00	-.82	489	61.08	.28	393	61.51	.88	254	62.32	1.29	<u>Water Soluble Phosph</u>		
			474	60.98	.19	377	61.15	.51	009	62.20	1.22	<u>Grav Quimociac</u>		
Meth: 030.XX PCT			Avg 60.79			Avg 60.68			106 62.04 1.19			444 61.30 .86		
<u>Insoluble Phosphate</u>			072 60.56 -.33			354 60.50 -.19			028 62.19 1.06			Avg 60.39		
096	0.09	1.30	488	58.53	-2.19	007	59.95	-.96	028	62.01	.81	300 59.48 -.87		
Avg	0.04		Meth: 041.10 PCT			055 59.25 -1.52			037 61.79 .80					
474	0.02	-.44	<u>Dir Available Phosph</u>			325 45.00 s -16.61			072 61.54 .54			Meth: 048.20 PCT		
409	0.00	-.79	<u>Grav Quimociac</u>			Meth: 041.60 PCT			485 61.66 .47			<u>Water Soluble Phosph</u>		
Meth: 040.20 PCT			254 62.32 1.43			<u>Dir Available Phosph</u>			230 61.80 .47			494 61.75 .44		
<u>InDir Available Phos</u>			009 62.20 1.39			<u>EDTA Extract</u>			177 61.78 .42			420 61.19 1.19		
<u>Spectrometri</u>			028 62.01 .80			018 62.45 1.35			027 61.74 .36			Avg 60.96		
489	61.08	.87	177	61.78	.23	029	62.25	1.20	233	61.71	.31	409 60.86 -.55		
Avg	61.03		Avg	61.67		106	62.04	1.16	043	61.71	.30	474 60.83 -.88		
474	60.98	-.86	102	61.60	-.15	028	62.19	.92	043	61.69	.28	Meth: 048.50 PCT		
Meth: 040.40 PCT			131 61.57 -.26			037 61.79 .77			231 61.65 .21			<u>Water Soluble Phosph</u>		
<u>InDir Available Phos</u>			485 61.66 -.57			494 61.75 .31			102 61.60 .14			ICP		
<u>Automated</u>			055 61.40 -.77			043 61.69 .10			131 61.57 .13			486 26.19 S .00		
409	61.82	.86	072	61.54	-.79	233	61.71	.08	Avg	61.51		Meth: 048.XX PCT		
Avg	61.49		105	61.38	-1.32	Avg	61.66		177	61.49	-.03	<u>Water Soluble Phosph</u>		
096	61.16	-.88	185	60.95	-1.57	231	61.65	-.03	393	61.51	-.11	444 61.30 .81		
Meth: 040.50 PCT			494 60.08 s -3.50			177 61.49 -.30			105 61.33 -.40			420 61.19 .67		
<u>InDir Available Phos</u>			Meth: 041.40 PCT			351 61.33 -.56			055 61.40 -.41			474 60.83 .22		
<u>ICP</u>			<u>Dir Available Phosph</u>			105 61.33 -.64			377 61.15 -.55			409 60.86 .19		
072	60.56	.88	<u>Automated</u>			073 61.37 -.88			095 61.20 -.64			Avg 60.73		
Avg	59.54		027 61.74 .71			486 60.24 -2.40			073 61.37 -.69			300 59.48 -1.82		
488	58.53	-.85	Avg 61.47			Meth: 041.99 PCT			105 61.38 -.88			486 26.19 s -49.86		
Meth: 040.99 PCT			095 61.20 -1.00			<u>Dir Available Phosph</u>			185 60.95 -.91					
<u>InDir Available Phos</u>			472 60.10 S -4.70			<u>Other</u>			354 60.50 -1.54			Meth: 050.00 PCT		
<u>Other</u>			131 59.00 S -6.42			230 61.80 .71			486 60.24 -1.94			<u>Soluble Potash</u>		
275	61.40	.71							494 60.08 -2.32			STPB Oxalate		
									007 59.95 -2.53			072 0.00 .00		
									472 60.10 s -2.83					
									055 59.25 A -3.47					

\* 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: 181.30 PPM			Meth: 191.30 PPM			Meth: 202.99 PPM			Meth: 221.XX PCT			Meth: 241.XX PCT						
