

- Pass 1 Results for 79 Labs - - Pass 2 Results for 76 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	7	2.15	4.52	0.03	7	2.15	4.52	0.03
Ammoniacal Nitrogen, Other		001.99	6	2.72	4.43	0.07	5	2.83	4.89	0.03
Method Group 001.XX PCT			13	2.41	4.40	0.05	12	2.43	4.59	0.03
Water Insoluble Nitrogen, Meth I	945.01	003.10	7	12.07	0.27	0.06	7	12.07	0.27	0.06
Water Insoluble Nitrogen, Other		003.99	2	12.35	0.19	0.10	2	12.35	0.19	0.10
Method Group 003.XX PCT			9	12.13	0.28	0.07	9	12.13	0.28	0.07
Ammon & Nitrate N, Devarda	892.01	009.10	1	0.20	0.00	0.00	1	0.20	0.00	0.00
Ammon & Nitrate N, Other		009.99	1	1.02	0.00	0.00	1	1.02	0.00	0.00
Method Group 009.XX PCT			2	0.61	0.47	0.00	2	0.61	0.47	0.00
Total Nitrogen, Modified Comprehensive	978.02	010.11	10	12.88	0.14	0.05	10	12.88	0.14	0.05
Total Nitrogen, Salicylic	955.04D	010.12	3	13.02	0.13	0.13	3	13.02	0.13	0.13
Total Nitrogen, Raney	970.03	010.16	1	12.79	0.04	0.05	1	12.79	0.04	0.05
Total Nitrogen, Combustion		010.60	52	13.08	0.12	0.06	47	13.08	0.10	0.04
Total Nitrogen, Other		010.99	2	13.14	0.31	0.04	2	13.14	0.31	0.04
Method Group 010.XX PCT			72	13.05	0.17	0.06	68	13.04	0.17	0.05
Total Phosphate, Grav Quimociac	962.02	020.10	1	1.92	0.03	0.04	1	1.92	0.03	0.04
Total Phosphate, Spectrometric	958.01	020.20	2	2.09	0.02	0.03	2	2.09	0.02	0.03
Total Phosphate, ICP		020.50	4	2.06	0.04	0.03	4	2.06	0.04	0.03
Total Phosphate, Other		020.99	1	1.99	0.02	0.03	1	1.99	0.02	0.03
Method Group 020.XX PCT			9	2.02	0.09	0.04	9	2.02	0.09	0.04
Dir Available Phosphate, Grav Quimociac	960.03E	041.10	1	1.79	0.06	0.09	1	1.79	0.06	0.09
Dir Available Phosphate, ICP		041.50	3	1.74	0.14	0.05	3	1.74	0.14	0.05
Dir Available Phosphate, EDTA Extract	993.01	041.60	1	2.08	0.01	0.01	1	2.08	0.01	0.01
Method Group 041.XX PCT			5	1.82	0.17	0.05	5	1.82	0.17	0.05
Water Soluble Phosphate, Spectrometric	970.01	048.20	2	0.49	0.26	0.02	2	0.49	0.26	0.02
Soluble Potash, ICP (Oxalate)		050.50	1	0.33	0.00	0.01	1	0.33	0.00	0.01
Soluble Potash, ICP (Citrate)		050.51	4	0.34	0.05	0.06	4	0.34	0.05	0.06
Soluble Potash, Flame (Citrate)	983.02(b	050.61	1	0.36	0.00	0.00	1	0.36	0.00	0.00
Soluble Potash, Other		050.99	4	0.41	0.11	0.03	4	0.41	0.11	0.03
Method Group 050.XX PCT			10	0.37	0.08	0.04	9	0.38	0.07	0.02
Free Water, Vacuum Oven	965.08B	060.00	3	2.40	1.17	0.09	3	2.40	1.17	0.09
Acid Soluble Calcium, ICP		101.30	12	1.78	0.08	0.03	11	1.78	0.08	0.02
Acid Soluble Calcium, Other		101.99	1	2.10	0.01	0.01	1	2.10	0.01	0.01
Method Group 101.XX PCT			13	1.80	0.12	0.03	12	1.81	0.12	0.02
Acid Soluble Magnesium, ICP		121.30	14	0.13	0.01	0.00	13	0.13	0.01	0.00
Method Group 121.XX PCT			14	0.13	0.01	0.00	13	0.13	0.01	0.00
Sulfur, Gravimetric	980.02a	144.01	11	0.29	0.24	0.03	10	0.26	0.23	0.02
Sulfur, Gravimetric	980.02b	144.02	1	2.22	0.18	0.26	1	2.22	0.18	0.26
Sulfur, Spectrometric		144.70	1	1.71	0.02	0.03	1	1.71	0.02	0.03

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Sulfur, Other		144.99	19	1.77	0.19	0.05	17	1.74	0.14	0.04
Method Group 144.XX PCT			36	1.22	0.76	0.05	34	1.17	0.75	0.04
Arsenic, ICP		151.30	2	0.43	0.49	0.04	2	0.43	0.49	0.04
Arsenic, Other		151.99	2	0.23	0.08	0.05	2	0.23	0.08	0.05
Method Group 151.XX PPM			4	0.33	0.34	0.04	4	0.33	0.34	0.04
Acid Soluble Boron, Other		165.99	4	0.012	0.020	0.001	4	0.012	0.020	0.001
Method Group 165.XX PCT			5	0.050	0.094	0.041	4	0.012	0.020	0.001
Cadmium, ICP		181.30	5	0.05	0.07	0.01	4	0.05	0.08	0.00
Water Soluble Chlorine, Other		190.99	1	0.30	0.00	0.01	1	0.30	0.00	0.01
Chromium, Atomic Absorption		191.00	1	7.65	1.20	1.70	1	7.65	1.20	1.70
Chromium, ICP		191.30	8	7.28	1.86	0.57	8	7.28	1.86	0.57
Chromium, Other		191.99	2	9.02	1.77	0.10	2	9.02	1.77	0.10
Method Group 191.XX PPM			11	7.63	1.86	0.59	11	7.63	1.86	0.59
