

MAGRUDER - Fertilizer Check Sample No. - 200403 Grade 19-19-19

- Pass 1 Results for 84 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	4	7.82	0.84	0.43	3	7.44	0.07	0.03
Ammoniacal Nitrogen, Other .....		001.99	8	7.99	0.52	0.14	7	8.00	0.55	0.07
Method Group 001.XX PCT			12	7.93	0.63	0.24	11	7.84	0.51	0.11
Ammon & Nitrate N, Devarda .....	892.01	009.10	2	7.70	0.43	0.04	2	7.70	0.43	0.04
Total Nitrogen, Reduced Iron .....		010.10	1	19.95	0.38	0.54	1	19.95	0.38	0.54
Total Nitrogen, Modified Comprehensive	978.02	010.11	7	20.17	0.17	0.08	7	20.17	0.17	0.08
Total Nitrogen, Salicylic .....	955.04D	010.12	4	20.14	0.16	0.13	3	20.17	0.11	0.02
Total Nitrogen, Raney .....	970.03	010.16	1	20.20	0.14	0.20	1	20.20	0.14	0.20
Total Nitrogen, Combustion .....		010.60	49	20.31	0.22	0.09	46	20.31	0.22	0.08
Total Nitrogen, Other .....		010.99	4	20.47	0.23	0.17	4	20.47	0.23	0.17
Method Group 010.XX PCT			67	20.28	0.24	0.11	63	20.29	0.23	0.09
Total Phosphate, Grav Quimociac .....	962.02	020.10	5	19.58	0.16	0.06	5	19.58	0.16	0.06
Total Phosphate, Spectrometric .....	958.01	020.20	21	19.44	0.21	0.08	19	19.44	0.21	0.05
Total Phosphate, Automated .....	978.01	020.40	5	19.72	0.26	0.13	5	19.72	0.26	0.13
Total Phosphate, ICP .....		020.50	6	19.43	0.32	0.09	6	19.43	0.32	0.09
Total Phosphate, Other .....		020.99	3	19.35	0.13	0.20	3	19.35	0.13	0.20
Method Group 020.XX PCT			40	19.49	0.24	0.09	37	19.47	0.22	0.07
Insoluble Phosphate, Grav Quimociac ...	963.03C	030.10	3	0.05	0.04	0.00	3	0.05	0.04	0.00
Insoluble Phosphate, Automated .....	978.01	030.40	2	0.05	0.02	0.03	2	0.05	0.02	0.03
Insoluble Phosphate, Other .....		030.99	1	0.03	0.01	0.01	1	0.03	0.01	0.01
Method Group 030.XX PCT			6	0.04	0.03	0.01	5	0.04	0.03	0.00
InDir Available Phosphate, Grav Quim ..	960.02	040.10	2	19.40	0.02	0.04	2	19.40	0.02	0.04
InDir Available Phosphate, Spectrometri	960.02	040.20	2	19.24	0.32	0.14	2	19.24	0.32	0.14
InDir Available Phosphate, Automated ..	960.02	040.40	2	19.53	0.08	0.04	2	19.53	0.08	0.04
InDir Available Phosphate, Other .....		040.99	1	19.36	0.04	0.05	1	19.36	0.04	0.05
Method Group 040.XX PCT			7	19.38	0.20	0.07	7	19.38	0.20	0.07
Dir Available Phosphate, Grav Quimociac	960.03E	041.10	17	19.49	0.15	0.07	16	19.49	0.15	0.06
Dir Available Phosphate, Spectrometric	960.03D	041.20	5	19.50	0.26	0.11	5	19.50	0.26	0.11
Dir Available Phosphate, Automated ....	978.01	041.40	5	19.11	0.34	0.05	4	19.21	0.31	0.02
Dir Available Phosphate, ICP .....		041.50	6	19.50	0.29	0.30	6	19.50	0.29	0.30
Dir Available Phosphate, EDTA Extract .	993.01	041.60	12	19.59	0.31	0.13	12	19.59	0.31	0.13
Method Group 041.XX PCT			45	19.48	0.29	0.12	43	19.47	0.29	0.10
Water Soluble Phosphate, Spectrometric	970.01	048.20	5	17.73	0.34	0.09	5	17.73	0.34	0.09
Water Soluble Phosphate, Other .....		048.99	2	17.96	0.69	0.64	2	17.96	0.69	0.64
Method Group 048.XX PCT			7	17.79	0.45	0.25	6	17.70	0.32	0.09
Soluble Potash, STPB Oxalate .....	958.02	050.00	23	18.58	0.24	0.07	22	18.57	0.24	0.06
Soluble Potash, STPB Citrate .....	969.04	050.10	2	18.82	0.48	0.10	2	18.82	0.48	0.10
Soluble Potash, AA (Oxalate) .....		050.30	9	18.38	0.53	0.22	9	18.38	0.53	0.22
Soluble Potash, ICP (Oxalate) .....		050.50	7	18.58	0.40	0.23	7	18.58	0.40	0.23

MAGRUDER - Fertilizer Check Sample No. - 200403 Grade 19-19-19

- Pass 1 Results for 84 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
Soluble Potash, ICP (Citrate) .....		050.51	7	18.66	0.40	0.25	7	18.66	0.40	0.25
Soluble Potash, Flame (Oxalate) .....	983.02(a)	050.60	5	18.72	0.55	0.13	5	18.72	0.55	0.13
Soluble Potash, Flame (Citrate) .....	983.02(b)	050.61	6	18.68	0.42	0.14	5	18.55	0.28	0.06
Soluble Potash, Other .....		050.99	11	18.34	0.20	0.06	10	18.36	0.19	0.05
Method Group 050.XX PCT			70	18.55	0.38	0.13	65	18.52	0.35	0.11
Free Water, Vacuum Oven .....	965.08B	060.00	8	0.75	0.08	0.04	8	0.75	0.08	0.04
Acid Soluble Calcium, ICP .....		101.30	9	0.21	0.02	0.01	9	0.21	0.02	0.01
Acid Soluble Magnesium, AA .....	984.01	121.00	2	0.33	0.01	0.01	2	0.33	0.01	0.01
Acid Soluble Magnesium, ICP .....		121.30	10	0.32	0.03	0.01	9	0.32	0.03	0.00
Method Group 121.XX PCT			12	0.32	0.03	0.01	11	0.32	0.02	0.00
Sulfur, Gravimetric .....	980.02a	144.01	1	0.61	0.01	0.01	1	0.61	0.01	0.01
Sulfur, Spectrometric .....		144.70	1	0.59	0.01	0.02	1	0.59	0.01	0.02
Sulfur, Other .....		144.99	7	0.59	0.03	0.02	6	0.60	0.02	0.01
Method Group 144.XX PCT			9	0.60	0.03	0.02	8	0.60	0.02	0.01
Arsenic, Atomic Absorption .....		151.00	4	3.26	2.45	0.21	4	3.26	2.45	0.21
Arsenic, ICP .....		151.30	3	4.17	0.70	1.00	3	4.17	0.70	1.00
Arsenic, Other .....		151.99	1	4.00	0.00	0.00	1	4.00	0.00	0.00
Method Group 151.XX PPM			8	3.69	1.78	0.48	7	3.60	1.86	0.26
