

- Pass 1 Results for 84 Labs - - Pass 2 Results for 83 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	2	11.96	0.11	0.07	2	11.96	0.11	0.07
Ammoniacal Nitrogen, Other		001.99	4	11.75	0.30	0.08	4	11.75	0.30	0.08
Method Group 001.XX PCT			6	11.82	0.27	0.08	6	11.82	0.27	0.08
Nitrate Nitrogen, Other		002.99	3	0.73	0.14	0.09	3	0.73	0.14	0.09
Water Insoluble Nitrogen, Meth I	945.01	003.10	1	0.41	0.01	0.02	1	0.41	0.01	0.02
Nitrogen From Urea, Urease (as N)	959.03	005.00	1	0.05	0.01	0.01	1	0.05	0.01	0.01
Ammon & Nitrate N, Devarda	892.01	009.10	3	12.48	0.57	0.11	3	12.48	0.57	0.11
Total Nitrogen, Modified Comprehensive	978.02	010.11	8	12.79	0.21	0.06	8	12.79	0.21	0.06
Total Nitrogen, Salicylic	955.04D	010.12	4	12.45	0.21	0.02	4	12.45	0.21	0.02
Total Nitrogen, Combustion		010.60	54	12.76	0.18	0.09	52	12.77	0.18	0.08
Total Nitrogen, Other		010.99	5	12.81	0.22	0.09	5	12.81	0.22	0.09
Method Group 010.XX PCT			71	12.75	0.20	0.08	68	12.76	0.18	0.07
Total Phosphate, Grav Quimociac	962.02	020.10	7	12.98	0.16	0.13	7	12.98	0.16	0.13
Total Phosphate, Spectrometric	958.01	020.20	18	12.92	0.15	0.10	17	12.91	0.14	0.08
Total Phosphate, Automated	978.01	020.40	5	12.86	0.07	0.07	5	12.86	0.07	0.07
Total Phosphate, ICP		020.50	5	13.01	0.42	0.10	5	13.01	0.42	0.10
Total Phosphate, Other		020.99	2	12.89	0.05	0.06	2	12.89	0.05	0.06
Method Group 020.XX PCT			38	12.93	0.20	0.10	37	12.92	0.20	0.10
Insoluble Phosphate, Grav Quimociac	963.03C	030.10	1	0.05	0.01	0.01	1	0.05	0.01	0.01
Insoluble Phosphate, Automated	978.01	030.40	2	0.02	0.01	0.01	2	0.02	0.01	0.01
Insoluble Phosphate, ICP		030.50	1	0.04	0.00	0.00	1	0.04	0.00	0.00
Method Group 030.XX PCT			4	0.03	0.01	0.01	4	0.03	0.01	0.01
InDir Available Phosphate, Grav Quim	960.02	040.10	1	13.00	0.08	0.11	1	13.00	0.08	0.11
InDir Available Phosphate, Spectrometri	960.02	040.20	1	12.99	0.04	0.06	1	12.99	0.04	0.06
InDir Available Phosphate, Automated	960.02	040.40	2	12.82	0.05	0.08	2	12.82	0.05	0.08
InDir Available Phosphate, ICP		040.50	2	12.09	0.51	0.16	2	12.09	0.51	0.16
InDir Available Phosphate, Other		040.99	1	12.98	0.04	0.05	1	12.98	0.04	0.05
Method Group 040.XX PCT			7	12.68	0.47	0.10	7	12.68	0.47	0.10
Dir Available Phosphate, Grav Quimociac	960.03E	041.10	16	12.94	0.14	0.11	16	12.94	0.14	0.11
Dir Available Phosphate, Spectrometric	960.03D	041.20	1	12.91	0.45	0.63	1	12.91	0.45	0.63
Dir Available Phosphate, Automated	978.01	041.40	4	12.99	0.18	0.04	4	12.99	0.18	0.04
Dir Available Phosphate, ICP		041.50	8	12.71	0.21	0.09	9	12.65	0.26	0.09
Dir Available Phosphate, EDTA Extract	993.01	041.60	12	12.87	0.16	0.07	11	12.89	0.15	0.05
Dir Available Phosphate, Other		041.99	2	13.17	0.15	0.20	2	13.17	0.15	0.20
Method Group 041.XX PCT			44	12.88	0.21	0.11	43	12.88	0.20	0.10
Water Soluble Phosphate, Grav Quimociac	962.03	048.10	1	10.91	0.03	0.04	1	10.91	0.03	0.04
Water Soluble Phosphate, Spectrometric	970.01	048.20	3	11.23	0.24	0.13	3	11.23	0.24	0.13
Water Soluble Phosphate, Other		048.99	1	10.41	0.16	0.22	1	10.41	0.16	0.22
Method Group 048.XX PCT			5	11.00	0.38	0.13	5	11.00	0.38	0.13

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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	15	13.75	0.18	0.09	14	13.73	0.16	0.08
Soluble Potash, AA (Oxalate)		050.30	11	13.52	0.57	0.15	10	13.54	0.59	0.11
Soluble Potash, AA (Citrate)		050.31	2	13.76	0.19	0.03	2	13.76	0.19	0.03
Soluble Potash, ICP (Oxalate)		050.50	6	14.01	0.53	0.08	6	14.01	0.53	0.08
Soluble Potash, ICP (Citrate)		050.51	12	13.61	0.61	0.16	12	13.61	0.61	0.16
Soluble Potash, Flame (Oxalate)	983.02(a)	050.60	6	13.55	0.52	0.05	6	13.55	0.52	0.05
Soluble Potash, Flame (Citrate)	983.02(b)	050.61	10	13.69	0.33	0.12	10	13.69	0.33	0.12
Soluble Potash, Other		050.99	15	13.56	0.43	0.11	15	13.56	0.43	0.11
Method Group 050.XX PCT			77	13.66	0.46	0.11	74	13.66	0.44	0.10
Free Water, Vacuum Oven	965.08B	060.00	4	0.56	0.05	0.05	4	0.56	0.05	0.05
Acid Soluble Calcium, AA	945.04	101.00	1	0.42	0.00	0.00	1	0.42	0.00	0.00
Acid Soluble Calcium, ICP		101.30	18	0.41	0.02	0.01	18	0.41	0.02	0.01
Acid Soluble Calcium, Other		101.99	1	0.39	0.04	0.05	1	0.39	0.04	0.05
Method Group 101.XX PCT			20	0.41	0.02	0.01	19	0.41	0.02	0.01
Acid Soluble Magnesium, AA	984.01	121.00	12	2.20	0.11	0.06	11	2.20	0.11	0.05
Acid Soluble Magnesium, ICP		121.30	33	2.21	0.10	0.05	32	2.20	0.10	0.04
Acid Soluble Magnesium, Other		121.99	2	2.19	0.23	0.07	2	2.19	0.23	0.07
Method Group 121.XX PCT			47	2.20	0.11	0.05	45	2.20	0.11	0.04
Water Soluble Magnesium, AA		131.00	2	1.60	0.69	0.02	2	1.60	0.69	0.02
Water Soluble Magnesium, ICP		131.30	3	1.49	0.50	0.11	3	1.49	0.50	0.11
Method Group 131.XX PCT			5	1.53	0.55	0.07	4	1.63	0.57	0.02
Sulfur, Gravimetric	980.02a	144.01	16	12.56	0.30	0.10	14	12.58	0.29	0.06
Sulfur, Gravimetric	980.02b	144.02	2	12.53	0.45	0.09	2	12.53	0.45	0.09
Sulfur, Spectrometric		144.70	1	11.17	0.11	0.16	1	11.17	0.11	0.16
Sulfur, Other		144.99	18	12.04	0.30	0.08	18	12.04	0.30	0.08
Method Group 144.XX PCT			39	12.21	0.50	0.11	35	12.26	0.44	0.08
Arsenic, ICP		151.30	6	2.83	0.89	0.23	6	2.83	0.89	0.23
Arsenic, Other		151.99	1	2.21	0.05	0.07	1	2.21	0.05	0.07
Method Group 151.XX PPM			7	2.74	0.85	0.20	7	2.74	0.85	0.20
Acid Soluble Boron, Spectrometric	982.01	165.00	9	0.120	0.009	0.002	8	0.120	0.009	0.002
Acid Soluble Boron, Other		165.99	19	0.120	0.011	0.004	18	0.119	0.010	0.003
Method Group 165.XX PCT			28	0.120	0.010	0.003	27	0.120	0.010	0.003
Water Soluble Boron, AA	52.950	171.00	1	0.100	0.000	0.000	1	0.100	0.000	0.000
Water Soluble Boron, Other		171.99	1	0.124	0.000	0.000	1	0.124	0.000	0.000
Method Group 171.XX PCT			2	0.112	0.014	0.000	2	0.112	0.014	0.000
Cadmium, ICP		181.30	16	5.65	0.61	0.29	15	5.66	0.58	0.19
Cadmium, Other		181.99	2	6.22	0.37	0.27	2	6.22	0.37	0.27
Method Group 181.XX PPM			18	5.71	0.61	0.28	17	5.73	0.58	0.20
Water Soluble Chlorine, Titrimetric	928.02	190.00	1	7.51	0.14	0.20	1	7.51	0.14	0.20

