

- Pass 1 Results for 60 Labs - - Pass 2 Results for 60 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	0.02	0.01	0.01	1	0.02	0.01	0.01
Nitrogen From Urea, Urease (as N)	959.03	005.00	1	0.11	0.11	0.16	1	0.11	0.11	0.16
Total Nitrogen, Salicylic	955.04D	010.12	1	0.08	0.01	0.01	1	0.08	0.01	0.01
Total Nitrogen, Combustion		010.60	3	6.07	9.36	0.02	3	6.07	9.36	0.02
Method Group 010.XX PCT			4	4.57	8.38	0.02	4	4.57	8.38	0.02
Total Phosphate, Spectrometric	958.01	020.20	1	0.22	0.01	0.01	1	0.22	0.01	0.01
Total Phosphate, Alka Quimociac	969.02	020.30	1	1.43	0.00	0.00	1	1.43	0.00	0.00
Total Phosphate, ICP		020.50	1	0.00	0.00	0.00	1	0.00	0.00	0.00
Method Group 020.XX PCT			3	0.55	0.69	0.00	3	0.55	0.69	0.00
Water Soluble Phosphate, Spectrometric	970.01	048.20	1	0.19	0.01	0.01	1	0.19	0.01	0.01
Soluble Potash, ICP (Oxalate)		050.50	2	0.20	0.06	0.02	2	0.20	0.06	0.02
Soluble Potash, ICP (Citrate)		050.51	1	0.21	0.01	0.02	1	0.21	0.01	0.02
Method Group 050.XX PCT			3	0.20	0.05	0.02	3	0.20	0.05	0.02
Acid Soluble Calcium, AA	945.04	101.00	1	3.17	0.15	0.21	1	3.17	0.15	0.21
Acid Soluble Calcium, ICP		101.30	14	3.26	0.17	0.04	14	3.26	0.17	0.04
Acid Soluble Calcium, Other		101.99	2	3.16	0.09	0.05	2	3.16	0.09	0.05
Method Group 101.XX PCT			17	3.24	0.16	0.05	15	3.22	0.11	0.04
Acid Soluble Magnesium, AA	984.01	121.00	1	0.38	0.02	0.03	1	0.38	0.02	0.03
Acid Soluble Magnesium, ICP		121.30	16	0.38	0.05	0.01	16	0.38	0.05	0.01
Method Group 121.XX PCT			17	0.38	0.05	0.01	17	0.38	0.05	0.01
Sulfur, Gravimetric	980.02a	144.01	1	0.20	0.02	0.03	1	0.20	0.02	0.03
Sulfur, Other		144.99	9	0.18	0.02	0.01	9	0.18	0.02	0.01
Method Group 144.XX PCT			10	0.18	0.02	0.02	10	0.18	0.02	0.02
Arsenic, Atomic Absorption		151.00	1	33.00	1.41	2.00	1	33.00	1.41	2.00
Arsenic, ICP		151.30	5	32.93	2.39	1.60	5	32.93	2.39	1.60
Arsenic, Other		151.99	1	39.00	4.24	6.00	1	39.00	4.24	6.00
Method Group 151.XX PPM			7	33.80	3.22	2.28	7	33.80	3.22	2.28
Acid Soluble Boron, Spectrometric	982.01	165.00	9	3.620	0.268	0.069	9	3.620	0.268	0.069
Acid Soluble Boron, Other		165.99	22	3.704	0.199	0.081	21	3.708	0.200	0.072
Method Group 165.XX PCT			31	3.680	0.222	0.078	30	3.682	0.224	0.071
Water Soluble Boron, AA	52.950	171.00	1	3.570	0.141	0.200	1	3.570	0.141	0.200
Water Soluble Boron, Spectrometric	982.01	171.10	1	2.485	0.064	0.090	1	2.485	0.064	0.090
Water Soluble Boron, Titrimetric	949.03	171.70	1	3.650	0.014	0.020	1	3.650	0.014	0.020
Water Soluble Boron, Other		171.99	1	3.310	0.014	0.020	1	3.310	0.014	0.020
Method Group 171.XX PCT			4	3.254	0.497	0.082	4	3.254	0.497	0.082
Cadmium, Atomic Absorption		181.00	2	1.70	0.10	0.17	2	1.70	0.10	0.17
Cadmium, ICP		181.30	9	5.34	3.34	1.09	8	4.91	3.08	0.43
Method Group 181.XX PPM			11	4.67	3.33	0.92	10	4.26	3.04	0.38
Water Soluble Chlorine, Titrimetric	928.02	190.00	1	1.21	0.01	0.01	1	1.21	0.01	0.01

- Pass 1 Results for 60 Labs - - Pass 2 Results for 60 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
Water Soluble Chlorine, Other		190.99	2	0.87	0.03	0.01	2	0.87	0.03	0.01
Method Group 190.XX PCT			3	0.98	0.18	0.01	3	0.98	0.18	0.01
Chromium, Atomic Absorption		191.00	1	65.00	2.83	4.00	1	65.00	2.83	4.00
Chromium, ICP		191.30	11	62.88	18.30	3.56	11	62.88	18.30	3.56