Acid Soluble Cobalt, ICP	965.11	202.30	10	2.38	1.39	0.10	10	2.38	1.39	0.10
Acid Soluble Cobalt, Other		202.99	3	3.99	1.03	0.50	3	3.99	1.03	0.50
Method Group 202.XX PPM			13	2.75	1.47	0.19	12	2.56	1.34	0.10
Acid Soluble Copper, Atomic Absorption	975.01	221.00	1	0.0013	0.0000	0.0000	1	0.0013	0.0000	0.0000
Acid Soluble Copper, ICP		221.30	19	0.0015	0.0007	0.0001	15	0.0013	0.0005	0.0000
Acid Soluble Copper, Other		221.99	3	0.0012	0.0001	0.0001	3	0.0012	0.0001	0.0001
Method Group 221.XX PCT			23	0.0014	0.0006	0.0001	19	0.0013	0.0005	0.0000
Acid Soluble Iron, ICP		241.30	12	0.03	0.00	0.00	11	0.03	0.00	0.00
Method Group 241.XX PCT			12	0.03	0.00	0.00	11	0.03	0.00	0.00
Lead, ICP		251.30	4	1.46	1.43	0.23	4	1.46	1.43	0.23
Lead, Other		251.99	3	2.36	3.16	0.49	3	2.36	3.16	0.49
Method Group 251.XX PPM			7	1.84	2.27	0.34	6	1.08	1.27	0.17
Acid Soluble Manganese, ICP	972.02a	261.30	8	0.002	0.000	0.000	7	0.002	0.000	0.000
Acid Soluble Manganese, Other		261.99	1	0.002	0.000	0.000	1	0.002	0.000	0.000
Method Group 261.XX PCT			9	0.002	0.000	0.000	8	0.002	0.000	0.000
Mercury, Atomic Absorption		281.00	1	0.00	0.00	0.00	1	0.00	0.00	0.00
Mercury, ICP		281.30	2	0.10	0.12	0.03	2	0.10	0.12	0.03
Method Group 281.XX PPM			3	0.07	0.10	0.02	3	0.07	0.10	0.02
Molybdenum, ICP		289.30	6	0.87	0.30	0.09	6	0.87	0.30	0.09
Molybdenum, Other		289.99	2	0.88	0.13	0.10	2	0.88	0.13	0.10
Method Group 289.XX PPM			8	0.87	0.26	0.09	8	0.87	0.26	0.09
Nickel, ICP		291.30	6	4.13	0.88	0.50	6	4.13	0.88	0.50
Nickel, Other		291.99	2	4.51	0.29	0.43	2	4.51	0.29	0.43
Method Group 291.XX PPM			8	4.23	0.79	0.48	8	4.23	0.79	0.48
Selenium, ICP		301.30	4	1.74	1.60	0.08	4	1.74	1.60	0.08
Selenium, Other		301.99	3	0.60	0.12	0.04	3	0.60	0.12	0.04

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Method Group	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
Method Group 301.XX PPM			7	1.25	1.31	0.06	7	1.25	1.31	0.06
Sodium, Other		311.99	6	0.21	0.04	0.01	5	0.21	0.05	0.00
Acid Soluble Zinc, Atomic Absorption ..	975.02	321.00	4	0.012	0.001	0.001	4	0.012	0.001	0.001
Acid Soluble Zinc, ICP		321.30	23	0.011	0.001	0.000	21	0.011	0.001	0.000
Acid Soluble Zinc, Other		321.99	1	0.012	0.000	0.000	1	0.012	0.000	0.000
Method Group 321.XX PCT			28	0.012	0.001	0.001	26	0.011	0.001	0.000
Water Soluble Zinc, ICP		325.30	1	0.012	0.000	0.000	1	0.012	0.000	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																				
Ammoniacal Nitrogen																				
MgO Distillation																				
309	12.73	2.34	220	12.42	1.28	027	1.02	.00	351	13.50 s	4.26	307	13.07	- .43						
Avg	2.15		029	12.38	1.15	Meth: 009.99 PCT			325	13.45 s	3.78	Meth: 010.60 PCT								
117	1.84	-.07	117	12.17	.44	Ammon & Nitrate N			230	13.35 s	3.73	Total Nitrogen								
029	0.14	-.44	023	12.14	.30	Other			262	13.35	2.77	Combustion								
444	0.13	-.45	Avg	12.07		Ammon & Nitrate N			232	13.23 R	2.00	095 13.04								
230	0.12	-.45	090	11.85	-.79	027 1.02 .87			072	13.25 R	1.99	055 13.03								
291	0.06	-.46	291	11.79	-1.01	Avg 0.61			296	13.24	1.71	231 13.04								
420	0.06	-.46	372	11.72	-1.27	309 0.20 -.87			426	13.22	1.41	420 13.07								
Meth: 003.10 PCT																				
Water Insoluble Nitr																				
Meth I																				
220	12.42	1.28	Meth: 010.11 PCT												136	13.01	-.92			
029	12.38	1.15	Total Nitrogen												131	12.99	-.97			
117	12.17	.44	Modified Comprehensive												291	12.98	-1.16			
023	12.14	.30	211	13.10	1.58	Other												390	13.02 R	-1.19
Avg	12.07		322	12.99	.78	027 1.02 .87												073	12.96	-1.25
444	0.13	-.45	Avg	12.98	.71	Avg 0.61												234	12.95	-1.42
230	0.12	-.45	029	12.94	.50	309 0.20 -.87												233	12.94	-1.46
