

- Pass 1 Results for 86 Labs - - Pass 2 Results for 85 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	4.48	0.32	0.02	7	4.48	0.32	0.02
Ammoniacal Nitrogen, Other		001.99	10	4.40	0.57	0.07	10	4.40	0.57	0.07
Method Group 001.XX PCT			17	4.43	0.48	0.05	16	4.34	0.32	0.04
Nitrate Nitrogen, Other		002.99	3	0.67	1.01	0.00	3	0.67	1.01	0.00
Water Insoluble Nitrogen, Meth I	945.01	003.10	3	3.46	0.07	0.04	3	3.46	0.07	0.04
Water Insoluble Nitrogen, Other		003.99	1	3.42	0.00	0.00	1	3.42	0.00	0.00
Method Group 003.XX PCT			4	3.45	0.06	0.03	4	3.45	0.06	0.03
Nitrogen From Urea, Urease (as N)	959.03	005.00	1	5.61	0.21	0.29	1	5.61	0.21	0.29
Nitrogen From Urea, Other		005.99	2	15.68	2.73	0.25	2	15.68	2.73	0.25
Method Group 005.XX PCT			3	12.32	5.62	0.26	3	12.32	5.62	0.26
Ammon & Nitrate N, Devarda	892.01	009.10	1	5.10	0.07	0.10	1	5.10	0.07	0.10
Total Nitrogen, Modified Comprehensive	978.02	010.11	9	25.25	0.24	0.14	9	25.25	0.24	0.14
Total Nitrogen, Salicylic	955.04D	010.12	4	25.26	0.17	0.17	4	25.26	0.17	0.17
Total Nitrogen, Combustion		010.60	53	25.52	0.28	0.18	51	25.52	0.27	0.15
Total Nitrogen, Other		010.99	4	25.03	0.39	0.14	4	25.03	0.39	0.14
Method Group 010.XX PCT			70	25.44	0.31	0.17	67	25.45	0.28	0.15
Total Phosphate, Spectrometric	958.01	020.20	2	0.15	0.12	0.01	2	0.15	0.12	0.01
Total Phosphate, ICP		020.50	2	0.03	0.00	0.00	2	0.03	0.00	0.00
Method Group 020.XX PCT			4	0.09	0.10	0.01	3	0.04	0.01	0.00
Insoluble Phosphate, Spectrometric	963.03C	030.20	1	0.04	0.00	0.01	1	0.04	0.00	0.01
InDir Available Phosphate, Spectrometri	960.02	040.20	1	0.02	0.01	0.01	1	0.02	0.01	0.01
InDir Available Phosphate, Other		040.99	1	4.82	0.04	0.05	1	4.82	0.04	0.05
Method Group 040.XX PCT			2	2.42	2.78	0.03	2	2.42	2.78	0.03
Dir Available Phosphate, Grav Quimociac	960.03E	041.10	2	0.11	0.01	0.00	2	0.11	0.01	0.00
Dir Available Phosphate, ICP		041.50	4	0.01	0.02	0.00	3	0.01	0.01	0.00
Dir Available Phosphate, EDTA Extract .	993.01	041.60	1	0.09	0.03	0.04	1	0.09	0.03	0.04
Method Group 041.XX PCT			7	0.05	0.05	0.01	6	0.04	0.05	0.00
Water Soluble Phosphate, Spectrometric	970.01	048.20	1	0.01	0.00	0.00	1	0.01	0.00	0.00
Soluble Potash, STPB Oxalate	958.02	050.00	14	5.38	0.19	0.14	14	5.38	0.19	0.14
Soluble Potash, STPB Citrate	969.04	050.10	1	5.53	0.04	0.05	1	5.53	0.04	0.05
Soluble Potash, AA (Oxalate)		050.30	5	5.30	0.12	0.09	5	5.30	0.12	0.09
Soluble Potash, AA (Citrate)		050.31	1	4.93	0.08	0.11	1	4.93	0.08	0.11
Soluble Potash, ICP (Oxalate)		050.50	12	5.30	0.19	0.10	11	5.30	0.19	0.08
Soluble Potash, ICP (Citrate)		050.51	9	5.27	0.14	0.05	8	5.23	0.07	0.03
Soluble Potash, Flame (Oxalate)	983.02(a)	050.60	3	5.29	0.07	0.06	3	5.29	0.07	0.06
Soluble Potash, Flame (Citrate)	983.02(b)	050.61	9	5.33	0.14	0.12	9	5.33	0.14	0.12
Soluble Potash, Other		050.99	18	5.30	0.12	0.08	18	5.30	0.12	0.08
Method Group 050.XX PCT			73	5.31	0.17	0.09	71	5.31	0.16	0.09
Free Water, Vacuum Oven	965.08B	060.00	4	1.34	0.23	0.08	4	1.34	0.23	0.08

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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
Acid Soluble Calcium, ICP		101.30	17	4.68	0.35	0.13	15	4.66	0.32	0.06
Acid Soluble Magnesium, AA	984.01	121.00	1	1.59	0.01	0.02	1	1.59	0.01	0.02
Acid Soluble Magnesium, ICP		121.30	16	1.62	0.10	0.02	15	1.63	0.10	0.02
Method Group 121.XX PCT			17	1.62	0.10	0.02	16	1.63	0.10	0.02
Water Soluble Magnesium, ICP		131.30	1	0.06	0.01	0.02	1	0.06	0.01	0.02
Sulfur, Gravimetric	980.02a	144.01	15	5.12	0.05	0.03	15	5.12	0.05	0.03
Sulfur, Spectrometric		144.70	1	5.75	0.16	0.23	1	5.75	0.16	0.23
Sulfur, Other		144.99	27	5.14	0.29	0.09	25	5.16	0.30	0.06
Method Group 144.XX PCT			44	5.14	0.25	0.07	41	5.13	0.23	0.06
Arsenic, ICP		151.30	4	1.02	0.50	0.51	4	1.02	0.50	0.51
