

MAGRUDER - Fertilizer Check Sample No. - 200309 Grade 18-9-9

- Pass 1 Results for 83 Labs - - Pass 2 Results for 83 Labs -

Method	AOAC Ref.	Method Code	No. of Labs	Grand Avq.	Std. Dev.	Average Range of Dups	No. of Labs	Grand Avq.	Std. Dev.	Average Range of Dups
Ammoniacal Nitrogen, MgO Distillation .	920.03	001.10	6	15.43	0.26	0.25	6	15.43	0.26	0.25
Ammoniacal Nitrogen, Other .....		001.99	11	15.45	0.13	0.09	11	15.45	0.13	0.09
Method Group 001.XX PCT			17	15.44	0.18	0.15	16	15.46	0.16	0.12
Ammon & Nitrate N, Devarda .....	892.01	009.10	3	17.61	0.12	0.11	3	17.61	0.12	0.11
Ammon & Nitrate N, Other .....		009.99	1	17.50	0.04	0.05	1	17.50	0.04	0.05
Method Group 009.XX PCT			4	17.58	0.12	0.10	4	17.58	0.12	0.10
Total Nitrogen, Modified Comprehensive	978.02	010.11	11	17.67	0.30	0.07	11	17.67	0.30	0.07
Total Nitrogen, Salicylic .....	955.04D	010.12	5	17.60	0.26	0.04	5	17.60	0.26	0.04
Total Nitrogen, Combustion .....		010.60	46	17.73	0.16	0.06	43	17.73	0.16	0.05
Total Nitrogen, Other .....		010.99	2	17.74	0.08	0.08	2	17.74	0.08	0.08
Method Group 010.XX PCT			66	17.73	0.22	0.06	62	17.72	0.21	0.05
Total Phosphate, Grav Quimociac .....	962.02	020.10	5	7.98	0.04	0.03	5	7.98	0.04	0.03
Total Phosphate, Spectrometric .....	958.01	020.20	17	8.01	0.18	0.07	16	8.00	0.18	0.05
Total Phosphate, Automated .....	978.01	020.40	6	8.01	0.17	0.10	6	8.01	0.17	0.10
Total Phosphate, ICP .....		020.50	5	7.95	0.43	0.05	6	8.13	0.57	0.04
Method Group 020.XX PCT			34	8.00	0.22	0.07	31	8.01	0.18	0.06
Insoluble Phosphate, Grav Quimociac ...	963.03C	030.10	3	0.02	0.02	0.00	3	0.02	0.02	0.00
Insoluble Phosphate, Spectrometric ....	963.03C	030.20	1	0.25	0.00	0.00	1	0.25	0.00	0.00
Insoluble Phosphate, Automated .....	978.01	030.40	3	0.03	0.01	0.01	3	0.03	0.01	0.01
Method Group 030.XX PCT			7	0.06	0.08	0.01	6	0.06	0.09	0.00
InDir Available Phosphate, Grav Quim ..	960.02	040.10	1	8.02	0.06	0.08	1	8.02	0.06	0.08
InDir Available Phosphate, Spectrometri	960.02	040.20	2	7.61	0.29	0.39	2	7.61	0.29	0.39
InDir Available Phosphate, Automated ..	960.02	040.40	2	7.85	0.16	0.04	2	7.85	0.16	0.04
InDir Available Phosphate, Other .....		040.99	1	8.04	0.06	0.09	1	8.04	0.06	0.09
Method Group 040.XX PCT			6	7.83	0.25	0.17	5	7.87	0.19	0.07
Dir Available Phosphate, Grav Quimociac	960.03E	041.10	18	8.02	0.11	0.07	17	8.00	0.09	0.05
Dir Available Phosphate, Spectrometric	960.03D	041.20	4	8.05	0.16	0.03	4	8.05	0.16	0.03
Dir Available Phosphate, Automated ....	978.01	041.40	5	7.86	0.19	0.08	5	7.86	0.19	0.08
Dir Available Phosphate, ICP .....		041.50	6	7.86	0.16	0.12	6	7.86	0.16	0.12
Dir Available Phosphate, EDTA Extract .	993.01	041.60	9	7.96	0.10	0.08	9	7.96	0.10	0.08
Method Group 041.XX PCT			43	7.98	0.16	0.07	40	7.98	0.14	0.06
Water Soluble Phosphate, Grav Quimociac	962.03	048.10	1	9.01	0.00	0.01	1	9.01	0.00	0.01
Water Soluble Phosphate, Spectrometric	970.01	048.20	4	7.23	0.19	0.07	3	7.24	0.22	0.02
Water Soluble Phosphate, ICP .....		048.50	1	6.89	0.02	0.04	1	6.89	0.02	0.04
Water Soluble Phosphate, Other .....		048.99	1	7.03	0.05	0.07	1	7.03	0.05	0.07
Method Group 048.XX PCT			7	7.41	0.71	0.06	6	7.44	0.76	0.03
Soluble Potash, STPB Oxalate .....	958.02	050.00	23	10.28	0.17	0.05	23	10.28	0.17	0.05
Soluble Potash, STPB Citrate .....	969.04	050.10	3	10.38	0.22	0.22	3	10.38	0.22	0.22
Soluble Potash, AA (Oxalate) .....		050.30	10	10.20	0.22	0.11	10	10.20	0.22	0.11

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Method	AOAC Ref.	Method Code	No. of Labs	Grand Avq.	Std. Dev.	Average Range of Dups	No. of Labs	Grand Avq.	Std. Dev.	Average Range of Dups
Soluble Potash, AA (Citrate) .....		050.31	1	10.60	0.14	0.20	1	10.60	0.14	0.20
Soluble Potash, ICP (Oxalate) .....		050.50	5	10.48	0.30	0.13	5	10.48	0.30	0.13
Soluble Potash, ICP (Citrate) .....		050.51	7	10.38	0.25	0.21	7	10.38	0.25	0.21
Soluble Potash, Flame (Oxalate) .....	983.02(a)	050.60	5	10.37	0.12	0.06	5	10.37	0.12	0.06
Soluble Potash, Flame (Citrate) .....	983.02(b)	050.61	3	10.46	0.20	0.02	3	10.46	0.20	0.02
Soluble Potash, Other .....		050.99	12	10.18	0.21	0.14	12	10.18	0.21	0.14
Method Group 050.XX PCT			71	10.30	0.25	0.11	66	10.28	0.23	0.08
Free Water, Vacuum Oven .....	965.08B	060.00	7	0.39	0.07	0.03	7	0.39	0.07	0.03
Free Water, Karl Fischer .....	972.01	060.20	1	0.48	0.01	0.01	1	0.48	0.01	0.01
Method Group 060.XX PCT			8	0.40	0.07	0.02	8	0.40	0.07	0.02
Acid Soluble Calcium, AA .....	945.04	101.00	1	0.27	0.02	0.03	1	0.27	0.02	0.03
Acid Soluble Calcium, ICP .....		101.30	8	0.22	0.03	0.01	8	0.22	0.03	0.01
Method Group 101.XX PCT			9	0.23	0.03	0.01	9	0.23	0.03	0.01
Acid Soluble Magnesium, AA .....	984.01	121.00	1	0.21	0.00	0.00	1	0.21	0.00	0.00
Acid Soluble Magnesium, ICP .....		121.30	9	0.23	0.01	0.01	9	0.23	0.01	0.01
Method Group 121.XX PCT			10	0.23	0.01	0.01	10	0.23	0.01	0.01
Water Soluble Magnesium, AA .....		131.00	1	0.11	0.00	0.01	1	0.11	0.00	0.01
Water Soluble Magnesium, ICP .....		131.30	1	0.04	0.01	0.01	1	0.04	0.01	0.01
Method Group 131.XX PCT			2	0.07	0.04	0.01	2	0.07	0.04	0.01
Sulfur, Gravimetric .....	980.02a	144.01	14	13.37	0.19	0.08	14	13.37	0.19	0.08
Sulfur, Gravimetric .....	980.02b	144.02	1	13.05	0.00	0.01	1	13.05	0.00	0.01
Sulfur, Turbidimetric .....	63.845	144.50	1	13.31	0.00	0.00	1	13.31	0.00	0.00
Sulfur, Spectrometric .....		144.70	1	13.44	0.00	0.00	1	13.44	0.00	0.00
Sulfur, Other .....		144.99	22	13.11	0.39	0.14	21	13.07	0.35	0.12
Method Group 144.XX PCT			41	13.23	0.40	0.10	39	13.21	0.39	0.08
Arsenic, Atomic Absorption .....		151.00	2	2.57	0.49	0.09	2	2.57	0.49	0.09
Arsenic, ICP .....		151.30	5	2.21	0.29	0.21	5	2.21	0.29	0.21
Arsenic, Other .....		151.99	1	2.00	0.00	0.00	1	2.00	0.00	0.00
Method Group 151.XX PPM			8	2.27	0.37	0.15	8	2.27	0.37	0.15
Acid Soluble Boron, Spectrometric .....	982.01	165.00	1	0.007	0.000	0.000	1	0.007	0.000	0.000
Acid Soluble Boron, Other .....		165.99	3	0.011	0.003	0.001	3	0.011	0.003	0.001
Method Group 165.XX PCT			4	0.010	0.003	0.001	4	0.010	0.003	0.001
Water Soluble Boron, Spectrometric .....	982.01	171.10	1	0.004	0.000	0.000	1	0.004	0.000	0.000
Cadmium, Atomic Absorption .....		181.00	4	0.99	0.25	0.10	4	0.99	0.25	0.10
Cadmium, ICP .....		181.30	8	0.79	0.16	0.07	8	0.79	0.16	0.07
Cadmium, Other .....		181.99	1	1.00	0.00	0.00	1	1.00	0.00	0.00
Method Group 181.XX PPM			13	0.87	0.21	0.07	13	0.87	0.21	0.07
Water Soluble Chlorine, Other .....		190.99	2	7.64	0.23	0.09	2	7.64	0.23	0.09
Chromium, Atomic Absorption .....		191.00	1	31.50	0.71	1.00	1	31.50	0.71	1.00

