

MAGRUDER - Fertilizer Check Sample No. - 200307 Grade 3-15-30

- Pass 1 Results for 85 Labs - - Pass 2 Results for 85 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	8	3.56	0.11	0.07	8	3.56	0.11	0.07
Ammoniacal Nitrogen, Other		001.99	11	3.59	0.14	0.05	10	3.60	0.13	0.04
Method Group 001.XX PCT			19	3.58	0.12	0.06	18	3.58	0.12	0.05
Ammon & Nitrate N, Devarda	892.01	009.10	4	3.61	0.10	0.05	4	3.61	0.10	0.05
Ammon & Nitrate N, Other		009.99	1	3.52	0.02	0.03	1	3.52	0.02	0.03
Method Group 009.XX PCT			5	3.59	0.10	0.05	5	3.59	0.10	0.05
Total Nitrogen, Modified Comprehensive	978.02	010.11	9	3.64	0.06	0.05	8	3.63	0.05	0.03
Total Nitrogen, Salicylic	955.04D	010.12	3	3.61	0.05	0.05	3	3.61	0.05	0.05
Total Nitrogen, Raney	970.03	010.16	1	3.61	0.00	0.00	1	3.61	0.00	0.00
Total Nitrogen, Combustion		010.60	48	3.69	0.08	0.04	45	3.70	0.08	0.03
Total Nitrogen, Other		010.99	1	3.76	0.01	0.02	1	3.76	0.01	0.02
Method Group 010.XX PCT			62	3.68	0.08	0.04	58	3.68	0.08	0.03
Total Phosphate, Grav Quimociac	962.02	020.10	7	16.17	0.13	0.09	7	16.17	0.13	0.09
Total Phosphate, Spectrometric	958.01	020.20	19	16.10	0.27	0.11	18	16.10	0.28	0.10
Total Phosphate, Automated	978.01	020.40	7	16.22	0.14	0.09	7	16.22	0.14	0.09
Total Phosphate, ICP		020.50	8	16.24	0.58	0.24	8	16.24	0.58	0.24
Method Group 020.XX PCT			41	16.16	0.33	0.13	39	16.15	0.28	0.11
Insoluble Phosphate, Grav Quimociac ...	963.03C	030.10	2	0.05	0.02	0.02	2	0.05	0.02	0.02
Insoluble Phosphate, Spectrometric	963.03C	030.20	2	0.24	0.18	0.02	2	0.24	0.18	0.02
Insoluble Phosphate, Automated	978.01	030.40	3	0.08	0.05	0.01	3	0.08	0.05	0.01
Method Group 030.XX PCT			7	0.12	0.12	0.02	7	0.12	0.12	0.02
InDir Available Phosphate, Grav Quim ..	960.02	040.10	1	16.21	0.09	0.13	1	16.21	0.09	0.13
InDir Available Phosphate, Spectrometri	960.02	040.20	2	15.86	0.14	0.10	2	15.86	0.14	0.10
InDir Available Phosphate, Automated ..	960.02	040.40	3	16.08	0.06	0.06	3	16.08	0.06	0.06
InDir Available Phosphate, Other		040.99	1	16.13	0.05	0.07	1	16.13	0.05	0.07
Method Group 040.XX PCT			7	16.04	0.15	0.08	7	16.04	0.15	0.08
Dir Available Phosphate, Grav Quimociac	960.03E	041.10	15	16.14	0.15	0.07	14	16.14	0.15	0.05
Dir Available Phosphate, Spectrometric	960.03D	041.20	4	16.17	0.15	0.05	4	16.17	0.15	0.05
Dir Available Phosphate, Alka Quim	960.03C	041.30	1	16.14	0.01	0.01	1	16.14	0.01	0.01
Dir Available Phosphate, Automated	978.01	041.40	4	16.00	0.21	0.02	4	16.00	0.21	0.02
Dir Available Phosphate, ICP		041.50	6	15.98	0.19	0.11	6	15.98	0.19	0.11
Dir Available Phosphate, EDTA Extract .	993.01	041.60	14	16.05	0.23	0.10	14	16.05	0.23	0.10
Dir Available Phosphate, Other		041.99	1	16.16	0.06	0.09	1	16.16	0.06	0.09
Method Group 041.XX PCT			45	16.08	0.19	0.08	43	16.08	0.19	0.07
Water Soluble Phosphate, Spectrometric	970.01	048.20	3	14.24	0.14	0.08	3	14.24	0.14	0.08
Water Soluble Phosphate, Alka Quimociac	964.04	048.30	1	14.23	0.04	0.05	1	14.23	0.04	0.05
Water Soluble Phosphate, Other		048.99	2	13.61	0.53	0.13	2	13.61	0.53	0.13
Method Group 048.XX PCT			6	14.02	0.43	0.09	6	14.02	0.43	0.09
Soluble Potash, STPB Oxalate	958.02	050.00	21	29.67	0.37	0.19	20	29.64	0.34	0.15

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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, STPB Citrate	969.04	050.10	2	30.10	0.08	0.12	2	30.10	0.08	0.12
Soluble Potash, AA (Oxalate)		050.30	10	29.35	0.50	0.28	9	29.33	0.50	0.20
Soluble Potash, ICP (Oxalate)		050.50	4	30.37	0.70	0.28	6	30.72	0.79	0.31
Soluble Potash, ICP (Citrate)		050.51	8	29.22	0.37	0.33	8	29.22	0.37	0.33
Soluble Potash, Flame (Oxalate)	983.02(a)	050.60	5	29.87	0.34	0.16	5	29.87	0.34	0.16
Soluble Potash, Flame (Citrate)	983.02(b)	050.61	7	29.72	0.26	0.13	7	29.72	0.26	0.13
Soluble Potash, Other		050.99	11	29.62	0.37	0.11	11	29.62	0.37	0.11
Method Group 050.XX PCT			69	29.65	0.50	0.22	65	29.61	0.44	0.17
Free Water, Vacuum Oven	965.08B	060.00	8	0.86	0.11	0.03	8	0.86	0.11	0.03
Acid Soluble Calcium, AA	945.04	101.00	16	2.63	0.10	0.07	15	2.62	0.09	0.05
Acid Soluble Calcium, ICP		101.30	27	2.65	0.12	0.05	27	2.65	0.12	0.05
Acid Soluble Calcium, Other		101.99	1	2.67	0.01	0.02	1	2.67	0.01	0.02
Method Group 101.XX PCT			44	2.64	0.11	0.06	43	2.64	0.11	0.05
Acid Soluble Magnesium, AA	984.01	121.00	21	1.19	0.06	0.02	21	1.18	0.07	0.02
Acid Soluble Magnesium, ICP		121.30	24	1.18	0.05	0.03	23	1.18	0.05	0.02
Acid Soluble Magnesium, Titrimetric	964.01	121.70	1	1.17	0.06	0.09	1	1.17	0.06	0.09
Acid Soluble Magnesium, Other		121.99	1	1.24	0.01	0.02	1	1.24	0.01	0.02
Method Group 121.XX PCT			47	1.18	0.06	0.03	43	1.19	0.05	0.02
Water Soluble Magnesium, AA		131.00	2	1.14	0.03	0.01	2	1.14	0.03	0.01
Water Soluble Magnesium, ICP		131.30	2	0.72	0.18	0.00	2	0.72	0.18	0.00
Water Soluble Magnesium, Other		131.99	2	1.05	0.05	0.04	2	1.05	0.05	0.04
Method Group 131.XX PCT			6	0.97	0.21	0.02	5	0.96	0.23	0.01
Sulfur, Gravimetric	980.02a	144.01	6	4.79	0.06	0.05	6	4.79	0.06	0.05
Sulfur, Turbidimetric	63.845	144.50	1	4.79	0.24	0.34	1	4.79	0.24	0.34
Sulfur, Spectrometric		144.70	1	4.68	0.01	0.02	1	4.68	0.01	0.02
Sulfur, Other		144.99	27	4.69	0.18	0.10	24	4.69	0.17	0.05
Method Group 144.XX PCT			35	4.71	0.17	0.10	30	4.73	0.13	0.05
Arsenic, Atomic Absorption		151.00	1	5.25	0.21	0.30	1	5.25	0.21	0.30
Arsenic, ICP		151.30	3	5.11	0.37	0.34	3	5.11	0.37	0.34
Arsenic, Other		151.99	2	7.08	0.18	0.19	2	7.08	0.18	0.19
Method Group 151.XX PPM			6	5.79	0.99	0.28	6	5.79	0.99	0.28
Acid Soluble Boron, Spectrometric	982.01	165.00	8	0.102	0.009	0.002	7	0.102	0.010	0.001
Acid Soluble Boron, Titrimetric	949.02	165.70	1	0.135	0.019	0.027	1	0.135	0.019	0.027
Acid Soluble Boron, Other		165.99	14	0.102	0.010	0.004	14	0.102	0.010	0.004
Method Group 165.XX PCT			23	0.103	0.012	0.004	22	0.102	0.009	0.003
Water Soluble Boron, AA	52.950	171.00	1	0.110	0.000	0.000	1	0.110	0.000	0.000
Water Soluble Boron, Spectrometric	982.01	171.10	1	0.086	0.001	0.001	1	0.086	0.001	0.001
Method Group 171.XX PCT			2	0.098	0.014	0.001	2	0.098	0.014	0.001
Cadmium, Atomic Absorption		181.00	5	1.98	0.35	0.02	4	2.06	0.35	0.01