Arsenic, Other		151.99	1	0.98	0.01	0.02	1	0.98	0.01	0.02
Method Group 151.XX PPM			5	1.01	0.44	0.41	5	1.01	0.44	0.41
Acid Soluble Boron, Other		165.99	3	0.005	0.004	0.002	3	0.005	0.004	0.002
Cadmium, ICP		181.30	8	0.45	0.30	0.04	7	0.44	0.32	0.01
Cadmium, Other		181.99	1	0.21	0.02	0.03	1	0.21	0.02	0.03
Method Group 181.XX PPM			9	0.42	0.30	0.03	8	0.41	0.31	0.02
Water Soluble Chlorine, Titrimetric ...	928.02	190.00	7	4.05	0.11	0.05	6	4.09	0.07	0.03
Water Soluble Chlorine, Other		190.99	7	3.61	0.56	0.07	7	3.61	0.56	0.07
Method Group 190.XX PCT			15	3.83	0.44	0.09	14	3.83	0.45	0.06
Chromium, ICP		191.30	9	145.27	31.28	21.61	8	142.31	26.03	11.57
Chromium, Other		191.99	1	14.88	0.33	0.47	1	14.88	0.33	0.47
Method Group 191.XX PPM			11	121.07	59.61	17.82	10	116.28	58.21	9.40
Acid Soluble Cobalt, AA		202.00	1	4.00	0.00	0.00	1	4.00	0.00	0.00
Acid Soluble Cobalt, ICP	965.11	202.30	12	20.75	9.06	1.33	12	20.75	9.06	1.33
Acid Soluble Cobalt, Other		202.99	1	5.40	0.22	0.31	1	5.40	0.22	0.31
Method Group 202.XX PPM			14	18.46	10.13	1.16	14	18.46	10.13	1.16
Acid Soluble Copper, Atomic Absorption	975.01	221.00	3	0.0088	0.0003	0.0002	3	0.0088	0.0003	0.0002
Acid Soluble Copper, ICP		221.30	16	0.0092	0.0008	0.0003	14	0.0091	0.0006	0.0001
Acid Soluble Copper, Other		221.99	1	0.0082	0.0000	0.0000	1	0.0082	0.0000	0.0000
Method Group 221.XX PCT			20	0.0091	0.0008	0.0002	18	0.0090	0.0006	0.0001
Acid Soluble Iron, Atomic Absorption ..	980.01	241.00	12	1.19	0.14	0.05	12	1.19	0.14	0.05
Acid Soluble Iron, ICP		241.30	33	1.19	0.24	0.05	34	1.17	0.27	0.05
Acid Soluble Iron, Other		241.99	3	1.25	0.16	0.03	3	1.25	0.16	0.03
Method Group 241.XX PCT			48	1.19	0.22	0.05	47	1.20	0.22	0.05
Lead, ICP		251.30	7	5.15	1.67	1.07	6	5.18	1.64	0.66
Lead, Other		251.99	1	2.80	0.11	0.15	1	2.80	0.11	0.15
Method Group 251.XX PPM			8	4.86	1.75	0.96	7	4.84	1.74	0.59
Acid Soluble Manganese, ICP	972.02a	261.30	11	0.016	0.001	0.001	11	0.016	0.001	0.001
Acid Soluble Manganese, Other		261.99	2	0.012	0.001	0.001	2	0.012	0.001	0.001

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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			14	0.016	0.002	0.001	13	0.016	0.002	0.001
Mercury, ICP		281.30	1	0.00	0.00	0.00	1	0.00	0.00	0.00
Molybdenum, ICP		289.30	15	13.58	2.24	0.86	14	13.49	2.23	0.63
Molybdenum, Other		289.99	1	17.25	0.64	0.90	1	17.25	0.64	0.90
Method Group 289.XX PPM			16	13.80	2.35	0.87	15	13.74	2.35	0.65
Nickel, ICP		291.30	9	75.82	11.12	4.50	8	76.56	10.87	2.26
Nickel, Other		291.99	2	35.52	28.41	2.58	2	35.52	28.41	2.58
Method Group 291.XX PPM			12	62.99	27.84	3.89	11	62.37	28.84	2.20
Selenium, ICP		301.30	2	0.93	1.09	0.25	2	0.93	1.09	0.25
Selenium, Other		301.99	1	0.44	0.03	0.05	1	0.44	0.03	0.05
Method Group 301.XX PPM			3	0.76	0.88	0.18	3	0.76	0.88	0.18
Sodium, Flame Photometric	974.01	311.30	1	0.05	0.00	0.00	1	0.05	0.00	0.00
Sodium, Other		311.99	7	0.06	0.01	0.00	6	0.06	0.01	0.00
Method Group 311.XX PCT			8	0.05	0.01	0.00	7	0.06	0.01	0.00
Acid Soluble Zinc, Atomic Absorption ..	975.02	321.00	5	0.043	0.006	0.002	5	0.043	0.006	0.002
Acid Soluble Zinc, ICP		321.30	18	0.041	0.005	0.002	16	0.041	0.004	0.001
Acid Soluble Zinc, Other		321.99	4	0.043	0.005	0.001	3	0.044	0.004	0.000
Method Group 321.XX PCT			27	0.042	0.005	0.002	24	0.042	0.005	0.001
Water Soluble Zinc, ICP		325.30	1	0.040	0.001	0.002	1	0.040	0.001	0.002
Water Soluble Zinc, Other		325.99	1	0.042	0.005	0.007	1	0.042	0.005	0.007
Method Group 325.XX PCT			2	0.041	0.003	0.005	2	0.041	0.003	0.005

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
<u>Meth: 001.10 PCT</u>			<u>Meth: 001.XX PCT</u>			<u>Meth: 003.XX PCT</u>			<u>Meth: 010.11 PCT</u>			<u>Meth: 010.60 PCT</u>		
