

- Pass 1 Results for 75 Labs - - Pass 2 Results for 74 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	8	9.65	0.15	0.03	8	9.65	0.15	0.03
Ammoniacal Nitrogen, Other		001.99	7	9.54	0.28	0.09	6	9.60	0.24	0.04
Method Group 001.XX PCT			15	9.60	0.22	0.06	14	9.63	0.19	0.03
Nitrate Nitrogen, Jones Modified	930.02	002.20	1	0.77	0.04	0.05	1	0.77	0.04	0.05
Nitrate Nitrogen, Other		002.99	5	0.60	0.05	0.03	5	0.60	0.05	0.03
Method Group 002.XX PCT			6	0.63	0.08	0.03	6	0.63	0.08	0.03
Nitrogen From Urea, Urease (as N)	959.03	005.00	1	0.18	0.04	0.05	1	0.18	0.04	0.05
Ammon & Nitrate N, Devarda	892.01	009.10	5	10.39	0.15	0.04	5	10.39	0.15	0.04
Total Nitrogen, Modified Comprehensive	978.02	010.11	3	10.53	0.07	0.07	3	10.53	0.07	0.07
Total Nitrogen, Salicylic	955.04D	010.12	2	10.61	0.05	0.08	2	10.61	0.05	0.08
Total Nitrogen, Combustion		010.60	44	10.69	0.15	0.09	43	10.69	0.15	0.08
Total Nitrogen, Other		010.99	5	10.40	0.18	0.07	5	10.40	0.18	0.07
Method Group 010.XX PCT			57	10.63	0.20	0.09	56	10.62	0.19	0.08
Total Phosphate, Grav Quimociac	962.02	020.10	4	9.51	0.05	0.04	4	9.51	0.05	0.04
Total Phosphate, Spectrometric	958.01	020.20	14	9.55	0.20	0.10	13	9.55	0.20	0.07
Total Phosphate, Automated	978.01	020.40	2	9.51	0.02	0.01	2	9.51	0.02	0.01
Total Phosphate, ICP		020.50	10	9.70	0.43	0.21	10	9.70	0.43	0.21
Total Phosphate, Other		020.99	3	9.74	0.25	0.04	3	9.74	0.25	0.04
Method Group 020.XX PCT			34	9.60	0.29	0.12	31	9.62	0.27	0.08
Insoluble Phosphate, Grav Quimociac	963.03C	030.10	1	0.03	0.00	0.00	1	0.03	0.00	0.00
Insoluble Phosphate, Spectrometric	963.03C	030.20	2	0.06	0.02	0.00	2	0.06	0.02	0.00
Insoluble Phosphate, ICP		030.50	1	0.05	0.00	0.00	1	0.05	0.00	0.00
Insoluble Phosphate, Other		030.99	2	0.04	0.01	0.01	2	0.04	0.01	0.01
Method Group 030.XX PCT			6	0.04	0.01	0.00	5	0.04	0.02	0.00
InDir Available Phosphate, Grav Quim	960.02	040.10	2	9.30	0.24	0.01	2	9.30	0.24	0.01
InDir Available Phosphate, Spectrometri	960.02	040.20	2	9.50	0.10	0.17	2	9.50	0.10	0.17
InDir Available Phosphate, ICP		040.50	1	9.70	0.06	0.09	1	9.70	0.06	0.09
InDir Available Phosphate, Other		040.99	2	9.35	0.12	0.06	2	9.35	0.12	0.06
Method Group 040.XX PCT			7	9.43	0.20	0.08	7	9.43	0.20	0.08
Dir Available Phosphate, Grav Quimociac	960.03E	041.10	10	9.45	0.08	0.09	10	9.45	0.08	0.09
Dir Available Phosphate, Spectrometric	960.03D	041.20	1	9.72	0.16	0.22	1	9.72	0.16	0.22
Dir Available Phosphate, Automated	978.01	041.40	4	9.53	0.28	0.07	4	9.53	0.28	0.07
Dir Available Phosphate, ICP		041.50	11	9.55	0.25	0.21	11	9.55	0.25	0.21
Dir Available Phosphate, EDTA Extract	993.01	041.60	8	9.40	0.20	0.09	8	9.40	0.20	0.09
Dir Available Phosphate, Other		041.99	2	9.59	0.29	0.00	2	9.59	0.29	0.00
Method Group 041.XX PCT			37	9.50	0.21	0.12	34	9.50	0.21	0.09
Water Soluble Phosphate, Spectrometric	970.01	048.20	2	6.95	0.47	0.12	2	6.95	0.47	0.12
Water Soluble Phosphate, ICP		048.50	1	6.22	0.08	0.12	1	6.22	0.08	0.12
Method Group 048.XX PCT			3	6.71	0.53	0.12	3	6.71	0.53	0.12

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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, STPB Oxalate	958.02	050.00	10	9.74	0.22	0.04	9	9.79	0.17	0.02
Soluble Potash, STPB Citrate	969.04	050.10	2	9.68	0.33	0.08	2	9.68	0.33	0.08
Soluble Potash, AA (Oxalate)		050.30	5	9.92	0.39	0.16	5	9.92	0.39	0.16
Soluble Potash, AA (Citrate)		050.31	1	9.82	0.15	0.21	1	9.82	0.15	0.21
Soluble Potash, ICP (Oxalate)		050.50	7	9.83	0.30	0.15	7	9.83	0.30	0.15
Soluble Potash, ICP (Citrate)		050.51	8	10.07	0.39	0.10	8	10.07	0.39	0.10
Soluble Potash, Flame (Oxalate)	983.02(a)	050.60	3	9.79	0.38	0.03	3	9.79	0.38	0.03
Soluble Potash, Flame (Citrate)	983.02(b)	050.61	9	10.09	0.22	0.11	9	10.09	0.22	0.11
Soluble Potash, Other		050.99	18	9.87	0.44	0.17	17	9.85	0.42	0.11
Method Group 050.XX PCT			63	9.90	0.36	0.12	62	9.89	0.36	0.10
Free Water, Vacuum Oven	965.08B	060.00	4	1.33	0.10	0.05	4	1.33	0.10	0.05
Method Group 060.XX PCT			4	1.33	0.10	0.05	4	1.33	0.10	0.05
Acid Soluble Calcium, AA	945.04	101.00	11	4.21	0.24	0.15	10	4.22	0.24	0.12
Acid Soluble Calcium, ICP		101.30	31	4.39	0.28	0.11	30	4.38	0.27	0.10
Acid Soluble Calcium, Titrimetric	945.03	101.70	1	4.36	0.05	0.08	1	4.36	0.05	0.08
Acid Soluble Calcium, Other		101.99	1	4.70	0.00	0.00	1	4.70	0.00	0.00
Method Group 101.XX PCT			45	4.37	0.30	0.12	42	4.35	0.27	0.10
Acid Soluble Magnesium, AA	984.01	121.00	10	1.98	0.09	0.05	9	1.97	0.08	0.04
Acid Soluble Magnesium, ICP		121.30	32	1.96	0.10	0.04	31	1.97	0.09	0.03
Acid Soluble Magnesium, Titrimetric	964.01	121.70	1	2.23	0.00	0.00	1	2.23	0.00	0.00
Method Group 121.XX PCT			44	1.97	0.12	0.04	41	1.98	0.10	0.03
Water Soluble Magnesium, AA		131.00	1	1.65	0.02	0.03	1	1.65	0.02	0.03
Water Soluble Magnesium, ICP		131.30	1	1.77	0.02	0.03	1	1.77	0.02	0.03
Method Group 131.XX PCT			2	1.71	0.07	0.03	2	1.71	0.07	0.03
Sulfur, Gravimetric	980.02a	144.01	11	13.50	0.31	0.15	10	13.55	0.26	0.09
Sulfur, Gravimetric	980.02b	144.02	1	13.41	0.01	0.01	1	13.41	0.01	0.01
Sulfur, Spectrometric		144.70	1	13.29	0.15	0.21	1	13.29	0.15	0.21
Sulfur, Other		144.99	20	13.12	0.72	0.21	20	13.05	0.79	0.16
Method Group 144.XX PCT			33	13.26	0.61	0.19	32	13.22	0.68	0.14
Arsenic, Atomic Absorption		151.00	1	20.45	0.35	0.50	1	20.45	0.35	0.50
Arsenic, ICP		151.30	8	21.42	2.37	1.90	7	21.24	1.98	1.07
Arsenic, Other		151.99	2	17.60	4.53	2.09	2	17.60	4.53	2.09
Method Group 151.XX PPM			11	20.64	3.03	1.81	10	20.44	2.85	1.22
Acid Soluble Boron, Spectrometric	982.01	165.00	5	0.062	0.004	0.001	5	0.062	0.004	0.001
Acid Soluble Boron, Other		165.99	19	0.064	0.008	0.004	19	0.063	0.008	0.003
Method Group 165.XX PCT			24	0.064	0.007	0.003	24	0.063	0.008	0.003
Water Soluble Boron, Other		171.99	3	0.080	0.020	0.005	3	0.080	0.020	0.005
Cadmium, Atomic Absorption		181.00	1	8.55	0.21	0.30	1	8.55	0.21	0.30
Cadmium, ICP		181.30	11	8.85	0.52	0.35	11	8.85	0.52	0.35

