

- Pass 1 Results for 76 Labs - - Pass 2 Results for 76 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	12	13.06	0.21	0.10	11	13.09	0.18	0.06
Ammoniacal Nitrogen, Other		001.99	12	13.08	0.18	0.07	12	13.08	0.18	0.07
Method Group 001.XX PCT			24	13.07	0.19	0.08	23	13.09	0.18	0.07
Nitrate Nitrogen, Other		002.99	2	0.14	0.02	0.01	2	0.14	0.02	0.01
Ammon & Nitrate N, Devarda	892.01	009.10	3	13.02	0.44	0.26	3	13.02	0.44	0.26
Ammon & Nitrate N, Other		009.99	1	13.21	0.02	0.03	1	13.21	0.02	0.03
Method Group 009.XX PCT			4	13.07	0.38	0.20	4	13.07	0.38	0.20
Total Nitrogen, Modified Comprehensive	978.02	010.11	7	13.10	0.16	0.05	7	13.10	0.16	0.05
Total Nitrogen, Salicylic	955.04D	010.12	1	13.12	0.08	0.12	1	13.12	0.08	0.12
Total Nitrogen, Combustion		010.60	50	13.35	0.17	0.08	47	13.34	0.16	0.06
Total Nitrogen, Other		010.99	4	13.27	0.16	0.05	4	13.27	0.16	0.05
Method Group 010.XX PCT			63	13.32	0.19	0.08	60	13.31	0.19	0.06
Total Phosphate, Grav Quimociac	962.02	020.10	6	5.19	0.04	0.02	5	5.20	0.04	0.01
Total Phosphate, Spectrometric	958.01	020.20	13	5.28	0.19	0.08	12	5.30	0.17	0.05
Total Phosphate, Automated	978.01	020.40	6	5.23	0.19	0.07	5	5.21	0.20	0.03
Total Phosphate, ICP		020.50	10	5.23	0.23	0.18	10	5.23	0.23	0.18
Total Phosphate, Other		020.99	2	5.14	0.37	0.02	2	5.14	0.37	0.02
Method Group 020.XX PCT			38	5.24	0.19	0.10	35	5.24	0.19	0.07
Insoluble Phosphate, Grav Quimociac	963.03C	030.10	1	0.01	0.00	0.00	1	0.01	0.00	0.00
Insoluble Phosphate, Spectrometric	963.03C	030.20	2	0.06	0.06	0.00	2	0.06	0.06	0.00
Insoluble Phosphate, Automated	978.01	030.40	1	0.21	0.01	0.01	1	0.21	0.01	0.01
Insoluble Phosphate, Other		030.99	1	0.05	0.01	0.01	1	0.05	0.01	0.01
Method Group 030.XX PCT			5	0.08	0.08	0.01	5	0.08	0.08	0.01
InDir Available Phosphate, Grav Quim	960.02	040.10	1	5.14	0.07	0.10	1	5.14	0.07	0.10
InDir Available Phosphate, Automated	960.02	040.40	1	4.95	0.08	0.11	1	4.95	0.08	0.11
InDir Available Phosphate, Other		040.99	2	5.31	0.10	0.03	2	5.31	0.10	0.03
Method Group 040.XX PCT			4	5.18	0.18	0.07	4	5.18	0.18	0.07
Dir Available Phosphate, Grav Quimociac	960.03E	041.10	13	5.16	0.09	0.03	13	5.16	0.09	0.03
Dir Available Phosphate, Spectrometric	960.03D	041.20	2	5.07	0.11	0.02	2	5.07	0.11	0.02
Dir Available Phosphate, Automated	978.01	041.40	3	5.12	0.05	0.02	3	5.12	0.05	0.02
Dir Available Phosphate, ICP		041.50	9	5.04	0.12	0.05	9	5.04	0.12	0.05
Dir Available Phosphate, EDTA Extract	993.01	041.60	12	5.17	0.12	0.10	12	5.17	0.12	0.10
Dir Available Phosphate, Other		041.99	1	5.17	0.05	0.07	1	5.17	0.05	0.07
Method Group 041.XX PCT			40	5.13	0.11	0.06	37	5.11	0.10	0.04
Water Soluble Phosphate, Spectrometric	970.01	048.20	3	4.67	0.25	0.03	3	4.67	0.25	0.03
Water Soluble Phosphate, ICP		048.50	1	4.91	0.02	0.03	1	4.91	0.02	0.03
Method Group 048.XX PCT			4	4.73	0.24	0.03	4	4.73	0.24	0.03
Soluble Potash, STPB Oxalate	958.02	050.00	17	12.49	0.25	0.09	16	12.49	0.26	0.07
Soluble Potash, STPB Citrate	969.04	050.10	2	12.96	0.19	0.19	2	12.96	0.19	0.19

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Method	AOAC Ref.	Method Code	No. of Labs	Grand Avg.	Std. Dev.	Average Range of Dups	No. of Labs	Grand Avg.	Std. Dev.	Average Range of Dups
Soluble Potash, AA (Oxalate)		050.30	6	12.26	0.51	0.10	6	12.26	0.51	0.10
Soluble Potash, ICP (Oxalate)		050.50	10	12.33	0.49	0.18	9	12.39	0.46	0.12
Soluble Potash, ICP (Citrate)		050.51	10	12.35	0.35	0.23	9	12.32	0.32	0.16
Soluble Potash, Flame (Oxalate)	983.02(a)	050.60	6	12.46	0.50	0.31	5	12.53	0.34	0.04
Soluble Potash, Flame (Citrate)	983.02(b)	050.61	8	12.71	0.29	0.21	8	12.71	0.29	0.21
Soluble Potash, Other		050.99	21	12.30	0.36	0.28	18	12.31	0.29	0.13
Method Group 050.XX PCT			80	12.42	0.40	0.20	73	12.43	0.36	0.11
Free Water, Vacuum Oven	965.08B	060.00	6	0.83	0.18	0.05	6	0.83	0.18	0.05
Free Water, Other		060.99	1	1.61	0.28	0.40	1	1.61	0.28	0.40
Method Group 060.XX PCT			7	0.94	0.34	0.10	6	0.83	0.18	0.05
Acid Soluble Calcium, ICP		101.30	16	1.78	0.12	0.03	16	1.78	0.12	0.03
Method Group 101.XX PCT			16	1.78	0.12	0.03	16	1.78	0.12	0.03
Acid Soluble Magnesium, ICP		121.30	16	0.18	0.02	0.01	16	0.18	0.02	0.01
Method Group 121.XX PCT			16	0.18	0.02	0.01	16	0.18	0.02	0.01
Sulfur, Gravimetric	980.02a	144.01	17	14.20	0.30	0.12	17	14.20	0.30	0.12
Sulfur, Gravimetric	980.02b	144.02	1	13.71	0.06	0.08	1	13.71	0.06	0.08
Sulfur, Other		144.99	24	13.91	0.59	0.20	22	13.90	0.59	0.13
Method Group 144.XX PCT			43	14.00	0.52	0.18	40	14.02	0.50	0.12
Arsenic, ICP		151.30	10	330.58	20.55	15.65	10	330.58	20.55	15.65
Arsenic, Other		151.99	2	350.23	12.08	13.79	2	350.23	12.08	13.79
Method Group 151.XX PPM			12	333.85	20.59	15.34	12	333.85	20.59	15.34
Acid Soluble Boron, Spectrometric	982.01	165.00	6	0.044	0.004	0.003	6	0.044	0.004	0.003
Acid Soluble Boron, Other		165.99	19	0.049	0.010	0.003	17	0.048	0.010	0.002
Method Group 165.XX PCT			25	0.048	0.010	0.003	23	0.047	0.009	0.002
Water Soluble Boron, Other		171.99	1	0.053	0.001	0.001	1	0.053	0.001	0.001
Cadmium, Atomic Absorption		181.00	1	339.50	16.26	23.00	1	339.50	16.26	23.00
Cadmium, ICP		181.30	14	343.55	19.70	8.37	14	343.55	19.70	8.37
Cadmium, Other		181.99	1	373.30	2.66	3.76	1	373.30	2.66	3.76
Method Group 181.XX PPM			16	345.16	20.06	9.00	16	345.16	20.06	9.00
Water Soluble Chlorine, Other		190.99	2	4.95	5.71	0.01	2	4.95	5.71	0.01
Chromium, Atomic Absorption		191.00	1	123.00	1.41	2.00	1	123.00	1.41	2.00
Chromium, ICP		191.30	13	109.82	13.18	7.73	12	111.68	11.16	6.06
Chromium, Other		191.99	1	81.45	6.62	9.37	1	81.45	6.62	9.37
Method Group 191.XX PPM			15	108.80	14.75	7.46	14	110.33	13.53	6.00
Acid Soluble Cobalt, AA		202.00	1	1125.0	91.92	130.00	1	1125.0	91.92	130.00
Acid Soluble Cobalt, ICP	965.11	202.30	11	945.97	53.68	24.25	11	945.97	53.68	24.25
Acid Soluble Cobalt, Other		202.99	2	945.81	37.75	26.99	2	945.81	37.75	26.99
Method Group 202.XX PPM			14	958.74	70.12	32.20	13	945.95	50.90	24.67
Acid Soluble Copper, Atomic Absorption	975.01	221.00	10	0.0346	0.0037	0.0022	9	0.0346	0.0035	0.0013

