

- Pass 1 Results for 78 Labs - - Pass 2 Results for 73 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	1	10.97	0.10	0.14	1	10.97	0.10	0.14
Ammoniacal Nitrogen, Other		001.99	6	11.43	0.34	0.05	6	11.43	0.34	0.05
Method Group 001.XX PCT			7	11.37	0.35	0.06	7	11.37	0.35	0.06
Nitrate Nitrogen, Other		002.99	1	0.03	0.01	0.02	1	0.03	0.01	0.02
Nitrogen From Urea, Urease (as N)	959.03	005.00	1	0.35	0.01	0.01	1	0.35	0.01	0.01
Ammon & Nitrate N, Devarda	892.01	009.10	2	11.36	0.10	0.10	2	11.36	0.10	0.10
Total Nitrogen, Modified Comprehensive	978.02	010.11	5	11.46	0.25	0.03	5	11.46	0.25	0.03
Total Nitrogen, Salicylic	955.04D	010.12	2	11.80	0.10	0.07	2	11.80	0.10	0.07
Total Nitrogen, Combustion		010.60	49	11.59	0.18	0.09	46	11.61	0.15	0.07
Total Nitrogen, Other		010.99	4	11.54	0.35	0.02	4	11.54	0.35	0.02
Method Group 010.XX PCT			63	11.58	0.24	0.10	58	11.59	0.20	0.07
Total Phosphate, Grav Quimociac	962.02	020.10	6	41.05	0.24	0.13	6	41.05	0.24	0.13
Total Phosphate, Spectrometric	958.01	020.20	14	40.96	1.25	0.23	13	40.82	1.19	0.16
Total Phosphate, Automated	978.01	020.40	5	40.92	0.39	0.15	5	40.92	0.39	0.15
Total Phosphate, ICP		020.50	7	40.37	1.25	0.64	6	40.34	1.26	0.36
Total Phosphate, Other		020.99	3	39.80	0.66	0.11	3	39.80	0.66	0.11
Method Group 020.XX PCT			36	40.82	1.13	0.29	31	40.89	0.64	0.14
Insoluble Phosphate, Grav Quimociac	963.03C	030.10	1	0.33	0.04	0.05	1	0.33	0.04	0.05
Insoluble Phosphate, Spectrometric	963.03C	030.20	2	0.58	0.04	0.02	2	0.58	0.04	0.02
Insoluble Phosphate, Automated	978.01	030.40	1	0.46	0.01	0.01	1	0.46	0.01	0.01
Insoluble Phosphate, ICP		030.50	2	0.26	0.10	0.02	2	0.26	0.10	0.02
Insoluble Phosphate, Other		030.99	1	0.35	0.02	0.03	1	0.35	0.02	0.03
Method Group 030.XX PCT			7	0.40	0.14	0.02	7	0.40	0.14	0.02
InDir Available Phosphate, Grav Quim	960.02	040.10	1	40.86	0.15	0.21	1	40.86	0.15	0.21
InDir Available Phosphate, Spectrometri	960.02	040.20	2	40.40	0.09	0.06	2	40.40	0.09	0.06
InDir Available Phosphate, Automated	960.02	040.40	1	40.91	0.01	0.01	1	40.91	0.01	0.01
InDir Available Phosphate, ICP		040.50	1	45.24	0.25	0.36	1	45.24	0.25	0.36
InDir Available Phosphate, Other		040.99	3	42.50	2.64	0.10	3	42.50	2.64	0.10
Method Group 040.XX PCT			8	41.91	2.20	0.12	8	41.91	2.20	0.12
Dir Available Phosphate, Grav Quimociac	960.03E	041.10	10	40.56	0.36	0.14	9	40.61	0.32	0.07
Dir Available Phosphate, Spectrometric	960.03D	041.20	1	40.07	0.04	0.05	1	40.07	0.04	0.05
Dir Available Phosphate, Automated	978.01	041.40	3	40.99	0.73	0.09	3	40.99	0.73	0.09
Dir Available Phosphate, ICP		041.50	8	40.49	0.79	0.36	8	40.49	0.79	0.36
Dir Available Phosphate, EDTA Extract	993.01	041.60	10	40.47	0.29	0.22	10	40.47	0.29	0.22
Dir Available Phosphate, Other		041.99	2	40.47	0.09	0.06	2	40.47	0.09	0.06
Method Group 041.XX PCT			35	40.50	0.56	0.21	34	40.51	0.56	0.19
Water Soluble Phosphate, Spectrometric	970.01	048.20	3	36.18	1.74	0.05	3	36.18	1.74	0.05
Soluble Potash, STPB Oxalate	958.02	050.00	1	0.04	0.01	0.01	1	0.04	0.01	0.01
Soluble Potash, AA (Citrate)		050.31	1	0.01	0.00	0.00	1	0.01	0.00	0.00

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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, ICP (Oxalate)		050.50	4	0.13	0.06	0.01	4	0.13	0.06	0.01
Soluble Potash, ICP (Citrate)		050.51	6	0.22	0.17	0.03	6	0.22	0.17	0.03
Soluble Potash, Other		050.99	6	0.15	0.10	0.01	6	0.15	0.10	0.01
Method Group 050.XX PCT			18	0.16	0.13	0.01	16	0.13	0.09	0.01
Free Water, Vacuum Oven	965.08B	060.00	6	1.39	0.22	0.11	5	1.38	0.21	0.03
Acid Soluble Calcium, ICP		101.30	13	0.21	0.02	0.01	12	0.21	0.01	0.01
Acid Soluble Magnesium, ICP		121.30	15	0.57	0.09	0.02	15	0.57	0.09	0.02
Sulfur, Gravimetric	980.02a	144.01	12	7.84	2.20	0.09	10	7.97	2.17	0.04
Sulfur, Gravimetric	980.02b	144.02	1	10.04	0.02	0.03	1	10.04	0.02	0.03
Sulfur, Spectrometric		144.70	1	5.10	0.01	0.01	1	5.10	0.01	0.01
Sulfur, Other		144.99	25	7.83	2.58	0.09	24	7.76	2.61	0.08
Method Group 144.XX PCT			39	7.82	2.45	0.09	35	7.76	2.50	0.06
Arsenic, ICP		151.30	6	12.71	0.92	0.62	6	12.71	0.92	0.62
Arsenic, Other		151.99	2	13.09	0.36	0.31	2	13.09	0.36	0.31
Method Group 151.XX PPM			8	12.80	0.82	0.54	7	12.63	0.61	0.33
Acid Soluble Boron, Other		165.99	8	0.023	0.019	0.004	7	0.021	0.019	0.001
