

- Pass 1 Results for 69 Labs - - Pass 2 Results for 69 Labs -

Method	AOAC Ref.	Method Code	No. of Labs	Grand Avg.	Std. Dev.	Average Range of Dups	No. of Labs	Grand Avg.	Std. Dev.	Average Range of Dups
Ammoniacal Nitrogen, MgO Distillation	920.03	001.10	1	0.05	0.00	0.00	1	0.05	0.00	0.00
Ammoniacal Nitrogen, Other		001.99	3	0.11	0.06	0.00	3	0.11	0.06	0.00
Method Group 001.XX PCT			4	0.09	0.06	0.00	4	0.09	0.06	0.00
Nitrate Nitrogen, Other		002.99	1	0.00	0.00	0.00	1	0.00	0.00	0.00
Nitrogen From Urea, Urease (as N)	959.03	005.00	1	0.72	0.00	0.00	1	0.72	0.00	0.00
Nitrogen From Urea, Other		005.99	2	0.92	0.31	0.08	2	0.92	0.31	0.08
Method Group 005.XX PCT			3	0.85	0.26	0.05	3	0.85	0.26	0.05
Percent Urea, Other		007.99	1	0.69	0.01	0.01	1	0.69	0.01	0.01
Ammon & Nitrate N, Devarda	892.01	009.10	1	1.52	0.00	0.00	1	1.52	0.00	0.00
Ammon & Nitrate N, Other		009.99	1	0.29	0.01	0.01	1	0.29	0.01	0.01
Method Group 009.XX PCT			2	0.90	0.71	0.00	2	0.90	0.71	0.00
Total Nitrogen, Modified Comprehensive	978.02	010.11	9	2.35	0.17	0.03	9	2.35	0.17	0.03
Total Nitrogen, Salicylic	955.04D	010.12	4	2.28	0.17	0.00	3	2.32	0.19	0.00
Total Nitrogen, Raney	970.03	010.16	1	2.24	0.00	0.00	1	2.24	0.00	0.00
Total Nitrogen, Combustion		010.60	45	2.22	0.13	0.05	41	2.23	0.11	0.04
Total Nitrogen, Other		010.99	4	2.17	0.11	0.08	4	2.17	0.11	0.08
Method Group 010.XX PCT			63	2.24	0.14	0.05	59	2.23	0.13	0.04
Total Phosphate, Grav Quimociac	962.02	020.10	6	4.03	0.17	0.02	6	4.03	0.17	0.02
Total Phosphate, Spectrometric	958.01	020.20	14	4.08	0.11	0.03	13	4.08	0.11	0.02
Total Phosphate, Automated	978.01	020.40	6	4.00	0.10	0.04	6	4.00	0.10	0.04
Total Phosphate, ICP		020.50	7	4.10	0.13	0.05	6	4.12	0.12	0.03
Total Phosphate, Other		020.99	2	3.91	0.13	0.09	2	3.91	0.13	0.09
Method Group 020.XX PCT			35	4.05	0.13	0.04	33	4.06	0.12	0.03
Insoluble Phosphate, ICP		030.50	1	0.00	0.00	0.00	1	0.00	0.00	0.00
InDir Available Phosphate, ICP		040.50	1	4.03	0.05	0.07	1	4.03	0.05	0.07
InDir Available Phosphate, Other		040.99	1	4.00	0.00	0.00	1	4.00	0.00	0.00
Method Group 040.XX PCT			2	4.01	0.03	0.04	2	4.01	0.03	0.04
Dir Available Phosphate, Grav Quimociac	960.03E	041.10	10	4.01	0.05	0.03	10	4.01	0.05	0.03
Dir Available Phosphate, Spectrometric	960.03D	041.20	1	4.01	0.04	0.05	1	4.01	0.04	0.05
Dir Available Phosphate, Automated	978.01	041.40	4	4.01	0.09	0.07	4	4.01	0.09	0.07
Dir Available Phosphate, ICP		041.50	10	4.02	0.11	0.06	10	4.02	0.11	0.06
Dir Available Phosphate, EDTA Extract	993.01	041.60	9	4.06	0.06	0.07	9	4.06	0.06	0.07
Dir Available Phosphate, Other		041.99	1	4.09	0.01	0.02	1	4.09	0.01	0.02
Method Group 041.XX PCT			36	4.02	0.08	0.06	36	4.02	0.08	0.06
Water Soluble Phosphate, Spectrometric	970.01	048.20	1	0.14	0.01	0.02	1	0.14	0.01	0.02
Soluble Potash, STPB Oxalate	958.02	050.00	13	8.24	0.30	0.04	13	8.24	0.30	0.04
Soluble Potash, AA (Oxalate)		050.30	7	7.98	0.20	0.10	7	7.98	0.20	0.10
Soluble Potash, ICP (Oxalate)		050.50	7	8.07	0.32	0.20	7	8.07	0.32	0.20
Soluble Potash, ICP (Citrate)		050.51	6	8.11	0.12	0.04	6	8.11	0.12	0.04