Method Group 191.XX PPM			12	63.06	17.50	3.60	12	63.06	17.50	3.60
Acid Soluble Cobalt, AA		202.00	2	39.25	3.30	3.50	2	39.25	3.30	3.50
Acid Soluble Cobalt, ICP	965.11	202.30	9	41.80	7.80	2.95	9	41.80	7.80	2.95
Method Group 202.XX PPM			11	41.33	7.20	3.05	11	41.33	7.20	3.05
Acid Soluble Copper, Atomic Absorption	975.01	221.00	18	7.2524	0.3719	0.1380	18	7.2524	0.3719	0.1380
Acid Soluble Copper, ICP		221.30	28	7.4544	0.3745	0.1117	28	7.4544	0.3745	0.1117
Acid Soluble Copper, Other		221.99	2	7.2362	0.2596	0.1527	2	7.2362	0.2596	0.1527
Method Group 221.XX PCT			48	7.3696	0.3801	0.1233	48	7.3696	0.3801	0.1233
Acid Soluble Iron, Atomic Absorption ..	980.01	241.00	20	14.62	0.80	0.29	19	14.72	0.64	0.21
Acid Soluble Iron, ICP		241.30	25	15.01	0.98	0.27	24	14.95	0.94	0.24
Acid Soluble Iron, Other		241.99	2	14.44	0.84	1.09	2	14.44	0.84	1.09
Method Group 241.XX PCT			47	14.82	0.92	0.31	45	14.88	0.85	0.24
Lead, Atomic Absorption		251.00	2	40.00	3.65	2.00	2	40.00	3.65	2.00
Lead, ICP		251.30	8	52.15	22.94	3.85	7	52.18	24.48	2.40
Method Group 251.XX PPM			10	49.72	21.03	3.48	9	49.47	22.09	2.31
Acid Soluble Manganese, AA	972.02a	261.00	17	7.274	0.403	0.111	17	7.274	0.403	0.111
Acid Soluble Manganese, AA	972.02b	261.11	2	7.281	0.068	0.078	2	7.281	0.068	0.078
Acid Soluble Manganese, ICP	972.02a	261.30	26	7.573	0.433	0.162	24	7.553	0.409	0.105
Acid Soluble Manganese, ICP	972.02b	261.31	2	7.650	0.122	0.020	2	7.650	0.122	0.020
Acid Soluble Manganese, Other		261.99	5	7.284	0.311	0.118	5	7.284	0.311	0.118
Method Group 261.XX PCT			52	7.439	0.421	0.133	50	7.424	0.405	0.104
Mercury, Atomic Absorption		281.00	1	0.26	0.00	0.01	1	0.26	0.00	0.01
Mercury, Other		281.99	2	0.26	0.01	0.00	2	0.26	0.01	0.00
Method Group 281.XX PPM			3	0.26	0.01	0.01	3	0.26	0.01	0.01
Molybdenum, ICP		289.30	14	575.68	35.53	11.82	13	581.60	28.63	9.57
Nickel, Atomic Absorption		291.00	2	5564.5	566.84	71.00	2	5564.5	566.84	71.00
Nickel, ICP		291.30	6	5342.0	473.20	282.39	5	5455.4	356.89	130.07
Method Group 291.XX PPM			8	5397.6	488.22	229.54	7	5486.6	406.13	113.19
Selenium, ICP		301.30	3	16.13	3.65	0.37	3	16.13	3.65	0.37
Sodium, Other		311.99	9	2.14	0.09	0.05	8	2.15	0.07	0.02
Acid Soluble Zinc, Atomic Absorption ..	975.02	321.00	19	6.079	0.301	0.135	18	6.110	0.273	0.114
Acid Soluble Zinc, ICP		321.30	30	6.356	0.376	0.133	29	6.365	0.360	0.095
Acid Soluble Zinc, Other		321.99	2	6.414	0.219	0.127	2	6.414	0.219	0.127
Method Group 321.XX PCT			51	6.255	0.369	0.134	49	6.273	0.347	0.103

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 001.10 PCT			Meth: 020.50 PCT			Meth: 101.30 PCT			Meth: 101.XX PCT			Meth: 121.30 PCT		
Ammoniacal Nitrogen			Total Phosphate			Acid Soluble Calcium			Acid Soluble Calcium			Acid Soluble Magnesi		
<u>MgO Distillation</u>			<u>ICP</u>			<u>ICP</u>			389 3.23 .23			<u>ICP</u>		
288 0.02 .71			422 0.00 .00			041 7.56 s 25.11			420 3.24 .22			288 0.33 -1.15		
Meth: 005.00 PCT			Meth: 020.XX PCT			422 4.14 s 5.10			292 3.24 .20			065 0.29 -1.96		
Nitrogen From Urea			<u>Total Phosphate</u>			390 3.72 2.68			Avg 3.22			Meth: 121.99 PCT		
<u>Urease (as N)</u>			389 1.43 1.28			035 3.40 .81			131 3.14 -.67			Acid Soluble Magnesi		
288 0.11 .71			Avg 0.55			232 3.39 .77			057 3.15 -.73			<u>Other</u>		