Cadmium, ICP		181.30	8	2.60	0.42	0.08	7	2.49	0.32	0.04
Cadmium, Other		181.99	2	2.67	0.03	0.04	2	2.67	0.03	0.04
Method Group 181.XX PPM			10	2.61	0.38	0.07	9	2.53	0.29	0.04
Water Soluble Chlorine, Titrimetric	928.02	190.00	1	0.10	0.00	0.00	1	0.10	0.00	0.00
Chromium, ICP		191.30	10	76.94	6.21	3.33	10	76.94	6.21	3.33
Chromium, Other		191.99	2	76.86	12.84	0.91	2	76.86	12.84	0.91
Method Group 191.XX PPM			12	76.93	7.30	2.93	12	76.93	7.30	2.93
Acid Soluble Cobalt, AA		202.00	1	2.00	0.00	0.00	1	2.00	0.00	0.00
Acid Soluble Cobalt, ICP	965.11	202.30	8	2.39	0.33	0.16	7	2.35	0.31	0.09
Acid Soluble Cobalt, Other		202.99	2	2.03	0.25	0.07	2	2.03	0.25	0.07
Method Group 202.XX PPM			11	2.29	0.34	0.13	10	2.25	0.32	0.08
Acid Soluble Copper, Atomic Absorption	975.01	221.00	3	0.0031	0.0003	0.0003	3	0.0031	0.0003	0.0003
Acid Soluble Copper, ICP		221.30	15	0.0026	0.0007	0.0002	13	0.0027	0.0003	0.0002
Acid Soluble Copper, Other		221.99	2	0.0024	0.0002	0.0002	2	0.0024	0.0002	0.0002
Method Group 221.XX PCT			20	0.0027	0.0006	0.0002	18	0.0027	0.0003	0.0002
Acid Soluble Iron, Atomic Absorption	980.01	241.00	1	0.82	0.01	0.02	1	0.82	0.01	0.02
Acid Soluble Iron, ICP		241.30	14	0.83	0.09	0.02	13	0.85	0.07	0.01
Method Group 241.XX PCT			15	0.83	0.09	0.02	14	0.85	0.07	0.01
Lead, ICP		251.30	3	0.94	0.23	0.23	3	0.94	0.23	0.23
Lead, Other		251.99	2	1.27	0.11	0.02	2	1.27	0.11	0.02
Method Group 251.XX PPM			5	1.07	0.25	0.14	4	1.14	0.16	0.01
Acid Soluble Manganese, ICP	972.02a	261.30	11	0.034	0.003	0.001	10	0.034	0.003	0.000
Acid Soluble Manganese, Other		261.99	1	0.037	0.000	0.000	1	0.037	0.000	0.000

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Method	AOAC Ref.	Method Code	No. of Labs	Grand Avg.	Std. Dev.	Average Range of Dups	No. of Labs	Grand Avg.	Std. Dev.	Average Range of Dups
Method Group 261.XX PCT			12	0.034	0.003	0.001	11	0.034	0.003	0.000
Mercury, Other		281.99	1	0.21	0.05	0.07	1	0.21	0.05	0.07
Molybdenum, ICP		289.30	11	18.90	1.39	0.79	11	18.90	1.39	0.79
Molybdenum, Other		289.99	2	20.47	0.41	0.63	2	20.47	0.41	0.63
Method Group 289.XX PPM			13	19.14	1.40	0.77	13	19.14	1.40	0.77
Nickel, ICP		291.30	9	9.02	0.98	0.75	9	9.02	0.98	0.75
Nickel, Other		291.99	2	10.42	0.21	0.26	2	10.42	0.21	0.26
Method Group 291.XX PPM			11	9.27	1.04	0.66	11	9.27	1.04	0.66
Selenium, ICP		301.30	2	2.78	3.22	0.35	2	2.78	3.22	0.35
Sodium, Other		311.99	6	0.17	0.01	0.01	5	0.17	0.01	0.00
Acid Soluble Zinc, Atomic Absorption	975.02	321.00	8	0.895	0.036	0.007	8	0.895	0.036	0.007
Acid Soluble Zinc, ICP		321.30	36	0.922	0.082	0.025	35	0.926	0.079	0.022
Acid Soluble Zinc, Other		321.99	3	0.920	0.103	0.013	3	0.920	0.103	0.013
Method Group 321.XX PCT			48	0.922	0.083	0.021	43	0.926	0.080	0.014
Water Soluble Zinc, Atomic Absorption		325.00	1	0.251	0.004	0.006	1	0.251	0.004	0.006
Water Soluble Zinc, ICP		325.30	3	0.600	0.209	0.013	3	0.600	0.209	0.013
Water Soluble Zinc, Other		325.99	1	0.930	0.014	0.020	1	0.930	0.014	0.020
Method Group 325.XX PCT			5	0.596	0.275	0.013	5	0.596	0.275	0.013

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index			
Meth: 001.10 PCT														
Ammoniacal Nitrogen														
MgO Distillation														
232	10.97	.71										Meth: 010.10 PCT		
Ammon & Nitrate N														
Devarda														
090	11.41	.53	106	11.75	1.03						Total Nitrogen			
Avg	11.36		049	11.70	.74						Combustion			
169	11.30	-1.10	247	11.71	.68						095	11.35	-1.75	
Meth: 010.11 PCT														
Total Nitrogen														
Modified Comprehensive														
474	11.72	1.05	292	11.71	.65						351	11.25	-2.37	
416	11.64	.74	360	11.64	.65						080	11.30	R -2.43	
Avg	11.43		037	11.69	.52						102	11.11	A -3.37	
137	11.29	-.42	230	11.65	.42						073	11.29	s -3.53	
473	11.28	-.47	450	11.65	.42						426	11.00	s -4.28	
420	10.87	-1.67	233	11.67	.40						255	10.80	s -5.64	
Meth: 001.XX PCT														
Ammoniacal Nitrogen														
354	11.81	1.28	450	11.65	.42						422	10.11	s -9.92	
479	11.68	.88	233	11.67	.40						Meth: 010.99 PCT			
371	11.67	.86	027	11.67	.39						Total Nitrogen			
Avg	11.37		131	11.66	.35						Other			
137	11.29	-.21	371	11.65	.27						460	12.68	S 3.21	
473	11.28	-.26	211	11.04	-1.68						300	11.78	.66	
232	10.97	-1.14	114	10.69	S -3.13						479	11.73	.51	