- Pass 1 Results for 69 Labs - - Pass 2 Results for 69 Labs -

Method	AOAC Ref.	Method Code	No. of Labs	Grand Avg.	Std. Dev.	Average Range of Dups	No. of Labs	Grand Avg.	Std. Dev.	Average Range of Dups
Soluble Potash, Flame (Oxalate)	983.02(a)	050.60	2	8.01	0.23	0.05	2	8.01	0.23	0.05
Soluble Potash, Flame (Citrate)	983.02(b)	050.61	9	8.19	0.18	0.07	9	8.19	0.18	0.07
Soluble Potash, Other		050.99	12	8.07	0.13	0.07	11	8.09	0.09	0.05
Method Group 050.XX PCT			59	8.11	0.27	0.08	55	8.12	0.26	0.06
Acid Soluble Calcium, AA	945.04	101.00	1	0.00	0.00	0.00	1	0.00	0.00	0.00
Acid Soluble Calcium, ICP		101.30	4	0.00	0.00	0.00	4	0.00	0.00	0.00
Method Group 101.XX PCT			5	0.00	0.00	0.00	5	0.00	0.00	0.00
Acid Soluble Magnesium, AA	984.01	121.00	1	2.54	0.01	0.02	1	2.54	0.01	0.02
Acid Soluble Magnesium, ICP		121.30	3	0.00	0.00	0.00	3	0.00	0.00	0.00
Method Group 121.XX PCT			4	0.64	1.18	0.01	3	0.00	0.00	0.00
Sulfur, Gravimetric	980.02a	144.01	12	1.50	0.44	0.06	11	1.48	0.45	0.04
Sulfur, Gravimetric	980.02b	144.02	3	1.55	0.25	0.14	3	1.55	0.25	0.14
Sulfur, Other		144.99	14	1.72	0.18	0.07	13	1.71	0.17	0.05
Method Group 144.XX PCT			30	1.58	0.36	0.07	27	1.58	0.37	0.05
Acid Soluble Boron, Spectrometric	982.01	165.00	8	0.021	0.003	0.002	8	0.021	0.003	0.002
Acid Soluble Boron, Other		165.99	19	0.023	0.003	0.001	19	0.023	0.003	0.001
Method Group 165.XX PCT			27	0.022	0.003	0.001	25	0.023	0.002	0.001
Water Soluble Boron, Other		171.99	1	0.025	0.000	0.000	1	0.025	0.000	0.000
Cadmium, ICP		181.30	1	0.03	0.00	0.01	1	0.03	0.00	0.01
Water Soluble Chlorine, Titrimetric	928.02	190.00	1	1.29	0.01	0.01	1	1.29	0.01	0.01
Water Soluble Chlorine, Other		190.99	1	0.76	0.01	0.02	1	0.76	0.01	0.02
Method Group 190.XX PCT			2	1.02	0.30	0.02	2	1.02	0.30	0.02
Chromium, ICP		191.30	3	0.61	0.15	0.04	3	0.61	0.15	0.04
Acid Soluble Cobalt, ICP	965.11	202.30	1	0.04	0.00	0.01	1	0.04	0.00	0.01
Acid Soluble Copper, Atomic Absorption	975.01	221.00	9	0.0367	0.0040	0.0011	8	0.0371	0.0041	0.0007
Acid Soluble Copper, ICP		221.30	29	0.0381	0.0019	0.0007	27	0.0381	0.0019	0.0006
Acid Soluble Copper, Other		221.99	2	0.0366	0.0007	0.0002	2	0.0366	0.0007	0.0002
Method Group 221.XX PCT			40	0.0377	0.0026	0.0008	37	0.0378	0.0025	0.0006
Acid Soluble Iron, Atomic Absorption	980.01	241.00	8	0.06	0.00	0.00	8	0.06	0.00	0.00
Acid Soluble Iron, ICP		241.30	28	0.06	0.00	0.00	25	0.06	0.00	0.00
Acid Soluble Iron, Other		241.99	2	0.06	0.00	0.01	2	0.06	0.00	0.01
Method Group 241.XX PCT			38	0.06	0.00	0.00	36	0.06	0.00	0.00
Lead, ICP		251.30	1	0.39	0.01	0.01	1	0.39	0.01	0.01
Acid Soluble Manganese, AA	972.02a	261.00	7	0.052	0.005	0.001	7	0.052	0.005	0.001
Acid Soluble Manganese, AA	972.02b	261.11	1	0.051	0.004	0.006	1	0.051	0.004	0.006
Acid Soluble Manganese, ICP		261.30	25	0.052	0.004	0.001	24	0.052	0.003	0.001
Acid Soluble Manganese, ICP		261.31	2	0.053	0.002	0.001	2	0.053	0.002	0.001
Acid Soluble Manganese, Other		261.99	5	0.051	0.001	0.001	5	0.051	0.001	0.001
Method Group 261.XX PCT			40	0.052	0.004	0.001	38	0.052	0.004	0.001

- Pass 1 Results for 69 Labs - - Pass 2 Results for 69 Labs -

Method	AOAC Ref.	Method Code	No. of Labs	Grand Avg.	Std. Dev.	Average Range of Dups	No. of Labs	Grand Avg.	Std. Dev.	Average Range of Dups
Molybdenum, ICP		289.30	12	12.37	1.36	0.52	11	12.31	1.37	0.39
Molybdenum, Other		289.99	2	12.68	0.78	0.05	2	12.68	0.78	0.05
Method Group 289.XX PPM			14	12.41	1.28	0.45	13	12.36	1.29	0.34
Nickel, ICP		291.30	1	0.14	0.00	0.01	1	0.14	0.00	0.01
Sodium, Other		311.99	4	0.07	0.06	0.00	4	0.07	0.06	0.00
Acid Soluble Zinc, Atomic Absorption	975.02	321.00	9	0.047	0.003	0.001	7	0.046	0.002	0.000
Acid Soluble Zinc, ICP		321.30	28	0.050	0.003	0.001	28	0.050	0.003	0.001
Acid Soluble Zinc, Other		321.99	1	0.047	0.001	0.001	1	0.047	0.001	0.001
Method Group 321.XX PCT			39	0.049	0.004	0.001	36	0.049	0.004	0.001
Water Soluble Zinc, Other		325.99	1	0.073	0.000	0.000	1	0.073	0.000	0.000