Meth: 010.12 PCT			420 0.22 -.48			288 3.33 .40			096 3.12 -1.00			022 0.04 S .00		
Total Nitrogen			422 0.00 -.79			009 3.31 .27			105 3.17 R -1.03			Meth: 121.XX PCT		
<u>Salicylic</u>						Avg 3.26			433 3.10 -1.04			<u>Acid Soluble Magnesi</u>		
185 0.08 -.71			Meth: 048.20 PCT			027 3.25 -.10			022 3.09 -1.17			422 0.68 s 6.57		
Meth: 010.60 PCT			Water Soluble Phosph			292 3.24 -.12			102 3.02 -1.72			041 0.58 s 4.50		
Total Nitrogen			<u>Spectrometric</u>			420 3.24 -.14			065 2.47 s -6.78			231 0.47 1.88		
<u>Combustion</u>			420 0.19 .71			307 3.26 -.31			Meth: 121.00 PCT			390 0.46 1.76		
073 18.15 1.29			Meth: 050.50 PCT			131 3.14 -.71			Acid Soluble Magnesi			433 0.43 1.21		
Avg 6.07			Soluble Potash			057 3.15 -.71			<u>AA</u>			232 0.41 .61		
422 0.03 -.65			<u>ICP (Oxalate)</u>			096 3.12 -.90			105 0.38 .71			105 0.38 .37		
307 0.03 -.65			422 0.25 .86			433 3.10 -.95			Meth: 121.30 PCT			389 0.39 .32		
Meth: 010.XX PCT			Avg 0.20			102 3.02 -1.41			Acid Soluble Magnesi			307 0.38 .21		
Total Nitrogen			307 0.15 -.87			065 2.47 s -4.77			<u>ICP</u>			009 0.39 .19		
<u>Total Nitrogen</u>			Meth: 050.51 PCT			Meth: 101.99 PCT			422 0.68 s 6.40			420 0.39 .15		
073 18.15 1.62			Soluble Potash			Acid Soluble Calcium			041 0.58 s 4.39			102 0.38 .10		
Avg 4.57			<u>ICP (Citrate)</u>			<u>Other</u>			231 0.47 1.83			Avg 0.38		
185 0.08 -.54			389 0.21 -.71			389 3.23 .87			390 0.46 1.71			096 0.37 -.20		
422 0.03 -.54			Meth: 050.XX PCT			Avg 3.16			433 0.43 1.18			057 0.36 -.36		
307 0.03 -.54			Soluble Potash			022 3.09 -.87			232 0.41 .60			035 0.36 -.53		
Meth: 020.20 PCT			<u>Soluble Potash</u>			Meth: 101.XX PCT			389 0.39 .32			292 0.35 -.75		
Total Phosphate			422 0.25 .98			<u>Acid Soluble Calcium</u>			307 0.38 .20			131 0.33 -1.09		
<u>Spectrometric</u>			389 0.21 .30			041 7.56 s 38.08			009 0.39 .18			288 0.33 -1.18		
420 0.22 .71			Avg 0.20			422 4.14 s 8.05			420 0.39 .15			065 0.29 -2.02		
Meth: 020.30 PCT			307 0.15 -1.21			390 3.72 A 4.42			102 0.38 .10			022 0.04 s -7.45		
Total Phosphate			Meth: 101.00 PCT			035 3.40 1.59			Avg 0.38			Meth: 144.01 PCT		
<u>Alka Quimociac</u>			Acid Soluble Calcium			232 3.39 1.55			096 0.37 -.19			Sulfur		
389 1.43 .00			<u>AA</u>			288 3.33 .99			057 0.36 -.35			<u>Gravimetric</u>		
Meth: 105 3.17 .71			105 3.17 .71			009 3.31 .79			035 0.36 -.52			288 0.20 -.71		
						307 3.26 .60			292 0.35 -.72					
						027 3.25 .25			131 0.33 -1.06					

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

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 144.02 PCT			Meth: 151.30 PPM			Meth: 165.00 PCT			Meth: 165.XX PCT			Meth: 171.70 PCT		
Sulfur			Arsenic			Acid Soluble Boron			Acid Soluble Boron			Water Soluble Boron		
<u>Gravimetric</u>			<u>ICP</u>			<u>Spectrometric</u>						<u>Titrimetric</u>		
292	0.29 S	.00	102	35.34	1.08	028	3.255	-1.37	422	3.916	1.08	416	3.650	-.71
			230	35.05	.89	220	2.545 S	-4.01	043	3.905	1.00			
			Avg	32.93					105	3.874	.89			
Meth: 144.99 PCT			037			Meth: 165.99 PCT			232			Meth: 171.99 PCT		
Sulfur			32.55			Acid Soluble Boron			3.778			Water Soluble Boron		
<u>Other</u>			096			<u>Other</u>			432			<u>Other</u>		
390	0.20	1.26	065	29.70	-1.39	042	4.031	1.69	137	3.735	.28	027	3.310	.71
