

MAGRUDER - Fertilizer Check Sample No. - 200607 Grade 12-0-18

- Pass 1 Results for 76 Labs - - Pass 2 Results for 76 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	8.55	0.20	0.03	6	8.55	0.20	0.03
Ammoniacal Nitrogen, Other		001.99	7	8.78	0.15	0.05	6	8.79	0.16	0.03
Method Group 001.XX PCT			13	8.67	0.21	0.04	12	8.67	0.21	0.03
Nitrate Nitrogen, Other		002.99	1	0.06	0.02	0.03	1	0.06	0.02	0.03
Water Insoluble Nitrogen, Other		003.99	1	1.11	0.00	0.00	1	1.11	0.00	0.00
Nitrogen From Urea, Urease (as N)	959.03	005.00	2	7.03	5.87	0.50	2	7.03	5.87	0.50
Nitrogen From Urea, Other		005.99	4	2.88	0.65	0.05	4	2.88	0.65	0.05
Method Group 005.XX PCT			7	5.61	4.84	0.18	6	4.53	4.33	0.08
Percent Urea, Urease (as Urea)	959.03	007.00	2	1.51	0.09	0.11	2	1.51	0.09	0.11
Ammon & Nitrate N, Devarda	892.01	009.10	2	8.77	0.05	0.08	2	8.77	0.05	0.08
Ammon & Nitrate N, Other		009.99	1	13.11	0.01	0.02	1	13.11	0.01	0.02
Method Group 009.XX PCT			3	10.22	2.24	0.06	3	10.22	2.24	0.06
Total Nitrogen, Modified Comprehensive	978.02	010.11	8	12.77	0.14	0.02	8	12.77	0.14	0.02
Total Nitrogen, Salicylic	955.04D	010.12	2	12.77	0.12	0.07	2	12.77	0.12	0.07
Total Nitrogen, Raney	970.03	010.16	1	13.05	0.01	0.01	1	13.05	0.01	0.01
Total Nitrogen, Combustion		010.60	50	12.88	0.16	0.08	46	12.89	0.15	0.05
Total Nitrogen, Other		010.99	3	12.80	0.08	0.01	3	12.80	0.08	0.01
Method Group 010.XX PCT			64	12.86	0.16	0.07	60	12.86	0.15	0.04
Total Phosphate, Grav Quimociac	962.02	020.10	1	0.85	0.04	0.05	1	0.85	0.04	0.05
Total Phosphate, Spectrometric	958.01	020.20	5	0.58	0.31	0.04	5	0.58	0.31	0.04
Total Phosphate, Automated	978.01	020.40	2	0.35	0.40	0.02	2	0.35	0.40	0.02
Total Phosphate, ICP		020.50	5	0.72	0.10	0.01	5	0.72	0.10	0.01
Method Group 020.XX PCT			13	0.62	0.28	0.03	12	0.61	0.29	0.02
Insoluble Phosphate, Spectrometric	963.03C	030.20	1	0.06	0.01	0.01	1	0.06	0.01	0.01
InDir Available Phosphate, Spectrometri	960.02	040.20	2	0.65	0.02	0.03	2	0.65	0.02	0.03
Dir Available Phosphate, Grav Quimociac	960.03E	041.10	3	0.67	0.10	0.08	3	0.67	0.10	0.08
Dir Available Phosphate, ICP		041.50	4	0.65	0.02	0.02	4	0.65	0.02	0.02
Dir Available Phosphate, EDTA Extract	993.01	041.60	2	0.63	0.09	0.07	2	0.63	0.09	0.07
Dir Available Phosphate, Other		041.99	2	0.47	0.18	0.02	2	0.47	0.18	0.02
Method Group 041.XX PCT			11	0.62	0.12	0.05	10	0.60	0.11	0.03
Soluble Potash, STPB Oxalate	958.02	050.00	13	17.88	0.20	0.11	13	17.88	0.20	0.11
Soluble Potash, AA (Oxalate)		050.30	9	17.85	0.62	0.21	8	17.91	0.61	0.13
Soluble Potash, AA (Citrate)		050.31	2	18.07	0.05	0.07	2	18.07	0.05	0.07
Soluble Potash, ICP (Oxalate)		050.50	5	18.20	0.48	0.13	4	18.25	0.51	0.02
Soluble Potash, ICP (Citrate)		050.51	7	17.77	0.34	0.22	7	17.77	0.34	0.22
Soluble Potash, Flame (Oxalate)	983.02(a)	050.60	7	18.01	0.18	0.14	6	18.02	0.16	0.07
Soluble Potash, Flame (Citrate)	983.02(b)	050.61	6	17.97	0.41	0.07	6	17.97	0.41	0.07
Soluble Potash, Other		050.99	15	18.02	0.49	0.24	14	18.00	0.46	0.15
Method Group 050.XX PCT			64	17.95	0.42	0.17	61	17.95	0.40	0.13

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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
Free Water, Vacuum Oven	965.08B	060.00	4	0.98	0.21	0.06	4	0.98	0.21	0.06
Acid Soluble Calcium, AA	945.04	101.00	1	0.21	0.01	0.02	1	0.21	0.01	0.02
Acid Soluble Calcium, ICP		101.30	11	0.22	0.02	0.01	11	0.22	0.02	0.01
Acid Soluble Calcium, Other		101.99	1	0.23	0.01	0.01	1	0.23	0.01	0.01
Method Group 101.XX PCT			13	0.22	0.01	0.01	13	0.22	0.01	0.01
Acid Soluble Magnesium, AA	984.01	121.00	17	1.65	0.06	0.03	16	1.64	0.05	0.02
Acid Soluble Magnesium, ICP		121.30	32	1.66	0.09	0.04	31	1.66	0.09	0.03
Acid Soluble Magnesium, Other		121.99	2	1.66	0.07	0.12	2	1.66	0.07	0.12
Method Group 121.XX PCT			52	1.66	0.08	0.04	50	1.65	0.08	0.03
Water Soluble Magnesium, AA		131.00	3	1.57	0.06	0.02	3	1.57	0.06	0.02
Water Soluble Magnesium, ICP		131.30	4	1.56	0.08	0.08	4	1.56	0.08	0.08
Method Group 131.XX PCT			7	1.56	0.07	0.05	6	1.57	0.05	0.03
Sulfur, Gravimetric	980.02a	144.01	17	18.56	0.32	0.07	17	18.56	0.32	0.07
Sulfur, Gravimetric	980.02b	144.02	3	18.21	0.28	0.06	3	18.21	0.28	0.06
Sulfur, Gravimetric	980.02c	144.03	1	18.70	0.00	0.00	1	18.70	0.00	0.00
Sulfur, Spectrometric		144.70	1	17.15	0.07	0.10	1	17.15	0.07	0.10
Sulfur, Other		144.99	18	18.20	0.35	0.18	18	18.20	0.35	0.18
Method Group 144.XX PCT			40	18.34	0.42	0.12	38	18.36	0.41	0.10
Arsenic, ICP		151.30	4	0.60	0.42	0.30	4	0.60	0.42	0.30
Arsenic, Other		151.99	1	0.79	0.13	0.18	1	0.79	0.13	0.18
Method Group 151.XX PPM			5	0.64	0.38	0.28	4	0.67	0.33	0.10
Acid Soluble Boron, Spectrometric	982.01	165.00	1	0.005	0.000	0.000	1	0.005	0.000	0.000
Acid Soluble Boron, Other		165.99	7	0.003	0.003	0.000	6	0.002	0.002	0.000
Method Group 165.XX PCT			8	0.003	0.003	0.000	7	0.003	0.002	0.000
Cadmium, Atomic Absorption		181.00	2	1.23	0.20	0.03	2	1.23	0.20	0.03