420	10.87	-1.40	309	10.33	S -4.55						397	11.70	.44	
Meth: 010.12 PCT														
Total Nitrogen														
Salicylic														
254	11.87	1.01	Avg	11.61							Avg	11.54		
Avg	11.80		117	11.60	-.07						420	10.98	-1.61	
185	11.74	-.70	389	11.60	-.07						030	9.81	S -4.94	
455	10.65	S -11.92	035	11.61	-.11						Meth: 010.XX PCT			
Total Nitrogen														
Meth: 010.60 PCT														
Total Nitrogen														
Combustion														
428	12.25	s 4.22	162	11.58	-.51						460	12.68	s 5.51	
055	11.86	1.65	040	11.55	-.52						428	12.25	A 3.36	
029	11.86	1.62	007	11.55	-.52						254	11.87	1.46	
177	11.86	1.61	042	11.54	-.55						055	11.86	1.38	
451	11.65	R 1.54	307	11.56	-.71						029	11.86	1.35	
Total Nitrogen														
Combustion														
428	12.25	s 4.22	324	11.50	-.73						177	11.86	1.35	
055	11.86	1.65	086	11.50	-.74						136	11.84	1.24	
029	11.86	1.62	028	11.51	-.89						475	11.82	1.22	
177	11.86	1.61	057	11.47	-.93						451	11.65	R 1.21	
451	11.65	R 1.54	041	11.47	-.97						043	11.80	1.06	
Total Nitrogen														
Combustion														
136	11.84	1.48	483	11.45	-1.07						009	11.77	1.02	
475	11.82	1.46	234	11.43	-1.21						377	11.79	1.01	
043	11.80	1.25	291	11.40	-1.42						300	11.78	.95	
009	11.77	1.21	368	11.41	-1.56						106	11.75	.88	
377	11.79	1.18	406	11.37	-1.74						185	11.74	.73	
Meth: 002.99 PCT														
Nitrate Nitrogen														
Other														
368	0.03	.71										Avg	11.59	
Meth: 005.00 PCT														
Nitrogen From Urea														
Urease (as N)														
232	0.35	.71										405	11.59	-.10
Total Nitrogen														
Combustion														
474	11.72	.66	474	11.72	.66						232	11.56	-.19	
049	11.70	.65	049	11.70	.65						007	11.55	-.33	
247	11.71	.63	247	11.71	.63						040	11.55	-.33	
023	11.70	.61	023	11.70	.61						042	11.54	-.33	
292	11.71	.61	292	11.71	.61						162	11.58	-.37	
397	11.70	.56	397	11.70	.56						324	11.50	-.46	
360	11.64	.53	360	11.64	.53						086	11.50	-.47	
037	11.69	.50	037	11.69	.50						307	11.56	-.50	
233	11.67	.41	233	11.67	.41						028	11.51	-.61	
027	11.67	.40	027	11.67	.40						057	11.47	-.62	
450	11.65	.39	450	11.65	.39						041	11.47	-.65	
230	11.65	.39	230	11.65	.39						260	11.45	-.72	
131	11.66	.37	131	11.66	.37						483	11.45	-.72	
371	11.65	.31	371	11.65	.31						470	11.44	-.79	
416	11.64	.29	416	11.64	.29									
231	11.63	.25	231	11.63	.25									
409	11.63	.18	409	11.63	.18									
Avg	11.61		Avg	11.61										
117	11.60	.14	117	11.60	.14									
402	11.61	.11	402	11.61	.11									
035	11.61	.05	035	11.61	.05									
389	11.60	.05	389	11.60	.05									
117	11.60	.05	117	11.60	.05									
Avg	11.59		Avg	11.59										
Meth: 010.60 PCT														
Total Nitrogen														
Combustion														
460	12.68	s 5.51	460	12.68	s 5.51									
428	12.25	A 3.36	428	12.25	A 3.36									
254	11.87	1.46	254	11.87	1.46									
055	11.86	1.38	055	11.86	1.38									
029	11.86	1.35	029	11.86	1.35									
177	11.86	1.35	177	11.86	1.35									
136	11.84	1.24	136	11.84	1.24									
475	11.82	1.22	475	11.82	1.22									
451	11.65	R 1.21	451	11.65	R 1.21									
043	11.80	1.06	043	11.80	1.06									
009	11.77	1.02	009	11.77	1.02									
377	11.79	1.01	377	11.79	1.01									
300	11.78	.95	300	11.78	.95									
106	11.75	.88	106	11.75	.88									
185	11.74	.73	185	11.74	.73									

\* 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											
Total Nitrogen											
234	11.43	-0.83									
291	11.40	-1.00									
368	11.41	-1.12									
095	11.35	-1.25									
406	11.37	-1.25									
351	11.25	-1.73									
080	11.30 R	-1.79									
102	11.11	-2.50									
073	11.29 R	-2.67									
211	11.04	-2.80									
420	10.98	-3.13									
426	11.00 R	-3.21									
255	10.80 S	-4.26									
114	10.69 S	-4.64									
455	10.65 S	-4.79									
309	10.33 S	-6.44									
422	10.11 S	-7.56									
030	9.81 S	-9.10									
Meth: 020.10 PCT											
Total Phosphate											
470	41.30	1.00									
114	41.14	.79									
090	41.19	.78									
416	41.14	.36									
Avg	41.05										
300	40.89	-.68									
041	40.67	-1.63									
Meth: 020.20 PCT											
Total Phosphate											