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Water Soluble Chlorine, Other		190.99	1	7.92	0.09	0.13	1	7.92	0.09	0.13
Method Group 190.XX PCT			2	7.71	0.25	0.17	2	7.71	0.25	0.17
Chromium, ICP		191.30	15	88.36	4.38	1.74	15	88.36	4.38	1.74
Chromium, Other		191.99	1	86.15	2.33	3.30	1	86.15	2.33	3.30
Method Group 191.XX PPM			16	88.22	4.29	1.84	16	88.22	4.29	1.84
Acid Soluble Cobalt, ICP	965.11	202.30	13	10.24	1.99	0.50	13	10.24	1.99	0.50
Acid Soluble Cobalt, Other		202.99	1	11.80	0.14	0.20	1	11.80	0.14	0.20
Method Group 202.XX PPM			14	10.35	1.96	0.48	13	10.16	1.89	0.39
Acid Soluble Copper, Atomic Absorption	975.01	221.00	3	0.0031	0.0002	0.0003	3	0.0031	0.0002	0.0003
Acid Soluble Copper, ICP		221.30	20	0.0030	0.0010	0.0002	17	0.0028	0.0008	0.0001
Acid Soluble Copper, Other		221.99	3	0.0025	0.0012	0.0000	3	0.0025	0.0012	0.0000
Method Group 221.XX PCT			26	0.0029	0.0009	0.0002	22	0.0028	0.0008	0.0001
Acid Soluble Iron, Atomic Absorption	980.01	241.00	10	0.34	0.04	0.01	10	0.34	0.04	0.01
Acid Soluble Iron, ICP		241.30	31	0.36	0.02	0.01	30	0.36	0.02	0.01
Acid Soluble Iron, Other		241.99	2	0.35	0.01	0.01	2	0.35	0.01	0.01
Method Group 241.XX PCT			45	0.35	0.03	0.01	43	0.36	0.03	0.01
Lead, ICP		251.30	7	2.20	1.29	0.05	7	2.20	1.29	0.05
Lead, Other		251.99	1	1.62	0.01	0.01	1	1.62	0.01	0.01
Method Group 251.XX PPM			8	2.13	1.22	0.05	8	2.13	1.22	0.05
Acid Soluble Manganese, AA	972.02a	261.00	9	0.363	0.043	0.024	8	0.358	0.039	0.015
Acid Soluble Manganese, AA	972.02b	261.11	1	0.355	0.019	0.027	1	0.355	0.019	0.027
Acid Soluble Manganese, ICP		261.30	30	0.379	0.026	0.014	29	0.379	0.026	0.013
Acid Soluble Manganese, ICP		261.31	1	0.398	0.011	0.016	1	0.398	0.011	0.016
Acid Soluble Manganese, Other		261.99	3	0.373	0.009	0.013	3	0.373	0.009	0.013
Method Group 261.XX PCT			45	0.374	0.030	0.017	44	0.374	0.029	0.015
Mercury, Atomic Absorption		281.00	1	0.03	0.00	0.00	1	0.03	0.00	0.00
Mercury, ICP		281.30	1	0.26	0.08	0.12	1	0.26	0.08	0.12
Mercury, Other		281.99	1	0.03	0.00	0.00	1	0.03	0.00	0.00
Method Group 281.XX PPM			3	0.10	0.13	0.04	3	0.10	0.13	0.04
Molybdenum, ICP		289.30	13	7.41	0.76	0.18	12	7.29	0.64	0.12
Molybdenum, Other		289.99	1	7.10	0.20	0.28	1	7.10	0.20	0.28
Method Group 289.XX PPM			14	7.38	0.74	0.18	13	7.27	0.62	0.13
Nickel, ICP		291.30	12	33.37	2.24	0.95	12	33.37	2.24	0.95
Selenium, ICP		301.30	3	0.90	1.03	0.35	3	0.90	1.03	0.35
Selenium, Other		301.99	2	0.33	0.25	0.02	2	0.33	0.25	0.02
Method Group 301.XX PPM			5	0.67	0.83	0.22	4	0.70	0.92	0.08
Sodium, Other		311.99	7	0.36	0.04	0.01	7	0.36	0.04	0.01
Acid Soluble Zinc, Atomic Absorption	975.02	321.00	10	0.404	0.029	0.026	10	0.404	0.029	0.026
Acid Soluble Zinc, ICP		321.30	36	0.406	0.028	0.013	36	0.406	0.028	0.013

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Acid Soluble Zinc, Other		321.99	3	0.390	0.016	0.004	3	0.390	0.016	0.004
Method Group 321.XX PCT			49	0.405	0.028	0.015	47	0.404	0.027	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														
405	12.05	.88										Meth: 010.60 PCT		
Avg	11.96											Total Nitrogen		
232	11.87	-.85										Combustion		
Meth: 009.10 PCT														
Ammon & Nitrate N														
Devarda														
030	13.00	.93	114	15.19 s	13.67							Meth: 010.99 PCT		
090	12.67	.34	422	13.40 s	3.55							Total Nitrogen		
Avg	12.48		361	13.19	2.39							Combustion		
420	11.78	-1.24	351	13.11	1.97							041	12.68	-.61
Meth: 010.11 PCT														
Total Nitrogen														
Modified Comprehensi														
371	15.05 s	10.90	444	13.07	1.75							037	12.66	-.69
073	13.27	2.32	035	13.04	1.57							369	12.67	-.80
405	12.80	.22	157	12.97	1.11							425	12.63	-.82
211	12.81	.10	049	12.96	1.06							423	12.60	-.95
322	12.79	.02	390	12.94	.96							028	12.59	-1.17
Avg	12.79		102	12.93	.91							230	12.55	-1.27
105	12.74	-.25	232	12.93	.90							034	12.56	-1.29
288	12.70	-.44	255	12.91	.83							247	12.55	-1.32
309	12.63	-.75	426	12.89	.71							023	12.59 R	-1.40
029	12.57	-1.12	372	12.89	.69							055	12.53	-1.41
Meth: 001.XX PCT														
Ammoniacal Nitrogen														
405	12.05	.89	027	12.89	.69							409	12.52	-1.44
105	12.01	.80	443	12.80	.59							009	12.52	-1.46
096	11.98	.62	262	12.85	.54							022	12.52	-1.59
232	11.87	.23	057	12.85	.44							096	12.47	-1.76
Avg	11.82		131	12.84	.41							451	12.50 R	-1.78
420	11.66	-.63	162	12.84	.39							Meth: 010.99 PCT		
027	11.34	-1.80	406	12.83	.35							Total Nitrogen		
Meth: 002.99 PCT														
Nitrate Nitrogen														
Other														
232	0.86	.91	025	12.81	.22							046	12.83	.36
288	0.74	.07	450	12.80	.18							360	12.77	.30
Avg	0.73		024	12.79	.17							405	12.80	.30
105	0.59	-1.29	296	12.79	.12							025	12.81	.24
Meth: 003.10 PCT														
Water Insoluble Nitr														
Meth I														
232	0.41	-.71	086	12.77	.06							211	12.81	.22
Meth: 010.12 PCT														
Total Nitrogen														
Salicylic														
416	12.60	.72	Avg	12.77								136	12.78	-.34
397	12.60	.72	040	12.75	-.19							105	12.73	-.42
185	12.48	.21	234	12.74	-.23							402	12.54	-1.25
Avg	12.45		029	12.73	-.25							420	11.96 S	-3.89
254	12.12	-1.56	291	12.75	-.29							Meth: 010.XX PCT		
Meth: 010.16 PCT														
Total Nitrogen														
Raney														
419	12.32 S	.00	360	12.77	-.31							Avg	12.76	
Meth: 010.16 PCT														
Total Nitrogen														
232	0.41	-.71	106	12.70	-.39							114	15.19 s	13.11
Meth: 010.16 PCT														
Total Nitrogen														
232	0.41	-.71	231	12.70	-.46							371	15.05 s	12.39
Meth: 010.16 PCT														
Total Nitrogen														
419	12.32 S	.00	177	12.68	-.54							422	13.40 s	3.42