Cadmium, ICP		181.30	7	0.92	0.45	0.20	7	0.92	0.45	0.20
Cadmium, Other		181.99	1	0.31	0.00	0.00	1	0.31	0.00	0.00
Method Group 181.XX PPM			10	0.92	0.45	0.14	9	0.87	0.43	0.09
Water Soluble Chlorine, Titrimetric	928.02	190.00	3	0.46	0.15	0.04	3	0.46	0.15	0.04
Water Soluble Chlorine, Other		190.99	2	0.29	0.07	0.06	2	0.29	0.07	0.06
Method Group 190.XX PCT			5	0.39	0.15	0.05	5	0.39	0.15	0.05
Chromium, Atomic Absorption		191.00	1	63.00	0.00	0.00	1	63.00	0.00	0.00
Chromium, ICP		191.30	12	45.56	18.02	1.63	12	45.56	18.02	1.63
Chromium, Other		191.99	1	43.55	0.49	0.70	1	43.55	0.49	0.70
Method Group 191.XX PPM			14	46.67	17.27	1.45	14	46.67	17.27	1.45
Acid Soluble Cobalt, AA		202.00	2	13.93	1.39	1.45	2	13.93	1.39	1.45
Acid Soluble Cobalt, ICP	965.11	202.30	6	12.38	0.89	0.39	5	12.55	0.81	0.18
Acid Soluble Cobalt, Other		202.99	1	15.45	0.07	0.10	1	15.45	0.07	0.10
Method Group 202.XX PPM			10	13.70	2.37	0.58	9	13.77	2.47	0.42

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Acid Soluble Copper, Atomic Absorption	975.01	221.00	8	0.0032	0.0006	0.0002	7	0.0031	0.0005	0.0001
Acid Soluble Copper, ICP		221.30	14	0.0030	0.0004	0.0002	13	0.0030	0.0004	0.0002
Acid Soluble Copper, Other		221.99	1	0.0033	0.0000	0.0000	1	0.0033	0.0000	0.0000
Method Group 221.XX PCT			23	0.0031	0.0004	0.0002	21	0.0031	0.0004	0.0002
Acid Soluble Iron, Atomic Absorption	980.01	241.00	15	1.22	0.13	0.05	14	1.23	0.13	0.04
Acid Soluble Iron, ICP		241.30	33	1.13	0.27	0.05	31	1.11	0.26	0.04
Acid Soluble Iron, Other		241.99	2	1.10	0.07	0.09	2	1.10	0.07	0.09
Method Group 241.XX PCT			51	1.14	0.24	0.05	48	1.14	0.24	0.04
Lead, Atomic Absorption		251.00	2	4.72	1.67	0.26	2	4.72	1.67	0.26
Lead, ICP		251.30	11	9.19	1.59	0.77	11	9.19	1.59	0.77
Lead, Other		251.99	1	10.35	0.07	0.10	1	10.35	0.07	0.10
Method Group 251.XX PPM			15	9.09	2.77	0.68	15	9.09	2.77	0.68
Acid Soluble Manganese, AA	972.02a	261.00	11	0.590	0.027	0.016	11	0.590	0.027	0.016
Acid Soluble Manganese, AA	972.02b	261.11	3	0.574	0.051	0.004	3	0.574	0.051	0.004
Acid Soluble Manganese, ICP	972.02a	261.30	28	0.596	0.038	0.017	26	0.594	0.037	0.013
Acid Soluble Manganese, ICP	972.02b	261.31	2	0.591	0.028	0.023	2	0.591	0.028	0.023
Acid Soluble Manganese, Other		261.99	2	0.596	0.035	0.009	2	0.596	0.035	0.009
Method Group 261.XX PCT			47	0.596	0.040	0.015	43	0.591	0.035	0.012
Water Soluble Manganese, ICP	972.03	271.30	3	2.134	2.405	0.121	3	2.134	2.405	0.121
Mercury, Atomic Absorption		281.00	1	0.09	0.00	0.00	1	0.09	0.00	0.00
Mercury, Other		281.99	1	0.07	0.01	0.01	1	0.07	0.01	0.01
Method Group 281.XX PPM			2	0.08	0.01	0.01	2	0.08	0.01	0.01
Molybdenum, Atomic Absorption		289.00	1	2.20	0.14	0.20	1	2.20	0.14	0.20
Molybdenum, ICP		289.30	9	3.90	1.32	0.56	8	3.83	1.30	0.31
Molybdenum, Other		289.99	1	4.31	0.06	0.08	1	4.31	0.06	0.08
Method Group 289.XX PPM			11	3.78	1.30	0.49	10	3.71	1.28	0.28
Nickel, Atomic Absorption		291.00	1	26.50	2.12	3.00	1	26.50	2.12	3.00
Nickel, ICP		291.30	6	30.33	1.93	1.07	6	30.33	1.93	1.07
Method Group 291.XX PPM			7	29.78	2.33	1.34	7	29.78	2.33	1.34
Selenium, ICP		301.30	3	9.99	10.99	5.43	3	9.99	10.99	5.43
Sodium, Other		311.99	6	0.14	0.01	0.01	6	0.14	0.01	0.01
Acid Soluble Zinc, Atomic Absorption	975.02	321.00	7	0.025	0.002	0.001	7	0.025	0.002	0.001
Acid Soluble Zinc, ICP		321.30	19	0.025	0.003	0.002	18	0.025	0.003	0.001
Acid Soluble Zinc, Other		321.99	1	0.026	0.000	0.000	1	0.026	0.000	0.000
Method Group 321.XX PCT			27	0.025	0.003	0.001	26	0.025	0.003	0.001
Water Soluble Zinc, ICP		325.30	2	0.028	0.008	0.004	2	0.028	0.008	0.004

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: 005.XX PCT			Meth: 010.11 PCT			Meth: 010.60 PCT		
<u>Ammoniacal Nitrogen</u>			<u>Ammoniacal Nitrogen</u>			<u>Nitrogen From Urea</u>			<u>Total Nitrogen</u>			<u>Total Nitrogen</u>		
<u>MgO Distillation</u>			309 8.20 -2.19			029 1.84 -.62			<u>Modified Comprehensi</u>			<u>Combustion</u>		
230	11.90 s	19.62	Meth: 002.99 PCT			Meth: 007.00 PCT			405	12.64	-.92	096	12.93	.28
220	8.73	.89	Nitrate Nitrogen			Percent Urea			309	12.51	-1.89	136	12.91	.26
288	8.72	.87	<u>Other</u>			<u>Urease (as Urea)</u>			220	12.40 s	-3.33	368	12.91	.21
324	8.68	.68	288	0.06	-.71	351 1.56 .99			Meth: 010.12 PCT			372	12.91	.17
Avg	8.55		Meth: 003.99 PCT			Avg 1.51			Total Nitrogen			007	12.90	.09
415	8.53	-.14	Water Insoluble Nitr			247 1.46 -.73			<u>Salicylic</u>			251	12.90	.07
029	8.45	-.54	<u>Other</u>			Meth: 009.10 PCT			434 12.86 .88			Avg 12.89		
309	8.20	-1.78	027	1.11	.00	Ammon & Nitrate N			Avg 12.77			040 12.88 -.08		
Meth: 001.99 PCT			Meth: 005.00 PCT			200 8.79 .61			Meth: 010.16 PCT			296 12.88 -.08		
Ammoniacal Nitrogen			Nitrogen From Urea			Avg 8.77			Total Nitrogen			307 12.89 -.10		
<u>Other</u>			<u>Urease (as N)</u>			193 8.75 -1.06			<u>Raney</u>			324 12.89 -.10		