324	42.70 R	1.66									
420	42.75	1.62									
232	41.34	.46									
292	41.32	.42									
479	41.15	.28									
Spectrometric											
483	47.55 S	5.72									
255	45.42 S	4.03									
389	41.75	1.12									
307	40.54 R	.94									
402	40.97	.50									
422	40.75	.32									
Avg	40.34										
291	40.31	-.04									
426	40.32	-.20									
368	37.97	-1.96									
Meth: 020.50 PCT											
Total Phosphate											
450	41.11	.26									
473	41.08	.22									
231	41.05	.20									
406	41.00	.19									
405	41.02	.16									
474	40.94	.10									
Avg	40.82										
371	40.73	-.14									
169	39.85	-.82									
234	37.37	-2.91									
309	36.41 S	-3.72									
428	19.71 S	-17.83									
Meth: 020.40 PCT											
Total Phosphate											
027	43.30 S	6.19									
409	41.36	1.13									
247	41.13	.54									
035	40.93	.29									
Avg	40.92										
456	40.90	-.26									
095	40.27	-1.67									
Meth: 020.50 PCT											
Total Phosphate											
ICP											
483	47.55 S	5.72									
255	45.42 S	4.03									
389	41.75	1.12									
307	40.54 R	.94									
402	40.97	.50									
422	40.75	.32									
Avg	40.34										
291	40.31	-.04									
426	40.32	-.20									
368	37.97	-1.96									
Meth: 020.99 PCT											
Total Phosphate											
322	40.52	1.09									
137	39.84	.05									
Avg	39.80										
455	39.05	-1.14									
230	35.60 S	-6.35									
Meth: 020.XX PCT											
Total Phosphate											
483	47.55 S	10.36									
255	45.42 S	7.04									
027	43.30 R	3.84									
324	42.70 R	2.96									
420	42.75	2.89									
389	41.75	1.34									
232	41.34	.75									
409	41.36	.73									
292	41.32	.66									
470	41.30	.63									
090	41.19	.50									
114	41.14	.47									
479	41.15	.40									
416	41.14	.38									
450	41.11	.37									
247	41.13	.36									
473	41.08	.29									
406	41.00	.28									
231	41.05	.26									
405	41.02	.19									
035	40.93	.19									
456	40.90	.16									
402	40.97	.11									
474	40.94	.08									
Meth: 020.XX PCT											
Total Phosphate											
451	33.83 S	-5.24									
Meth: 020.99 PCT											
Total Phosphate											
371	40.73	-.34									
041	40.67	-.37									
322	40.52	-.60									
291	40.31	-.92									
426	40.32	-.97									
095	40.27	-.99									
169	39.85	-1.64									
137	39.84	-1.64									
307	40.54 R	-1.89									
455	39.05	-2.87									
368	37.97 R	-4.68									
234	37.37 A	-5.49									
309	36.41 S	-6.98									
230	35.60 S	-8.25									
451	33.83 S	-11.11									
428	19.71 S	-33.07									
Meth: 030.10 PCT											
Insoluble Phosphate											
090	0.33	.71									
Meth: 030.20 PCT											
Insoluble Phosphate											
474	0.61	.82									
Avg	0.58										
405	0.55	-.91									
Meth: 030.40 PCT											
Insoluble Phosphate											
Automated											
409	0.46	.71									
Meth: 030.50 PCT											
Insoluble Phosphate											
ICP											
479	0.34	-.44									
090	0.33	-.55									
255	0.18	-1.58									
Meth: 040.10 PCT											
InDir Available Phos											
Grav Quim											
090	40.86	.71									
Meth: 040.20 PCT											
InDir Available Phos											
Spectrometri											
405	40.47	.87									
Avg	40.40										
474	40.33	-.87									
Meth: 040.40 PCT											
InDir Available Phos											
Automated											
409	40.91	-.71									

\* 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: 040.50 PCT			Meth: 041.20 PCT			Meth: 041.60 PCT			Meth: 041.XX PCT		
InDir Available Phos			Dir Available Phosph			Dir Available Phosph			Dir Available Phosph		
ICP			Spectrometric			EDTA Extract			177	40.21	- .55
255	45.24	.71	030	40.07	.71	029	40.20	-1.18	055	40.21	- .56
						117	40.10	-1.32	043	40.16	- .64
Meth: 040.99 PCT			Meth: 041.40 PCT			Meth: 041.99 PCT			029	40.20	- .67
InDir Available Phos			Dir Available Phosph			Dir Available Phosph			117	40.10	- .75
Other			Automated			Other			030	40.07	- .79
460	45.90 X	1.29	027	41.92	1.27	351	40.53	.98	055	40.03	- .85
Avg	42.50		Avg	40.99		Avg	40.47		185	40.15 R	- .89
479	40.81	- .64	131	40.68	- .43	230	40.40	- .73	023	39.68	-1.52
247	40.78	- .65	095	40.39	- .84	Meth: 041.XX PCT			360	39.65	-1.62