* 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>												
291	12.75	- .26										
105	12.73	- .33										
106	12.70	- .35										
288	12.70	- .38										
231	12.70	- .42										
233	12.69	- .45										
177	12.68	- .49										
041	12.68	- .57										
377	12.66	- .57										
095	12.67	- .64										
037	12.66	- .64										
007	12.70	- .64										
324	12.70	- .64										
309	12.63	- .73										
369	12.67	- .74										
425	12.63	- .76										
397	12.60	- .89										
423	12.60	- .89										
416	12.60	- .89										
028	12.59	- 1.10										
029	12.57	- 1.15										
230	12.55	- 1.19										
034	12.56	- 1.21										
247	12.55	- 1.24										
402	12.54	- 1.26										
023	12.59 R	- 1.32										
055	12.53	- 1.33										
409	12.52	- 1.35										
009	12.52	- 1.37										
022	12.52	- 1.50										
185	12.48	- 1.58										
096	12.47	- 1.66										
451	12.50 R	- 1.68										
419	12.32 s	- 3.03										
254	12.12 A	- 3.52										
420	11.96 s	- 4.40										
Meth: 020.10 PCT												
<u>Total Phosphate</u>												
105	13.25	1.65										
444	13.01	.94										
090	13.04	.51										
405	13.04	.42										
Avg	12.98	.42										
300	12.91	-.60										
041	12.86	-.83										
157	12.80	- 1.20										
Meth: 020.20 PCT												
<u>Total Phosphate</u>												
425	13.73 s	5.96										
030	13.10 R	2.00										
419	13.12	1.88										
324	13.10	1.39										
231	13.06	1.11										
372	13.05	1.03										
288	13.00	.68										
292	12.98	.54										
262	12.95	.48										
Avg	12.91	.29										
232	12.88	-.29										
309	12.85	-.41										
406	12.87	-.49										
451	12.85	-.49										
416	12.83	-.58										
234	12.86	-.66										
420	12.85	-.76										
450	12.85	- 1.02										
169	12.71	- 1.44										
369	12.70	- 1.61										
Meth: 020.40 PCT												
<u>Total Phosphate</u>												
247	12.91	.73										
096	12.87	.49										
Avg	12.86	.42										
409	12.82	-.84										
105	12.77	- 1.44										
042	12.66 s	- 3.13										
Meth: 020.50 PCT												
<u>Total Phosphate</u>												
422	14.59 S	3.79										
426	13.50	1.17										
393	13.42	.97										
Avg	13.01	.97										
361	12.96	-.14										
444	12.64	-.90										
390	12.55	- 1.17										
432	12.45 S	- 1.59										
255	11.70 S	- 3.16										
423	5.47 s	- 18.12										
Meth: 020.99 PCT												
<u>Total Phosphate</u>												
402	12.89	1.22										
Avg	12.89	-.49										
114	12.88	-.10										
193	11.82 S	- 23.68										
443	10.89 S	- 41.18										
Meth: 020.XX PCT												
<u>Total Phosphate</u>												
422	14.59 s	8.29										
425	13.73 s	4.05										
426	13.50	2.88										
393	13.42	2.46										
105	13.25	1.63										
Meth: 020.10 PCT												
<u>Total Phosphate</u>												
030	13.10 R	1.33										
419	13.12	1.24										
324	13.10	.89										
444	13.01	.87										
231	13.06	.69										
090	13.04	.66										
372	13.05	.64										
405	13.04	.61										
288	13.00	.39										
292	12.98	.30										
262	12.95	.29										
361	12.96	.22										
035	12.93	.13										
Avg	12.92	-.07										
247	12.91	-.07										
114	12.88	-.20										
232	12.88	-.26										
300	12.91	-.28										
096	12.87	-.33										
402	12.89	-.34										
309	12.85	-.36										
041	12.86	-.37										
406	12.87	-.39										
451	12.85	-.40										
416	12.83	-.48										
234	12.86	-.50										
420	12.85	-.57										
409	12.82	-.57										
157	12.80	-.67										
450	12.77	-.78										
105	12.77	-.81										
169	12.71	- 1.07										
369	12.70	- 1.18										
444	12.64	- 1.41										
042	12.66	- 1.43										
390	12.55	- 1.99										
432	12.45 s	- 2.91										
193	11.82 s	- 5.97										
Meth: 030.10 PCT												
<u>Total Phosphate</u>												
255	11.70 s	- 6.08										
443	10.89 s	- 10.27										
423	5.47 s	- 37.04										
Meth: 030.40 PCT												
<u>Total Phosphate</u>												
096	0.03	.78										
Avg	0.02											
409	0.02	-.94										
Meth: 030.50 PCT												
<u>Total Phosphate</u>												
405	0.06 S	3.54										
090	0.05	.71										
Avg	0.05											
Meth: 040.10 PCT												
<u>Total Phosphate</u>												
090	13.00	-.71										
Avg	13.00											
090	13.00	-.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: 040.20 PCT											
InDir Available Phos											
Spectrometri											
372	12.99	.71									
Meth: 040.40 PCT											
InDir Available Phos											
Automated											
096	12.84	.73									
Avg	12.82										
409	12.80	-.99									
Meth: 040.50 PCT											
InDir Available Phos											
ICP											
423	12.53	.86									
Avg	12.09										
255	11.66	-.87									
Meth: 040.99 PCT											
InDir Available Phos											
Other											
405	12.98	.71									
Meth: 040.XX PCT											
InDir Available Phos											
090	13.00	.68									
372	12.99	.66									
405	12.98	.63									
096	12.84	.34									
409	12.80	.27									
Avg	12.68										
423	12.53	-.37									
255	11.66	-2.21									
Meth: 041.10 PCT											
Dir Available Phosph											
Grav Quimociac											
185	13.20	1.90									
105	13.19	1.86									
Meth: 041.10 PCT											
Dir Available Phosph											
Grav Quimociac											
211	13.11	1.16									
022	12.95	1.04									
254	12.97	.47									
055	12.95	.32									
131	12.94	.14									
Avg	12.94										
086	12.90	-.31									
102	12.89	-.33									
177	12.87	-.45									
029	12.90	-.49									
040	12.86	-.63									
009	12.85	-.65									
049	12.85	-.79									
233	12.88	-1.12									
260	12.72	-1.53									
296	12.51	-3.24									
Meth: 041.20 PCT											
Dir Available Phosph											
Spectrometric											
055	12.91	-.71									
Meth: 041.40 PCT											
Dir Available Phosph											
Automated											
025	13.23	1.34									
027	13.03	.25									
Avg	12.99										
131	12.93	-.32									
029	12.77	-1.24									
Meth: 041.50 PCT											
Dir Available Phosph											
ICP											
022	13.65	3.89									
023	13.01	1.41									
360	12.91	.98									
Meth: 041.50 PCT											
Dir Available Phosph											
ICP											
009	12.87	.89									
007	12.74	.39									
Avg	12.71										
393	12.63	-.15									
291	12.64	-.23									
361	12.50	-.60									
354	12.38	-1.10									
377	12.22	-1.72									
Meth: 041.60 PCT											
Dir Available Phosph											
EDTA Extract											
028	13.07	.68									
024	12.99	.88									
055	12.99	.68									
351	12.92	.28									
296	12.91	.26									
Avg	12.89										
034	12.84	-.35									
288	12.85	-.41									
177	12.80	-.67									
073	12.74	-.96									
106	12.76	-1.35									
057	12.56	-2.16									
Meth: 041.99 PCT											
Dir Available Phosph											
Other											
105	13.23	1.15									
Avg	13.17										
322	13.12	-.42									
230	11.10	-14.23									
Meth: 041.99 PCT											
Dir Available Phosph											
Other											
025	13.23	1.34									
027	13.03	.25									
Avg	12.99										
131	12.93	-.32									
029	12.77	-1.24									
Meth: 041.50 PCT											
Dir Available Phosph											
ICP											
022	13.65	3.89									
023	13.01	1.41									
360	12.91	.98									
Meth: 041.50 PCT											
Dir Available Phosph											
ICP											
022	13.65	3.77									
106	12.76	-.99									
291	12.64	-1.25									
393	12.63	-1.27									
057	12.56	-1.59									
361	12.50	-1.88									
296	12.51	-2.04									
354	12.38	-2.48									
377	12.22	-3.29									
230	11.10	-9.08									
Meth: 041.60 PCT											
Dir Available Phosph											
EDTA Extract											
028	13.07	.94									
024	12.99	.51									
055	12.95	.37									
029	12.90	.31									
131	12.94	.30									
131	12.93	.23									
351	12.92	.22									
296	12.91	.20									
086	12.90	.15									
360	12.91	.11									
102	12.89	.03									
Avg	12.88										
177	12.87	-.05									
009	12.85	-.22									
040	12.86	-.22									
034	12.84	-.25									
288	12.85	-.29									
009	12.87	-.35									
049	12.85	-.37									
177	12.80	-.49									
029	12.77	-.60									
073	12.74	-.70									
233	12.88	-.74									
007	12.74	-.74									
Meth: 048.10 PCT											
Water Soluble Phosph											
Grav Quimociac											
405	10.91	.71									
Meth: 048.20 PCT											
Water Soluble Phosph											
Spectrometric											
096	11.36	.87									
420	11.38	.63									
Avg	11.23										
372	10.95	-1.16									
Meth: 048.99 PCT											
Water Soluble Phosph											
Other											
393	10.41	.71									
Meth: 048.XX PCT											
Water Soluble Phosph											
096	11.36	1.02									
420	11.38	.98									
Avg	11.00										
372	10.95	-.13									
405	10.91	-.24									
393	10.41	-1.56									