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Cadmium, Other		181.99	1	9.30	0.19	0.27	1	9.30	0.19	0.27
Method Group 181.XX PPM			13	8.86	0.50	0.34	13	8.86	0.50	0.34
Water Soluble Chlorine, Titrimetric	928.02	190.00	5	5.09	0.09	0.04	5	5.09	0.09	0.04
Water Soluble Chlorine, Other		190.99	1	4.74	0.18	0.26	1	4.74	0.18	0.26
Method Group 190.XX PCT			6	5.03	0.17	0.07	5	5.09	0.09	0.04
Chromium, ICP		191.30	11	100.64	15.89	3.39	11	100.64	15.89	3.39
Chromium, Other		191.99	1	67.79	1.34	1.90	1	67.79	1.34	1.90
Method Group 191.XX PPM			12	97.91	17.80	3.27	12	97.91	17.80	3.27
Acid Soluble Cobalt, AA		202.00	2	21.25	20.52	1.50	2	21.25	20.52	1.50
Acid Soluble Cobalt, ICP	965.11	202.30	11	21.55	9.85	0.77	11	21.55	9.85	0.77
Acid Soluble Cobalt, Other		202.99	1	4.61	0.04	0.05	1	4.61	0.04	0.05
Method Group 202.XX PPM			14	20.30	11.91	0.82	14	20.30	11.91	0.82
Acid Soluble Copper, Atomic Absorption	975.01	221.00	4	0.0021	0.0023	0.0008	3	0.0009	0.0005	0.0001
Acid Soluble Copper, ICP		221.30	14	0.0010	0.0012	0.0003	12	0.0006	0.0003	0.0001
Acid Soluble Copper, Other		221.99	1	0.0013	0.0000	0.0000	1	0.0013	0.0000	0.0000
Method Group 221.XX PCT			19	0.0012	0.0015	0.0004	17	0.0008	0.0006	0.0002
Acid Soluble Iron, Atomic Absorption	980.01	241.00	8	0.62	0.04	0.02	8	0.62	0.04	0.02
Acid Soluble Iron, ICP		241.30	31	0.56	0.06	0.02	29	0.55	0.06	0.02
Method Group 241.XX PCT			39	0.57	0.06	0.02	36	0.57	0.05	0.02
Lead, ICP		251.30	10	6.21	2.50	0.79	10	6.21	2.50	0.79
Lead, Other		251.99	1	5.46	0.57	0.80	1	5.46	0.57	0.80
Method Group 251.XX PPM			11	6.14	2.40	0.79	11	6.14	2.40	0.79
Acid Soluble Manganese, AA	972.02a	261.00	9	0.279	0.023	0.012	9	0.279	0.023	0.012
Acid Soluble Manganese, ICP	972.02a	261.30	27	0.262	0.036	0.017	26	0.261	0.035	0.015
Acid Soluble Manganese, ICP	972.02b	261.31	1	0.279	0.001	0.001	1	0.279	0.001	0.001
Acid Soluble Manganese, Other		261.99	5	0.271	0.036	0.017	5	0.271	0.036	0.017
Method Group 261.XX PCT			43	0.268	0.035	0.018	41	0.267	0.033	0.014
Mercury, ICP		281.30	1	1.16	0.03	0.04	1	1.16	0.03	0.04
Mercury, Other		281.99	3	0.04	0.01	0.01	3	0.04	0.01	0.01
Method Group 281.XX PPM			4	0.32	0.52	0.01	4	0.32	0.52	0.01
Molybdenum, ICP		289.30	11	6.24	0.92	0.22	11	6.24	0.92	0.22
Molybdenum, Other		289.99	2	5.86	2.35	0.04	2	5.86	2.35	0.04
Method Group 289.XX PPM			14	5.81	1.77	0.18	13	5.79	1.84	0.14
Nickel, ICP		291.30	12	28.36	3.10	0.66	11	27.87	2.71	0.50
Method Group 291.XX PPM			12	28.36	3.10	0.66	11	27.87	2.71	0.50
Selenium, ICP		301.30	2	0.77	0.89	0.03	2	0.77	0.89	0.03
Selenium, Other		301.99	2	0.66	0.56	0.03	2	0.66	0.56	0.03
Method Group 301.XX PPM			4	0.72	0.69	0.03	4	0.72	0.69	0.03
Sodium, Flame Photometric	974.01	311.30	1	0.31	0.02	0.03	1	0.31	0.02	0.03

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Sodium, Other		311.99	7	0.30	0.01	0.01	7	0.30	0.01	0.01
Method Group 311.XX PCT			8	0.30	0.01	0.01	8	0.30	0.01	0.01
Acid Soluble Zinc, Atomic Absorption	975.02	321.00	10	0.356	0.026	0.012	9	0.360	0.022	0.008
Acid Soluble Zinc, ICP		321.30	32	0.356	0.026	0.015	30	0.356	0.025	0.011
Acid Soluble Zinc, Other		321.99	1	0.350	0.000	0.000	1	0.350	0.000	0.000
Method Group 321.XX PCT			43	0.355	0.025	0.014	40	0.356	0.024	0.010
Water Soluble Zinc, ICP		325.30	1	0.250	0.004	0.006	1	0.250	0.004	0.006
Water Soluble Zinc, Other		325.99	1	0.355	0.007	0.010	1	0.355	0.007	0.010
Method Group 325.XX PCT			2	0.303	0.061	0.008	2	0.303	0.061	0.008

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index			
Meth: 001.10 PCT														
Ammoniacal Nitrogen														
MgO Distillation														
300	9.86	1.41										037	10.37	-2.25
351	9.80	.98										422	10.26 s	-2.93
405	9.73	.56										009	10.19 s	-3.36
232	9.68	.27										262	10.15 s	-3.62
090	9.66	.25										Meth: 010.99 PCT		
Avg	9.65											Total Nitrogen		
470	9.57	-.57										Combustion		
456	9.50	-1.02										Other		
415	9.41	-1.65										255	10.59	1.16
330	8.65 s	-6.82										300	10.50	.57
Meth: 001.99 PCT														
Ammoniacal Nitrogen														
Other														
473	9.75	.64										200	10.50	.54
255	9.74	.62										Avg	10.40	
397	9.75	.61										476	10.21	-1.10
371	9.70	.43										030	10.21	-1.15
Avg	9.60											Meth: 010.60 PCT		
027	9.52	-.29										Total Nitrogen		
368	9.20 R	-1.80										Combustion		
420	9.11	-2.02										055	10.79	.74
Meth: 001.99 PCT														
Ammoniacal Nitrogen														
300	9.86	1.21										420	10.79	.68
351	9.80	.88										131	10.74	.54
473	9.75	.63										330	10.75	.54
255	9.74	.62										232	10.75	.49
397	9.75	.61										049	10.75	.47
405	9.73	.55										291	10.76	.47
371	9.70	.37										102	10.74	.45
232	9.68	.32										035	10.74	.44
090	9.66	.26										029	10.75	.40
Avg	9.63											247	10.73	.32
470	9.57	-.30										292	10.73	.29
027	9.52	-.29										296	10.72	.23
368	9.20 R	-1.80										095	10.71	.13
420	9.11	-2.02										007	10.70	.09
Meth: 002.20 PCT														
Nitrate Nitrogen														
Jones Modified														
230	1.43 S	19.72										Avg	10.69	
029	0.77	.71										027	10.68	-.09
Avg	0.77											136	10.69	-.10
Meth: 002.99 PCT														
Nitrate Nitrogen														
Other														
397	0.67	1.44										231	10.67	-.13
027	0.62	.36										162	10.68	-.32
232	0.61	.21										086	10.67	-.40
Avg	0.60											324	10.65	-.42
371	0.58	-.55										233	10.63	-.43
368	0.55	-1.40										402	10.62	-.45
Meth: 002.99 PCT														
Nitrate Nitrogen														
230	1.43 s	10.85										405	10.62	-.45
029	0.77	1.80										041	10.62	-.48
397	0.67	.56										307	10.62	-.49
Avg	0.63											042	10.63	-.56
027	0.62	-.14										377	10.60	-.64
232	0.61	-.31										360	10.67	-.65
371	0.58	-.68										028	10.65	-.82
368	0.55	-1.17										393	10.52	-1.12
Meth: 005.00 PCT														
Nitrogen From Urea														
Urease (as N)														
232	0.18	.71										406	10.52	-1.21
Meth: 010.11 PCT														
Ammon & Nitrate N														
Devarda														
471	10.56	1.16										055	10.79	.74
393	10.46	.49										420	10.79	.68
397	10.41	.24										131	10.74	.54
Avg	10.39											330	10.75	.54
090	10.39	-.07										232	10.75	.49
470	10.15	-1.69										049	10.75	.47
Meth: 010.12 PCT														
Total Nitrogen														
Salicylic														
254	10.62	1.15										291	10.76	.47
Avg	10.61											102	10.74	.45
185	10.60	-.42										035	10.74	.44
455	9.57 S	-19.57										029	10.75	.40
Meth: 010.60 PCT														
Total Nitrogen														
Combustion														
443	11.48 s	5.60										247	10.73	.32
230	11.10	2.77										292	10.73	.29
275	10.98	1.83										296	10.72	.23
177	10.93	1.65										095	10.71	.13
351	10.85 R	1.37										007	10.70	.09
043	10.85	1.15										Avg	10.69	
354	10.81	.96										027	10.68	-.09
450	10.80	.90										136	10.69	-.10
055	10.79	.88										231	10.67	-.13
420	10.79	.84										162	10.68	-.32
330	10.75	.70										086	10.67	-.40
291	10.76	.68										324	10.65	-.42
049	10.75	.66										233	10.63	-.43
232	10.75	.66										402	10.62	-.45
131	10.74	.66										405	10.62	-.45
102	10.74	.63										041	10.62	-.48
029	10.75	.63										307	10.62	-.49
035	10.74	.61										042	10.63	-.56
028	10.45	-1.62										377	10.60	-.64
247	10.73	-.23										360	10.67	-.65
368	10.37	-2.23										028	10.65	-.82
* X=Excluded from lab performance S/s=Screened Outlier R=Duplicate Range too large A=Analysis beyond 3-s limits														