422	0.20	1.20	009	11.65 S	-8.90	230	4.020	1.56	291	3.710	.15			
102	0.19	.59				433	3.995	1.44	377	3.710	.13			
009	0.19	.53	Meth: 151.99 PPM			090	3.930	1.16	324	3.705	.11	Meth: 171.XX PCT		
Avg	0.18		Arsenic			422	3.916	1.08	Avg	3.682		<u>Water Soluble Boron</u>		
096	0.17	-.53	<u>Other</u>			043	3.905	.98	360	3.680	-.13	416	3.650	.80
035	0.18	-.68	220	39.00	.71	232	3.778	.45	136	3.640	-.19	193	3.570	.67
307	0.17	-.85	Meth: 151.XX PPM			432	3.735	.26	255	3.610	-.33	027	3.310	.12
389	0.16	-.96	Arsenic			291	3.710	.10	444	3.625	-.35	Avg	3.254	
232	0.14	-1.57	220	39.00	1.87	377	3.710	.05	296	3.605	-.42	296	2.485	-1.55
			102	35.34	.56	Avg	3.708		354	3.605	-.46			
			230	35.05	.39	324	3.705	-.03	288	3.625 R	-.65	Meth: 181.00 PPM		
			Avg	33.80		360	3.680	-.21	055	3.520	-.74	Cadmium		
			136	33.00	-.40	136	3.640	-.34	397	3.500	-.87	<u>Atomic Absorption</u>		
			037	32.55	-.53	444	3.625	-.50	009	3.480	-.90	220	1.70	.98
			096	32.00	-.66	255	3.610	-.50	292	3.450	-1.03	Avg	1.70	
			065	29.70	-1.30	354	3.605	-.62	231	3.450	-1.03	193	1.70	-.73
			009	11.65 S	-6.89	288	3.625 R	-.79	211	3.450	-1.06	Meth: 181.30 PPM		
						397	3.500	-1.10	300	3.395	-1.28	Cadmium		
			Meth: 165.00 PCT			009	3.480	-1.14	037	3.370	-1.39	<u>ICP</u>		
			Acid Soluble Boron			231	3.450	-1.29	028	3.255	-1.91	324	22.10 S	5.58
			<u>Spectrometric</u>			211	3.450	-1.31	220	2.545 S	-5.07	390	11.11	2.03
			029	4.155	2.00	300	3.395	-1.57				065	8.78 R	1.63
			105	3.874	.96	Meth: 165.XX PCT			Meth: 171.00 PCT			037	7.88	.97
			137	3.735	.45	Acid Soluble Boron			Water Soluble Boron			035	5.94	.34
			Avg	3.620		<u>AA</u>						Avg	4.91	
			057	3.615	-.13	029	4.155	2.12	193	3.570	-.71	096	3.80	-.36
			296	3.605	-.21	042	4.031	1.62				230	3.00	-.62
			055	3.520	-.40	230	4.020	1.51	Meth: 171.10 PCT			102	2.79	-.69
			292	3.450	-.63	433	3.995	1.40	Water Soluble Boron			232	2.40	-.82
			037	3.370	-.93	090	3.930	1.15	<u>Spectrometric</u>			009	2.35	-.83

* 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: 181.XX PPM <u>Cadmium</u>			Meth: 191.30 PPM <u>Chromium</u>			Meth: 202.30 PPM <u>Acid Soluble Cobalt</u>			Meth: 221.00 PCT <u>Acid Soluble Copper</u>			Meth: 221.30 PCT <u>Acid Soluble Copper</u>		
324	22.10 s	5.87	ICP			ICP			Atomic Absorption			ICP		
390	11.11	2.26	035	91.40	1.59	390	51.60	1.26	177	7.4670	.59	389	7.5200	.18
065	8.78 R	1.82	009	87.65	1.35	037	48.59	.87	211	7.4650	.57	Avg	7.4544	
037	7.88	1.19	037	81.11	1.00	035	46.20	.58	028	7.3550	.50	027	7.3400	-.32
035	5.94	.56	390	76.95	.78	057	45.65	.53	029	7.4150	.45	324	7.3000	-.42
Avg	4.26		102	64.10	.09	009	45.75	.52	055	7.3350	.38	231	7.3000	-.45
096	3.80	-.17	Avg	62.88		Avg	41.80		428	7.3600	.35	420	7.2250	-.62
230	3.00	-.42	096	61.35	-.10	230	38.40	-.46	351	7.3350	.23	444	7.1400	-.84
102	2.79	-.49	065	49.19 X	-.79	102	39.36	-.54	095	7.2550	.02	037	7.1300	-.87
232	2.40	-.62	230	47.65	-.83	324	32.45	-1.20	Avg	7.2524		354	7.0690	-1.03
009	2.35	-.63	232	45.75	-.94	065	28.19 X	-1.82	105	7.2050	-.26	422	7.0170	-1.17
220	1.70	-.84	324	45.30	-.96	232	0.00 s	-5.36	043	7.1750	-.31	433	6.8200	-1.69
193	1.70	-.85	444	41.23	-1.19	Meth: 202.XX PPM <u>Acid Soluble Cobalt</u>			260	6.7600	-1.33	233	6.8335	-1.70