* 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: 050.00 PCT																													
Soluble Potash																													
STPB Oxalate																													
022	14.05 R	2.27													024	13.84	.41												
009	13.94	1.39													057	13.83	.40												
416	13.89	1.04													055	13.77	.39												
102	13.82	.97													090	13.82	.38												
055	13.77	.87													361	13.80	.31												
233	13.86	.86													324	13.75	.24												
057	13.83	.70													029	13.72	.23												
090	13.82	.66													055	13.73	.21												
211	13.75	.12													211	13.75	.20												
Avg	13.73														291	13.70	.15												
095	13.72	-.05													095	13.72	.14												
049	13.69	-.24													028	13.66	.11												
231	13.59	-.93													169	13.68	.09												
296	13.57	-1.00													049	13.69	.08												
372	13.49	-1.51													232	13.68	.07												
029	13.46	-1.71													057	13.67	.04												
230	11.30 s	-15.46													105	13.67	.02												
397	10.75 s	-18.96													Avg	13.66													
Meth: 050.30 PCT																													
Soluble Potash																													
AA (Oxalate)																													
369	14.59	1.78													300	13.60	-.14												
073	14.14	1.03													095	13.59	-.15												
157	13.88	.57													234	13.62	-.16												
234	13.62	.17													231	13.59	-.19												
040	13.57	.07													296	13.57	-.19												
451	13.55	.06													114	13.56	-.22												
351	13.55	.04													040	13.57	-.22												
Avg	13.54														351	13.55	-.23												
420	13.30 R	-.60													451	13.55	-.26												
185	13.05	-.87													402	13.52	-.32												
262	13.00	-.94													372	13.49	-.37												
425	12.47	-1.81													247	13.48	-.42												
Meth: 050.50 PCT																													
Soluble Potash																													
ICP (Oxalate)																													
443	15.75 S	4.34													029	13.46	-.44												
131	13.89	.66													041	13.46	-.45												
Meth: 050.60 PCT																													
Soluble Potash																													
Flame (Oxalate)																													
443	15.75 S	4.34													042	13.45	-.50												
131	13.89	.66													423	13.44	-.50												
Meth: 050.61 PCT																													
Soluble Potash																													
Flame (Citrate)																													
443	15.75 s	4.80													030	13.35	-.77												
422	14.79	2.55													420	13.30 R	-.99												
432	14.65 R	2.30													444	13.16	-1.13												
369	14.59	2.10													034	13.10	-1.27												
426	14.30	1.45													Meth: 050.99 PCT														
027	14.30	1.45													Soluble Potash														
023	14.29	1.43													Other														
Avg	14.25	1.34													390	13.10	-1.08												
057	13.67	-.07													322	13.05	-1.19												
028	13.66	-.18													354	12.98	-1.37												
041	13.46	-.71													255	12.81	-1.72												
030	13.35	-1.12													193	12.08 S	-3.59												
034	13.10	-1.80													Meth: 050.99 PCT														
Soluble Potash																													
ICP (Citrate)																													
432	14.65	1.76													Soluble Potash														
023	14.29	1.12													Other														
009	14.06	.74													443	15.75 s	4.80												
007	13.97	.62													422	14.79	2.55												
377	13.83	.38													432	14.65 R	2.30												
361	13.80	.30													369	14.59	2.10												
291	13.70	.17													426	14.30	1.45												
Avg	13.61														027	14.30	1.45												
423	13.44	-.30													023	14.29	1.43												
022	13.05	-.93													025	14.25	1.34												
096	13.00	-1.08													073	14.14	1.11												
419	12.97	-1.08													106	14.12	1.05												
393	12.63	-1.63													131	14.05	.96												
Meth: 050.99 PCT																													
Soluble Potash																													
Other																													
027	14.30	1.70													022	14.05	.95												
131	14.05	1.19													009	14.06	.91												
177	14.03	1.07													177	14.03	.83												
105	13.94	.93													035	14.02	.83												
360	13.87	.72													007	13.97	.75												
232	13.68	.27													105	13.94	.71												
300	13.60	.08													292	13.96	.67												
114	13.56	.02													009	13.94	.64												
Avg	13.56														254	13.92	.60												
402	13.52	-.32													131	13.89	.53												
402	13.52	-.32													416	13.89	.53												
372	13.49	-.37													406	13.89	.52												
247	13.48	-.42													105	13.86	.51												
029	13.46	-.44													157	13.88	.49												
041	13.46	-.44													360	13.87	.49												
042	13.46	-.45													233	13.86	.46												
042	13.45	-.50													102	13.82	.46												
423	13.44	-.50													377	13.83	.43												
030	13.35	-.77													Meth: 050.60 PCT														
420	13.30 R	-.99													Soluble Potash														
444	13.16	-1.13													Flame (Oxalate)														
034	13.10	-1.27													443	15.75 S	4.34												
* 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>											
390	13.10	-1.27									
022	13.05	-1.37									
322	13.05	-1.37									
185	13.05	-1.40									
262	13.00	-1.50									
354	12.98	-1.55									
096	13.00 R	-1.56									
419	12.97	-1.57									
255	12.81	-1.90									
393	12.63	-2.32									
309	12.47	-2.67									
425	12.47	-2.67									
193	12.08 s	-3.72									
230	11.30 s	-5.30									
397	10.75 s	-6.53									
Meth: 060.00 PCT											
Free Water											
Vacuum Oven											
096	1.05 s	9.45									
105	0.61	1.37									
Avg	0.56										
416	0.55	-0.19									
405	0.54	-0.32									
007	0.52	-1.22									
Meth: 101.00 PCT											
<u>Acid Soluble Calcium</u>											
AA	0.42	.71									
105	0.42										
Avg	0.42										
420	0.28 S	-81.69									
450	0.02 S	-233.13									
Meth: 101.30 PCT											
<u>Acid Soluble Calcium</u>											
057	0.43	.94									
035	0.43	.79									
232	0.42	.68									
096	0.42	.43									
247	0.42	.43									
433	0.42	.39									
009	0.41	.07									
Avg	0.41										
065	0.41	-0.13									
102	0.41	-0.18									
292	0.41	-0.43									
288	0.41	-0.52									
405	0.39	-1.11									
423	0.39	-1.39									
022	0.38	-1.89									
027	0.37	-1.96									
Meth: 101.99 PCT											
<u>Acid Soluble Calcium</u>											
193	0.39	-0.71									
Meth: 101.XX PCT											
<u>Acid Soluble Calcium</u>											
422	1.57 s	60.51									
041	0.56 s	7.77									
131	0.44	1.35									
390	0.43	1.19									
106	0.43	.95									
057	0.43	.94									
035	0.43	.80									
232	0.42	.69									
096	0.42	.43									
Meth: 101.30 PCT											
<u>Acid Soluble Magnesi</u>											
422	2.91 s	7.42									
090	2.43	2.35									
432	2.32 R	2.08									
444	2.36	1.62									
027	2.34	1.39									
354	2.31	1.14									
231	2.30	1.11									
300	2.27	1.02									
035	2.29	.91									
409	2.25	.73									
057	2.21	.63									
390	2.25	.58									
037	2.26	.56									
423	2.25	.48									
247	2.24	.40									
009	2.22	.34									
131	2.22	.19									
426	2.21	.08									
Avg	2.20										
360	2.20	-0.11									
419	2.18	-0.25									
233	2.19	-0.26									
106	2.17	-0.34									
232	2.20	-0.38									
288	2.20	-0.48									
292	2.15	-0.60									
096	2.13	-0.76									
433	2.13	-0.81									
324	2.13	-0.82									
065	2.12	-0.84									
405	2.11	-1.02									
393	2.10	-1.12									
102	2.08	-1.30									
022	2.04	-1.75									
255	2.01	-2.06									
Meth: 101.99 PCT											
<u>Acid Soluble Magnesi</u>											
193	2.54 S	1.71									
042	2.38	.89									
Avg	2.19										
114	2.00	-0.84									
234	1.74 S	-2.02									
Meth: 121.XX PCT											
<u>Acid Soluble Magnesi</u>											
041	2.94 s	6.99									
422	2.91 s	6.76									
193	2.54 s	3.64									
090	2.43	2.15									
432	2.32 R	1.90									
042	2.38	1.86									
444	2.36	1.49									
027	2.34	1.28									
095	2.32	1.12									
105	2.27 R	1.11									
450	2.32	1.10									
354	2.31	1.05									
231	2.30	1.02									
029	2.30	.97									
300	2.27	.94									
028	2.29	.88									
035	2.29	.84									
409	2.25	.67									
177	2.27	.65									
057	2.21	.58									
390	2.25	.54									
037	2.26	.52									
423	2.25	.45									
247	2.24	.38									
232	2.20	.34									
288	2.20	-0.48									
096	2.13	-0.76									
433	2.13	-0.81									
324	2.13	-0.82									
065	2.12	-0.84									
405	2.11	-1.02									
393	2.10	-1.12									
102	2.08	-1.30									
022	2.04	-1.75									
255	2.01	-2.06									
Avg	2.20										