<u>Ammoniacal Nitrogen</u>			<u>Ammoniacal Nitrogen</u>			<u>Water Insoluble Nitr</u>			<u>Total Nitrogen</u>			<u>Total Nitrogen</u>		
<u>MgO Distillation</u>									<u>Modified Comprehensi</u>			<u>Combustion</u>		
405	7.32 s	8.77	476	4.38	.10	475	3.64 s	4.93	090	25.21	-.29	024	25.64	.79
258	5.21	2.24	456	4.35	.07	090	3.51	1.10	473	25.18	-.43	324	25.70	.78
415	4.56	.24	291	4.35	.04	057	3.48	.92	260	25.13	-.49	296	25.71	.78
Avg	4.48		Avg	4.34		Avg	3.45		474	25.25	-.51	049	25.70	.70
309	4.41	-.22	027	4.31	-.12	027	3.42	-.47	105	25.22	-.75	007	25.70	.69
291	4.35	-.41	232	4.26	-.25	029	3.38	-1.11	470	24.79	-1.87	177	25.68	.63
456	4.35	-.41	420	4.26	-.28	<u>Meth: 005.00 PCT</u>			211	24.22 S	-4.27	086	25.66	.62
232	4.26	-.67	444	4.23	-.36	<u>Nitrogen From Urea</u>			309	23.80 S	-5.93	247	25.65	.58
444	4.23	-.78	475	4.04	-1.00	<u>Urease (as N)</u>			<u>Meth: 010.12 PCT</u>			450	25.65	.54
			368	3.97	-1.18				<u>Total Nitrogen</u>			035	25.62	.47
			419	3.70	-2.04				<u>Salicylic</u>			070	25.59	.44
<u>Meth: 001.99 PCT</u>			<u>Meth: 002.99 PCT</u>			<u>Meth: 005.99 PCT</u>						102	25.62	.43
<u>Ammoniacal Nitrogen</u>			<u>Nitrate Nitrogen</u>			<u>Nitrogen From Urea</u>						040	25.55	.23
<u>Other</u>			<u>Other</u>			<u>Other</u>						291	25.55	.15
137	24.64 s	35.76	275	1.97	1.29	309	18.04	.86	Avg	25.26		Avg	25.52	
471	5.87	2.59	Avg	0.67		Avg	15.68		185	25.17	-.60	231	25.50	-.08
255	4.53	.25	232	0.03	-.63	029	13.33	-.87	415	25.10	-.88	377	25.45	-.29
397	4.50	.18	027	0.00	-.66	<u>Meth: 005.XX PCT</u>			<u>Meth: 010.60 PCT</u>			354	25.43	-.33
096	4.48	.14	<u>Meth: 003.10 PCT</u>			<u>Nitrogen From Urea</u>			<u>Total Nitrogen</u>			325	25.50	-.38
Avg	4.40		<u>Water Insoluble Nitr</u>						<u>Combustion</u>			157	25.50	-.38
476	4.38	-.05	<u>Meth I</u>									009	25.48	-.42
027	4.31	-.17	090	3.51	.84	309	18.04	1.02	117	51.65 s	98.75	390	25.49	-.42
420	4.26	-.26	057	3.48	.74	029	13.33	.18	428	26.85 s	5.55	034	25.43	-.49
475	4.04	-.66	Avg	3.46		Avg	12.32		029	25.79 R	2.21	307	25.40	-.65
368	3.97	-.76	029	3.38	-1.12	232	5.61	-1.20	444	26.09	2.13	028	25.46	-.70
419	3.70	-1.25	<u>Meth: 009.10 PCT</u>			<u>Meth: 009.10 PCT</u>			255	26.07	2.07	275	25.34	-.72
			<u>Ammon & Nitrate N</u>			<u>Devarda</u>			475	25.59 R	1.39	096	25.30	-.83
									405	25.87	1.34	041	25.30	-.84
<u>Meth: 001.XX PCT</u>			<u>Meth: 003.99 PCT</u>			<u>Meth: 010.11 PCT</u>			023	25.83	1.27	393	25.28	-.88
<u>Ammoniacal Nitrogen</u>			<u>Water Insoluble Nitr</u>			<u>Total Nitrogen</u>			055	25.81	1.18	360	25.29	-.91
137	24.64 s	63.79	<u>Other</u>			<u>Modified Comprehensi</u>			368	25.77	1.07	042	25.34	-1.00
405	7.32 s	9.35	027	3.42	.00	114	25.62	1.53	233	25.73	1.00	027	25.24	-1.09
471	5.87 A	4.78	475	3.64 S	.00	456	25.48	1.05	131	25.73	.86	057	25.24	-1.10
258	5.21	2.71	Avg	3.42		460	25.35	.47	043	25.55	.83	389	25.20	-1.18
415	4.56	.67				Avg	25.25		106	25.74	.83	402	25.19	-1.26
255	4.53	.62							136	25.74	.82	095	25.14	-1.43
397	4.50	.49							292	25.73	.80	073	25.07	-1.69
096	4.48	.43												
309	4.41	.21												

* 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: 010.60 PCT			Meth: 010.XX PCT			Meth: 010.XX PCT			Meth: 030.20 PCT			Meth: 041.60 PCT		
Total Nitrogen			Total Nitrogen			Total Nitrogen			Insoluble Phosphate			Dir Available Phosph		
<u>Combustion</u>									<u>Spectrometric</u>			<u>EDTA Extract</u>		
232	25.07	-1.70	086	25.66	.79	185	25.17	-1.01	474	0.04	-.71	024	0.09	.71
426	25.08	-1.77	247	25.65	.75	105	25.22	-1.03	Meth: 040.20 PCT			Meth: 041.XX PCT		
422	25.01	-1.90	450	25.65	.73	095	25.14	-1.12	InDir Available Phos			<u>Dir Available Phosph</u>		
Meth: 010.99 PCT			035	25.62	.64	260	25.13	-1.14	<u>Spectrometri</u>			185 0.11 1.41		
