

- Pass 1 Results for 79 Labs - - Pass 2 Results for 75 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	2	22.77	26.14	0.21	2	22.77	26.14	0.21
Nitrogen From Urea, Urease (as N)	959.03	005.00	1	47.18	0.00	0.00	1	47.18	0.00	0.00
Nitrogen From Urea, Other		005.99	5	46.00	0.30	0.12	5	46.00	0.30	0.12
Method Group 005.XX PCT			6	46.19	0.53	0.10	5	46.31	0.49	0.05
Percent Biuret, Spec (as Biuret)	960.04	008.10	6	0.92	0.07	0.01	6	0.92	0.07	0.01
Ammon & Nitrate N, Devarda	892.01	009.10	1	2.06	0.00	0.00	1	2.06	0.00	0.00
Ammon & Nitrate N, Other		009.99	1	46.00	0.01	0.02	1	46.00	0.01	0.02
Method Group 009.XX PCT			2	24.03	25.37	0.01	2	24.03	25.37	0.01
Total Nitrogen, Modified Comprehensive	978.02	010.11	10	46.13	0.24	0.09	9	46.14	0.24	0.05
Total Nitrogen, Salicylic	955.04D	010.12	2	46.03	0.62	0.76	2	46.03	0.62	0.76
Total Nitrogen, Combustion		010.60	52	46.29	0.47	0.22	49	46.28	0.47	0.17
Total Nitrogen, Other		010.99	5	46.15	0.26	0.12	5	46.15	0.26	0.12
Method Group 010.XX PCT			69	46.25	0.44	0.21	63	46.23	0.42	0.13
Total Phosphate, ICP		020.50	1	0.08	0.01	0.01	1	0.08	0.01	0.01
Dir Available Phosphate, ICP		041.50	1	0.00	0.00	0.00	1	0.00	0.00	0.00
Dir Available Phosphate, Other		041.99	1	0.09	0.01	0.01	1	0.09	0.01	0.01
Method Group 041.XX PCT			2	0.05	0.05	0.01	2	0.05	0.05	0.01
Soluble Potash, ICP (Oxalate)		050.50	2	0.66	0.43	0.05	2	0.66	0.43	0.05
Soluble Potash, Other		050.99	2	0.12	0.14	0.00	2	0.12	0.14	0.00
Method Group 050.XX PCT			4	0.39	0.42	0.03	3	0.18	0.14	0.00
Free Water, Vacuum Oven	965.08B	060.00	2	0.35	0.26	0.01	2	0.35	0.26	0.01
Free Water, Other		060.99	1	0.29	0.01	0.01	1	0.29	0.01	0.01
Method Group 060.XX PCT			3	0.33	0.20	0.01	3	0.33	0.20	0.01
Acid Soluble Calcium, AA	945.04	101.00	1	0.91	0.01	0.01	1	0.91	0.01	0.01
Acid Soluble Calcium, ICP		101.30	10	0.84	0.14	0.02	9	0.85	0.15	0.01
Method Group 101.XX PCT			11	0.85	0.14	0.02	10	0.86	0.14	0.01
Acid Soluble Magnesium, AA	984.01	121.00	1	0.48	0.01	0.02	1	0.48	0.01	0.02
Acid Soluble Magnesium, ICP		121.30	12	0.46	0.09	0.01	12	0.46	0.09	0.01
Method Group 121.XX PCT			13	0.46	0.09	0.01	13	0.46	0.09	0.01
Sulfur, Gravimetric	980.02a	144.01	16	15.49	0.51	0.14	16	15.49	0.51	0.14
Sulfur, Gravimetric	980.02b	144.02	1	17.48	0.05	0.07	1	17.48	0.05	0.07
Sulfur, Other		144.99	22	15.15	0.82	0.21	20	15.20	0.83	0.15
Method Group 144.XX PCT			39	15.35	0.79	0.18	37	15.39	0.79	0.15
Arsenic, Atomic Absorption		151.00	1	9.55	0.21	0.30	1	9.55	0.21	0.30
Arsenic, ICP		151.30	6	10.93	3.57	0.68	6	10.93	3.57	0.68
Arsenic, Other		151.99	1	8.46	0.16	0.22	1	8.46	0.16	0.22
Method Group 151.XX PPM			8	10.45	3.19	0.57	7	10.68	3.33	0.37
Acid Soluble Boron, Other		165.99	5	0.041	0.013	0.003	5	0.041	0.013	0.003
Cadmium, Atomic Absorption		181.00	2	0.73	0.56	0.08	2	0.73	0.56	0.08