434	9.05	1.63	193	12.10	.87	Meth: 009.99 PCT			434 13.05 .71			406 12.86 -.22		
372	8.91	.74	Avg	7.03		Ammon & Nitrate N			Meth: 010.60 PCT			131 12.87 -.23		
Avg	8.79		288	1.96	-.86	<u>Other</u>			Total Nitrogen			095 12.87 -.29		
397	8.78	-.25	Meth: 005.99 PCT			137 13.11 .71			<u>Combustion</u>			231 12.84 -.32		
096	8.71	-.47	Nitrogen From Urea			Meth: 009.XX PCT			043 13.47 s 3.97			041 12.83 -.38		
409	8.70	-.56	<u>Other</u>			Ammon & Nitrate N			157 13.28 2.68			009 12.83 -.43		
247	8.72 R	-.68	434	13.72 s	16.62	137 13.11 1.29			369 13.08 R 2.26			247 12.82 -.50		
027	8.57	-1.30	027	3.33	.68	Avg 10.22			422 13.14 1.74			291 12.81 X -.58		
Meth: 001.XX PCT			309 3.20 .49			200 8.79 -.64			230 13.10 1.45			360 12.80 -.59		
<u>Ammoniacal Nitrogen</u>			230 3.18 .45			193 8.75 -.65			409 13.04 R 1.41			055 12.88 -.68		
230	11.90 s	17.57	Avg 2.88			Meth: 010.11 PCT			177 13.05 1.17			023 12.80 -.80		
434	9.05	1.79	029	1.84	-1.61	Total Nitrogen			232 13.05 1.12			233 12.77 -.83		
372	8.91	1.11	Meth: 005.XX PCT			<u>Modified Comprehensi</u>			330 13.02 .88			351 12.77 -.84		
397	8.78	.56	Nitrogen From Urea			288 12.93 1.17			029 13.01 .82			325 12.75 -.99		
247	8.72 R	.46	434 13.72 2.12			114 12.90 .92			025 13.01 .81			426 12.74 -1.03		
220	8.73	.27	193 12.10 R 1.75			029 12.88 .81			049 13.00 .80			028 12.69 -1.34		
288	8.72	.25	Avg 4.53			416 12.79 .18			035 12.99 .78			442 12.69 -1.35		
096	8.71	.20	027	3.33	-.28	090 12.78 .12			073 12.98 .76			027 12.69 -1.37		
324	8.68	.15	309	3.20	-.31	Avg 12.77			425 12.99 .67			034 12.65 -1.64		
409	8.70	.13	230	3.18	-.31	371 12.73 -.36			106 12.98 .61			423 12.62 -1.86		
Avg	8.67		288	1.96	-.60	102 12.94 .35			029 13.01 .82			037 12.63 R -2.05		
027	8.57	-.44	S/s=Screened Outlier			R=Duplicate Range too large			002 12.99 .67			262 12.60 -2.06		
415	8.53	-.66	A=Analysis beyond 3-s limits						106 12.98 .61			390 12.65 R -2.34		
029	8.45	-1.05							102 12.94 .35			042 12.40 s -4.74		

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index		
Meth: 010.99 PCT			Meth: 010.XX PCT			Meth: 010.XX PCT			Meth: 020.XX PCT			Meth: 041.50 PCT				
<u>Total Nitrogen</u>			<u>Total Nitrogen</u>			<u>Total Nitrogen</u>			<u>Total Phosphate</u>			<u>Dir Available Phosph</u>				
Other			Other			Other			Other			ICP				
354	13.53 S	9.07	251	12.90	.21	220	12.40 s	-3.63	390	0.87	.93	251	0.67	1.19		
397	12.90	1.29	131	12.87	.20	042	12.40 s	-4.57	405	0.85	.83	Avg	0.65			
Avg	12.80		307	12.89	.17	Meth: 020.10 PCT			368	0.74	.47	007	0.65	-.38		
377	12.75	-.64	324	12.89	.17	<u>Total Phosphate</u>			288	0.73 R	.45	354	0.65	-.74		
415	12.74	-.65	029	12.88	.12	<u>Grav Quimociac</u>			372	0.72	.38	009	0.64	-1.19		
Meth: 010.XX PCT			040	12.88	.12	405			0.85	.71	330	0.70	.32	325	0.00 s	-34.48
<u>Total Nitrogen</u>			296	12.88	.08	Meth: 020.20 PCT			247	0.70	.31	Meth: 041.60 PCT				
354	13.53 s	4.42	Avg	12.86		<u>Total Phosphate</u>			220	0.69	.29	<u>Dir Available Phosph</u>				
043	13.47 s	4.06	406	12.86	-.07	<u>Spectrometric</u>			422	0.68	.25	<u>EDTA Extract</u>				
157	13.28	2.78	231	12.84	-.16	292	0.77	.60	Avg	0.61		296	0.69	.68		
369	13.08 R	2.31	041	12.83	-.23	288	0.73	.51	307	0.59	-.06	Avg	0.63			
292	13.16	1.98	434	12.86	-.27	372	0.72	.44	042	0.00	-2.11	288	0.58	-1.02		
422	13.14	1.86	009	12.83	-.28	220	0.69	.37	262	0.00	-2.11	Meth: 041.99 PCT				
230	13.10	1.58	247	12.82	-.35	Avg	0.58		<u>Insoluble Phosphate</u>			<u>Dir Available Phosph</u>				
409	13.04 R	1.50	360	12.80	-.43	262	0.00	-1.88	<u>Spectrometric</u>			<u>Other</u>				
177	13.05	1.28	291	12.81 X	-.43	Meth: 020.40 PCT			220	0.06	.71	377	0.63	.87		
232	13.05	1.25	416	12.79	-.50	<u>Total Phosphate</u>			Meth: 040.20 PCT			Avg	0.47			
434	13.05	1.21	090	12.78	-.61	<u>Automated</u>			<u>InDir Available Phos</u>			230	0.32	-.87		
330	13.02	1.01	233	12.77	-.67	247	0.70	.87	<u>Spectrometri</u>			Meth: 041.XX PCT				
029	13.01	.95	351	12.77	-.68	Avg	0.35		372	0.66	.78	<u>Dir Available Phosph</u>				
025	13.01	.94	023	12.80	-.68	042	0.00	-.86	Avg	0.65		296	0.77 R	1.72		
049	13.00	.92	377	12.75	-.80	Meth: 020.50 PCT			220	0.64	-.95	296	0.69	.81		
035	12.99	.90	415	12.74	-.81	<u>Total Phosphate</u>			Meth: 041.10 PCT			251	0.67	.62		
073	12.98	.87	325	12.75	-.84	<u>ICP</u>			<u>Dir Available Phosph</u>			354	0.65	.40		
425	12.99	.81	426	12.74	-.87	390	0.87	1.60	<u>Grav Quimociac</u>			007	0.65	.38		
106	12.98	.75	371	12.73	-.95	368	0.74	.26	296	0.77	1.35	009	0.64	.38		
055	12.88	.68	028	12.69	-1.17	Avg	0.72		Avg	0.67		009	0.63	.26		
102	12.94	.48	442	12.69	-1.19	330	0.70	-.21	009	0.63	-.41	377	0.63	.26		
288	12.93	.44	027	12.69	-1.21	422	0.68	-.38	220	0.61	-.71	220	0.61	.23		
096	12.93	.42	185	12.67	-1.32	307	0.59	-1.30	Meth: 041.10 PCT			Avg	0.60			
136	12.91	.36	034	12.65	-1.47	Meth: 020.50 PCT			<u>Dir Available Phosph</u>			288	0.58	-.67		