Total Nitrogen			028	25.46	.64	476	25.12	-1.19	474 0.02 .71			022 0.10 1.19		
<u>Other</u>			102	25.62	.63	415	25.10	-1.23	Meth: 040.99 PCT			024 0.09 R 1.07		
371	25.49	1.24	114	25.62	.60	073	25.07	-1.36	InDir Available Phos			Avg 0.04		
476	25.12	.23	070	25.59	.59	232	25.07	-1.38	<u>Other</u>			354 0.03 -.27		
Avg	25.03		371	25.49	.49	426	25.08	-1.47	455 4.82 .71			393 0.02 X -.46		
420	25.00	-.19	456	25.48	.42	422	25.01	-1.56	Meth: 040.XX PCT			325 0.00 -.95		
030	24.50	-1.37	390	25.49	.41	420	25.00	-1.61	InDir Available Phos			377 0.00 -.95		
Meth: 010.XX PCT			040	25.55	.40	470	24.79	-2.34	<u>InDir Available Phos</u>			Meth: 048.20 PCT		
Total Nitrogen			325	25.50	.40	030	24.50 A	-3.37	455 4.82 .87			Water Soluble Phosph		
117	51.65 s	93.71	157	25.50	.40	211	24.22 s	-4.40	Avg 2.42			<u>Spectrometric</u>		
428	26.85 s	5.47	009	25.48	.38	309	23.80 s	-5.84	474 0.02 -.87			474 0.01 .00		
444	26.09	2.25	291	25.55	.36	Meth: 020.20 PCT			Meth: 041.10 PCT			Meth: 050.00 PCT		
029	25.79 R	2.21	231	25.50	.16	Total Phosphate			Dir Available Phosph			Soluble Potash		
255	26.07	2.19	Avg	25.45		<u>Spectrometric</u>			<u>Grav Quimociac</u>			<u>STPB Oxalate</u>		
405	25.87	1.50	354	25.43	-.10	420	0.25	.87	185 0.11 .87			022 5.65 1.59		
023	25.83	1.42	377	25.45	-.13	Avg	0.15		Avg 0.11			114 5.60 1.33		
475	25.59 R	1.38	034	25.43	-.35	474	0.05	-.86	022 0.10 -.87			009 5.54 .85		
055	25.81	1.33	455	25.35	-.40	Meth: 020.50 PCT			Meth: 041.50 PCT			055 5.53 .77		
368	25.77	1.22	460	25.35	-.40	Total Phosphate			Dir Available Phosph			211 5.52 .71		
233	25.73	1.14	275	25.34	-.47	<u>ICP</u>			<u>ICP</u>			470 5.51 .66		
131	25.73	1.03	307	25.40	-.49	389	0.04	.87	354 0.03 R 2.17			Avg 5.38		
106	25.74	1.01	096	25.30	-.55	Avg	0.03		393 0.02 X 1.29			090 5.33 -.42		
136	25.74	1.01	041	25.30	-.57	422	0.03	-.87	Avg 0.01			231 5.32 -.42		
292	25.73	.99	393	25.28	-.61	Meth: 020.XX PCT			325 0.00 -.64			049 5.26 -.69		
324	25.70	.95	360	25.29	-.65	Total Phosphate			377 0.00 -.64			102 5.30 -.72		
296	25.71	.95	397	25.40 X	-.73	420	0.25 R	22.76	Meth: 041.50 PCT			397 5.25 -.74		
024	25.64	.90	027	25.24	-.81	474	0.05	1.25	Dir Available Phosph			296 5.25 -.74		
049	25.70	.89	042	25.34	-.81	Avg	0.04		<u>ICP</u>			057 5.29 -.83		
007	25.70	.89	057	25.24	-.82	389	0.04	-.36	354 0.03 R 2.17			258 5.04 -1.94		
043	25.55	.86	074	25.25	-.85	474	0.05	1.25	393 0.02 X 1.29			257 4.30 s -5.67		
177	25.68	.83	090	25.21	-.88	Avg	0.04		Avg 0.01					
			389	25.20	-.88	389	0.04	-.36	325 0.00 -.64					
			402	25.19	-.97	422	0.03	-.90	377 0.00 -.64					
			473	25.18	-1.00									

* 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: 050.10 PCT			Meth: 050.51 PCT			Meth: 050.99 PCT			Meth: 050.XX PCT			Meth: 050.XX PCT		
Soluble Potash			Soluble Potash			Soluble Potash			Soluble Potash			Soluble Potash		
<u>STPB Citrate</u>			<u>ICP (Citrate)</u>			<u>Other</u>								
117	5.53	-.71	432	6.34 s	15.98	322	5.52	1.82	324	5.34 R	1.13	009	5.25	-.44
			023	5.61 R	5.51	471	5.47	1.58	029	5.42	1.09	296	5.25	-.49
			043	5.33	1.52	360	5.39	.75	471	5.47	1.08	397	5.25	-.51
Meth: 050.30 PCT			007			325			456			309		
Soluble Potash			475			177			035			102		
<u>AA (Oxalate)</u>			009			232			360			389		
185	5.35	1.27	Avg	5.23		275	5.33	.35	073	5.39	.47	393	5.20	-.72
073	5.39	.74	389	5.20	-.47	247	5.34	.35	090	5.33	.38	368	5.21	-.73
043	5.34	.46	393	5.20	-.55	027	5.33	.35	325	5.35	.38	377	5.19	-.79
040	5.30	.01	377	5.19	-.68	255	5.32	.30	231	5.32	.31	057	5.29	-.82
Avg	5.30		291	5.12	-1.63	137	5.33	.23	043	5.34	.31	450	5.23	-.86
231	5.12	-1.46				Avg	5.30		105	5.34	.31	034	5.18	-.86
						476	5.26	-.46	043	5.33	.27	426	5.24	-.97
Meth: 050.31 PCT			Meth: 050.60 PCT			442			131			291		