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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
Cadmium, ICP		181.30	7	1.53	1.27	0.38	6	1.23	0.99	0.08
Cadmium, Other		181.99	1	0.52	0.02	0.03	1	0.52	0.02	0.03
Method Group 181.XX PPM			10	1.27	1.15	0.28	9	1.04	0.88	0.07
Water Soluble Chlorine, Titrimetric	928.02	190.00	1	0.49	0.01	0.02	1	0.49	0.01	0.02
Chromium, Atomic Absorption		191.00	1	339.50	0.71	1.00	1	339.50	0.71	1.00
Chromium, ICP		191.30	9	267.51	35.61	17.87	9	267.51	35.61	17.87
Method Group 191.XX PPM			10	274.71	40.32	16.18	10	274.71	40.32	16.18
Acid Soluble Cobalt, AA		202.00	2	239.75	14.86	2.50	2	239.75	14.86	2.50
Acid Soluble Cobalt, ICP	965.11	202.30	14	203.88	48.99	11.28	14	203.88	48.99	11.28
Acid Soluble Cobalt, Other		202.99	1	79.25	5.42	7.67	1	79.25	5.42	7.67
Method Group 202.XX PPM			17	200.77	55.43	10.04	17	200.77	55.43	10.04
Acid Soluble Copper, Atomic Absorption	975.01	221.00	5	0.2252	0.0082	0.0046	5	0.2252	0.0082	0.0046
Acid Soluble Copper, ICP		221.30	27	0.2307	0.0184	0.0047	26	0.2314	0.0183	0.0040
Acid Soluble Copper, Other		221.99	1	0.2000	0.0141	0.0200	1	0.2000	0.0141	0.0200
Method Group 221.XX PCT			33	0.2289	0.0178	0.0051	31	0.2304	0.0172	0.0041
Acid Soluble Iron, Atomic Absorption	980.01	241.00	11	8.66	0.65	0.13	11	8.66	0.65	0.13
Acid Soluble Iron, Colorimetric		241.20	1	9.29	0.01	0.01	1	9.29	0.01	0.01
Acid Soluble Iron, ICP		241.30	35	9.12	0.66	0.20	33	9.08	0.64	0.16
Acid Soluble Iron, Other		241.99	2	9.20	0.24	0.01	2	9.20	0.24	0.01
Method Group 241.XX PCT			49	9.03	0.66	0.17	44	9.02	0.64	0.11
Lead, Atomic Absorption		251.00	1	80.50	0.71	1.00	1	80.50	0.71	1.00
Lead, ICP		251.30	10	66.52	10.57	5.27	10	66.52	10.57	5.27
Lead, Other		251.99	1	52.96	0.42	0.59	1	52.96	0.42	0.59
Method Group 251.XX PPM			12	66.55	11.19	4.52	11	65.19	10.37	3.45
Acid Soluble Manganese, AA	972.02a	261.00	9	18.236	0.523	0.194	8	18.247	0.519	0.081
Acid Soluble Manganese, ICP	972.02a	261.30	27	18.944	1.194	0.329	26	18.892	1.172	0.272
Acid Soluble Manganese, ICP	972.02b	261.31	2	18.025	2.975	0.150	2	18.025	2.975	0.150
Acid Soluble Manganese, Other		261.99	6	19.110	0.828	0.448	5	19.003	0.748	0.158
Method Group 261.XX PCT			45	18.834	1.240	0.332	41	18.737	1.184	0.215
Water Soluble Manganese, Atomic Abs	972.03	271.00	1	17.540	0.424	0.600	1	17.540	0.424	0.600
Water Soluble Manganese, ICP	972.03	271.30	4	11.425	7.076	0.049	3	11.035	8.329	0.010
Water Soluble Manganese, Other		271.99	1	12.457	0.180	0.255	1	12.457	0.180	0.255
Method Group 271.XX PCT			6	12.616	6.110	0.175	5	11.632	6.256	0.090
Mercury, Atomic Absorption		281.00	1	0.03	0.00	0.01	1	0.03	0.00	0.01
Mercury, ICP		281.30	1	10.00	1.41	2.00	1	10.00	1.41	2.00
Mercury, Other		281.99	1	0.05	0.00	0.01	1	0.05	0.00	0.01
Method Group 281.XX PPM			3	3.36	5.18	0.67	3	3.36	5.18	0.67
Molybdenum, ICP		289.30	10	21.62	6.60	3.27	9	22.05	6.26	1.86
Molybdenum, Other		289.99	2	17.27	3.17	0.39	2	17.27	3.17	0.39