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Cadmium, ICP		181.30	8	1.92	0.18	0.09	8	1.92	0.18	0.09
Cadmium, Other		181.99	2	1.95	0.07	0.05	2	1.95	0.07	0.05
Method Group 181.XX PPM			15	1.94	0.24	0.06	14	1.94	0.24	0.05
Water Soluble Chlorine, Other		190.99	2	0.00	0.00	0.00	2	0.00	0.00	0.00
Chromium, ICP		191.30	11	50.41	6.36	2.48	10	50.32	6.47	1.70
Chromium, Other		191.99	1	63.00	1.41	2.00	1	63.00	1.41	2.00
Method Group 191.XX PPM			12	51.46	7.05	2.44	11	51.47	7.20	1.73
Acid Soluble Cobalt, AA		202.00	1	21.00	0.00	0.00	1	21.00	0.00	0.00
Acid Soluble Cobalt, ICP	965.11	202.30	10	11.84	5.27	1.43	10	11.84	5.27	1.43
Acid Soluble Cobalt, Other		202.99	1	19.50	0.71	1.00	1	19.50	0.71	1.00
Method Group 202.XX PPM			12	13.24	5.77	1.27	12	13.24	5.77	1.27
Acid Soluble Copper, Atomic Absorption	975.01	221.00	7	0.0048	0.0005	0.0003	6	0.0049	0.0005	0.0001
Acid Soluble Copper, ICP		221.30	15	0.0048	0.0003	0.0001	13	0.0048	0.0002	0.0001
Method Group 221.XX PCT			22	0.0048	0.0004	0.0002	21	0.0048	0.0003	0.0001
Acid Soluble Iron, Atomic Absorption ..	980.01	241.00	16	0.43	0.03	0.01	15	0.43	0.03	0.01
Acid Soluble Iron, ICP		241.30	24	0.42	0.04	0.01	23	0.42	0.04	0.01
Acid Soluble Iron, Other		241.99	1	0.46	0.00	0.00	1	0.46	0.00	0.00
Method Group 241.XX PCT			41	0.43	0.03	0.01	39	0.43	0.03	0.01
Lead, Atomic Absorption		251.00	4	9.75	1.56	1.11	4	9.75	1.56	1.11
Lead, ICP		251.30	8	9.24	1.28	1.19	8	9.24	1.28	1.19
Lead, Other		251.99	2	7.88	0.37	0.42	2	7.88	0.37	0.42
Method Group 251.XX PPM			14	9.19	1.38	1.06	14	9.19	1.38	1.06
Acid Soluble Manganese, AA	972.02a	261.00	15	0.212	0.013	0.006	14	0.210	0.012	0.005
Acid Soluble Manganese, AA	972.02b	261.11	2	0.207	0.019	0.006	2	0.207	0.019	0.006
Acid Soluble Manganese, ICP	972.02a	261.30	20	0.200	0.023	0.008	19	0.199	0.023	0.007
Acid Soluble Manganese, ICP	972.02b	261.31	2	0.215	0.006	0.000	2	0.215	0.006	0.000
Acid Soluble Manganese, Other		261.99	4	0.213	0.017	0.013	4	0.213	0.017	0.013
Method Group 261.XX PCT			44	0.205	0.020	0.007	42	0.205	0.020	0.006
Water Soluble Manganese, Atomic Abs ...	972.03	271.00	2	0.175	0.064	0.000	2	0.175	0.064	0.000
Mercury, Atomic Absorption		281.00	1	0.00	0.00	0.00	1	0.00	0.00	0.00
Molybdenum, ICP		289.30	9	6.53	1.19	0.40	9	6.53	1.19	0.40
Molybdenum, Other		289.99	2	5.18	2.11	0.15	2	5.18	2.11	0.15
Method Group 289.XX PPM			11	6.28	1.44	0.35	11	6.28	1.44	0.35
Nickel, Atomic Absorption		291.00	1	24.00	1.41	2.00	1	24.00	1.41	2.00
Nickel, ICP		291.30	4	23.72	1.19	0.78	3	23.67	1.11	0.14
Nickel, Other		291.99	2	26.05	7.07	2.40	2	26.05	7.07	2.40
Method Group 291.XX PPM			7	24.43	3.69	1.42	7	24.43	3.69	1.42
Selenium, Other		301.99	3	0.48	0.40	0.02	3	0.48	0.40	0.02
Sodium, Flame Photometric	974.01	311.30	1	0.59	0.01	0.01	1	0.59	0.01	0.01

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Sodium, Other		311.99	8	0.69	0.03	0.02	8	0.69	0.03	0.02
Method Group 311.XX PCT			9	0.68	0.05	0.02	9	0.68	0.05	0.02
Acid Soluble Zinc, Atomic Absorption ..	975.02	321.00	8	0.271	0.018	0.010	8	0.271	0.018	0.010
Acid Soluble Zinc, ICP		321.30	19	0.256	0.022	0.011	19	0.256	0.022	0.011
Method Group 321.XX PCT			27	0.260	0.022	0.010	27	0.260	0.022	0.010
Water Soluble Zinc, Atomic Absorption .		325.00	1	0.225	0.007	0.010	1	0.225	0.007	0.010
Water Soluble Zinc, ICP		325.30	1	0.285	0.001	0.001	1	0.285	0.001	0.001
Method Group 325.XX PCT			2	0.255	0.035	0.006	2	0.255	0.035	0.006