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Chromium, ICP .....		191.30	10	22.22	2.49	0.60	9	22.32	2.59	0.41
Chromium, Other .....		191.99	1	23.00	0.00	0.00	1	23.00	0.00	0.00
Method Group 191.XX PPM			12	23.06	3.46	0.58	11	23.22	3.56	0.42
Acid Soluble Cobalt, AA .....		202.00	1	2.25	0.07	0.10	1	2.25	0.07	0.10
Acid Soluble Cobalt, ICP .....	965.11	202.30	9	2.84	1.30	1.09	8	2.69	1.09	0.73
Acid Soluble Cobalt, Other .....		202.99	2	2.25	0.50	0.50	2	2.25	0.50	0.50
Method Group 202.XX PPM			12	2.69	1.16	0.91	11	2.57	0.96	0.63
Acid Soluble Copper, Atomic Absorption	975.01	221.00	6	0.0019	0.0002	0.0001	5	0.0019	0.0002	0.0001
Acid Soluble Copper, ICP .....		221.30	10	0.0019	0.0002	0.0001	9	0.0019	0.0002	0.0001
Acid Soluble Copper, Other .....		221.99	1	0.0021	0.0001	0.0001	1	0.0021	0.0001	0.0001
Method Group 221.XX PCT			18	0.0019	0.0002	0.0001	17	0.0019	0.0002	0.0001
Acid Soluble Iron, Atomic Absorption ..	980.01	241.00	1	0.24	0.01	0.01	1	0.24	0.01	0.01
Acid Soluble Iron, ICP .....		241.30	6	0.18	0.01	0.00	5	0.18	0.01	0.00
Method Group 241.XX PCT			9	0.18	0.03	0.00	9	0.18	0.03	0.00
Lead, Atomic Absorption .....		251.00	4	2.33	1.06	0.19	4	2.33	1.06	0.19
Lead, ICP .....		251.30	5	1.73	0.85	0.27	5	1.73	0.85	0.27
Lead, Other .....		251.99	1	2.00	0.00	0.00	1	2.00	0.00	0.00
Method Group 251.XX PPM			10	2.00	0.92	0.21	10	2.00	0.92	0.21
Acid Soluble Manganese, AA .....	972.02a	261.00	1	0.018	0.000	0.001	1	0.018	0.000	0.001
Acid Soluble Manganese, ICP .....	972.02a	261.30	7	0.022	0.002	0.002	6	0.022	0.001	0.001
Acid Soluble Manganese, ICP .....	972.02b	261.31	1	0.020	0.001	0.001	1	0.020	0.001	0.001
Method Group 261.XX PCT			9	0.021	0.002	0.001	8	0.021	0.002	0.001
Water Soluble Manganese, Atomic Abs ...	972.03	271.00	1	0.002	0.000	0.001	1	0.002	0.000	0.001
Mercury, Atomic Absorption .....		281.00	1	0.14	0.00	0.00	1	0.14	0.00	0.00
Mercury, Other .....		281.99	1	0.50	0.00	0.00	1	0.50	0.00	0.00
Method Group 281.XX PPM			2	0.32	0.21	0.00	2	0.32	0.21	0.00
Molybdenum, Atomic Absorption .....		289.00	1	1.85	0.49	0.70	1	1.85	0.49	0.70
Molybdenum, ICP .....		289.30	6	2.12	0.57	0.20	6	2.12	0.57	0.20
Molybdenum, Other .....		289.99	1	2.00	0.00	0.00	1	2.00	0.00	0.00
Method Group 289.XX PPM			8	2.07	0.51	0.24	8	2.07	0.51	0.24
Nickel, Atomic Absorption .....		291.00	2	70.78	9.13	2.85	2	70.78	9.13	2.85
Nickel, ICP .....		291.30	8	77.90	7.44	7.92	8	77.90	7.44	7.92
Nickel, Other .....		291.99	2	77.85	12.43	3.10	2	77.85	12.43	3.10
Method Group 291.XX PPM			12	76.70	8.63	6.27	12	76.70	8.63	6.27
Selenium, Atomic Absorption .....		301.00	2	0.07	0.02	0.01	2	0.07	0.02	0.01
Selenium, Other .....		301.99	1	1.00	0.00	0.00	1	1.00	0.00	0.00
Method Group 301.XX PPM			3	0.38	0.48	0.01	3	0.38	0.48	0.01
Sodium, Atomic Absorption .....	983.04	311.00	1	0.21	0.00	0.00	1	0.21	0.00	0.00
Sodium, Flame Photometric .....	974.01	311.30	1	0.19	0.00	0.00	1	0.19	0.00	0.00

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Sodium, Other .....		311.99	4	0.22	0.01	0.00	4	0.22	0.01	0.00
Method Group 311.XX PCT			6	0.21	0.02	0.00	6	0.21	0.02	0.00
Acid Soluble Zinc, Atomic Absorption ..	975.02	321.00	8	0.018	0.002	0.001	8	0.018	0.002	0.001
Acid Soluble Zinc, ICP .....		321.30	12	0.019	0.001	0.001	12	0.019	0.001	0.001
Acid Soluble Zinc, Other .....		321.99	1	0.017	0.000	0.001	1	0.017	0.000	0.001
Method Group 321.XX PCT			21	0.018	0.002	0.001	20	0.018	0.001	0.001
Water Soluble Zinc, ICP .....		325.30	1	0.017	0.000	0.001	1	0.017	0.000	0.001