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Method Group 289.XX PPM			12	20.90	6.33	2.79	11	21.18	6.06	1.59
Nickel, Atomic Absorption		291.00	1	287.50	3.54	5.00	1	287.50	3.54	5.00
Nickel, ICP		291.30	11	248.53	51.48	9.92	11	248.53	51.48	9.92
Nickel, Other		291.99	1	111.30	6.87	9.71	1	111.30	6.87	9.71
Method Group 291.XX PPM			13	240.97	61.62	9.53	13	240.97	61.62	9.53
Selenium, ICP		301.30	5	70.12	50.64	12.27	5	70.12	50.64	12.27
Selenium, Other		301.99	2	39.67	42.08	0.57	2	39.67	42.08	0.57
Method Group 301.XX PPM			7	61.42	48.86	8.93	7	61.42	48.86	8.93
Sodium, Other		311.99	6	0.07	0.02	0.00	6	0.07	0.02	0.00
Acid Soluble Zinc, Atomic Absorption	975.02	321.00	5	0.809	0.049	0.027	4	0.798	0.042	0.009
Acid Soluble Zinc, ICP		321.30	24	0.875	0.097	0.033	23	0.872	0.095	0.025
Acid Soluble Zinc, Other		321.99	2	0.825	0.055	0.029	2	0.825	0.055	0.029
Method Group 321.XX PCT			31	0.861	0.092	0.032	30	0.858	0.090	0.026
Water Soluble Zinc, ICP		325.30	1	0.520	0.014	0.020	1	0.520	0.014	0.020