291	0.06	-.46	114	12.93	.34	027 1.02 .87												035	12.94	-1.62
420	0.06	-.46	Avg	12.88		Avg 0.61												027	12.89	-1.97
Meth: 003.99 PCT																				
Water Insoluble Nitr																				
Other																				
234	12.50	.95	Meth: 010.12 PCT												428	12.90 R	-2.13			
Avg	12.35		Total Nitrogen												402	12.83	-2.64			
220	2.18 R	-.14	Salicylic												023	12.74 A	-3.51			
096	1.17	-.34	397	13.15	1.05	086 13.13												451	12.70 s	-4.07
255	0.79	-.42	Avg	12.80	-.49	Avg 13.02												009	12.74 s	-4.23
372	0.10	-.56	220	12.80	-.65	185 12.97 -.45												255	12.66 s	-4.31
027	0.04	-.57	029	12.38	.90	117 12.95 -1.10												444	12.52 s	-5.74
Meth: 003.99 PCT																				
Water Insoluble Nitr																				
Other																				
234	12.50	1.36	Meth: 010.16 PCT												Meth: 010.99 PCT					
220	12.42	1.02	Total Nitrogen												Total Nitrogen					
029	12.38	.90	Salicylic												Other					
027	12.21	.29	397	13.15	1.05	096 13.10												422 13.62 S 1.57		
117	12.17	.27	Avg	13.02		Avg 13.02												354 13.41 .87		
023	12.14	.11	185	12.97	-.45	117 12.95 -1.10												Avg 13.14		
Avg	12.13		117	12.95	-1.10	Meth: 010.10 PCT												420 12.88 -.86		
220	2.18 R	-.06	Meth: 010.16 PCT												Meth: 010.99 PCT					
117	1.84	-.13	Total Nitrogen												Total Nitrogen					
096	1.17	-.28	Raney												Total Nitrogen					
255	0.79	-.36	300	12.79	.71	Avg 13.08												422 13.62 s 3.40		
029	0.14	-.50	034	13.06		Avg 13.07												351 13.50 2.67		
444	0.13	-.50	041	13.06		393 13.07												325 13.45 2.40		
230	0.12	-.51	377	13.05		034 13.06														
372	0.10	-.51	Meth: 010.16 PCT																	
291	0.06	-.52	Total Nitrogen																	
420	0.06	-.52	Raney																	
027	0.04	-.52	300 12.79 .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: 010.XX PCT																	
<u>Total Nitrogen</u>																	
230	13.35 s	2.31	041	13.06	.08	Meth: 010.XX PCT											
354	13.41	2.13	377	13.05	.07	Total Phosphate											
262	13.35	1.82	Avg			13.04	Grav Quimociac										
072	13.25 R	1.34	055	13.03	-.10	Meth: 020.10 PCT											
232	13.23 R	1.33	095	13.04	-.12	Total Phosphate											
296	13.24	1.20	231	13.04	-.15	Spectrometric											
426	13.22	1.04	372	13.00	-.26	420	2.09	.46	Meth: 020.20 PCT								
453	13.20	.92	131	12.99	-.33	Avg											
247	13.18	.77	322	12.99	-.34	232	2.09	-1.13	Meth: 041.50 PCT								
102	13.17	.74	136	13.01	-.34	Dir Available Phosph											
024	13.17	.71	105	12.98	-.40	ICP											
043	13.13	.69	291	12.98	-.45	Total Phosphate											
397	13.15	.69	185	12.97	-.48	ICP											
028	13.15	.67	073	12.96	-.49	389	2.10	1.08	Meth: 041.60 PCT								
049	13.16	.66	390	13.02	-.58	393	2.07	.69	Dir Available Phosph								
425	13.15	.60	234	12.95	-.58	Avg											
040	13.15	.60	233	12.94	-.60	453	2.05	-.50	Meth: 041.60 PCT								
292	13.15	.60	029	12.94	-.63	444	2.01	-1.27	Dir Available Phosph								
086	13.13	.56	114	12.93	-.69	307	1.84 s	-5.40	EDTA Extract								
443	13.14	.56	035	12.94	-.73	Meth: 020.99 PCT											
406	13.13	.49	027	12.89	-.90	Total Phosphate											
409	13.12	.47	117	12.95 R	-.93	Other											
025	13.12	.45	420	12.88	-.98	422	1.99	.71	Meth: 041.XX PCT								
177	13.10	.37	428	12.90 R	-1.02	Dir Available Phosph											
029	13.10	.35	416	12.86	-1.10	Avg											
420	13.07	.35	371	12.87	-1.11	443	0.00 S	-104.47	Other								
389	13.10	.33	402	12.83	-1.28	Meth: 020.XX PCT											
106	13.10	.33	220	12.80	-1.44	Total Phosphate											
330	13.10	.33	300	12.79	-1.52	Total Phosphate											
007	13.10	.33	023	12.74	-1.78	389	2.10	.93	Meth: 048.20 PCT								
324	13.10	.33	451	12.70 X	-2.11	Avg											