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 001.10 PCT			Meth: 005.XX PCT			Meth: 010.11 PCT			Meth: 010.60 PCT		
Ammoniacal Nitrogen			Nitrogen From Urea			Total Nitrogen			Total Nitrogen		
MgO Distillation			309	1.18	1.27	Modified Comprehensi			Combustion		
232	0.05	-.71	Avg	0.85		029	2.19	-.98	035	2.25	.21
			232	0.72	-.52				055	2.25	.17
Meth: 001.99 PCT			029	0.66	-.79	Meth: 010.12 PCT			292	2.25	.17
Ammoniacal Nitrogen						Total Nitrogen			102	2.24	.09
Other						Salicylic			096	2.23	.03
105	0.19	1.29	Meth: 007.99 PCT			254	2.56	1.27	Avg	2.23	
Avg	0.11		Percent Urea			Avg	2.32		040	2.22	
096	0.07	-.56	Other			397	2.23	-.45	330	2.20	-.24
420	0.06	-.72	027	0.69	-.71	351	2.19	-.67	007	2.20	-.24
						185	2.16	-.82	029	2.20	-.26
Meth: 001.XX PCT			Meth: 009.10 PCT						291	2.20	-.30
Ammoniacal Nitrogen			Ammon & Nitrate N						234	2.22	-.33
105	0.19	1.61	Devarda			Meth: 010.16 PCT			106	2.19	-.40
Avg	0.09		257	1.52	.00	Total Nitrogen			324	2.23	-.40
096	0.07	-.36				Raney			262	2.17	-.56
420	0.06	-.53	Meth: 009.99 PCT			300	2.24	.00	233	2.17	-.62
232	0.05	-.71	Ammon & Nitrate N						247	2.16	-.87
			Other			Meth: 010.60 PCT			177	2.12	-1.06
			105	0.29	-.71	Total Nitrogen			131	2.11	-1.09
Meth: 002.99 PCT						Combustion			057	2.11	-1.11
Nitrate Nitrogen			Meth: 009.XX PCT			037	2.39	1.69	057	2.11	-1.11
Other			Ammon & Nitrate N			073	2.41	1.66	230	2.14	-1.12
232	0.00	.71	257	1.52	.87	136	2.41	1.61	377	2.09	-1.28
			Avg	0.90		368	2.39	1.48	255	2.08	-1.31
Meth: 005.00 PCT			105	0.29	-.87	023	2.38	1.39	041	2.04	-1.72
Nitrogen From Urea						428	2.38	1.38	426	2.05	-1.73
Urease (as N)			Meth: 010.11 PCT			157	2.33	1.08	042	2.04	-2.04
232	0.72	.71	Total Nitrogen			027	2.32	.95	034	1.92	-2.77
			Modified Comprehensi			354	2.33	.91	232	1.83	-3.57
Meth: 005.99 PCT			460	2.66	1.86	325	2.33	.90	405	1.06	-10.54
Nitrogen From Urea			455	2.53	1.07	296	2.31	.77			
Other			309	2.52	1.03	043	2.27	.76	Meth: 010.99 PCT		
309	1.18	.85	Avg	2.35		072	2.31	.75	Total Nitrogen		
Avg	0.92		090	2.28	-.41	360	2.30	.63	Other		
029	0.66	-.88	114	2.26	-.53	095	2.28	.51	420	2.28	.95
			105	2.25	-.62	028	2.25	.28	371	2.25	.67
			416	2.24	X	009	2.23	.27	Avg	2.17	
			260	2.22	-.78	231	2.26	.26	409	2.12	-.68