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 001.10 PCT			Meth: 001.XX PCT			Meth: 010.11 PCT			Meth: 010.60 PCT			Meth: 010.60 PCT		
<u>Ammoniacal Nitrogen</u>			<u>Ammoniacal Nitrogen</u>			<u>Total Nitrogen</u>			<u>Total Nitrogen</u>			<u>Total Nitrogen</u>		
<u>MgO Distillation</u>						<u>Modified Comprehensi</u>			<u>Combustion</u>			<u>Combustion</u>		
415	17.95 S	9.62	416	15.55	.61	090	18.15	1.57	361	17.90	1.06	177	17.56	-1.10
288	15.67	1.10	247	15.54	.56	114	18.05	1.25	330	17.90	1.05	262	17.55	-1.21
029	15.61	.67	289	15.54	.55	415	17.98	1.04	251	17.90	1.05	023	17.45	-1.80
416	15.55	.47	193	15.53	.54	405	17.91	.77	035	17.89	.99	389	17.43	-1.96
Avg	15.43		363	15.51	.45	Avg	17.67		422	17.87	.87	351	17.41	-2.07
405	15.33	-.38	420	15.38	-.55	029	17.61	-.21	136	17.86	.77	027	17.39	-2.18
251	15.23	-1.19	369	15.40	-.71	073	17.67	-.25	376	17.80 R	.76	Meth: 010.99 PCT		
040	15.20	-1.44	419	15.35	-.75	363	17.57	-.50	360	17.79 R	.68	<u>Total Nitrogen</u>		
Meth: 001.99 PCT			405	15.33	-.80	414	17.46	-.74	037	17.83	.61	<u>Other</u>		
<u>Ammoniacal Nitrogen</u>			397	15.30	-.99	211	17.44	-.79	131	17.81	.50	368	18.42 S	11.88
<u>Other</u>			376	15.27	-1.37	322	17.31	-1.20	024	17.78	.35	300	17.79	.75
393	17.69 s	17.54	251	15.23	-2.07	288	17.27	-1.35	234	17.77	.29	Avg	17.74	
418	16.48 s	8.12	040	15.20 R	-2.47	Meth: 010.12 PCT			275	17.75	.29	289	17.70	-.97
320	15.60	1.19	409	14.32 s	-7.12	<u>Total Nitrogen</u>			324	17.78	.26	Meth: 010.XX PCT		
096	15.57	.93	Meth: 009.10 PCT			<u>Salicylic</u>			007	17.77	.26	<u>Total Nitrogen</u>		
247	15.54	.76	<u>Ammon &amp; Nitrate N</u>			137	17.94	1.32	247	17.74	.26	368	18.42 s	4.33
289	15.54	.75	<u>Devarda</u>			254	17.80	.76	157	17.77	.25	406	18.30 A	2.77
193	15.53	.73	391	17.70	1.09	Avg	17.60		025	17.76	.21	022	18.26	2.54
363	15.51	.60	392	17.65	.51	351	17.59	-.19	040	17.76	.13	090	18.15	2.01
Avg	15.45		Avg	17.61		185	17.41	-.75	028	17.74	.13	232	18.09	1.75
420	15.38	-.63	257	17.49	-1.03	102	17.28	-1.26	233	17.74	.07	114	18.05	1.55
369	15.40	-.87	258	17.40 S	-2.40	Meth: 010.16 PCT			096	17.74	.04	292	18.02	1.42
419	15.35	-.89	Meth: 009.99 PCT			<u>Total Nitrogen</u>			Avg	17.73		409	18.01	1.38
397	15.30	-1.19	<u>Ammon &amp; Nitrate N</u>			<u>Raney</u>			049	17.70	-.27	415	17.98	1.24
376	15.27	-1.68	<u>Other</u>			419	15.20 S	.00	029	17.72	-.33	137	17.94	1.05
409	14.32 s	-8.90	420	17.50	.71	Meth: 010.60 PCT			106	17.69	-.34	095	17.94	1.04
Meth: 001.XX PCT			Meth: 009.XX PCT			<u>Total Nitrogen</u>			055	17.72	-.37	405	17.91	.86
<u>Ammoniacal Nitrogen</u>			<u>Ammon &amp; Nitrate N</u>			<u>Combustion</u>			086	17.71	-.37	361	17.90	.84
415	17.95 s	15.57	391	17.70	1.31	406	18.30 s	3.60	296	17.69	-.42	251	17.90	.84
393	17.69 s	13.89	392	17.65	.71	022	18.26 s	3.29	393	17.65	-.54	330	17.90	.84
418	16.48 s	6.40	Avg	17.58		232	18.09	2.25	390	17.64	-.60	035	17.89	.80
288	15.67	1.65	420	17.50	-.79	292	18.02	1.82	377	17.64	-.61	422	17.87	.70
029	15.61	.91	257	17.49	-.82	409	18.01	1.76	009	17.61	-.83	136	17.86	.63
320	15.60	.90	258	17.40 s	-2.32	095	17.94	1.31	325	17.59	-.91	376	17.80 R	.60
096	15.57	.69	* X=Excluded from lab performance S/s=Screened Outlier R=Duplicate Range too large A=Analysis beyond 3-s limits			095	17.94	1.31	041	17.65 R	-.92	360	17.79	.54

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 010.XX PCT			Meth: 010.XX PCT			Meth: 020.20 PCT			Meth: 020.XX PCT			Meth: 020.XX PCT		
<u>Total Nitrogen</u>			<u>Total Nitrogen</u>			<u>Total Phosphate</u>			<u>Total Phosphate</u>			<u>Total Phosphate</u>		
037	17.83	.51	414	17.46	-1.30	<u>Spectrometric</u>			354	17.90 s	53.81	292	7.61	-2.20
131	17.81	.42	023	17.45	-1.32	257	8.00	-.09	234	9.42 s	7.70	389	7.30 A	-3.88
254	17.80	.36	211	17.44	-1.39	416	7.99	-.18	415	9.05 s	5.64	Meth: 030.10 PCT		
300	17.79	.34	389	17.43	-1.44	390	7.94	-.36	422	9.00 s	5.40	Insoluble Phosphate		
024	17.78	.30	185	17.41	-1.51	232	7.94	-.38	042	8.79 s	4.69	<u>Grav Quimociac</u>		
234	17.77	.26	351	17.41	-1.52	258	7.95	-.40	330	8.45	2.39	405	0.04	.83
324	17.78	.24	027	17.39	-1.60	363	7.85	-.89	362	8.41	2.16	320	0.03	.48
007	17.77	.24	322	17.31	-1.97	397	7.75	-1.42	361	8.25	1.32	Avg 0.02		
275	17.75	.24	102	17.28	-2.15	292	7.61	-2.18	035	8.24	1.24	090	0.00	-1.26
157	17.77	.23	288	17.27	-2.18	Meth: 020.40 PCT			324	8.12 R	1.00	Meth: 030.20 PCT		
247	17.74	.20	419	15.20 s	-12.09	<u>Total Phosphate</u>			392	8.20	.99	Insoluble Phosphate		
025	17.76	.19	Meth: 020.10 PCT			<u>Automated</u>			247	8.07 R	.69	<u>Spectrometric</u>		
040	17.76	.15	<u>Total Phosphate</u>			042	8.79 s	5.10	414	8.06	.62	363 0.25 .00		
028	17.74	.12	<u>Grav Quimociac</u>			035	8.24	1.36	369	8.10	.51	Meth: 030.40 PCT		
233	17.74	.09	414	8.06 s	3.02	247	8.07	.75	420	8.08	.49	Insoluble Phosphate		
096	17.74	.07	405	8.03	1.27	193	8.08	.55	193	8.08	.49	<u>Automated</u>		
142	17.73	.07	090	8.00	.56	409	8.02	.27	406	8.10	.49	096	0.04	1.00
Avg	17.72		095	7.99	.24	Avg	8.01		391	8.08	.37	409	0.03	
049	17.70	-.16	Avg	7.98		320	7.90	-.68	368	8.04	.26	409	0.03	-.51
106	17.69	-.22	114	7.97	-.42	096	7.76	-1.50	409	8.02	.25	247	0.02	-1.11
029	17.72	-.24	157	7.91	-1.53	Meth: 020.50 PCT			142	8.05	.23	Meth: 030.XX PCT		
086	17.71	-.26	Meth: 020.20 PCT			<u>Total Phosphate</u>			405	8.03	.15	Insoluble Phosphate		
055	17.72	-.27	<u>Total Phosphate</u>			<u>ICP</u>			Avg	8.01		363 0.25 2.12		
296	17.69	-.29	<u>Spectrometric</u>			422	9.00 S	1.55	090	8.00	-.13	Avg 0.06		
289	17.70	-.30	234	9.42 s	7.89	330	8.45	.58	095	7.99	-.15	096 0.04 -.26		
393	17.65	-.36	415	9.05 s	5.79	361	8.25	.23	416	7.99	-.21	405 0.04 -.33		
043	17.65	-.39	362	8.41	2.26	Avg	7.95		288	8.01	-.25	320 0.03 -.38		
390	17.64	-.41	392	8.20	1.07	368	8.04	-.17	114	7.97	-.27	409 0.03 -.44		
377	17.64	-.42	324	8.12 R	1.06	393	7.71	-.74	390	7.94	-.41	247 0.02 R -.50		
073	17.67	-.46	369	8.10	.57	389	7.30	-1.46	232	7.94	-.43	090 0.00 -.72		
029	17.61	-.55	406	8.10	.55	Meth: 020.99 PCT			258	7.95	-.44	Avg -1.68		
009	17.61	-.59	420	8.08	.55	<u>Total Phosphate</u>			157	7.91	-.56	A=Analysis beyond 3-s limits		
325	17.59	-.65	391	8.08	.44	<u>Other</u>			320	7.90	-.65			
041	17.65 R	-.67	142	8.05	.29	354	17.90 S	.00	363	7.85	-.93			
351	17.59	-.70	288	8.01	.25				096	7.76	-1.40			
177	17.56	-.79	Avg	8.00					397	7.75	-1.46			
262	17.55	-.87							393	7.71	-1.68			
363	17.57 R	-.91												