						Dir Available Phosph			043	39.60	-1.62
Meth: 040.XX PCT			Meth: 041.50 PCT			ICP			102	39.20	-2.37
InDir Available Phos			Dir Available Phosph			080	50.40 s	17.73	368	38.18 s	-4.24
460	45.90 X	1.81	ICP			027	41.92	2.53			
255	45.24	1.52	007	41.44	1.22	007	41.44	1.70	Meth: 048.20 PCT		
Avg	41.91		354	41.25	.98	354	41.25	1.36	Water Soluble Phosph		
409	40.91	- .46	475	41.11	.88	475	41.11	1.22	Spectrometric		
090	40.86	- .48	377	41.00	.69	377	41.00	.95	420	38.43	1.29
479	40.81	- .50	Avg	40.49		Avg	41.00	.88	Avg	36.18	
247	40.78	- .52	055	40.21	- .37	057	40.87	.65	479	35.17	- .58
405	40.47	- .66	023	39.68	-1.06	211	40.84	.60	474	34.95	- .71
474	40.33	- .72	360	39.65	-1.13	106	40.59	.46			
			043	39.60	-1.13	009	40.76	.46	Meth: 050.00 PCT		
Meth: 041.10 PCT			368	38.18 S	-2.98	397	40.75	.43	Soluble Potash		
Dir Available Phosph						131	40.70	.34	STPB Oxalate		
Grav Quimociac			Meth: 041.60 PCT			028	40.58	.34	009	0.04	- .71
049	41.00	1.21	Dir Available Phosph			131	40.68	.30			
260	40.93	.99	EDTA Extract			040	40.55	.28	Meth: 050.31 PCT		
211	40.84	.71	057	40.87	1.41	177	40.57	.12	Soluble Potash		
009	40.76	.49	397	40.75	.98	351	40.53	.11	AA (Citrate)		
131	40.70	.27	106	40.59	.95	Avg	40.51		030	0.01	.00
Avg	40.61		028	40.58	.72	254	40.48	- .05			
254	40.48	- .40	136	40.50	.41	230	40.40	- .19	Meth: 050.50 PCT		
040	40.55	- .50	177	40.57	.38	136	40.50	- .21	Soluble Potash		
177	40.21	-1.27	Avg	40.47		095	40.39	- .26	ICP (Oxalate)		
185	40.15 R	-1.79	231	40.35	- .66	231	40.35	- .39	292	0.17	.66
055	40.03	-1.80	043	40.16	-1.11	231	40.35	- .39	354	0.17	.56
102	39.20 s	-4.41							324	0.16	.41

\* 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>															
354	0.17	.43										Meth: 144.XX PCT			
324	0.16	.33										<u>Sulfur</u>			
402	0.15	.29	354	0.20	-1.21										397 5.13 -1.06
009	0.15	.27	009	0.19	-1.25										474 5.10 -1.07
Avg	0.13		232	0.19	-1.70										426 5.05 -1.09
450	0.10	-.36	041	0.19 R	-2.14										040 5.00 -1.11
009	0.04	-1.01										324 4.99 -1.37			
422	0.04	-1.02										230 4.97 R -1.14			
030	0.01	-1.30										230 4.68 -1.18			
137	0.00	-1.41										307 4.62 -1.20			
291	0.00	-1.41										300 4.44 -1.27			
Meth: 121.30 PCT															
<u>Acid Soluble Magnesi</u>															
041	0.77	2.34										479 4.87 -1.16			
422	0.73	1.80										247 4.79 -1.19			
483	0.66	1.11										230 4.68 -1.23			
479	0.58	.11										307 4.62 -1.26			
Avg	0.57											300 4.44 -1.33			
389	0.56	-.19										354 3.48 -1.71			
035	0.55	-.20										Meth: 151.30 PPM			
102	0.55	-.21										<u>Arsenic</u>			
106	0.55	-.24										ICP			
131	0.55	-.24										368 23.35 s 11.71			
307	0.55	-.25										450 14.00 1.78			
057	0.54	-.38										009 13.27 .67			
232	0.53	-.54										037 12.84 .16			
474	0.51	-.76										Avg 12.71			
009	0.48	-1.05										102 12.34 -.49			
354	0.45	-1.47										474 11.90 -.89			
291	0.00 s	-6.64										230 11.90 -.91			
Meth: 144.01 PCT															
<u>Sulfur</u>															
389	0.23	1.47										Meth: 151.99 PPM			
479	0.23	1.16										<u>Arsenic</u>			
057	0.22	.97										Other			
131	0.22	.76										409 13.35 .99			
102	0.21	.26										Avg 13.09			
035	0.21	.25										231 12.84 -.73			
Avg	0.21											Meth: 151.XX PPM			
474	0.21	-.25										<u>Arsenic</u>			
307	0.21	-.30										368 23.35 s 17.75			
106	0.20	-.52										450 14.00 R 2.78			

\* 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: 151.XX PPM											
<u>Arsenic</u>											
409	13.35	1.25									
009	13.27	1.12									
231	12.84	.35									
037	12.84	.35									
Avg	12.63										
102	12.34	-.63									
474	11.90	-1.22									
230	11.90	-1.25									
Meth: 165.99 PCT											
<u>Acid Soluble Boron</u>											
009	0.049	1.49									
422	0.040 R	1.17									
389	0.041	1.09									
483	0.028	.43									
Avg	0.021										
354	0.020	-.03									
106	0.004	-.89									
232	0.003	-.95									
291	0.000	-1.10									
Meth: 181.30 PPM											
<u>Cadmium</u>											
ICP	3.35 R	2.72									
474	3.00	1.58									
102	2.77	.87									
009	2.52	.08									
Avg	2.49										
230	2.46	-.11									