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: 009.XX PCT			Meth: 010.60 PCT			Meth: 010.60 PCT		
<u>Ammoniacal Nitrogen</u>			<u>Ammoniacal Nitrogen</u>			<u>Ammon & Nitrate N</u>			<u>Total Nitrogen</u>			<u>Total Nitrogen</u>		
<u>MgO Distillation</u>									<u>Combustion</u>			<u>Combustion</u>		
090	4.04 s	4.52	394	3.66	.61	420	3.52	-.77	025	3.86	2.10	232	3.64	-.77
040	3.60	1.01	096	3.65	.57	030	3.50	-.96	351	3.84	1.93	361	3.64	-.83
029	3.65	.86	029	3.65	.57	Meth: 010.11 PCT			393	3.78 R	1.53	330	3.65	-.92
288	3.63	.68	288	3.63	.41	Total Nitrogen			041	3.80	1.39	136	3.63	-.96
416	3.63	.67	416	3.63	.40	<u>Modified Comprehensi</u>			234	3.80	1.30	324	3.62	-1.16
220	3.60	.54	220	3.60	.36	090	4.08 s	9.70	037	3.74	.78	009	3.61	-1.16
Avg	3.56		397	3.62	.33	309	3.70 R	2.61	096	3.75	.71	073	3.56	-1.87
351	3.52	-.37	320	3.62	.32	288	3.70	1.44	095	3.75	.70	055	3.58 R	-1.91
415	3.43	-1.16	Avg	3.58		363	3.69	1.17	360	3.70	.66	233	3.55	-1.96
309	3.40	-1.74	419	3.58	-.24	220	3.66	.72	356	3.72	.50	023	3.57 R	-2.42
Meth: 001.99 PCT			351	3.52	-.50	414	3.64	.11	292	3.73	.49	390	3.42 s	-4.16
<u>Ammoniacal Nitrogen</u>			420	3.49	-.77	Avg	3.63		043	3.71	.43	325	3.36 s	-4.48
<u>Other</u>			363	3.51 R	-1.12	211	3.63	-.21	247	3.73	.37	Meth: 010.99 PCT		
393	4.08 S	3.69	415	3.43	-1.19	029	3.60	-.72	275	3.71	.35	<u>Total Nitrogen</u>		
262	3.76	1.20	309	3.40	-1.67	322	3.58	-1.21	049	3.72	.30	<u>Other</u>		
193	3.68	.65	418	3.27	-2.57	415	3.59	-1.21	029	3.71	.12	300	3.76	.71
289	3.67	.56	376	3.16 s	-3.44	Meth: 010.12 PCT			034	3.70	.03	Meth: 010.99 PCT		
394	3.66	.42	Meth: 009.10 PCT			Total Nitrogen			Avg	3.70		<u>Total Nitrogen</u>		
096	3.65	.39	<u>Ammon & Nitrate N</u>			<u>Salicylic</u>			220	3.70	-.07	Meth: 010.99 PCT		
397	3.62	.17	<u>Devarda</u>			137	3.64	1.06	042	3.69	-.17	<u>Total Nitrogen</u>		
320	3.62	.16	392	3.73	1.19	185	3.62	.33	024	3.69	-.17	090	4.08 s	5.22
Avg	3.60		257	3.66	.72	Avg	3.61		131	3.69	-.17	394	3.96 s	3.57
419	3.58	-.26	Avg	3.61		391	3.56	-.58	307	3.70	-.20	040	3.92 s	3.10
420	3.49	-.84	030	3.50	-1.11	102	3.56	-1.12	231	3.69	-.26	070	3.91	2.98
363	3.51 R	-1.10	Meth: 009.99 PCT			Meth: 010.16 PCT			142	3.69	-.28	402	3.85	2.29
418	3.27	-2.48	<u>Ammon & Nitrate N</u>			<u>Total Nitrogen</u>			106	3.68	-.31	025	3.86	2.26
376	3.16 S	-3.28	<u>Other</u>			<u>Raney</u>			377	3.68	-.35	351	3.84	2.09
Meth: 001.XX PCT			420	3.52	.71	419	3.61	.00	422	3.68	-.36	393	3.78 R	1.66
<u>Ammoniacal Nitrogen</u>			Meth: 009.XX PCT			Meth: 010.60 PCT			409	3.69	-.37	041	3.80	1.55
393	4.08 s	4.17	<u>Ammon & Nitrate N</u>			<u>Combustion</u>			035	3.67	-.45	234	3.80	1.47
090	4.04 s	3.75	392	3.73	1.42	394	3.96 s	3.42	0389	3.66	-.50	309	3.70 R	1.33
262	3.76	1.46	257	3.66	.88	040	3.92 s	2.95	027	3.67	-.62	300	3.76	1.01
193	3.68	.84	Avg	3.59		070	3.91	2.82	381	3.65	-.63	037	3.74	.90
040	3.60	.83	391	3.56	-.43	402	3.85	2.13	007	3.66	-.64	096	3.75	.88
289	3.67	.74	* X=Excluded from lab performance S/s=Screened Outlier R=Duplicate Range too large A=Analysis beyond 3-s limits						028	3.66	-.73	095	3.75	.87
									177	3.64	-.76	360	3.70	.69
									296	3.64	-.76	292	3.73	.64