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index			
Meth: 010.XX PCT														
<u>Total Nitrogen</u>														
292	10.73	.54	262	10.15	-2.45	Meth: 020.40 PCT						368	9.99	1.42
360	10.67	.53	415	10.00 s	-3.20	Total Phosphate						371	9.91	1.08
296	10.72	.50	114	9.78 s	-4.33	Automated						415	9.81	.67
095	10.71	.42	474	9.78 s	-4.33	Avg						255	9.75	.50
007	10.70	.39	455	9.57 s	-5.38	247						231	9.75	.49
162	10.68	.37				035						455	9.69	.25
086	10.67	.37	Meth: 020.50 PCT											
136	10.69	.32	Total Phosphate											
324	10.65	.29	ICP											
042	10.63	.28	041	9.55	1.29	393						231	9.59	-.13
027	10.68	.26	090	9.54	.70	426						200	9.57	-.21
231	10.67	.24	Avg	9.51	.87	422						090	9.54	-.30
307	10.62	.19	114	9.48	-.64	368						041	9.55	-.32
233	10.63	.16	470	9.46	-.96	231						456	9.53	-.34
Avg	10.62		117	9.25 s	-5.26	255						473	9.57	-.38
402	10.62	-.02	Meth: 020.99 PCT											
041	10.62	-.05	Total Phosphate											
405	10.62	-.06	Spectrometric											
185	10.60	-.16	371	9.91	1.85	432						114	9.48	-.53
377	10.60	-.20	415	9.81	1.29	330						114	9.48	-.54
105	10.60	-.23	324	9.62 R	1.21	402						232	9.48	-.55
254	10.62	-.31	406	9.69	.71	Meth: 040.10 PCT						247	0.05	.94
255	10.59	-.45	292	9.64	.47	Total Phosphate						Avg	0.04	
393	10.52	-.54	473	9.57	.46	Other						473	0.04	-.25
300	10.50	-.64	231	9.59	.21	443						405	0.03	-.89
406	10.52	-.64	200	9.57	.09	476						090	0.03	-.89
260	10.52	-.66	Avg	9.55		Avg						307	9.29	-.1.28
200	10.50	-.66	474	9.55	-.38	455						117	9.25	-.1.41
211	10.49	-.69	232	9.48	-.39	322						420	9.18	-1.63
023	10.53	-.72	471	9.48 X	-.39	Meth: 020.XX PCT						432	9.18 R	-1.77
426	10.54	-.79	450	9.39	-.84	Total Phosphate						330	9.15 R	-1.95
325	10.45	-.93	405	9.29	-1.35	443						035	8.43 s	-4.36
368	10.37	-1.41	420	9.18	-1.86	476						402	8.21 s	-5.16
037	10.37	-1.42	Meth: 030.10 PCT											
422	10.26	-1.92	Insoluble Phosphate											
476	10.21	-2.15	Grav Quimociac											
030	10.21	-2.18	090	0.03	.00	Meth: 040.20 PCT						473	9.53	.93
009	10.19	-2.25	InDir Available Phos											
Spectrometric														

* 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: 040.20 PCT											
InDir Available Phos			Meth: 041.10 PCT								
Spectrometri			Dir Available Phosph			Meth: 041.60 PCT					
Avg	9.50		Grav Quimociac			EDTA Extract			Dir Available Phosph		
474	9.48	- .79	177	9.43	- .39	029	9.73	1.81	211	9.49	- .04
Meth: 040.50 PCT											
InDir Available Phos			009	9.42	- .43	043	9.54	.72	086	9.47	- .22
ICP			102	9.39	- .93	296	9.43	.34	105	9.46	- .24
255	9.70	- .71	105	9.39	- 1.65	105	9.46	.30	131	9.46	- .24
Meth: 041.20 PCT											
Dir Available Phosph			Avg	9.40		Avg	9.40		185	9.48	- .27
Spectrometric			397	9.40	- .01	397	9.40	- .01	131	9.43	- .34
262	11.70 S	12.73	177	9.34	- .29	177	9.34	- .29	177	9.43	- .37
030	9.72	.71	024	9.23	- .87	024	9.23	- .87	009	9.42	- .38
Avg	9.72		351	9.09	- 1.63	351	9.09	- 1.63	296	9.43	- .44
Meth: 041.40 PCT											
Other			Meth: 041.99 PCT								
247	9.45	.80	Dir Available Phosph			Dir Available Phosph					
Avg	9.35		Automated			Other					
405	9.25	- .93	095	9.80	.98	275	9.84	.87	049	9.47	- .63
Meth: 040.99 PCT											
InDir Available Phos			027	9.72	.70	Avg	9.59		325	9.38	- .65
255	9.70	1.39	Avg	9.53		230	8.63 S	- 3.33	177	9.34	- .75
473	9.53	.67	131	9.46	- .27	Meth: 041.20 PCT					
474	9.48	.44	028	9.14	- 1.41	Spectrometric					
090	9.51	.40	Meth: 041.50 PCT								
247	9.45	.08	Dir Available Phosph			Dir Available Phosph					
Avg	9.43		ICP			Automated					
405	9.25	- .92	393	9.97	1.67	291	9.83	1.61	029	9.73	1.30
300	9.09	- 1.70	291	9.83	1.12	095	9.80	1.45	030	9.72	1.20
Meth: 041.10 PCT											
Dir Available Phosph			009	9.68	1.00	009	9.68 R	1.35	Water Soluble Phosph		
Grav Quimociac			007	9.56	.85	029	9.73	1.30	Spectrometric		
055	9.72 S	3.45	055	9.59	.36	030	9.72	1.20	420	7.36	.88
049	9.47	1.56	360	9.56	.26	055	9.72	1.12	Avg	6.95	
254	9.55	1.38	Avg	9.55		027	9.72	1.08	474	6.55	- .85
185	9.48	.80	043	9.54	- .35	007	9.56 R	1.06	Meth: 050.30 PCT		
086	9.47	.53	377	9.38	- .70	055	9.59	.59	Soluble Potash		
211	9.49	.48	325	9.38	- .73	043	9.54	.45	AA (Oxalate)		
Avg	9.45		023	9.27	- 1.17	360	9.56	.42	262	12.88 S	7.50
131	9.43	- .29	368	9.33	- 1.43	254	9.55	.35	185	10.35	1.15
Meth: 050.10 PCT											
Soluble Potash			Meth: 048.20 PCT								
STPB Citrate			Water Soluble Phosph			Water Soluble Phosph					
300	9.96	.86	Spectrometric			ICP					
Avg	9.68		420	7.36	.88	393	6.22	- .71	Meth: 048.50 PCT		
117	9.40	- .87	Meth: 048.20 PCT								
Meth: 050.30 PCT											
Soluble Potash			Meth: 048.20 PCT								
STPB Citrate			Water Soluble Phosph			Water Soluble Phosph					
300	9.96	.86	Spectrometric			ICP					
Avg	9.68		420	7.36	.88	393	6.22	- .71	Meth: 048.50 PCT		
117	9.40	- .87	Meth: 048.20 PCT								
Meth: 050.30 PCT											
Soluble Potash			Meth: 048.20 PCT								
AA (Oxalate)			Water Soluble Phosph			Water Soluble Phosph					
262	12.88 S	7.50	ICP			ICP					
185	10.35	1.15	393	6.22	- .71	Meth: 048.50 PCT					
023	10.30	1.00	Meth: 048.20 PCT								
Avg	9.92		Water Soluble Phosph			Water Soluble Phosph					
136	9.92	- .08	ICP			ICP					
043	9.54	- 1.01	Meth: 048.20 PCT								