232	2.41	-.27									
450	2.35	-.48									
368	1.95	-1.71									
Meth: 181.99 PPM											
<u>Chromium</u>											
231	87.98	.87									
Avg	76.86										
409	65.75	-.87									
Meth: 191.XX PPM											
<u>Chromium</u>											
450	87.50	1.57									
231	87.98	1.51									
037	81.80	.67									
102	81.67	.65									
009	80.22	.54									
Avg	76.93										
035	75.75	-.22									
474	75.00	-.26									
368	76.25	-.60									
230	72.50	-.61									
232	71.10	-.82									
027	67.62	-1.30									
409	65.75	-1.53									
Meth: 190.00 PCT											
<u>Water Soluble Chlori</u>											
<u>Titrimetric</u>											
422	0.10	.00									
Meth: 191.30 PPM											
<u>Chromium</u>											
ICP	87.50	1.85									
450	81.80	.79									
037	81.67	.76									
102	80.22	.63									
009	76.94										
Avg	75.75	-.26									
035	75.00	-.31									
474	75.00	-.31									
368	76.25	-.71									
230	72.50	-.72									
232	71.10	-.97									
027	67.62	-1.54									
Meth: 202.00 PPM											
<u>Acid Soluble Cobalt</u>											
AA	474	2.00	.00								
Meth: 202.30 PPM											
<u>Acid Soluble Cobalt</u>											
ICP	2.63 R	1.34									
057	2.70	1.16									
450	2.66	1.00									
009	2.50	.47									
Avg	2.39	.40									
035	2.35	-.33									
474	2.25	-.33									
230	2.25	-.33									
232	2.19	-.53									
027	1.78	-1.84									
Meth: 202.99 PPM											
<u>Acid Soluble Cobalt</u>											
Other	231	2.24	.87								
Avg	2.03										
409	1.81	-.86									
Meth: 202.XX PPM											
<u>Acid Soluble Cobalt</u>											
057	2.63 R	1.54									
450	2.70	1.44									
009	2.66	1.29									
368	2.50	.78									
102	2.39	.57									
Avg	2.25										
035	2.25	-.03									
231	2.24	-.12									
422	2.19	-.20									
474	2.00	-.79									
409	1.81	-1.39									
232	1.78	-1.48									
Meth: 221.00 PCT											
<u>Acid Soluble Copper</u>											
Atomic Absorption	043	0.0033	.85								
Avg	0.0032	.56									
474	0.0028	-1.21									
Meth: 221.30 PCT											
<u>Acid Soluble Copper</u>											
ICP	422	0.0450 s	122.65								
402	0.0250 s	64.44									
324	0.0106 s	22.58									
027	0.0069 s	11.95									
102	0.0035 R	2.66									
043	0.0033	1.68									
028	0.0032	1.32									
009	0.0030	.84									
389	0.0030	.79									
450	0.0030	.79									
057	0.0029	.59									
035	0.0029	.61									
368	0.0027	.55									
095	0.0027	.02									
Avg	0.0027										
232	0.0027	-.53									
106	0.0026	-.91									
307	0.0024	-1.13									
230	0.0023	-1.36									
483	0.0021	-1.91									
255	0.0005 A	-6.86									
041	0.0000 S	-8.53									
354	0.0000 S	-8.53									
Meth: 221.99 PCT											
<u>Acid Soluble Copper</u>											
Other	231	0.0026	.86								
Avg	0.0024										
409	0.0022	-.88									
Meth: 221.XX PCT											
<u>Acid Soluble Copper</u>											
422	0.0450 s	122.65									
402	0.0250 s	64.44									
324	0.0106 s	22.58									
027	0.0069 s	11.95									
102	0.0035 R	2.66									
043	0.0033	1.68									
028	0.0032	1.32									
009	0.0030	.84									
389	0.0030	.79									
450	0.0030	.79									
057	0.0029	.59									
035	0.0029	.61									
368	0.0027	.55									
095	0.0027	.02									
Avg	0.0027										
232	0.0027	-.53									
106	0.0026	-.91									
307	0.0024	-1.13									
230	0.0023	-1.36									
483	0.0021	-1.91									
255	0.0005 A	-6.86									
041	0.0000 S	-8.53									
354	0.0000 S	-8.53									

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Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 221.XX PCT											
<u>Acid Soluble Copper</u>											
433	0.0029	.47									
474	0.0028	.44									
Avg	0.0027										
095	0.0027	-.07									
231	0.0026	-.46									
232	0.0027	-.50									
368	0.0027	-.51									
106	0.0026	-.88									
307	0.0024	-1.11									
230	0.0023	-1.33									
409	0.0022	-1.44									
483	0.0021	-1.83									
255	0.0005 A	-6.33									
041	0.0000 s	-7.85									
354	0.0000 s	-7.85									
Meth: 241.00 PCT											
<u>Acid Soluble Iron</u>											
474	0.82	-.71									
Meth: 241.30 PCT											
<u>Acid Soluble Iron</u>											
ICP											