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: 020.50 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>		
356	3.72	.62	009	3.61	-.97	<u>Spectrometric</u>			<u>ICP</u>			095	15.96	-.71
247	3.73	.55	419	3.61	-.97	416	16.17	.25	422	15.34	-1.57	391	15.91	-.86
043	3.71	.53	324	3.62	-.99	288	16.11	.08				376	16.02	-.86
049	3.72	.48	029	3.60	-1.10	Avg	16.10		Meth: 020.XX PCT			292	15.83	-1.13
275	3.71	.43	415	3.59	-1.32	220	15.98	-.44	<u>Total Phosphate</u>			356	15.75	-1.42
288	3.70	.36	322	3.58	-1.40	391	15.91	-.70	042	20.16 s	14.14	309	15.75	-1.42
409	3.69	.33	102	3.56	-1.65	376	16.02 R	-.80	307	17.02 R	3.18	324	15.68	-1.67
029	3.71	.29	073	3.56	-1.67	292	15.83	-.98	330	16.82	2.41	397	15.70	-1.69
142	3.69	.28	055	3.58 R	-1.74	309	15.75	-1.27	389	16.58	1.50	402	15.55 R	-2.29
307	3.70	.25	233	3.55	-1.76	356	15.75	-1.27	035	16.51	1.27	422	15.34	-2.91
034	3.70	.22	023	3.57 R	-2.27	324	15.68	-1.53	234	16.50	1.22	381	14.00 s	-9.44
231	3.69	.20	390	3.42 s	-3.95	397	15.70	-1.56	232	16.49	1.20			
363	3.69	.20	325	3.36 s	-4.26	381	14.00 s	-9.51	418	16.34	.83	Meth: 030.10 PCT		
220	3.70	.16							231	16.35	.73	Insoluble Phosphate		
042	3.69	.16	Meth: 020.10 PCT			Meth: 020.40 PCT			361	16.35	.69	<u>Grav Quimociac</u>		
131	3.69	.16	Total Phosphate			Total Phosphate			420	16.33	.63	090	0.06	.48
024	3.69	.16	<u>Grav Quimociac</u>			<u>Automated</u>			362	16.29	.56	Avg	0.05	
Avg	3.68		090	16.26	.93	042	20.16 s	27.82	090	16.26	.46	320	0.04	-1.13
106	3.68	-.13	414	16.24	.93	035	16.51	2.06	414	16.24	.45			
422	3.68	-.23	114	16.24	.76	193	16.24	.61	193	16.24	.42	Meth: 030.20 PCT		
377	3.68	-.27	313	16.26	.72	Avg	16.22		114	16.24	.38	Insoluble Phosphate		
389	3.66	-.31	Avg	16.17		394	16.19	-.21	313	16.26	.37	<u>Spectrometric</u>		
035	3.67	-.32	363	16.15	-.12	096	16.18	-.30	257	16.18	.37	363	0.39	.86
220	3.66	-.41	300	16.06	-.85	247	16.17	-.45	392	16.25	.34	Avg	0.24	
381	3.65	-.44	095	15.96	-1.72	409	16.12	-.75	142	16.22	.28	220	0.08	-.87
007	3.66	-.50				320	16.13	-.99	247	16.15	.18			
027	3.67	-.53	Meth: 020.20 PCT						394	16.19	.15	Meth: 030.40 PCT		
296	3.64	-.57	Total Phosphate			Meth: 020.50 PCT			247	16.17	.13	Insoluble Phosphate		
177	3.64	-.58	<u>Spectrometric</u>			Total Phosphate			096	16.18	.13	<u>Automated</u>		
232	3.64	-.59	234	16.50	1.43	<u>ICP</u>			416	16.17	.10	096	0.14	1.23
028	3.66	-.59	232	16.49	1.41	307	17.02	1.40	363	16.15	.00	Avg	0.08	
361	3.64	-.64	418	16.34	1.00	330	16.82	1.02	Avg	16.15		409	0.07	-.47
414	3.64	-.64	231	16.35	.92	389	16.58	.58	288	16.11	-.16	247	0.04	-.88
136	3.63	-.77	420	16.33	.82	361	16.35	.18	409	16.12	-.18			
211	3.63	-.77	362	16.29	.73	Avg	16.24		300	16.06	-.32	Meth: 030.XX PCT		
137	3.64	-.78	392	16.25	.53	247	16.15	-.18	368	16.12	-.33	<u>Insoluble Phosphate</u>		
330	3.65	-.79	257	16.18	.47	368	16.12	-.26	320	16.13	-.38	363	0.39	2.26
185	3.62	-.85	142	16.22	.46	402	15.55	-1.26	220	15.98	-.60	096	0.14	.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: 030.XX PCT			Meth: 040.XX PCT			Meth: 041.30 PCT			Meth: 041.60 PCT			Meth: 041.XX PCT				
<u>Insoluble Phosphate</u>			<u>InDir Available Phos</u>			<u>Dir Available Phosph</u>			<u>Dir Available Phosph</u>			<u>Dir Available Phosph</u>				
Avg	0.12		096	16.04	.13	<u>Alka Quim</u>			<u>EDTA Extract</u>			131	16.13	.26		
220	0.08	-.34	Avg	16.04		260	16.14	.71	351	16.03	-.10	296	16.10	.15		
409	0.07	-.44	289	15.96	-.89	Meth: 041.40 PCT			095	15.90	-.89	419	16.10	.09		
090	0.06	-.50	363	15.76	-1.84	<u>Dir Available Phosph</u>			073	15.79	-1.21	040	16.09	.08		
247	0.04	-.62	Meth: 041.10 PCT			<u>Automated</u>			377	15.72	-1.47	029	16.10	.07		
320	0.04	-.64	<u>Dir Available Phosph</u>			034	16.18	.90	262	15.60	-1.99	Avg	16.08			
Meth: 040.10 PCT			<u>Grav Quimociac</u>			029	16.10	.49	Meth: 041.99 PCT			296	16.07	-.20		
<u>InDir Available Phos</u>			041	16.37	1.48	025	16.03	.18	<u>Dir Available Phosph</u>			397	16.06	-.21		
<u>Grav Quim</u>			055	16.29	.93	Avg			16.00		<u>Other</u>			351	16.03	-.26
090	16.21	.71	185	16.26	.84	027	15.68	-1.56	131	16.16	-.71	025	16.03	-.28		
Meth: 040.20 PCT			177	16.24	.64	393	15.62 S	-2.59	Meth: 041.XX PCT			030	15.98	-.53		
<u>InDir Available Phos</u>			029	16.22	.50	Meth: 041.50 PCT			<u>Dir Available Phosph</u>			322	16.07	-.59		
<u>Spectrometri</u>			211	16.20	.38	<u>Dir Available Phosph</u>			415	17.49 s	7.33	325	15.96	-.67		
289	15.96	1.01	009	16.19	.31	<u>ICP</u>			041	16.37	1.50	007	15.97	-.69		
Avg	15.86		Avg	16.14		360	16.21	1.30	055	16.32	1.24	393	15.96 X	-.77		
363	15.76	-.69	131	16.13	-.20	361	16.14	.80	037	16.31	1.17	095	15.90 R	-1.17		
Meth: 040.40 PCT			102	16.13	-.22	Avg	15.98		362	16.29	1.14	049	15.86	-1.19		
<u>InDir Available Phos</u>			296	16.10	-.35	325	15.96	-.19	288	16.24 R	1.10	137	15.81	-1.42		
<u>Automated</u>			040	16.09	-.39	007	15.97	-.37	028	16.29	1.08	073	15.79	-1.58		
394	16.14	1.02	414	16.13	-.59	393	15.96 X	-.42	055	16.29	1.06	377	15.72	-1.90		
Avg	16.08		322	16.07 R	-.88	070	15.67	-1.68	185	16.26	.96	027	15.68	-2.12		
096	16.04	-.71	049	15.86	-1.86	023	15.35 S	-3.38	360	16.21	.85	070	15.67	-2.19		
409	16.06	-.98	137	15.81	-2.16	Meth: 041.20 PCT			177	16.24	.82	262	15.60	-2.51		
Meth: 040.99 PCT			<u>Dir Available Phosph</u>			Meth: 041.60 PCT			043	16.22	.81	393	15.62 s	-3.12		
<u>InDir Available Phos</u>			<u>Spectrometric</u>			<u>Dir Available Phosph</u>			029	16.22	.72	023	15.35 s	-3.88		
<u>Other</u>			415	17.49 S	8.54	<u>EDTA Extract</u>			106	16.19	.64	Meth: 048.20 PCT				
247	16.13	.71	037	16.31	1.11	037			16.31	1.11	<u>Water Soluble Phosph</u>					
Meth: 040.XX PCT			028	16.29	1.04	028			16.29	1.04	<u>Spectrometric</u>					
<u>InDir Available Phos</u>			288	16.24	1.02	288			16.24	1.02	362			14.31	.81	
090	16.21	1.17	Avg	16.17		043			16.22	.79	193			14.32	.63	
394	16.14	.66	419	16.10	-.47	106			16.19	.66	Avg			14.24		
247	16.13	.60	362	16.29	.89	024			16.19	.61	363			14.08	-1.21	
409	16.06	.37	Avg	16.17		106			16.19	.66	Meth: 048.30 PCT					
* X=Excluded from lab performance			030	15.98	-1.25	024			16.19	.61	<u>Water Soluble Phosph</u>					
S/s=Screened Outlier			090	16.21	1.17	177			16.17	.52	<u>Alka Quimociac</u>					
R=Duplicate Range too large			394	16.14	.66	296			16.07	.16	247			14.23	.71	
A=Analysis beyond 3-s limits			247	16.13	.60	397			16.06	.15	Avg			16.05		
			Avg	16.06		Avg			16.05		260			16.14	.28	