037	13.09	.33	073	12.68	-2.19	420	2.09	.82	Water Soluble Phosph								
096	13.10	.32	090	12.67	-2.19	393	2.07	.63	Spectrometric								
211	13.10	.30	009	12.74 s	-2.23	453	2.05	.43	420								
307	13.07	.28	255	12.66	-2.24	Avg											
360	13.06	.25	444	12.52 s	-3.06	444											
393	13.07	.17	422	1.99	-.29	422											
034	13.06	.11	444	1.92	-1.10	444											

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Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index			
Meth: 050.XX PCT														
<u>Soluble Potash</u>														
024	0.36	- .22										Meth: 144.99 PCT		
009	0.35	- .38										Sulfur		
393	0.35	- .47										Other		
420	0.33	- .57										354	1.70	- .32
444	0.30 R	- 1.49										232	1.69	- .33
307	0.27	- 1.51										255	1.68	- .50
443	0.00 s	- 5.05										096	1.63	- .81
Meth: 060.00 PCT														
<u>Free Water</u>														
Vacuum Oven														
096	3.62	1.04										136	1.31	- 3.12
247	2.55	.13										300	0.77 s	- 6.98
Avg	2.40											027	0.22 s	- 10.98
416	1.02	- 1.18										330	0.20 s	- 11.09
Meth: 101.30 PCT														
<u>Acid Soluble Calcium</u>														
ICP												Meth: 144.XX PCT		
432	2.25 s	5.50										Sulfur		
393	1.96	2.13										360	2.34	1.55
102	1.87	1.10										292	2.22 R	1.40
390	1.79 R	.65										102	1.98	1.07
453	1.83	.54										291	1.88	.94
389	1.80	.45										233	1.87	.92
131	1.80	.29										220	1.87	.92
Avg	1.78											351	1.81	.84
065	1.77	- .06										453	1.78	.80
420	1.74	- .46										009	1.76	.79
232	1.72	- .67										390	1.75 R	.77
433	1.72	- .75										057	1.75	.77
009	1.70	- .90										422	1.75	.77
307	1.66	- 1.20										307	1.75	.77
057	0.01 s	- 14.88										023	1.74	.75
Meth: 121.30 PCT														
<u>Acid Soluble Magnesi</u>														
ICP												Meth: 144.01 PCT		
432	0.31 s	16.80										Sulfur		
444	0.16	2.58										Gravimetric		
049	0.14 R	1.95										292	2.22	.71
102	0.14	.94										Meth: 144.70 PCT		
433	0.14	.79										Sulfur		
009	1.70	- .90										Spectrometric		
307	1.66	- 1.20										393	1.71	- .71
057	0.01 s	- 14.88										Meth: 144.99 PCT		
Meth: 121.30 PCT														
<u>Acid Soluble Magnesi</u>														
ICP												Sulfur		
432	0.31 s	16.80										Other		
444	0.16	2.58										360	2.34 A	4.37
049	0.14 R	1.95										102	1.98	1.73
102	0.14	.94										291	1.88	1.05
433	0.14	.79										220	1.87	1.01
009	1.70	- .90										390	1.75 R	.62
307	1.66	- 1.20										351	1.81	.52
057	0.01 s	- 14.88										307	1.75	.29
Meth: 144.99 PCT														
<u>Acid Soluble Magnesi</u>														
ICP												453	1.78	.28
432	0.31 s	16.80										009	1.76	.26
444	0.16	2.58										023	1.74	.13
049	0.14 R	1.95										422	1.75	.11
102	0.14	.94										057	1.75	.10
433	0.14	.79										Avg	1.74	
009	1.70	- .90										137	1.73	- .05
307	1.66	- 1.20										389	1.74	- .11
057	0.01 s	- 14.88										Meth: 144.01 PCT		
Meth: 144.01 PCT														
<u>Sulfur</u>														
ICP												Gravimetric		
432	0.31 s	16.80										233	1.87 s	7.06
444	0.16	2.58										372	0.92	2.88
049	0.14 R	1.95										397	0.64 R	1.69
102	0.14	.94										262	0.27	.03
433	0.14	.79										Avg	0.26	
389	0.14	.69										Meth: 121.99 PCT		
Avg	0.13											Acid Soluble Magnesi		
065	0.13	- .38										ICP		
009	0.13	- .49										420	0.13	- .64
131	0.13	- .54										232	0.12	- .82
307	0.13	- .63										393	0.12	- 1.22
420	0.13	- .64										Meth: 121.30 PCT		
232	0.13	- .64										Acid Soluble Calcium		
433	0.13	- .75										Other		
009	1.70	- .90										422	0.23 s	.00
307	1.66	- 1.20										Meth: 121.99 PCT		