368	12.91	.33	405	12.64	-1.50	<u>Total Phosphate</u>			<u>Grav Quimociac</u>			230	0.32	-2.72		
372	12.91	.31	423	12.62	-1.69	<u>ICP</u>			296			0.77 R	1.72			
095	12.87	.27	262	12.60	-1.89	390	0.87	1.60	Avg			0.65				
007	12.90	.24	037	12.63 R	-1.90	368	0.74	.26	Avg			0.67				
397	12.90	.24	390	12.65 R	-2.21	Avg	0.72		009			0.63	-.41			
* X=Excluded from lab performance			309	12.51	-2.41	Meth: 020.50 PCT			220			0.61	-.71			
			S/s=Screened Outlier			R=Duplicate Range too large			A=Analysis beyond 3-s limits							

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 050.00 PCT			Meth: 050.50 PCT			Meth: 050.61 PCT			Meth: 050.XX PCT			Meth: 050.XX PCT		
Soluble Potash			Soluble Potash			Soluble Potash			<u>Soluble Potash</u>			<u>Soluble Potash</u>		
<u>STPB Oxalate</u>			<u>ICP (Oxalate)</u>			<u>Flame (Citrate)</u>								
230	20.10 s	11.28	426	18.97	1.42	037	17.98	.17	262	18.65	1.74	029	17.86	-.25
102	19.27 s	7.18	422	18.34	.18	Avg	17.97		369	18.58	1.62	009	17.90	-.26
220	18.25	1.93	Avg	18.25		035	17.72	-.63	041	18.54	1.47	027	17.84	-.29
233	17.99	.74	324	17.99	-.51	028	17.61	-.89	025	18.44	1.22	185	17.83	-.33
114	18.00	.69	106	18.02 R	-.74	029	17.55	-1.04	422	18.34	.95	309	17.80	-.38
043	17.99	.54	354	17.70	-1.08	Meth: 050.99 PCT			220	18.25	.78	007	17.88	-.59
009	17.90	.44	Meth: 050.51 PCT			Soluble Potash			232	18.26	.77	035	17.72	-.61
416	17.95	.33	Soluble Potash			Other			106	18.02 R	.75	354	17.70	-.64
049	17.91	.20	<u>ICP (Citrate)</u>			307	19.45 s	3.61	157	18.00	.68	055	17.75	-.65
372	17.90	.13	009	18.08	.97	131	18.83	1.82	406	18.22	.68	090	17.64	-.80
231	17.90	.08	043	18.06	.88	330	18.31 R	1.79	042	18.05	.67	434	17.64	-.84
Avg	17.88		291	18.05 X	.82	034	18.76	1.64	360	18.20	.64	028	17.61	-.87
029	17.86	-.20	007	17.88	.73	232	18.26	.57	055	18.18	.58	423	17.56	-1.00
055	17.75	-1.06	Avg	17.77		042	18.05	.55	040	18.10	.56	029	17.55	-1.02
090	17.64	-1.29	423	17.56	-.64	360	18.20	.47	260	18.14	.55	247	17.51	-1.12
257	17.48	-2.06	368	17.48	-.91	260	18.14	.41	009	18.08	.40	257	17.48	-1.18
Meth: 050.30 PCT			251	17.27	-1.53	432	18.15	.35	023	18.10	.40	368	17.48	-1.22
Soluble Potash			Meth: 050.60 PCT			177	18.02	.04	043	18.06	.33	351	17.40	-1.37
<u>AA (Oxalate)</u>			Soluble Potash			Avg	18.00		095	18.07	.32	390	17.40	-1.40
262	18.65	1.22	<u>Flame (Oxalate)</u>			377	17.93	-.21	288	18.07	.31	251	17.27	-1.75
369	18.58	1.13	415	20.39 s	14.50	027	17.84	-.35	254	18.07	.28	325	17.25	-1.76
040	18.10	.42	406	18.22	1.29	434	17.64	-.82	233	17.99	.27	193	17.33 R	-1.86
023	18.10	.33	055	18.18	1.03	247	17.51	-1.07	291	18.05 X	.23	425	16.73	-3.05
Avg	17.91		288	18.07	.41	390	17.40	-1.31	114	18.00	.21	Meth: 060.00 PCT		
137	17.90	-.03	Avg	18.02		325	17.25	-1.62	037	17.98	.19	Free Water		
185	17.83	-.14	200	17.94	-.56	Meth: 050.XX PCT			177	18.02	.16	<u>Vacuum Oven</u>		
351	17.40	-.83	131	17.90	-.74	<u>Soluble Potash</u>			043	17.99	.10	096	1.31	1.61
193	17.33 R	-1.16	309	17.80	-1.32	415	20.39 s	6.09	324	17.99	.08	Avg	0.98	
425	16.73	-1.93	157	18.00 R	-1.65	230	20.10 s	5.36	Avg	17.95		007	0.91	-.35
Meth: 050.31 PCT			Meth: 050.61 PCT			416	17.95	-.07	416	17.95	-.07	193	0.87	-.58
Soluble Potash			Soluble Potash			200	17.94	-.13	200	17.94	-.13	416	0.84	-.67
<u>AA (Citrate)</u>			<u>Flame (Citrate)</u>			307	19.45 s	4.25	049	17.91	-.13	Meth: 101.00 PCT		
095	18.07	1.22	102	19.27 s	3.35	102	19.27 s	3.35	231	17.90	-.13	Acid Soluble Calcium		
254	18.07	.09	426	18.97	2.54	131	18.83	2.21	372	17.90	-.14	<u>AA</u>		
Avg	18.07		131	18.83	2.21	330	18.31 R	2.10	131	17.90	-.15			
* X=Excluded from lab performance			041	18.54	1.38	034	18.76	2.00	137	17.90	-.15	220	0.21	-.71
			025	18.44	1.14	R=Duplicate Range too large			377	17.93	-.18	A=Analysis beyond 3-s limits		
			S/s=Screened Outlier											

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 101.30 PCT			Meth: 101.XX PCT			Meth: 121.30 PCT			Meth: 121.99 PCT			Meth: 121.XX PCT		
<u>Acid Soluble Calcium</u>			<u>Acid Soluble Calcium</u>			<u>Acid Soluble Magnesi</u>			<u>Acid Soluble Magnesi</u>			<u>Acid Soluble Magnesi</u>		
ICP			220	0.21	- .96	ICP			Other			040	1.66	.09
422	0.88 s	42.97	114	0.19 X	-1.87	090	1.78	1.26	042	1.68	.91	177	1.66	.06
096	0.34 s	7.79	307	0.14 s	-5.55	291	1.77	1.18	Avg	1.66		Avg	1.65	
423	0.26	2.28				354	1.69 R	1.15	034	1.65	-.82	433	1.64	-.16
433	0.23	.67	Meth: 121.00 PCT			432	1.75	1.10	Meth: 121.XX PCT			043	1.65	-.24
106	0.23	.44	<u>Acid Soluble Magnesi</u>			247	1.70	.68	<u>Acid Soluble Magnesi</u>			055	1.63	-.36
131	0.22	.33	AA			390	1.72	.63	330	2.74 s	13.11	288	1.63	-.36
009	0.22	.20	193	1.94 s	6.95	231	1.72	.59	096	2.71 s	12.74	131	1.62	-.40
035	0.22	.03	029	1.78 R	3.33	023	1.70	.46	422	2.09 s	5.29	009	1.63	-.41
Avg	0.22		200	1.75	2.29	037	1.67	.45	415	1.97 s	3.94	351	1.62	-.42
288	0.22	-.34	028	1.70	1.29	233	1.70	.36	193	1.94 s	3.69	434	1.65	-.43