\* 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: 040.10 PCT			Meth: 041.10 PCT			Meth: 041.40 PCT			Meth: 041.XX PCT			Meth: 041.XX PCT		
<u>InDir Available Phos</u>			<u>Dir Available Phosph</u>			<u>Dir Available Phosph</u>			<u>Dir Available Phosph</u>			<u>Dir Available Phosph</u>		
<u>Grav Quim</u>			<u>Grav Quimociac</u>			<u>Automated</u>								
090	8.02	.71	185	8.25 R	3.31	393	7.81	-.43	262	8.39	2.99	393	7.81	-1.32
			137	8.18	2.00	027	7.56	-1.68	362	8.30	2.37	022	7.79	-1.42
			009	8.07	.81				185	8.25 R	2.29	007	7.81	-1.43
Meth: 040.20 PCT			040			Meth: 041.50 PCT			137			325		
<u>InDir Available Phos</u>			.72			<u>Dir Available Phosph</u>			8.18			7.76		
<u>Spectrometri</u>						<u>ICP</u>			1.46			-1.65		
289	7.62	1.22	211	8.07	.72	360	8.06 R	1.21	360	8.06 R	1.21	393	7.69	-2.15
Avg	7.61		296	8.05	.71	043	8.09	.80	043	8.09	.80	027	7.56 A	-3.12
363	7.60	-.12	041	8.03	.65	009	8.07	.70	009	8.07	.70	377	7.54 s	-3.30
			055	8.04	.49	073	8.07	.70	073	8.07	.70	022	7.61 s	-3.67
			177	8.01	.34	361	8.00	.92	211	8.07	.65	251	7.36 s	-4.85
			Avg	8.00		Avg	7.86		040	8.07	.65	354	7.32 s	-4.93
Meth: 040.40 PCT			260			025			296					
<u>InDir Available Phos</u>			7.98			7.82			8.05					
<u>Automated</u>			-.26			-.23			.61					
409	7.99	.88	131	7.98	-.26	325	7.76	-.67	131	8.03	.54	Meth: 048.10 PCT		
Avg	7.85		405	7.99	-.27	007	7.81	-.69	041	8.03	.54	<u>Water Soluble Phosph</u>		
096	7.72	-.85	233	8.00	-.34	393	7.69	-1.11	055	8.04	.49	<u>Grav Quimociac</u>		
			029	7.96	-.49	251	7.36 S	-3.48	296	7.98	.44	415	9.01	.71
			102	7.95	-.56	354	7.32 S	-3.50	177	8.01	.31			
			028	7.96	-.93	Meth: 041.60 PCT			233	8.00	.28	Meth: 048.20 PCT		
Meth: 040.99 PCT			049			<u>Dir Available Phosph</u>			023			<u>Water Soluble Phosph</u>		
<u>InDir Available Phos</u>			7.91			<u>EDTA Extract</u>			7.99			<u>Spectrometric</u>		
<u>Other</u>			-1.26						.22					
376	8.04	.71	022	7.79	-2.49	262	8.39 s	4.44	361	8.00	.19	362	7.49	1.15
			Meth: 041.20 PCT			405	7.99	.18	405	7.99	.18	Avg	7.24	
			<u>Dir Available Phosph</u>			043	8.09	1.33	419	8.00	.17	247	7.23	-.08
			<u>Spectrometric</u>			073	8.07	1.17	106	7.98	.15	193	7.19 R	-.61
			362	8.30	1.59	296	7.98	.67	260	7.98	.13	363	7.01	-1.08
			Avg	8.05		028	8.00	.49	131	7.98	.13			
			419	8.00	-.36	Avg	7.96		Avg	7.98		Meth: 048.50 PCT		
			106	7.98	-.46	095	7.95	-.52	029	7.96	-.14	<u>Water Soluble Phosph</u>		
			055	7.93	-.79	288	7.96	-.67	102	7.95	-.17	<u>ICP</u>		
			022	7.61 s	-3.54	351	7.90	-.76	029	7.94	-.31	393	6.89	.71
			Meth: 041.40 PCT			177	7.85	-1.09	055	7.93	-.38			
			<u>Dir Available Phosph</u>			397	7.83	-1.47	095	7.95	-.42	Meth: 048.99 PCT		
			<u>Automated</u>			377	7.54 s	-4.47	288	7.96	-.50	<u>Water Soluble Phosph</u>		
			131	8.03	.91	Meth: 041.XX PCT			028	7.96	-.53	<u>Other</u>		
			023	7.99	.72	<u>Dir Available Phosph</u>			351	7.90	-.65	275	7.03	-.71
			029	7.94	.39	086	9.71 s	12.74	049	7.91	-.66			
			Avg	7.86		322	8.57 s	4.39	177	7.85	-.92			
			* 254	8.50 S	5.69	254	8.50 s	3.84	025	7.82	-1.15			
			* X=Excluded from lab performance						397	7.83	-1.17			
			S/s=Screened Outlier									A=Analysis beyond 3-s limits		
			R=Duplicate Range too large											

