

- Pass 1 Results for 69 Labs - - Pass 2 Results for 68 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	6	8.04	0.85	0.85	5	8.23	0.79	0.02
Ammoniacal Nitrogen, Other		001.99	6	7.63	1.73	0.06	6	7.63	1.73	0.06
Method Group 001.XX PCT			12	7.83	1.35	0.07	11	7.90	1.39	0.05
Nitrate Nitrogen, Jones Modified	930.02	002.20	1	20.40	0.57	0.80	1	20.40	0.57	0.80
Nitrate Nitrogen, Other		002.99	6	8.20	1.16	0.22	5	8.24	1.25	0.05
Method Group 002.XX PCT			7	9.94	4.56	0.30	6	10.27	4.87	0.18
Nitrogen From Urea, Urease (as N)	959.03	005.00	1	16.82	0.05	0.07	1	16.82	0.05	0.07
Percent Biuret, Spec (as Biuret)	960.04	008.10	2	0.94	0.09	0.01	2	0.94	0.09	0.01
Ammon & Nitrate N, Devarda	892.01	009.10	2	15.42	0.21	0.04	2	15.42	0.21	0.04
Total Nitrogen, Modified Comprehensive	978.02	010.11	3	31.84	0.93	0.03	3	31.84	0.93	0.03
Total Nitrogen, Salicylic	955.04D	010.12	4	31.24	0.47	0.42	4	31.24	0.47	0.42
Total Nitrogen, Combustion		010.60	49	32.21	0.39	0.16	46	32.24	0.34	0.12
Total Nitrogen, Other		010.99	2	32.25	0.36	0.32	2	32.25	0.36	0.32
Method Group 010.XX PCT			62	32.04	0.59	0.21	58	32.09	0.54	0.16
Total Phosphate, Spectrometric	958.01	020.20	3	3.40	2.52	0.11	3	3.40	2.52	0.11
Total Phosphate, ICP		020.50	1	5.44	0.04	0.06	1	5.44	0.04	0.06
Method Group 020.XX PCT			4	3.91	2.33	0.09	4	3.91	2.33	0.09
Insoluble Phosphate, ICP		030.50	1	0.28	0.04	0.05	1	0.28	0.04	0.05
Indir Available Phosphate, Other		040.99	1	4.68	0.03	0.04	1	4.68	0.03	0.04
Dir Available Phosphate, ICP		041.50	2	4.64	0.19	0.04	2	4.64	0.19	0.04
Water Soluble Phosphate, Spectrometric	970.01	048.20	1	0.13	0.01	0.01	1	0.13	0.01	0.01
Soluble Potash, ICP (Oxalate)		050.50	3	0.18	0.16	0.01	3	0.18	0.16	0.01
Soluble Potash, Other		050.99	3	0.11	0.09	0.02	3	0.11	0.09	0.02
Method Group 050.XX PCT			6	0.14	0.13	0.01	5	0.13	0.14	0.01
Free Water, Vacuum Oven	965.08B	060.00	2	1.92	0.26	0.07	2	1.92	0.26	0.07
Acid Soluble Calcium, ICP		101.30	9	0.77	0.27	0.03	8	0.77	0.29	0.02
Acid Soluble Magnesium, ICP		121.30	10	0.85	1.13	0.02	10	0.85	1.13	0.02
Sulfur, Gravimetric	980.02a	144.01	11	5.20	0.46	0.07	10	5.23	0.47	0.05
Sulfur, Gravimetric	980.02b	144.02	2	8.87	3.91	0.06	2	8.87	3.91	0.06
Sulfur, Other		144.99	27	10.80	3.22	0.20	27	10.80	3.22	0.20
Method Group 144.XX PCT			41	9.30	3.77	0.15	38	9.26	3.77	0.12
Arsenic, ICP		151.30	4	9.50	2.85	0.82	4	9.50	2.85	0.82
Acid Soluble Boron, Spectrometric	982.01	165.00	1	0.315	0.072	0.102	1	0.315	0.072	0.102
Acid Soluble Boron, Other		165.99	5	0.283	0.042	0.019	4	0.269	0.027	0.007
Method Group 165.XX PCT			6	0.288	0.045	0.033	6	0.288	0.045	0.033
Cadmium, ICP		181.30	5	244.31	20.28	5.65	5	244.31	20.28	5.65
Water Soluble Chlorine, Titrimetric	928.02	190.00	1	0.01	0.00	0.00	1	0.01	0.00	0.00
Chromium, ICP		191.30	5	491.91	43.24	18.56	4	478.37	32.73	7.37
Acid Soluble Cobalt, ICP	965.11	202.30	6	73.56	13.32	2.01	6	73.56	13.32	2.01