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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 Copper, ICP		221.30	28	0.0330	0.0041	0.0021	25	0.0323	0.0034	0.0012
Acid Soluble Copper, Other		221.99	3	0.0359	0.0031	0.0035	3	0.0359	0.0031	0.0035
Method Group 221.XX PCT			41	0.0336	0.0040	0.0022	38	0.0334	0.0038	0.0016
Acid Soluble Iron, Atomic Absorption	980.01	241.00	11	2.69	0.44	0.09	11	2.69	0.44	0.09
Acid Soluble Iron, ICP		241.30	33	2.05	1.02	0.08	31	2.03	1.02	0.07
Acid Soluble Iron, Other		241.99	2	2.84	0.13	0.05	2	2.84	0.13	0.05
Method Group 241.XX PCT			46	2.24	0.93	0.08	44	2.23	0.94	0.07
Lead, Atomic Absorption		251.00	1	4550.0	0.00	0.00	1	4550.0	0.00	0.00
Lead, ICP		251.30	13	3688.5	1852.4	105.44	13	3688.5	1852.4	105.44
Lead, Other		251.99	1	4729.3	90.12	127.45	1	4729.3	90.12	127.45
Method Group 251.XX PPM			15	3815.4	1751.4	99.88	15	3815.4	1751.4	99.88
Acid Soluble Manganese, AA	972.02a	261.00	9	0.160	0.009	0.009	9	0.160	0.009	0.009
Acid Soluble Manganese, AA	972.02b	261.11	1	0.168	0.005	0.007	1	0.168	0.005	0.007
Acid Soluble Manganese, ICP		261.30	26	0.154	0.013	0.006	24	0.153	0.013	0.005
Acid Soluble Manganese, ICP		261.31	2	0.155	0.009	0.005	2	0.155	0.009	0.005
Acid Soluble Manganese, Other		261.99	4	0.168	0.010	0.006	4	0.168	0.010	0.006
Method Group 261.XX PCT			43	0.158	0.014	0.006	41	0.157	0.012	0.006
Mercury, Atomic Absorption		281.00	1	620.45	2.76	3.90	1	620.45	2.76	3.90
Mercury, ICP		281.30	3	596.77	568.11	66.36	3	596.77	568.11	66.36
Mercury, Other		281.99	2	660.06	38.33	20.26	2	660.06	38.33	20.26
Method Group 281.XX PPM			6	621.81	384.68	40.58	5	493.67	264.01	13.70
Molybdenum, ICP		289.30	17	17.80	2.70	0.85	17	17.80	2.70	0.85
Molybdenum, Other		289.99	1	15.00	1.41	2.00	1	15.00	1.41	2.00
Method Group 289.XX PPM			18	17.65	2.72	0.92	18	17.65	2.72	0.92
Nickel, Atomic Absorption		291.00	1	1210.0	14.14	20.00	1	1210.0	14.14	20.00
Nickel, ICP		291.30	14	1153.5	105.50	47.32	13	1135.8	81.32	35.26
Nickel, Other		291.99	1	1093.1	48.85	69.09	1	1093.1	48.85	69.09
Method Group 291.XX PPM			16	1153.3	101.08	46.97	15	1137.9	79.31	36.50
Selenium, ICP		301.30	7	116.46	8.33	3.75	7	116.46	8.33	3.75
Selenium, Other		301.99	3	114.96	18.93	13.86	3	114.96	18.93	13.86
Method Group 301.XX PPM			10	116.01	11.93	6.79	10	116.01	11.93	6.79
Sodium, Other		311.99	7	0.38	0.08	0.01	7	0.38	0.08	0.01
Acid Soluble Zinc, Atomic Absorption	975.02	321.00	11	0.157	0.006	0.004	10	0.158	0.006	0.003
Acid Soluble Zinc, ICP		321.30	33	0.165	0.012	0.006	31	0.165	0.011	0.004
Acid Soluble Zinc, Other		321.99	1	0.176	0.001	0.001	1	0.176	0.001	0.001
Method Group 321.XX PCT			46	0.164	0.012	0.006	42	0.163	0.009	0.004
Water Soluble Zinc, ICP		325.30	1	0.136	0.001	0.002	1	0.136	0.001	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											
291	13.42	1.84	105	13.23	.86	393	13.21	.71	102	13.41 R	1.50
117	13.34	1.41	405	13.24	.85	Other			043	13.58	1.47
444	13.25	.88	220	13.17	.47	Meth: 009.99 PCT			443	13.55	1.34
029	13.10	.04	420	13.16	.43	Ammon & Nitrate N			405	13.55	1.27
Avg	13.09		096	13.14	.28	Other			405	13.55	1.27
090	13.07	-.16	397	13.10	.07	Ammon & Nitrate N			042	13.45 R	1.16
419	13.05	-.36	393	13.09	.06	420	13.47	1.07	009	13.51	1.07
232	13.04	-.48	029	13.10	.05	393	13.21	.36	Avg	13.07	1.05
230	13.00	-.50	Avg	13.09		090	13.00	-.23	307	13.50	1.05
456	13.00	-.68	371	13.07	-.13	030	12.60	-1.47	330	13.50	.98
416	12.93 X	-.93	090	13.07	-.15	Meth: 010.11 PCT			055	13.49	.92
351	12.82	-1.55	419	13.05	-.35	Total Nitrogen			419	13.45	.74
330	12.75 R	-2.38	232	13.04	-.47	Modified Comprehensi			450	13.45	.74
Meth: 001.99 PCT											
Ammoniacal Nitrogen											
Other											
422	13.35	1.54	456	13.00	-.67	220	13.25	.95	028	13.44	.61
105	13.23	.85	416	12.93 X	-.91	105	13.21	.65	291	13.42	.48
405	13.24	.84	255	12.91	-1.09	456	13.20	.61	086	13.41	.39
220	13.17	.47	027	12.87	-1.22	029	13.18	.49	177	13.38	.35
420	13.16	.43	351	12.82	-1.53	Avg	13.10		292	13.40	.33
096	13.14	.29	234	12.71	-2.23	114	13.09	-.54	106	13.35	.32
397	13.10	.09	330	12.75 R	-2.36	090	13.02	-.54	247	13.35	.22
393	13.09	.06	Meth: 002.99 PCT			211	12.78	-1.99	049	13.38	.22
Avg	13.08		Nitrate Nitrogen			460	12.59 S	-3.17	073	13.38	.20
255	12.91	-1.05	Other			Meth: 010.12 PCT			136	13.37	.18
027	13.07	-1.11	232	0.16	.87	Total Nitrogen			029	13.36	.12
255	12.91	-1.05	Avg	0.14		Salicylic			Avg	13.34	
027	12.87	-1.18	393	0.12	-.87	Avg			402	13.32	-.18
234	12.71	-2.16	Meth: 009.10 PCT			Total Nitrogen			035	13.33	-.20
Ammon & Nitrate N											
Devarda											
420	13.47	1.03	Meth: 010.60 PCT			Avg			131	13.31	-.24
090	13.02	-.13	Total Nitrogen			185			296	13.31	-.26
030	12.60	-1.19	Combustion			455			041	13.34	-.31
117	13.34	1.42	428	13.83	3.06	Meth: 010.60 PCT			390	13.33	-.33
444	13.25	.89	037	13.62 R	2.26	Total Nitrogen			027	13.28	-.40
Meth: 010.60 PCT											
Total Nitrogen											
Combustion											
072	13.23	-.80	360	13.83	2.76	Avg			402	13.32	-.18
361	13.21	-.87	428	13.80	2.65	Salicylic			035	13.33	-.20
351	13.20	-.88	037	13.62 R	2.04	Avg			131	13.31	-.24
230	13.20	-.90	444	13.60	1.57	185			296	13.31	-.26
018	13.20	-.90	043	13.58	1.41	455			041	13.34	-.31
368	13.18	-1.05	102	13.41 R	1.33	Meth: 010.60 PCT			390	13.33	-.33
024	13.16	-1.20	443	13.55	1.29	Total Nitrogen			027	13.28	-.40
451	13.14	-1.31	405	13.55	1.23	Combustion			232	13.32	-.46
057	13.11	-1.47	042	13.45 R	1.08	Avg			040	13.27	-.47
406	13.05	-1.84	009	13.51	1.06	360			233	13.28	-.47
354	12.96	-2.43	307	13.50	1.04	428			231	13.27	-.49
426	12.92 s	-3.07	330	13.50	.99	037			007	13.25	-.67
Meth: 010.99 PCT											
Total Nitrogen											
Other											
105	13.48	1.38	444	13.60	1.67	444			324	13.30	-.69
234	13.31	.32	Meth: 010.60 PCT			Total Nitrogen			027	13.28	-.40
Avg	13.27		Total Nitrogen			Avg			402	13.32	-.18
420	13.19	-.53	Meth: 010.60 PCT			Salicylic			035	13.33	-.20
255	13.10	-1.10	Total Nitrogen			Avg			131	13.31	-.24
Meth: 010.60 PCT											
Total Nitrogen											
Combustion											
360	13.83	2.76	Meth: 010.12 PCT			Avg			402	13.32	-.18
428	13.80	2.65	Total Nitrogen			Salicylic			035	13.33	-.20
037	13.62 R	2.04	Meth: 010.60 PCT			Avg			131	13.31	-.24
444	13.60	1.57	Total Nitrogen			185			296	13.31	-.26
043	13.58	1.41	Meth: 010.60 PCT			455			041	13.34	-.31
102	13.41 R	1.33	Total Nitrogen			Meth: 010.60 PCT			390	13.33	-.33
443	13.55	1.29	Combustion			Total Nitrogen			027	13.28	-.40
405	13.55	1.23	Avg			Avg			232	13.32	-.46
042	13.45 R	1.08	360			360			040	13.27	-.47
009	13.51	1.06	428			428			233	13.28	-.47
307	13.50	1.04	037			428			231	13.27	-.49
330	13.50	.99	037			037			007	13.25	-.67
055	13.49	.92	444			444			324	13.30	-.69
406	13.45	.74	Meth: 010.60 PCT			Total Nitrogen			027	13.28	-.40
354	12.96	-2.43	Combustion			Avg			402	13.32	-.18
426	12.92 s	-3.07	Avg			Salicylic			035	13.33	-.20
Meth: 010.99 PCT											
Total Nitrogen											
Other											
105	13.48	1.38	Meth: 010.12 PCT			Avg			131	13.31	-.24
234	13.31	.32	Total Nitrogen			Salicylic			035	13.33	-.20
Avg	13.27		Meth: 010.60 PCT			Avg			131	13.31	-.24
420	13.19	-.53	Total Nitrogen			185			296	13.31	-.26
255	13.10	-1.10	Meth: 010.60 PCT			455			041	13.34	-.31
Meth: 010.60 PCT											
Total Nitrogen											
Combustion											
360	13.83	2.76	Meth: 010.60 PCT			Total Nitrogen			027	13.28	-.40
428	13.80	2.65	Total Nitrogen			Combustion			232	13.32	-.46
037	13.62 R	2.04	Meth: 010.60 PCT			Avg			040	13.27	-.47
444	13.60	1.57	Total Nitrogen			360			233	13.28	-.47
043	13.58	1.41	Meth: 010.60 PCT			428			231	13.27	-.49
102	13.41 R	1.33	Total Nitrogen			037			007	13.25	-.67
443	13.55	1.29	Combustion			444			324	13.30	-.69
405	13.55	1.23	Avg			Meth: 010.60 PCT			027	13.28	-.40
042	13.45 R	1.08	Total Nitrogen			Total Nitrogen			232	13.32	-.46
009	13.51	1.06	Combustion			Avg			040	13.27	-.47
307	13.50	1.04	360			360			233	13.28	-.47
330	13.50	.99	428			428			231	13.27	-.49
055	13.49	.92	037			037			007	13.25	-.67
419	13.45	.74	444			444			324	13.30	-.69
450	13.45	.74	Meth: 010.60 PCT			Total Nitrogen			027	13.28	-.40
377	13.44	.66	Total Nitrogen			Combustion			232	13.32	-.46
028	13.44	.61	Meth: 010.11 PCT			Avg			040	13.27	-.47
291	13.42	.48	Total Nitrogen			185			296	13.31	-.26
086	13.41	.39	Modified Comprehensi			455			041	13.34	-.31
177	13.38	.35	220			460			029	13.36	.12
292	13.40	.33	416			460			029	13.36	.12
106	13.35	.32	12.93 X			220			291	13.42	.48
247	13.35	.22	12.91			105			086	13.41	.39
049	13.38	.22	12.87			456			177	13.38	.35
073	13.38	.20	12.82			029			292	13.40	.33
136	13.37	.18	12.71			Avg			106	13.35	.32
029	13.36	.12	12.75 R			114			247	13.35	.22
Avg	13.34		0.16			090			049	13.38	.22
402	13.32	-.18	0.14			211			073	13.38	.20
035	13.33	-.20	0.12			460			136	13.37	.18
131	13.31	-.24	Meth: 002.99 PCT			Meth: 010.12 PCT			029	13.36	.12
296	13.31	-.26	Nitrate Nitrogen			Total Nitrogen			Avg	13.34	
041	13.34	-.31	Other			Salicylic			402	13.32	-.18
390	13.33	-.33	232			Avg			035	13.33	-.20
027	13.28	-.40	0.16			Avg			131	13.31	-.24
232	13.32	-.46	0.14			185			296	13.31	-.26
040	13.27	-.47	0.12			455			041	13.34	-.31
233	13.28	-.47	Meth: 009.10 PCT			Meth: 010.60 PCT			390	13.33	-.33
231	13.27	-.49	Ammon & Nitrate N			Total Nitrogen			027	13.28	-.40
007	13.25	-.67	Devarda			Combustion			232	13.32	-.46
324	13.30	-.69	420			Avg			040	13.27	-.47
Meth: 010.60 PCT											
Total Nitrogen											
Combustion											
360	13.83	2.76	Meth: 010.60 PCT			Avg			040	13.27	-.47
428	13.80	2.65	Total Nitrogen			360			233	13.28	-.47
037	13.62 R	2.04	Meth: 010.60 PCT			428			231	13.27	-.49
444	13.60	1.57	Total Nitrogen			037			007	13.25	-.67
043	13.58	1.41	Meth: 010.60 PCT			444			324	13.30	-.69
102	13.41 R	1.33	Total Nitrogen								