Cadmium			Chromium			Acid Soluble Cobalt			Acid Soluble Copper			Acid Soluble Iron						
<u>ICP</u>			<u>ICP</u>			<u>Other</u>			393 1.4700 s 7.09			Avg 0.00						
035	0.78 S	6.53	486	0.54	-1.83	042	0.01	-0.87	230	0.7500 R	3.38	105	0.00	-0.90				
482	0.39 R	2.43	Meth: 191.99 PPM			Meth: 202.XX PPM			486	0.4400	1.65	102	0.00	-1.87				
486	0.23	.78	Chromium			<u>Acid Soluble Cobalt</u>			433	0.4050	1.48	Meth: 251.30 PPM						
474	0.20	.47	<u>Other</u>			035 0.59 R 3.05			042	0.2900	.96	Lead						
102	0.19	.35	409	0.62	.42	102	0.34	1.37	Avg	0.1262		<u>ICP</u>						
Avg	0.15		Avg	0.57		482	0.34	1.22	472	0.0010	-.66	482	1.46	1.05				
041	0.00	-1.60	042	0.53	-1.15	041	0.15	.32	043	0.0001	-.66	474	1.00	.24				
Meth: 181.99 PPM			Meth: 191.XX PPM			Avg 0.15			105	0.0001	-.67	Avg	0.84					
Cadmium			Chromium			494 0.03 -.71			354	0.0000	-.67	041	0.05	-1.16				
<u>Other</u>			009 12.65 1.32			409 0.01 -.88			495	0.0000	-.67	Meth: 251.99 PPM						
409	0.02	.83	041 11.75 R 1.19	Meth: 221.00 PCT			402 0.01 -.88			Meth: 241.00 PCT			Lead					
Avg	0.02		230 10.60 .89	Acid Soluble Copper			Meth: 241.00 PCT			Acid Soluble Iron			<u>Other</u>					
042	0.02	-.90	482 9.64 .70	<u>Atomic Absorption</u>			Acid Soluble Iron			Atomic Absorption			042 0.03 .71					
Meth: 181.XX PPM			035 9.45 .66			043 0.0001 .49			105 0.0001 -.12			Meth: 251.99 PPM			Lead			
Cadmium			102 5.84 -.08			Avg 0.0001			Meth: 241.30 PCT			Meth: 251.XX PPM			<u>Lead</u>			
035	0.78 s	6.60	409 0.62 -1.15	105 0.0001 -.12			Meth: 241.30 PCT			Acid Soluble Iron			482 1.46 R 2.32			474 1.00 1.29		
482	0.39 R	2.74	486 0.54 -1.16	Meth: 221.30 PCT			Acid Soluble Iron			<u>ICP</u>			Avg 0.36			041 0.05 -.63		
486	0.23	1.18	042 0.53 -1.17	Acid Soluble Copper			ICP			041 0.01 S 8.01			042 0.03 -.66			Meth: 261.00 PCT		
474	0.20	.89	Meth: 202.30 PPM			393 1.4700 S 6.37			035 0.00 R 1.31			Meth: 261.00 PCT			Acid Soluble Mangane			
102	0.19	.78	Acid Soluble Cobalt			230 0.7500 R 3.00			354 0.00 .61			Acid Soluble Mangane			<u>AA</u>			
Avg	0.11		<u>ICP</u>			486 0.4400 1.43			495 0.00 .61			105 0.000 0.71			474 1.00 1.29			
409	0.02	-.87	035 0.59 1.57			433 0.4050 1.28			389 0.00 .47			Avg 0.36			041 0.05 -.63			
042	0.02	-.92	102 0.34 .46			Avg 0.1410			393 0.00 .22			042 0.03 -.66			Meth: 261.30 PCT			
041	0.00	-1.06	482 0.34 .25			472 0.0010 -.67			Avg 0.00			Meth: 261.30 PCT			Acid Soluble Mangane			
Meth: 191.30 PPM			041 0.15 -.67			354 0.0000 -.68			102 0.00 -1.87			Acid Soluble Mangane			<u>AA</u>			
Chromium			494 0.03 -1.15			495 0.0000 -.68			Meth: 241.XX PCT			Acid Soluble Mangane			105 0.000 0.71			
<u>ICP</u>			Meth: 202.99 PPM			401 0.0000 -.68			Acid Soluble Iron			ICP			393 2.435 S7865.78			
009	12.65	1.12	Acid Soluble Cobalt			041 0.0000 -.68			041 0.01 s 8.22			393 2.435 S7865.78			041 0.000 1.29			