Soluble Potash			Soluble Potash			042			5.28			5.12		
<u>AA (Citrate)</u>			<u>Flame (Oxalate)</u>			131			5.34			231		
030	4.93	-.71	105	5.34	.86	368	5.21	-.91	177	5.35	.24	041	5.12	-1.26
			415	5.33	.57	450	5.23	-1.13	275	5.33	.23	402	5.11	-1.30
Meth: 050.50 PCT			Avg			402			055			422		
Soluble Potash			309			260			027			260		
<u>ICP (Oxalate)</u>			5.21			5.10			5.33			5.10		
420	5.67	1.97	Meth: 050.61 PCT			307			247			419		
070	5.56	1.39	Soluble Potash			460			255			258		
324	5.34 R	.98	<u>Flame (Citrate)</u>			Meth: 050.XX PCT			415			030		
055	5.35	.27	028			<u>Soluble Potash</u>			024			307		
390	5.30	.27	5.55			432			137			460		
Avg	5.30		029			6.34 s			Avg			257		
292	5.27	-.18	456			5.65			040			4.30 s		
444	5.27	-.23	131			2.28			5.30					
106	5.28	-.27	024			2.20			007			Meth: 060.00 PCT		
354	5.27	-.29	Avg			1.96			475			Free Water		
426	5.24	-.79	105			1.88			292			<u>Vacuum Oven</u>		
422	5.07	-1.20	035			1.53			105			096		
419	5.03	-1.49	034			1.49			390			Avg		
			041			1.44			444			1.34		
			5.18			1.33			106			1.31		
			-1.50			1.31			354			-.43		
						1.27			476			1.06		
						1.25			049			-1.22		
						1.21			042			474		

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Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 101.30 PCT Acid Soluble Calcium			Meth: 121.30 PCT Acid Soluble Magnesi			Meth: 144.01 PCT Sulfur			Meth: 144.99 PCT Sulfur			Meth: 144.XX PCT Sulfur		
<u>ICP</u>			<u>ICP</u>			<u>Gravimetric</u>			<u>Other</u>					
354	5.35	2.14	291	1.60	-.35	324	5.18	1.50	363	5.21	.17	324	5.18	.23
009	5.18 R	1.97	035	1.54	-.91	073	5.15	1.35	475	5.19	.11	055	5.14	.16
422	5.29	1.96	389	1.54	-.95	055	5.14	.89	Avg	5.16		043	5.16	.11
027	4.92	.84	307	1.53	-1.00	043	5.16	.89	027	5.07	-.30	102	5.14	.04
057	4.77	.46	232	1.55 R	-1.02	057	5.13	.74	177	5.07	-.31	029	5.14	.03
420	4.74	.28	474	1.53	-1.05	296	5.13	.55	023	5.05	-.36	Avg	5.13	
363	4.67	.05	102	1.50	-1.29	102	5.14	.52	291	5.05	-.37	470	5.13	-.04
Avg	4.66					029	5.14	.45	247	5.04	-.41	296	5.13	-.09
390	4.61	-.18	Meth: 121.XX PCT			470	5.13	.39	037	5.03	-.44	105	5.11	-.10
131	4.62	-.25	<u>Acid Soluble Magnesi</u>			Avg	5.12		255	4.99	-.54	057	5.13	-.13
291	4.56	-.32	422	1.86	2.39	105	5.11	-.25	231	4.94	-.74	040	5.10	-.14
102	4.50	-.49	354	1.79	1.71	040	5.10	-.34	368	5.00 R	-.78	397	5.07	-.28
474	4.50	-.50	057	1.68	.63	397	5.07	-1.09	232	5.03 R	-.79	095	5.07	-.29
389	4.50	-.50	027	1.68	.55	095	5.07	-1.12	307	4.92	-.86	027	5.07	-.29
035	4.38	-.90	363	1.65	.40	371	5.06	-1.24	390	4.91	-.87	177	5.07	-.31
307	4.37	-.92	131	1.65	.25	114	5.04	-1.79	450	4.87	-.98	371	5.06	-.32
232	4.41 R	-1.31	420	1.65	.20	444	4.91 s	-4.55	292	4.82	-1.13	023	5.05	-.37
393	4.16 X	-1.58	009	1.63	.12				419	4.83	-1.14	291	5.05	-.39
			Avg	1.63		Meth: 144.70 PCT			393	4.64	-1.76	114	5.04	-.42
Meth: 121.00 PCT			390	1.62	-.22	Sulfur						247	5.04	-.43
Acid Soluble Magnesi			291	1.60	-.33	<u>Spectrometric</u>			Meth: 144.XX PCT			037	5.03	-.48
<u>AA</u>			043	1.59	-.39	474	5.75	.71	<u>Sulfur</u>			255	4.99	-.61
043	1.59	.71	035	1.54	-.91	Meth: 144.99 PCT			473	16.01 s	48.13	231	4.94	-.87
Meth: 121.30 PCT			389	1.54	-.95	Sulfur			035	6.64 s	6.68	368	5.00 R	-.97
Acid Soluble Magnesi			307	1.53	-1.00	<u>Other</u>			137	5.90 A	3.40	444	4.91	-.98
<u>ICP</u>			232	1.55 R	-1.03	473	16.01 s	36.44	474	5.75	2.77	232	5.03 R	-.99
422	1.86	2.30	474	1.53	-1.06	035	6.64 s	4.99	354	5.65	2.32	307	4.92	-1.03
354	1.79	1.64	102	1.50	-1.30	137	5.90	2.50	009	5.59	2.06	390	4.91	-1.04
057	1.68	.59	Meth: 131.30 PCT			354	5.65	1.68	157	5.48	1.53	450	4.87	-1.19
027	1.68	.51	Water Soluble Magnes			009	5.59	1.48	117	5.42	1.28	292	4.82	-1.38
363	1.65	.37	<u>ICP</u>			157	5.48	1.08	360	5.42	1.26	419	4.83	-1.39