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 010.XX PCT											
<u>Total Nitrogen</u>											
105	13.48	.91	420	13.19	-.67	Meth: 020.20 PCT					
419	13.45	.77	029	13.18	-.72	<u>Total Phosphate</u>					
450	13.45	.77	368	13.18	-.74	Spectrometric					
377	13.44	.71	024	13.16	-.87	Avg 5.30					
028	13.44	.67	451	13.14	-.96	232 5.30					
291	13.42	.56	185	13.12	-1.09	420 5.28					
086	13.41	.49	057	13.11	-1.10	220 5.29					
292	13.40	.43	255	13.10	-1.15	231 5.20					
177	13.38	.40	114	13.09	-1.31	416 5.15 X					
232	13.32	.38	406	13.05	-1.41	419 5.14					
049	13.38	.33	090	13.02	-1.60	450 5.03					
106	13.35	.33	354	12.96	-1.91	324 5.04 R					
073	13.38	.33	426	12.92 s	-2.48	Meth: 020.40 PCT					
136	13.37	.30	211	12.78	-2.85	<u>Total Phosphate</u>					
041	13.34	.30	460	12.59 s	-3.87	Automated					
390	13.33	.28	455	12.13 s	-6.35	456 5.58					
029	13.36	.25	Meth: 030.10 PCT								
247	13.35	.25	Insoluble Phosphate								
035	13.33	.15	Grav Quimociac								
402	13.32	.03	Avg 5.38 s								
Meth: 020.10 PCT											
<u>Total Phosphate</u>											
131	13.31	-.06	444	5.38 s	6.35	220 0.12					
296	13.31	-.09	114	5.26	1.41	Avg 0.06					
234	13.31	-.16	041	5.22	.44	405 0.01					
027	13.28	-.19	Avg	5.20		Meth: 030.20 PCT					
040	13.27	-.24	022	5.20	-.11	Insoluble Phosphate					
231	13.27	-.26	117	5.19	-.35	Spectrometric					
233	13.28	-.28	105	5.15	-1.48	220 0.12					
007	13.25	-.43	090	5.15 R	-2.02	Avg 0.06					
220	13.25	-.47	Meth: 020.50 PCT								
072	13.23	-.53	<u>Total Phosphate</u>								
324	13.30	-.54	ICP								
105	13.21	-.59	393	14.63 s	41.45	220 5.29					
361	13.21	-.59	361	5.59	1.60	232 5.30					
351	13.20	-.60	330	5.50	1.49	420 5.28					
018	13.20	-.61	426	5.23	.49	114 5.26					
230	13.20	-.61	255	5.30	.46	Avg 5.24					
456	13.20	-.61	Avg	5.23		Meth: 030.40 PCT					
<u>Total Phosphate</u>											
Spectrometric											
428	10.33 s	30.51	402	5.22	-.06	Insoluble Phosphate					
460	5.65	2.14	247	5.17	-.26	Automated					
371	5.42	.98	390	5.11	-.81	096 0.21					
405	5.42	.71	307	5.20	-.85	Meth: 030.99 PCT					
406	5.40	.58	368	5.06	-.88	Insoluble Phosphate					
292	5.35	.30	451	4.91	-1.43	Other					
292	5.35	.30	432	4.85 S	-2.40	247 0.05					
105	5.15	-.48	Meth: 020.99 PCT								
<u>Total Phosphate</u>											
Other											
455	11.05 S	16.12	Meth: 020.XX PCT								
443	6.47 S	3.64	<u>Total Phosphate</u>								
422	5.46	.87	416 5.15 X								
Avg	5.14		419 5.14								
234	4.82	-.87	090 5.15								
Meth: 020.XX PCT											
<u>Total Phosphate</u>											
393	14.63 s	50.60	426 5.23								
455	11.05 s	31.34	035 5.12								
428	10.33 s	27.48	220 5.12								
443	6.47 s	6.65	096 5.11								
460	5.65	2.23	406 5.09								
361	5.59	1.90	390 5.11								
456	5.58	1.84	307 5.20 R								
330	5.50 R	1.77	368 5.06								
422	5.46	1.16	450 5.03								
371	5.42	1.14	324 5.04 R								
444	5.38	1.11	451 4.91								
405	5.42	.96	234 4.82								
406	5.40	.84	432 4.85 s								
042	5.30	.79	Meth: 030.10 PCT								
292	5.35	.60	Insoluble Phosphate								
255	5.30	.53	Grav Quimociac								
220	5.29	.39	090 0.01								
232	5.30	.31	Meth: 030.20 PCT								
420	5.28	.19	Insoluble Phosphate								
114	5.26	.09	Spectrometric								
Avg	5.24		220 0.12								
041	5.22	-.10	Avg 0.06								
402	5.22	-.12	405 0.01								
231	5.20	-.21	Meth: 030.40 PCT								
022	5.20	-.21	Insoluble Phosphate								
117	5.19	-.25	Automated								
247	5.18	-.35	096 0.21								
247	5.17	-.38	Meth: 030.99 PCT								
105	5.15	-.48	Insoluble Phosphate								
* 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: 050.00 PCT														
Soluble Potash														
STPB Oxalate														
416	12.52	X	12.52	.83		456	13.17	1.57	443	15.25	s	7.81		
Avg	12.49		12.56	.37		028	13.02	1.13	444	13.09		2.05		
055	12.47	-.14	12.40	.02		018	12.85	.50	022	13.10		1.85		
090	12.45	-.22	12.39			Avg	12.71		055	13.09		1.81		
220	12.48	-.23	12.30	-.22		029	12.67	-.62	428	13.04		1.70		
057	12.42	-.28	12.03	-.80		037	12.53	-.63	028	13.02		1.67		
296	12.44	-.33	11.82	-1.38		035	12.50	-.81	324	12.95		1.50		
029	12.40	-.40	11.75	-1.41		057	12.56	-.94	114	12.96		1.47		
231	12.30	-.75	11.75	-1.59		105	12.42	-1.08	420	12.96		1.45		
102	12.32	-.80							432	12.80	R	1.41		
247	12.18	-1.20				Meth: 050.99 PCT								
072	12.05	-1.73				Soluble Potash								
009	11.80	s	-4.08			Other								
						432	12.80	1.88	042	12.35	R	2.56		
						007	12.61	1.70	027	12.82		1.71		
						291	12.70	1.21	422	12.74		1.46		
						043	12.37	.23	307	12.39		.90		
						009	12.36	.13	402	12.58		.90		
						361	12.34	.10	177	12.55		.88		
						Avg	12.32		330	12.50		.72		
						377	12.28	-.46	072	12.44		.42		
						022	12.07	-.85	234	12.42		.42		
						393	12.04	-.87	131	12.36		.42		
						096	11.90	-1.31	450	12.38		.36		
									105	12.37		.21		
									Avg	12.31				
						Meth: 050.60 PCT								
						Soluble Potash								
						Flame (Oxalate)								
						443	15.25	S	7.95					
						055	13.09		1.62					
						406	12.68		.42					
						Avg	12.53							
						131	12.37		-.47					
						105	12.37		-.47					
						460	12.15		-1.12					
						030	12.13	R	-2.69					
						Meth: 050.50 PCT								
						Soluble Potash								
						ICP (Oxalate)								
						324	12.95		1.26					
						420	12.96		1.23					