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

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index				
Meth: 010.XX PCT															
<u>Total Nitrogen</u>															
096	2.23	-.01										Meth: 020.50 PCT			
397	2.23	-.01										<u>Total Phosphate</u>			
040	2.22	-.13	057	4.09	.35										ICP
260	2.22	-.17	090	4.09	.32	426	4.71 s	4.83							
009	2.23	-.23	Avg	4.03	.48	432	4.34	1.78							
330	2.20	-.24	117	3.97	-.34	057	4.18	.48							
007	2.20	-.24	262	3.70	-1.93	368	4.13	.15							
029	2.20	-.25										Avg			
291	2.20	-.28										255			
234	2.22	-.29										460			
351	2.19	-.33										035			
324	2.23	-.34										455			
029	2.19	-.35										405			
106	2.19	-.37										258			
262	2.17	-.50										231			
185	2.16	-.54										420			
233	2.17	-.55										371			
247	2.16	-.76										117			
177	2.12	-.93										416			
131	2.11	-.96										330			
409	2.12	-.96										024			
057	2.11	-.97										042			
230	2.14 R	-.97										157			
377	2.09	-1.12										262			
255	2.08	-1.14										309			
041	2.04	-1.49										Meth: 041.20 PCT			
426	2.05	-1.50										Dir Available Phosph			
030	2.04	-1.57										<u>Spectrometric</u>			
042	2.04 R	-1.75										030			
034	1.92	-2.37										Meth: 030.50 PCT			
232	1.83	-3.04										Insoluble Phosphate			
405	1.06 s	-8.93										ICP			
Meth: 020.10 PCT															
<u>Total Phosphate</u>															
114	4.21	1.05										255			
041	4.13	.57										0.00			
Meth: 020.20 PCT															
<u>Total Phosphate</u>															
096	4.07	.66										Meth: 040.50 PCT			
035	4.04	.54										InDir Available Phos			
Avg	4.00											ICP			
024	3.89	-1.15										255			
042	3.86	-1.44										4.03			
Meth: 020.40 PCT															
<u>Total Phosphate</u>															
095	4.10	.94										4.03			
247	4.08	.71										.71			
096	4.07	.66										Meth: 040.99 PCT			
035	4.04	.54										InDir Available Phos			
Avg	4.00											Other			
024	3.89	-1.15										405			
042	3.86	-1.44										4.00			
Meth: 020.50 PCT															
<u>Total Phosphate</u>															
257	8.06 s	32.05										4.00			
324	4.35	2.46										4.00			
231	4.21	1.16										4.00			
428	4.20	1.08										4.01			
232	4.10	.27										4.01			
Avg	4.08											4.01			
292	4.07	-.07										4.01			
177	4.07	-.08										4.01			
409	4.06	-.19										4.01			
234	4.03	-.51										4.01			
460	4.05 R	-.52										4.01			
258	4.00	-.71										4.01			
405	4.00	-.71										4.01			
420	3.99	-.84										4.01			
371	3.99	-.88										4.01			
416	3.97 X	-1.03										4.01			
309	0.19 s	-35.25										4.01			
Meth: 020.99 PCT															
<u>Total Phosphate</u>															
455	4.01	.71										4.01			
Avg	3.91											4.01			
157	3.82	-.99										4.01			
Meth: 020.XX PCT															
<u>Total Phosphate</u>															
426	4.71 s	4.83										4.01			
432	4.34	1.78										4.01			
057	4.18	.48										4.01			
368	4.13	.15										4.01			
Avg	4.12											4.01			
255	4.03	-.77										4.01			
291	4.02	-.79										4.01			
231	4.01	-.93										4.01			
330	4.00 R	-1.25										4.01			
Meth: 020.XX PCT															
<u>Total Phosphate</u>															
409	4.06	.08										4.01			
Avg	4.06											4.01			
291	4.02	-.33										4.01			
234	4.03	-.34										4.01			
255	4.03	-.38										4.01			
460	4.05	-.41										4.01			
035	4.04	-.41										4.01			
455	4.01	-.44										4.01			
405	4.00	-.48										4.01			
258	4.00	-.48										4.01			
231	4.01	-.48										4.01			
420	3.99	-.61										4.01			
371	3.99	-.63										4.01			
117	3.97	-.70										4.01			
416	3.97 X	-.76										4.01			
330	4.00 R	-.94										4.01			
024	3.89	-1.37										4.01			
042	3.86	-1.61										4.01			
157	3.82 R	-2.06										4.01			
262	3.70	-2.89										4.01			
309	0.19 s	-31.04										4.01			
Meth: 041.10 PCT															
<u>Dir Available Phosph</u>															
009	4.08	1.37										4.01			
136	4.06	.87										4.01			
105	4.05	.71										4.01			
055	4.04	.62										4.01			
040	4.03	.23										4.01			
Avg	4.01											4.01			
131	4.01	-.20										4.01			
185	4.00	-.33										4.01			
254	4.01	-.57										4.01			
260	3.98	-.79										4.01			
072	3.90	-2.19										4.01			
102	3.88 s	-2.96										4.01			
Meth: 041.20 PCT															
<u>Dir Available Phosph</u>															
030	4.01	.71										4.01			
Meth: 041.40 PCT															
<u>Dir Available Phosph</u>															
027	4.10	1.10										4.01			
029	4.03	.14										4.01			
131	4.02	.06										4.01			
Avg	4.01											4.01			
072	3.92	-1.51										4.01			
095	0.33 s	-42.58										4.01			

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

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 041.50 PCT											
Dir Available Phosph											
ICP	009	4.11	1.08								
007	4.17	1.70	1.07								
009	4.11	.92	1.05								
360	4.07	.77	1.02								
377	4.07	.53	.92								
Avg	4.02		.87								
291	4.02	-1.14	.82								
023	4.00	-1.32	.78								
043	3.97	-1.50	.60								
325	4.00	-1.65	.58								
055	3.93	-1.81	.49								
354	3.82	-1.85	.44								
Meth: 041.60 PCT											
Dir Available Phosph											
EDTA Extract	040	4.03	.06								
028	4.13	1.15	.06								
106	4.07	1.12	.06								
034	4.10	.94	-1.12								
351	4.09	.62	-1.2								
233	4.07	.25	-2.1								
043	4.07	.22	-2.4								
Avg	4.06		-3.2								
296	4.03	-.79	-3.8								
073	4.01	-.81	-4.0								
105	3.97	-1.81	-4.7								
Meth: 041.99 PCT											
Dir Available Phosph											
Other	105	4.09	.71								
Avg	4.09		-1.15								
230	2.13	S-138.62	-1.69								
Meth: 041.XX PCT											
Dir Available Phosph											
007	4.17	2.09	-2.31								
028	4.13	1.32	-45.06								
Meth: 041.XX PCT											
Dir Available Phosph											
ICP	009	4.11	1.08								
034	4.10	1.07	1.07								
027	4.10	1.05	1.05								
106	4.07	1.02	1.02								
360	4.07	.92	.92								
351	4.09	.87	.87								
105	4.09	.82	.82								
009	4.08	.78	.78								
233	4.07	.60	.60								
043	4.07	.58	.58								
377	4.07	.58	.58								
296	4.03	.49	.49								
136	4.06	.44	.44								
105	4.05	.34	.34								
055	4.04	.33	.33								
040	4.03	.06	.06								
029	4.03	.06	.06								
Avg	4.02		-1.12								
131	4.02	-1.2	-1.2								
073	4.01	-2.1	-2.1								
291	4.02	-2.1	-2.1								
131	4.01	-2.4	-2.4								
185	4.00	-3.2	-3.2								
030	4.01	-3.8	-3.8								
254	4.01	-4.0	-4.0								
023	4.00	-4.7	-4.7								
260	3.98	-6.2	-6.2								
043	3.97	-7.4	-7.4								
325	4.00	-8.7	-8.7								
105	3.97	-1.08	-1.08								
055	3.93	-1.15	-1.15								
072	3.90	-1.53	-1.53								
072	3.92	-1.69	-1.69								
102	3.88	-2.01	-2.01								
354	3.82	-2.49	-2.49								
230	2.13	S-23.11	-23.11								
095	0.33	S-45.06	-45.06								
Meth: 041.XX PCT											
Dir Available Phosph											
007	4.17	2.09	-2.31								
028	4.13	1.32	-45.06								
Meth: 048.20 PCT											
Water Soluble Phosph											
Spectrometric	420	0.14	-0.71								
Meth: 050.00 PCT											
Soluble Potash											
STPB Oxalate	114	8.85	2.07								
072	8.37	.44	.44								
055	8.30	.22	.22								
009	8.29	.16	.16								
043	8.24	.14	.14								
Avg	8.24		.14								
055	7.87	-.97	-.97								
354	7.62	-1.41	-1.41								
426	7.17	S-2.88	-2.88								
Meth: 050.51 PCT											
Soluble Potash											
ICP (Citrate)	432	9.10	S-8.07								
007	8.25	1.18	1.18								
009	8.24	1.04	1.04								
291	8.15	.44	.44								
Avg	8.11		.44								
043	8.07	-.34	-.34								
377	8.02	-.81	-.81								
023	7.94	-1.44	-1.44								
096	7.31	S-6.57	-6.57								
Meth: 050.60 PCT											
Soluble Potash											
Flame (Oxalate)	460	9.15	S-4.97								
030	8.21	.87	.87								
Avg	8.01		.87								
309	7.81	-.86	-.86								
Meth: 050.61 PCT											
Soluble Potash											
Flame (Citrate)	028	8.46	1.52								
095	8.43	1.35	1.35								
105	8.31	.64	.64								
Avg	8.19		.64								
041	8.18	-.22	-.22								
024	8.11	-.44	-.44								
029	8.13	-.71	-.71								
131	8.06	-.76	-.76								
035	8.12	-.80	-.80								
034	7.95	-1.41	-1.41								
Meth: 050.99 PCT											
Soluble Potash											
Other	455	8.73	S-6.81								
177	8.23	1.69	1.69								
325	8.20	1.19	1.19								
368	8.19	1.08	1.08								
232	8.11	.38	.38								
Avg	8.09		.38								
131	8.09	-.32	-.32								
360	8.09	-.38	-.38								
072	8.05	-.44	-.44								
042	8.05	-.49	-.49								
105	8.06	-.63	-.63								
255	8.00	-1.01	-1.01								
371	7.94	-1.68	-1.68								
260	7.82	R-3.33	-3.33								
330	7.75	S-4.00	-4.00								