* 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>														
360	2.20	-1.10												
419	2.18	-0.21												
233	2.19	-0.22												
106	2.17	-0.29												
420	2.20	-0.38												
288	2.20	-0.43												
292	2.15	-0.53												
351	2.14	-0.54												
096	2.13	-0.67												
296	2.14	-0.69												
433	2.13	-0.72												
324	2.13	-0.73												
065	2.12	-0.74												
405	2.11	-0.90												
393	2.10	-1.00												
262	2.09	-1.05												
102	2.08	-1.16												
055	2.07	-1.42												
022	2.04	-1.57												
309	2.03	-1.68												
255	2.01	-1.86												
114	2.00	-1.90												
234	1.74 s	-4.46												
371	1.04 s	-11.08												
Meth: 131.00 PCT														
<u>Water Soluble Magnes</u>														
AA	029	2.19	.87											
Avg	1.60													
309	1.00	-0.87												
Meth: 131.30 PCT														
<u>Water Soluble Magnes</u>														
ICP	432	1.15	-0.74											
Meth: 131.XX PCT														
<u>Water Soluble Magnes</u>														
029	2.19	.98												
027	2.13	.87												
Avg	1.63													
405	1.20	-0.76												
432	1.15 R	-0.88												
309	1.00	-1.10												
Meth: 144.01 PCT														
<u>Sulfur</u>														
157	13.17	2.02												
055	12.95	1.25												
028	12.59 R	.63												
057	12.73	.57												
288	12.73	.52												
324	12.70	.40												
296	12.67	.30												
262	12.60	.06												
Avg	12.58													
102	12.56	-0.08												
029	12.55	-0.15												
095	12.46	-0.44												
105	12.55	-0.45												
114	12.26	-1.12												
397	12.25	-1.15												
233	12.16 R	-1.60												
106	12.00	-2.00												
444	11.76 s	-3.00												
Meth: 144.02 PCT														
<u>Sulfur</u>														
027	2.13	1.27												
Avg	1.49													
405	1.20	-0.59												
Meth: 144.02 PCT														
<u>Gravimetric</u>														
292	12.91	.86												
Meth: 144.02 PCT														
<u>Gravimetric</u>														
419	16.10 s	8.72												
157	13.17	2.07												
055	12.95	1.56												
292	12.91	1.48												
057	12.73	1.07												
288	12.73	1.07												
324	12.70	1.00												
296	12.67	.93												
028	12.59 R	.85												
262	12.60	.77												
105	12.55	.71												
102	12.56	.68												
029	12.55	.65												
095	12.46	.44												
232	12.40	.33												
354	12.35	.29												
177	12.38	.28												
390	12.35	.23												
372	12.29	.07												
027	12.27	.02												
Avg	12.26													
114	12.26	-0.02												
360	12.24	-0.10												
397	12.25	-0.12												
193	12.15	-0.26												
029	12.14	-0.30												
450	12.08	-0.45												
023	12.06	-0.46												
300	12.05	-0.49												
233	12.16 R	-0.51												
106	12.00	-0.60												
351	11.94	-0.73												
247	11.86	-0.91												
131	11.84	-0.95												
035	11.75	-1.16												
423	11.70	-1.29												
009	11.70	-1.30												
444	11.76 R	-1.33												
Meth: 144.70 PCT														
<u>Sulfur</u>														
393	11.17	.71												
Meth: 144.99 PCT														
<u>Sulfur</u>														
419	16.10 s	13.54												
232	12.40	1.20												
177	12.38	1.15												
354	12.35	1.07												
390	12.35	1.05												
372	12.29	.84												
027	12.27	.77												
360	12.24	.68												
193	12.15	.35												
450	12.08	.30												
300	12.05	.17												
023	12.06	.13												
Avg	12.04													
351	11.94	-0.38												
247	11.86	-0.61												
131	11.84	-0.67												
035	11.75	-0.98												
423	11.70	-1.17												
009	11.70	-1.19												
096	11.32	-2.41												
422	10.72 s	-4.41												
255	10.38 s	-5.55												
Meth: 151.30 PPM														
<u>Arsenic</u>														
450	4.50 s	2.53												
233	4.60	2.00												
247	2.95	.31												
Avg	2.83													
065	2.63	-0.28												
102	2.49	-0.39												
230	2.18	-0.73												
393	2.14	-0.79												
Meth: 151.99 PPM														
<u>Arsenic</u>														
409	2.21	.71												
Meth: 151.XX PPM														
<u>Arsenic</u>														
450	4.50 s	2.73												
233	4.60	2.20												
247	2.95	.38												
Avg	2.74													
065	2.63	-0.22												
102	2.49	-0.30												
409	2.21	-0.63												
230	2.18	-0.66												
393	2.14	-0.73												