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	
Meth: 001.10 PCT												
Ammoniacal Nitrogen												
MgO Distillation												
330	45.40	.87										Meth: 010.12 PCT
Avg	22.77	-1.03										Total Nitrogen
232	0.13	-.87										Salicylic
Meth: 009.10 PCT												
Ammon & Nitrate N												
Devarda												
257	2.06	.00										Combustion
255	47.18	.00										Avg
Meth: 005.99 PCT												
Nitrogen From Urea												
Other												
444	46.40	1.35										037
300	46.15	.51										354
309	46.00	.01										234
Avg	46.00	.87										086
397	45.85	-.52										027
029	45.60	-1.46										231
Meth: 009.99 PCT												
Ammon & Nitrate N												
Other												
027	46.00	.71										028
Meth: 009.11 PCT												
Ammon & Nitrate N												
Other												
027	46.00	.87										043
Avg	24.03	.08										041
257	2.06	-.87										426
Meth: 010.11 PCT												
Total Nitrogen												
Modified Comprehensi												
460	46.45	1.31										260
114	46.44	1.28										230
456	46.17	.32										402
473	46.21	.27										073
470	46.16	.08										095
Avg	46.14	.08										009
211	46.12	-.12										443
090	46.10	-.19										024
415	45.99	-.64										40.61 s
105	46.06 R	-.87										-12.15
309	45.64	-2.13										Meth: 010.99 PCT
Meth: 008.10 PCT												
Percent Biuret												
Spec (as Biuret)												
470	1.06	1.90										Total Nitrogen
371	0.94	.17										030
450	0.93	.09										030
Avg	0.92	.09										475
456	0.90	-.31										325
Meth: 010.60 PCT												
Total Nitrogen												
Combustion												
Avg	46.28											291
351	46.24	-.08										072
042	46.24	-.17										296
422	46.20	-.19										296
255	46.18	-.25										096
057	46.11	-.36										377
037	46.12	-.37										247
055	46.09	-.41										460
034	46.08	-.45										114
136	46.61	.92										070
007	46.60	.91										420
177	46.61	.90										390
232	46.60	.89										233
307	46.35 R	.88										131
030	46.54	.83										360
475	46.33	.81										292
325	46.50	.80										420
291	46.55	.77										042
072	46.54	.74										420
296	46.54	.73										351
096	46.49	.61										Avg
377	46.48	.60										473
247	46.47	.56										46.21
460	46.45	.54										-.06
114	46.44	.52										
070	46.41	.43										
420	46.35	.31										
390	46.34	.28										
233	46.33	.27										
131	46.33	.27										
360	46.29	.21										
292	46.30	.17										
042	46.24	.16										
420	46.26	.15										
351	46.24	.04										
Avg	46.23											
473	46.21	-.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
Meth: 144.01 PCT											
Sulfur											
324	19.40 s	5.09	Meth: 144.01 PCT								
247	18.33 s	3.73	Sulfur								
292	17.48	2.64	231	14.54 R	-1.21	Meth: 151.99 PPM					
114	16.91	1.92	450	14.33	-1.34	Arsenic					
291	16.84	1.84	422	13.55	-2.33	096 9.35					
041	16.37	1.26	307	13.27	-2.68	102 8.70					
377	16.25	1.09	131	11.51 s	-4.92	009 8.80 R					
117	16.15	.98	230	11.00 s	-5.55	231 8.46					
073	15.85	.60	363	10.74 s	-5.88	390 8.36					
473	15.77	.48	030	8.12 s	-9.19	Meth: 165.99 PCT					
049	15.75	.46	Acid Soluble Boron								
475	15.65	.34	Other								
354	15.62	.51	354	0.058	1.30	354 0.058 1.30					
330	15.50	.44	363	0.051	.72	363 0.051 .72					
360	15.30	.36	Meth: 151.00 PPM								
351	15.37	.23	Arsenic								
232	15.34	.22	Atomic Absorption								
177	15.25	.07	136	9.55	-.71	Avg 0.041					
Meth: 144.99 PCT											
Sulfur											
291	16.84	1.97	Meth: 151.30 PPM								
377	16.25	1.27	Arsenic								
117	16.15	1.16	ICP								
473	15.77	.68	247	46.00 S	9.85	247 46.00 S 9.85					
049	15.75	.67	037	17.85	1.94	037 17.85 1.94					
354	15.62	.51	450	12.50	.46	450 12.50 .46					
330	15.50	.44	Meth: 181.00 PPM								
360	15.30	.36	Cadmiium								
351	15.37	.23	Atomic Absorption								
232	15.34	.22	363	1.22	.86	363 1.22 .86					
177	15.25	.07	Meth: 181.30 PPM								
Avg	15.20		Arsenic								
255	15.11	-.12	ICP								
027	15.06	-.17	Meth: 181.00 PPM								
419	14.91	-.35	Cadmiium								
390	14.90	-.43	Atomic Absorption								
090	14.83	-.44	232	17.80 s	16.66	232 17.80 s 16.66					
096	14.82	-.46	009	3.35 R	2.39	009 3.35 R 2.39					
009	14.83 R	-.63	247	3.00	1.78	247 3.00 1.78					
231	14.54 R	-.95	230	1.49	.34	230 1.49 .34					
450	14.33	-1.04	419	1.50	.28	419 1.50 .28					
422	13.55	-1.98	Meth: 151.99 PPM								
307	13.27	-2.31	Arsenic								
131	11.51 s	-4.43	247	46.00 s	10.63	247 46.00 s 10.63					
363	10.74 s	-5.34	037	17.85	2.15	037 17.85 2.15					
Meth: 144.02 PCT											
Sulfur											
292	17.48	.71	450	12.50	.57	450 12.50 .57					
Meth: 181.00 PPM											
Chromium											
232	17.80 s	19.05	Meth: 181.30 PPM								
009	3.35 R	2.90	Chromium								
247	3.00	2.23	Atomic Absorption								
230	1.49	.56	470	339.50	.71	470 339.50 .71					
419	1.50	.53	Meth: 191.00 PPM								
363	1.22	.21	Chromium								
Avg	1.04		Atomic Absorption								
102	0.77	-.31	Meth: 191.30 PPM								
390	0.60	-.50	Chromium								
231	0.52	-.59	ICP								
136	0.25	-.90	247	540.50 s	7.93	247 540.50 s 7.93					
450	0.00	-1.18	450	321.50	1.56	450 321.50 1.56					
Meth: 190.00 PCT											
Water Soluble Chlori											
Titrmetric											
422	0.49	.71	009	316.20	1.37	009 316.20 1.37					
Meth: 191.00 PPM											
Chromium											
Atomic Absorption											
470	339.50	.71	037	278.70	.41	037 278.70 .41					
Meth: 191.30 PPM											
Chromium											
ICP											
247	540.50 s	7.93	419	268.00	.06	419 268.00 .06					
450	321.50	1.56	Avg	267.51		Avg 267.51					
009	316.20	1.37	102	266.18	-.08	102 266.18 -.08					