102	0.22	-.35	220	1.67	1.11	423	1.70	.35	251	1.85	2.34	073	1.62	-.46
065	0.22	-.43	434	1.65	.78	409	1.68	.30	027	1.85	2.33	262	1.61	-.58
232	0.21	-.87	257	1.67	.51	041	1.68	.14	117	1.79	1.73	065	1.61	-.62
114	0.19 X	-1.83	043	1.65	.47	426	1.67	.06	029	1.78 R	1.71	230	1.60	-.63
307	0.14 s	-5.43	137	1.66	.39	Avg	1.66		090	1.78	1.51	309	1.60	-.63
			040	1.66	.35	360	1.66	-.03	291	1.77	1.43	034	1.65	-.67
			177	1.66	.31	433	1.64	-.26	432	1.75	1.33	035	1.60	-.68
Meth: 101.99 PCT			Avg			288	1.63	-.42	354	1.69 R	1.31	397	1.59	-.73
<u>Acid Soluble Calcium</u>			055			009	1.63	-.47	200	1.75	1.14	102	1.58	-.84
Other			351			131	1.62	-.48	247	1.70	.84	095	1.58	-.91
390	0.23	.71	073	1.62	-.62	307	1.65	-.58	390	1.72	.83	232	1.55	-1.21
			262	1.61	-.84	065	1.61	-.67	042	1.68	.82	106	1.55	-1.30
Meth: 101.XX PCT			309			230	1.60	-.69	231	1.72	.78	368	1.54	-1.32
<u>Acid Soluble Calcium</u>			397			035	1.60	-.73	307	1.65	.64	114	1.51 X	-1.79
422	0.88 s	44.02	095	1.58	-1.44	102	1.58	-.88	023	1.70	.63	324	1.51	-1.79
096	0.34 s	7.98	296	1.46 s	-4.23	232	1.55	-1.21	028	1.70	.59	296	1.46	-2.43
423	0.26	2.34	425	1.15 s	-11.03	106	1.55	-1.30	220	1.67	.57	425	1.15 s	-6.14
390	0.23	.75				368	1.54	-1.32	037	1.67	.53			
433	0.23	.69	Meth: 121.30 PCT			114	1.51 X	-1.74	233	1.70	.52	Meth: 131.00 PCT		
106	0.23	.46	<u>Acid Soluble Magnesi</u>			324	1.51	-1.74	423	1.70	.52	<u>Water Soluble Magnes</u>		
131	0.22	.33	ICP						409	1.68	.41	AA		
009	0.22	.21	330	2.74 s	11.77	Meth: 121.70 PCT			041	1.68	.28	220	1.62	.79
035	0.22	.04	096	2.71 s	11.44	<u>Acid Soluble Magnesi</u>			426	1.67	.16	309	1.60	.44
Avg	0.22		422	2.09 s	4.68	Titrimetric			257	1.67	.16	Avg	1.57	
288	0.22	-.35	251	1.85	2.00	415			360	1.66	.09	029	1.50	-1.30
102	0.22	-.35	027	1.85	2.00	.00			137	1.66	.09			
065	0.22	-.43	117	1.79	1.46									
232	0.21	-.89												
* 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: 131.30 PCT			Meth: 144.01 PCT			Meth: 144.99 PCT			Meth: 144.XX PCT			Meth: 151.XX PPM		
Water Soluble Magnes			Sulfur			Sulfur			<u>Sulfur</u>			<u>Arsenic</u>		
<u>ICP</u>			<u>Gravimetric</u>			<u>Other</u>			102	18.32 X	-.14	409	0.79	.44
095	1.63	.91	193	18.10	-1.44	027	18.18	-.06	200	18.32	-.19	Avg	0.67	
Avg	1.56		106	18.09	-1.47	307	18.13	-.44	397	18.25	-.29	096	0.65	-.17
027	1.54	-.19	Meth: 144.02 PCT			232	18.16	-.56	351	18.24	-.30	102	0.20	-1.40
230	1.56	-.70	Sulfur			023	18.05	-.65	029	18.19	-.43	065	0.48 R	-1.55
432	1.50	-1.46	<u>Gravimetric</u>			422	17.89	-.89	247	18.24	-.43	Meth: 165.00 PCT		
Meth: 131.XX PCT			371	18.53	1.15	009	17.74	-1.42	027	18.18	-.45	Acid Soluble Boron		
Water Soluble Magnes			Avg	18.21		423	17.65	-1.57	193	18.10	-.63	<u>Spectrometric</u>		
095	1.63	.98	029	18.19	-.12	131	17.46	-2.09	307	18.13	-.65	220	0.005	.00
220	1.62	.86	434	17.92	-1.08	Meth: 144.XX PCT			106	18.09	-.65	Meth: 165.99 PCT		
309	1.60	.49	Meth: 144.03 PCT			<u>Sulfur</u>			232	18.16 R	-.68	Acid Soluble Boron		
Avg	1.57		Sulfur			028	22.41 s	9.82	023	18.05	-.86	<u>Other</u>		
027	1.54	-.64	<u>Gravimetric</u>			251	20.33 s	4.78	434	17.92	-1.08	422	0.009 R	2.67
230	1.56	-1.10	137	18.70	.00	354	19.06 s	2.74	422	17.89	-1.15	106	0.007	2.08
029	1.50	-1.39	Meth: 144.70 PCT			043	19.17	1.97	009	17.74 R	-1.59	Avg	0.002	
432	1.50 R	-2.35	Sulfur			262	19.10	1.82	423	17.65	-1.74	433	0.002	-.13
Meth: 144.01 PCT			<u>Spectrometric</u>			230	19.00	1.56	131	17.46	-2.19	409	0.002	-.14
Sulfur			372	17.15	.71	157	18.82	1.11	372	17.15	-2.94	423	0.001	-.51
<u>Gravimetric</u>			Meth: 144.99 PCT			324	18.73	.91	Meth: 151.30 PPM			232	0.001	-.65
251	20.33 s	5.54	Sulfur			360	18.71	.90	<u>Arsenic</u>			288	0.001	-.66
043	19.17	1.92	<u>Other</u>			137	18.70	.83	<u>ICP</u>			Meth: 165.XX PCT		
262	19.10	1.72	028	22.41 s	11.86	390	18.65	.72	368	17.10 s	45.83	Acid Soluble Boron		
230	19.00	1.38	354	19.06 s	3.48	296	18.63	.71	095	1.05	1.09	422	0.009 R	2.48
157	18.82	.80	360	18.71	1.49	035	18.55	.59	096	0.65	.17	106	0.007	1.90
324	18.73	.57	390	18.65	1.29	090	18.50	.48	Avg	0.60		220	0.005	.98
296	18.63	.41	035	18.55	1.08	029	18.55	.46	102	0.20	-.94	Avg	0.003	
Avg	18.56		090	18.50	.93	288	18.54	.44	065	0.48 X	-1.18	433	0.002	-.29
288	18.54	-.09	330	18.43	.66	040	18.54	.43	Meth: 151.99 PPM			409	0.002	-.30
040	18.54	-.09	177	18.35	.43	371	18.53	.41	<u>Arsenic</u>			423	0.001	-.67
029	18.55	-.12	102	18.32 X	.38	416	18.46	.26	<u>Other</u>			232	0.001	-.81
055	18.46	-.32	247	18.24	.37	055	18.46	.25	409	0.79	-.71	288	0.001	-.81
233	18.46	-.32	368	18.32	.35	233	18.46	.25	Meth: 151.XX PPM					
416	18.46	-.32	351	18.24	.12	330	18.43	.17	<u>Arsenic</u>					
200	18.32	-.79	Avg	18.20		Avg	18.36		368	17.10 s	57.27			
095	18.31	-.80	Meth: 144.01 PCT			177	18.35	-.02	095	1.05	1.14			
397	18.25	-.98	Sulfur			368	18.32	-.11	Meth: 151.99 PPM					
* X=Excluded from lab performance			S/s=Screened Outlier			095	18.31	-.13	<u>Arsenic</u>					