483	0.97	1.74									
389	0.96	1.60									
422	0.90	.68									
102	0.88	.48									
035	0.87	.25									
479	0.86	.17									
057	0.86	.11									
Avg	0.85										
131	0.84	-.16									
041	0.82	-.48									
106	0.81	-.61									
307	0.77	-1.09									
009	0.78	-1.10									
232	0.73	-1.79									
354	0.64 R	-3.16									
291	0.00 s	-12.45									
Meth: 251.30 PPM											
<u>Lead</u>											
ICP											
035	3.91 S	12.82									
450	1.00	.25									
474	1.00	.25									
Avg	0.94										
102	0.83	-1.54									
Meth: 251.99 PPM											
<u>Lead</u>											
ICP											
035	0.96	1.83									
422	0.82	-.49									
106	0.81	-.62									
307	0.77	-1.09									
009	0.78	-1.09									
232	0.73	-1.76									
Meth: 241.30 PCT											
<u>Acid Soluble Manganese</u>											
ICP											
106	0.330 s	101.74									
422	0.040	1.97									
041	0.037	1.00									
474	0.037	.98									
389	0.036	.60									
102	0.035	.19									
Avg	0.034										
131	0.033	-.35									
057	0.033	-.60									
035	0.032	-.64									
009	0.032	-.78									
307	0.032	-.78									
232	0.031 R	-1.39									
354	0.030	-1.47									
483	0.013 s	-7.40									
291	0.000 s	-11.79									
Meth: 281.99 PPM											
<u>Mercury</u>											
ICP											
433	21.84	2.13									
450	20.00	1.07									
037	19.60	.52									
368	19.10	.39									
474	19.05	.16									
Avg	18.90										
102	18.67	-.24									
232	18.85	-.54									
009	18.17	-.70									
035	18.00	-.81									
057	17.83	-1.04									
230	16.75	-1.73									
422	9.60 s	-6.80									
255	3.31 s	-11.29									
Meth: 289.30 PPM											
<u>Molybdenum</u>											
ICP											
433	21.84	1.93									
231	20.64	1.09									
450	20.00	.94									
409	20.30	.86									
037	19.60	.34									
Avg	19.14										
474	19.05	-.12									
368	19.10	-.36									
102	18.67	-.38									
232	18.85	-.57									
009	18.17	-.70									
035	18.00	-.81									
057	17.83	-1.04									
230	16.75	-1.73									
422	9.60 s	-6.80									
255	3.31 s	-11.29									
Meth: 291.30 PPM											
<u>Nickel</u>											
ICP											
450	10.50	1.59									
037	10.19	1.21									
368	9.20	.84									
102	9.20	.18									
Avg	9.02										
035	8.99	-.21									

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Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 291.30 PPM											
Nickel											
ICP											
009	8.79	- .51									
474	8.50	- .73									
230	7.97	-1.08									
232	7.85	-1.33									
Meth: 291.99 PPM											
Nickel											
Other											
409	10.45	1.21									
Avg	10.42										
231	10.38	- .17									
Meth: 291.30 PPM											
Nickel											
450	10.50	1.27									
409	10.45	1.15									
231	10.38	1.06									
037	10.19	.90									
Avg	9.27										
102	9.20	- .08									
035	8.99	- .33									
009	8.79	- .63									
368	9.20	- .77									
474	8.50	- .88									
230	7.97	-1.25									
232	7.85	-1.47									
Meth: 301.30 PPM											
Selenium											
ICP											
368	5.55	.87									
Avg	2.78										
450	0.00	- .86									
Meth: 311.99 PCT											
Sodium											
Other											
422	0.48 s	35.75									
057	0.18 R	2.09									
009	0.18	1.31									
102	0.17	.83									
035	0.17	.37									
Avg	0.17										
232	0.16	- .82									
474	0.16	-1.14									
Meth: 321.00 PCT											
Acid Soluble Zinc											
Atomic Absorption											
397	1.125 s	6.33									
460	0.955	1.66									
169	0.920	.68									
177	0.909	.37									
371	0.905	.31									
028	0.904	.25									
Avg	0.895										
043	0.876	- .52									
029	0.848	-1.32									
351	0.844	-1.41									
Meth: 321.30 PCT											
Acid Soluble Zinc											
ICP											
483	1.135	2.64									
055	1.040	1.52									
422	1.030	1.33									
057	1.010	1.05									
231	1.005	1.01									
255	1.000	.93									
389	1.000	.93									
102	0.993	.85									
426	0.984	.76									
057	0.983	.72									
042	0.945	.31									
042	0.945	.31									
291	0.950	.30									
300	0.945	.25									
106	0.940	.22									
450	0.930	.14									
475	0.935	.13									
360	0.935	.13									