* 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: 050.30 PCT												
Soluble Potash												
AA (Oxalate)												
351	9.50	-1.07										Meth: 050.99 PCT
Soluble Potash												
Flame (Oxalate)												
443	11.73 S	5.14	275	9.78	-0.20						Soluble Potash	
406	10.22	1.13	325	9.76	-0.26						Other	
Meth: 050.31 PCT												
Soluble Potash												
AA (Citrate)												
200	9.78	-0.04	402	9.13	-1.72						Meth: 050.61 PCT	
415	9.37	-1.10	322	9.03	-1.94						Soluble Potash	
Meth: 050.50 PCT												
Soluble Potash												
ICP (Oxalate)												
420	10.23	1.31	432	10.80	2.54						Flame (Citrate)	
422	10.12	.95	035	10.55	1.85						Soluble Potash	
426	10.03	.69	330	10.25 R	1.84						Flame (Citrate)	
Meth: 050.51 PCT												
Soluble Potash												
ICP (Citrate)												
432	10.80	1.89	185	10.35	1.35						Soluble Potash	
009	10.26	.64	023	10.30	1.19						Flame (Citrate)	
393	10.14	.19	177	10.31	1.18						Soluble Potash	
043	10.13	.18	009	10.26	1.13						Flame (Citrate)	
Avg	10.07		455	10.26	1.03						Soluble Potash	
007	10.07	-0.14	024	10.22	.96						Other	
377	9.95	-0.32	476	10.19	.96						Soluble Potash	
291	9.82	-0.67	420	10.23	.94						Other	
296	9.42	-1.70	456	10.22	.92						Soluble Potash	
Meth: 050.60 PCT												
Soluble Potash												
Flame (Oxalate)												
330	10.25 R	1.60	406	10.22	.91						Soluble Potash	
432	10.80	1.89	360	10.18	.83						Other	
009	10.26	.64	450	10.18	.82						Soluble Potash	
393	10.14	.19	095	10.17	.78						Flame (Oxalate)	
043	10.13	.18	042	10.15	.77						Soluble Potash	
Avg	10.07		027	10.13	.72						Flame (Oxalate)	
007	10.07	-0.14	393	10.14	.70						Soluble Potash	
377	9.95	-0.32	043	10.13	.68						Flame (Oxalate)	
291	9.82	-0.67	422	10.12	.63						Soluble Potash	
296	9.42	-1.70	028	10.03	.53						Flame (Oxalate)	
Meth: 050.99 PCT												
Soluble Potash												
ICP (Citrate)												
330	10.25 R	1.60	406	10.22	.91						Soluble Potash	
432	10.80	1.89	360	10.18	.83						Other	
009	10.26	.64	450	10.18	.82						Soluble Potash	
393	10.14	.19	095	10.17	.78						Flame (Oxalate)	
043	10.13	.18	042	10.15	.77						Soluble Potash	
Avg	10.07		027	10.13	.72						Flame (Oxalate)	
007	10.07	-0.14	393	10.14	.70						Soluble Potash	
377	9.95	-0.32	043	10.13	.68						Flame (Oxalate)	
291	9.82	-0.67	422	10.12	.63						Soluble Potash	
296	9.42	-1.70	028	10.03	.53						Flame (Oxalate)	
Meth: 050.61 PCT												
Soluble Potash												
Flame (Citrate)												
035	10.55	2.05	102	14.66 s	13.34						Soluble Potash	
024	10.22	.75	262	12.88 s	8.35						Other	
456	10.22	.57	443	11.73 s	5.15						Soluble Potash	
095	10.17	.38	230	11.30 s	3.95						Other	
Avg	10.09		432	10.80	2.54						Soluble Potash	
426	10.03	.69	035	10.55	1.85						Other	
Meth: 050.99 PCT												
Soluble Potash												
Flame (Citrate)												
131	9.95	-0.64	330	10.25 R	1.84						Soluble Potash	
028	9.80	-0.12	185	10.35	1.35						Other	
324	9.66	-0.60	023	10.30	1.19						Soluble Potash	
055	9.50	-1.17	177	10.31	1.18						Other	
354	9.49	-1.29	009	10.26	1.13						Soluble Potash	
Meth: 050.99 PCT												
Soluble Potash												
ICP (Oxalate)												
420	10.23	1.31	455	10.26	1.03						Soluble Potash	
422	10.12	.95	024	10.22	.96						Other	
426	10.03	.69	476	10.19	.96						Soluble Potash	
Avg	9.83		420	10.23	.94						Other	
292	9.80	-0.12	456	10.22	.92						Soluble Potash	
324	9.66	-0.60	406	10.22	.91						Other	
055	9.50	-1.17	360	10.18	.83						Soluble Potash	
354	9.49	-1.29	476	10.19	.96						Other	
Meth: 050.99 PCT												
Soluble Potash												
ICP (Citrate)												
330	10.25 R	1.60	406	10.22	.91						Soluble Potash	
432	10.80	1.89	360	10.18	.83						Other	
009	10.26	.64	450	10.18	.82						Soluble Potash	
393	10.14	.19	095	10.17	.78						Other	
043	10.13	.18	042	10.15	.77						Soluble Potash	
Avg	10.07		027	10.13	.72						Other	
007	10.07	-0.14	393	10.14	.70						Soluble Potash	
377	9.95	-0.32	043	10.13	.68						Other	
291	9.82	-0.67	422	10.12	.63						Soluble Potash	
296	9.42	-1.70	028	10.03	.53						Other	
Meth: 050.60 PCT												
Soluble Potash												
Flame (Oxalate)												
330	10.25 R	1.60	406	10.22	.91						Soluble Potash	
432	10.80	1.89	360	10.18	.83						Other	
009	10.26	.64	450	10.18	.82						Soluble Potash	
393	10.14	.19	095	10.17	.78						Other	
043	10.13	.18	042	10.15	.77						Soluble Potash	
Avg	10.07		027	10.13	.72						Other	
007	10.07	-0.14	393	10.14	.70						Soluble Potash	
377	9.95	-0.32	043	10.13	.68						Other	
291	9.82	-0.67	422	10.12	.63						Soluble Potash	
296	9.42	-1.70	028	10.03	.53						Other	
Meth: 050.60 PCT												
Soluble Potash												
Flame (Oxalate)												
330	10.25 R	1.60	406	10.22	.91						Soluble Potash	
432	10.80	1.89	360	10.18	.83						Other	
009	10.26	.64	450	10.18	.82						Soluble Potash	
393	10.14	.19	095	10.17	.78						Other	
043	10.13	.18	042	10.15	.77						Soluble Potash	
Avg	10.07		027	10.13	.72						Other	
007	10.07	-0.14	393	10.14	.70						Soluble Potash	
377	9.95	-0.32	043	10.13	.68						Other	
291	9.82	-0.67	422	10.12	.63						Soluble Potash	
296	9.42	-1.70	028	10.03	.53						Other	
Meth: 050.60 PCT												
Soluble Potash												
Flame (Oxalate)												
330	10.25 R	1.60	406	10.22	.91						Soluble Potash	
432	10.80	1.89	360	10.18	.83						Other	
009	10.26	.64	450	10.18	.82						Soluble Potash	
393	10.14	.19	095	10.17	.78						Other	
043	10.13	.18	042	10.15	.77						Soluble Potash	
Avg	10.07		027	10.13	.72						Other	
007	10.07	-0.14	393	10.14	.70						Soluble Potash	
377	9.95	-0.32	043	10.13	.68						Other	
291	9.82	-0.67	422	10.12	.63						Soluble Potash	
296	9.42	-1.70	028	10.03	.53						Other	
Meth: 050.60 PCT												
Soluble Potash												
Flame (Oxalate)												
330	10.25 R	1.60	406	10.22	.91						Soluble Potash	
432	10.80	1.89	360	10.18	.83						Other	
009	10.26	.64	450	10.18	.82						Soluble Potash	
393	10.14	.19	095	10.17	.78						Other	
043	10.13	.18	042	10.15	.77						Soluble Potash	
Avg	10.07		027	10.13	.72						Other	
007	10.07	-0.14	393	10.14	.70						Soluble Potash	
377	9.95	-0.32	043	10.13	.68						Other	
291	9.82	-0.67	422	10.12	.63						Soluble Potash	
296	9.42	-1.70	028	10.03	.53						Other	
Meth: 050.60 PCT												
Soluble Potash												
Flame (Oxalate)												
330	10.25 R	1.60	406	10.22	.91						Soluble Potash	
432	10.80	1.89	360	10.18	.83						Other	
009	10.26	.64	450	10.18	.82						Soluble Potash	
393	10.14	.19	095	10.17	.78						Other	
043	10.13	.18	042	10.15	.77						Soluble Potash	
Avg	10.07		027	10.13	.72						Other	
007	10.07	-0.14	393	10.14	.70						Soluble Potash	
377	9.95	-0.32	043	10.13	.68						Other	
291	9.82	-0.67	422	10.12	.63						Soluble Potash	
296	9.42	-1.70	028	10.03	.53						Other	
Meth: 050.60 PCT												
Soluble Potash												
Flame (Oxalate)												
330	10.25 R	1.60	406	10.22	.91						Soluble Potash	
432	10.80	1.89	360	10.18	.83						Other	
009	10.26	.64	450	10.18	.82						Soluble Potash	
393	10.14	.19	095	10.17	.78						Other	
043	10.13	.18	042	10.15	.77						Soluble Potash	
Avg	10.07		027	10.13	.72						Other	
007	10.07	-0.14	393	10.14	.70						Soluble Potash	
377	9.95	-0.32	043	10.13	.68						Other	
291	9.82	-0.67	422	10.12	.63						Soluble Potash	
296	9.42	-1.70	028	10.03	.53						Other	
Meth: 050.60 PCT												
Soluble Potash												
Flame (Oxalate)												
330	10.25 R	1.60	406	10.22	.91						Soluble Potash	
432	10.80	1.89	360	10.18	.83						Other	
009	10.26	.64	450	10.18	.82						Soluble Potash	
393	10.14	.19	095	10.17	.78						Other	
043	10.13	.18	042	10.15	.77						Soluble Potash	
Avg	10.07		027	10.13	.72						Other	
007	10.07	-0.14	393	10.14	.70						Soluble Potash	
377	9.95	-0.32	043	10.13	.68						Other	
291	9.82											