131	1.65	.22	027	0.06	.71	117	5.42	.89	422	5.36	1.02	393	4.64	-2.21
420	1.65	.17				117	5.42	.87	389	5.25	.57	Meth: 151.30 PPM		
009	1.63	.10				360	5.42	.70	275	5.23	.46	Arsenic		
Avg	1.63					422	5.36	.70	363	5.21	.33	<u>ICP</u>		
390	1.62	-.22				389	5.25	.36	475	5.19	.25	232	2.04 s	2.34
						275	5.23	.27	073	5.15	.24	368	1.25	1.02

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Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 151.30 PPM			Meth: 181.30 PPM			Meth: 190.99 PCT			Meth: 191.30 PPM			Meth: 202.30 PPM		
Arsenic			Cadmium			Water Soluble Chlori			Chromium			Acid Soluble Cobalt		
<u>ICP</u>			<u>ICP</u>			<u>Other</u>			<u>ICP</u>			<u>ICP</u>		
390	1.32	.62	390	0.26	-.53	275	4.24	1.13	Avg	142.31		057	28.55	.87
Avg	1.02		102	0.21	-.70	009	4.04	.78	102	132.88	-.36	035	26.95	.68
474	1.00	-.04	450	0.00	-1.35	300	4.00	.70	037	128.22	-.59	037	26.42	.63
450	0.50	-1.44				471	3.97	.65	232	120.00 X	-1.16	368	26.40	.62
			Meth: 181.99 PPM			Avg			419	112.00	-1.16	390	21.55	.13
Meth: 151.99 PPM			Cadmium			455			474	9.50 s	-5.10	Avg		
Arsenic			<u>Other</u>			368			Meth: 191.99 PPM			232		
<u>Other</u>			231			460			Chromium			419		
231	0.98	.71	Meth: 181.XX PPM			Meth: 190.XX PCT			<u>Other</u>			102		
			<u>Cadmium</u>			<u>Water Soluble Chlori</u>			231			102		
			419	1.04	2.01	422	8.10 s	9.39	Meth: 191.XX PPM			027		
			009	0.65	.77	275	4.24	.90	Chromium			009		
			232	0.51 R	.44	028	4.19	.78	450			231		
			474	0.50	.30	043	4.12	.63	192.00			5.40		
			Avg	0.41		029	4.10	.59	1.32			.71		
			368	0.40	-.02	057	4.08	.57	027			1.26		
			390	0.26	-.46	009	4.04	.47	157.85			.57		
			102	0.21	-.64	102	4.02	.41	368			149.50		
			231	0.21	-.65	296	4.02	.41	035			146.00		
			450	0.00	-1.31	300	4.00	.37	232			120.00 X		
			Meth: 190.00 PCT			471			102			132.88		
			Water Soluble Chlori			055			037			128.22		
			<u>Titrimetric</u>			Avg			Avg			116.28		
			422	8.10 s	59.62	444			419			112.00		
			028	4.19	1.45	455			231			14.88		
			043	4.12	.51	368			474			9.50		
			029	4.10	.19	460			Meth: 202.00 PPM			232		
			Avg	4.09		Meth: 191.30 PPM			Acid Soluble Cobalt			419		
			296	4.02	-1.00	Chromium			AA			102		
			102	4.02	-1.00	<u>ICP</u>			474			14.99		
			057	4.08	-1.05	027			4.00			-.37		
			055	3.85 R	-3.83	450			.00			10.70		
			444	3.74 s	-5.99	009			Meth: 202.30 PPM			231		
						368			Acid Soluble Cobalt			5.40		
						035			<u>ICP</u>			474		
						149.50			450			4.00		
						146.00			30.60			-1.29		
						.16			29.48			-1.43		
									.96			-1.82		

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Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 221.00 PCT			Meth: 221.XX PCT			Meth: 241.00 PCT			Meth: 241.30 PCT			Meth: 241.XX PCT		
<u>Acid Soluble Copper</u>			<u>Acid Soluble Copper</u>			<u>Acid Soluble Iron</u>			<u>Acid Soluble Iron</u>			<u>Acid Soluble Iron</u>		
<u>Atomic Absorption</u>			<u>Atomic Absorption</u>			<u>Atomic Absorption</u>			<u>ICP</u>			<u>ICP</u>		
043	0.0090	.87	471	0.0545 s	98.24	397	1.12	-.56	231	1.02	-.58	389	1.30	.48
095	0.0090	.47	324	0.0164 s	13.57	363	1.08	-.82	102	1.02	-.61	390	1.28	.47
Avg	0.0088		354	0.0140 s	9.79	030	1.02	-1.24	114	0.82	-1.32	035	1.30	.46
474	0.0084	-1.23	450	0.0115 R	4.66	258	0.93	-1.88	402	0.76	-1.55	368	1.24	.31
			247	0.0100	1.85	474	0.21 s	-6.99	475	0.63	-2.03	255	1.26	.31
			402	0.0100	1.85				292	0.56	-2.27	095	1.26	.29
			255	0.0094	1.06	Meth: 241.30 PCT			426	0.52 S	-2.45	043	1.25	.26
Meth: 221.30 PCT			095 0.0094 .81			Acid Soluble Iron			247	0.38 s	-2.97	422	1.25	.25
<u>Acid Soluble Copper</u>			057 0.0092 .81			<u>ICP</u>						157	1.24	.21
<u>ICP</u>			232 0.0094 .77			432 1.59 1.56			Meth: 241.99 PCT			476	1.22	.14