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 048.99 PCT			Meth: 050.00 PCT			Meth: 050.51 PCT			Meth: 050.99 PCT			Meth: 050.XX PCT		
Water Soluble Phosph			Soluble Potash			Soluble Potash			Soluble Potash			<u>Soluble Potash</u>		
<u>Other</u>			<u>STPB Oxalate</u>			<u>ICP (Citrate)</u>			<u>Other</u>					
275	14.07 X	.87	296	29.19	-1.37	393	29.79 X	1.57	330	30.55 s	3.27	275	29.95 X	.85
Avg	13.61		392	29.16	-1.42	389	29.25	.68	177	30.18	1.51	043	29.92	.82
096	13.15	-.86				070	29.38	.46	275	29.95 X	.98	106	29.91	.76
Meth: 048.XX PCT			Meth: 050.10 PCT			Avg 29.22			027 29.90 .76			137 29.91 .68		
Water Soluble Phosph			Soluble Potash			361 29.13 -.25			325 29.89 .73			027 29.90 .67		
<u>Other</u>			<u>STPB Citrate</u>			368 29.12 -.83			232 29.82 .54			262 29.85 .65		
362	14.31	.70	025	30.14	.85	007	28.91	-1.16	360	29.81	.51	325	29.89	.64
193	14.32	.70	Avg	30.10		023	28.78	-1.44	Avg	29.62		232	29.82	.48
247	14.23	.48	322	30.06	-.88				394	29.44	-.52	360	29.81	.46
275	14.07 X	.22	Meth: 050.30 PCT			Meth: 050.60 PCT			260 29.37 -.66			393 29.79 X .45		
363	14.08	.15	Soluble Potash			Soluble Potash			300 29.19 -1.16			030 29.79 .42		
Avg	14.02		<u>AA (Oxalate)</u>			<u>Flame (Oxalate)</u>			289 29.16 -1.24			345 29.77 .37		
096	13.15	-2.06	397	36.45 s	14.23	415	31.76 S	5.51	376	29.09	-1.42	231	29.77	.36
Meth: 050.00 PCT			381	31.31 s	4.31	390	30.21	.97	419	26.40 s	-9.00	034	29.76	.35
Soluble Potash			137	29.91	1.15	309	30.15	.92	Meth: 050.XX PCT			211	29.72	.25
<u>STPB Oxalate</u>			262	29.85	1.08	055	30.01	.39	<u>Soluble Potash</u>			220	29.68	.18
257	30.25 R	2.35	185	29.50 R	1.05	Avg	29.87		397	36.45 s	15.41	037	29.63	.15
391	30.28	2.02	095	29.55	.44	288	29.51	-1.08	415	31.76 s	4.86	102	29.66	.12
023	30.31	1.99	363	29.39	.38	356	29.50	-1.19	307	31.66 s	4.63	028	29.63	.11
009	30.11	1.45	234	29.52	.38	Meth: 050.61 PCT			381	31.31 s	4.30	350	29.64	.09
043	29.92	.99	193	29.35	.30	Soluble Potash			324	31.21 s	3.65	029	29.62	.02
345	29.77	.39	Avg	29.33		<u>Flame (Citrate)</u>			422	31.00	3.15	Avg	29.61	
231	29.77	.38	040	29.33	-.43	041 30.06 1.43			292	30.98 A	3.15	247	29.58	-.13
211	29.72	.23	351	28.76	-1.15	035 29.91 .86			042	30.72 s	3.04	095	29.55	-.13
220	29.68	.15	142	28.35	-1.99	030 29.79 .29			330	30.55 R	2.77	234	29.52	-.19
102	29.66	.07	Meth: 050.50 PCT			034 29.76 .20			257	30.25 R	1.85	288	29.51	-.25
350	29.64	.06	Soluble Potash			Avg 29.72			391	30.28	1.61	416	29.49	-.27
Avg	29.64		<u>ICP (Oxalate)</u>			028 29.63 -.38			023	30.31	1.59	055	29.55	-.29
029	29.62	-.07	307	31.66 S	1.20	037 29.63 -.41			390	30.21	1.35	095	29.45	-.37
055	29.55	-.44	324	31.21 S	.70	029 29.26 X -1.81			177	30.18	1.30	394	29.44	-.41
416	29.49	-.46	292	30.98	.48	Meth: 050.99 PCT			309	30.15	1.27	356	29.50	-.43
095	29.45	-.58	422	31.00	.37	Soluble Potash			025	30.14	1.21	414	29.44	-.44
414	29.44	-.66	Avg	30.37		<u>Other</u>			070	29.38	-.52	070	29.38	-.52
049	29.38	-.86	106	29.91	-1.05	042 30.72 s 3.58			260	29.37	-.53	260	29.37	-.53
090	29.31	-1.02	247	29.58	-1.45	055 30.01 .90			049	29.38	-.59	049	29.38	-.59
418	29.37	-1.07	* X=Excluded from lab performance S/s=Screened Outlier R=Duplicate Range too large A=Analysis beyond 3-s limits						363	29.39	-.65	363	29.39	-.65

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 050.XX PCT			Meth: 101.00 PCT			Meth: 101.30 PCT			Meth: 101.XX PCT			Meth: 121.00 PCT		
<u>Soluble Potash</u>			Acid Soluble Calcium			Acid Soluble Calcium			<u>Acid Soluble Calcium</u>			Acid Soluble Magnesi		
193	29.35	-.67	<u>AA</u>			<u>ICP</u>			397	2.66	.38	<u>AA</u>		
090	29.31	-.70	136	2.70	.88	320	2.63	-.17	376	2.66	.34	289	1.21 R	.82
418	29.37	-.76	028	2.70	.88	419	2.61	-.35	234	2.67	.30	177	1.23	.69
029	29.26 X	-.80	220	2.67	.87	247	2.60	-.40	394	2.67	.25	220	1.22	.53
040	29.33	-.80	177	2.69	.82	009	2.58	-.58	300	2.66	.19	136	1.22	.53
300	29.19	-.95	397	2.66	.59	131	2.59	-.59	307	2.65	.10	391	1.22	.53
296	29.19	-.97	351	2.63	.18	102	2.61	-.68	Avg	2.64		356	1.18	.41
389	29.25	-.98	043	2.64	.17	023	2.57	-.69	043	2.64	-.06	392	1.18	.28
392	29.16	-1.00	Avg	2.62		232	2.58	-.73	351	2.63	-.07	040	1.20	.27
289	29.16	-1.02	390	2.61	-.25	368	2.56	-.73	320	2.63	-.12	043	1.20	.27
361	29.13	-1.07	363	2.62	-.34	106	2.49	-1.42	419	2.61	-.32	390	1.18	.15
185	29.50 R	-1.15	040	2.61	-.43	288	2.46	-1.58	390	2.61	-.32	257	1.19	.14
376	29.09	-1.17	055	2.57	-.74	422	2.36	-2.46	363	2.62	-.32	Avg	1.18	
368	29.12	-1.27	095	2.55	-1.28				247	2.60	-.35	397	1.17	-.20
007	28.91	-1.71	193	2.48	-1.59	Meth: 101.99 PCT			040	2.61	-.44	296	1.18	-.20
351	28.76	-1.91	296	2.45	-1.97	Acid Soluble Calcium			009	2.58	-.55	137	1.15	-.36
023	28.78	-1.98	289	2.37 S	-3.03	<u>Other</u>			131	2.59	-.59	351	1.14	-.45
142	28.35	-2.85	262	2.06 s	-6.30	234	2.67	.71	023	2.57	-.68	029	1.13	-.67
419	26.40 s	-7.56							102	2.61	-.71	262	1.12	-.86
						Meth: 101.30 PCT			368	2.56	-.73	095	1.01	-2.26
						Acid Soluble Calcium			232	2.58	-.74	309	1.00 s	-2.40
						<u>ICP</u>			055	2.57	-.75			
						361	2.89	2.25	095	2.55	-1.16	Meth: 121.30 PCT		
						330	2.85	1.89	193	2.48	-1.46	Acid Soluble Magnesi		
						073	2.72 R	1.66	106	2.49	-1.49	<u>ICP</u>		
						292	2.81	1.57	288	2.46	-1.66	409	1.28	2.06
						409	2.76	1.32	296	2.45	-1.77	035	1.28	2.05
						096	2.78	1.30	289	2.37 s	-2.62	330	1.25	1.42
						360	2.73	1.11	422	2.36	-2.63	389	1.20 R	1.10
						393	2.67 X	.65	262	2.06 s	-5.30	360	1.20	.73
						324	2.72	.57				394	1.22	.73
						035	2.69	.33	Meth: 121.00 PCT			131	1.21	.72
						389	2.69	.33	Acid Soluble Magnesi			300	1.22	.71
						070	2.68	.28	<u>AA</u>			070	1.22	.71
						376	2.66	.27	381	1.40 s	3.05	307	1.21	.51
						394	2.67	.15	028	1.33	2.04	Avg	1.18	
						300	2.66	.10	055	1.26	1.17	361	1.18	-.16
						073	2.72 R	2.14	389	2.69	.45	096	1.18	-.21
						137	2.75	1.46	070	2.68	.39			
						* X=Excluded from lab performance	S/s=Screened Outlier	R=Duplicate Range too large	363	1.24	.87			