* 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: 165.00 PCT											
Acid Soluble Boron											
Spectrometric											
409	0.134	1.60									
397	0.130	1.13									
029	0.125 R	.80									
023	0.120	.22									
055	0.121	.18									
Avg	0.120										
028	0.119	-.14									
105	0.118	-.24									
296	0.110	-1.05									
057	0.105	-1.55									
Meth: 165.99 PCT											
Acid Soluble Boron											
Other											
432	0.325 s	24.04									
042	0.145	2.51									
450	0.133 R	1.52									
354	0.135	1.48									
360	0.130	.96									
444	0.128	.84									
090	0.125	.72									
433	0.127	.68									
230	0.121	.26									
106	0.120	.05									
300	0.120	.05									
Avg	0.119										
009	0.119	-.34									
231	0.116	-.57									
393	0.114	-.76									
423	0.112	-.81									
255	0.111	-.86									
288	0.112	-.86									
324	0.110	-.90									
296	0.110	-.92									
009	0.110	-.92									
232	0.109	-.99									
422	0.108	-.99									
057	0.105	-1.44									
Meth: 171.00 PCT											
Water Soluble Boron											
AA											
296	0.100	.00									
Meth: 165.99 PCT											
Acid Soluble Boron											
Other											
432	0.325 s	25.37									
042	0.145	2.62									
450	0.133 R	1.59									
354	0.135	1.54									
409	0.134	1.47									
397	0.130	1.04									
360	0.130	.99									
444	0.128	.86									
090	0.125	.74									
029	0.125	.74									
433	0.127	.69									
230	0.121	.27									
023	0.120	.20									
055	0.121	.17									
106	0.120	.03									
300	0.120	.03									
Avg	0.119										
028	0.119	-.13									
105	0.118	-.23									
231	0.116	-.39									
393	0.114	-.63									
423	0.112	-.83									
255	0.111	-.88									
288	0.112	-.93									
324	0.110	-.98									
296	0.110	-.98									
009	0.110	-.99									
232	0.109	-1.08									
422	0.108	-1.24									
057	0.105	-1.44									
Meth: 171.99 PCT											
Water Soluble Boron											
Other											
409	0.124	.87									
Avg	0.112										
296	0.100	-.87									
Meth: 181.30 PPM											
Cadmium											
ICP											
037	6.29	1.25									
035	6.27	1.05									
324	6.25	1.04									
247	6.20	.92									
009	6.10	.77									
106	6.00	.58									
419	6.00	.58									
102	5.76	.26									
Avg	5.73										
065	5.63	-.18									
233	5.42	-.62									
393	5.34	-.67									
232	5.25	-.83									
390	5.14	-1.02									
444	4.98	-1.30									
450	5.43 R	-1.59									
230	4.35	-2.37									
Meth: 190.00 PCT											
Water Soluble Chlori											
Titrimetric											
422	7.51	.71									
Meth: 191.99 PPM											
Chromium											
Other											
409	86.15	-.71									
Meth: 191.99 PPM											
Chromium											
Other											
409	86.15	-.71									
Meth: 181.30 PPM											
Chromium											
ICP											
009	94.20	1.43									
230	93.90	1.29									
247	93.50	1.18									
450	92.00	.83									
106	91.50	.73									
390	90.70	.70									
419	90.00	.38									
Avg	88.36										
065	87.78	-.17									
037	86.43	-.52									
102	86.84	-.59									
035	85.75	-.68									
096	85.00	-.77									
232	84.75	-.83									
324	82.90	-1.26									
393	80.10	-1.89									
444	68.10 s	-4.64									
027	60.00 s	-6.48									
Meth: 190.99 PCT											
Water Soluble Chlori											
Other											
009	7.92	.71									
Meth: 191.99 PPM											
Cadmium											
Other											
409	6.48	1.28									
037	6.29	1.15									
035	6.27	.94									
324	6.25	.93									
247	6.20	.81									
009	6.10	.66									
300	5.95	.57									
106	6.00	.46									
419	6.00	.46									
102	5.76	.26									
Avg	5.73										
065	5.63	-.18									
233	5.42	-.62									
393	5.34	-.67									
232	5.25	-.83									
390	5.14	-1.02									
444	4.98	-1.30									
450	5.43 R	-1.59									
230	4.35	-2.37									
Meth: 181.99 PPM											
Cadmium											
Other											
409	6.48	.72									
Avg	6.22										
300	5.95	-.99									

* 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: 191.XX PPM												
<u>Chromium</u>												
409	86.15	-.62										
035	85.75	-.67										
096	85.00	-.75										
232	84.75	-.82										
324	82.90	-1.25										
393	80.10	-1.89										
444	68.10 s	-4.70										
027	60.00 s	-6.58										
Meth: 202.XX PPM												
<u>Acid Soluble Cobalt</u>												
035	12.80 R	1.46										
409	11.80	.87										
065	11.55	.76										
393	10.37	.13										
Avg	10.16											
247	10.10	-.06										
106	10.00	-.09										
419	10.00	-.09										
390	9.09	-.57										
232	9.15	-.61										
324	8.45	-.92										
102	8.04	-1.13										
230	7.03	-1.66										
Meth: 221.00 PCT												
<u>Acid Soluble Copper</u>												
409	0.0035	.85										
300	0.0030	.42										
Avg	0.0025											
402	0.0010	-1.27										
Meth: 221.XX PCT												
<u>Acid Soluble Copper</u>												
422	0.0105 s	9.30										
262	0.0100 s	8.67										
444	0.0054 R	3.15										
255	0.0040	1.43										
231	0.0040	1.43										
288	0.0035 R	1.02										
409	0.0035	.83										
247	0.0034	.64										
057	0.0033	.64										
233	0.0033	.62										
105	0.0031 R	.51										
450	0.0032	.48										
009	0.0030	.29										
035	0.0031	.28										
102	0.0030	.20										
419	0.0030	.20										
Meth: 202.99 PPM												
<u>Acid Soluble Cobalt</u>												
409	11.80	-.71										
Meth: 202.XX PPM												
<u>Acid Soluble Cobalt</u>												
450	16.60 s	3.81										
009	13.40	1.71										
057	13.16	1.62										
Meth: 221.30 PCT												
<u>Acid Soluble Copper</u>												
422	0.0105 s	9.52										
444	0.0054 R	3.21										
231	0.0040	1.44										
255	0.0040	1.44										
288	0.0035 R	1.02										
247	0.0034	.63										
057	0.0033	.63										
233	0.0033	.61										
009	0.0030	.27										
035	0.0031	.26										
102	0.0030	.20										
419	0.0030	.20										
Meth: 221.30 PCT												
<u>Acid Soluble Copper</u>												
422	0.0105 s	9.30										
262	0.0100 s	8.67										
444	0.0054 R	3.15										
255	0.0040	1.43										
231	0.0040	1.43										
288	0.0035 R	1.02										
409	0.0035	.83										
247	0.0034	.64										
057	0.0033	.64										
233	0.0033	.62										
105	0.0031	.51										
450	0.0032	.48										
009	0.0030	.29										
035	0.0031	.28										
102	0.0030	.20										
419	0.0030	.20										
Meth: 221.00 PCT												
<u>Acid Soluble Iron</u>												
371	0.59 s	6.37										
055	0.40	1.49										
397	0.38	1.00										
262	0.36	.62										
105	0.36	.61										
351	0.36	.56										
Avg	0.34											
296	0.32	-.37										
095	0.32	-.44										
177	0.31	-.60										
029	0.30	-.91										
028	0.26	-1.92										
Meth: 241.00 PCT												
<u>Acid Soluble Iron</u>												
231	0.37	.34										
102	0.37	.28										
131	0.36	.21										
255	0.36	.20										
009	0.36	.15										
Avg	0.36											
390	0.35	-.37										
035	0.35	-.39										
444	0.35	-.57										
393	0.35	-.70										
232	0.34	-.74										
423	0.34	-.76										
233	0.34	-.82										
027	0.33	-1.50										
065	0.33	-1.55										
041	0.32	-1.81										
114	0.30	-2.72										
300	0.28 s	-3.87										
Meth: 241.99 PCT												
<u>Acid Soluble Iron</u>												
096	0.51 s	6.88										
432	0.46 s	5.03										
405	0.45 s	3.91										
090	0.40	1.64										
106	0.39	1.39										
Meth: 221.30 PCT												
<u>Acid Soluble Iron</u>												
096	0.51 s	6.88										
432	0.46 s	5.03										
405	0.45 s	3.91										
090	0.40	1.64										
106	0.39	1.39										