\* 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: 050.XX PCT														
<u>Soluble Potash</u>														
444	11.82	-1.84										Meth: 144.01 PCT		
390	11.75	-1.88										Sulfur		
042	12.35 R	-2.09										Gravimetric		
426	11.75 R	-2.11										102	13.83	-1.27
185	11.65	-2.16										086	13.61	-2.02
030	12.13 R	-2.44										117	13.19 s	-3.70
009	11.80 s	-2.81										Meth: 144.02 PCT		
Meth: 060.00 PCT														
Free Water														
Vacuum Oven														
096	1.17	1.91										Sulfur		
247	0.89	.35										Gravimetric		
Avg	0.83											292	13.71	-.71
456	0.80	-.17										Meth: 144.99 PCT		
405	0.76	-.46										Sulfur		
007	0.73	-.57										Other		
416	0.63 X	-1.09										049	14.83	1.60
Meth: 060.99 PCT														
Free Water														
Other														
443	1.61	.71										354	14.81	1.56
Meth: 060.XX PCT														
Free Water														
443	1.61 R	4.51										291	14.67	1.30
096	1.17	1.91										360	14.24 R	.94
247	0.89	.35										232	14.42	.89
Avg	0.83											351	14.40	.84
456	0.80	-.17										220	14.32	.72
405	0.76	-.46										330	14.30	.68
007	0.73	-.57										307	14.29	.66
416	0.63 X	-1.09										027	14.26	.60
Meth: 101.30 PCT														
Acid Soluble Calcium														
ICP	1.76	-.21										037	14.14	.52
324	2.09	2.62										247	14.03	.27
057	1.88	.86										419	13.90	.17
247	1.85	.57										Avg	13.90	
035	1.83	.43										450	13.75	-.28
131	1.83	.41										368	13.66	-.44
390	1.82	.40										230	13.60	-.50
096	1.82	.27										422	13.44	-.79
354	1.81	.25										090	13.43	-.81
106	1.80	.10										255	13.37	-.90
Avg	1.78											390	13.80 R	-1.03
009	1.76	-.21										393	13.16	-1.26
393	1.74	-.44										177	13.13	-1.31
102	1.73	-.51										009	13.07	-1.41
307	1.72	-.56										117	12.83	-1.82
232	1.66	-1.07										Meth: 121.99 PCT		
086	1.66	-1.12										Acid Soluble Magnesi		
292	1.56	-1.92										422	0.39 s	10.42
049	0.02 s	-15.12										035	0.19	.09
Meth: 101.XX PCT														
Acid Soluble Calcium														
009	1.76	-.21										Avg	0.18	-.08
393	1.74	-.44										307	0.18	-.09
102	1.73	-.51										086	0.18	-.18
307	1.72	-.56										102	0.18	-.50
232	1.66	-1.07										106	0.18	-.54
086	1.66	-1.12										096	0.18	-1.01
292	1.56	-1.92										232	0.16	-1.19
049	0.02 s	-15.12										292	0.16	-1.19
Meth: 101.99 PCT														
Acid Soluble Calcium														
Other	2.85 S	.00										393	0.14	-2.20
422	2.85 S	.00										Avg	0.18	.09
Meth: 101.XX PCT														
Acid Soluble Calcium														
422	2.85 s	9.14										035	0.19	.09
324	2.09	2.62										Avg	0.18	-.08
057	1.88	.86										307	0.18	-.08
247	1.85	.57										086	0.18	-.09
035	1.83	.43										102	0.18	-.18
131	1.83	.41										106	0.18	-.50
390	1.82	.40										096	0.18	-1.01
096	1.82	.27										232	0.16	-1.19
354	1.81	.25										292	0.16	-1.19
106	1.80	.10										393	0.14	-2.20
Avg	1.78											Avg	14.88	2.27
009	1.76	-.21										324	14.65	1.51
393	1.74	-.44										296	14.45	.83
102	1.73	-.51										233	14.37	.58
307	1.72	-.56										057	14.35	.52
232	1.66	-1.07										029	14.25	.22
086	1.66	-1.12										371	14.24	.15
292	1.56	-1.92										Avg	14.20	.22
049	0.02 s	-15.12										105	14.18	-.07
Meth: 121.99 PCT														
Acid Soluble Magnesi														
422	0.39 s	10.42										028	14.15	-.15
035	0.19	.09										444	14.15	-.20
Avg	0.18	-.08										043	14.19	-.33
307	0.18	-.09										397	14.05	-.51
086	0.18	-.18										040	14.07	-.55
102	0.18	-.50										073	14.00	-.66
106	0.18	-1.01										114	13.94	-.90
096	0.18	-1.19										Meth: 144.01 PCT		
232	0.16	-1.19										Sulfur		
292	0.16	-1.19										Gravimetric		
393	0.14	-2.20										055	14.88	2.27
Avg	0.18	.09										324	14.65	1.51
035	0.19	.09										296	14.45	.83
Avg	0.18	-.08										233	14.37	.58
307	0.18	-.08										057	14.35	.52
086	0.18	-.09										029	14.25	.22
102	0.18	-.18										371	14.24	.15
106	0.18	-.50										Avg	14.20	.22
096	0.18	-1.01										105	14.18	-.07
232	0.16	-1.19										028	14.15	-.15
292	0.16	-1.19										444	14.15	-.20
393	0.14	-2.20										043	14.19	-.33
Avg	0.18	.09										397	14.05	-.51
035	0.19	.09										040	14.07	-.55
Avg	0.18	-.08										073	14.00	-.66
307	0.18	-.08										114	13.94	-.90
086	0.18	-.09										Meth: 144.01 PCT		
102	0.18	-.18										Sulfur		
106	0.18	-.50										Gravimetric		
096	0.18	-1.01										055	14.88	2.27
232	0.16	-1.19										324	14.65	1.51
292	0.16	-1.19										296	14.45	.83
393	0.14	-2.20										233	14.37	.58
Avg	0.18	.09										057	14.35	.52
035	0.19	.09										029	14.25	.22
Avg	0.18	-.08										371	14.24	.15
307	0.18	-.08										Avg	14.20	.22
086	0.18	-.09										105	14.18	-.07
102	0.18	-.18										028	14.15	-.15
106	0.18	-.50										444	14.15	-.20
096	0.18	-1.01										043	14.19	-.33
232	0.16	-1.19										397	14.05	-.51
292	0.16	-1.19										040	14.07	-.55
393	0.14	-2.20										073	14.00	-.66
Avg	0.18	.09										114	13.94	-.90
035	0.19	.09										Meth: 144.01 PCT		
Avg	0.18	-.08										Sulfur		
307	0.18	-.09										Gravimetric		
086	0.18	-.18										055	14.88	2.27
102	0.18	-.50										324	14.65	1.51
106	0.18	-1.01										296	14.45	.83
096	0.18	-1.19										233	14.37	.58
232	0.16	-1.19										057	14.35	.52
292	0.16	-1.19										029	14.25	.22
393	0.14	-2.20										371	14.24	.15
Avg	0.18	.09										Avg	14.20	.22
035	0.19	.09										105	14.18	-.07
Avg	0.18	-.08										028	14.15	-.15
307	0.18	-.08										444	14.15	-.20
086	0.18	-.09										043	14.19	-.33
102	0.18	-.18										397	14.05	-.51
106	0.18	-.50										040	14.07	-.55
096	0.18	-1.01										073	14.00	-.66
232	0.16	-1.19										114	13.94	-.90
292	0.16	-1.19										Meth: 144.01 PCT		
393	0.14	-2.20										Sulfur		
Avg	0.18	.09										Gravimetric		
035	0.19	.09										055	14.88	2.27
Avg	0.18	-.08										324	14.65	1.51
307	0.18	-.09										296	14.45	.83
086	0.18	-.18										233	14.37	.58
102	0.18	-.50										057	14.35	.52
106	0.18	-1.01										029	14.25	.22
096	0.18	-1.19										371	14.24	.15
232	0.16	-1.19										Avg	14.20	.22
292	0.16	-1.19										105	14.18	-.07
393	0.14	-2.20										028	14.15	-.15
Avg	0.18	.09										444	14.15	-.20
035	0.19	.09										043	14.19	-.33
Avg	0.18	-.08										397	14.05	-.51
307	0.18	-.08										040	14.07	-.55
086	0.18	-.09										073	14.00	-.66
102	0.18	-.18										114	13.94	-.90
106	0.18	-.50										Meth: 144.01 PCT		
096	0.18	-1.01										Sulfur		
232	0.16	-1.19										Gravimetric		
292	0.16	-1.19										055	14.88	2.27
393	0.14	-2.20										324	14.65	1.51
Avg	0.18	.09										296	14.45	.83
035	0.19	.09										233	14.37	.58
Avg	0.18	-.08										057	14.35	.52
307	0.18	-.09										029	14.25	.22
086	0.18	-.18										371	14.24	.15
102	0.18	-.50										Avg	14.20	.22
106	0.18	-1.01										105	14.18	-.07
096	0.18	-1.19										028	14.15	-.15
232	0.16	-1.19										444	14.15	-.20