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index				
Meth: 121.30 PCT			Meth: 121.XX PCT			Meth: 121.XX PCT			Meth: 144.01 PCT			Meth: 144.99 PCT						
<u>Acid Soluble Magnesi</u>			<u>Acid Soluble Magnesi</u>			<u>Acid Soluble Magnesi</u>			<u>Sulfur</u>			<u>Sulfur</u>						
<u>ICP</u>									<u>Gravimetric</u>			<u>Other</u>						
419	1.17	-.30	177	1.23	.78	095	1.01 A	-3.61	324	4.86	1.34	Avg	4.69					
232	1.17	-.33	360	1.20	.65	309	1.00 s	-3.81	043	4.81	.89	106	4.67	-.15				
009	1.15	-.62	131	1.21	.60	320	0.99 s	-4.01	288	4.83	.68	300	4.68	-.34				
368	1.15	-.64	394	1.22	.58	393	0.78 s	-8.31	Avg	4.79		397	4.68	-.37				
292	1.15	-.64	300	1.22	.55	Meth: 131.00 PCT			055	4.75	-.65	394	4.63	-.37				
102	1.16	-.79	220	1.22	.55	Water Soluble Magnes			102	4.73	-.97	137	4.63	-.42				
023	1.14	-.81	391	1.22	.55	<u>AA</u>			095	4.75	-1.03	360	4.64	-.61				
324	1.14	-.84	136	1.22	.55	289	1.17	.87	Meth: 144.50 PCT			351	4.59	-.69				
288	1.14	-.87	070	1.22	.55	Avg	1.14		<u>Sulfur</u>			023	4.54	-.91				
247	1.13	-1.07	307	1.21	.36	220	1.11	-.86	<u>Turbidimetric</u>			368	4.51	-1.09				
106	1.13	-1.15	040	1.20	.17	Meth: 131.30 PCT			289	4.79	.71	363	4.61 R	-1.15				
422	1.11	-1.58	043	1.20	.17	Water Soluble Magnes			Meth: 144.70 PCT			275	4.42 X	-1.58				
320	0.99 s	-3.93	Avg	1.19		<u>ICP</u>			<u>Sulfur</u>			035	4.62 R	-1.71				
393	0.78 s	-8.30	257	1.19	-.12	360	0.88	.87	<u>Spectrometric</u>			409	4.19	-2.95				
Meth: 121.70 PCT			096	1.18	-.26	Avg	0.72		Meth: 144.99 PCT			393	3.51 s	-6.91				
<u>Acid Soluble Magnesi</u>			390	1.18	-.26	393	0.57 X	-.87	<u>Sulfur</u>			Meth: 144.XX PCT						
<u>Titrimetric</u>			361	1.18	-.28	Meth: 131.99 PCT			247			4.68	.71	<u>Sulfur</u>				
415	1.17	.71	296	1.18	-.40	Water Soluble Magnes			Avg			4.68		330	4.99	2.08		
Meth: 121.99 PCT			419	1.17	-.42	<u>Other</u>			393			3.18 S	-106.13	232	4.96	1.80		
<u>Acid Soluble Magnesi</u>			392	1.18	-.44	029	1.09	.71	Meth: 144.99 PCT			289	4.79 R	1.42	289	4.79 R	1.42	
<u>Other</u>			232	1.17	-.44	Avg	1.05		<u>Sulfur</u>			296	4.89	1.23	324	4.86	1.08	
234	1.24	.71	397	1.17	-.44	393	1.02	-.99	<u>Other</u>			009	4.84	.86	009	4.84	.86	
Meth: 121.XX PCT			356	1.18	-.63	Meth: 131.XX PCT			330			4.99	1.74	288	4.83	.80		
<u>Acid Soluble Magnesi</u>			009	1.15	-.75	Water Soluble Magnes			232			4.96	1.53	043	4.81	.75		
<u>Other</u>			292	1.15	-.77	<u>Water Soluble Magnes</u>			070			4.70 R	1.36	136	4.80	.56		
234	1.24	.71	368	1.15	-.77	289	1.17	.88	296			4.89	1.12	095	4.75	.43		
Meth: 121.XX PCT			137	1.15	-.77	220			1.11	.64	009			4.84	.84	361	4.78	.38
<u>Acid Soluble Magnesi</u>			102	1.16	-.85	029			1.09	.54	136			4.80	.61	389	4.77	.36
381	1.40 s	4.29	351	1.14	-.91	Avg			0.96		389			4.77	.46	419	4.76	.34
028	1.33	2.79	023	1.14	-.95	360			0.88	-.36	193			4.77	.45	193	4.77	.33
409	1.28	1.90	324	1.14	-.97	393			0.57 X	-1.70	419			4.76	.41	029	4.76	.24
035	1.28	1.87	415	1.17 R	-.98	393			1.02 R	.29	029			4.76	.37	055	4.75	.19
055	1.26	1.51	288	1.14	-.99	Avg			0.96		040			4.75	.33	040	4.75	.17
330	1.25	1.25	247	1.13	-1.19	360			0.88	-.36	028			4.74	.24	102	4.73	.10
289	1.21 R	1.10	029	1.13	-1.24	393			0.57 X	-1.70	376			4.71	.21	028	4.74	.06
363	1.24	1.08	106	1.13	-1.28	Meth: 144.99 PCT			Meth: 144.99 PCT			Meth: 144.99 PCT						
234	1.24	1.07	262	1.12	-1.51	<u>Sulfur</u>			<u>Sulfur</u>			<u>Sulfur</u>						
389	1.20 R	1.04	422	1.11	-1.69	<u>Other</u>			<u>Other</u>			<u>Other</u>						
* 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: 144.XX PCT			Meth: 151.99 PPM			Meth: 165.99 PCT			Meth: 165.XX PCT			Meth: 181.30 PPM		
<u>Sulfur</u>			Arsenic			Acid Soluble Boron			<u>Acid Soluble Boron</u>			Cadmium		
Avg	4.73		<u>Other</u>			<u>Other</u>			043	0.100	-.57	<u>ICP</u>		
376	4.71	-.33	Avg	7.08		368	0.185 s	8.76	028	0.096	-.68	393	1476.5 s	8230.69
247	4.68	-.39	409	7.00	-.44	409	0.120	1.89	106	0.096	-.70	368	3.39 s	11.22
106	4.67	-.47	Meth: 151.XX PPM			131	0.116	1.53	394	0.095	-.76	009	2.15	1.32
300	4.68	-.60	<u>Arsenic</u>			009	0.111	.98	023	0.094	-.85	106	2.00	.72
397	4.68	-.62	368	31.91 s	33.63	324	0.110	.86	232	0.092	-1.05	419	2.00	.47
394	4.63	-.78	040	7.15	1.39	330	0.105	.62	055	0.091	-1.22	232	1.96	.42
137	4.63	-.84	409	7.00	1.22	Avg	0.102		234	0.091	-1.24	376	1.94	.27
360	4.64	-.99	Avg	5.79		029	0.101	-.07	300	0.090	-1.27	Avg	1.92	
351	4.59	-1.18	106	5.35	-.47	360	0.101	-.38	Meth: 171.00 PCT			102	1.90	-.19
023	4.54	-1.51	247	5.25	-.55	288	0.098	-.43	<u>Water Soluble Boron</u>			247	1.85	-.45
363	4.61 R	-1.69	136	5.25	-.56	043	0.100	-.55	<u>AA</u>			288	1.53	-2.12
368	4.51	-1.76	102	4.73	-1.12	106	0.096	-.66	137	0.110	.00	035	0.96 s	-5.70
070	4.70 R	-1.87	Meth: 165.00 PCT			394	0.095	-.72	Meth: 171.10 PCT			Meth: 181.99 PPM		
035	4.62 R	-2.41	Acid Soluble Boron			232	0.092	-1.00	<u>Water Soluble Boron</u>			Cadmium		
275	4.42 X	-2.43	<u>Spectrometric</u>			234	0.091	-1.19	<u>Spectrometric</u>			<u>Other</u>		
409	4.19 A	-4.27	393	0.937 s	87.45	300	0.090	-1.21	220	0.086	.71	409	2.00	.71
393	3.51 s	-9.64	296	0.510 S	42.72	Meth: 165.XX PCT			Meth: 171.XX PCT			Avg	1.95	
393	3.18 s	-12.18	040	0.116	1.39	<u>Acid Soluble Boron</u>			<u>Water Soluble Boron</u>			040	1.90	-1.00
Meth: 151.00 PPM			292	0.114	1.23	393	0.937 s	89.65	Meth: 171.00 PCT			Meth: 181.00 PPM		
Arsenic			391	0.107	.44	296	0.510 s	43.82	<u>Water Soluble Boron</u>			Cadmium		
<u>Atomic Absorption</u>			Avg	0.102		368	0.185 s	9.07	137	0.110	.87	<u>Cadmium</u>		
136	5.25	.71	392	0.100	-.24	397	0.135 R	3.83	Avg	0.098		393	1476.5 s	6137.96
Meth: 151.30 PPM			409	0.120	1.95	409	0.120	1.95	220	0.086	-.87	368	3.39 s	8.29
Arsenic			131	0.116	1.58	040	0.116	1.48	Meth: 181.00 PPM			193	2.60	2.72
<u>ICP</u>			028	0.096	-.71	292	0.114	1.31	Cadmium			009	2.15	.89
368	31.91 S	90.92	023	0.094	-.87	009	0.111	1.00	<u>Atomic Absorption</u>			106	2.00 R	.48
106	5.35	.76	055	0.091	-1.24	324	0.110	.88	193	2.60	1.56	232	1.96	.28
247	5.25	.40	Meth: 165.70 PCT			330	0.105	.64	Avg	2.06		363	2.00	.25
Avg	5.11		Acid Soluble Boron			391	0.107	.51	363	2.00	-.18	409	2.00	.25
102	4.73	-1.33	<u>Titrimetric</u>			Avg	0.102		136	1.90	-.47	419	2.00	.25
Meth: 151.99 PPM			397	0.135	-.71	029	0.101	-.09	394	1.75	-.91	Avg	1.94	
Arsenic			Meth: 165.99 PCT			392	0.100	-.19	289	1.67 R	-1.15	136	1.90	-.16
<u>Other</u>			Acid Soluble Boron			289	0.100	-.38	Meth: 181.30 PPM			376	1.94	-.19
040	7.15	1.14	<u>Titrimetric</u>			360	0.101	-.40	Cadmium			102	1.90	-.20
* X=Excluded from lab performance			397	0.135	-.71	288	0.098	-.46	Atomic Absorption			040	1.90	-.26
			S/s=Screened Outlier			R=Duplicate Range too large			A=Analysis beyond 3-s limits			247	1.85	-.42