* 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: 241.99 PCT																	
Acid Soluble Iron																	
Other			390	0.35	-0.19	390	0.35	-0.19	390	0.35	-0.19	390	0.35	-0.19			
234	0.34	-1.05	444	0.35	-0.33	419	3.35	1.01	114	0.400	0.80	037	0.375	0.78			
042	0.15 S	-17.16	393	0.35	-0.39	393	2.93	0.66	422	0.400	0.79	402	0.374	0.14			
Meth: 241.99 PCT																	
Acid Soluble Iron																	
371	0.59 s	7.72	232	0.34	-0.41	Avg	2.13		035	0.398	0.75	Avg	0.373				
096	0.51 s	5.06	423	0.34	-0.42	450	2.00	-0.10	057	0.391	0.55	042	0.372	-1.37			
432	0.46 s	3.73	233	0.34	-0.49	409	1.62	-0.42	288	0.380	0.51	255	0.349 s	-3.63			
405	0.45	2.94	234	0.34	-0.61	230	1.02	-0.91	423	0.392	0.50	Meth: 261.99 PCT					
055	0.40	1.30	027	0.33	-0.95	106	1.00	-0.93	393	0.390	0.42	Acid Soluble Manganese					
090	0.40	1.30	065	0.33	-0.99	102	0.85	-1.05	360	0.382	0.33	292	2.145 s	60.89			
106	0.39	1.13	296	0.32	-1.16	Meth: 261.00 PCT			324	0.385	0.30	234	0.425 s	2.35			
354	0.38	0.93	041	0.32	-1.17	Acid Soluble Manganese			102	0.382	0.13	432	0.440	2.28			
057	0.38	0.84	095	0.32	-1.25	AA			Avg	0.379	-0.38	041	0.435	2.17			
324	0.38	0.80	177	0.31	-1.47	450	0.410 R	1.79	131	0.374	-0.43	450	0.410 R	1.99			
230	0.38	0.79	114	0.30	-1.83	028	0.404	1.26	009	0.368	-0.51	090	0.410	1.43			
433	0.38	0.73	029	0.30	-1.87	055	0.395	1.17	023	0.366	-0.59	354	0.406	1.16			
397	0.38	0.65	300	0.28	-2.65	351	0.401	1.14	106	0.375	-0.62	028	0.404	1.16			
023	0.37	0.54	028	0.26 A	-3.20	Avg	0.358		390	0.363	-0.66	055	0.395	1.13			
426	0.37	0.50	042	0.15 s	-6.90	262	0.355	-0.15	232	0.362	-0.70	351	0.401	0.97			
247	0.37	0.47	Meth: 251.30 PPM														
292	0.37	0.47	Lead														
288	0.36 R	0.46	Lead			397	0.340	-0.46	233	0.360	-0.71	114	0.400	0.91			
422	0.37	0.46	ICP			177	0.339	-0.51	300	0.360	-0.71	422	0.400	0.89			
360	0.37	0.37	247	4.25	1.59	296	0.323	-0.91	444	0.360	-0.74	230	0.398	0.88			
419	0.36	0.36	247	4.25	1.59	095	0.305	-1.38	231	0.365	-0.77	035	0.398	0.85			
231	0.37	0.35	419	3.35	0.90	105	0.247 s	-3.87	027	0.361	-0.79	057	0.391	0.65			
102	0.37	0.33	393	2.93	0.57	Meth: 261.11 PCT			426	0.355	-0.93	423	0.392	0.63			
255	0.36	0.27	Avg	2.20		Acid Soluble Manganese			096	0.371 R	-1.01	393	0.390	0.56			
131	0.36	0.26	450	2.00	-0.15	AA			065	0.340	-1.48	106	0.375	0.52			
105	0.36	0.24	230	1.02	-0.92	029	0.355	0.71	022	0.330	-2.00	288	0.380	0.51			
009	0.36	0.21	106	1.00	-0.93	Meth: 261.31 PCT			Meth: 261.31 PCT								
262	0.36	0.14	102	0.85	-1.05	Acid Soluble Manganese			Acid Soluble Manganese								
351	0.36	0.08	ICP			ICP			ICP								
Avg	0.36	-0.06	409	1.62	-0.71	230	0.398	0.71	230	0.398	0.71	324	0.385	0.43			
035	0.35	-0.16	Meth: 261.99 PCT														
Acid Soluble Manganese																	
Other																	
Avg																	
009																	
131																	
023																	
390																	

* 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: 261.XX PCT											
<u>Acid Soluble Manganese</u>											
042	0.372	- .40									
232	0.362	- .43									
433	0.361	- .45									
233	0.360	- .46									
300	0.360	- .47									
444	0.360	- .50									
027	0.361	- .58									
231	0.365	- .59									
262	0.355	- .66									
426	0.355	- .67									
029	0.355	- .80									
096	0.371	- .88									
255	0.349	- 1.07									
397	0.340	- 1.16									
065	0.340	- 1.17									
177	0.339	- 1.21									
022	0.330	- 1.65									
296	0.323	- 1.76									
095	0.305	- 2.38									
105	0.247	- 5.55									
Meth: 281.00 PPM											
<u>Mercury</u>											
<u>Atomic Absorption</u>											
230	0.03	- .71									
Meth: 281.30 PPM											
<u>Mercury</u>											
<u>ICP</u>											
393	0.26	.71									
Meth: 281.99 PPM											
<u>Mercury</u>											
<u>Other</u>											
300	0.03	.71									
Meth: 289.99 PPM											
<u>Molybdenum</u>											
035	16.75	s 15.48									
324	8.85	R 2.65									
247	8.35	1.74									
450	8.00	1.17									
393	7.76	.80									
Meth: 289.30 PPM											
<u>Molybdenum</u>											
ICP											
035	16.75	s 14.90									
324	8.85	R 2.53									
247	8.35	1.66									
450	8.00	1.11									
393	7.76	.75									
433	7.45	.26									
057	7.35	.13									
419	7.35	.13									
Avg	7.29										
232	7.20	- .20									
009	7.15	- .22									
065	7.05	- .37									
102	7.09	- .38									
106	7.00	- .44									
230	5.68	- 2.51									
288	4.50	S - 4.40									
444	4.30	S - 4.76									
Meth: 289.99 PPM											
<u>Molybdenum</u>											
<u>Other</u>											
409	7.10	.71									
Meth: 289.30 PPM											
<u>Selenium</u>											
029	0.521	s 4.10									
055	0.450	1.89									
450	0.433	1.15									
262	0.410	1.05									
351	0.414	.52									
Avg	0.404										
177	0.393	- .37									
Meth: 289.99 PPM											
<u>Selenium</u>											
<u>Other</u>											
409	0.55	.87									
Avg	0.33										
296	0.12	- .87									
Meth: 301.XX PPM											
<u>Selenium</u>											
<u>Other</u>											
409	0.55	.87									
Avg	0.33										
296	0.12	- .87									
Meth: 301.XX PPM											
<u>Selenium</u>											
<u>ICP</u>											
393	2.14	1.58									
Avg	0.70										
409	0.55	- .17									
065	0.55	R - .46									
296	0.12	- .64									
450	0.00	- .76									
Meth: 311.99 PCT											
<u>Sodium</u>											
<u>Other</u>											
422	0.77	s 11.10									
057	0.44	2.18									
288	0.37	.60									
Avg	0.36										
009	0.36	- .24									
102	0.35	- .34									
035	0.34	- .55									
232	0.34	- .61									
423	0.34	- .75									
405	0.09	s - 7.54									
Meth: 321.00 PCT											
<u>Acid Soluble Zinc</u>											
<u>Atomic Absorption</u>											
029	0.400	- .23									
055	0.450	1.89									
450	0.433	1.15									
262	0.410	1.05									
351	0.414	.52									
Avg	0.404										
177	0.393	- .37									
Meth: 321.30 PCT											
<u>Acid Soluble Zinc</u>											
<u>ICP</u>											
288	0.460	1.93									
057	0.455	1.72									
023	0.450	1.56									
090	0.445	1.39									
426	0.439	1.17									
230	0.431	.95									
360	0.431	.90									
292	0.420	.86									
106	0.430	.85									
432	0.415	.62									
393	0.420	.61									
255	0.412	.58									
041	0.420	.49									
354	0.414	.42									
409	0.410	.38									
422	0.413	.23									
405	0.410	.13									
Avg	0.406										
027	0.403	- .11									
324	0.400	- .22									
433	0.400	- .23									
102	0.402	- .23									
035	0.399	- .28									
390	0.400	- .44									
009	0.398	- .45									
300	0.390	- .58									
037	0.405	- .59									