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Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 191.30 PPM											
Chromium											
ICP			Meth: 202.30 PPM			Meth: 202.30 PPM			Meth: 202.30 PPM		
096	259.50	-0.27	Acid Soluble Cobalt	102	142.72	Acid Soluble Cobalt	102	142.72	Acid Soluble Copper	433	0.2285
232	248.50	-0.76	ICP	027	120.00	ICP	027	120.00	ICP	377	0.2243
027	225.00	-1.19	426	262.80	098	231	79.25	095	0.2165	105	0.2235
230	224.00	-1.38	096	252.00	087	037	246.45	057	0.2159	422	0.2250
Meth: 191.99 PPM											
Chromium											
ICP			057	242.00	083	057	242.00	232	0.2141	402	0.2215
096	259.50	-0.40	233	236.25	067	233	236.25	426	0.2136 R	043	0.2210
232	248.50	-0.81	390	224.50	042	390	224.50	307	0.2095	475	0.2200
027	225.00	-1.23	Avg	203.88		Avg	203.88	450	0.2025	095	0.2165
230	224.00	-1.38	422	200.00	-08	422	200.00	041	0.2000	057	0.2159
Meth: 202.99 PPM											
Chromium											
ICP			009	181.55 X	-49	009	181.55 X			460	0.2150
096	259.50	-0.40	419	175.50	-58	419	175.50			232	0.2141
232	248.50	-0.81	230	153.00	-1.04	230	153.00			426	0.2136 R
027	225.00	-1.23	232	152.50	-1.07	232	152.50			307	0.2095
230	224.00	-1.38	102	142.72	-1.25	102	142.72			450	0.2025
Meth: 202.99 PPM											
Chromium											
ICP			027	120.00	-1.71	027	120.00			041	0.2000
096	259.50	-0.40								231	0.2000 R
232	248.50	-0.81								471	0.1690 S
027	225.00	-1.23									
230	224.00	-1.38									
Meth: 221.99 PPM											
Chromium											
ICP											
096	259.50	-0.40									
232	248.50	-0.81									
027	225.00	-1.23									
230	224.00	-1.38									
Meth: 221.30 PCT											
Acid Soluble Copper											
ICP											
096	259.50	-0.40									
232	248.50	-0.81									
027	225.00	-1.23									
230	224.00	-1.38									
Meth: 221.00 PCT											
Acid Soluble Copper											
ICP											
096	259.50	-0.40									
232	248.50	-0.81									
027	225.00	-1.23									
230	224.00	-1.38									
Meth: 241.00 PCT											
Acid Soluble Iron											
ICP											
096	259.50	-0.40									
232	248.50	-0.81									
027	225.00	-1.23									
230	224.00	-1.38									