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 048.XX PCT			Meth: 050.10 PCT			Meth: 050.50 PCT			Meth: 050.99 PCT			Meth: 050.XX PCT		
<u>Water Soluble Phosph</u>			Soluble Potash			Soluble Potash			Soluble Potash			<u>Soluble Potash</u>		
415	9.01	2.06	<u>STPB Citrate</u>			<u>ICP (Oxalate)</u>			<u>Other</u>			073	10.43	.67
362	7.49	.06	025	10.58	.87	106	10.24	-.81	330	10.85 s	3.49	391	10.43	.66
Avg	7.44		Avg	10.38		292	9.27 S	-4.09	260	10.48	1.85	193	10.39	.52
247	7.23	-.29	322	10.31	-.50	Meth: 050.51 PCT			325	10.36	.90	406	10.39	.49
193	7.19 R	-.37	041	10.25	-1.22	Soluble Potash			419	10.35	.88	288	10.37	.48
275	7.03	-.55	Meth: 050.30 PCT			<u>ICP (Citrate)</u>			177	10.35	.87	322	10.31	.42
363	7.01	-.57	Soluble Potash			023	10.66	1.17	289	10.31	.70	055	10.36	.40
393	6.89	-.72	<u>AA (Oxalate)</u>			Avg	10.18		Avg	10.18		419	10.35	.38
Meth: 050.00 PCT			095	10.59	1.79	251	10.46	1.08	232	10.13	-.24	325	10.36	.36
Soluble Potash			234	10.21	.66	377	10.62	1.07	028	10.16	-.28	007	10.29	.35
<u>STPB Oxalate</u>			073	10.31	.60	393	10.38	.63	027	10.03	-.73	177	10.35	.35
095	11.29 s	5.80	040	10.32	.58	Avg	10.38		376	10.04	-.74	073	10.31	.34
090	10.67	2.22	040	10.32	.58	007	10.29	-.46	042	10.00	-.98	289	10.31	.26
102	10.49	1.23	351	10.30	.49	389	10.13	-.99	360	9.96	-1.16	040	10.32	.25
043	10.44	.98	142	10.22	.13	361	10.10	-1.11	275	9.95 X	-1.31	350	10.33	.23
131	10.44	.92	Avg	10.20		Meth: 050.60 PCT			Meth: 050.XX PCT			351	10.30	.20
416	10.44	.92	363	10.19	-.23	Soluble Potash			<u>Soluble Potash</u>			055	10.32	.18
073	10.43	.86	369	10.12	-.39	<u>Flame (Oxalate)</u>			095	11.29 s	4.41	354	10.31	.17
391	10.43	.86	185	9.90	-1.44	024	10.55	1.40	422	10.91	2.75	258	10.29	.06
193	10.39	.67	157	9.84	-1.63	406	10.39	.17	330	10.85 R	2.72	Avg	10.28	
350	10.33	.29	262	9.43 S	-3.53	Avg	10.37		368	10.66 R	1.86	029	10.28	-.02
055	10.32	.22	397	9.19 S	-4.63	055	10.36	-.33	023	10.66	1.71	345	10.25	-.15
258	10.29	.06	Meth: 050.31 PCT			288	10.37	-.48	090	10.67	1.70	009	10.24	-.21
Avg	10.28		Soluble Potash			390	10.19	-1.47	377	10.62	1.58	324	10.26	-.22
029	10.28	-.04	<u>AA (Citrate)</u>			415	8.86 S	-12.11	024	10.63	1.53	106	10.24	-.24
345	10.25	-.21	254	10.60	.71	Meth: 050.61 PCT			254	10.60	1.47	142	10.22	-.29
009	10.24	-.29	Avg	10.60		Soluble Potash			251	10.46 R	1.38	296	10.21	-.30
296	10.21	-.41	086	7.99 S	-18.46	<u>Flame (Citrate)</u>			095	10.59	1.37	211	10.21	-.32
211	10.21	-.44	Meth: 050.50 PCT			024	10.63	.84	260	10.48 R	1.34	029	10.20	-.34
049	10.21	-.46	Soluble Potash			035	10.55	.43	025	10.58	1.29	049	10.21	-.34
257	10.19	-.52	<u>ICP (Oxalate)</u>			Avg	10.46		024	10.55	1.17	257	10.19	-.38
392	10.10	-1.04	422	10.91	1.47	029	10.20	-1.27	035	10.55	1.17	390	10.19	-.40
022	10.09	-1.12	368	10.66	.89	Meth: 050.99 PCT			102	10.49	.94	363	10.19	-.44
418	10.08	-1.22	Avg	10.48		Soluble Potash			393	10.38	.83	028	10.16	-.58
233	10.02	-1.53	354	10.31	-.55	<u>ICP (Oxalate)</u>			043	10.44	.75	389	10.13	-.67
028	9.93	-2.05	324	10.26	-.76	024			131	10.44	.71	369	10.12	-.70
137	9.63 s	-3.74	* X=Excluded from lab performance			S/s=Screened Outlier			416	10.44	.71	234	10.21	-.70
									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.XX PCT			Meth: 060.XX PCT			Meth: 101.XX PCT			Meth: 121.XX PCT			Meth: 144.02 PCT		
<u>Soluble Potash</u>			<u>Free Water</u>			<u>Acid Soluble Calcium</u>			<u>Acid Soluble Magnesi</u>			<u>Sulfur</u>		
392	10.10	-.78	247	0.49	1.16	288	0.21	-.58	320	0.21	-1.05	<u>Gravimetric</u>		
361	10.10	-.80	363	0.49	1.15	393	0.21	-.67	Meth: 131.00 PCT			292	14.58 S	310.27
022	10.09	-.83	393	0.48	1.01	009	0.20	-.79	Water Soluble Magnes			086	13.05	.71
418	10.08	-.91	193	0.41	.17	102	0.20	-.83	<u>AA</u>			Avg 13.05		
041	10.25 R	-1.05	Avg 0.40			Meth: 121.00 PCT			193	0.11	.71	Meth: 144.50 PCT		
376	10.04	-1.08	320	0.38	-.62	Acid Soluble Magnesi			Meth: 131.30 PCT			Sulfur		
027	10.03	-1.10	007	0.36	-.65	<u>AA</u>			Water Soluble Magnes			<u>Turbidimetric</u>		
233	10.02	-1.14	416	0.32	-1.08	193	0.21	.71	ICP			289	13.31	.00
042	10.00	-1.28	361	0.31	-1.35	Meth: 121.30 PCT			393	0.04	-.71	Meth: 144.70 PCT		
360	9.96	-1.46	Meth: 101.00 PCT			Acid Soluble Magnesi			Meth: 131.XX PCT			Sulfur		
028	9.93	-1.54	Acid Soluble Calcium			ICP			<u>Water Soluble Magnes</u>			Meth: 144.99 PCT		
275	9.95 X	-1.57	193	0.27	.71	422	0.35 s	8.36	193	0.11	.86	Sulfur		
185	9.90	-1.70	Meth: 101.30 PCT			361	0.25	1.41	Avg 0.07			<u>Spectrometric</u>		
157	9.84	-1.90	Acid Soluble Calcium			131	0.24	.96	393	0.04	-.87	393 13.44 .00		
137	9.63	-2.82	ICP			035	0.24	.81	Meth: 144.01 PCT			Sulfur		
262	9.43 s	-3.72	422	0.62 s	15.06	232	0.24	.74	Sulfur			Other		
292	9.27 s	-4.40	361	0.29	2.42	102	0.23	.34	Gravimetric			330	13.90 R	2.48
397	9.19 s	-4.76	Avg 0.22			Avg 0.23			251 14.38 s 5.38			027	13.86	2.22
415	8.86 s	-6.16	131	0.22	-.03	009 0.22 -.80			043 13.76 2.14			361	13.61	1.50
086	7.99 s	-9.95	035	0.22	-.08	288 0.22 -1.07			351 13.67 1.58			389	13.50	1.24
Meth: 060.00 PCT			320	0.22	-.20	393 0.22 -1.07			288 13.55 1.12			360	13.38	1.01
Free Water			288	0.21	-.45	320 0.21 -1.16			324 13.48 .62			136	13.35	.77
<u>Vacuum Oven</u>			393	0.21	-.59	Meth: 121.XX PCT			233 13.45 .46			296	13.31	.66
247	0.49	1.32	009	0.20	-.69	<u>Acid Soluble Magnesi</u>			055 13.39 .15			035	13.25	.52
363	0.49	1.30	102	0.20	-.75	422	0.35 s	8.47	Avg 13.37			405	13.23	.45
193	0.41	.29	Meth: 101.XX PCT			361	0.25	1.52	040 13.31 -.35			029	13.11	.09
Avg	0.39		Acid Soluble Calcium			131	0.24	1.07	073 13.31 -.47			Avg 13.07		
007	0.36	-.53	422	0.62 s	13.54	232	0.24	.84	028 13.25 -.70			131	12.99	-.26
320	0.38	-.55	361	0.29	2.04	102	0.23	.44	102 13.24 -.75			232	12.96	-.35
416	0.32	-.95	193	0.27	1.43	Avg 0.23			095 13.22 -.83			275	13.00 X	-.35
361	0.31	-1.22	Avg 0.23			009	0.22	-.70	397 13.22 -.84			106	13.01	-.35
Meth: 060.20 PCT			131	0.22	-.19	193 0.21 -.95			193 13.21 -.89			262	12.95	-.38
Free Water			035	0.22	-.21	288 0.22 -.97			157 13.19 -.98			177	12.98	-.44
<u>Karl Fischer</u>			320	0.22	-.31	393 0.22 -.97			023 12.70 -1.05			300	12.90	-.49
393	0.48	.71	S/s=Screened Outlier			R=Duplicate Range too large			A=Analysis beyond 3-s limits			419	12.75	-.92