041	11.75 R	.98	<u>Other</u>			Meth: 221.99 PCT			035 0.00 R 1.36			Avg 0.000			495 0.000 -.65			
230	10.60	.60	409 0.01 .87			Acid Soluble Copper			354 0.00 .66			495 0.000 -.65			354 0.000 -.65			
482	9.64	.37	Avg 0.01			<u>Other</u>			495 0.00 .52			Meth: 261.30 PCT			Acid Soluble Mangane			
035	9.45	.33	Avg 0.01			042 0.2900 .71			393 0.00 .27			Acid Soluble Mangane			<u>ICP</u>			
Avg	8.12		Meth: 202.99 PPM			Meth: 221.99 PCT			Meth: 241.30 PCT			Acid Soluble Mangane			ICP			
102	5.84	-.55	Acid Soluble Cobalt			Acid Soluble Copper			Acid Soluble Iron			Acid Soluble Mangane			ICP			

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Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
<u>Meth: 261.XX PCT</u>			<u>Meth: 289.XX PPM</u>			<u>Meth: 291.XX PPM</u>			<u>Meth: 321.00 PCT</u>			<u>Meth: 321.XX PCT</u>		
<u>Acid Soluble Manganese</u>			<u>Molybdenum</u>			<u>Nickel</u>			<u>Acid Soluble Zinc</u>			<u>Acid Soluble Zinc</u>		
393	2.435	s7865.78	096	2.30	.46	486	0.13	-.63	460	0.000	1.20	009	0.000	-.52
105	0.000	R 2.33	035	2.16	.31	Meth: 301.30 PPM			Avg	0.000		043	0.000	-.52
041	0.000	1.29	041	1.95	.07	<u>Selenium</u>			043	0.000	-.30	102	0.000	-.52
Avg	0.000		Avg	1.95		<u>ICP</u>			105	0.000	-.98	105	0.000	-.52
495	0.000	-.65	409	1.70	-.33	230	0.95	.87	Meth: 321.30 PCT			495	0.000	-.52
354	0.000	-.65	230	1.71	-.34	Avg	0.55		<u>Acid Soluble Zinc</u>			354	0.000	-.52
Meth: 281.99 PPM			486	1.56	-.51	041	0.15	-.86	<u>ICP</u>					
<u>Mercury</u>			042	1.44	-.67	Meth: 301.99 PPM			393	4.305	s 4.24			
<u>Other</u>			494	1.37	-.77	<u>Selenium</u>			486	2.430	2.17			
042	0.09	.71	474	1.30	-.86	<u>Other</u>			247	1.730	1.40			
Meth: 289.30 PPM			009	1.10	-1.13	042	0.09	.88	230	0.850	R .43			
<u>Molybdenum</u>			Meth: 291.30 PPM			<u>Nickel</u>			Avg	0.463				
<u>ICP</u>			<u>ICP</u>			041			485	0.002	-.51			
433	3.66	2.03	041	3.95	1.86	Avg			472	0.001	-.51			
393	3.15	1.39	Avg	1.23		Meth: 301.XX PPM			009	0.000	-.51			
096	2.30	.34	035	1.02	-.16	<u>Selenium</u>			102	0.000	-.51			
035	2.16	.21	482	0.52	-.48	230	0.95	1.60	292	0.000	-.51			
Avg	2.02		102	0.51	-.49	Avg	0.30		495	0.000	-.51			
041	1.95	-.11	486	0.13	-.75	041	0.15	-.39	354	0.000	-.51			
230	1.71	-.41	Meth: 291.99 PPM			042	0.09	-.51	Meth: 321.99 PCT					
486	1.56	-.58	<u>Nickel</u>			485	0.01	-.72	<u>Acid Soluble Zinc</u>					
494	1.37	-.81	<u>Other</u>			Meth: 311.99 PCT			<u>Other</u>					
474	1.30	-.90	409	0.29	.88	<u>Sodium</u>			409	3.265	.71			
009	1.10	-1.15	Avg	0.24		<u>Other</u>			Meth: 321.XX PCT					
Meth: 289.99 PPM			042	0.20	-.85	035	0.05	R 2.82	<u>Acid Soluble Zinc</u>					
<u>Molybdenum</u>			Meth: 291.XX PPM			354	0.04	1.76	393	4.305	2.85			
<u>Other</u>			<u>Nickel</u>			Avg	0.02		409	3.265	R 2.12			