* 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: 241.20 PCT														
Acid Soluble Iron														
Colorimetric														
470	9.29	- .71												
Meth: 241.30 PCT														
Acid Soluble Iron														
ICP														
292	10.69	2.51												
042	10.15 R	1.81												
102	10.13	1.63												
117	10.06	1.53												
114	10.07	1.53												
055	9.82	1.16												
377	9.73	1.00												
037	9.44 R	.86												
420	9.54	.71												
057	9.32	.59												
354	9.38	.45												
450	9.30	.33												
433	9.22	.22												
422	9.13	.21												
255	9.10	.16												
131	9.12	.11												
426	9.12	.11												
096	9.09	.06												
Avg	9.08													
231	9.05	-.06												
390	9.01	-.12												
360	8.97	-.19												
473	9.06	-.22												
095	8.94	-.23												
233	8.96	-.25												
419	8.89	-.30												
247	8.86	-.41												
041	8.81	-.48												
291	8.73	-.55												
444	8.59	-.77												
009	8.66	-.81												
157	8.50	-.91												
Meth: 241.30 PCT														
Acid Soluble Iron														
ICP														
354	21.360	2.13												
292	21.380	2.12												
117	20.300 R	1.43												
114	20.155	1.08												
090	20.020	.97												
055	20.015	.96												
422	19.990	.94												
041	19.800	.78												
377	19.450	.48												
426	18.917	.15												
390	19.000	.09												
450	19.000	.09												
Avg	18.892													
433	18.770	-.11												
095	18.770	-.12												
231	18.555	-.29												
419	18.520	-.33												
360	18.470	-.37												
420	18.435	-.39												
291	18.405	-.42												
057	18.425	-.42												
131	18.600	-.49												
233	18.270	-.58												
Meth: 251.30 PPM														
Lead														
ICP														
009	81.56 X	1.62												
450	80.50	1.33												
419	77.50	1.04												
233	67.26	.18												
Avg	66.52													
037	63.56	-.28												
027	62.50	-.38												
232	62.75	-.56												
230	60.20	-.68												
102	58.22	-.93												
390	51.10	-1.46												
Meth: 251.99 PPM														
Lead														
Other														
231	52.96	.71												
Meth: 251.11 PPM														
Lead														
ICP														
009	81.56 R	1.76												
450	80.50	1.48												
136	80.50	1.48												
419	77.50	1.19												
233	67.26	.26												
Avg	65.19													
037	63.56	-.16												
027	62.50	-.26												
232	62.75	-.50												
230	60.20	-.59												
102	58.22	-.84												
231	52.96	-1.18												
390	51.10	-1.36												
Meth: 261.00 PCT														
Acid Soluble Manganese														
AA														
095	19.448	2.32												
470	18.340	.18												
397	18.250	.10												
Avg	18.247													
177	18.132	-.23												
043	18.150	-.27												
460	18.050	-.39												
351	18.018	-.44												
028	18.150 R	-1.08												
296	17.590	-1.27												

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Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 261.30 PCT											
Acid Soluble Manganese											
ICP			055	20.015	1.08	307	13.598 s	-4.34	ICP		
444	18.060	-.71	422	19.990	1.06	Meth: 261.30 PCT			450	10.00	.71
247	18.055	-.77	041	19.800	.90	Acid Soluble Manganese			Meth: 281.30 PPM		
157	17.600	-1.13	234	19.515	.69	Water Soluble Mangan			Mercury		
232	16.720	-1.86	377	19.450	.60	Atomic Abs			ICP		
475	16.445	-2.10	095	19.448	.60	260	17.540	.71	Meth: 281.99 PPM		
402	14.145 s	-4.05	450	19.000	.22	Water Soluble Mangan			Mercury		
307	13.598 s	-4.52	390	19.000	.22	ICP			Other		
Meth: 261.31 PCT											
Acid Soluble Manganese											
ICP			426	18.917	.21	Meth: 271.30 PCT			009		
230	20.600	.87	255	18.762	.07	Water Soluble Mangan			009		
Avg	18.025		095	18.770	.06	291	18.275	.87	009		
324	15.450	-.87	433	18.770	.04	157	14.300	.39	009		
Meth: 261.99 PCT											
Acid Soluble Manganese											
ICP			Avg	18.737		255	12.597 R	.19	230		
230	20.600	.87	231	18.555	-.15	Avg	11.035		230		
Avg	18.025		419	18.520	-.20	475	0.530	-1.26	230		
324	15.450	-.87	360	18.470	-.24	Meth: 271.99 PCT			230		
Meth: 261.99 PCT											
Acid Soluble Manganese											
ICP			420	18.435	-.26	Water Soluble Mangan			230		
230	20.600	.87	291	18.405	-.28	Other			230		
Avg	18.025		057	18.425	-.30	027	12.457	.71	230		
324	15.450	-.87	037	18.376	-.31	Meth: 271.30 PCT			230		
Meth: 261.99 PCT											
Acid Soluble Manganese											
ICP			470	18.340	-.34	Water Soluble Mangan			230		
230	20.600	.87	471	18.265	-.40	Other			230		
Avg	18.025		397	18.250	-.41	Meth: 271.99 PCT			230		
324	15.450	-.87	131	18.600	-.44	Water Soluble Mangan			230		
Meth: 261.99 PCT											
Acid Soluble Manganese											
ICP			233	18.270	-.46	Other			230		
230	20.600	.87	043	18.150	-.50	Meth: 271.30 PCT			230		
Avg	18.025		177	18.132	-.51	Water Soluble Mangan			230		
324	15.450	-.87	444	18.060	-.58	Other			230		
Meth: 261.99 PCT											
Acid Soluble Manganese											
ICP			460	18.050	-.58	Meth: 271.99 PCT			230		
230	20.600	.87	351	18.018	-.61	Water Soluble Mangan			230		
Avg	18.025		247	18.055	-.65	Other			230		
324	15.450	-.87	028	18.150 R	-.68	Meth: 281.00 PPM			230		
Meth: 261.99 PCT											
Acid Soluble Manganese											
ICP			296	17.590	-.97	Mercury			230		
230	20.600	.87	157	17.600	-.99	Atomic Absorption			230		
Avg	18.025		232	16.720	-1.71	Meth: 289.99 PPM			230		
324	15.450	-.87	475	16.445	-1.95	Other			230		
Meth: 261.99 PCT											
Acid Soluble Manganese											
ICP			324	15.450	-2.78	Meth: 281.00 PPM			230		
230	20.600	.87	402	14.145 s	-3.88	Mercury			230		
Avg	18.025					Atomic Absorption			230		
324	15.450	-.87				Meth: 289.99 PPM			230		
Meth: 261.99 PCT											
Acid Soluble Manganese											
ICP						Other			230		
230	20.600	.87				Meth: 281.00 PPM			230		
Avg	18.025					Mercury			230		
324	15.450	-.87				Atomic Absorption			230		
Meth: 261.99 PCT											
Acid Soluble Manganese											
ICP						Meth: 281.00 PPM			230		
230	20.600	.87				Mercury			230		
Avg	18.025					Atomic Absorption			230		
324	15.450	-.87				Meth: 281.00 PPM			230		