						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: 181.00 PPM Cadmium <u>Atomic Absorption</u>			Meth: 190.00 PCT Water Soluble Chlori <u>Titrimetric</u>			Meth: 191.30 PPM Chromium <u>ICP</u>			Meth: 202.30 PPM Acid Soluble Cobalt <u>ICP</u>			Meth: 221.00 PCT Acid Soluble Copper <u>Atomic Absorption</u>		
193	1.40	.86	220	0.64	1.26	Avg	45.56		009	19.40 s	8.50	Avg	0.0031	
Avg	1.23		Avg	0.46		368	38.45	-.41	102	13.44	1.12	371	0.0030	-.24
200	1.06	-.87	422	0.42	-.33	065	24.05	-1.20	232	13.30	.93	220	0.0030	-.24
			102	0.33	-.89	434	15.75	-1.66	324	12.55	.19	434	0.0028	-.60
Meth: 181.30 PPM Cadmium <u>ICP</u>			Meth: 190.99 PCT Water Soluble Chlori <u>Other</u>			Meth: 191.99 PPM Chromium <u>Other</u>			Avg			029		
368	3.82 s	7.02	009	0.34	.65	409	43.55	.71	106	12.00	-.68	106	12.00	-.68
324	1.65	1.65	Avg	0.29					368	11.45	-1.37	065	11.54 R	-1.56
096	1.40	1.25	288	0.24	-1.04				095	1.99 s	-13.09	095	1.99 s	-13.09
Avg	0.92					Meth: 191.XX PPM <u>Chromium</u>			Meth: 202.99 PPM Acid Soluble Cobalt <u>Other</u>			Meth: 221.30 PCT Acid Soluble Copper <u>ICP</u>		
065	0.86	-.22				009	66.60	1.16	409	15.45	.71	354	0.0185 s	42.41
095	0.78	-.30	Meth: 190.XX PCT <u>Water Soluble Chlori</u>			096	65.50	1.09				368	0.0045 s	4.83
035	0.79	-.33	220	0.64	1.71	220	63.00	.95				422	0.0045 s	4.28
434	0.54	-.85	422	0.42	.15	035	61.50	.86				330	0.0035 R	1.72
102	0.42	-1.11	Avg	0.39		102	57.44	.63				035	0.0035	1.42
Meth: 181.99 PPM Cadmium <u>Other</u>			009	0.34	-.38	106	57.00	.60				041	0.0033	1.16
409	0.31	.00	102	0.33	-.41	232	49.50	.16				102	0.0032	.97
Meth: 181.XX PPM Cadmium <u>Atomic Absorption</u>			288	0.24	-1.11	037	48.55	.13				433	0.0032	.62
368	3.82 s	7.41				324	47.30	.08				106	0.0032	.41
324	1.65	1.84	Meth: 191.00 PPM Chromium <u>Atomic Absorption</u>			Avg	46.67					009	0.0031	.38
096	1.40 R	1.41	220	63.00	.00	409	43.55	-.18				324	0.0031	.18
193	1.40	1.23				368	38.45	-.49				Avg	0.0030	
200	1.06	.44	Meth: 191.30 PPM Chromium <u>ICP</u>			065	24.05	-1.31				288	0.0030	-.03
Avg	0.87		009	66.60	1.17	434	15.75	-1.79				232	0.0030	-.04
065	0.86	-.18	096	65.50	1.11	095	15.14	-1.83				037	0.0029	-.46
095	0.78	-.20										095	0.0027	-.99
035	0.79	-.25	Meth: 202.00 PPM Acid Soluble Cobalt <u>AA</u>			368	11.45	-.94				065	0.0029 X	-1.03
434	0.54	-.76	434	14.85	.74	065	11.54	-.96				233	0.0022	-2.29
102	0.42	-1.03	Avg	13.93		095	1.99 s	-4.77						
409	0.31	-1.29	220	13.00	-.98									
* X=Excluded from lab performance			S/s=Screened Outlier			Meth: 221.00 PCT Acid Soluble Copper <u>Atomic Absorption</u>			Meth: 221.99 PCT Acid Soluble Copper <u>Other</u>			Meth: 221.XX PCT Acid Soluble Copper <u>Atomic Absorption</u>		
						095	0.0040	1.60				409	0.0033	.00
						193	0.0035 R	1.14						
						043	0.0035	.60						
						028	0.0034	.53						

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 221.XX PCT			Meth: 241.00 PCT			Meth: 241.30 PCT			Meth: 241.XX PCT			Meth: 251.00 PPM		
<u>Acid Soluble Copper</u>			<u>Acid Soluble Iron</u>			<u>Acid Soluble Iron</u>			<u>Acid Soluble Iron</u>			<u>Lead</u>		
422	0.0045 s	3.57	<u>Atomic Absorption</u>			<u>ICP</u>			324	1.26	.53	<u>Atomic Absorption</u>		
095	0.0040	2.20	040	1.22	-.30	291	1.03 X	-.33	177	1.25	.47	193	22.00 S	10.37
193	0.0035 R	1.56	434	1.19	-.31	231	0.96	-.60	288	1.15 R	.43	220	6.15	.87
330	0.0035 R	1.39	028	1.21	-.35	114	0.94 X	-.67	040	1.22	.38	Avg	4.72	
035	0.0035	1.10	262	1.14	-.78	102	0.92	-.76	095	1.23	.37	200	3.29	-.86
041	0.0033	.93	296	1.11	-.98	023	0.77	-1.30	028	1.21	.35	Meth: 251.30 PPM		
043	0.0035	.91	220	1.09 R	-1.35	090	0.74	-1.43	233	1.22	.35	<u>Lead</u>		
028	0.0034	.82	397	1.01	-1.75	065	0.71	-1.52	230	1.21	.31	<u>ICP</u>		
102	0.0032	.77	371	0.73 s	-3.93	368	0.65	-1.76	351	1.21	.30	368	15.45 s	3.96
409	0.0033	.56	Meth: 241.30 PCT			247	0.65	-1.78	433	1.21	.30	324	10.85	1.15
433	0.0032	.40	<u>Acid Soluble Iron</u>			423	0.52	-2.27	043	1.21	.29	035	10.36	.94
106	0.0032	.24	<u>ICP</u>			117	0.09 S	-3.90	307	1.17	.29	106	9.75	.64
009	0.0031	.20	096	1.79 S	2.59	Meth: 241.99 PCT			055	1.20	.28	037	10.10	.60
Avg	0.0031		432	1.55	1.67	<u>Acid Soluble Iron</u>			434	1.19	.23	009	9.80	.39
324	0.0031	-.12	354	1.51 R	1.56	<u>Other</u>			426	1.18	.16	096	9.75	.35
232	0.0030	-.14	035	1.44	1.26	034	1.14	.57	041	1.15	.15	232	9.60	.26
288	0.0030	-.15	106	1.41	1.13	Avg	1.10		034	1.14	.09	102	9.39	.18
371	0.0030	-.15	330	1.40	1.11	042	1.07	-1.08	251	1.14	.04	Avg	9.19	
220	0.0030	-.15	422	1.40	1.11	Meth: 241.XX PCT			Avg	1.14		065	8.67	-.45
037	0.0029	-.51	027	1.30	.69	<u>Acid Soluble Iron</u>			095	1.12	-.07	434	7.38	-1.18
434	0.0028	-.62	360	1.29	.66	096	1.79 s	2.79	262	1.14	-.15	095	5.45	-2.36
065	0.0029 X	-.93	409	1.28	.64	432	1.55	1.76	296	1.11	-.21	Meth: 251.99 PPM		
095	0.0027	-.98	390	1.28	.63	354	1.51 R	1.64	232	1.08	-.27	<u>Lead</u>		