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 101.00 PCT											
Acid Soluble Calcium											
AA			393	4.39	.17	AA			471	1.97	-.25
029	4.01	-.98	415	4.36	.15	471	1.97	-.25	073	1.89	-.98
471	3.96	-1.17	177	4.38	.13	043	1.96	-.30	102	1.85	-1.29
055	4.07 R	-1.23	Avg	4.35		262	1.91	-.83	300	1.83	-1.54
397	3.90	-1.38	023	4.34	-.06	029	1.89	-1.12	393	1.82	-1.64
			324	4.33	-.15	351	1.88	-1.13	307	1.81	-1.74
			360	4.31	-.17				354	1.80	-1.77
Meth: 101.70 PCT											
Acid Soluble Calcium											
ICP			043	4.30	-.23	Meth: 121.30 PCT					
117	5.16 s	2.91	037	4.32	-.24	Acid Soluble Magnesi					
422	5.15	2.83	028	4.32	-.25	ICP					
330	5.05	2.52	300	4.26	-.34	330 3.50 s 16.18					
432	4.76 R	1.65	035	4.27	-.36	041 2.37 s 4.25					
420	4.68	1.11	296	4.32	-.38	117 2.20 2.44					
231	4.64	.97	131	4.23	-.43	231 2.17 2.11					
450	4.47	.74	351	4.19	-.61	114 2.09 1.24					
			262	4.15	-.75	042 2.05 .99					
			114	4.20	-.86	422 2.05 .79					
			474	4.10	-.94	433 2.03 .64					
Meth: 101.99 PCT											
Acid Soluble Calcium											
200	5.57 s	4.49	041	4.09	-.99	368 2.02 .59					
117	5.16 A	3.04	354	4.08	-1.00	095 2.02 .55					
422	5.15	2.96	307	4.07	-1.03	035 2.00 .54					
330	5.05	2.65	291	4.02	-1.22	131 1.98 .43					
432	4.76 R	1.75	029	4.01	-1.29	450 2.01 .40					
042	4.70	1.30	055	4.07 R	-1.38	255 2.00 .35					
105	4.68	1.26	471	3.96	-1.47	090 2.00 .33					
420	4.68	1.23	027	3.93	-1.54	291 1.99 .16					
231	4.64	1.09	397	3.90	-1.67	360 1.98 .14					
450	4.47	.80				432 1.98 .10					
090	4.54	.72	Meth: 121.00 PCT								
324	4.33	-.23	Acid Soluble Magnesi								
247	4.36	-.26	AA			Avg 1.97					
360	4.31	-.27	200	2.51 s	6.57	055 1.96					
037	4.32	-.30	177	2.14	2.02	023 1.97					
035	4.27	-.45	105	2.07 R	1.57	324 1.96					
300	4.26	-.45	028	2.04	.95	426 1.95					
131	4.23	-.54	028	1.99	.31	037 1.95					
114	4.20	-.92	397	1.99	.20	009 1.94					
474	4.10	-1.04	296	1.99	.20	420 1.94					
041	4.09	-1.09	Avg	1.97		232 1.93					

* 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: 121.XX PCT														
<u>Acid Soluble Magnesi</u>														
296	1.99	.12												
360	1.98	.10												
291	1.99	.09												
432	1.98	.02												
Avg	1.98													
247	1.98	-.06												
055	1.96	-.18												
471	1.97	-.22												
023	1.97	-.23												
043	1.96	-.27												
324	1.96	-.28												
426	1.95	-.32												
037	1.95	-.36												
009	1.94	-.39												
420	1.94	-.46												
262	1.91	-.71												
232	1.93	-.77												
029	1.89	-.95												
351	1.88	-.96												
073	1.89	-1.00												
102	1.85	-1.31												
300	1.83	-1.54												
393	1.82	-1.65												
307	1.81	-1.74												
354	1.80	-1.77												
086	1.76 R	-2.39												
474	1.61 A	-3.77												
Meth: 131.00 PCT														
<u>Water Soluble Magnes</u>														
AA	029	1.65	.71											
Meth: 131.30 PCT														
<u>Water Soluble Magnes</u>														
ICP	473	14.11	1.34											
027	1.77	-.71												
Meth: 144.02 PCT														
<u>Sulfur</u>														
292	13.41	-.71												
Meth: 144.70 PCT														
<u>Sulfur</u>														
474	13.29	.71												
Meth: 144.99 PCT														
<u>Sulfur</u>														
029	13.56	.65												
Meth: 144.01 PCT														
<u>Sulfur</u>														
114	15.45 s	7.28												
043	13.98	1.67												
324	13.85	1.17												
262	13.70	.58												
296	13.56	.23												
029	13.56	.06												
Avg	13.55													
055	13.53	-.09												
397	13.49	-.27												
095	13.44	-.44												
371	13.33	-.83												
028	13.05	-1.99												
230	13.05 R	-2.32												
Meth: 144.99 PCT														
<u>Sulfur</u>														
177	13.47	.53												
291	13.46	.52												
351	13.42	.47												
330	13.35	.39												
009	13.19	.32												
049	13.21	.32												
Avg	13.13													
086	13.04	-.13												
009	13.19	-.32												
028	13.05	-.14												
450	12.97	-.19												
023	12.93	-.23												
232	12.96	-.30												
368	12.84	-.43												
307	12.72	-.43												
255	12.90 R	-.86												
422	12.11	-1.19												
426	11.99	-1.35												
393	11.61	-1.84												
354	11.55 S	-1.91												
035	9.81 s	-4.13												
Meth: 144.XX PCT														
<u>Sulfur</u>														
114	15.45 s	3.30												
117	14.70	2.19												
473	14.11	1.30												
043	13.98	1.12												
360	13.85	.93												
324	13.85	.93												
262	13.70	.70												
296	13.56	.50												
027	13.56	.50												
029	13.56	.49												
055	13.53	.45												
397	13.49	.40												
177	13.47	.36												
291	13.46	.35												
095	13.44	.32												
Meth: 151.00 PPM														
<u>Arsenic</u>														
102	20.35	-.26												
393	18.68	-.62												
231	13.83	-2.34												
474	8.55 s	-4.18												
Meth: 151.30 PPM														
<u>Atomic Absorption</u>														
136	20.45	.71												
Meth: 151.30 PPM														
<u>ICP</u>														
009	22.65 R	2.07												
368	24.00	1.61												
450	23.00	1.02												
049	22.24	.50												
Avg	21.24													
037	20.43	-.44												
102	20.35	-.59												
Meth: 151.99 PPM														
<u>Arsenic</u>														
009	22.65 R	1.56												
368	24.00	1.37												
450	23.00	.97												
049	22.24	.63												
086	21.38	.55												
136	20.45	.09												
Avg	20.44													
037	20.43	-.11												
247	20.00	-.15												
102	20.35	-.26												
393	18.68	-.62												
231	13.83	-2.34												
474	8.55 s	-4.18												
Meth: 165.00 PCT														
<u>Acid Soluble Boron</u>														
<u>Spectrometric</u>														
397	0.066	1.14												
471	0.064 X	.55												
023	0.062	.28												
029	0.062	.00												
Avg	0.062													
055	0.056	-1.68												