Avg	0.926										
169	0.920	- .08									
420	0.912	- .19									
479	0.925	- .19									
402	0.910	- .20									
177	0.909	- .22									
095	0.907	- .23									
371	0.905	- .27									
028	0.904	- .27									
324	0.905	- .32									
037	0.896	- .38									
131	0.895	- .39									
368	0.896 R	- .58									
009	0.897 R	- .59									
043	0.876	- .62									
114	0.875	- .71									
Meth: 321.30 PCT											
Acid Soluble Zinc											
ICP											
483	1.135	2.64									
055	1.040	1.52									
422	1.030	1.33									
057	1.010	1.05									
231	1.005	1.01									
255	1.000	.93									
389	1.000	.93									
102	0.993	.85									
426	0.984	.76									
035	0.983	.72									
117	0.959	.41									
Meth: 321.99 PCT											
Acid Soluble Zinc											
Other											
137	1.020	.97									
042	0.945	.28									
Avg	0.920										
474	0.795	-1.22									
Meth: 321.99 PCT											
Acid Soluble Zinc											
Other											
177	0.909	- .22									
095	0.907	- .23									
371	0.905	- .27									
028	0.904	- .27									
324	0.905	- .32									
037	0.896	- .38									
131	0.895	- .39									
368	0.896 R	- .58									
009	0.897 R	- .59									
043	0.876	- .62									
114	0.875	- .71									
Meth: 325.00 PCT											
Water Soluble Zinc											
Atomic Absorption											
027	0.251	.71									
Meth: 325.30 PCT											
Water Soluble Zinc											
ICP											
230	0.870	1.29									
Avg	0.600										
479	0.470	- .62									
473	0.460	- .67									
Meth: 325.99 PCT											
Water Soluble Zinc											
Other											
450	0.930	.71									
Meth: 325.55 PCT											
Water Soluble Zinc											
450	0.930	1.21									
230	0.870	1.00									
Avg	0.596										
479	0.470	- .46									
473	0.460	- .50									
027	0.251	-1.26									

\* 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
001.99	6	0.00	1.04	0.10	144.01	12	-	1.04	0.04
001.XX	7	0.00	1.03	0.12	144.99	25	0.03	1.00	0.03
009.10	2	0.00	0.75	0.68	144.XX	37	0.03	0.99	0.03
009.XX	2	0.00	0.75	0.68	151.30	7	1.66	4.47	0.71
010.11	7	-	1.09	0.18	151.99	2	0.00	1.00	0.50
010.12	3	-	3.97	0.51	151.XX	9	2.21	5.89	0.96
010.60	54	-	0.41	0.64	165.99	8	0.129	1.029	0.198
010.99	6	-	0.29	0.14	165.XX	8	0.129	1.029	0.198
010.XX	70	-	0.48	0.45	181.30	8	0.33	1.34	0.22
020.10	6	0.00	0.96	0.38	181.99	2	0.00	0.56	0.77
020.20	16	-	1.24	0.38	181.XX	10	0.28	1.31	0.22
020.40	6	1.01	2.63	0.61	191.30	10	0.00	0.95	0.37
020.50	10	0.47	2.96	0.43	191.99	2	0.00	1.22	0.04
020.99	4	-	1.59	0.18	191.XX	12	0.00	0.98	0.28
020.XX	42	-	1.09	0.62	202.30	8	0.11	0.99	0.40
030.20	2	0.00	1.15	0.30	202.99	2	0.00	1.21	0.13
030.50	2	0.00	1.21	0.15	202.XX	11	0.11	1.02	0.34
030.XX	7	0.00	1.03	0.10	221.00	3	0.0000	0.9773	0.4434
040.20	2	0.00	1.13	0.34	221.30	21	10.538	32.871	3.7756
040.99	3	0.00	1.12	0.02	221.99	2	0.0000	1.0576	0.4367
040.XX	8	0.00	1.03	0.04	221.XX	26	7.7153	27.011	3.0909
041.10	11	-	0.53	0.41	241.30	15	-	3.29	0.27
041.40	3	0.00	1.11	0.08	241.XX	16	-	3.29	0.27
041.50	10	0.96	4.26	0.37	251.30	4	3.18	6.38	1.06
041.60	10	0.00	0.89	0.48	251.99	2	0.00	1.22	0.10
041.99	2	0.00	1.04	0.46	251.XX	6	2.51	7.17	1.23
041.XX	33	0.44	3.32	0.37	261.30	13	6.861	28.814	0.186
048.20	3	0.00	1.12	0.02	261.99	2	-	121.50	7.018
048.XX	3	0.00	1.12	0.02	261.XX	15	5.418	26.880	0.213
050.50	4	0.00	1.07	0.10	289.30	13	-	3.60	0.34
050.51	6	0.00	1.04	0.12	289.99	2	0.00	0.58	0.76
050.99	7	1.35	3.71	0.05	289.XX	15	-	3.41	0.32
050.XX	18	0.99	2.98	0.20	291.30	9	0.00	0.91	0.45
060.00	6	0.07	0.96	0.50	291.99	2	0.00	0.22	0.85
060.XX	6	0.07	0.96	0.50	291.XX	11	0.00	0.94	0.39
101.30	15	4.93	16.90	0.50	301.30	2	0.00	1.22	0.08
101.XX	15	4.93	16.90	0.50	301.XX	2	0.00	1.22	0.08
121.30	16	-	1.92	0.12	311.99	7	5.20	13.49	0.91
121.XX	16	-	1.92	0.12	311.XX	7	5.20	13.49	0.91

## Method Evaluation - Z Values Based on 1 Reports

Method Code	Number Of Labs	Avg Bias of Labs	Std Dev of Biases	Std Dev Within Labs	Method Code	Number Of Labs	Avg Bias of Labs	Std Dev of Biases	Std Dev Within Labs
321.00	9	0.703	2.316	0.126					
321.30	36	- 0.053	1.024	0.228					
321.99	3	0.000	1.113	0.089					
321.XX	48	- 0.049	1.022	0.200					
325.30	3	0.000	1.117	0.039					
325.XX	4	0.115	1.188	0.026					