057	0.01 s	- 14.88										Acid Soluble Magnesi		
Meth: 144.99 PCT														
<u>Sulfur</u>														
ICP												Other		
432	0.31 s	16.80										422	0.23 s	.00
444	0.16	2.58										Meth: 144.02 PCT		
049	0.14 R	1.95										Sulfur		
102	0.14	.94										Gravimetric		
433	0.14	.79										095	0.24	- .09
009	1.70	- .90										043	0.19	- .33
307	1.66	- 1.20										324	0.19	- .33
057	0.01 s	- 14.88										055	0.18	- .38
Meth: 144.99 PCT														
<u>Other</u>														
360	2.34 A	4.37										117	0.17	- .39
422	1.75	.77										029	0.17	- .42
307	1.75	.77										230	0.17	- .42
023	1.74	.75										114	0.13	- .56
389	1.74	.75										Meth: 144.99 PCT		
137	1.73	.74										Sulfur		
393	1.71	.71										Other		
354	1.70	.70										354	1.70	- .32
232	1.69	.69										232	1.69	- .33
255	1.68	.67										255	1.68	- .50
096	1.63	- .81										096	1.63	- .81
136	1.31	- 3.12										136	1.31	- 3.12
300	0.77 s	- 6.98										300	0.77 s	- 6.98
027	0.22 s	- 10.98										027	0.22 s	- 10.98
330	0.20 s	- 11.09										330	0.20 s	- 11.09

* 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: 144.XX PCT												
<u>Sulfur</u>												
262	0.27	-1.20										Meth: 202.XX PPM
095	0.24	-1.24										<u>Acid Soluble Cobalt</u>
027	0.22	-1.27										102 1.46 -.83
330	0.20	-1.29										230 1.28 -.96
043	0.19	-1.31										372 0.00 -1.91
324	0.19	-1.31										Meth: 221.00 PCT
055	0.18	-1.32										Acid Soluble Copper
117	0.17	-1.33										<u>Atomic Absorption</u>
230	0.17	-1.34										043 0.0013 .71
029	0.17	-1.34										Meth: 221.30 PCT
114	0.13	-1.38										Acid Soluble Copper
Meth: 151.30 PPM												
<u>Arsenic</u>												
372	53.55 S	107.45										ICP
230	0.85	.87										330 0.1000 s 192.20
Avg	0.43											402 0.0060 s 9.09
393	0.00 X	-.86										372 0.0035 A 4.29
Meth: 151.99 PPM												
<u>Arsenic</u>												
409	0.29	.94										393 0.0025 2.20
Avg	0.23											444 0.0020 1.30
136	0.17	-.79										354 0.0016 .52
Meth: 181.30 PPM												
<u>Cadmium</u>												
393	0.19	1.60										049 0.0015 R .38
Avg	0.05											102 0.0015 R .38
102	0.03	-.27										324 0.0015 R .37
065	0.04 R	-.39										433 0.0015 .36
230	0.00	-.66										389 0.0015 .25
372	0.00	-.66										Avg 0.0013 -.04
Meth: 191.99 PPM												
<u>Chromium</u>												
409	10.55	1.57										009 0.0013 -.08
009	10.15	1.39										233 0.0013 -.11
037	9.28	.89										057 0.0013 -.12
065	9.01	.75										065 0.0013 -.12
220	7.65	.46										247 0.0013 -.16
220	7.63	.46										232 0.0013 -.19
231	7.49	-.87										095 0.0012 -.26
Meth: 191.00 PPM												
<u>Chromium</u>												
220	7.65	-.71										307 0.0011 -.45
<u>Atomic Absorption</u>												
009	10.15	1.57										230 0.0010 -.65
037	9.28	1.08										041 0.0000 -2.60
065	9.01	.94										
Avg	7.28	-.50										
372	6.39	-.62										
230	6.13	-.62										
444	6.28	-.62										
232	5.85	-.79										
247	5.13	-1.16										
393	0.00 S	-3.91										
Meth: 165.00 PCT												
<u>Acid Soluble Boron</u>												
393	1.430 S	.00										
Meth: 165.99 PCT												
<u>Other</u>												
409	0.200 S	10.45										
422	0.045	1.62										
Avg	0.012	-.47										
444	0.003	-.57										
232	0.001	-.57										
433	0.000	-.58										
Meth: 191.30 PPM												
<u>Chromium</u>												
009	10.15	1.57										
037	9.28	1.08										
065	9.01	.94										
Avg	7.28	-.50										
372	6.39	-.62										
230	6.13	-.62										
444	6.28	-.62										
232	5.85	-.79										
247	5.13	-1.16										
393	0.00 S	-3.91										
Meth: 202.99 PPM												
<u>Other</u>												