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Laboratory Averages & Accuracy Indexes

Lab Average* Index Lab Average* Index Lab Average* Index Lab Average* Index

Meth: 291.99 PPM
Nickel
 Other 231 111.30 .71
 Meth: 291.99 PPM
Nickel
 450 337.50 1.58
 009 288.65 .77
 136 287.50 .76
 096 284.50 .73
 037 278.65 .61
 419 268.00 .44
 233 248.00 .12
 102 246.04 .09
 Avg 240.97
 230 224.00 -.28
 232 219.00 -.43
 027 195.00 -.75
 247 144.50 -1.57
 231 111.30 -2.11

Meth: 301.99 PPM
Selenium
 037 158.81 1.99
 102 76.11 .30
 009 68.58 X .25
 Avg 61.42
 450 57.50 -.17
 230 48.70 -.30
 232 17.00 -.91
 231 3.24 -1.19
 Meth: 311.99 PPM
Sodium
 Other 422 0.12 1.92
 363 0.08 .52
 Avg 0.07
 009 0.06 -.40
 102 0.05 -.58
 292 0.05 -.71
 232 0.05 -.75

Meth: 321.30 PCT
Acid Soluble Zinc
 ICP 102 0.969 1.03
 255 0.929 .64
 420 0.925 .62
 354 0.925 .57
 037 0.902 .36
 131 0.875 .16
 Avg 0.872
 233 0.865 -.09
 426 0.862 -.18
 402 0.847 -.26
 095 0.845 -.29
 450 0.855 -.32
 363 0.840 -.33
 422 0.840 -.35
 433 0.836 -.38
 057 0.813 -.69
 475 0.805 -.70
 009 0.804 X -.78
 232 0.778 -.99
 307 0.771 -1.07
 027 0.647 -2.37
 230 0.627 s -3.06
 157 0.520 s -3.71

Meth: 321.99 PCT
Acid Soluble Zinc
 258 1.915 s 27.62
 460 0.850 R 1.73
 296 0.851 1.28
 043 0.818 .55
 Avg 0.798
 095 0.768 -.74
 470 0.757 -1.00
 Meth: 321.00 PCT
Acid Soluble Zinc
 Atomic Absorption
 258 1.915 s 27.62
 460 0.850 R 1.73
 296 0.851 1.28
 043 0.818 .55
 Avg 0.798
 095 0.768 -.74
 470 0.757 -1.00

Meth: 301.30 PPM
Selenium
 ICP 037 158.81 1.75
 Avg 70.12
 009 68.58 X -.20
 450 57.50 -.29
 230 48.70 -.45
 232 17.00 -1.05
 Meth: 301.99 PPM
Selenium
 Other 102 76.11 .87
 Avg 39.67
 231 3.24 -.87