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 144.99 PCT											
Sulfur											
Other	13.66	-0.74	368	13.66	-0.74						
131	12.10 S	-3.07	230	13.60	-0.84						
035	11.30 s	-4.40	086	13.61	-0.89						
			422	13.44	-1.17						
			090	13.43	-1.19						
			390	13.80 R	-1.27						
Meth: 144.99 PCT											
Sulfur											
055	14.88	1.72	255	13.37	-1.30						
049	14.83	1.64	393	13.16	-1.72						
354	14.81	1.59	177	13.13	-1.78						
291	14.67	1.29	009	13.07	-1.90						
324	14.65	1.26	117	13.19 R	-1.92						
360	14.24 R	.98	117	12.83	-2.38						
296	14.45	.85	131	12.10 s	-3.86						
232	14.42	.81	035	11.30 s	-5.41						
351	14.40	.75									
233	14.37	.70									
057	14.35	.65									
220	14.32	.60									
330	14.30	.56									
307	14.29	.53									
027	14.26	.47									
029	14.25	.46									
037	14.14	.45									
371	14.24	.44									
043	14.19	.39									
105	14.18	.31									
028	14.15	.26									
444	14.15	.26									
040	14.07	.24									
247	14.03	.18									
397	14.05	.12									
Avg	14.02										
073	14.00	-.11									
114	13.94	-.24									
419	13.90	-.31									
102	13.83	-.44									
450	13.75	-.55									
292	13.71	-.62									
Meth: 151.99 PCT											
Arsenic											
117	0.071	2.63	422	0.071	2.63						
117	0.068	2.29	117	0.068	2.29						
354	0.061 R	1.69	354	0.061 R	1.69						
368	0.056 R	1.47	368	0.056 R	1.47						
042	0.055	1.03	042	0.055	1.03						
049	0.054	.71	049	0.054	.71						
043	0.053	.60	043	0.053	.60						
106	0.050	.32	106	0.050	.32						
433	0.050	.30	433	0.050	.30						
360	0.048	.10	360	0.048	.10						
029	0.048	.07	029	0.048	.07						
291	0.048	.07	291	0.048	.07						
Avg	0.047		Avg	0.047							
324	0.046	-.14	324	0.046	-.14						
040	0.045	-.24	040	0.045	-.24						
057	0.044	-.32	057	0.044	-.32						
090	0.044	-.36	090	0.044	-.36						
055	0.044	-.36	055	0.044	-.36						
419	0.042	-.53	419	0.042	-.53						
037	0.047	-.55	037	0.047	-.55						
232	0.042	-.61	232	0.042	-.61						
Meth: 165.99 PCT											
Acid Soluble Boron											
432	1.235 s	133.07	432	1.235 s	133.07						
422	0.071	2.63	422	0.071	2.63						
117	0.068	2.29	117	0.068	2.29						
354	0.061 R	1.69	354	0.061 R	1.69						
368	0.056 R	1.47	368	0.056 R	1.47						
042	0.055	1.03	042	0.055	1.03						
049	0.054	.71	049	0.054	.71						
043	0.053	.60	043	0.053	.60						
106	0.050	.32	106	0.050	.32						
433	0.050	.30	433	0.050	.30						
360	0.048	.10	360	0.048	.10						
029	0.048	.07	029	0.048	.07						
291	0.048	.07	291	0.048	.07						
Avg	0.047		Avg	0.047							
324	0.046	-.14	324	0.046	-.14						
040	0.045	-.24	040	0.045	-.24						
057	0.044	-.32	057	0.044	-.32						
090	0.044	-.36	090	0.044	-.36						
055	0.044	-.36	055	0.044	-.36						
419	0.042	-.53	419	0.042	-.53						
037	0.047	-.55	037	0.047	-.55						
232	0.042	-.61	232	0.042	-.61						
Meth: 165.99 PCT											
Acid Soluble Boron											
432	1.235 s	133.07	432	1.235 s	133.07						
422	0.071	2.63	422	0.071	2.63						
117	0.068	2.29	117	0.068	2.29						
354	0.061 R	1.69	354	0.061 R	1.69						
368	0.056 R	1.47	368	0.056 R	1.47						
042	0.055	1.03	042	0.055	1.03						
049	0.054	.71	049	0.054	.71						
043	0.053	.60	043	0.053	.60						
106	0.050	.32	106	0.050	.32						
433	0.050	.30	433	0.050	.30						
360	0.048	.10	360	0.048	.10						
029	0.048	.07	029	0.048	.07						
291	0.048	.07	291	0.048	.07						
Avg	0.047		Avg	0.047							
324	0.046	-.14	324	0.046	-.14						
040	0.045	-.24	040	0.045	-.24						
057	0.044	-.32	057	0.044	-.32						
090	0.044	-.36	090	0.044	-.36						
055	0.044	-.36	055	0.044	-.36						
419	0.042	-.53	419	0.042	-.53						
037	0.047	-.55	037	0.047	-.55						
232	0.042	-.61	232	0.042	-.61						
Meth: 151.30 PCT											
Arsenic											
106	0.047	1.49	037	0.047	1.49						
029	0.048	.95	029	0.048	.95						
055	0.044	.26	055	0.044	.26						
057	0.044	.23	057	0.044	.23						
Avg	0.044		Avg	0.044							
428	0.041	-.67	428	0.041	-.67						
393	0.039	-1.34	393	0.039	-1.34						
Meth: 165.00 PCT											
Acid Soluble Boron											
432	1.235 s	133.07	432	1.235 s	133.07						
422	0.071	2.63	422	0.071	2.63						
117	0.068	2.29	117	0.068	2.29						
354	0.061 R	1.69	354	0.061 R	1.69						
368	0.056 R	1.47	368	0.056 R	1.47						
042	0.055	1.03	042	0.055	1.03						
049	0.054	.71	049	0.054	.71						
043	0.053	.60	043	0.053	.60						
106	0.050	.32	106	0.050	.32						
433	0.050	.30	433	0.050	.30						
360	0.048	.10	360	0.048	.10						
029	0.048	.07	029	0.048	.07						
291	0.048	.07	291	0.048	.07						
Avg	0.047		Avg	0.047							
324	0.046	-.14	324	0.046	-.14						
040	0.045	-.24	040	0.045	-.24						
057	0.044	-.32	057	0.044	-.32						
090	0.044	-.36	090	0.044	-.36						
055	0.044	-.36	055	0.044	-.36						
419	0.042	-.53	419	0.042	-.53						
037	0.047	-.55	037	0.047	-.55						
232	0.042	-.61	232	0.042	-.61						
Meth: 181.00 PPM											
Cadmium											
220	339.50	.71	220	339.50	.71						
Atomic Absorption											
220	339.50	.71	220	339.50	.71						
Meth: 165.99 PCT											
Acid Soluble Boron											
432	1.235 s	133.07	432	1.235 s	133.07						
422	0.071	2.63	422	0.071	2.63						
117	0.068	2.29	117	0.068	2.29						
354	0.061 R	1.69	354	0.061 R	1.69						
368	0.056 R	1.47	368	0.056 R	1.47						
042	0.055	1.03	042	0.055	1.03						
049	0.054	.71	049	0.054	.71						
043	0.053	.60	043	0.053	.60						
106	0.050	.32	106	0.050	.32						
433	0.050	.30	433	0.050	.30						
360	0.048	.10	360	0.048	.10						
029	0.048	.07	029	0.048	.07						
291	0.048	.07	291	0.048	.07						
Avg	0.047		Avg	0.047							
324	0.046	-.14	324	0.046	-.14						
040	0.045	-.24	040	0.045	-.24						
057	0.044	-.32	057	0.044	-.32						
090	0.044	-.36	090	0.044	-.36						
055	0.044	-.36	055	0.044	-.36						
419	0.042	-.53	419	0.042	-.53						
037	0.047	-.55	037	0.047	-.55						
232	0.042	-.61	232	0.042	-.61						