Meth: 190.00 PCT <u>Water Soluble Chlori</u>			Meth: 191.XX PPM <u>Chromium</u>			390	51.60	1.43	234	6.4950	-2.04	255	6.7600	-1.86
<u>Titrimetric</u>			035	91.40	1.65	037	48.59	1.01	157	6.3050	-2.55	065	4.8580 s	-6.93
422	1.21	-.71	009	87.65	1.41	035	46.20	.69	030	5.8850 s	-4.02	Meth: 221.99 PCT <u>Acid Soluble Copper</u>		
Meth: 190.99 PCT <u>Water Soluble Chlori</u>			037	81.11	1.03	057	45.65	.64	Meth: 221.30 PCT <u>Acid Soluble Copper</u>			<u>Other</u>		
<u>Other</u>			390	76.95	.80	009	45.75	.62	ICP			042	7.4474	.88
009	0.90	.84	220	65.00	.16	136	41.50	.21	041	9.0100 s	4.16	Avg	7.2362	
Avg	0.87		102	64.10	.09	Avg	41.33		102	8.4232 S	2.69	022	7.0250	-.85
288	0.84	-.89	Avg	63.06		230	38.40	-.44	090	8.2600	2.15	Meth: 221.XX PCT <u>Acid Soluble Copper</u>		
Meth: 190.XX PCT <u>Water Soluble Chlori</u>			096	61.35	-.12	102	39.36	-.55	035	8.1915	2.00	041	9.0100 s	4.32
<u>Water Soluble Chlori</u>			065	49.19 X	-.84	220	37.00	-.66	288	7.7900	1.02	162	8.7350 s	3.60
422	1.21	1.28	230	47.65	-.88	324	32.45	-1.24	390	7.8200	1.01	102	8.4232 s	2.87
Avg	0.98		232	45.75	-.99	065	28.19 X	-1.92	230	7.7400	.77	090	8.2600	2.34
009	0.90	-.48	324	45.30	-1.01	232	0.00 s	-5.74	291	7.7050	.68	035	8.1915	2.19
288	0.84	-.80	444	41.23	-1.25	Meth: 221.00 PCT <u>Acid Soluble Copper</u>			360	7.6800	.62	390	7.8200	1.21
Meth: 191.00 PPM <u>Chromium</u>			Meth: 202.00 PPM <u>Acid Soluble Cobalt</u>			<u>Atomic Absorption</u>			377	7.6400	.51	288	7.7900	1.20
<u>Atomic Absorption</u>			AA			162	8.7350 s	3.99	057	7.5450	.33	230	7.7400	.98
220	65.00	.71	136	41.50	.82	136	7.6500	1.08	330	7.5300	.31	291	7.7050	.89
Meth: 191.00 PPM <u>Chromium</u>			Avg	39.25		137	7.6050	.95	232	7.5260	.24	360	7.6800	.83
<u>Atomic Absorption</u>			220	37.00	-.91	040	7.4810	.73	300	7.5350	.22	292	7.6800	.82
Meth: 191.00 PPM <u>Chromium</u>			Meth: 202.00 PPM <u>Acid Soluble Cobalt</u>			<u>Atomic Absorption</u>			009	7.4700	.19	432	7.6350	.80
<u>Atomic Absorption</u>			Meth: 221.00 PCT <u>Acid Soluble Copper</u>			<u>Atomic Absorption</u>			131	7.5225	.19	136	7.6500	.75
Meth: 191.00 PPM <u>Chromium</u>			Meth: 221.00 PCT <u>Acid Soluble Copper</u>			<u>Atomic Absorption</u>								
<u>Atomic Absorption</u>			Meth: 221.00 PCT <u>Acid Soluble Copper</u>			<u>Atomic Absorption</u>								

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

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 221.XX PCT			Meth: 221.XX PCT			Meth: 241.30 PCT			Meth: 241.XX PCT			Meth: 241.XX PCT		
<u>Acid Soluble Copper</u>			<u>Acid Soluble Copper</u>			<u>Acid Soluble Iron</u>			<u>Acid Soluble Iron</u>			<u>Acid Soluble Iron</u>		
377	7.6400	.72	157	6.3050	-2.80	ICP			035	16.62	2.06	041	14.10	-.91
137	7.6050	.62	030	5.8850 s	-4.22	354	15.48	.57	330	16.48	1.97	255	14.17	-.97
057	7.5450	.51	065	4.8580 s	-6.61	027	15.39	.46	390	16.35	1.73	030	14.18	-.99
040	7.4810	.49				131	15.31	.37	389	16.25	1.64	042	14.52 R	-1.27
330	7.5300	.48	Meth: 241.00 PCT			432	15.25	.35	324	15.95	1.26	296	13.78	-1.30
296	7.3800	.47	Acid Soluble Iron			230	15.15	.34	137	15.55	.79	162	13.74	-1.34
232	7.5260	.44	<u>Atomic Absorption</u>			232	15.19	.27	055	15.44	.76	220	13.50	-1.62
300	7.5350	.44	137	15.55	1.29	291	15.06	.19	354	15.48	.72	444	13.38	-1.78
131	7.5225	.41	055	15.44	1.22	009	15.11	.16	211	15.40	.62	193	12.62 R	-2.84