* 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		
232	0.405	-.63
131	0.388	-.67
231	0.390	-.68
233	0.387	-.71
444	0.385	-.82
022	0.380	-1.00
096	0.362	-1.58
423	0.356	-1.81
419	0.355	-1.83
065	0.348	-2.07

Meth: 321.99 PCT

Acid Soluble Zinc	Lab Average*	Index
Other		
402	0.401	.65
114	0.400	.61
Avg	0.390	
042	0.370	-1.31

Meth: 321.XX PCT

Acid Soluble Zinc	Lab Average*	Index
029	0.521 s	4.45
288	0.460	2.11
055	0.450 R	2.05
057	0.455	1.89
023	0.450	1.73
090	0.445	1.55
426	0.439	1.32
450	0.433	1.26
262	0.410 R	1.14
230	0.431	1.08
360	0.431	1.03
106	0.430	.98
292	0.420	.96
393	0.420	.71
432	0.415	.70
232	0.405	.66

Meth: 321.XX PCT

Acid Soluble Zinc	Lab Average*	Index
255	0.412	.65
037	0.405	.61
041	0.420	.61
351	0.414	.56
354	0.414	.51
409	0.410	.44
422	0.413	.33
405	0.410	.24
Avg	0.404	
027	0.403	-.02
402	0.401	-.12
114	0.400	-.14
324	0.400	-.14
433	0.400	-.15
102	0.402	-.20
035	0.399	-.20
177	0.393	-.40
009	0.398	-.42
390	0.400	-.42
300	0.390	-.51
028	0.402	-.58
296	0.390	-.59
131	0.388	-.61
231	0.390	-.63
233	0.387	-.65
105	0.399	-.67
444	0.385	-.77
397	0.380	-.88
022	0.380	-.96
042	0.370	-1.29
095	0.369	-1.31
096	0.362	-1.56
423	0.356	-1.79
419	0.355	-1.82
065	0.348	-2.07
371	0.059 s	-12.84

* 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	2	0.00	1.14	0.32	050.99	16	- 0.21	1.29	0.34
001.99	4	0.00	1.06	0.17	050.XX	72	- 0.18	1.58	0.28
001.XX	6	0.00	1.03	0.17	060.00	5	1.88	4.26	0.69
002.99	3	0.00	0.94	0.49	060.XX	5	1.88	4.26	0.69
002.XX	3	0.00	0.94	0.49	101.00	3	- 104.8	118.26	3.99
009.10	3	0.00	1.11	0.11	101.30	20	3.32	13.22	0.45
009.XX	3	0.00	1.11	0.11	101.XX	24	1.63	13.43	0.52
010.11	9	1.21	3.75	0.21	121.00	13	- 0.76	3.09	0.34
010.12	4	0.00	1.08	0.09	121.30	35	0.47	2.00	0.40
010.60	56	0.26	2.12	0.33	121.99	4	- 0.12	1.59	0.46
010.99	6	- 0.64	1.83	0.28	121.XX	52	0.06	2.38	0.44
010.XX	74	0.23	2.44	0.37	131.00	2	0.00	1.22	0.02
020.10	7	0.00	0.91	0.46	131.30	3	0.00	1.10	0.17
020.20	19	0.38	1.63	0.53	131.XX	5	- 0.17	1.01	0.11
020.40	6	- 0.45	1.35	0.82	144.01	17	- 0.25	1.18	0.37
020.50	9	- 2.09	6.32	0.32	144.02	3	- 5.91	10.27	0.09
020.99	4	- 15.53	19.53	6.08	144.99	21	0.17	3.54	0.17
020.XX	43	- 1.11	6.19	0.66	144.XX	41	- 0.42	3.31	0.20
030.10	2	1.06	1.50	2.06	151.30	7	0.27	1.18	0.66
030.40	2	0.00	1.11	0.37	151.XX	8	0.26	1.20	0.64
030.XX	5	0.40	1.27	0.71	165.00	9	0.065	0.982	0.209
040.40	2	0.00	0.46	0.80	165.99	20	1.047	4.485	3.111
040.50	2	0.00	1.20	0.16	165.XX	29	0.761	3.963	2.731
040.XX	7	0.00	1.03	0.12	171.XX	2	0.000	1.225	0.000
041.10	17	- 0.18	1.12	0.56	181.30	16	- 0.03	0.96	0.44
041.40	4	0.00	1.07	0.12	181.99	2	0.00	1.02	0.48
041.50	10	0.39	1.55	0.20	181.XX	18	- 0.03	0.96	0.42
041.60	12	- 0.07	0.99	0.36	190.XX	2	0.00	1.13	0.33
041.99	3	- 4.61	8.00	2.03	191.30	17	- 0.65	2.09	0.26
041.XX	38	- 0.31	1.79	0.63	191.XX	18	- 0.63	2.07	0.27
048.20	3	0.00	1.00	0.40	202.30	14	0.23	1.29	0.46
048.XX	5	0.00	1.03	0.23	202.XX	15	0.32	1.32	0.47
050.00	17	- 1.90	5.88	0.41	221.00	4	6.9632	13.930	0.7329
050.30	11	- 0.04	0.98	0.17	221.30	21	0.6286	2.3370	0.2628
050.31	2	0.00	1.22	0.08	221.99	3	0.0000	1.1179	0.0146
050.50	6	0.00	1.04	0.09	221.XX	28	0.7826	2.5539	0.2368
050.51	12	0.00	1.00	0.18	241.00	11	0.58	2.15	0.09
050.60	7	0.61	1.87	0.31	241.30	35	0.33	1.89	0.48
050.61	10	0.00	1.00	0.23	241.99	3	- 5.72	9.93	0.57

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.XX	49	0.13	2.01	0.30					
251.30	7	0.00	1.04	0.03					
251.XX	8	0.00	1.03	0.03					
261.00	10	0.151	1.362	0.938					
261.30	31	2.149	12.056	0.368					
261.99	5	0.643	3.284	2.663					
261.XX	48	1.241	8.867	0.680					
281.XX	3	0.000	1.066	0.275					
289.30	16	0.51	4.24	0.72					
289.XX	17	0.50	4.26	0.72					
291.30	12	0.00	0.99	0.23					
291.XX	12	0.00	0.99	0.23					
301.30	3	0.00	1.08	0.24					
301.99	2	0.00	1.22	0.05					
301.XX	5	- 0.03	0.94	0.20					
311.99	9	0.39	4.81	0.22					
311.XX	9	0.39	4.81	0.22					
321.00	12	- 0.650	3.783	0.568					
321.30	36	0.000	0.960	0.301					
321.99	3	0.000	1.092	0.196					
321.XX	50	- 0.151	2.149	0.394					