Acid Soluble Boron, Other .....		165.99	4	0.015	0.010	0.001	4	0.015	0.010	0.001
Cadmium, Atomic Absorption .....		181.00	5	1.79	0.24	0.29	5	1.79	0.24	0.29
Cadmium, ICP .....		181.30	7	1.61	0.20	0.05	6	1.58	0.19	0.01
Cadmium, Other .....		181.99	1	2.00	0.00	0.00	1	2.00	0.00	0.00
Method Group 181.XX PPM			14	1.76	0.29	0.13	13	1.73	0.28	0.10
Water Soluble Chlorine, Titrimetric ...	928.02	190.00	2	11.39	12.79	0.03	2	11.39	12.79	0.03
Water Soluble Chlorine, Other .....		190.99	2	14.61	0.35	0.10	2	14.61	0.35	0.10
Method Group 190.XX PCT			4	13.00	8.55	0.07	4	13.00	8.55	0.07
Chromium, ICP .....		191.30	9	38.86	2.76	1.16	8	39.14	2.71	0.80
Chromium, Other .....		191.99	1	39.00	0.00	0.00	1	39.00	0.00	0.00
Method Group 191.XX PPM			10	38.88	2.62	1.05	9	39.12	2.55	0.71
Acid Soluble Cobalt, AA .....		202.00	1	2.10	0.42	0.60	1	2.10	0.42	0.60
Acid Soluble Cobalt, ICP .....	965.11	202.30	8	1.43	0.32	0.23	7	1.42	0.29	0.12
Acid Soluble Cobalt, Other .....		202.99	2	1.24	0.57	0.61	2	1.24	0.57	0.61
Method Group 202.XX PPM			12	1.33	0.58	0.31	11	1.32	0.57	0.22
Acid Soluble Copper, Atomic Absorption	975.01	221.00	4	0.0005	0.0003	0.0000	4	0.0005	0.0003	0.0000
Acid Soluble Copper, ICP .....		221.30	9	0.1826	0.3503	0.0251	7	0.0019	0.0044	0.0009
Acid Soluble Copper, Other .....		221.99	1	1.0000	0.0000	0.0000	1	1.0000	0.0000	0.0000
Method Group 221.XX PCT			14	0.1890	0.3695	0.0162	12	0.0846	0.2820	0.0005
Acid Soluble Iron, Atomic Absorption ..	980.01	241.00	1	0.51	0.00	0.00	1	0.51	0.00	0.00
Acid Soluble Iron, ICP .....		241.30	8	0.49	0.02	0.01	7	0.49	0.03	0.00

MAGRUDER - Fertilizer Check Sample No. - 200403 Grade 19-19-19

- Pass 1 Results for 84 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
Method Group 241.XX PCT			9	0.50	0.02	0.01	8	0.49	0.02	0.00
Lead, Atomic Absorption .....		251.00	4	2.05	0.71	0.46	4	2.05	0.71	0.46
Lead, ICP .....		251.30	4	1.54	1.10	0.06	4	1.54	1.10	0.06
Lead, Other .....		251.99	1	1.00	0.00	0.00	1	1.00	0.00	0.00
Method Group 251.XX PPM			9	1.71	0.91	0.23	8	1.73	0.95	0.13
Acid Soluble Manganese, AA .....	972.02b	261.11	1	0.012	0.000	0.001	1	0.012	0.000	0.001
Acid Soluble Manganese, ICP .....	972.02a	261.30	8	0.012	0.001	0.000	7	0.012	0.001	0.000
Acid Soluble Manganese, Other .....		261.99	1	0.012	0.000	0.000	1	0.012	0.000	0.000
Method Group 261.XX PCT			10	0.012	0.001	0.000	9	0.012	0.001	0.000
Mercury, Atomic Absorption .....		281.00	1	0.13	0.02	0.03	1	0.13	0.02	0.03
Mercury, ICP .....		281.30	2	4.55	2.66	0.10	2	4.55	2.66	0.10
Mercury, Other .....		281.99	1	0.20	0.00	0.00	1	0.20	0.00	0.00
Method Group 281.XX PPM			4	2.36	2.92	0.06	4	2.36	2.92	0.06
Molybdenum, Atomic Absorption .....		289.00	1	2.75	0.21	0.30	1	2.75	0.21	0.30
Molybdenum, ICP .....		289.30	9	3.30	1.37	0.19	9	3.30	1.37	0.19
Molybdenum, Other .....		289.99	1	3.00	0.00	0.00	1	3.00	0.00	0.00
Method Group 289.XX PPM			11	3.23	1.25	0.19	11	3.23	1.25	0.19
Nickel, Atomic Absorption .....		291.00	2	5.98	1.13	0.15	2	5.98	1.13	0.15
Nickel, ICP .....		291.30	7	5.82	0.79	0.33	7	5.82	0.79	0.33
Nickel, Other .....		291.99	2	6.72	0.33	0.10	2	6.72	0.33	0.10
Method Group 291.XX PPM			11	6.02	0.84	0.25	11	6.02	0.84	0.25
Selenium, Atomic Absorption .....		301.00	1	0.05	0.01	0.01	1	0.05	0.01	0.01
Sodium, Atomic Absorption .....	983.04	311.00	1	0.40	0.02	0.03	1	0.40	0.02	0.03
Sodium, Flame Photometric .....	974.01	311.30	1	0.38	0.02	0.02	1	0.38	0.02	0.02
Sodium, Other .....		311.99	5	0.37	0.02	0.01	5	0.37	0.02	0.01
Method Group 311.XX PCT			7	0.37	0.02	0.02	7	0.37	0.02	0.02
Acid Soluble Zinc, Atomic Absorption ..	975.02	321.00	4	0.003	0.001	0.000	4	0.003	0.001	0.000
Acid Soluble Zinc, ICP .....		321.30	13	0.002	0.000	0.000	12	0.002	0.000	0.000
Acid Soluble Zinc, Other .....		321.99	1	0.003	0.000	0.000	1	0.003	0.000	0.000
Method Group 321.XX PCT			18	0.002	0.001	0.000	17	0.002	0.001	0.000

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: 010.16 PCT			Meth: 010.60 PCT			Meth: 010.XX 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>			420 7.30 -1.05			<u>Raney</u>			<u>Combustion</u>			377 20.70 1.78		
029	8.97 R	25.12				419	20.20	-.71	324	20.22	-.43	411	20.63	1.54
415	7.50	1.03	Meth: 009.10 PCT						234	20.18	-.62	292	20.65	1.54
288	7.45	.25	Ammon & Nitrate N			Meth: 010.60 PCT			406	20.17	-.65	024	20.64	1.51
Avg	7.44		<u>Devarda</u>			<u>Total Nitrogen</u>			325	20.17	-.66	362	20.63	1.47
324	7.36	-1.17	200	8.07	.86	<u>Combustion</u>			389	20.20	-.67	405	20.63	1.47
			Avg	7.70		330	20.75	2.00	232	20.15	-.72	072	20.57	1.39
			420	7.33	-.87	022	20.72	1.86	102	20.14	-.77	018	20.60	1.34
Meth: 001.99 PCT						377	20.70	1.77	177	20.12	-.86	354	20.39 R	1.23