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
			Meth: 144.XX PCT			Meth: 151.99 PPM			Meth: 171.10 PCT			Meth: 181.XX PPM		
<u>Sulfur</u>			<u>Sulfur</u>			<u>Arsenic</u>			<u>Water Soluble Boron</u>			<u>Cadmium</u>		
<u>Other</u>			086	13.05	-.41	<u>Other</u>			<u>Spectrometric</u>			040	0.99	.58
247	12.68	-1.14	131	12.99	-.56	409	2.00	.00	393	0.004	.00	232	0.92	.45
376	12.58	-1.41	106	13.01	-.58	Meth: 151.XX PPM			Meth: 181.00 PPM			102	0.90	.14
422	12.49	-1.72	275	13.00 X	-.59	<u>Arsenic</u>			<u>Cadmium</u>			Avg 0.87		
009	12.54 S	-2.24	232	12.96	-.65	368	31.03 s	97.47	<u>Atomic Absorption</u>			106	0.80	-.34
363	11.72 s	-5.56	177	12.98	-.66	040	3.00	1.96	193	1.30	1.27	009	0.77	-.49
Meth: 144.XX PCT			262	12.95	-.67	247	2.60	.93	296	1.03	.19	288	0.73	-.71
<u>Sulfur</u>			300	12.90	-.79	376	2.39	.37	Avg 0.99			247	0.70	-.95
292	14.58 s	3.55	419	12.75	-1.18	Avg 2.27			040	0.99	-.08	136	0.65	-1.09
251	14.38	3.02	023	12.70	-1.30	136	2.15	-.36	136	0.65	-1.35	419	0.52	-1.71
330	13.90 R	1.95	247	12.68	-1.38	389	2.05	-.62	Meth: 181.30 PPM			Meth: 190.99 PCT		
027	13.86	1.69	376	12.58	-1.63	106	2.10	-.72	<u>Cadmium</u>			<u>Water Soluble Chlori</u>		
043	13.76	1.45	422	12.49	-1.91	409	2.00	-.74	<u>ICP</u>			<u>Other</u>		
351	13.67	1.19	137	12.44	-1.99	102	1.90	-1.05	368	2.04 s	8.31	288	7.83	.90
361	13.61	1.03	009	12.54 s	-2.29	Meth: 165.00 PCT			376	1.03	1.48	Avg 7.64		
288	13.55	.93	363	11.72 s	-5.32	<u>Acid Soluble Boron</u>			232	0.92	.93	009	7.46	-.83
389	13.50	.80	Meth: 151.00 PPM			<u>Spectrometric</u>			Avg 0.79			Meth: 191.00 PPM		
324	13.48	.71	<u>Arsenic</u>			393 0.007 .00			102	0.90	.66	<u>Chromium</u>		
360	13.38 R	.67	<u>Atomic Absorption</u>			Meth: 165.99 PCT			106	0.80	.04	<u>Atomic Absorption</u>		
233	13.45	.64	040	3.00	.87	<u>Acid Soluble Boron</u>			Avg 0.77			193	31.50	.71
393	13.44	.61	Avg	2.57		<u>Other</u>			009	0.77	-.16	Meth: 191.30 PPM		
055	13.39	.47	136	2.15	-.87	009 0.015 1.22			288	0.73	-.46	<u>Chromium</u>		
136	13.35	.37	Meth: 151.30 PPM			Avg 0.011			247	0.70	-.86	<u>ICP</u>		
073	13.31	.31	<u>Arsenic</u>			232 0.010 -.29			419 0.52 -1.74			389 28.00 2.20		
296	13.31	.27	<u>ICP</u>			422 0.008 -.96			Meth: 181.99 PPM			009 24.90 1.00		
040	13.31	.27	368	31.03 s	123.09	Meth: 165.XX PCT			<u>Cadmium</u>			368 22.65 .13		
289	13.31	.27	247	2.60	1.38	<u>Acid Soluble Boron</u>			409 1.00 .00			Avg 22.32		
035	13.25	.17	376	2.39	.67	009 0.015 1.48			Meth: 181.XX PPM			376 22.30 -.04		
102	13.24	.15	Avg	2.21		232 0.010 .25			<u>Cadmium</u>			247 21.65 -.27		
405	13.23	.13	389	2.05	-.57	Avg 0.010			368 2.04 s 6.06			035 21.10 -.54		
028	13.25	.11	106	2.10	-.78	422 0.008 -.63			193 1.30 2.12			102 21.35 R -.58		
397	13.22	.08	102	1.90	-1.11	393 0.007 -.92			296 1.03 .79			419 20.50 -.73		
193	13.21	.05							376 1.03 .76			288 20.00 -.90		
095	13.22	.04							296 1.03 .76			232 19.80 -.98		
Avg	13.21								409 1.00 .62					
157	13.19	-.03												
029	13.11	-.26												
* 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: 191.99 PPM Chromium			Meth: 202.99 PPM Acid Soluble Cobalt			Meth: 221.30 PCT Acid Soluble Copper			Meth: 221.XX PCT Acid Soluble Copper			Meth: 241.XX PCT Acid Soluble Iron		
<u>Other</u>			<u>Other</u>			<u>ICP</u>			028 0.0019 .08			035 0.18 -.12		
409	23.00	.00	193	2.50	1.12	422	0.0060 s	26.57	Avg	0.0019		102	0.18	-.20
Meth: 191.XX PPM Chromium			Meth: 202.XX PPM Acid Soluble Cobalt			368 0.0024 s 3.80			035 0.0019 -.57			320 0.16 -.50		
<u>Chromium</u>			106 4.45 s 3.05			330 0.0020 R 1.46			106 0.0018 -.59			422 0.11 -2.10		
193	31.50	2.33	419	4.00 R	2.55	232	0.0021	1.15	389	0.0017	-1.16	Meth: 251.00 PPM Lead		
389	28.00	1.34	389	4.00	1.49	040	0.0020	1.04	296	0.0018	-1.28	<u>Atomic Absorption</u>		
009	24.90	.48	288	3.10	1.46	292	0.0020	.69	288	0.0016	-1.56	193	4.00	1.57
Avg	23.22		247	3.60	1.07	035	0.0019	.64	095	0.0016	-2.03	Avg	2.33	
409	23.00	-.06	009	2.68	.34	102	0.0020	.49	393	0.0015 s	-3.66	040	2.08	-.27
368	22.65	-.16	368	2.77	.20	247	0.0020	.49	419	0.0015 s	-3.66	296	1.80	-.51
376	22.30	-.26	Avg	2.57		Avg	0.0019		390	0.0010 s	-5.15	136	1.45	-.84
247	21.65	-.44	040	2.33	-.29	106	0.0018	-.59	Meth: 241.00 PCT Acid Soluble Iron			Meth: 251.30 PPM Lead		
102	21.35 R	-.62	296	2.25	-.34	389	0.0017	-1.23	<u>Atomic Absorption</u>			<u>ICP</u>		
035	21.10	-.63	193	2.50	-.52	288	0.0016	-1.69	193	0.24	.71	419	2.70	1.16
419	20.50	-.78	232	2.05	-.54	393	0.0015 s	-4.07	Meth: 241.30 PCT Acid Soluble Iron			106	2.05	.38
288	20.00	-.90	409	2.00	-.59	419	0.0015 s	-4.07	<u>ICP</u>			102	1.80	.25
232	19.80	-.96	320	1.00	-1.93	Meth: 221.99 PCT Acid Soluble Copper			361 0.22 s 5.33			368	1.82	.20
Meth: 202.00 PPM Acid Soluble Cobalt			Meth: 221.00 PCT Acid Soluble Copper			Meth: 221.XX PCT Acid Soluble Copper			102 0.18 R 1.03			Avg	1.73	