* 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: 165.99 PCT											
Acid Soluble Boron											
Other											
473	0.085 S	2.70									
422	0.076	1.51									
368	0.073 R	1.38									
360	0.071	1.04									
090	0.070	.93									
231	0.070	.86									
255	0.069	.78									
433	0.068	.65									
117	0.067	.53									
009	0.066	.52									
300	0.067	.52									
307	0.064	.31									
Avg	0.064										
291	0.063	-.07									
043	0.062	-.25									
232	0.061	-.28									
114	0.060	-.32									
324	0.059	-.32									
055	0.056	-.39									
296	0.054	-1.04									
042	0.055	-1.09									
354	0.047	-1.94									
086	0.044 S	-2.26									
Meth: 165.99 PCT											
Acid Soluble Boron											
473	0.085 s	2.99									
422	0.076	1.69									
368	0.073 R	1.54									
360	0.071	1.16									
090	0.070	1.04									
231	0.070	.97									
255	0.069	.88									
433	0.068	.74									
117	0.067	.61									
009	0.066	.59									
300	0.067	.59									
397	0.066	.46									
Meth: 165.99 PCT											
Acid Soluble Boron											
307	0.064	.35									
471	0.064 X	.18									
Avg	0.063										
291	0.063	-.07									
029	0.062	-.08									
023	0.062	-.15									
043	0.062	-.27									
232	0.061	-.29									
114	0.060	-.34									
324	0.059	-.41									
055	0.056	-.87									
296	0.054	-1.13									
042	0.055	-1.18									
354	0.047	-2.12									
086	0.044 s	-2.47									
Meth: 171.99 PCT											
Water Soluble Boron											
200	0.105 X	1.24									
Avg	0.080										
426	0.075	-.31									
027	0.062	-.93									
Meth: 181.00 PPM											
Cadmium											
136	8.55	-.71									
Meth: 181.00 PPM											
Atomic Absorption											
136	8.55	-.71									
Meth: 181.30 PPM											
Cadmium											
450	9.50	1.62									
368	9.50	1.34									
009	9.20	1.02									
231	9.30	.91									
037	9.09	.55									
474	9.05	.39									
Avg	8.86										
102	8.85	-.13									
247	8.75	-.55									
136	8.55	-.69									
086	8.50	-.77									
393	8.45	-.83									
035	8.43	-.88									
232	8.02	-1.70									
Meth: 190.00 PCT											
Water Soluble Chlori											
422	6.42 S	15.13									
043	5.20	1.33									
055	5.13	.52									
029	5.10	.20									
Avg	5.09										
105	5.02	-.93									
102	4.98	-1.25									
Meth: 190.99 PCT											
Water Soluble Chlori											
009	4.74	.71									
Avg	4.74										
368	2.67 S	-11.29									
Meth: 190.99 PCT											
Water Soluble Chlori											
009	4.74	.71									
Avg	4.74										
368	2.67 S	-11.29									
Meth: 191.30 PPM											
Chromium											
450	119.50	1.21									
009	115.65	.97									
035	112.50	.78									
086	109.19	.55									
368	109.00	.53									
393	104.50	.33									
Avg	100.64										
102	98.38	-.14									
232	98.30	-.16									
037	91.56	-.57									
027	85.00	-.98									
474	63.50	-2.34									
Meth: 191.99 PPM											
Chromium											
231	67.79	.71									
Meth: 191.99 PPM											
Chromium											
450	119.50	1.23									
009	115.65	1.02									
035	112.50	.84									
086	109.19	.65									
368	109.00	.62									
393	104.50	.42									
232	98.30	.06									
102	98.38	.04									
Avg	97.91										
037	91.56	-.36									
027	85.00	-.73									
231	67.79	-1.69									
474	63.50	-1.93									
Meth: 202.00 PPM											
Acid Soluble Cobalt											
136	39.00	.87									
Avg	21.25										
474	3.50	-.87									
Meth: 202.30 PPM											
Acid Soluble Cobalt											
009	36.66	1.53									
450	34.05	1.27									
086	27.80	.63									
368	26.25	.48									
035	24.95	.35									
Avg	21.55										
232	19.67	-.20									
393	18.85	-.27									
037	17.00	-.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
Meth: 202.30 PPM											
Acid Soluble Cobalt											
ICP			ICP			ICP			ICP		
049	16.41	-.52	042	0.4950	s1892.26	042	0.0007	-.22	043	0.0007	-.27
102	15.44	-.63	324	0.0060	S 21.10	247	0.0006	-.34	247	0.0006	-.34
422	0.00	-2.19	255	0.0045	R 15.23	095	0.0006	-.36	102	0.59	.61
			422	0.0025	R 7.52	086	0.0006	-.43	231	0.59	.56
Meth: 202.99 PPM											
Acid Soluble Cobalt											
Other			402	0.0011	1.74	009	0.0005	-.51	009	0.58	.51
231	4.61	-.71	450	0.0008	.61	368	0.0005	-.62	255	0.57	.35
			232	0.0007	.58	474	0.0004	-.72	368	0.56	.33
			035	0.0007	.39	354	0.0006	-.77	131	0.56	.15
			433	0.0007	.25	041	0.0000	-1.43	Avg	0.55	.26
			247	0.0006	.17				095	0.54	-.18
Meth: 202.99 PPM											
Acid Soluble Cobalt											
136	39.00	1.57	095	0.0006	.02	Meth: 241.00 PCT					
009	36.66	1.37	Avg	0.0006		Acid Soluble Iron					
450	34.05	1.15	086	0.0006	-.22	Atomic Absorption					
086	27.80	.63	009	0.0005	-.33	105	0.68	1.92	232	0.53	-.37
368	26.25	.50	368	0.0005	-.55	029	0.63	.91	292	0.53	-.42
035	24.95	.39	354	0.0006	-1.35	351	0.64	.51	433	0.53	-.48
Avg	20.30		041	0.0000	-2.29	Avg	0.62		307	0.53	-.50
232	19.67	-.06	Meth: 241.30 PCT								
393	18.85	-.12	Acid Soluble Iron								
037	17.00	-.28	Atomic Absorption								
049	16.41	-.33	231	0.0013	.00	105	0.68	1.92	292	0.53	-.42
102	15.44	-.42	Meth: 221.99 PCT								
231	4.61	-1.32	Acid Soluble Copper								
474	3.50	-1.41	042	0.4950	s 876.35	043	0.61	-.21	023	0.48	-1.28
422	0.00	-1.70	324	0.0060	s 9.42	397	0.61	-.30	027	0.45	-1.76
Meth: 221.00 PCT											
Acid Soluble Copper											
105	0.0055	R 10.22	422	0.0025	3.13	177	0.58	-.93	402	0.44	-1.95
043	0.0015	1.17	043	0.0015	1.15	028	0.57	-1.30	420	0.39	-2.90
Avg	0.0009	-.15	231	0.0013	.88	474	0.31	s -8.65	300	0.29	s -4.75
296	0.0009	-.15	402	0.0011	.44	Meth: 241.30 PCT					
474	0.0004	-1.06	296	0.0009	.12	Acid Soluble Iron					
Meth: 251.00 PPM											
Lead											
Atomic Absorption											
136	17.50	S .00	035	0.0007	-.19	035	0.64	1.54	105	0.68	2.18
						432	0.62	R 1.46	432	0.62	R 1.34
						055	0.61	R 1.33	035	0.64	1.34
						422	0.62	1.18	029	0.63	1.26
						450	0.61	1.05	055	0.61	R 1.24
						324	0.60	.88	351	0.64	1.22
						426	0.60	.85	422	0.62	.94
						114	0.59	.83	450	0.61	.83
						247	0.60	.73	296	0.61	.79
						360	0.59	.70	397	0.61	.79