<u>Ammoniacal Nitrogen</u>			Meth: 010.10 PCT			411	20.63	1.53	073	20.15	-.88	322	20.46	.76
<u>Other</u>			<u>Total Nitrogen</u>			292	20.65	1.52	114	20.23 R	-.89	009	20.44	.76
030	16.17 S	14.87	<u>Reduced Iron</u>			024	20.64	1.49	360	20.18	-.89	042	20.45	.70
419	15.15 S	13.03	072	19.95	.71	072	20.57 R	1.38	372	20.11	-.91	025	20.43	.60
363	9.15	2.10				018	20.60	1.31	043	20.09 R	-1.23	095	20.41	.56
397	8.15	.29	Meth: 010.11 PCT			009	20.44	.71	157	20.03	-1.28	247	20.42	.56
Avg	8.00		<u>Total Nitrogen</u>			042	20.45	.63	028	20.03	-1.28	409	20.41	.55
300	7.94	-.12	<u>Modified Comprehensi</u>			025	20.43	.53	027	19.88	-1.94	393	20.40	.53
320	7.89	-.22	322	20.46	1.72	040	20.33	.52	007	19.85	-2.08	040	20.33	.52
409	7.81	-.35	288	20.29	.72	095	20.41	.49	402	19.80	-2.30	029	20.36	.44
096	7.75	-.46	029	20.27	.59	247	20.42	.48	034	19.66 s	-2.99	131	20.38	.42
354	7.91 R	-.58	Avg	20.17		409	20.41	.47	369	19.55 s	-3.54	136	20.38	.41
420	7.30	-1.27	090	20.06	-.74	393	20.40	.46				106	20.38	.41
			414	20.05	-.78	029	20.36	.39	Meth: 010.99 PCT			049	20.37	.36
			415	20.03	-.85	131	20.38	.34	<u>Total Nitrogen</u>			296	20.36	.32
			363	20.06 X	-.90	136	20.38	.33	<u>Other</u>			096	20.34	.32
						106	20.38	.33	405	20.63	.71	422	20.34	.24
			Meth: 010.12 PCT			049	20.37	.27	362	20.63	.69	351	20.33	.23
			<u>Total Nitrogen</u>			096	20.34	.26	Avg	20.47		361	20.34	.22
			<u>Salicylic</u>			296	20.36	.23	211	20.23	-1.03	233	20.33	.21
			137	20.27	.97	351	20.33	.17	354	20.39	-1.20	231	20.33	.18
			416	20.20	.30	422	20.34	.14	368	19.79 S	-4.48	288	20.29	.13
			Avg	20.17		361	20.34	.13	030	18.23 S	-9.64	Avg	20.29	
			102	20.03	-1.21	233	20.33	.13	300	8.07 S	-53.37	137	20.27	-.11
			185	20.07 R	-2.20	231	20.33	.10				029	20.27	-.11
						Avg	20.31		Meth: 010.XX PCT			055	20.26	-.17
						055	20.26	-.26	<u>Total Nitrogen</u>			211	20.23	-.24
						035	20.27	-.33	330	20.75	1.99	035	20.27	-.26
						070	20.22	-.43	022	20.72	1.86	070	20.22	-.30
			* 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: 010.XX PCT			Meth: 020.10 PCT			Meth: 020.40 PCT			Meth: 020.XX PCT			Meth: 030.10 PCT		
<u>Total Nitrogen</u>			<u>Total Phosphate</u>			<u>Total Phosphate</u>			<u>Total Phosphate</u>			<u>Insoluble Phosphate</u>		
324	20.22	-.31	114	19.65	.43	114	19.65	.79	114	19.65	.79	405	0.10	1.26
416	20.20	-.39	Grav Quimociac			Automated			257	19.54 R	.77	Grav Quimociac		
234	20.18	-.48	Avg	19.58		Avg	19.72		361	19.64	.75	Avg 0.05		
406	20.17	-.51	414	19.52	-.52	096	19.63	-.36	096	19.63	.73	090 0.03 -.39		
325	20.17	-.52	405	19.50	-.59	409	19.53	-.70	397	19.63	.69	320 0.01 -.87		
389	20.20	-.56	090	19.43	-1.03	320	19.46	-.97	258	19.62	.66	Meth: 030.20 PCT		
419	20.20	-.56	Meth: 020.20 PCT			Meth: 020.50 PCT			422	19.56	.53	Insoluble Phosphate		
232	20.15	-.58	Total Phosphate			Total Phosphate			232	19.59	.53	Spectrometric		
102	20.14	-.62	Spectrometric			ICP			419	19.50	.46	363 0.37 S .00		
177	20.12	-.71	362	19.75	1.46	330	21.38 S	6.18	157	19.50	.40			
073	20.15	-.75	392	19.71	1.25	247	19.82	1.23	416	19.55	.33			
372	20.11	-.76	231	19.70	1.22	361	19.64	.67	414	19.52	.31	Meth: 030.40 PCT		
360	20.18	-.78	257	19.54 R	.89	422	19.56	.48	409	19.53	.26	Insoluble Phosphate		
114	20.23 R	-.80	397	19.63	.87	157	19.50	.34	292	19.52	.19	<u>Automated</u>		
090	20.06	-.98	258	19.62	.85	Avg	19.43		405	19.50	.15	409 0.06 1.06		
414	20.05	-1.03	232	19.59	.70	389	19.10	-1.03	Avg	19.47		Avg 0.05		
363	20.06 X	-1.05	419	19.50	.55	402	18.97	-1.46	320	19.46	-.05	096 0.04 -.61		
102	20.03	-1.07	416	19.55	.48	Meth: 020.99 PCT			090	19.43	-.22			
043	20.09	-1.08	292	19.52	.34	Total Phosphate			391	19.42	-.25	Meth: 030.99 PCT		
415	20.03	-1.09	Avg	19.44		Other			247	19.38	-.43	Insoluble Phosphate		
157	20.03	-1.10	391	19.42	-.15	418 19.45 1.00			418	19.45	-.44	<u>Other</u>		
028	20.03	-1.11	247	19.38	-.34	Avg 19.35			288	19.36	-.53	247 0.03 -.71		
185	20.07 R	-1.31	288	19.36	-.44	368 19.29 -.83			420	19.36	-.56			
027	19.88	-1.73	420	19.36	-.47	300 19.33 -.90			324	19.36	-.56	Meth: 030.XX PCT		
072	19.95 R	-1.84	324	19.36	-.49	Meth: 020.XX PCT			406	19.34	-.59	<u>Insoluble Phosphate</u>		
007	19.85	-1.86	406	19.34	-.50	Total Phosphate			369	19.33	-.66	363 0.37 s 10.26		
402	19.80	-2.07	369	19.33	-.57	095 21.51 s 9.06			234	19.30	-.77	405 0.10 1.82		
034	19.66	-2.72	234	19.30	-.69	330 21.38 s 8.56			300	19.33	-.83	409 0.06 R .86		
369	19.55 s	-3.24	363	19.34 R	-.91	193 20.10 A 2.87			368	19.29	-.90	Avg 0.04		
368	19.79 s	-3.97	200	19.15	-1.40	035 19.86 1.78			363	19.34 R	-.92	096 0.04 -.21		
030	18.23 s	-8.76	372	18.90	-2.62	411 19.83 1.61			200	19.15	-1.43	090 0.03 -.30		
300	8.07 s	-52.05	Meth: 020.10 PCT			Meth: 020.40 PCT			389	19.10	-1.65	247 0.03 -.48		