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

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 050.XX PCT														
<u>Soluble Potash</u>														
028	8.46	1.28	377	8.02	- .41	Meth: 050.XX PCT								
420	8.42	1.22	035	8.12	- .45	<u>Soluble Potash</u>								
095	8.43	1.17	255	8.00	- .47	096	0.02 s	21.73	Meth: 101.XX PCT					
324	8.34 R	1.07	233	8.00	- .51	<u>Acid Soluble Calcium</u>								
072	8.37	.94	057	7.99	- .51	027	0.00	1.16	Sulfur					
106	8.33	.80	034	7.95	- .67	009	0.00	.72	Gravimetric					
105	8.31	.70	023	7.94	- .70	232	0.00 X	.44	Sulfur					
055	8.30	.68	371	7.94	- .71	Avg	0.00	- .24	Gravimetric					
009	8.29	.62	043	7.93	- .75	105	0.00	- 1.27	Sulfur					
007	8.25	.51	231	7.88	- .94	397	0.83	- 1.44	Meth: 144.01 PCT					
177	8.23	.50	157	7.85	- 1.08	057	0.79	- 1.53	Sulfur					
043	8.24	.47	309	7.81	- 1.18	Meth: 121.00 PCT								
009	8.24	.45	260	7.82 R	- 1.28	<u>Acid Soluble Magnesi</u>								
029	8.13	.40	055	7.87 R	- 1.32	AA	2.54	- .71	Sulfur					
030	8.21	.34	330	7.75 R	- 1.52	Meth: 144.02 PCT								
325	8.20	.31	073	7.73	- 1.58	<u>Gravimetric</u>								
368	8.19	.26	185	7.70	- 1.64	233	1.72	.69	Sulfur					
262	8.19	.26	354	7.62	- 1.91	Meth: 121.30 PCT								
041	8.18	.24	096	7.31	- 3.08	<u>Acid Soluble Magnesi</u>								
291	8.15	.18	102	7.19 s	- 3.68	ICP	0.00	- .72	Sulfur					
040	8.16	.16	426	7.17 s	- 3.69	Meth: 144.99 PCT								
258	8.16	.13	254	7.19 s	- 3.70	<u>Gravimetric</u>								
Avg	8.12	-.03	230	5.86 s	- 8.57	Sulfur								
024	8.11	-.09	Meth: 101.00 PCT			Meth: 121.XX PCT								
090	8.11	-.12	<u>Acid Soluble Calcium</u>			<u>Acid Soluble Magnesi</u>								
232	8.11	-.12	105	0.00	.71	262	2.54 R	1584.15	Sulfur					
131	8.09	-.17	AA			095	0.00	1.29	Other					
043	8.07	-.19	105	0.00	.71	Avg	0.00	- .57	Sulfur					
360	8.09	-.19	Meth: 101.30 PCT			232	0.00 X	- .72	Sulfur					
292	8.07	-.20	<u>Acid Soluble Calcium</u>			041	0.00	- .72	Other					
397	8.06	-.24	096	0.02 s	21.32	Meth: 144.01 PCT								
131	8.06	-.25	027	0.00	1.04	<u>Gravimetric</u>								
234	8.07	-.25	009	0.00	.58	405	2.13	1.44	Sulfur					
136	8.06	-.25	072	8.06 X	-.27	296	1.86	.83	Gravimetric					
416	8.06 X	-.27	009	0.00	.58	055	1.84	.82	Sulfur					
072	8.05	-.27	232	0.00 X	.37	324	1.84	.80	Gravimetric					
042	8.05	-.28	Avg	0.00	-.40	106	1.74 R	.67	Sulfur					
105	8.06	-.30	041	0.00	- 1.40	114	1.70	.49	Gravimetric					
Meth: 144.XX PCT														
<u>Sulfur</u>														
157	3.14 s	4.25	Meth: 144.01 PCT											
405	2.13	1.51	Sulfur											
377	2.07	1.35	105	1.62	.32	Meth: 144.02 PCT								
117	1.98 R	1.15	Sulfur											
296	1.86	.76	Gravimetric											
055	1.84	.75	233	1.72	.57	Sulfur								
324	1.84	.72	Gravimetric											
106	1.74 R	.60	029	1.25	- 1.30	Sulfur								
009	1.78	.58	Meth: 144.99 PCT											
255	1.77	.53	Sulfur											
231	1.76	.50	Gravimetric											
232	1.75	.47	233	1.72	.69	Sulfur								
027	1.74	.45	Gravimetric											
360	1.73	.41	043	1.68	.57	Sulfur								
233	1.72	.39	Meth: 121.XX PCT											
368	1.71	.38	<u>Acid Soluble Magnesi</u>											
409	1.68	.36	095	0.00	1.29	Sulfur								
114	1.70	.34	Avg	0.00	- .57	Sulfur								
043	1.68	.32	232	0.00 X	- .57	Sulfur								
023	1.67	.28	041	0.00	- .72	Other								
102	1.64	.18	Meth: 121.XX PCT											
105	1.62	.13	157	3.14 s	8.26	Sulfur								
291	1.59	.12	377	2.07	2.11	Sulfur								
Avg	1.58	-.51	117	1.98 R	1.74	Other								
028	1.39	-.51	009	1.78	.53	Sulfur								
095	1.37	-.56	255	1.77	.38	Sulfur								
096	1.27	-.85	231	1.76	.32	Other								
029	1.25 R	-.97	232	1.75	.26	Sulfur								
102	0.90	- 1.84	027	1.74	.21	Other								
397	0.83	- 2.05	368	1.71	.17	Sulfur								
057	0.79	- 2.16	360	1.73	.14	Sulfur								
354	0.76	- 2.23	Avg	1.71	-.23	Sulfur								
230	0.47 s	- 3.02	023	1.67	-.23	Gravimetric								
Meth: 165.00 PCT														
<u>Acid Soluble Boron</u>														
428	0.044 s	8.24	102	1.64	- .36	Meth: 144.01 PCT								
Spectrometric														
428 0.044 s 8.24														