324	0.0164 s	13.20	043 0.0090 .30	473 1.58 1.54	Acid Soluble Iron			Avg			307	1.17	-.14	
354	0.0140 s	9.50	368 0.0090 .08	117 1.52 1.30	<u>Other</u>						460	1.15	-.31	
450	0.0115 R	4.43	102 0.0090 .04	354 1.48 1.15	137 1.43 1.18						371	1.12	-.35	
402	0.0100	1.66	027 0.0090 .04	450 1.36 .70	Avg 1.25						397	1.12	-.39	
247	0.0100	1.66	Avg 0.0090	057 1.35 .69	476 1.22 -.20						419	1.12	-.39	
255	0.0094	.92	095 0.0090 -.10	360 1.34 .64	042 1.09 -1.03						042	1.09	-.52	
057	0.0092	.72	433 0.0088 -.41	106 1.34 .64	Meth: 241.XX PCT						363	1.08	-.56	
095	0.0094	.64	422 0.0086 -.67	055 1.32 .62	<u>Acid Soluble Iron</u>						291	1.06	-.62	
232	0.0094	.59	389 0.0085 -.86	027 1.33 .58	432 1.59 1.79						420	1.05	-.69	
Avg	0.0091		474 0.0084 -1.06	324 1.32 .56	473 1.58 1.76						232	1.07 R	-.70	
368	0.0090	-.09	363 0.0083 -1.22	131 1.31 .52	117 1.52 1.46						433	1.04	-.72	
102	0.0090	-.12	035 0.0083 -1.24	389 1.30 .49	354 1.48 1.29						444	1.03	-.77	
027	0.0090	-.12	231 0.0082 -1.41	035 1.30 .47	137 1.43 1.07						030	1.02	-.83	
433	0.0088	-.57	009 0.0084 R -1.52	390 1.28 .47	057 1.35 .73						231	1.02	-.83	
422	0.0086	-.83	419 0.0001 s -16.00	255 1.26 .34	450 1.36 .73						102	1.02	-.86	
389	0.0085	-1.02	Meth: 241.00 PCT			177 1.34 .67						258	0.93	-1.24
363	0.0083	-1.37	Acid Soluble Iron			106 1.34 .66						114	0.82	-1.73
035	0.0083	-1.38	<u>Atomic Absorption</u>			360 1.34 .67						402	0.76	-2.01
009	0.0084 R	-1.63	177 1.34 1.10	157 1.24 .27	106 1.34 .66						475	0.63	-2.60	
419	0.0001 s	-15.93	028 1.33 1.04	Avg 1.19	055 1.32 .65						292	0.56	-2.89	
Meth: 221.99 PCT			095 1.33 .99	307 1.17 -.03	028 1.33 .64						426	0.52 s	-3.11	
<u>Acid Soluble Copper</u>			296 1.32 .94	419 1.12 -.24	095 1.33 .61						247	0.38 s	-3.74	
<u>Other</u>			029 1.30 .81	291 1.06 -.42	027 1.33 .59						474	0.21 s	-4.54	
231	0.0082	.00	043 1.25 .45	420 1.05 -.48	296 1.32 .58									
471	0.0545 S	.00	Avg 1.19	232 1.07 X -.49	324 1.32 .57									
Avg	0.0082		460 1.15 -.45	433 1.04 -.49	131 1.31 .51									
			371 1.12 -.50	444 1.03 -.53	029 1.30 .50									

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Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 251.30 PPM			Meth: 261.30 PCT			Meth: 289.30 PPM			Meth: 289.XX PPM			Meth: 291.XX PPM		
Lead			Acid Soluble Manganese			Molybdenum			Molybdenum			Nickel		
<u>ICP</u>			<u>ICP</u>			<u>ICP</u>			<u>ICP</u>			<u>ICP</u>		
419	7.05	1.17	035	0.016	-.80	450	16.50	1.37	102	13.87	.11	035	75.20	.45
009	6.57	.87	131	0.016	-.92	232	14.79 R	1.11	433	13.82	.05	247	75.00	.44
368	5.65	.44	389	0.016	-.96	057	15.45	.92	Avg	13.74		102	74.23	.41
450	5.50	.36	102	0.015	-1.30	009	15.48	.91	027	11.78	-.84	419	66.25	.14
Avg	5.18		422	0.015 s	-4.75	368	15.30	.86	419	11.55	-.93	Avg	62.37	
232	4.97 R	-1.08	419	0.000 s	-14.87	035	15.05	.70	037	11.22	-1.11	027	60.00	-.08
102	3.31	-1.14	Meth: 261.99 PCT			247	14.75	.58	474	9.50	-1.81	037	60.06	-.12
474	3.00	-1.33	Acid Soluble Manganese			390	14.50	.46	231	2.47 s	-4.79	474	2.50	-2.08
Meth: 251.99 PPM			<u>Other</u>			102	13.87	.20	Meth: 291.30 PPM			Meth: 301.30 PPM		
Lead			363	0.014	.91	433	13.82	.15	Nickel			Selenium		
<u>Other</u>			Avg	0.012		Avg	13.49		<u>ICP</u>			<u>ICP</u>		
231	2.80	.71	474	0.011	-.82	027	11.78	-.77	450	95.00	1.72	368	1.85	.88
Meth: 251.XX PPM			Meth: 261.XX PCT			419	11.55	-.87	009	88.16	1.08	Avg	0.93	
Lead			Acid Soluble Manganese			037	11.22	-1.07	368	78.65	.24	450	0.00	-.85
419	7.05	1.29	009	0.018	1.42	255	10.08	-1.54	Avg	76.56		Meth: 301.99 PPM		
232	4.97 R	1.02	354	0.018	.97	474	9.50	-1.81	035	75.20	-.14	Selenium		
009	6.57	1.01	247	0.017	.85	Meth: 289.99 PPM			247	75.00	-.14	<u>Other</u>		
368	5.65	.56	390	0.017	.68	Molybdenum			102	74.23	-.22	296		