Total Phosphate			Total Phosphate			Total Phosphate			402	18.97	-2.25	320 0.01 -.91		
<u>Grav Quimociac</u>			<u>Automated</u>			<u>Automated</u>			372	18.90	-2.57	Meth: 040.10 PCT		
095	21.51 S	12.36	193	20.10	1.57	247 19.82 1.55			042	19.14 s	-2.89	InDir Available Phos		
411	19.83	1.63	035	19.86	.69	362 19.75 1.24			Grav Quim					
* X=Excluded from lab performance			S/s=Screened Outlier			R=Duplicate Range too large			A=Analysis beyond 3-s limits					
									405 19.40 1.05					

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>			072 22.05 s 9.03			177 19.26		- .75
090 19.40 .63			137 20.73 s 8.08			Avg 19.21			072 20.98 s 5.26			397 19.26		- .82
Avg 19.40			254 19.70 1.39			029 19.16 - .16			137 20.73 s 4.38			055 19.25		- .84
			009 19.69 1.29			027 18.81 -1.27			018 20.15 2.42			025 19.23		- .87
Meth: 040.20 PCT			131 19.66 1.13			393 18.73 R -1.59			351 20.10 2.22			288 19.22		- .91
<u>InDir Available Phos</u>			233 19.65 1.06						360 19.75 1.10			029 19.16		-1.10
<u>Spectrometri</u>			102 19.63 .91			Meth: 041.50 PCT			106 19.77 1.08			070 19.43 R		-1.12
289 19.51 .87			049 19.49 R .72			<u>Dir Available Phosph</u>			007 19.67 .96			325 19.12		-1.24
Avg 19.24			185 19.49 .59			<u>ICP</u>			073 19.67 .93			055 19.09		-1.36
363 18.97 - .87			296 19.55 .43			360 19.75 1.00			034 19.74 .93			027 18.81		-2.32
			136 19.50 .30			007 19.67 .88			393 19.64 R .89			393 18.73		-2.64
Meth: 040.40 PCT			040 19.52 .18			393 19.64 .81			254 19.70 .79			354 18.60 s		-3.12
<u>InDir Available Phos</u>			Avg 19.49			Avg 19.50			009 19.69 .74			030 18.47 s		-3.54
<u>Automated</u>			211 19.47 - .11			361 19.40 - .35			028 19.67 .69			200 17.56 s		-6.72
096 19.60 .92			177 19.38 - .71			070 19.43 -1.11			131 19.66 .65					
Avg 19.53			260 19.37 - .80			325 19.12 -1.31			233 19.65 .62			Meth: 048.20 PCT		
409 19.47 - .81			322 19.36 - .84			354 18.60 S -3.15			415 19.64 .59			<u>Water Soluble Phosph</u>		
			414 19.33 -1.26						095 19.60 .56			<u>Spectrometric</u>		
Meth: 040.99 PCT			029 19.29 -1.34			Meth: 041.60 PCT			102 19.63 .53			193 18.15		1.24
<u>InDir Available Phos</u>			055 19.25 -1.66			<u>Dir Available Phosph</u>			131 19.63 .53			362 17.86		.45
<u>Other</u>						<u>EDTA Extract</u>			362 19.62 .52			096 17.83		.30
247 19.36 .71			Meth: 041.20 PCT			018 20.15 1.86			377 19.59 .44			Avg 17.73		
			<u>Dir Available Phosph</u>			351 20.10 1.67			049 19.49 .39			420 17.62		- .33
			<u>Spectrometric</u>			073 19.67 .64			185 19.49 .32			363 17.18		-1.60
Meth: 040.XX PCT			106 19.77 1.08			034 19.74 .48			296 19.55 .27					
<u>InDir Available Phos</u>			415 19.64 .53			095 19.60 .34			136 19.50 .17			Meth: 048.99 PCT		
096 19.60 1.08			362 19.62 .47			028 19.67 .25			040 19.52 .14			<u>Water Soluble Phosph</u>		
289 19.51 .73			Avg 19.50			Avg 19.59			Avg 19.47			<u>Other</u>		
409 19.47 .44			419 19.40 - .54			377 19.59 - .16			211 19.47 - .01			275 18.37 X		1.07
405 19.40 .14			055 19.09 -1.59			043 19.44 - .51			043 19.44 - .16			Avg 17.96		
090 19.40 .09			030 18.47 S -3.96			296 19.42 - .55			296 19.42 - .19			247 17.55		- .59
Avg 19.38						177 19.26 -1.07			361 19.40 - .27					
247 19.36 - .20			Meth: 041.40 PCT			397 19.26 -1.11			177 19.38 - .33			Meth: 048.XX PCT		
363 18.97 -2.13			<u>Dir Available Phosph</u>			288 19.22 -1.21			260 19.37 - .38			<u>Water Soluble Phosph</u>		
			<u>Automated</u>			200 17.56 s -6.56			322 19.36 - .41			275 18.37 R		2.84
Meth: 041.10 PCT			072 22.05 S 9.22						419 19.40 - .44			193 18.15		1.43
<u>Dir Available Phosph</u>			131 19.63 1.36						414 19.33 - .64			362 17.86		.57
<u>Grav Quimociac</u>			025 19.23 .08						029 19.29 - .67			096 17.83		.42
072 20.98 s 9.71														
* 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	Lab	Average*	Index
Meth: 048.XX PCT			Meth: 050.10 PCT			Meth: 050.51 PCT			Meth: 050.99 PCT			Meth: 050.XX PCT		
<u>Water Soluble Phosph</u>			Soluble Potash			Soluble Potash			Soluble Potash			<u>Soluble Potash</u>		
Avg	17.70		<u>STPB Citrate</u>			<u>ICP (Citrate)</u>			<u>Other</u>			300	18.68	.44
420	17.62	-.27	022	18.41	-.88	361	18.45	-.52	419	18.30	-.31	177	18.68	.44
247	17.55	-.48	Meth: 050.30 PCT			007	18.58	-.77	027	18.26	-.57	131	18.67	.41
363	17.18	-1.63	Soluble Potash			389	18.35	-.78	260	18.26	-.61	029	18.65	.38
Meth: 050.00 PCT			<u>AA (Oxalate)</u>			393	18.29	-.96	360	18.22	-.74	028	18.63	.31
Soluble Potash			369	19.48	2.09	Meth: 050.60 PCT			289	18.15 R	-1.25	009	18.60	.23
<u>STPB Oxalate</u>			137	19.03	1.22	Soluble Potash			368	18.04	-1.66	211	18.59	.19
391	18.95	1.58	040	18.43	.28	<u>Flame (Oxalate)</u>			072	10.82 s	-38.69	233	18.58	.16