<u>AA</u>			<u>Atomic Absorption</u>			<u>Acid Soluble Copper</u>			009 0.18 .94			247	0.28	-1.70
296	2.25	.71	397	0.1684 s	844.92	397	0.1684 s	949.90	292	0.18	.43	Meth: 251.99 PPM Lead		
Meth: 202.30 PPM Acid Soluble Cobalt			086	0.0045 S	13.46	422	0.0060 s	23.57	288	0.18	.43	<u>Other</u>		
<u>ICP</u>			193	0.0021	1.05	086	0.0045 s	15.08	Avg	0.18		409	2.00	.00
106	4.45 s	2.62	043	0.0020	.38	368	0.0024 R	3.33	035	0.18	-.09	Meth: 251.XX PPM Lead		
419	4.00 R	2.19	029	0.0020	.38	330	0.0020	1.27	320	0.16	-1.80	193	4.00	2.18
288	3.10	1.25	028	0.0019	.11	193	0.0021	1.13	422	0.11 s	-9.22	419	2.70	.79
389	4.00	1.20	Avg	0.0019		232	0.0021	.97	Meth: 241.XX PCT Acid Soluble Iron			040	2.08	.17
247	3.60	.84	296	0.0018 R	-1.12	409	0.0021	.89	193	0.24	1.64	106	2.05	.08
368	2.77	.07	095	0.0016	-1.76	040	0.0020	.87	361	0.22	1.04	409	2.00	.00
Avg	2.69		390	0.0010 S	-4.53	292	0.0020	.56	009	0.18	.09	Avg	2.00	
009	2.68	-.28	Meth: 221.30 PCT Acid Soluble Copper			029	0.0020	.39	Meth: 241.00 PCT Acid Soluble Iron			296	1.80	-.24
040	2.33	-.35	<u>ICP</u>			247	0.0020	.39	<u>Atomic Absorption</u>			A=Analysis beyond 3-s limits		
232	2.05	-.59	043 0.0020 .39			102	0.0020	.39	193	0.24	1.64			
320	1.00	-1.80	043 0.0020 .39			043	0.0020	.39	288	0.18	-.02			
* 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: 251.XX PPM <u>Lead</u>			Meth: 261.XX PCT <u>Acid Soluble Manganese</u>			Meth: 289.30 PPM <u>Molybdenum</u>			Meth: 291.30 PPM <u>Nickel</u>			Meth: 301.XX PPM <u>Selenium</u>		
368	1.82	-.25	193	0.018	-1.58	106	1.15	-1.70	040	72.90	-1.10	409	1.00	1.29
102	1.80	-.30	Meth: 271.00 PCT <u>Water Soluble Mangan</u>			Meth: 289.99 PPM <u>Molybdenum</u>			Meth: 291.99 PPM <u>Nickel</u>			Avg 0.38		
136	1.45	-.62	Atomic Abs			Other			232 69.35 -1.17			389 0.08 -.62		
247	0.28	-1.87	193	0.002	.71	Meth: 281.00 PPM <u>Mercury</u>			409 88.50 .87			040 0.06 -.67		
Meth: 261.00 PCT <u>Acid Soluble Manganese</u>			Meth: 281.99 PPM <u>Mercury</u>			Meth: 289.XX PPM <u>Molybdenum</u>			Avg 77.85			Meth: 311.00 PCT <u>Sodium</u>		
193	0.018	.71	193	0.14	.00	Atomic Absorption			035 67.20 -.87			Atomic Absorption		
Meth: 261.30 PCT <u>Acid Soluble Manganese</u>			Meth: 281.99 PPM <u>Mercury</u>			Meth: 291.XX PPM <u>Nickel</u>			Meth: 311.30 PCT <u>Sodium</u>			Meth: 311.99 PCT <u>Sodium</u>		
ICP			Other			409 88.50 1.38			320 0.19 .71			Meth: 311.99 PCT <u>Sodium</u>		
320	0.023 R	2.33	409	0.50	.00	Avg 2.07			102 86.50 1.38			Other		
102	0.024	1.52	Meth: 281.XX PPM <u>Mercury</u>			102 2.05 -.10			368 82.49 1.18			422 1.64 s 95.13		
131	0.022	.90	409	0.50	.87	409 2.00 -.13			009 82.10 .73			102 0.23 1.04		
422	0.022	.35	Avg 0.32			232 1.95 -.25			193 78.50 .22			009 0.23 .42		
Avg	0.022		193	0.14	-.87	296 1.85 -.81			376 77.85 .14			288 0.22 .05		
009	0.022	-.18	Meth: 291.00 PPM <u>Nickel</u>			106 1.15 -1.80			Avg 76.70			Avg 0.22		
035	0.021	-.67	Atomic Absorption			Meth: 289.00 PPM <u>Molybdenum</u>			419 75.00 -.61			035 0.20 -1.49		
393	0.020	-1.34	Avg 70.78			Atomic Absorption			040 72.90 -.87			Meth: 311.XX PCT <u>Sodium</u>		
Meth: 261.31 PCT <u>Acid Soluble Manganese</u>			296 63.05 -.88			193 78.50 .85			232 69.35 -1.12			422 1.64 s 82.44		
ICP			296 1.85 .71			Avg 70.78			035 67.20 -1.12			102 0.23 1.28		
288	0.020	-.71	Meth: 289.30 PPM <u>Molybdenum</u>			296 63.05 -.88			296 63.05 -1.61			009 0.23 .73		
Meth: 261.XX PCT <u>Acid Soluble Manganese</u>			ICP			Meth: 291.30 PPM <u>Nickel</u>			Meth: 301.00 PPM <u>Selenium</u>			288 0.22 .42		
320	0.023 R	2.01	368	5.33 S	5.67	ICP			Atomic Absorption			193 0.21 .06		
102	0.024	1.56	419	2.80	1.31	102 86.50 1.47			389 0.08 .94			Avg 0.21		
131	0.022	.88	288	2.60	.87	368 82.49 1.28			Avg 0.07			035 0.20 -.91		
422	0.022	.67	009	2.15	.11	009 82.10 .71			040 0.06 -.79			320 0.19 -1.52		
009	0.022	.28	Avg 2.12			Avg 77.90			Meth: 301.99 PPM <u>Selenium</u>			Meth: 311.99 PCT <u>Sodium</u>		
Avg	0.021		102	2.05	-.15	376 77.85 -.03			Atomic Absorption			422 1.64 s 82.44		
035	0.021	-.27	232	1.95	-.31	106 77.00 -.12			389 0.08 .94			102 0.23 1.28		
393	0.020	-.64	Meth: 291.00 PPM <u>Nickel</u>			419 75.00 -.78			Avg 0.07			009 0.23 .73		
288	0.020	-.88	Atomic Absorption			Meth: 291.30 PPM <u>Nickel</u>			040 0.06 -.79			288 0.22 .42		
* X=Excluded from lab performance			S/s=Screened Outlier			ICP			Meth: 301.99 PPM <u>Selenium</u>			193 0.21 .06		
						102 86.50 1.47			Other			Avg 0.21		
						368 82.49 1.28			409 1.00 .00			035 0.20 -.91		
						009 82.10 .71			Avg .00			320 0.19 -1.52		
						Avg 77.90			R=Duplicate Range too large			A=Analysis beyond 3-s limits		
						376 77.85 -.03								
						106 77.00 -.12								
						419 75.00 -.78								