409	1.70	.87	041	3.95	2.30	494	0.02	-.12	486	2.430	1.38			
Avg	1.57		035	1.02	.11	482	0.02	-.22	247	1.730	.83			
042	1.44	-.87	Avg	0.94		300	0.02	-.31	230	0.850	.15			
Meth: 289.XX PPM			482	0.52	-.33	495	0.01	-1.12	Avg	0.666				
<u>Molybdenum</u>			102	0.51	-.33	Meth: 321.99 PCT			041	0.002	-.52			
433	3.66	2.26	409	0.29	-.50	<u>Acid Soluble Zinc</u>			472	0.001	-.52			
393	3.15	1.59	042	0.20	-.57	041			460	0.000	-.52			

\* 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	8	- 3.52	10.01	0.20	121.XX	6	0.19	1.05	0.21
001.99	9	0.00	0.74	0.68	144.70	2	0.00	0.00	0.00
001.XX	17	- 2.06	8.65	0.44	144.99	6	- 0.86	2.25	0.49
009.10	2	0.00	0.63	0.74	144.XX	9	- 0.08	2.37	0.46
009.XX	3	0.00	0.73	0.69	151.30	6	0.22	1.09	0.05
010.11	8	0.64	2.20	0.78	151.99	2	0.00	1.04	0.46
010.12	3	0.00	1.08	0.25	151.XX	8	0.21	1.13	0.05
010.60	59	0.03	0.99	0.45	165.99	3	0.000	0.948	0.484
010.99	3	6.93	12.00	5.16	165.XX	4	0.000	0.960	0.429
010.XX	72	0.15	1.75	0.78	181.30	6	1.48	2.74	0.48
020.10	11	- 0.26	2.16	0.48	181.99	2	0.00	1.18	0.24
020.20	12	0.15	1.02	0.62	181.XX	8	1.16	2.53	0.39
020.40	9	0.08	0.91	1.72	191.30	7	0.13	1.01	0.19
020.50	13	0.52	2.15	0.66	191.99	2	0.00	0.59	0.76
020.99	2	0.00	1.13	0.33	191.XX	9	0.13	1.04	0.14
020.XX	47	0.17	1.96	0.87	202.30	5	0.00	0.95	0.42
030.40	2	0.00	1.16	0.27	202.99	2	0.00	0.30	0.84
030.XX	3	0.00	1.07	0.27	202.XX	7	0.41	1.41	0.50
040.20	2	0.00	1.22	0.06	221.00	2	0.0000	0.3111	0.8376
040.40	2	0.00	1.21	0.13	221.30	8	1.1605	2.4997	0.2805
040.50	2	0.00	1.21	0.15	221.XX	11	0.9427	2.4387	0.2922
040.XX	7	0.00	1.03	0.11	241.30	7	1.23	3.09	0.58
041.10	12	- 0.28	1.24	0.63	241.XX	8	1.11	2.97	0.63
041.40	4	- 2.48	3.14	1.63	251.30	3	0.00	1.06	0.29
041.50	8	- 1.91	6.02	0.38	251.XX	4	0.55	1.43	0.35
041.60	14	0.00	0.91	0.45	261.30	4	11788.	23576.	4115.0
041.XX	32	- 0.96	4.55	0.76	261.XX	5	9430.8	21087.	3680.6
048.10	2	0.00	1.22	0.09	289.30	10	0.00	1.02	0.07
048.20	3	0.00	1.02	0.37	289.99	2	0.00	1.22	0.07
048.XX	6	- 8.31	20.37	0.25	289.XX	12	0.00	1.02	0.07
050.50	2	0.00	1.00	0.50	291.30	5	0.00	1.06	0.05
050.51	6	0.44	1.43	0.10	291.99	2	0.00	1.15	0.30
050.99	3	34.25	59.32	0.34	291.XX	7	0.00	1.04	0.04
050.XX	12	143.58	487.28	2.76	301.30	2	0.00	1.21	0.14
060.00	5	0.00	1.02	0.27	301.99	2	0.00	1.21	0.15
060.XX	5	0.00	1.02	0.27	301.XX	4	0.00	1.07	0.11
101.30	10	1.77	5.58	4.55	311.99	6	0.39	1.35	0.64
101.XX	11	1.66	5.46	4.43	311.XX	6	0.39	1.35	0.64
121.30	6	0.19	1.05	0.21	321.00	3	0.000	1.109	0.117

## Method Evaluation - Z Values Based on 1 Reports

<u>Method Code</u>	<u>Number Of Labs</u>	<u>Avg Bias of Labs</u>	<u>Std Dev of Biases</u>	<u>Std Dev Within Labs</u>	<u>Method Code</u>	<u>Number Of Labs</u>	<u>Avg Bias of Labs</u>	<u>Std Dev of Biases</u>	<u>Std Dev Within Labs</u>
321.30	11	0.425	1.572	0.019					
321.XX	14	0.183	1.141	0.152					