\* 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: 181.99 PPM											
Cadmium											
Other		.71									
231	373.30										
Meth: 181.XX PPM											
Cadmium											
086	375.05	1.58									
231	373.30	1.41									
106	371.00	1.31									
009	360.50	.80									
037	351.44	.55									
419	350.50	.28									
368	348.50	.18									
Avg	345.16										
247	343.00	-.12									
035	341.50	-.29									
233	338.05	-.36									
096	334.50	-.53									
220	339.50	-.64									
230	332.50	-.65									
102	337.66	-.72									
450	328.00	-.87									
232	297.50	-2.38									
393	1.15 s	-17.15									
Meth: 190.99 PCT											
Water Soluble Chlori											
Other		.87									
422	9.90										
Avg	4.95										
009	0.01	-.87									
Meth: 191.00 PPM											
Chromium											
220	123.00	.71									
Atomic Absorption											
220	123.00										
Meth: 191.30 PPM											
Chromium											
ICP		1.42									
450	127.50	1.42									
247	121.00	.88									
419	116.50	.66									
037	115.77	.60									
096	117.00	.60									
009	117.50	.52									
368	113.00	.46									
Avg	111.68										
102	110.19	-.15									
035	105.50	-.56									
106	108.50	-.65									
232	102.30	-.89									
230	85.45	-2.35									
027	87.41 R	-2.51									
393	20.50 s	-8.17									
049	1.20 s	-9.90									
Meth: 191.99 PPM											
Chromium											
Other		.71									
231	81.45										
Meth: 191.XX PPM											
Chromium											
450	127.50	1.27									
220	123.00	.94									
247	121.00	.82									
419	116.50	.61									
096	117.00	.57									
037	115.77	.56									
009	117.50	.53									
368	113.00	.42									
Avg	110.33										
102	110.19	-.05									
035	105.50	-.36									
106	108.50	-.50									
232	102.30	-.64									
Meth: 202.99 PPM											
Acid Soluble Cobalt											
Other		.94									
231	974.63										
Avg	945.81										
247	917.00	-.78									
393	2.00 S	-25.00									
Meth: 202.00 PPM											
Acid Soluble Cobalt											
AA		.71									
220	1125.0										
Meth: 202.30 PPM											
Acid Soluble Cobalt											
ICP		.16									
027	1155.5 s	4.56									
035	1045.0	1.87									
450	991.00	.86									
368	976.00	.67									
096	973.50	.51									
057	954.50	.16									
Avg	945.97										
230	944.00	-.12									
247	917.00	-.55									
086	911.25	-.70									
102	942.97	-.73									
106	905.50	-.80									
232	845.00	-1.88									
009	0.55 s	-17.61									
Meth: 202.99 PPM											
Acid Soluble Cobalt											
Other		.94									
231	974.63										
Avg	945.81										
247	917.00	-.78									
393	2.00 S	-25.00									
Meth: 202.00 PPM											
Acid Soluble Cobalt											
AA		.46									
220	1125.0										
Meth: 202.30 PPM											
Acid Soluble Cobalt											
ICP		.16									
027	1155.5 s	4.81									
220	1125.0 R	3.74									
035	1045.0	1.97									
450	991.00	.91									
368	976.00	.71									
231	974.63	.70									
096	973.50	.54									
057	954.50	.17									
Avg	945.95										
230	944.00	-.12									
247	917.00	-.58									
247	917.00	-.58									
086	911.25	-.74									
102	942.97	-.77									
106	905.50	-.84									
232	845.00	-1.98									
393	2.00 s	-18.54									
009	0.55 s	-18.57									
324	0.0330	.21									
Meth: 221.00 PCT											
Acid Soluble Copper											
Atomic Absorption		3.67									
177	0.0475 S	3.67									
460	0.0420	2.17									
055	0.0350 R	1.42									
351	0.0376	.86									
028	0.0363	.53									
Avg	0.0346										
029	0.0330	-.45									
073	0.0330	-.45									
043	0.0343	-.50									
040	0.0322	-.69									
220	0.0320	-.78									
397	0.0310	-1.01									
Meth: 221.30 PCT											
Acid Soluble Copper											
ICP		20.13									
330	0.1000 s	20.13									
450	0.0415 R	2.92									
368	0.0384 R	2.50									
420	0.0390	1.99									
102	0.0350 R	1.69									
247	0.0356	1.11									
042	0.0360	1.10									
086	0.0351	.85									
117	0.0329	.69									
354	0.0345	.67									
402	0.0345	.67									
444	0.0330	.63									
360	0.0339	.48									
433	0.0338	.46									
009	0.0335	.38									
090	0.0330	.36									
057	0.0333	.32									
324	0.0330	.21									
Meth: 221.30 PCT											
Acid Soluble Copper											
Avg		0.0323									
131	0.0318	-.17									
307	0.0317	-.20									
291	0.0315	-.28									
233	0.0322	-.47									
035	0.0308	-.48									
022	0.0305	-.56									
106	0.0300	-.69									
292	0.0300	-.69									
426	0.0305	-.70									
230	0.0250	-2.18									
027	0.0230	-2.77									
432	0.0100 s	-6.64									
393	0.0026 s	-8.84									
419	0.0003 s	-9.52									
405	0.0002 s	-9.56									