* 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: 251.30 PPM												
Lead			Meth: 261.00 PCT									
ICP			Acid Soluble Manganese									
393	11.05	1.93	AA	296	0.311	1.35	ICP	023	0.244	-0.57	Meth: 261.30 PCT	
450	8.00	.72	296	0.311	1.35	ICP	023	0.244	-0.57	Acid Soluble Manganese		
009	7.30	.55	397	0.287	.68	086	0.242	-0.60	086	0.242	-0.60	
247	7.45	.50	029	0.288	.67	073	0.241	-0.71	105	0.290	.71	
102	6.25	.02	043	0.290	.63	307	0.229	-0.94	102	0.288	.69	
Avg	6.21		105	0.290	.49	117	0.228	-0.95	433	0.287	.60	
232	6.21	-0.28	028	0.285	.29	027	0.186	-2.12	028	0.285	.55	
086	5.73	-0.33	Avg	0.279		420	0.175	-2.44	055	0.275	.52	
474	4.50	-0.71	177	0.268	-0.51	009	0.274	.43	009	0.274	.43	
035	3.41	-1.12	351	0.266	-0.58	Meth: 261.31 PCT			368	0.280	.39	
368	2.20	-1.66	262	0.230	-2.11	Acid Soluble Manganese			324	0.279	.35	
Meth: 261.30 PCT												
Acid Soluble Manganese												
ICP			324	0.279	.71	Meth: 261.99 PCT						
300	1.890 s	46.09	ICP	042	0.290	.77	Acid Soluble Manganese					
432	0.345	2.41	432	0.345	2.41	255	0.296	.69	232	0.271	.19	
041	0.312 s	2.16	041	0.312 s	2.16	037	0.292	.63	393	0.268	.06	
114	0.295 R	1.59	090	0.300	1.15	Avg	0.271		177	0.268	.03	
090	0.300	1.15	095	0.294	.92	393	0.268	.06	Avg	0.267		
095	0.294	.92	450	0.290	.86	474	0.210	-1.74	296	0.268	.03	
450	0.290	.86	102	0.288	.80	Meth: 261.30 PCT						
102	0.288	.80	433	0.287	.72	Acid Soluble Manganese						
433	0.287	.72	055	0.275	.58	ICP						
055	0.275	.58	368	0.280	.53	300	1.890 s	46.09	432	0.345	2.41	
368	0.280	.53	009	0.274	.51	041	0.312 s	2.16	041	0.312 s	2.16	
009	0.274	.51	360	0.275	.42	114	0.295 R	1.59	114	0.295 R	1.59	
360	0.275	.42	231	0.275	.42	090	0.300	1.15	090	0.300	1.15	
231	0.275	.42	292	0.275	.42	095	0.294	.92	095	0.294	.92	
292	0.275	.42	474	0.271	.30	450	0.290	.86	450	0.290	.86	
474	0.271	.30	Avg	0.261		102	0.288	.80	102	0.288	.80	
Avg	0.261		402	0.255	-.21	433	0.287	.72	433	0.287	.72	
402	0.255	-.21	426	0.259	-.22	055	0.275	.58	055	0.275	.58	
426	0.259	-.22	354	0.256	-.31	368	0.280	.53	368	0.280	.53	
354	0.256	-.31	422	0.249	-.36	009	0.274	.51	009	0.274	.51	
422	0.249	-.36	131	0.257	-.41	360	0.275	.42	360	0.275	.42	
131	0.257	-.41	035	0.245	-.47	231	0.275	.42	231	0.275	.42	
035	0.245	-.47	471	2.825 s	108.99	432	0.345	2.40	432	0.345	2.40	
471	2.825 s	108.99	471	2.825 s	77.01	041	0.312 R	2.19	041	0.312 R	2.19	
Meth: 261.00 PCT												
Acid Soluble Manganese												
AA			296	0.311	1.32	114	0.295 R	1.60	114	0.295 R	1.60	
471	2.825 s	108.99	090	0.300	1.06	296	0.311	1.32	296	0.311	1.32	
471	2.825 s	108.99	042	0.290	.92	090	0.300	1.06	090	0.300	1.06	
Meth: 261.30 PCT												
Acid Soluble Manganese												
AA			042	0.290	.92	042	0.290	.92	042	0.290	.92	
471	2.825 s	108.99	255	0.296	.69	255	0.296	.69	255	0.296	.69	
471	2.825 s	108.99	095	0.294	.92	037	0.292	.63	037	0.292	.63	
471	2.825 s	108.99	095	0.294	.92	Avg	0.271		Avg	0.271		
471	2.825 s	108.99	450	0.290	.86	393	0.268	.06	393	0.268	.06	
471	2.825 s	108.99	102	0.288	.80	474	0.210	-1.74	474	0.210	-1.74	
471	2.825 s	108.99	433	0.287	.72	Meth: 261.30 PCT						
471	2.825 s	108.99	055	0.275	.58	Acid Soluble Manganese						
471	2.825 s	108.99	368	0.280	.53	ICP						
471	2.825 s	108.99	009	0.274	.51	300	1.890 s	46.09	300	1.890 s	46.09	
471	2.825 s	108.99	360	0.275	.42	432	0.345	2.41	432	0.345	2.41	
471	2.825 s	108.99	231	0.275	.42	041	0.312 s	2.16	041	0.312 s	2.16	
471	2.825 s	108.99	292	0.275	.42	114	0.295 R	1.59	114	0.295 R	1.59	
471	2.825 s	108.99	474	0.271	.30	090	0.300	1.15	090	0.300	1.15	
471	2.825 s	108.99	Avg	0.261		095	0.294	.92	095	0.294	.92	
471	2.825 s	108.99	402	0.255	-.21	450	0.290	.86	450	0.290	.86	
471	2.825 s	108.99	426	0.259	-.22	102	0.288	.80	102	0.288	.80	
471	2.825 s	108.99	354	0.256	-.31	433	0.287	.72	433	0.287	.72	
471	2.825 s	108.99	422	0.249	-.36	055	0.275	.58	055	0.275	.58	
471	2.825 s	108.99	131	0.257	-.41	368	0.280	.53	368	0.280	.53	
471	2.825 s	108.99	035	0.245	-.47	009	0.274	.51	009	0.274	.51	
471	2.825 s	108.99	402	0.255	-.21	360	0.275	.42	360	0.275	.42	
471	2.825 s	108.99	426	0.259	-.22	231	0.275	.42	231	0.275	.42	
471	2.825 s	108.99	354	0.256	-.31	292	0.275	.42	292	0.275	.42	
471	2.825 s	108.99	422	0.249	-.36	474	0.271	.30	474	0.271	.30	
471	2.825 s	108.99	131	0.257	-.41	Avg	0.261		Avg	0.261		
471	2.825 s	108.99	035	0.245	-.47	402	0.255	-.21	402	0.255	-.21	
471	2.825 s	108.99	426	0.259	-.22	426	0.259	-.22	426	0.259	-.22	
471	2.825 s	108.99	354	0.256	-.31	255	0.296	.69	255	0.296	.69	
471	2.825 s	108.99	422	0.249	-.36	095	0.294	.81	095	0.294	.81	
471	2.825 s	108.99	131	0.257	-.41	037	0.292	.80	037	0.292	.80	
471	2.825 s	108.99	035	0.245	-.47	450	0.290	.76	450	0.290	.76	