220	7.5000	.40	211	15.40	1.06	422	15.09	.15	027	15.39	.60	231	12.30	-3.04
389	7.5200	.40	157	15.30	.90	420	15.06	.11	131	15.31	.50	065	13.39 s	-3.07
009	7.4700	.32	177	15.28	.88	096	15.03	.08	157	15.30	.50	090	11.15 s	-4.40
042	7.4474	.31	040	15.27	.87	Avg	14.95		177	15.28	.48	102	11.04 s	-4.53
177	7.4670	.29	136	15.20	.74	360	14.83	-.14	040	15.27	.48	397	10.98 s	-4.57
211	7.4650	.25	105	15.15	.67	057	14.61	-.41	432	15.25	.47	288	10.95 s	-4.61
029	7.4150	.17	037	14.92	.32	233	14.75	-.42	230	15.15	.44	292	7.52 s	-8.65
Avg	7.3696		028	14.75	.09	433	14.33	-.67	232	15.19	.38	300	2.27 s	-14.81
351	7.3350	-.11	Avg	14.72		377	14.17	-.83	136	15.20	.38			
027	7.3400	-.11	029	14.69	-.26	041	14.10	-.90	105	15.15	.33	Meth: 251.00 PPM		
428	7.3600	-.19	351	14.44	-.44	255	14.17	-.95	291	15.06	.27	Lead		
324	7.3000	-.20	095	14.41	-.54	444	13.38	-1.69	009	15.11	.27	<u>Atomic Absorption</u>		
231	7.3000	-.26	043	14.37	-.55	065	13.39 S	-2.81	422	15.09	.25	220	43.00	.87
095	7.2550	-.30	428	14.38	-.66	231	12.30	-2.82	420	15.06	.21	Avg 40.00		
055	7.3350	-.32	030	14.18	-1.12	090	11.15 S	-4.05	096	15.03	.18	136	37.00	-.87
420	7.2250	-.40	296	13.78	-1.48	102	11.04 S	-4.16	037	14.92	.09			
028	7.3550	-.41	162	13.74	-1.54	288	10.95 S	-4.24	Avg	14.88		Meth: 251.30 PPM		
105	7.2050	-.49	220	13.50	-1.91	292	7.52 S	-7.88	360	14.83	-.08	Lead		
043	7.1750	-.56	193	12.62 R	-3.55	300	2.27 s	-13.43	028	14.75	-.16	<u>ICP</u>		
444	7.1400	-.61	397	10.98 s	-5.83				029	14.69	-.30	035	145.00 S	3.79
037	7.1300	-.63				Meth: 241.99 PCT			057	14.61	-.38	102	91.41	1.60
354	7.0690	-.79	Meth: 241.30 PCT			Acid Soluble Iron			233	14.75	-.43	009	76.70	1.00
022	7.0250	-.92	Acid Soluble Iron			Other			351	14.44	-.51	324	58.20	.25
422	7.0170	-.93	<u>ICP</u>			042	14.52	1.22	095	14.41	-.58	230	52.80	.03
433	6.8200	-1.45	035	16.62	1.78	Avg	14.44		043	14.37	-.59	Avg 52.18		
233	6.8335	-1.46	330	16.48 R	1.69	234	14.35	-.13	234	14.35	-.62	232	52.00 R	-.29
255	6.7600	-1.61	390	16.35	1.48				433	14.33	-.65	037	32.41	-.81
260	6.7600	-1.61	389	16.25	1.40				428	14.38	-.65	444	30.61	-.88
234	6.4950	-2.31	324	15.95	1.06				377	14.17	-.83	065	23.10	-1.20

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

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 251.XX PPM			Meth: 261.11 PCT			Meth: 261.31 PCT			Meth: 261.XX PCT			Meth: 281.00 PPM		
<u>Lead</u>			Acid Soluble Manganese			Acid Soluble Manganese			<u>Acid Soluble Manganese</u>			Mercury		
035	145.00 s	4.33	<u>AA</u>			<u>ICP</u>			377	7.535	.27	<u>Atomic Absorption</u>		
102	91.41	1.90	029	7.320	1.05	324	7.755	.87	177	7.440	.18	230	0.26	.71
009	76.70	1.23	Avg 7.281			Avg 7.650			432	7.440	.18	Meth: 281.99 PPM		
324	58.20	.40	040	7.242	-.63	027 7.545 -.86			041	7.440	.13	Mercury		
232	52.00 R	.34	Meth: 261.30 PCT			Meth: 261.99 PCT			360	7.455	.08	<u>Other</u>		
230	52.80	.15	Acid Soluble Manganese			Acid Soluble Manganese			Avg	7.424		220	0.27	.84
Avg	49.47		<u>ICP</u>			<u>Other</u>			131	7.405	-.10	Avg 0.26		
220	43.00	-.30	102	8.553 S	2.59	042	7.574	1.04	220	7.355	-.18	009	0.25	-.89
136	37.00	-.57	390	8.370	2.02	255	7.560	.90	397	7.335	-.23	Meth: 281.XX PPM		
037	32.41	-.77	330	8.230 R	1.86	037	7.300	.06	260	7.375	-.24	<u>Mercury</u>		