450	5.50	.48	057	0.017	.60	<u>Other</u>			419	66.25	-.96	0.44 .71		
Avg	4.84		232	0.016	.19	422	25.00 S	14.49	232	69.90 R	-1.20	Meth: 301.XX PPM		
102	3.31	-.88	027	0.016	.11	028	17.25	.71	027	60.00	-1.52	Selenium		
474	3.00	-1.06	Avg	0.016		Avg	17.25		474	2.50 s	-6.81	368		
231	2.80	-1.17	035	0.016	-.14	231	2.47 S	-23.22	Meth: 291.99 PPM			1.85 1.27		
Meth: 261.30 PCT			389	0.016	-.32	Meth: 289.XX PPM			Nickel			Avg		
Acid Soluble Manganese			131	0.016	-.37	Molybdenum			<u>Other</u>			0.76		
<u>ICP</u>			102	0.015	-.44	422	25.00 s	5.23	037			296		
009	0.018	1.82	363	0.014	-1.29	028	17.25	1.50	Avg			0.44		
354	0.018	1.09	474	0.011	-2.41	450	16.50	1.19	231			-.37		
247	0.017	1.06	422	0.015 R	-2.77	232	14.79 R	.99	Meth: 291.XX PPM			450		
390	0.017	.58	419	0.000 s	-8.57	057	15.45	.76	Nickel			0.00		
057	0.017	.51	Meth: 281.30 PPM			009	15.48	.75	037			-.87		
Avg	0.016		Mercury			368	15.30	.71	450			1.14		
232	0.016	-.25	<u>ICP</u>			035	15.05	.56	009			.90		
027	0.016	-.38	450	0.00	.00	247	14.75	.44	368			.57		
						390	14.50	.33	232			.47		
									Meth: 291.XX PPM			Meth: 311.30 PCT		
									Nickel			Sodium		
									450			Flame Photometric		
									037			105		
									Avg			0.05 .71		
									231			Meth: 311.99 PCT		
									10.98			Sodium		
									-.86			<u>Other</u>		
									Meth: 291.XX PPM			422		
									Nickel			0.17 s 8.49		
									450					
									95.00					
									009					
									88.16					
									368					
									78.65					
									232					
									69.90 R					

* 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	1.10	3.25	0.06	151.30	5	0.41	1.12	0.79
001.99	11	3.25	10.83	0.07	151.XX	6	0.39	1.16	0.81
001.XX	19	4.10	14.67	0.10	165.99	3	0.000	1.062	0.284
002.99	3	0.00	1.12	0.00	165.XX	3	0.000	1.062	0.284
002.XX	3	0.00	1.12	0.00	181.30	8	0.03	0.97	0.11
003.10	3	0.00	1.00	0.41	181.XX	9	0.04	0.97	0.11
003.99	2	0.00	0.00	0.00	190.00	9	5.65	20.34	1.15
003.XX	5	0.65	1.68	1.70	190.99	7	0.00	1.04	0.09
005.99	2	0.00	1.22	0.06	190.XX	16	0.57	2.53	0.14
005.XX	3	0.00	1.12	0.03	191.30	10	- 0.41	1.89	0.69
010.11	11	- 0.92	2.25	0.40	191.XX	11	0.08	1.00	0.29
010.12	4	0.00	0.81	0.62	202.30	12	0.00	1.02	0.10
010.60	55	1.89	13.22	1.95	202.XX	14	0.00	1.02	0.08
010.99	4	0.00	1.05	0.22	221.00	3	0.0000	1.0458	0.3227
010.XX	74	1.16	10.89	1.60	221.30	19	0.4747	5.4323	0.9910
020.20	2	0.00	1.22	0.06	221.99	2	0.0000	0.0000	0.0000
020.50	2	0.00	1.22	0.00	221.XX	23	4.0025	17.819	11.177
020.XX	4	5.68	11.40	0.54	241.00	13	- 0.54	2.16	0.19
040.XX	2	0.00	1.22	0.01	241.30	35	- 0.08	1.10	0.13
041.10	2	0.00	1.22	0.00	241.99	3	0.00	1.11	0.12
041.50	4	0.53	1.40	0.21	241.XX	50	- 0.25	1.33	0.15
041.XX	7	0.14	1.03	0.17	251.30	7	- 0.02	0.93	0.46
050.00	15	- 0.38	1.70	0.44	251.XX	8	0.01	0.94	0.41
050.30	5	0.00	0.84	0.57	261.30	13	- 1.243	4.195	1.325
050.50	12	0.02	0.94	0.38	261.99	2	0.000	1.158	0.281
050.51	10	2.13	5.22	0.48	261.XX	15	- 0.601	2.390	0.742
050.60	3	0.00	0.97	0.45	289.30	15	0.04	0.98	0.29
050.61	9	0.00	0.88	0.51	289.99	3	- 3.68	17.99	4.55
050.99	20	- 0.42	1.57	0.61	289.XX	18	0.02	1.88	0.56
050.XX	70	- 0.10	1.50	0.47	291.30	10	- 0.74	2.32	0.35
060.00	5	- 0.62	1.65	1.07	291.99	2	0.00	1.22	0.06
060.XX	5	- 0.62	1.65	1.07	291.XX	12	0.02	0.98	0.12
101.30	17	0.05	1.04	0.39	301.30	2	0.00	1.20	0.16
101.XX	17	0.05	1.04	0.39	301.XX	3	0.00	1.10	0.17
121.30	16	- 0.05	1.00	0.20	311.99	8	1.02	3.11	0.45
121.XX	17	- 0.05	1.00	0.20	311.XX	9	0.99	3.18	0.46
144.01	16	- 0.28	1.42	0.47	321.00	6	15.663	38.376	1.824
144.99	29	1.40	6.87	0.21	321.30	21	- 0.009	2.758	1.350
144.XX	46	1.24	7.21	0.24	321.99	4	- 0.418	1.237	0.113

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
321.XX	30	3.727	20.574	1.415					