193	18.83 R	1.30	Avg	18.38		415	19.68	1.76	Meth: 050.XX PCT			114	18.56	.16
102	18.80	.96	397	18.27	-.36	Avg	18.72		<u>Soluble Potash</u>			350	18.57	.16
073	18.79	.94	185	18.10	-.56	028	18.63	-.16	254	21.30 s	8.00	372	18.54	.08
345	18.79	.91	363	18.19	-.56	406	18.52	-.37	042	19.81 s	4.39	Avg	18.52	
043	18.77	.85	136	18.03	-.69	055	18.61	-.38	415	19.68 A	3.34	095	18.51	-.05
392	18.75	.79	351	17.99	-.76	288	18.15	-1.04	330	19.39 s	2.93	406	18.52	-.08
257	18.73	.66	420	17.93	-.86	Meth: 050.61 PCT			369	19.48	2.78	231	18.50	-.16
055	18.68	.48	234	7.79 s	-20.02	Soluble Potash			018	19.35 R	2.49	361	18.45	-.21
131	18.67	.42	Meth: 050.50 PCT			<u>Flame (Citrate)</u>			070	19.36	2.47	325	18.43	-.27
029	18.65	.40	Soluble Potash			018	19.35 R	2.98	322	19.23	2.03	029	18.43	-.28
211	18.59	.10	<u>ICP (Oxalate)</u>			025	18.88	1.18	422	19.16	1.85	232	18.40	-.36
233	18.58	.06	422	19.16	1.45	034	18.84	1.06	137	19.03	1.45	049	18.41	-.37
Avg	18.57		106	18.82	.73	Avg	18.55		377	18.98	1.38	022	18.41	-.43
416	18.56	-.03	324	18.60	.57	029	18.43	-.44	391	18.95	1.22	035	18.38	-.44
350	18.57	-.15	157	18.75	.50	035	18.38	-.62	025	18.88	1.03	090	18.37	-.46
114	18.56	-.19	Avg	18.58		030	18.22	-1.19	193	18.83	1.00	040	18.43	-.48
095	18.51	-.24	372	18.54	-.12	Meth: 050.99 PCT			106	18.82	.99	418	18.35	-.50
231	18.50	-.34	292	18.21	-.96	Soluble Potash			034	18.84	.93	389	18.35	-.52
049	18.41	-.69	354	17.97	-1.53	<u>Other</u>			007	18.58 R	.88	419	18.30	-.64
090	18.37	-.84	Meth: 050.51 PCT			042	19.81 s	8.55	102	18.80	.79	258	18.28	-.75
258	18.28	-1.25	Soluble Potash			330	19.39 s	5.94	073	18.79	.77	393	18.29	-.76
072	18.01	-2.31	<u>ICP (Citrate)</u>			300	18.68	1.62	345	18.79	.76	027	18.26	-.77
411	18.00	-2.39	254	21.30 s	6.59	177	18.68	1.62	157	18.75	.72	260	18.26	-.79
Meth: 050.10 PCT			070	19.36	1.81	325	18.43	.36	043	18.77	.71	397	18.27	-.86
Soluble Potash			377	18.98	.89	232	18.40	.23	324	18.60 R	.70	360	18.22	-.88
<u>STPB Citrate</u>			Avg	18.66		Avg	18.36		392	18.75	.67	030	18.22	-.89
322	19.23	.85	009	18.60	-.18	418	18.35	-.05	257	18.73	.58	292	18.21	-.97
Avg	18.82		Meth: 050.51 PCT			Soluble Potash			055	18.61	.58	288	18.15	-1.10
* X=Excluded from lab performance			S/s=Screened Outlier			R=Duplicate Range too large			055	18.68	.46	289	18.15	-1.14
			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
<u>Meth: 050.XX PCT</u>			<u>Meth: 101.30 PCT</u>			<u>Meth: 121.XX PCT</u>			<u>Meth: 144.XX PCT</u>			<u>Meth: 151.XX PPM</u>		
<u>Soluble Potash</u>			<u>Acid Soluble Calcium</u>			<u>Acid Soluble Magnesi</u>			<u>Sulfur</u>			<u>Arsenic</u>		
363	18.19 R	-1.17	ICP			288	0.31	-.61	Avg	0.60		Avg	3.60	
185	18.10	-1.25	393	0.20	-.73	419	0.31	-.61	009	0.59	-.57	296	1.30	-1.25
368	18.04	-1.40	288	0.20	-1.06	009	0.30	-1.02	419	0.59	-.61	193	0.90	-1.46
136	18.03	-1.46				393	0.30	-1.24	247	0.59	-.80			
072	18.01	-1.48	<u>Meth: 121.00 PCT</u>			320	0.29 R	-1.77	232	0.57	-1.53	<u>Meth: 165.99 PCT</u>		
411	18.00	-1.53	<u>Acid Soluble Magnesi</u>			<u>Meth: 144.01 PCT</u>			363	0.54 R	-3.53	<u>Acid Soluble Boron</u>		
351	17.99	-1.56	<u>AA</u>			<u>Sulfur</u>			422	0.43 s	-8.70	<u>Other</u>		
354	17.97	-1.63	193	0.33	.79	<u>Gravimetric</u>			<u>Meth: 151.00 PPM</u>			009	0.027	1.27
420	17.93	-1.73	Avg	0.33		288	0.72 S	21.03	<u>Arsenic</u>			422	0.018	.30
072	10.82 s	-22.19	095	0.33	-.93	102	0.61	.71	<u>Atomic Absorption</u>			Avg	0.015	
234	7.79 s	-30.93	<u>Meth: 121.30 PCT</u>			Avg	0.61		040	6.48	1.32	288	0.012	-.27
			<u>Acid Soluble Magnesi</u>			<u>Meth: 144.70 PCT</u>			136	4.35	.45	232	0.002	-1.31
			<u>ICP</u>			<u>Sulfur</u>			Avg	3.26		<u>Meth: 181.00 PPM</u>		
			422	1.15 s	30.98	<u>Spectrometric</u>			296	1.30	-.80	<u>Cadmium</u>		
			131	0.38	2.24	247	0.59	.71	193	0.90	-.96	<u>Atomic Absorption</u>		
			035	0.35	.83	<u>Meth: 144.99 PCT</u>			<u>Meth: 151.30 PPM</u>			289	25.55 s	97.84
			102	0.33	.39	<u>Sulfur</u>			<u>Arsenic</u>			193	2.05	1.49
			Avg	0.32		<u>Other</u>			<u>ICP</u>			136	1.90	.95
			361	0.32	-.15	361	0.63	1.24	288	4.30	1.43	Avg	1.79	
			232	0.32	-.25	320	0.62	.93	Avg	4.17		397	1.69	-.44
			288	0.31	-.52	035	0.61	.55	106	4.05	-.18	040	1.70	-.64
			419	0.31	-.52	Avg	0.60		102	4.15	-.64	296	1.60	-.87
			009	0.30	-.89	009	0.59	-.57	<u>Meth: 151.99 PPM</u>			<u>Meth: 181.30 PPM</u>		
			393	0.30	-1.10	419	0.59	-.62	<u>Arsenic</u>			<u>Cadmium</u>		
			320	0.29 R	-1.58	232	0.57	-1.45	<u>Other</u>			<u>ICP</u>		
			<u>Meth: 101.30 PCT</u>			<u>Meth: 121.XX PCT</u>			409	4.00	.00	324	2.40 s	4.24
			<u>Acid Soluble Calcium</u>			<u>Acid Soluble Magnesi</u>			<u>Meth: 151.XX PPM</u>			393	1.76 R	1.14
			<u>ICP</u>			<u>Sulfur</u>			<u>Arsenic</u>			232	1.77	.95