\* 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: 221.99 PCT														
Acid Soluble Copper														
Other														
114	0.0365	1.14												
247	0.0378	.60												
Avg	0.0359													
422	0.0335	-.92												
Meth: 221.XX PCT														
Acid Soluble Copper														
330	0.1000 s	17.45												
177	0.0475 s	3.72												
460	0.0420	2.32												
450	0.0415	2.32												
368	0.0384 R	2.01												
420	0.0390	1.47												
055	0.0350 R	1.38												
102	0.0350 R	1.38												
114	0.0365	1.23												
247	0.0378	1.15												
351	0.0376	1.11												
028	0.0363	.79												
247	0.0356	.75												
042	0.0360	.69												
043	0.0343	.51												
086	0.0351	.49												
422	0.0335	.39												
354	0.0345	.32												
402	0.0345	.32												
360	0.0339	.16												
433	0.0338	.15												
009	0.0335	.13												
Avg	0.0334													
029	0.0330	-.10												
073	0.0330	-.10												
324	0.0330	-.10												
057	0.0333	-.11												
090	0.0330	-.28												
040	0.0322	-.32												
131	0.0318	-.43												
Meth: 221.XX PCT														
Acid Soluble Copper														
330	0.1000 s	17.45												
177	0.0475 s	3.72												
460	0.0420	2.32												
450	0.0415	2.32												
368	0.0384 R	2.01												
420	0.0390	1.47												
055	0.0350 R	1.38												
102	0.0350 R	1.38												
114	0.0365	1.23												
247	0.0378	1.15												
351	0.0376	1.11												
028	0.0363	.79												
247	0.0356	.75												
042	0.0360	.69												
043	0.0343	.51												
086	0.0351	.49												
422	0.0335	.39												
354	0.0345	.32												
402	0.0345	.32												
360	0.0339	.16												
433	0.0338	.15												
009	0.0335	.13												
Avg	0.0334													
029	0.0330	-.10												
073	0.0330	-.10												
324	0.0330	-.10												
057	0.0333	-.11												
090	0.0330	-.28												
040	0.0322	-.32												
131	0.0318	-.43												
Meth: 221.XX PCT														
Acid Soluble Iron														
Other														
114	0.0365	1.14												
247	0.0378	.60												
Avg	0.0359													
422	0.0335	-.92												
Meth: 241.99 PCT														
Acid Soluble Iron														
Other														
234	2.95	.88												
Avg	2.84													
422	2.73	-.85												
Meth: 241.XX PCT														
Acid Soluble Iron														
Other														
117	3.68	1.54												
432	3.22	1.06												
330	3.20	1.04												
354	3.18 R	1.03												
360	3.19	1.02												
460	3.19	1.02												
106	3.09	.92												
233	3.02	.84												
055	3.01	.83												
042	3.00	.83												
351	3.01	.83												
234	2.95	.76												
028	2.94	.76												
043	2.90	.71												
291	2.90	.71												
029	2.88	.70												
405	2.84	.65												
177	2.82	.63												
027	2.81	.61												
057	2.73	.55												
422	2.73	.53												
009	2.65	.45												
433	2.52	.30												
231	2.42	.22												
037	2.42	.21												
073	2.38	.21												
296	2.40	.17												
096	2.40	.17												
040	2.38	.17												
Avg	2.23													
324	2.19	-.05												
247	2.21	-.06												
Meth: 241.30 PCT														
Acid Soluble Iron														
ICP														
117	3.68	1.61												
432	3.22	1.16												
330	3.20	1.15												
354	3.18 R	1.14												
360	3.19	1.13												
106	3.09	1.03												
233	3.02	.97												
042	3.00	.95												
291	2.90	.85												
405	2.84	.79												
027	2.81	.76												
057	2.73	.69												
009	2.65	.60												
433	2.52	.47												
037	2.42	.39												
096	2.40	.35												



Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 289.30 PPM											
Molybdenum											
ICP			230	14.90	-1.02	Meth: 291.30 PPM					
035	18.25	.21	397	15.00	-1.04	Nickel					
232	18.20	.21	255	14.66	-1.17	027	1384.0 R	3.36	Meth: 301.99 PPM		
057	18.09	.19	049	11.31	-2.34	035	1260.0	1.56	Selenium		
Avg	17.80					220	1210.0	.92	Other		
106	17.50	-.22				368	1141.0	.52	Meth: 321.00 PCT		
247	17.00	-.30				009	1168.5	.46	Acid Soluble Zinc		
220	17.00	-.30				419	1174.5	.46	Atomic Absorption		
009	15.65	-.80				037	1148.2	.39	296	107.50	-.56
230	14.90	-1.08				247	1150.5	.16	220	100.50	-.89
255	14.66	-1.23				Avg	1137.9		Meth: 301.99 PPM		
049	11.31	-2.41				086	1104.0	-.44	Selenium		
Meth: 289.99 PPM											
Molybdenum											
ICP			036	1084.5	-.69	Meth: 321.30 PCT					
114	49.00 S	24.30	231	1093.1	-.71	Acid Soluble Zinc					
397	15.00	.71	102	1133.6	-.72	ICP					
Avg	15.00		106	1082.0	-.75	432 0.220 s 8.15					
Meth: 289.99 PPM											
Molybdenum											
ICP			232	957.85	-2.27	442 0.220 s 3.31					
114	49.00 S	24.30	049	12.29 s	-14.19	330 0.200 3.18					
397	15.00	.71	393	1.32 s	-14.33	368 0.183 R 2.39					
Avg	15.00					354 0.183 1.61					
Meth: 289.99 PPM											
Molybdenum											
ICP			Meth: 311.99 PCT								
114	49.00 S	11.69	Sodium								
433	23.21	2.05	Other								
450	20.50	1.07	422	0.56	2.29	086 0.170 .88					
291	20.00	.87	307	0.39	.15	090 0.175 .86					
037	19.48	.72	Avg	0.38		057 0.169 .48					
086	19.08	.71	102	0.35	-.38	114 0.170 .43					
368	19.30	.66	232	0.34	-.41	037 0.167 .34					
102	18.52	.33	009	115.00	-.21	360 0.168 .31					
035	18.25	.26	037	115.15	-.39	009 0.167 .24					
232	18.20	.25	450	111.50	-.67	433 0.167 .24					
057	18.09	.22	230	102.00	-1.74	402 0.166 .19					
Avg	17.65		393	5.71 s	-13.30	324 0.167 .12					
106	17.50	-.19	Meth: 321.00 PCT								
247	17.00	-.24	Acid Soluble Zinc								
220	17.00	-.24	Atomic Absorption								
009	15.65	-.74	460	0.355 s	34.83	Avg 0.165					
Meth: 291.99 PPM											
Nickel											
ICP			040	0.179 s	4.93	117 0.165					
106	17.50	-.19	231	136.87	1.18	131 0.165					
247	17.00	-.24	Avg	114.96		233 0.164					
220	17.00	-.24	Meth: 301.99 PPM								
009	15.65	-.74	Selenium								
Meth: 291.99 PPM											
Nickel											
ICP			231	136.87	1.18	028 0.165 1.33					
114	49.00 S	24.30	Avg	114.96		177 0.163 .88					
397	15.00	.71	Meth: 321.00 PCT								
Avg	15.00		Acid Soluble Zinc								
Meth: 289.99 PPM											
Molybdenum											
ICP			Atomic Absorption								
114	49.00 S	24.30	460	0.355 s	34.83	117 0.165					
433	23.21	2.05	040	0.179 s	4.93	131 0.165					
450	20.50	1.07	233	0.164		233 0.164					
291	20.00	.87	220	17.00	-.24	307 0.163					
037	19.48	.72	009	15.65	-.74	022 0.162					
086	19.08	.71	Meth: 321.00 PCT								
368	19.30	.66	Acid Soluble Zinc								
102	18.52	.33	Atomic Absorption								
035	18.25	.26	460	0.355 s	34.83	117 0.165					
232	18.20	.25	040	0.179 s	4.93	131 0.165					
057	18.09	.22	233	0.164		233 0.164					
Avg	17.65		220	17.00	-.24	307 0.163					
106	17.50	-.19	009	15.65	-.74	022 0.162					
247	17.00	-.24	Meth: 321.00 PCT								
220	17.00	-.24	Acid Soluble Zinc								
009	15.65	-.74	Atomic Absorption								
Meth: 321.00 PCT											
Acid Soluble Zinc											
Atomic Absorption											
351	0.162	.81	Avg 0.165								
296	0.162	.81	117 0.165								
055	0.160	.44	131 0.165								
Avg	0.158		233 0.164								
371	0.154	-.71	307 0.163								
043	0.153	-.81	022 0.162								
029	0.153	-.96	Avg 0.165								
397	0.155	-.99	117 0.165								
073	0.149	-1.54	131 0.165								
220	0.152 R	-1.56	233 0.164								
Meth: 321.30 PCT											
Acid Soluble Zinc											
ICP											
432	0.220 s	8.15	Avg 0.165								
042	0.200 s	3.31	117 0.165								
330	0.200	3.18	131 0.165								
368	0.183 R	2.39	233 0.164								
354	0.183	1.61	307 0.163								
106	0.180	1.35	022 0.162								
035	0.176	1.00	Avg 0.165								
086	0.170	.88	117 0.165								
090	0.175	.86	131 0.165								
057	0.169	.48	233 0.164								
114	0.170	.43	307 0.163								
037	0.167	.34	022 0.162								
360	0.168	.31	Avg 0.165								
009	0.167	.24	117 0.165								
433	0.167	.24	131 0.165								
402	0.166	.19	233 0.164								
324	0.167	.12	307 0.163								
Avg	0.165		022 0.162								
117	0.165	-.09	Avg 0.165								
131	0.165	-.10	117 0.165								
233	0.164	-.20	131 0.165								
307	0.163	-.34	233 0.164								
022	0.162	-.35	307 0.163								