* 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: 289.99 PPM											
Molybdenum											
Other											
028	7.89	.87									
Avg	5.86										
231	3.82	-.87									
Meth: 289.99 PPM											
Nickel											
Other											
028	7.89	1.14									
450	7.00	.66									
433	6.82	.57									
247	6.80	.56									
393	6.77	.53									
232	6.70	.49									
368	6.45	.36									
086	6.34	.33									
009	6.11	.25									
035	6.16	.20									
102	5.85	.05									
Avg	5.79										
231	3.82	-1.07									
474	3.65	-1.17									
422	1.00	-2.61									
Meth: 291.30 PPM											
Nickel											
ICP											
009	33.76	R 2.21									
450	32.50	1.72									
368	30.45	.95									
049	30.05	.85									
247	29.35	.60									
102	28.13	.10									
035	28.00	.09									
Avg	27.87										
086	27.47	-.16									
232	26.90	-.36									
027	26.00	-.69									
393	25.25	-.97									
037	22.46	-2.00									
231	11.81	s -5.92									
474	11.00	s -6.21									
Meth: 301.30 PPM											
Selenium											
ICP											
009	33.76	R 2.21									
450	32.50	1.72									
368	30.45	.95									
049	30.05	.85									
247	29.35	.60									
102	28.13	.10									
035	28.00	.09									
Avg	27.87										
086	27.47	-.16									
232	26.90	-.36									
027	26.00	-.69									
393	25.25	-.97									
037	22.46	-2.00									
231	11.81	s -5.92									
474	11.00	s -6.21									
Meth: 301.99 PPM											
Selenium											
ICP											
009	33.76	R 2.21									
450	32.50	1.72									
368	30.45	.95									
049	30.05	.85									
247	29.35	.60									
102	28.13	.10									
035	28.00	.09									
Avg	27.87										
086	27.47	-.16									
232	26.90	-.36									
027	26.00	-.69									
393	25.25	-.97									
037	22.46	-2.00									
231	11.81	s -5.92									
474	11.00	s -6.21									
Meth: 301.99 PPM											
Selenium											
ICP											
009	33.76	R 2.21									
450	32.50	1.72									
368	30.45	.95									
049	30.05	.85									
247	29.35	.60									
102	28.13	.10									
035	28.00	.09									
Avg	27.87										
086	27.47	-.16									
232	26.90	-.36									
027	26.00	-.69									
393	25.25	-.97									
037	22.46	-2.00									
231	11.81	s -5.92									
474	11.00	s -6.21									
Meth: 301.99 PPM											
Selenium											
ICP											
009	33.76	R 2.21									
450	32.50	1.72									
368	30.45	.95									
049	30.05	.85									
247	29.35	.60									
102	28.13	.10									
035	28.00	.09									
Avg	27.87										
086	27.47	-.16									
232	26.90	-.36									
027	26.00	-.69									
393	25.25	-.97									
037	22.46	-2.00									
231	11.81	s -5.92									
474	11.00	s -6.21									
Meth: 301.99 PPM											
Selenium											
ICP											
009	33.76	R 2.21									
450	32.50	1.72									
368	30.45	.95									
049	30.05	.85									
247	29.35	.60									
102	28.13	.10									
035	28.00	.09									
Avg	27.87										
086	27.47	-.16									
232	26.90	-.36									
027	26.00	-.69									
393	25.25	-.97									
037	22.46	-2.00									
231	11.81	s -5.92									
474	11.00	s -6.21									
Meth: 301.99 PPM											
Selenium											
ICP											
009	33.76	R 2.21									
450	32.50	1.72									
368	30.45	.95									
049	30.05	.85									
247	29.35	.60									
102	28.13	.10									
035	28.00	.09									
Avg	27.87										
086	27.47	-.16									
232	26.90	-.36									
027	26.00	-.69									
393	25.25	-.97									
037	22.46	-2.00									
231	11.81	s -5.92									
474	11.00	s -6.21									
Meth: 301.99 PPM											
Selenium											
ICP											
009	33.76	R 2.21									
450	32.50	1.72									
368	30.45	.95									
049	30.05	.85									
247	29.35	.60									
102	28.13	.10									
035	28.00	.09									
Avg	27.87										
086	27.47	-.16									
232	26.90	-.36									
027	26.00	-.69									
393	25.25	-.97									
037	22.46	-2.00									

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 321.XX PCT											
<u>Acid Soluble Zinc</u>											
009	0.384	1.18									
360	0.385	1.18									
102	0.379	1.02									
255	0.378	.90									
324	0.376	.87									
292	0.375	.81									
231	0.375	.81									
471	0.371	.74									
296	0.364	.49									
023	0.359	.33									
028	0.357	.27									
177	0.362	.22									
Avg 0.356											
095	0.355	-.14									
368	0.353	-.15									
131	0.353	-.17									
450	0.355	-.22									
200	0.355	-.22									
420	0.355	-.22									
114	0.355	-.22									
037	0.352	-.23									
090	0.356	-.25									
474	0.350	-.27									
043	0.350	-.27									
351	0.338	-.79									
354	0.342	-.82									
029	0.336	-.86									
426	0.342	-.90									
300	0.335	-.92									
232	0.333	-.98									
073	0.333	-1.00									
433	0.333	-1.02									
307	0.332	-1.14									
291	0.326	-1.28									
027	0.325	-1.38									
086	0.346	R -1.52									
402	0.319	-1.59									
035	0.317	-1.77									
Meth: 321.XX PCT											
<u>Acid Soluble Zinc</u>											
262	0.315	R -2.03									
422	0.256	s -4.23									
247	0.007	s -14.66									
Meth: 325.30 PCT											
<u>Water Soluble Zinc</u>											
ICP											
393	0.250	.71									
Meth: 325.99 PCT											
<u>Water Soluble Zinc</u>											
Other											
450	0.355	.71									
Meth: 325.XX PCT											
<u>Water Soluble Zinc</u>											
450	0.355	.87									
Avg	0.303										
393	0.250	-.86									

* 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	9	- 0.76	2.46	0.17	050.50	7	0.00	0.99	0.31
001.99	7	- 0.24	1.13	0.30	050.51	8	0.00	1.02	0.18
001.XX	16	- 0.46	1.65	0.27	050.60	4	1.28	2.72	0.07
002.20	2	9.40	13.30	4.23	050.61	9	0.00	0.98	0.30
002.99	5	0.00	0.97	0.38	050.99	18	0.05	0.99	0.35
002.XX	7	1.50	4.07	1.07	050.XX	64	0.44	2.34	0.31
009.10	5	0.00	1.04	0.17	060.00	4	0.00	1.02	0.31
009.XX	5	0.00	1.04	0.17	060.XX	5	5.62	12.60	0.81
010.11	6	- 4.87	5.48	0.65	101.00	12	0.42	1.89	0.40
010.12	3	- 6.52	11.29	0.74	101.30	32	0.13	1.09	0.30
010.60	48	- 0.07	1.45	0.46	101.XX	46	0.17	1.25	0.31
010.99	5	0.00	1.02	0.27	121.00	11	0.71	2.16	0.42
010.XX	62	- 0.19	1.55	0.33	121.30	35	0.41	3.07	0.35
020.10	5	- 0.98	2.32	0.97	121.XX	47	0.42	2.68	0.33
020.20	14	0.03	0.96	0.38	131.XX	2	0.00	1.19	0.21
020.40	3	- 14.70	25.47	0.75	144.01	12	0.44	2.38	0.50
020.50	11	- 0.32	1.40	0.29	144.99	22	0.20	1.30	0.22
020.99	4	3.30	6.66	0.11	144.XX	36	- 0.07	1.39	0.23
020.XX	36	- 0.01	2.62	0.32	151.30	9	- 0.63	2.33	0.73
030.20	2	0.00	1.22	0.04	151.99	2	0.00	1.18	0.23
030.99	2	0.00	1.11	0.37	151.XX	12	- 0.28	1.53	0.47
030.XX	6	0.01	0.95	0.13	165.00	5	0.000	1.033	0.214
040.10	2	0.00	1.22	0.03	165.99	21	0.181	1.118	0.307
040.20	2	0.00	0.39	0.82	165.XX	26	0.163	1.126	0.308
040.99	2	0.00	1.13	0.33	171.99	3	0.000	1.101	0.160
040.XX	7	0.00	1.00	0.26	171.XX	3	0.000	1.101	0.160
041.10	11	0.30	1.17	0.77	181.30	11	0.00	0.92	0.44
041.20	2	6.36	9.00	0.50	181.XX	13	0.00	0.92	0.43
041.40	4	0.00	1.07	0.12	190.00	6	2.52	6.24	0.36
041.50	12	- 0.41	1.63	0.52	190.99	2	5.64	7.98	0.50
041.60	8	0.00	0.97	0.33	190.XX	8	- 2.04	11.78	0.61
041.99	3	- 1.11	2.11	0.08	191.30	11	0.00	1.01	0.14
041.XX	33	0.06	2.45	0.44	191.XX	12	0.00	1.01	0.12
048.20	2	0.00	1.20	0.17	202.00	2	0.00	1.22	0.04
048.XX	3	0.00	1.10	0.14	202.30	11	0.00	1.02	0.05
050.00	12	2.88	8.60	0.31	202.XX	14	0.00	1.02	0.04
050.10	2	0.00	1.21	0.12	221.00	4	2.4298	4.9439	1.5864
050.30	6	1.25	3.19	0.22	221.30	16	120.89	472.17	14.411
050.31	2	- 3.64	5.14	0.54	221.XX	21	42.860	190.90	5.8571

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
241.00	9	- 0.96	3.02	0.38					
241.30	33	- 0.25	1.61	0.29					
241.XX	42	- 0.46	1.85	0.30					
251.30	10	0.00	1.00	0.22					
251.XX	12	0.40	1.67	0.23					
261.00	10	10.893	34.460	1.191					
261.30	29	1.670	8.591	0.579					
261.99	5	0.000	1.005	0.302					
261.XX	45	2.845	13.472	0.642					
281.99	3	0.00	0.97	0.45					
281.XX	4	0.00	1.08	0.02					
289.30	12	- 0.47	1.90	0.16					
289.99	2	0.00	1.22	0.01					
289.XX	14	0.01	0.98	0.07					
291.30	13	- 0.31	2.09	0.17					
291.XX	14	- 0.71	2.50	0.17					
301.30	2	0.00	1.22	0.02					
301.99	2	0.00	1.22	0.02					
301.XX	4	0.00	1.08	0.02					
311.99	8	1.56	4.45	0.69					
311.XX	9	1.25	3.78	0.77					
321.00	11	0.012	1.305	0.714					
321.30	35	- 0.207	3.238	0.947					
321.XX	47	- 0.155	2.960	0.909					