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

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 165.00 PCT											
Acid Soluble Boron											
<u>Spectrometric</u>											
023	0.024	1.02									
037	0.021	.72									
258	0.023	.67									
055	0.022	.59									
057	0.021	.14									
296	0.021	.11									
Avg	0.021										
029	0.020	-.68									
257	0.015	-2.16									
397	0.015	-5.05									
Meth: 165.99 PCT											
Acid Soluble Boron											
<u>Other</u>											
354	0.029	2.22									
433	0.027	1.65									
360	0.026	1.05									
368	0.025	1.03									
426	0.025	.92									
136	0.025	.67									
042	0.023	.04									
090	0.023	.04									
Avg	0.023										
232	0.023	-.11									
255	0.022	-.23									
409	0.022	-.35									
009	0.022	-.37									
230	0.022	-.53									
291	0.022	-.58									
106	0.021	-.84									
043	0.021	-.94									
117	0.020	-1.02									
432	0.020	-1.14									
114	0.019	-1.58									
Meth: 171.99 PCT											
Water Soluble Boron											
<u>Other</u>											
027	0.025	.00									
Meth: 165.99 PCT											
Acid Soluble Boron											
<u>Spectrometric</u>											
023	0.024	1.02									
037	0.021	.72									
258	0.023	.67									
055	0.022	.59									
057	0.021	.14									
296	0.021	.11									
Avg	0.021										
029	0.020	-.68									
257	0.015	-2.16									
397	0.015	-5.05									
Meth: 165.99 PCT											
Acid Soluble Boron											
<u>Other</u>											
117	0.0372	.89									
Avg	0.0366										
114	0.0360	-.84									
Meth: 221.00 PCT											
Acid Soluble Copper											
<u>ICP</u>											
157	0.0365	R -1.14									
095	0.0358	-1.22									
409	0.0355	-1.38									
232	0.0353	-1.49									
096	0.0350	-1.69									
291	0.0335	-2.42									
023	0.0280	s -5.42									
Meth: 221.99 PCT											
Acid Soluble Copper											
<u>Other</u>											
117	0.0372	.89									
Avg	0.0366										
114	0.0360	-.84									
Meth: 221.99 PCT											
Acid Soluble Copper											
<u>ICP</u>											
420	0.0600	s 8.83									
460	0.0445	2.68									
041	0.0405	R 1.24									
354	0.0405	1.10									
028	0.0405	1.09									
426	0.0402	.99									
433	0.0402	.97									
432	0.0400	.89									
247	0.0400	.89									
027	0.0400	.89									
377	0.0396	.76									
009	0.0395	.72									
102	0.0395	.68									
230	0.0391	.53									
131	0.0391	.51									
037	0.0390	.49									
090	0.0385	.35									
324	0.0382	.09									
Avg	0.0381										
106	0.0380	-.03									
360	0.0380	-.03									
368	0.0380	-.25									
057	0.0374	-.35									
136	0.0375	-.40									
233	0.0373	-.48									
255	0.0369	-.61									
042	0.0365	-.87									
Meth: 181.30 PPM											
Cadmium											
<u>ICP</u>											
102	0.03	.71									
Meth: 190.00 PCT											
Water Soluble Chlori											
296	0.0365	-.18									
105	0.0340	R -.89									
043	0.0326	-1.10									
428	0.0318	S -1.48									
029	0.0310	-1.50									
Meth: 190.99 PCT											
Water Soluble Chlori											
<u>Other</u>											
009	0.76	.71									
Meth: 191.30 PPM											
Chromium											
<u>ICP</u>											
247	0.75	.94									
009	0.65	.43									
Avg	0.61										
102	0.43	-1.20									
Meth: 202.30 PPM											
Acid Soluble Cobalt											
<u>ICP</u>											
102	0.04	-.71									
Meth: 221.00 PCT											
Acid Soluble Copper											
<u>Atomic Absorption</u>											
460	0.0445	1.81									
028	0.0405	.84									
371	0.0375	.16									