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 241.30 PCT			Meth: 241.XX PCT			Meth: 241.XX PCT			Meth: 251.XX PPM			Meth: 261.11 PCT		
Acid Soluble Iron			Acid Soluble Iron			Acid Soluble Iron			Lead			Acid Soluble Manganese		
<u>ICP</u>			<u>ICP</u>			<u>ICP</u>			<u>ICP</u>			<u>AA</u>		
292	0.45	.70	330	0.48	1.45	320	0.30 s	-3.65	393	17.66 s	6.17	040	0.223	.88
131	0.44	.61	409	0.47	1.16	381	0.30 s	-3.77	368	11.35	1.78	Avg	0.207	
324	0.44	.54	234	0.46	1.00	393	0.28 s	-4.51	136	10.95	1.42	095	0.192	-.85
096	0.44	.54	136	0.46	1.00	Meth: 251.00 PPM			193	10.50	1.02	Meth: 261.30 PCT		
389	0.44	.43	361	0.46	.86	Lead			106	9.40	.96	Acid Soluble Manganese		
009	0.43	.37	356	0.45 R	.71	<u>Atomic Absorption</u>			394	10.03	.67	<u>ICP</u>		
Avg	0.42		292	0.45	.57	136	10.95	.95	009	9.75	.62	131	0.229	1.34
102	0.42	-.05	043	0.45	.57	193	10.50	.58	419	9.50	.43	389	0.228	1.26
394	0.42	-.21	131	0.44	.47	394	10.03	.30	Avg	9.19		360	0.221 R	1.17
419	0.41	-.45	029	0.44	.43	Avg	9.75		247	9.15	-.11	102	0.223	1.04
368	0.40	-.57	324	0.44	.40	363	7.50	-1.48	102	8.59	-.45	009	0.222	1.01
023	0.40	-.57	096	0.44	.40	Meth: 251.30 PPM			232	8.25	-.83	422	0.214	.68
106	0.40	-.72	220	0.44	.30	Lead			409	8.00	-.86	247	0.215	.68
376	0.39	-.73	389	0.44	.30	<u>ICP</u>			288	7.90	-.94	419	0.210	.65
247	0.39	-.79	009	0.43	.22	393	17.66 s	6.62	040	7.75	-1.09	292	0.210	.48
288	0.39	-.85	296	0.43	.16	368	11.35	1.89	363	7.50	-1.28	376	0.210	.47
035	0.39	-.98	028	0.43	.14	106	9.40	1.03	035	2.20 s	-5.08	035	0.202	.23
232	0.38	-1.04	351	0.43	.05	009	9.75	.65	Meth: 261.00 PCT			288	0.200	.18
300	0.38	-1.28	Avg	0.43		419	9.50	.44	Acid Soluble Manganese			368	0.200	.05
307	0.37	-1.41	390	0.43	-.15	Avg	9.24		<u>AA</u>			Avg	0.199	
320	0.30 S	-3.25	289	0.43	-.15	247	9.15	-.13	356	0.230 R	1.85	023	0.194	-.23
393	0.28 s	-4.06	102	0.42	-.21	102	8.59	-.52	136	0.225	1.30	232	0.187	-.63
Meth: 241.99 PCT			394	0.42	-.37	232	8.25	-.92	392	0.222	.99	361	0.185	-.65
Acid Soluble Iron			193	0.41	-.49	288	7.90	-1.06	390	0.220	.82	307	0.170	-1.27
<u>Other</u>			397	0.41	-.63	035	2.20 s	-5.52	029	0.219	.70	320	0.168	-1.41
234	0.46	.00	419	0.41	-.66	Meth: 251.99 PPM			177	0.216	.54	402	0.160	-1.71
362	0.56 S	.00	177	0.40	-.71	Lead			043	0.216	.49	300	0.155	-1.94
Avg	0.46		368	0.40	-.79	<u>Other</u>			296	0.213	.34	Meth: 261.31 PCT		
Meth: 241.XX PCT			023	0.40	-.79	409	8.00	.34	397	0.212	.17	Acid Soluble Manganese		
Acid Soluble Iron			106	0.40	-.95	Avg	7.88		Avg	0.210		<u>ICP</u>		
362	0.56 s	4.26	376	0.39	-.96	040	7.75	-1.18	257	0.210	-.02	324	0.220	.87
422	0.52	2.64	247	0.39	-1.03	Meth: 261.00 PCT			289	0.205	-.60	Avg	0.215	
095	0.50	2.06	288	0.39	-1.09	Acid Soluble Manganese			028	0.199	-1.05	106	0.210	-.87
360	0.48 R	1.73	040	0.39	-1.21	<u>ICP</u>			391	0.190	-1.69	Meth: 261.30 PCT		
137	0.48	1.59	035	0.39	-1.22	Lead			193	0.185	-2.15	Acid Soluble Manganese		
* X=Excluded from lab performance			232	0.38	-1.28	<u>Other</u>			381	0.160 s	-4.28	Acid Soluble Manganese		
			300	0.38	-1.54	Avg			A=Analysis beyond 3-s limits					
			307	0.37	-1.68	Avg								
			S/s=Screened Outlier R=Duplicate Range too large											