444	30.61	-.85	090	8.280	1.78	Avg 7.284			029	7.320	-.30	220	0.27	.96
065	23.10	-1.20	035	8.118	1.41	022	7.190	-.36	037	7.300	-.31	230	0.26	.32
Meth: 261.00 PCT			288	7.950	.97	234	6.795	-1.58	043	7.295	-.32	Avg 0.26		
Acid Soluble Manganese			230	7.865	.78	Meth: 261.XX PCT			389	7.290	-.35	009	0.25	-1.21
<u>AA</u>			300	7.775	.54	<u>Acid Soluble Manganese</u>			095	7.275	-.37	Meth: 289.30 PPM		
137	7.940	1.66	232	7.733	.45	102	8.553 s	2.92	105	7.400	-.42	<u>ICP</u>		
162	7.905	1.58	009	7.730	.44	390	8.370	2.36	040	7.242	-.45	390	643.50	2.19
136	7.740	1.16	422	7.709	.38	330	8.230 R	2.17	433	7.225	-.49	057	613.50	1.13
105	7.400	.53	354	7.637	.23	090	8.280	2.12	022	7.190	-.60	232	610.15	1.02
177	7.440	.45	057	7.585	.13	035	8.118	1.74	351	7.169	-.63	288	590.00	.46
028	7.405	.36	291	7.580	.12	288	7.950	1.30	231	7.150	-.69	324	594.00	.45
260	7.375	.33	Avg 7.553			137	7.940	1.28	055	7.180	-.74	Avg 581.60		
220	7.355	.21	377	7.535	-.05	162	7.905	1.20	444	7.175	-.74	433	581.00	-.05
397	7.335	.16	360	7.455	-.24	230	7.865	1.10	233	7.204	-.76	035	580.00	-.09
095	7.275	.06	041	7.440	-.30	300	7.775	.87	420	7.065	-.91	220	570.00	-.53
043	7.295	.05	432	7.440	-.33	324	7.755	.82	296	6.980	-1.13	230	563.50	-.65
Avg	7.274		131	7.405	-.37	136	7.740	.78	307	7.400 R	-1.23	009	562.50	-.67
351	7.169	-.26	389	7.290	-.65	232	7.733	.77	211	6.750	-1.67	037	558.11	-.82
055	7.180	-.48	433	7.225	-.80	009	7.730	.76	193	6.675	-1.85	255	556.50	-.89
296	6.980	-.77	231	7.150	-1.00	422	7.709	.70	292	6.560	-2.14	102	538.00	-1.53
211	6.750	-1.30	233	7.204	-1.00	354	7.637	.54	157	6.435	-2.45	065	498.75 R	-2.98
193	6.675	-1.49	444	7.175	-1.01	042	7.574	.51	030	5.430 s	-4.93	444	465.00 s	-4.17
157	6.435	-2.08	420	7.065	-1.21	057	7.585	.41	065	1.901 s	-13.65			
030	5.430 s	-4.58	307	7.400 R	-1.27	291	7.580	.40						
			292	6.560	-2.43	255	7.560	.35						
			065	1.901 s	-13.82	027	7.545	.30						

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

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 291.00 PPM			Meth: 311.99 PCT			Meth: 321.30 PCT			Meth: 321.99 PCT			Meth: 321.XX PCT		
Nickel			Sodium			Acid Soluble Zinc			Acid Soluble Zinc			Acid Soluble Zinc		
<u>Atomic Absorption</u>			<u>Other</u>			<u>ICP</u>			<u>Other</u>					
220	6054.0	.87	422	2.30	2.11	102	7.595 s	3.49	042	6.593	.86	022	6.235	-.22
Avg	5564.5		009	2.19	.70	035	7.065	1.95	Avg	6.414		232	6.159	-.34
136	5075.0	-.86	Avg	2.15		390	7.015	1.81	022	6.235	-.87	231	6.230	-.39
			292	2.15	-.07	230	7.010	1.80				211	6.115	-.46
			232	2.14	-.17	090	6.950	1.64	Meth: 321.XX PCT			037	6.105	-.49
Meth: 291.30 PPM			035			057			<u>Acid Soluble Zinc</u>			397	6.076	-.57
Nickel			288			288			040			296	6.075	-.57
<u>ICP</u>			057			300			102			055	6.145	-.60
035	5876.5	1.18	102	2.08	-.88	432	6.570	.57	035	7.595 s	3.88	028	6.125	-.62
009	5502.0	.56	307	2.08 R	-.97	377	6.435	.42	390	7.065	2.29	389	6.050	-.66
102	5606.4	.42				422	6.460	.27	230	7.015	2.14	420	6.070	-.67
Avg	5455.4					291	6.441	.22	090	7.010	2.13	220	6.015	-.75
232	5404.5	-.14	Meth: 321.00 PCT			131	6.430	.19	057	6.950	1.96	105	5.960	-.90
037	4888.0	-1.61	Acid Soluble Zinc			041	6.380	.05	288	6.770	1.45	234	5.925	-1.01
065	4775.0 R	-2.40	<u>Atomic Absorption</u>			027	6.375	.05	042	6.615	1.04	043	5.900	-1.08