			422	2.37 s	122.03	422	1.15 s	34.21	040	6.48	1.55	106	1.70	.61
			035	0.25	1.97	131	0.38	2.45	288	4.30 R	.66	102	1.68	.51
			320	0.23	1.00	035	0.35	.88	136	4.35	.40	419	1.60	.09
			361	0.23	.74	102	0.33	.40	102	4.15	.38	Avg	1.58	
			419	0.22	.30	193	0.33	.29	106	4.05	.24	035	1.55	-.20
			Avg	0.21		095	0.33	.17	102	4.15	.38	009	1.20	-1.98
			102	0.20	-.54	Avg	0.32		409	4.00	.21			
			009	0.20	-.72	361	0.32	-.20	<u>* X=Excluded from lab performance S/s=Screened Outlier R=Duplicate Range too large A=Analysis beyond 3-s limits</u>					
			232	0.20	-.72	232	0.32	-.31						



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: 181.99 PPM			Meth: 190.XX PCT			Meth: 191.XX PPM			Meth: 202.XX PPM			Meth: 221.99 PCT		
<u>Cadmium</u>			<u>Water Soluble Chlori</u>			<u>Chromium</u>			<u>Acid Soluble Cobalt</u>			<u>Acid Soluble Copper</u>		
<u>Other</u>			422 22.47 1.11			Avg 39.12			193 5.00 s 6.45			<u>Other</u>		
409 2.00 .00			288 14.90 .22			409 39.00 -.05			136 2.10 1.46			368 12.675 S .00		
			009 14.32 .15			288 37.00 -.83			368 1.47 R 1.10			409 1.0000 .00		
Meth: 181.XX PPM			Avg 13.00			324 36.05 -1.21			320 1.50 .93			Avg 1.0000		
<u>Cadmium</u>			232 0.32 -1.48			035 36.65 R -1.26			102 1.76 .83					
289 25.55 s 84.56						232 35.30 -1.53			040 1.65 .59			Meth: 221.XX PCT		
324 2.40 2.36			Meth: 191.00 PPM						009 1.65 .59			<u>Acid Soluble Copper</u>		
193 2.05 R 1.43			<u>Chromium</u>			Meth: 202.00 PPM			232 1.35 .10			368 12.675 s 45.47		
409 2.00 .94			<u>Atomic Absorption</u>			<u>Acid Soluble Cobalt</u>			Avg 1.32			393 1.6800 s 6.01		
136 1.90 .92			193 94.00 S .00			<u>AA</u>			106 1.30 -.03			409 1.0000 3.25		
393 1.76 .47						193 5.00 S 6.84			288 1.25 -.15			232 0.8800 R 2.83		
232 1.77 .11			Meth: 191.30 PPM			Avg 2.10			409 1.00 -.56			389 0.7500 R 2.37		
Avg 1.73			<u>Chromium</u>			136 2.10 -.71			389 0.95 -.65			Avg 0.0846		
106 1.70 -.12			<u>ICP</u>						324 0.00 -2.31			402 0.0120 -.26		
102 1.68 -.19			393 42.85 1.37			Meth: 202.30 PPM						422 0.0010 -.30		
397 1.69 -.21			009 41.70 .96			<u>Acid Soluble Cobalt</u>						193 0.0010 -.30		
419 1.60 -.48			389 41.00 .78			<u>ICP</u>			Meth: 221.00 PCT			029 0.0005 -.30		
040 1.70 -.48			419 39.50 .23			320 1.50 R 1.77			<u>Acid Soluble Copper</u>			043 0.0003 -.30		
296 1.60 -.59			102 39.70 .21			102 1.76 1.35			<u>Atomic Absorption</u>			330 0.0002 -.30		
035 1.55 -.66			Avg 39.14			009 1.65 .83			193 0.0010 1.54			296 0.0002 -.30		
009 1.20 -1.90			288 37.00 -.79			040 1.65 .83			Avg 0.0005			106 0.0001 -.30		
			324 36.05 -1.14			Avg 1.42			029 0.0005 -.16			324 0.0001 -.30		
Meth: 190.00 PCT			035 36.65 R -1.19			232 1.35 -.29			043 0.0003 -.68			102 0.0001 -.30		
<u>Water Soluble Chlori</u>			232 35.30 -1.44			106 1.30 -.40			296 0.0002 -.81			419 0.0000 -.30		
<u>Titrimetric</u>						288 1.25 -.60								
422 22.47 .87			Meth: 191.99 PPM			389 0.95 -1.63			Meth: 221.30 PCT					
Avg 11.39			<u>Chromium</u>			324 0.00 s -4.93			<u>Acid Soluble Copper</u>					
232 0.32 -.87			<u>Other</u>						<u>ICP</u>					
			409 39.00 .00			Meth: 202.99 PPM			393 1.6800 s 399.55					
Meth: 190.99 PCT						<u>Acid Soluble Cobalt</u>			232 0.8800 R 198.42					
<u>Water Soluble Chlori</u>			Meth: 191.XX PPM			<u>Other</u>			389 0.7500 R 169.03					
<u>Other</u>			<u>Chromium</u>			368 1.47 1.15			402 0.0120 2.37					
288 14.90 .89			193 94.00 s 21.52			Avg 1.24			Avg 0.0019					
Avg 14.61			393 42.85 1.47			409 1.00 -.41			422 0.0010 -.21					
009 14.32 -.84			009 41.70 1.02						330 0.0002 -.39					
			389 41.00 .83						106 0.0001 -.41					
			419 39.50 .25						324 0.0001 -.41					
			102 39.70 .23						102 0.0001 -.41					
									419 0.0000 -.43					
									035 0.51 .63					

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 241.30 PCT Acid Soluble Iron			Meth: 251.30 PPM Lead			Meth: 261.30 PCT Acid Soluble Mangane			Meth: 281.30 PPM Mercury			Meth: 289.99 PPM Molybdenum		
<u>ICP</u>			<u>ICP</u>			<u>ICP</u>			<u>ICP</u>			<u>Other</u>		
Avg	0.49		393	12.09 S	9.57	035	0.013	.81	040	6.85	.87	409	3.00	.00
009	0.48	-.55	419	3.10	1.41	102	0.013	.75	Avg	4.55				
402	0.47	-.88	035	1.72	.17	009	0.013	.54	106	2.25	-.87			
232	0.45	-1.71	Avg	1.54		288	0.013	.31				Meth: 289.99 PPM Molybdenum		
393	0.19 s	-11.61	106	1.05	-.45	320	0.013	.25	Meth: 281.99 PPM Mercury			393	5.91	2.15
			102	0.30	-1.13	Avg	0.012		<u>Other</u>			422	5.61	1.92
Meth: 241.99 PCT Acid Soluble Iron			Meth: 251.99 PPM Lead			422 0.011 R -1.55			409 0.20 .00			Avg 3.23		
<u>Other</u>			<u>Other</u>			393 0.010 -2.17			Meth: 281.99 PPM Mercury			409 3.00 -.18		