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: 325.30 PCT								
Acid Soluble Zinc			<u>Acid Soluble Zinc</u>			Water Soluble Zinc								
<u>Atomic Absorption</u>						<u>ICP</u>								
392	0.292	1.19	391	0.300	1.84	247	0.285	.71						
029	0.274	.21	102	0.292	1.51									
Avg	0.271		392	0.292	1.48									
028	0.264	-.43	040	0.289	1.47									
257	0.270	-.55	009	0.277	.80									
043	0.259	-.62	324	0.275	.73									
296	0.251	-1.10	257	0.270	.65									
193	0.255	-1.18	361	0.270	.65									
095	0.024 s	-13.44	402	0.270	.65									
Meth: 321.30 PCT			029	0.274	.65									
			131	0.272	.61									
			028	0.264	.23									
			Avg	0.260										
			409	0.260	.00									
<u>ICP</u>			043	0.259	-.07									
102	0.292	1.71	368	0.255	-.33									
040	0.289	1.66	106	0.253	-.40									
009	0.277	1.00	296	0.251	-.48									
324	0.275	.92	288	0.249	-.53									
361	0.270	.81	300	0.250	-.65									
402	0.270	.81	193	0.255	-.73									
131	0.272	.80	419	0.245	-.73									
409	0.260	.20	232	0.242	-.86									
Avg	0.256		307	0.240	-.92									
368	0.255	-.23	035	0.241	-.95									
106	0.253	-.26	320	0.235	-1.16									
288	0.249	-.33	422	0.234	-1.22									
300	0.250	-.53	393	0.209 X	-2.36									
419	0.245	-.54	095	0.024 s	-10.87									
232	0.242	-.66	Meth: 325.00 PCT											
307	0.240	-.72	Water Soluble Zinc											
035	0.241	-.76	<u>Atomic Absorption</u>											
320	0.235	-.97	193	0.225	.71									
422	0.234	-1.02												
393	0.209 X	-2.16												

* X=Excluded from lab performance S/s=Screened Outlier R=Duplicate Range too large A=Analysis beyond 3-s limits

Method Evaluation - Z Values Based on 1 Reports

Method Code	Number Of Labs	Avg Bias of Labs	Std Dev of Biases	Std Dev Within Labs	Method Code	Number Of Labs	Avg Bias of Labs	Std Dev of Biases	Std Dev Within Labs
001.10	9	0.50	1.72	0.49	060.00	8	0.00	1.02	0.14
001.99	13	- 0.03	1.66	0.39	060.XX	8	0.00	1.02	0.14
001.XX	22	0.17	1.65	0.42	101.00	18	- 0.45	1.83	0.63
009.10	4	0.00	1.01	0.32	101.30	27	0.00	0.96	0.32
009.XX	5	0.00	1.00	0.31	101.XX	46	- 0.15	1.26	0.42
010.11	10	1.11	3.16	0.78	121.00	23	0.15	1.14	0.22
010.12	3	0.00	0.84	0.60	121.30	26	- 0.45	1.99	0.39
010.60	52	- 0.08	1.41	0.49	121.XX	51	- 0.30	1.82	0.37
010.XX	65	0.05	1.46	0.49	131.00	2	0.00	1.21	0.11
020.10	7	0.00	0.93	0.43	131.30	2	0.00	1.22	0.01
020.20	20	- 0.39	1.93	1.32	131.99	2	0.00	1.00	0.50
020.40	8	3.47	9.86	0.58	131.XX	5	0.20	0.69	0.44
020.50	8	0.00	1.00	0.26	144.01	6	0.00	0.86	0.55
020.XX	42	0.18	2.73	0.93	144.70	2	- 52.94	74.87	5.10
030.10	2	0.00	0.56	0.77	144.99	28	- 0.28	1.59	0.51
030.20	2	0.00	1.22	0.08	144.XX	36	- 0.47	2.12	0.69
030.40	3	0.00	1.10	0.18	151.30	4	17.97	35.95	27.84
030.XX	7	0.00	1.04	0.10	151.99	2	0.00	0.62	0.75
040.20	2	0.00	0.97	0.52	151.XX	7	3.76	10.00	7.91
040.40	3	0.00	0.88	0.56	165.00	10	12.990	29.416	0.620
040.XX	7	0.00	0.97	0.35	165.99	15	0.575	2.418	0.479
041.10	15	- 0.03	0.96	0.30	165.XX	26	5.612	19.233	0.614
041.20	5	1.71	3.92	0.23	171.XX	2	0.000	1.224	0.026
041.40	5	- 0.37	1.25	0.82	181.00	5	- 0.23	1.06	0.07
041.50	7	- 0.47	1.54	0.41	181.30	11	739.60	2452.0	381.65
041.60	14	0.00	0.98	0.28	181.99	2	0.00	1.00	0.50
041.XX	42	0.00	1.64	0.39	181.XX	18	337.06	1429.4	222.49
048.20	3	0.00	1.02	0.37	190.99	2	0.00	1.22	0.07
048.99	2	0.00	1.21	0.12	190.XX	2	0.00	1.22	0.07
048.XX	6	0.00	1.04	0.13	191.30	11	0.01	0.96	0.29
050.00	21	0.09	1.01	0.45	191.XX	13	0.42	1.76	0.24
050.10	2	0.00	0.66	0.73	202.30	10	0.00	1.01	0.17
050.30	12	1.54	4.24	0.63	202.XX	12	0.00	1.01	0.14
050.50	6	0.00	1.02	0.23	221.00	7	- 0.107	0.9795	0.4220
050.51	8	0.00	0.85	0.55	221.30	18	1.2163	5.4089	1.4794
050.60	6	0.92	2.42	0.30	221.XX	25	0.6115	3.4820	0.9900
050.61	7	0.00	0.99	0.29	241.00	17	- 0.25	1.48	0.17
050.99	14	- 0.23	2.75	1.07	241.30	26	- 0.22	1.43	0.15
050.XX	72	0.48	2.43	0.60	241.99	2	0.00	0.00	0.00

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	45	- 0.12	1.55	0.22					
251.00	4	0.00	0.99	0.37					
251.30	10	0.11	2.95	0.55					
251.99	2	0.00	0.48	0.80					
251.XX	16	0.07	2.22	0.46					
261.00	16	- 0.159	1.471	0.382					
261.11	2	0.000	1.203	0.163					
261.30	20	0.048	0.991	0.242					
261.31	2	0.000	1.225	0.000					
261.99	4	0.000	0.898	0.520					
261.XX	45	- 0.047	1.087	0.265					
271.00	2	0.000	1.225	0.000					
271.XX	2	0.000	1.225	0.000					
289.30	10	1.16	3.78	0.43					
289.99	2	0.00	1.22	0.05					
289.XX	12	0.81	2.97	0.32					
291.30	5	6.50	14.45	1.73					
291.99	2	0.00	1.19	0.20					
291.XX	8	1.20	3.50	0.47					
301.99	3	0.00	1.12	0.03					
301.XX	3	0.00	1.12	0.03					
311.99	8	0.00	0.92	0.44					
311.XX	9	0.00	0.98	0.29					
321.00	9	- 1.494	4.569	0.356					
321.30	19	0.000	0.967	0.297					
321.XX	28	- 0.388	2.260	0.298					