029	0.0023	-1.99	131	1.27	.63	137	1.50	1.54	042	1.07	-.41	<u>Other</u>		
233	0.0022	-2.10	009	1.27	.59	425	1.47	1.41	220	1.09 R	-.46	409 10.35 -.71		
Meth: 241.00 PCT			324	1.26	.57	035	1.44	1.30	291	1.03 X	-.48	Meth: 251.XX PPM		
<u>Acid Soluble Iron</u>			233	1.22	.41	106	1.41	1.16	397	1.01	-.56	<u>Lead</u>		
<u>Atomic Absorption</u>			288	1.15 R	.41	330	1.40	1.13	231	0.96	-.78	193 22.00 s 4.66		
137	1.50	2.15	230	1.21	.37	422	1.40	1.13	114	0.94 X	-.85	368 15.45 2.30		
425	1.47	1.92	433	1.21	.37	027	1.30	.67	023	0.77	-1.56	324 10.85 .69		
029	1.26	.33	307	1.17	.32	360	1.29	.62	090	0.74	-1.70	035 10.36 .57		
177	1.25	.19	426	1.18	.24	409	1.28	.60	371	0.73	-1.73	409 10.35 .46		
Avg	1.23		041	1.15	.18	390	1.28	.60	065	0.71	-1.80	106 9.75 .39		
095	1.23	-.01	251	1.14	.11	131	1.27	.59	368	0.65	-2.07	037 10.10 .38		
351	1.21	-.15	095	1.12	.06	009	1.27	.55	247	0.65	-2.09	009 9.80 .26		
043	1.21	-.22	Avg	1.11		029	1.26	.53	423	0.52	-2.64	Meth: 251.99 PPM		
055	1.20	-.27	232	1.08	-.17	Meth: 241.99 PCT			117	0.09 s	-4.46	<u>Other</u>		
* X=Excluded from lab performance			S/s=Screened Outlier			R=Duplicate Range too large			A=Analysis beyond 3-s limits			409 10.35 -.71		

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: 261.30 PCT <u>Acid Soluble Manganese</u>			Meth: 261.99 PCT <u>Acid Soluble Manganese</u>			Meth: 261.XX PCT <u>Acid Soluble Manganese</u>			Meth: 281.XX PPM <u>Mercury</u>		
096	9.75	.24	<u>ICP</u>			<u>Other</u>			Avg	0.591		193	0.09	.83
232	9.60	.18	432	0.720 s	3.57	042	0.626	.87	220	0.585	-.22	Avg	0.08	
102	9.39	.13	035	0.670	2.06	Avg	0.596		095	0.583	-.26	409	0.07	-.90
Avg	9.09		354	0.651 R	1.75	409	0.566	-.86	233	0.579	-.34			
065	8.67	-.23	106	0.630	1.01				043	0.580	-.42	Meth: 289.00 PPM <u>Molybdenum</u>		
434	7.38	-.64	330	0.630	1.01	Meth: 261.XX PCT <u>Acid Soluble Manganese</u>			368	0.576	-.55	Meth: 289.30 PPM <u>Molybdenum</u>		
220	6.15	-1.06	307	0.597 R	1.00	432	0.720 s	3.85	409	0.566	-.72	Meth: 289.99 PPM <u>Molybdenum</u>		
095	5.45	-1.31	027	0.629	.95	193	0.720 A	3.68	296	0.573	-.74	Meth: 289.99 PPM <u>Other</u>		
200	3.29	-2.09	117	0.615	.88	035	0.670	2.26	433	0.562	-.83	Meth: 289.99 PPM <u>Other</u>		
			102	0.623	.79	354	0.651 R	1.93	230	0.573	-.83	Meth: 289.99 PPM <u>Other</u>		
			251	0.620	.76	425	0.633	1.20	055	0.565	-.85	Meth: 289.99 PPM <u>Other</u>		
			231	0.615	.59	330	0.630	1.15	232	0.550	-1.18	Meth: 289.99 PPM <u>Other</u>		
			009	0.609	.47	106	0.630	1.15	291	0.545 X	-1.32	Meth: 289.99 PPM <u>Other</u>		
			037	0.600	.44	027	0.629	1.09	041	0.545	-1.32	Meth: 289.99 PPM <u>Other</u>		
			360	0.607	.38	307	0.597 R	1.07	351	0.545	-1.32	Meth: 289.99 PPM <u>Other</u>		
			023	0.602	.35	042	0.626	1.01	065	0.516	-2.14	Meth: 289.99 PPM <u>Other</u>		
			423	0.605	.33	117	0.615 R	.99	422	0.515	-2.17	Meth: 289.99 PPM <u>Other</u>		
			090	0.605	.33	102	0.623	.91	434	0.510	-2.31	Meth: 289.99 PPM <u>Other</u>		
			288	0.603	.26	251	0.620	.88	Meth: 271.30 PCT			Meth: 289.99 PPM <u>Other</u>		
			426	0.597	.11	029	0.620	.82	Water Soluble Mangan			Meth: 289.99 PPM <u>Other</u>		
			390	0.596	.07	028	0.618	.82	<u>ICP</u>			Meth: 289.99 PPM <u>Other</u>		
			Avg	0.594		262	0.615	.81	230	5.235	1.29	Meth: 289.99 PPM <u>Other</u>		
			131	0.591	-.09	231	0.615	.70	Avg	2.134		Meth: 289.99 PPM <u>Other</u>		
			233	0.579	-.40	009	0.609	.57	432	0.585	-.64	Meth: 289.99 PPM <u>Other</u>		
			368	0.576	-.58	324	0.610	.54	095	0.581	-.65	Meth: 289.99 PPM <u>Other</u>		
			433	0.562	-.86	037	0.600	.50	Meth: 281.00 PPM			Meth: 289.99 PPM <u>Other</u>		
			232	0.550	-1.19	360	0.607	.48	Mercury			Meth: 289.99 PPM <u>Other</u>		
			291	0.545 X	-1.32	090	0.605	.43	<u>Atomic Absorption</u>			Meth: 289.99 PPM <u>Other</u>		
			041	0.545	-1.32	423	0.605	.43	193	0.09	.71	Meth: 289.99 PPM <u>Other</u>		
			065	0.516	-2.09	023	0.602	.43	Meth: 281.99 PPM			Meth: 289.99 PPM <u>Other</u>		
			422	0.515	-2.12	288	0.603	.35	Mercury			Meth: 289.99 PPM <u>Other</u>		
			Meth: 261.31 PCT <u>Acid Soluble Manganese</u>			257	0.600	.26	<u>Other</u>			Meth: 289.99 PPM <u>Other</u>		
			<u>ICP</u>			426	0.597	.19	409			Meth: 289.99 PPM <u>Other</u>		
			324	0.610	.65	390	0.596	.15	0.07			Meth: 289.99 PPM <u>Other</u>		
			Avg	0.591		177	0.595	.11	.71			Meth: 289.99 PPM <u>Other</u>		
			230	0.573	-1.04	040	0.593	.10				Meth: 289.99 PPM <u>Other</u>		
			* X=Excluded from lab performance			131	0.591	.06				Meth: 289.99 PPM <u>Other</u>		
			S/s=Screened Outlier									Meth: 289.99 PPM <u>Other</u>		
			R=Duplicate Range too large									Meth: 289.99 PPM <u>Other</u>		
			A=Analysis beyond 3-s limits									Meth: 289.99 PPM <u>Other</u>		

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 289.XX PPM			Meth: 301.30 PPM			Meth: 321.30 PCT			Meth: 321.XX PCT					