362	0.64 S	.00	409	1.00	.00	Meth: 261.99 PCT Acid Soluble Mangane			Meth: 281.99 PPM Mercury			419 3.00 -.24		
Meth: 241.99 PCT Acid Soluble Iron			Meth: 251.99 PPM Lead			419 0.012 .00			040 6.85 1.54			040 2.75 -.40		
<u>Other</u>			<u>Other</u>			Meth: 261.99 PCT Acid Soluble Mangane			Avg 2.36			009 2.70 -.42		
362	0.64 s	5.74	393	12.09 s	10.89	419 0.012 .00			106 2.25 -.04			288 2.65 -.46		
422	0.52	.92	419	3.10	1.44	Meth: 261.99 PCT Acid Soluble Mangane			409 0.20 -.74			102 2.52 -.57		
288	0.52	.85	397	2.70	1.03	419 0.012 .00			193 0.13 -.76			232 2.55 -.58		
102	0.51	.70	040	2.60	.91	Meth: 261.99 PCT Acid Soluble Mangane			Meth: 289.00 PPM Molybdenum			324 2.45 -.62		
320	0.50 R	.69	Avg	1.73		035 0.013 1.01			Atomic Absorption			389 2.35 -.70		
035	0.51	.61	035	1.72	-.07	102 0.013 .92			040 2.75 .71			Meth: 291.00 PPM Nickel		
193	0.51	.42	136	1.40	-.41	009 0.013 .71			Meth: 289.30 PPM Molybdenum			Atomic Absorption		
Avg	0.49		193	1.50 R	-.58	288 0.013 .44			ICP			136 6.95 .87		
009	0.48	-.64	106	1.05	-.72	320 0.013 .38			393 5.91 1.90			Avg 5.98		
402	0.47	-.99	409	1.00	-.77	Avg 0.012			422 5.61 1.69			193 5.00 -.86		
232	0.45	-1.87	102	0.30	-1.51	419 0.012 -.24			Avg 3.30			Meth: 291.30 PPM Nickel		
393	0.19 s	-12.36				232 0.012 -.29			419 3.00 -.27			<u>ICP</u>		
Meth: 251.00 PPM Lead			Meth: 261.00 PCT Acid Soluble Mangane			095 0.012 -.56			009 2.70 -.44			393 13.54 s 9.77		
<u>Atomic Absorption</u>			<u>AA</u>			422 0.011 R -1.64			288 2.65 -.48			288 7.25 1.82		
397	2.70	.94	193	0.002 S	.00	393 0.010 -2.31			102 2.52 -.58			102 6.32 .64		
040	2.60	.78				193 0.002 s -11.12			232 2.55 -.58			009 6.00 .34		
Avg	2.05		Meth: 261.11 PCT Acid Soluble Mangane			Meth: 281.00 PPM Mercury			324 2.45 -.62			Avg 5.82		
136	1.40	-.96	<u>AA</u>			Atomic Absorption			389 2.35 -.70			232 5.80 -.51		
193	1.50	-1.05	095	0.012	.71	193 0.13 .71			Meth: 289.30 PPM Molybdenum			419 5.25 -.73		
						Meth: 281.00 PPM Mercury			ICP			106 5.15 -.86		
						Atomic Absorption			393 5.91 1.90			324 5.00 -1.07		
						193 0.13 .71			422 5.61 1.69					
						Meth: 281.00 PPM Mercury			Avg 3.30					
						Atomic Absorption			419 3.00 -.27					
						193 0.13 .71			009 2.70 -.44					
						Meth: 281.00 PPM Mercury			288 2.65 -.48					
						Atomic Absorption			102 2.52 -.58					
						193 0.13 .71			232 2.55 -.58					
						Meth: 281.00 PPM Mercury			324 2.45 -.62					
						Atomic Absorption			389 2.35 -.70					
						193 0.13 .71			Meth: 289.30 PPM Molybdenum					
						Meth: 281.00 PPM Mercury			ICP					
						Atomic Absorption			393 5.91 1.90					
						193 0.13 .71			422 5.61 1.69					
						Meth: 281.00 PPM Mercury			Avg 3.30					
						Atomic Absorption			419 3.00 -.27					
						193 0.13 .71			009 2.70 -.44					
						Meth: 281.00 PPM Mercury			288 2.65 -.48					
						Atomic Absorption			102 2.52 -.58					
						193 0.13 .71			232 2.55 -.58					
						Meth: 281.00 PPM Mercury			324 2.45 -.62					
						Atomic Absorption			389 2.35 -.70					
						193 0.13 .71			Meth: 289.30 PPM Molybdenum					
						Meth: 281.00 PPM Mercury			ICP					
						Atomic Absorption			393 5.91 1.90					
						193 0.13 .71			422 5.61 1.69					
						Meth: 281.00 PPM Mercury			Avg 3.30					
						Atomic Absorption			419 3.00 -.27					
						193 0.13 .71			009 2.70 -.44					
						Meth: 281.00 PPM Mercury			288 2.65 -.48					
						Atomic Absorption			102 2.52 -.58					
						193 0.13 .71			232 2.55 -.58					
						Meth: 281.00 PPM Mercury			324 2.45 -.62					
						Atomic Absorption			389 2.35 -.70					
						193 0.13 .71			Meth: 289.30 PPM Molybdenum					
						Meth: 281.00 PPM Mercury			ICP					
						Atomic Absorption			393 5.91 1.90					
						193 0.13 .71			422 5.61 1.69					
						Meth: 281.00 PPM Mercury			Avg 3.30					
						Atomic Absorption			419 3.00 -.27					
						193 0.13 .71			009 2.70 -.44					
						Meth: 281.00 PPM Mercury			288 2.65 -.48					
						Atomic Absorption			102 2.52 -.58					
						193 0.13 .71			232 2.55 -.58					
						Meth: 281.00 PPM Mercury			324 2.45 -.62					
						Atomic Absorption			389 2.35 -.70					
						193 0.13 .71			Meth: 289.30 PPM Molybdenum					
						Meth: 281.00 PPM Mercury			ICP					
						Atomic Absorption			393 5.91 1.90					
						193 0.13 .71			422 5.61 1.69					
						Meth: 281.00 PPM Mercury			Avg 3.30					
						Atomic Absorption			419 3.00 -.27					
						193 0.13 .71			009 2.70 -.44					
						Meth: 281.00 PPM Mercury			288 2.65 -.48					
						Atomic Absorption			102 2.52 -.58					
						193 0.13 .71			232 2.55 -.58					
						Meth: 281.00 PPM Mercury			324 2.45 -.62					
						Atomic Absorption			389 2.35 -.70					
						193 0.13 .71			Meth: 289.30 PPM Molybdenum					