390	0.59 S	-15.28	040	7.911 s	8.93	Avg	6.375	.03	162	6.593	.94	444	5.850	-1.23
			162	6.590	1.78	330	6.365		300	6.590	.93	351	5.831	-1.28
			029	6.425	1.38	354	6.310	-.15	029	6.570	.86	233	5.785	-1.45
Meth: 291.XX PPM			137	6.415	1.12	009	6.297	-.20	432	6.425	.74	095	5.755	-1.52
Nickel			428	6.365	1.06	292	6.330	-.32	377	6.435	.61	307	6.100 R	-1.88
220	6054.0	1.40	136	6.360	.92	324	6.435	-.32	422	6.460	.54	157	5.595	-1.95
035	5876.5	.96	177	6.300	.70	360	6.235	-.37	428	6.441	.49	433	5.575	-2.01
009	5502.0	.48	055	6.145	.62	255	6.230	-.37	428	6.365	.47	030	5.530 R	-2.26
102	5606.4	.30	028	6.125	.57	231	6.215	-.42	291	6.430	.46	065	1.353 s	-14.19
Avg	5486.6		211	6.115	.06	232	6.230	-.52	137	6.415	.41			
232	5404.5	-.20	Avg	6.110		037	6.159	-.58	009	6.330	.36			
136	5075.0	-1.02	296	6.075	-.13	420	6.105	-.72	131	6.380	.31			
037	4888.0	-1.49	397	6.076	-.13	389	6.070	-.87	041	6.375	.30			
065	4775.0 R	-2.17	220	6.015	-.37	444	6.050	-.89	027	6.375	.29			
390	0.59 s	-13.51	105	5.960	-.55	233	5.850	-1.44	136	6.360	.26			
			234	5.925	-.68	307	5.785	-1.64	330	6.310	.11			
Meth: 301.30 PPM			043	5.900	-.77	307	6.100 R	-1.90	354	6.297	.10			
Selenium			351	5.831	-1.03	433	5.575	-2.19	177	6.300	.08			
<u>ICP</u>			095	5.755	-1.36	065	1.353 s	-13.92	Avg	6.273				
230	20.25	1.13	157	5.595	-1.89				292	6.250	-.09			
Avg	16.13		030	5.530 R	-2.32				360	6.230	-.12			
065	16.03	-.06							324	6.235	-.13			
037	12.10	-1.10							255	6.215	-.18			

* 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
010.60	3	0.00	1.12	0.00	261.00	18	- 0.254	1.449	0.182
010.XX	4	0.00	1.08	0.00	261.11	2	0.000	0.813	0.648
020.XX	3	0.00	1.12	0.00	261.30	28	- 0.361	2.847	0.365
050.50	2	0.00	1.21	0.14	261.31	2	0.000	1.218	0.092
050.XX	3	0.00	1.09	0.19	261.99	5	0.000	1.027	0.237
101.30	17	1.51	6.38	0.36	261.XX	55	- 0.252	2.223	0.289
101.99	2	0.00	1.15	0.29	281.99	2	0.00	1.19	0.22
101.XX	20	2.18	8.87	0.54	281.XX	3	0.00	1.07	0.27
121.30	18	0.59	1.99	0.35	289.30	15	- 0.46	1.55	0.35
121.XX	20	0.17	2.64	0.35	289.XX	15	- 0.46	1.55	0.35
144.99	9	0.00	0.93	0.41	291.00	2	0.00	1.22	0.07
144.XX	11	0.44	1.70	0.43	291.30	7	- 2.46	5.76	0.60
151.30	6	- 1.48	3.73	0.35	291.XX	9	- 1.70	4.55	0.47
151.XX	8	- 0.86	2.58	0.42	301.30	3	0.00	1.12	0.05
165.00	10	- 0.401	1.591	0.144	301.XX	3	0.00	1.12	0.05
165.99	22	- 0.019	0.966	0.261	311.99	9	- 0.09	0.99	0.68
165.XX	32	- 0.166	1.311	0.216	311.XX	9	- 0.09	0.99	0.68
171.XX	4	0.000	1.072	0.111	321.00	20	0.224	1.820	1.392
181.00	2	0.00	0.03	0.87	321.30	32	- 0.351	2.720	0.380
181.30	10	0.68	1.99	0.34	321.99	2	0.000	1.154	0.291
181.XX	12	0.61	1.94	0.31	321.XX	53	- 0.134	2.348	0.739
190.99	2	0.00	1.18	0.22					
190.XX	3	0.00	1.12	0.04					
191.30	11	0.00	1.02	0.13					
191.XX	12	0.00	1.01	0.14					
202.00	2	0.00	0.96	0.54					
202.30	10	- 0.54	1.94	0.24					
202.XX	12	- 0.48	1.91	0.26					
221.00	20	0.0155	1.5552	0.4276					
221.30	31	- 0.006	1.8117	0.2288					
221.99	2	0.0000	1.1504	0.2972					
221.XX	53	0.0031	1.6619	0.3120					
241.00	21	- 0.43	1.71	0.38					
241.30	31	- 1.09	3.08	0.46					
241.99	2	0.00	0.14	0.86					
241.XX	54	- 0.86	2.71	0.46					
251.00	2	0.00	1.16	0.27					
251.30	9	0.42	1.55	0.12					
251.XX	11	0.40	1.59	0.12					