409	10.55	.87										
Avg	9.02											
231	7.49	-.87										
Meth: 191.99 PPM												
<u>Chromium</u>												
409	10.55	1.57										
009	10.15	1.39										
037	9.28	.89										
065	9.01	.75										
220	7.65	.46										
220	7.63	.46										
231	7.49	-.87										
Meth: 202.XX PPM												
<u>Acid Soluble Cobalt</u>												
136	5.05 R	1.91										
057	4.14	1.17										
009	4.00	1.07										
409	3.98	1.06										
231	2.95	-1.02										
Meth: 191.30 PPM												
<u>Chromium</u>												
009	10.15	1.57										
009	10.15	1.57										
037	9.28	1.08										
065	9.01	.94										
Avg	7.28	-.50										
372	6.39	-.62										
230	6.13	-.62										
444	6.28	-.62										
232	5.85	-.79										
247	5.13	-1.16										
393	0.00 S	-3.91										
Meth: 165.XX PCT												
<u>Acid Soluble Boron</u>												
393	1.430 S	72.33										
409	0.200 R	10.45										
422	0.045	1.62										
Avg	0.012	-.47										
444	0.003	-.57										
232	0.001	-.57										
433	0.000	-.58										
Meth: 191.30 PPM												
<u>Chromium</u>												
009	10.15	1.57										
037	9.28	1.08										
065	9.01	.94										
Avg	7.28	-.50										
372	6.39	-.62										
230	6.13	-.62										
444	6.28	-.62										
232	5.85	-.79										
247	5.13	-1.16										
393	0.00 S	-3.91										
Meth: 202.99 PPM												
<u>Other</u>												
136	5.05	1.21										
Avg	3.99											
409	3.98	-.05										
231	2.95	-1.02										
Meth: 202.XX PPM												
<u>Acid Soluble Cobalt</u>												
136	5.05 R	1.91										
057	4.14	1.17										
009	4.00	1.07										
409	3.98	1.06										
231	2.95	-1.02										
Meth: 190.99 PCT												
<u>Water Soluble Chloride</u>												
231	7.49	-.08										
372	6.39	-.69										
444	6.28	-.79										
230	6.13	-.81										
232	5.85	-.97										
247	5.13	-1.35										
422	0.30	.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
Meth: 221.99 PCT											
Acid Soluble Copper											
Other											
422	0.0035 S	18.20									
231	0.0014	1.03									
220	0.0013	.43									
Avg	0.0012										
409	0.0011	-1.12									
Meth: 221.99 PCT											
Acid Soluble Copper											
330	0.1000 s	215.19									
402	0.0060 s	10.21									
422	0.0035 s	4.88									
372	0.0035 A	4.83									
393	0.0025	2.49									
444	0.0020	1.49									
354	0.0016	.62									
102	0.0015 R	.45									
049	0.0015 R	.45									
324	0.0015 R	.44									
433	0.0015	.43									
389	0.0015	.31									
231	0.0014	.13									
043	0.0013	.06									
Avg	0.0013										
009	0.0013	-.02									
233	0.0013	-.07									
057	0.0013	-.09									
065	0.0013	-.10									
247	0.0013	-.15									
232	0.0013	-.18									
220	0.0013	-.18									
095	0.0012	-.26									
307	0.0011	-.47									
409	0.0011	-.51									
230	0.0010	-.69									
041	0.0000	-2.87									
Meth: 241.30 PCT											
Acid Soluble Iron											
ICP											
307	0.03 R	1.72									
065	0.04	1.30									
389	0.04	1.20									
102	0.04	.85									
131	0.03	.77									
009	0.03	.33									
057	0.03	.17									
Avg	0.03										
049	0.03	-.56									
433	0.03	-.78									
232	0.03	-.99									
453	0.03	-1.16									
444	0.03	-1.63									
Meth: 241.99 PCT											
Acid Soluble Iron											
Other											
307	0.00 S	.00									
422	0.05 S	.00									
Avg	0.00										
Meth: 241.30 PCT											
Acid Soluble Iron											
422	0.05 s	4.84									
307	0.03 R	1.72									
065	0.04	1.30									
389	0.04	1.20									
102	0.04	.85									
131	0.03	.77									
009	0.03	.33									
057	0.03	.17									
Avg	0.03										
049	0.03	-.56									