<u>Molybdenum</u>			<u>Selenium</u>			<u>Acid Soluble Zinc</u>			<u>Acid Soluble Zinc</u>					
Avg	3.71		ICP			ICP			423	0.027	.49			
102	3.63	-.10	368	22.25	1.33	106	0.030	1.41	324	0.026	.39			
037	3.65	-.18	Avg	9.99		041	0.027	.77	095	0.026	.38			
065	2.32	-1.10	095	6.47	-.32	037	0.026	.56	330	0.026	.32			
220	2.20	-1.19	065	1.26 X	-.79	433	0.027	.51	233	0.026	.31			
095	1.57	-1.68				131	0.026	.45	409	0.026	.10			
			Meth: 311.99 PCT			423	0.027	.44	102	0.025	.08			
Meth: 291.00 PPM			Sodium			324	0.026	.35	Avg	0.025				
Nickel			Other			330	0.026	.28	009	0.025	-.18			
<u>Atomic Absorption</u>			422	0.21 s	8.41	233	0.026	.28	028	0.025	-.22			
220	26.50	.71	288	0.15	1.68	102	0.025	.06	065	0.025	-.39			
			102	0.14	.46	Avg	0.025		296	0.024	-.45			
Meth: 291.30 PPM			009	0.14	.38	009	0.025	-.17	043	0.024	-.48			
Nickel			Avg	0.14		065	0.025	-.36	232	0.024	-.56			
<u>ICP</u>			035	0.14	-.18	232	0.024	-.52	220	0.024	-.66			
368	39.95 s	5.41	232	0.13	-.41	114	0.024 X	-.61	434	0.024	-.66			
009	32.70	1.33	423	0.13	-1.46	422	0.024	-.76	114	0.024 X	-.66			
106	31.50	.66				251	0.020	-1.74	422	0.024	-.83			
102	31.31	.54	Meth: 321.00 PCT			307	0.018	-2.42	251	0.020	-1.90			
Avg	30.33		Acid Soluble Zinc						307	0.018	-2.65			
035	30.30	-.10	<u>Atomic Absorption</u>			Meth: 321.99 PCT			Meth: 325.30 PCT					
232	28.25	-1.08	137	0.610 s	256.07	Acid Soluble Zinc			Water Soluble Zinc					
037	27.90	-1.34	193	0.033 S	3.56	<u>Other</u>			<u>ICP</u>					
065	14.38 s	-8.31	262	0.030	2.12	409	0.026	-.71	368	0.035	.91			
			095	0.026	.49	Meth: 321.XX PCT			Avg	0.028				
Meth: 291.XX PPM			Avg	0.025		<u>Acid Soluble Zinc</u>			095	0.022	-.82			
Nickel			028	0.025	-.23	137	0.610 s	211.64						
368	39.95 s	4.70	296	0.024	-.50	354	0.042 s	6.16						
009	32.70	1.32	043	0.024	-.55	193	0.033 s	2.92						
106	31.50	.77	434	0.024	-.75	117	0.029 R	2.26						
102	31.31	.67	220	0.024	-.75	035	0.031	2.04						
035	30.30	.24				262	0.030	1.72						
Avg	29.78		Meth: 321.30 PCT			106	0.030	1.55						
232	28.25	-.67	<u>ICP</u>			041	0.027	.84						
037	27.90	-.89	354	0.042 s	5.61	037	0.026	.62						
220	26.50	-1.55	117	0.029 R	2.06	433	0.027	.57						
065	14.38 s	-6.65	035	0.031	1.85	131	0.026	.50						

\* 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	2.44	6.52	3.66	121.00	20	- 0.28	3.27	0.70
001.99	7	- 0.06	0.97	0.22	121.30	35	0.80	2.96	0.30
001.XX	14	1.10	4.15	2.38	121.99	2	0.00	0.37	0.83
005.00	2	0.00	1.22	0.05	121.XX	58	0.59	2.82	0.38
005.99	5	3.32	7.49	0.06	131.00	3	0.00	1.08	0.23
005.XX	7	0.25	1.16	0.04	131.30	4	0.00	0.67	0.73
007.00	2	0.00	0.81	0.65	131.XX	7	- 0.20	0.99	0.83
007.XX	2	0.00	0.81	0.65	144.01	18	0.31	1.63	0.15
009.10	2	0.00	0.50	0.79	144.02	3	0.00	1.11	0.12
009.XX	3	0.00	1.12	0.01	144.99	20	0.72	2.83	0.63
010.11	9	- 0.29	1.31	0.68	144.XX	42	0.34	1.95	0.39
010.12	2	0.00	1.15	0.30	151.30	5	7.86	17.59	10.56
010.60	52	- 0.01	1.24	0.66	151.XX	6	8.08	20.09	12.08
010.99	4	2.27	4.63	0.10	165.99	7	0.381	1.389	0.088
010.XX	66	0.01	1.35	0.63	165.XX	8	0.309	1.301	0.082
020.20	5	0.00	1.06	0.09	181.00	2	0.00	1.22	0.09
020.40	2	0.00	1.22	0.04	181.30	8	0.80	2.45	1.05
020.50	5	0.00	1.06	0.05	181.XX	11	0.73	2.24	0.93
020.XX	13	0.03	0.98	0.07	190.00	3	0.00	1.09	0.20
040.20	2	0.00	0.86	0.62	190.99	2	0.00	0.92	0.57
040.XX	2	0.00	0.86	0.62	190.XX	5	0.00	1.03	0.24
041.10	3	0.00	0.93	0.51	191.30	12	0.00	1.02	0.06
041.50	5	- 6.90	15.43	0.62	191.XX	14	0.00	1.02	0.05
041.60	2	0.00	0.95	0.54	202.00	2	0.00	0.94	0.56
041.99	2	0.00	1.22	0.04	202.30	8	- 0.73	5.92	0.36
041.XX	10	- 0.56	2.07	0.30	202.XX	11	- 0.46	1.70	0.17
050.00	15	1.22	3.44	0.50	221.00	8	0.0853	0.9750	0.3704
050.30	9	- 0.11	1.01	0.27	221.30	17	3.0425	10.214	1.3012
050.31	2	0.00	0.00	0.87	221.XX	25	1.7760	7.2692	1.0115
050.50	5	- 0.09	0.96	0.26	241.00	16	- 0.32	1.37	0.26
050.51	7	0.00	0.96	0.37	241.30	35	0.01	1.26	0.15
050.60	8	1.80	5.19	0.72	241.99	2	0.00	0.70	0.71
050.61	6	0.00	1.04	0.11	241.XX	52	- 0.01	1.23	0.17
050.99	16	0.24	1.22	0.64	251.00	3	3.46	6.05	0.09
050.XX	63	0.27	1.51	0.48	251.30	12	0.33	1.47	0.32
060.00	4	0.00	1.06	0.17	251.XX	16	0.29	1.52	0.16
060.XX	4	0.00	1.06	0.17	261.00	12	0.403	1.662	0.355
101.30	14	3.25	11.75	0.54	261.11	3	0.000	1.117	0.043
101.XX	16	2.91	11.27	0.56	261.30	29	0.173	1.154	0.378

## 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
261.31	2	0.000	0.920	0.572					
261.99	2	0.000	1.208	0.141					
261.XX	48	0.207	1.208	0.354					
271.30	3	0.000	1.117	0.042					
271.XX	3	0.000	1.117	0.042					
281.XX	2	0.000	1.168	0.260					
289.30	10	2.02	6.29	0.61					
289.XX	12	1.74	5.89	0.57					
291.30	8	- 0.41	3.72	0.84					
291.XX	9	- 0.25	2.91	0.69					
301.30	3	0.00	0.99	0.42					
301.XX	3	0.00	0.99	0.42					
311.99	7	1.17	3.20	0.84					
311.XX	7	1.17	3.20	0.84					
321.00	9	28.805	85.220	1.553					
321.30	20	0.338	1.550	0.515					
321.XX	30	7.389	38.600	0.841					
325.30	2	0.000	1.160	0.278					