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

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 221.XX PCT											
Acid Soluble Copper											
106	0.0380	.09									
Avg	0.0378										
057	0.0374	-.15									
371	0.0375	-.23									
136	0.0375	-.23									
117	0.0372	-.24									
233	0.0373	-.26									
262	0.0370	-.31									
397	0.0370	-.31									
255	0.0369	-.35									
296	0.0365	-.54									
042	0.0365	-.54									
114	0.0360	-.70									
157	0.0365 R	-.78									
095	0.0358	-.80									
409	0.0355	-.92									
232	0.0353	-1.00									
096	0.0350	-1.16									
105	0.0340 R	-1.69									
291	0.0335	-1.71									
043	0.0326	-2.08									
428	0.0318 s	-2.65									
029	0.0310	-2.72									
023	0.0280 s	-3.96									
Meth: 241.00 PCT											
Acid Soluble Iron											
Atomic Absorption											
460	0.08 S	3.48									
028	0.07	1.30									
371	0.06	1.04									
296	0.06	.67									
262	0.06	.35									
Avg	0.06										
043	0.06	-.27									
397	0.06	-.40									
029	0.05	-1.12									
105	0.05	-1.63									
Meth: 241.00 PCT											
Acid Soluble Iron											
Other											
234	0.07	1.12									
Avg	0.06										
117	0.06	-.49									
Meth: 241.30 PCT											
Acid Soluble Iron											
ICP											
354	0.09 s	8.67									
420	0.08 s	5.30									
433	0.07	2.70									
426	0.07	2.56									
042	0.07 R	1.56									
324	0.07 R	1.51									
106	0.07	1.29									
136	0.07	.97									
027	0.06	.53									
057	0.06	.49									
255	0.06	.43									
230	0.06	.17									
102	0.06	.17									
247	0.06	.10									
Avg	0.06										
055	0.06	-.26									
090	0.06	-.26									
368	0.06	-.44									
360	0.06	-.47									
233	0.06	-.56									
095	0.06	-.60									
232	0.06	-.61									
114	0.06	-.64									
041	0.06	-.64									
157	0.06	-.64									
409	0.06	-.64									
377	0.06	-.66									
131	0.06	-.67									
009	0.06	-.82									
291	0.06	-1.60									
023	0.05 A	-3.16									
105	0.05	-1.63									
105	0.05	-1.63									
Meth: 241.99 PCT											
Acid Soluble Iron											
Acid Soluble Iron											
409	0.06	-.34									
114	0.06	-.34									
131	0.06	-.36									
377	0.06	-.37									
009	0.06	-.59									
043	0.06	-.64									
397	0.06	-.76									
291	0.06	-1.13									
029	0.05	-1.61									
105	0.05	-2.19									
023	0.05	-2.41									
428	0.04 s	-4.27									
Meth: 251.30 PPM											
Lead											
ICP											
102	0.39	.71									
Meth: 261.00 PCT											
Acid Soluble Manganese											
AA											
460	0.062	1.84									
257	0.054	.45									
028	0.053	.35									
Avg	0.052										
262	0.052	-.09									
296	0.049	-.51									
043	0.048	-.74									
105	0.044	-1.41									
397	0.005 s	-8.54									
Meth: 261.11 PCT											
Acid Soluble Manganese											
AA											
029	0.051	-.71									
Meth: 261.30 PCT											
Acid Soluble Manganese											
ICP											
324	0.054	.83									
Avg	0.053										
230	0.051	-.90									