Laboratory Averages & Accuracy Indexes

<u>Lab</u>	<u>Average*</u>	<u>Index</u>	<u>Lab</u>	<u>Average*</u>	<u>Index</u>	<u>Lab</u>	<u>Average*</u>	<u>Index</u>	<u>Lab</u>	<u>Average*</u>	<u>Index</u>	<u>Lab</u>	<u>Average*</u>	<u>Index</u>
Meth: 321.00 PCT			Meth: 321.XX PCT			Meth: 321.30 PCT			Meth: 325.30 PCT			Meth: 321.99 PCT		
Acid Soluble Zinc			Acid Soluble Zinc			Acid Soluble Zinc			Water Soluble Zinc			Acid Soluble Zinc		
<u>Atomic Absorption</u>			<u>ICP</u>			<u>ICP</u>						<u>Other</u>		
086	0.023	2.06	422	0.027 s	6.06	422	0.027 s	5.92	247	0.017	.71	409	0.017	-.71
043	0.019	.54	330	0.026 s	5.72	330	0.026 s	5.60						
193	0.019	.24	086	0.023 A	3.21	393	0.020	1.26						
Avg	0.018		393	0.020	1.44	232	0.019	1.07						
028	0.018	-.16	419	0.020	1.26	419	0.020	1.03						
029	0.018	-.30	292	0.020	1.26	292	0.020	1.03						
095	0.017	-.80	232	0.019	1.20	288	0.019	.66						
390	0.018	-.96	043	0.019	.90	368	0.019	.52						
296	0.016	-1.12	288	0.019	.88	Avg	0.019							
			368	0.019	.57	009	0.019	-.10						
			193	0.019	.40	035	0.018	-.60						
			009	0.019	.22	389	0.018	-.62						
			Avg	0.018		102	0.018	-1.05						
			028	0.018	-.13	320	0.017	-1.10						
			029	0.018	-.35	040	0.016	-1.69						
			035	0.018	-.37									
			389	0.018	-.38									
			320	0.017	-.85									
			409	0.017	-.89									
			102	0.018	-.96									
			095	0.017	-1.12									
			390	0.018	-1.43									
			040	0.016	-1.43									
			296	0.016	-1.58									

\* 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	7	1.37	3.70	0.60	060.00	7	0.00	1.01	0.24
001.99	14	1.20	5.82	0.46	060.XX	8	0.00	1.01	0.22
001.XX	21	1.29	5.02	0.64	101.30	9	1.67	5.10	0.38
009.10	4	- 0.44	1.15	0.95	101.XX	10	1.35	4.38	0.36
009.XX	5	- 0.31	1.06	0.88	121.30	10	0.83	2.79	0.35
010.11	11	0.00	1.01	0.16	121.XX	11	0.77	2.71	0.33
010.12	5	0.00	1.05	0.11	131.XX	2	0.00	1.22	0.09
010.60	48	0.15	1.17	0.25	144.01	16	0.02	2.11	0.26
010.99	3	2.99	5.22	4.53	144.02	2	154.81	218.93	14.29
010.XX	66	- 0.08	1.85	0.40	144.99	24	- 0.12	1.34	0.93
020.10	6	0.30	1.15	1.03	144.XX	44	0.01	1.29	0.63
020.20	19	0.75	2.35	0.32	151.00	2	0.00	1.22	0.10
020.40	7	0.65	1.94	0.91	151.30	6	16.41	40.20	30.17
020.50	6	0.00	1.05	0.05	151.XX	9	8.65	25.98	19.53
020.XX	39	1.89	8.79	0.44	165.99	3	0.000	1.072	0.259
030.10	3	0.00	1.10	0.17	165.XX	4	0.000	1.050	0.218
030.40	3	0.00	0.89	0.55	181.00	4	0.00	1.05	0.23
030.XX	7	- 0.07	0.97	0.05	181.30	9	0.86	2.75	1.02
040.20	2	0.00	0.05	0.87	181.XX	14	0.40	1.78	0.65
040.40	2	0.00	1.20	0.18	190.99	2	0.00	1.17	0.25
040.XX	6	- 0.22	1.07	0.76	190.XX	2	0.00	1.17	0.25
041.10	21	1.65	4.60	0.53	191.30	10	- 0.04	0.97	0.18
041.20	5	- 0.57	1.57	0.95	191.XX	12	- 0.04	0.98	0.13
041.40	5	0.00	1.03	0.24	202.30	10	0.28	0.97	1.00
041.50	8	- 0.82	1.69	0.74	202.99	2	0.00	0.71	0.71
041.60	11	0.01	2.13	0.49	202.XX	13	0.26	1.01	1.00
041.XX	42	0.21	2.69	0.58	221.00	9	94.728	281.14	10.520
048.20	4	- 0.06	0.92	0.28	221.30	14	1.8241	7.2892	1.3805
048.XX	7	- 0.05	0.97	0.06	221.XX	24	40.865	193.57	7.3039
050.00	25	0.08	1.70	0.17	241.30	8	- 0.43	4.07	0.44
050.10	3	0.00	0.77	0.66	241.XX	9	0.00	1.03	0.10
050.30	12	- 0.68	1.83	0.33	251.00	4	0.00	1.07	0.10
050.31	2	- 9.23	13.06	0.50	251.30	5	0.00	1.04	0.17
050.50	6	- 0.68	1.90	0.28	251.XX	10	0.00	1.02	0.14
050.51	7	0.00	0.88	0.52	261.30	7	0.147	0.951	0.874
050.60	6	- 2.02	5.02	0.28	261.XX	9	0.132	1.001	0.610
050.61	3	0.00	1.12	0.05	281.XX	2	0.000	1.225	0.000
050.99	13	0.25	1.25	0.56	289.30	7	0.81	2.33	0.27
050.XX	71	- 0.32	1.93	0.41	289.XX	9	0.71	2.31	0.35

## 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
291.00	2	0.00	1.20	0.19					
291.30	8	0.00	0.75	0.66					
291.99	2	0.00	1.21	0.12					
291.XX	12	0.00	0.89	0.48					
301.00	2	0.00	1.04	0.46					
301.XX	3	0.00	1.12	0.01					
311.99	5	19.02	42.55	0.75					
311.XX	7	11.78	31.17	0.55					
321.00	8	0.000	0.904	0.472					
321.30	14	0.780	2.143	0.834					
321.XX	23	0.619	1.870	0.766					