433	0.03	-.78									
232	0.03	-.99									
453	0.03	-1.16									
444	0.03	-1.63									
Meth: 241.99 PCT											
Acid Soluble Iron											
Other											
307	0.00 S	.00									
422	0.05 S	.00									
Avg	0.00										
Meth: 241.30 PCT											
Acid Soluble Iron											
422	0.05 s	4.84									
307	0.03 R	1.72									
065	0.04	1.30									
389	0.04	1.20									
102	0.04	.85									
131	0.03	.77									
009	0.03	.33									
057	0.03	.17									
Avg	0.03										
049	0.03	-.56									
433	0.03	-.78									
232	0.03	-.99									
453	0.03	-1.16									
444	0.03	-1.63									
Meth: 241.30 PCT											
Acid Soluble Iron											
ICP											
307	0.00 s	-12.05									
Meth: 241.99 PCT											
Acid Soluble Iron											
Lead											
372	3.66	1.55									
Avg	1.46										
393	1.36	-.07									
230	0.46	-.70									
065	0.34 X	-.78									
Meth: 251.99 PPM											
Lead											
Other											
136	6.40	1.30									
Avg	2.36										
231	0.34	-.64									
409	0.33	-.64									
Meth: 251.30 PPM											
Lead											
136	6.40 R	4.23									
372	3.66	2.04									
393	1.36	.22									
Avg	1.08										
230	0.46	-.50									
231	0.34	-.58									
065	0.34 X	-.59									
409	0.33	-.60									
Meth: 261.30 PCT											
Acid Soluble Manganese											
ICP											
102	0.002	1.46									
009	0.002 R	1.38									
433	0.002	1.23									
065	0.002	.31									
Avg	0.002										
049	0.002	-.56									
433	0.002	-.78									
232	0.002	-.99									
453	0.002	-1.16									
444	0.002	-1.63									
Meth: 261.30 PCT											
Acid Soluble Manganese											
ICP											
102	0.002	1.46									
009	0.002 R	1.38									
433	0.002	1.23									
065	0.002	.31									
Avg	0.002										
049	0.002	-.56									
433	0.002	-.78									
232	0.002	-.99									
453	0.002	-1.16									
444	0.002	-1.63									
Meth: 261.99 PCT											
Acid Soluble Manganese											
Other											
409	0.002	.00									
422	0.002 S	.00									
Avg	0.002										
Meth: 261.30 PCT											
Acid Soluble Manganese											
102	0.002	1.54									
009	0.002 R	1.36									
433	0.002	1.32									
065	0.002	.45									
389	0.002	.31									
Avg	0.002										
057	0.002	-.47									
247	0.002	-.60									
232	0.002	-.92									
409	0.002	-1.29									
444	0.002 s	-3.43									
422	0.002 s	-3.43									
Meth: 281.00 PPM											
Mercury											
Atomic Absorption											

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 289.XX PPM											
<u>Molybdenum</u>											
433	0.80	-.30									
409	0.78	-.36									
230	0.66	-.79									
220	0.43	-1.68									
Meth: 291.30 PPM											
<u>Nickel</u>											
ICP	5.25	1.29									
009	4.42	.71									
065	4.47	.39									
037	4.31	.28									
Avg	4.13										
232	3.65	-.67									
247	2.70	-1.62									
Meth: 291.99 PPM											
<u>Nickel</u>											
ICP	4.60	1.10									
136	4.51										
Avg	4.42	-.54									
Meth: 291.XX PPM											
<u>Nickel</u>											
009	5.25	1.34									
444	4.42	.75									
136	4.60	.61									
065	4.47	.32									
409	4.42	.29									
037	4.31	.24									
Avg	4.23										
232	3.65	-.86									
247	2.70	-1.95									
Meth: 301.30 PPM											
<u>Selenium</u>											
ICP	3.72	1.24									
393	2.62	.55									
Avg	1.74										
065	0.63	-.70									
372	0.00	-1.09									
Meth: 301.99 PPM											
<u>Selenium</u>											
ICP	0.75	1.24									
231	0.60	-.27									
409	0.56	-.94									
296	0.48										
Meth: 301.XX PPM											
<u>Selenium</u>											
393	3.72	1.88									
230	2.62	1.04									
Avg	1.25										