\* 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: 291.99 PPM			Meth: 311.99 PCT			Meth: 321.30 PCT			Meth: 321.XX PCT					
<u>Nickel</u>			<u>Sodium</u>			<u>Acid Soluble Zinc</u>			<u>Acid Soluble Zinc</u>					
<u>Other</u>			<u>Other</u>			<u>ICP</u>			095 0.002 -1.19					
409	7.00	.84	422	0.56 S	9.65	102	0.002	.33	422	0.002 R	-1.59	389	0.001	-1.90
Avg	6.72		102	0.40	1.47	320	0.002	.33						
035	6.45	-.89	288	0.38	.42	288	0.002	.17						
			009	0.37	.31	Avg	0.002							
			Avg	0.37		232	0.002	-.20						
Meth: 291.XX PPM			Meth: 311.XX PCT			Meth: 321.99 PCT			Meth: 321.XX PCT					
<u>Nickel</u>			<u>Sodium</u>			<u>Acid Soluble Zinc</u>			<u>Other</u>					
393	13.54 s	8.97	422	0.56 s	8.88	389	0.001	-2.37	409	0.003	.00			
288	7.25	1.48	193	0.40	1.31									
409	7.00	1.17	102	0.40	1.14									
136	6.95	1.13	320	0.38	.60									
035	6.45	.52	288	0.38	.24									
102	6.32	.38	Avg	0.37										
Avg	6.02		009	0.37	-.32									
009	6.00	-.24	035	0.36	-1.00									
232	5.80	-.54	232	0.34	-1.40									
419	5.25	-.91												
106	5.15	-1.03												
193	5.00	-1.21												
324	5.00	-1.23												
Meth: 301.00 PPM			Meth: 321.00 PCT			Meth: 321.30 PCT			Meth: 321.99 PCT					
<u>Selenium</u>			<u>Acid Soluble Zinc</u>			<u>Acid Soluble Zinc</u>			<u>Other</u>					
<u>Atomic Absorption</u>			<u>Atomic Absorption</u>			<u>Atomic Absorption</u>			<u>Other</u>					
040	0.05	.71	043	0.006 S	3.62	330	0.003	.86	409	0.003	.84			
			193	0.003	1.04	409	0.003	.84						
			029	0.003	.78	035	0.003	.58						
Meth: 311.00 PCT			Meth: 321.30 PCT			Meth: 321.99 PCT			Meth: 321.XX PCT					
<u>Sodium</u>			<u>Acid Soluble Zinc</u>			<u>Acid Soluble Zinc</u>			<u>Other</u>					
<u>Atomic Absorption</u>			<u>Atomic Absorption</u>			<u>Atomic Absorption</u>			<u>Other</u>					
193	0.40	-.71	028	0.002	-.63	102	0.002	-.05	409	0.003	.00			
			095	0.002	-1.19	320	0.002	-.05						
						288	0.002	-.29						
						028	0.002	-.34						
						009	0.002	-.39						
						232	0.002	-.41						
						324	0.002	-.58						
						419	0.002	-.59						
						106	0.002	-.69						

\* 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	4	5.53	11.09	5.97	050.99	14	- 1.93	10.88	1.36
001.99	10	2.77	5.97	0.27	050.XX	72	- 0.31	4.20	1.29
001.XX	14	2.35	5.61	0.50	060.00	9	9.27	27.82	0.32
009.10	2	0.00	1.22	0.05	060.XX	9	9.27	27.82	0.32
009.XX	2	0.00	1.22	0.05	101.30	10	12.20	38.60	0.69
010.11	7	0.00	0.99	0.29	101.XX	10	12.20	38.60	0.69
010.12	4	- 0.22	1.01	1.02	121.00	2	0.00	0.79	0.66
010.60	51	- 0.13	1.14	0.32	121.30	11	2.68	9.43	0.48
010.99	7	- 9.42	19.71	1.36	121.XX	13	2.50	9.57	0.49
010.XX	68	- 0.99	6.45	0.55	144.01	2	8.29	11.73	9.15
020.10	6	2.06	5.13	0.23	144.99	8	- 1.35	2.96	0.62
020.20	21	0.00	0.96	0.28	144.XX	11	- 0.55	3.49	1.45
020.40	6	- 0.37	1.27	0.91	151.00	4	0.00	1.08	0.05
020.50	7	0.87	2.50	0.38	151.30	3	0.00	0.18	0.90
020.99	3	0.00	0.62	0.76	151.XX	8	0.05	0.97	0.21
020.XX	42	0.43	2.15	0.53	165.99	4	0.000	1.075	0.088
030.10	3	0.00	1.12	0.00	165.XX	4	0.000	1.075	0.088
030.40	2	0.00	0.80	0.66	181.00	6	16.31	39.95	0.62
030.XX	7	1.49	3.79	1.11	181.30	8	0.64	1.73	0.24
040.10	2	0.00	0.00	0.87	181.XX	15	5.71	21.83	0.36
040.20	2	0.00	1.19	0.22	190.00	2	0.00	1.22	0.00
040.40	2	0.00	1.13	0.33	190.99	2	0.00	1.19	0.20
040.XX	7	0.00	1.01	0.22	190.XX	4	0.00	1.08	0.01
041.10	19	0.94	2.96	0.31	191.30	9	- 0.10	1.00	0.31
041.20	6	- 0.66	1.86	0.24	191.XX	11	1.87	6.59	0.30
041.40	6	1.28	4.03	0.19	202.00	2	3.42	4.83	0.50
041.50	7	- 0.44	1.38	0.61	202.30	9	- 0.52	1.87	0.63
041.60	13	- 0.50	2.05	0.27	202.99	2	0.00	0.59	0.76
041.XX	44	0.03	1.98	0.49	202.XX	13	0.52	1.99	0.42
048.20	5	0.00	1.05	0.16	221.00	4	0.0000	1.0735	0.1036
048.99	2	0.00	0.84	0.63	221.30	10	74.494	131.34	41.018
048.XX	7	0.30	1.23	0.74	221.99	2	0.0000	0.0000	0.0000
050.00	23	0.05	1.00	0.22	221.XX	16	3.4683	11.131	2.2012
050.10	2	0.00	1.21	0.15	241.30	9	- 1.25	3.99	0.21
050.30	10	- 2.00	6.40	0.23	241.XX	11	- 0.57	4.36	0.21
050.50	7	0.00	0.98	0.33	251.00	4	0.00	0.98	0.40
050.51	8	0.82	2.49	0.38	251.30	5	1.91	4.38	0.03
050.60	5	0.00	1.05	0.16	251.XX	10	1.06	3.57	0.19
050.61	6	0.47	1.49	0.38	261.30	8	- 0.155	1.048	0.356

## 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
261.XX	11	- 1.126	3.457	0.347					
281.30	2	0.00	1.22	0.02					
281.XX	4	0.00	1.08	0.01					
289.30	9	0.00	1.03	0.09					
289.XX	11	0.00	1.02	0.10					
291.00	2	0.00	1.22	0.09					
291.30	8	1.22	3.58	0.24					
291.99	2	0.00	1.19	0.20					
291.XX	12	0.75	2.76	0.19					
311.99	6	1.61	4.03	0.34					
311.XX	8	1.11	3.26	0.41					
321.00	5	0.721	1.855	0.223					
321.30	14	0.910	3.974	1.118					
321.XX	19	0.817	2.684	0.646					