Meth: 321.00 PCT
Acid Soluble Zinc
 258 1.915 s 27.62
 460 0.850 R 1.73
 296 0.851 1.28
 043 0.818 .55
 Avg 0.798
 095 0.768 -.74
 470 0.757 -1.00
 Meth: 321.30 PCT
Acid Soluble Zinc
 ICP 292 1.090 2.30
 247 1.045 1.86
 419 0.945 R 1.44
 041 0.980 1.19

Meth: 321.99 PCT
Acid Soluble Zinc
 258 1.915 s 12.20
 292 1.090 2.59
 247 1.045 2.13
 419 0.945 R 1.61
 Meth: 321.00 PCT
Acid Soluble Zinc
 258 1.915 s 12.20
 292 1.090 2.59
 247 1.045 2.13
 419 0.945 R 1.61

Meth: 321.99 PCT
Acid Soluble Zinc
 258 1.915 s 12.20
 292 1.090 2.59
 247 1.045 2.13
 419 0.945 R 1.61
 Meth: 321.00 PCT
Acid Soluble Zinc
 258 1.915 s 12.20
 292 1.090 2.59
 247 1.045 2.13
 419 0.945 R 1.61

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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	2	0.00	1.22	0.01	221.99	2	- 1.096	1.5500	0.5000
001.XX	2	0.00	1.22	0.01	221.XX	34	- 0.058	1.3716	0.4903
005.99	5	0.00	1.01	0.28	241.00	12	0.27	1.34	0.35
005.XX	6	- 0.24	1.12	0.15	241.30	36	- 0.02	1.12	0.57
008.10	6	0.00	1.05	0.07	241.99	2	0.00	1.22	0.03
008.XX	6	0.00	1.05	0.07	241.XX	50	0.01	1.16	0.52
009.XX	2	0.00	1.22	0.00	251.30	10	0.00	0.96	0.34
010.11	10	- 0.03	0.97	0.29	251.XX	12	0.13	1.05	0.32
010.12	2	0.00	0.33	0.83	261.00	10	0.548	2.015	0.533
010.60	53	- 0.21	1.92	0.37	261.30	29	- 0.254	1.478	0.208
010.99	5	0.00	1.00	0.31	261.31	2	0.000	1.224	0.027
010.XX	68	- 0.14	1.89	0.43	261.99	6	0.144	1.001	0.537
041.XX	2	0.00	1.22	0.09	261.XX	46	- 0.106	1.331	0.236
050.50	2	0.00	1.22	0.07	271.30	4	0.047	0.918	0.005
050.99	2	0.00	1.22	0.00	271.XX	6	0.157	1.024	0.022
050.XX	4	1.57	3.27	0.17	281.XX	3	0.000	1.110	0.111
060.00	2	0.00	1.22	0.01	289.30	10	- 0.07	0.98	0.44
060.XX	3	0.00	1.12	0.02	289.99	2	0.00	1.22	0.09
101.30	11	- 0.57	1.94	0.09	289.XX	12	- 0.05	0.97	0.42
101.XX	12	- 0.56	1.97	0.09	291.30	11	0.00	1.01	0.14
121.30	13	0.48	1.99	0.09	291.XX	13	0.00	1.01	0.11
121.XX	14	0.46	1.99	0.09	301.30	5	0.00	1.05	0.13
144.01	19	- 0.83	4.43	0.20	301.99	2	0.00	1.22	0.01
144.99	25	- 0.29	1.83	0.20	301.XX	7	0.00	1.03	0.12
144.XX	45	- 0.41	2.35	0.18	311.99	6	0.00	1.04	0.10
151.30	7	1.40	3.83	0.34	311.XX	6	0.00	1.04	0.10
151.XX	9	1.11	3.67	0.32	321.00	6	4.677	10.891	2.744
165.99	5	0.000	1.041	0.183	321.30	26	- 0.212	1.290	0.434
165.XX	5	0.000	1.041	0.183	321.99	2	0.000	1.164	0.270
181.00	2	0.00	1.22	0.07	321.XX	33	0.212	2.420	0.686
181.30	8	2.35	5.90	0.40					
181.XX	11	1.97	5.79	0.38					
191.30	10	0.77	2.59	0.71					
191.XX	12	0.14	2.63	0.57					
202.00	2	0.00	1.21	0.12					
202.30	14	0.00	1.01	0.16					
202.XX	17	0.00	1.01	0.13					
221.00	6	1.5134	3.8088	2.1797					
221.30	27	- 0.036	0.9966	0.1932					