231	0.75	-.38									
065	0.63	-.48									
409	0.56	-.52									
296	0.48	-.58									
372	0.00	-.95									
Meth: 311.99 PPM											
<u>Sodium</u>											
ICP	0.29	1.82									
422	0.21	.38									
307	0.21	.03									
102	0.21										
Avg	0.21										
009	0.19	-.42									
057	0.18	-.61									
232	0.17	-.81									
Meth: 321.00 PPM											
<u>Acid Soluble Zinc</u>											
ICP	0.013	1.06									
029	0.013	.81									
Avg	0.012										
028	0.011	-.57									
220	0.011	-1.18									
Meth: 321.30 PPM											
<u>Acid Soluble Zinc</u>											
ICP	0.140	135.57									
330	0.100	93.11									
041	0.016	5.64									
390	0.015	4.62									
422	0.014	3.41									
402	0.014	2.89									
409	0.013	1.75									
029	0.013	1.56									
043	0.013	1.23									
255	0.013	1.23									
102	0.013	1.17									
037	0.012	1.03									
131	0.012	.80									
354	0.012	.79									
324	0.012	.63									
231	0.012	.46									
096	0.012	.38									
009	0.012	.22									
065	0.011	.20									
Avg	0.011										
233	0.011	-.32									
230	0.011	-.39									
027	0.011	-.43									
247	0.011	-.44									
057	0.011	-.63									
049	0.011	-.66									
232	0.011	-.76									
444	0.011	-1.07									
307	0.010	-1.09									
389	0.011	-1.14									
433	0.010	-1.31									
372	0.010	-1.97									
Meth: 321.99 PPM											
<u>Acid Soluble Zinc</u>											
ICP	0.014	14.12									
422	0.012	.71									
231	0.012										
Avg	0.012										
Meth: 321.XX PPM											
<u>Acid Soluble Zinc</u>											
ICP	0.010	-1.16									
433	0.010	-1.36									
372	0.010	-2.02									
Meth: 325.30 PPM											
<u>Water Soluble Zinc</u>											
ICP	0.012	.71									
095	0.012	.71									

* 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	0.00	1.04	0.00	191.30	9	- 0.43	1.61	0.17
001.99	6	- 0.02	0.95	0.01	191.99	2	0.00	1.22	0.03
001.XX	13	0.00	0.98	0.01	191.XX	12	- 0.34	1.52	0.20
003.10	7	0.00	1.03	0.13	202.30	10	0.00	1.03	0.05
003.99	2	0.00	1.09	0.40	202.99	3	0.00	1.02	0.37
003.XX	9	0.00	1.02	0.17	202.XX	13	0.14	1.10	0.14
009.XX	2	0.00	1.22	0.00	221.30	21	9.8310	41.848	0.0951
010.11	10	0.00	0.99	0.25	221.99	4	4.4433	8.9276	1.9755
010.12	3	0.00	0.85	0.59	221.XX	26	9.0802	42.111	0.2362
010.60	59	- 0.16	1.77	0.61	241.30	12	0.02	0.85	0.67
010.99	3	0.52	1.25	0.08	241.99	2	0.00	0.00	0.00
010.XX	73	0.04	1.13	0.36	241.XX	13	- 0.10	2.31	1.84
020.20	2	0.00	0.16	0.86	251.30	4	0.00	1.07	0.09
020.50	5	- 1.03	2.45	0.83	251.99	3	0.00	1.11	0.13
020.99	2	- 52.23	73.87	0.50	251.XX	7	0.60	1.85	0.22
020.XX	9	- 2.43	7.58	0.35	261.30	9	- 0.151	1.106	1.192
041.50	3	0.00	1.09	0.22	261.99	2	0.000	0.000	0.000
041.XX	4	- 0.05	1.16	0.25	261.XX	11	- 0.220	1.092	1.363
048.20	2	0.00	1.22	0.04	281.30	2	0.00	1.20	0.18
048.XX	2	0.00	1.22	0.04	281.XX	3	0.00	1.10	0.17
050.51	4	0.00	0.64	0.75	289.30	7	1.29	3.54	0.26
050.99	4	0.00	1.06	0.19	289.99	2	0.00	1.09	0.40
050.XX	11	- 0.56	1.77	0.36	289.XX	9	1.14	3.55	0.28
060.00	3	0.00	1.12	0.05	291.30	6	0.00	0.98	0.34
060.XX	3	0.00	1.12	0.05	291.99	2	0.00	0.46	0.80
101.30	14	- 1.09	5.94	0.25	291.XX	8	0.00	0.96	0.36
101.XX	15	- 0.76	4.12	0.17	301.30	4	0.00	1.08	0.03
121.30	15	1.15	4.43	0.51	301.99	3	0.00	1.09	0.19
121.XX	16	1.67	4.76	0.50	301.XX	7	0.00	1.04	0.03
144.01	12	0.73	2.25	0.11	311.99	6	0.02	0.95	0.16
144.99	22	- 1.12	3.78	0.21	311.XX	6	0.02	0.95	0.16
144.XX	36	0.06	1.01	0.05	321.00	4	0.000	0.990	0.373
151.30	3	35.82	62.04	0.18	321.30	27	9.015	31.486	2.254
151.99	2	0.00	1.11	0.36	321.99	2	3.889	5.500	8.348
151.XX	5	30.88	69.05	0.20	321.XX	33	7.303	28.089	2.062
165.99	5	1.845	4.231	2.196					
165.XX	6	13.140	27.925	8.264					
181.30	5	- 0.05	0.94	0.14					
181.XX	5	- 0.05	0.94	0.14					