\* 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: 321.30 PCT

Acid Soluble Zinc	Lab Average*	Index
ICP		
420	0.162	-.35
450	0.165	-.46
102	0.165	-.46
292	0.160	-.49
230	0.160	-.49
419	0.161	-.50
390	0.159	-.75
255	0.156	-.85
247	0.154	-1.04
232	0.148	-1.61
426	0.148	-1.68
291	0.146	-1.82
444	0.143 R	-2.37
027	0.111 s	-5.03
405	0.006 s	-14.61

Meth: 321.XX PCT

Acid Soluble Zinc	Lab Average*	Index
ICP		
450	0.165	.62
102	0.165	.62
360	0.168	.62
037	0.167	.59
009	0.167	.55
433	0.167	.55
402	0.166	.45
324	0.167	.45
307	0.163	.37
028	0.165	.30
131	0.165	.30
233	0.164	.27
117	0.165	.23
AVG	0.163	
177	0.163	-.06
351	0.162	-.07
296	0.162	-.13
022	0.162	-.13
420	0.162	-.23
055	0.160	-.28
292	0.160	-.28
230	0.160	-.30
419	0.161	-.36
390	0.159	-.67
255	0.156	-.73
247	0.154	-.95
397	0.155	-1.01
371	0.154	-1.01
043	0.153	-1.07
029	0.153	-1.11
220	0.152	-1.43
073	0.149	-1.52
232	0.148	-1.66
426	0.148	-1.75
291	0.146	-1.90
444	0.143 R	-2.61
027	0.111 s	-5.79
405	0.006 s	-17.43

Meth: 321.99 PCT

Acid Soluble Zinc	Lab Average*	Index
Other		
422	0.176	.71

Meth: 321.XX PCT

Acid Soluble Zinc	Lab Average*	Index
460	0.355 s	21.44
432	0.220 s	10.09
042	0.200 s	4.32
330	0.200 A	4.17
368	0.183 R	3.12
040	0.179 R	2.72
354	0.183	2.26
106	0.180	1.95
035	0.176	1.52
422	0.176	1.45
090	0.175	1.34
086	0.170	1.25
057	0.169	.84
114	0.170	.83

\* 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	12	- 0.16	1.10	0.46	050.XX	70	0.06	1.32	0.65
001.99	12	0.00	0.98	0.28	060.00	6	0.00	1.03	0.16
001.XX	24	- 0.08	1.03	0.38	060.XX	7	0.62	1.90	0.45
002.99	2	0.00	1.19	0.21	101.30	17	- 0.89	3.79	0.14
002.XX	2	0.00	1.19	0.21	101.XX	18	- 0.33	4.37	0.14
009.10	3	0.00	1.00	0.41	121.30	16	0.00	0.98	0.26
009.XX	4	0.00	0.97	0.41	121.XX	17	0.61	2.70	0.28
010.11	8	- 0.40	1.46	0.23	144.01	18	- 0.19	1.24	0.45
010.12	2	- 5.86	8.29	0.50	144.99	26	- 0.27	1.39	0.29
010.60	52	0.06	1.11	0.44	144.XX	44	- 0.20	1.36	0.30
010.99	4	0.00	1.06	0.17	151.30	11	- 1.43	4.83	0.46
010.XX	64	- 0.15	1.36	0.37	151.99	2	0.00	0.67	0.72
020.10	7	0.48	2.17	1.64	151.XX	13	- 1.22	4.49	0.45
020.20	14	2.07	8.24	0.48	165.00	6	0.000	0.853	0.557
020.40	6	0.07	0.96	0.29	165.99	20	5.982	26.294	4.995
020.50	12	3.31	12.05	0.69	165.XX	26	5.125	25.640	4.867
020.99	4	4.94	7.68	0.23	181.30	15	- 1.16	4.59	0.27
020.XX	41	2.81	10.07	0.57	181.XX	17	- 1.01	4.26	0.29
030.20	2	0.00	1.22	0.06	190.99	2	0.00	1.22	0.00
030.XX	5	0.00	1.06	0.05	190.XX	2	0.00	1.22	0.00
040.99	2	0.00	1.21	0.14	191.30	15	- 1.35	3.30	0.44
040.XX	4	0.00	1.05	0.21	191.XX	17	- 0.96	2.61	0.35
041.10	14	- 0.83	3.25	3.41	202.30	13	- 1.05	5.17	0.71
041.20	3	3.94	6.87	3.47	202.99	3	- 8.33	14.46	0.33
041.40	4	- 3.31	6.67	0.68	202.XX	16	- 1.81	6.72	0.75
041.50	10	- 0.41	1.59	0.24	221.00	11	0.3423	1.4083	0.5117
041.60	13	0.25	1.19	0.59	221.30	33	- 0.275	4.8118	0.4952
041.99	2	- 4.50	6.36	1.65	221.99	3	0.0000	0.7034	0.7095
041.XX	36	- 0.04	2.99	1.88	221.XX	46	- 0.197	3.6654	0.4596
048.20	3	0.00	1.11	0.08	241.00	11	0.00	1.01	0.14
048.XX	4	0.00	1.08	0.08	241.30	33	0.02	1.00	0.06
050.00	18	- 0.15	1.13	0.76	241.99	2	0.00	1.19	0.21
050.10	2	0.00	0.92	0.57	241.XX	46	0.00	1.00	0.06
050.30	6	0.00	1.04	0.11	251.30	13	0.00	1.02	0.04
050.50	10	- 0.14	1.05	0.31	251.XX	15	0.00	1.02	0.04
050.51	10	0.09	0.93	0.60	261.00	10	0.487	1.728	0.569
050.60	7	0.97	3.22	0.93	261.30	29	- 0.150	1.850	0.323
050.61	8	0.00	0.93	0.42	261.31	2	0.000	1.160	0.279
050.99	21	- 0.05	0.91	0.82	261.99	5	- 2.074	4.702	0.469

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
261.XX	47	- 0.205	2.019	0.358					
281.30	3	0.00	1.11	0.09					
281.99	2	0.00	1.10	0.37					
281.XX	6	0.49	1.52	0.14					
289.30	17	0.00	0.99	0.20					
289.99	2	12.02	17.00	2.55					
289.XX	19	0.61	2.82	0.47					
291.30	16	- 1.54	4.95	0.41					
291.XX	18	- 1.41	4.81	0.41					
301.30	8	- 1.66	4.79	0.28					
301.99	3	0.00	1.02	0.38					
301.XX	11	- 0.84	2.93	0.35					
311.99	7	0.00	1.04	0.04					
311.XX	7	0.00	1.04	0.04					
321.00	13	2.882	9.694	1.039					
321.30	37	- 0.322	2.912	1.150					
321.XX	51	0.290	4.286	1.235					