\* 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: 261.99 PCT														
Acid Soluble Manganese														
Other			409	0.051	-0.32	114	64.00 S	65.77	232	0.04	-0.56	360	0.050	-0.18
255	0.052	.93	117	0.050	-0.34	114	64.00 S	65.77	232	0.04	-0.56	360	0.050	-0.18
037	0.052	.93	432	0.050	-0.43	117	13.35	.87	232	0.04	-0.56	114	0.049	-0.25
Avg	0.051		042	0.050	-0.51	Avg	12.68		Meth: 321.00 PCT			057	0.049	-0.30
117	0.050	-0.62	055	0.050	-0.51	409	12.00	-0.86	Acid Soluble Zinc			377	0.049	-0.34
409	0.051	-0.64	157	0.049	-0.76				Atomic Absorption			368	0.049	-0.41
042	0.050	-1.40	296	0.049	-0.76	Meth: 289.99 PPM			257	0.073 S	11.75	232	0.048	-0.54
Meth: 261.99 PCT														
Acid Soluble Manganese														
Other			029	0.051 R	-0.85	Molybdenum			460	0.053 R	3.30	037	0.048	-0.62
255	0.052	.93	043	0.048	-1.10	114	64.00 S	39.99	028	0.050	1.77	096	0.048	-0.66
037	0.052	.93	232	0.048	-1.12	027	15.00 S	4.38	397	0.048 R	1.35	233	0.047	-0.73
Avg	0.051		102	0.046	-1.51	433	15.59	2.50	296	0.048	1.04	157	0.047	-0.89
117	0.050	-0.62	291	0.046	-1.55	042	13.00 R	.92	Avg	0.046		055	0.046	-1.17
409	0.051	-0.64	095	0.046	-1.56	117	13.35	.76	371	0.046	-0.22	102	0.046	-1.22
042	0.050	-1.40	105	0.044	-2.12	255	13.08	.56	105	0.045	-0.51	409	0.046	-1.36
Meth: 289.99 PPM														
Molybdenum														
Other			023	0.037 S	-4.07	368	12.80	.41	043	0.044	-0.55	291	0.043	-2.17
255	0.052	.93	397	0.005 S	-12.88	009	12.50	.13	029	0.044	-0.67	023	0.035 S	-4.38
037	0.052	.93				Avg	12.36		262	0.043	-1.10			
Avg	0.051		Meth: 289.30 PPM			232	12.35	-0.04	428	0.030 S	-6.92			
117	0.050	-0.62	Molybdenum			247	12.00	-0.28						
409	0.051	-0.64	ICP			409	12.00	-0.28	Meth: 321.30 PCT					
042	0.050	-1.40	027	15.00 S	4.14	230	12.00	-0.29	Acid Soluble Zinc					
Meth: 321.99 PCT														
Acid Soluble Zinc														
Other			433	15.59	2.39	037	12.35	-0.50	ICP					
255	0.052	.93	042	13.00 R	.89	106	11.50	-0.77	420	0.062 S	3.42			
037	0.052	.93	255	13.08	.56	057	11.20	-0.91	426	0.058	2.32			
Avg	0.051		037	12.35	.47	102	10.03	-1.81	106	0.057	1.96			
117	0.050	-0.62	368	12.80	.42				354	0.055	1.54			
409	0.051	-0.64	009	12.50	.16	Meth: 291.30 PPM			136	0.053	.97			
042	0.050	-1.40	232	12.35	.05	Nickel			009	0.053	.89			
Meth: 261.99 PCT														
Acid Soluble Manganese														
Other			Avg	12.31		ICP			433	0.053	.81			
255	0.052	.93	247	12.00	-0.22	102	0.14	.71	090	0.052	.69			
037	0.052	.93	230	12.00	-0.24				027	0.052	.50			
Avg	0.051		106	11.50	-0.69	Meth: 311.99 PCT			230	0.051	.48			
117	0.050	-0.62	057	11.20	-0.81	Sodium			041	0.050	.30			
409	0.051	-0.64	102	10.03	-1.67	Other			042	0.050	.30			
042	0.050	-1.40				354	0.17	1.62	247	0.051	.27			
Meth: 261.99 PCT														
Acid Soluble Manganese														
Other			Avg	0.07					095	0.050	.06			
255	0.052	.93	102	0.04	-0.51				432	0.050	.04			
037	0.052	.93	009	0.04	-0.55				Avg	0.050				
Avg	0.051													
117	0.050	-0.62												
409	0.051	-0.64												
042	0.050	-1.40												

\* 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
001.99	3	0.00	1.12	0.05	165.00	10	0.622	2.868	1.514
001.XX	4	0.00	1.08	0.04	165.99	19	0.000	0.995	0.191
005.99	2	0.00	1.20	0.16	165.XX	29	0.065	2.086	1.054
005.XX	3	0.00	1.10	0.16	190.XX	2	0.000	1.224	0.026
009.XX	2	0.00	1.22	0.00	191.30	3	0.00	1.09	0.20
010.11	9	0.00	1.03	0.09	191.XX	3	0.00	1.09	0.20
010.12	4	- 0.17	0.97	0.00	221.00	10	- 0.202	1.0100	0.2966
010.60	46	- 0.33	1.90	0.35	221.30	31	0.2171	2.5082	0.3322
010.99	4	0.00	0.98	0.40	221.99	2	0.0000	1.1921	0.1987
010.XX	63	- 0.10	1.55	0.27	221.XX	43	0.0386	1.8115	0.3156
020.10	6	0.00	1.04	0.09	241.00	10	0.00	1.84	0.36
020.20	16	0.03	13.05	0.18	241.30	30	0.42	2.12	0.46
020.40	6	0.00	1.02	0.23	241.99	2	0.00	0.69	0.72
020.50	8	0.48	1.98	0.38	241.XX	42	0.30	1.80	0.41
020.99	2	0.00	1.01	0.49	261.00	8	- 1.068	3.168	0.106
020.XX	36	0.08	7.66	0.29	261.30	27	0.098	1.655	0.235
040.XX	2	0.00	0.55	0.77	261.31	2	0.000	1.166	0.266
041.10	11	- 0.23	1.19	0.56	261.99	5	0.000	0.790	0.633
041.40	5	- 8.52	19.06	0.50	261.XX	43	- 0.242	2.415	0.238
041.50	10	0.00	0.94	0.40	289.30	13	0.19	1.07	1.05
041.60	9	0.00	0.77	0.64	289.99	3	21.92	37.98	0.74
041.99	2	- 69.30	98.00	2.06	289.XX	16	2.66	10.01	1.02
041.XX	31	- 2.17	9.02	0.51	311.99	4	0.00	1.08	0.02
050.00	15	- 0.77	2.40	0.25	311.XX	4	0.00	1.08	0.02
050.30	7	0.00	0.98	0.33	321.00	11	0.828	4.420	0.462
050.50	8	- 0.35	1.33	0.42	321.30	30	- 0.032	1.402	0.214
050.51	8	0.19	4.02	0.18	321.XX	42	0.042	1.824	0.231
050.60	3	1.66	2.99	0.16					
050.61	9	0.00	0.97	0.32					
050.99	14	0.02	2.44	0.68					
050.XX	58	- 0.26	1.83	0.35					
101.30	5	4.02	9.02	3.22					
101.XX	6	3.41	8.40	3.00					
121.30	3	0.00	1.12	0.02					
121.XX	4	396.03	792.07	3.12					
144.01	12	0.05	0.99	0.11					
144.02	3	0.00	1.04	0.33					
144.99	17	- 0.16	3.19	0.26					
144.XX	31	0.09	1.32	0.23					