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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
Acid Soluble Copper, ICP		221.30	10	0.3987	0.0307	0.0179	9	0.3977	0.0304	0.0129
Acid Soluble Iron, ICP		241.30	12	2.28	0.21	0.13	12	2.28	0.21	0.13
Lead, ICP		251.30	5	556.75	54.60	25.25	5	556.75	54.60	25.25
Acid Soluble Manganese, ICP	972.02a	261.30	8	1.748	0.095	0.039	8	1.748	0.095	0.039
Acid Soluble Manganese, Other		261.99	1	1.476	0.001	0.001	1	1.476	0.001	0.001
Method Group 261.XX PCT			10	1.762	0.181	0.033	10	1.762	0.181	0.033
Mercury, Atomic Absorption		281.00	1	0.77	0.00	0.00	1	0.77	0.00	0.00
Mercury, ICP		281.30	1	0.02	0.00	0.01	1	0.02	0.00	0.01
Method Group 281.XX PPM			2	0.39	0.44	0.00	2	0.39	0.44	0.00
Molybdenum, ICP		289.30	6	276.11	130.42	9.03	6	276.11	130.42	9.03
Nickel, ICP		291.30	5	1373.2	124.11	41.36	5	1373.2	124.11	41.36
Selenium, ICP		301.30	2	12.85	1.82	0.40	2	12.85	1.82	0.40
Selenium, Other		301.99	1	5.75	3.06	4.32	1	5.75	3.06	4.32
Method Group 301.XX PPM			3	10.48	4.16	1.71	3	10.48	4.16	1.71
Sodium, Other		311.99	4	0.68	0.04	0.04	3	0.67	0.03	0.01
Acid Soluble Zinc, Atomic Absorption	975.02	321.00	7	35.045	3.879	0.542	7	35.045	3.879	0.542
Acid Soluble Zinc, Gravimetric	942.02	321.10	1	37.995	0.007	0.010	1	37.995	0.007	0.010
Acid Soluble Zinc, ICP		321.30	32	35.043	2.008	0.632	31	35.108	1.978	0.531
Acid Soluble Zinc, Other		321.99	4	34.739	2.668	0.522	4	34.739	2.668	0.522
Method Group 321.XX PCT			44	35.083	2.439	0.593	41	34.970	2.090	0.492
Water Soluble Zinc, ICP		325.30	2	19.910	18.037	0.170	2	19.910	18.037	0.170
Water Soluble Zinc, Other		325.99	2	34.440	1.200	1.340	2	34.440	1.200	1.340
Method Group 325.XX PCT			4	27.175	14.155	0.755	4	27.175	14.155	0.755

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																
405	9.72 X	1.87	230	20.40	.71	420	15.61	.88	009	32.55	.91	393	31.70	-1.57		
Avg	8.23					Avg	15.42		073	32.54	.87	230	31.70 R	-1.80		
090	8.04	-.25	Meth: 002.99 PCT													
230	7.96	-.35	Nitrate Nitrogen													
456	7.74	-.62	Other													
232	7.72	-.65	420	10.58	1.87	Meth: 010.10 PCT										
330	7.05 R	-1.51	Avg	8.24		Total Nitrogen										
Meth: 001.99 PCT																
Ammoniacal Nitrogen																
Other																
057	31.79 S	13.96	371	7.98	-.21	470	28.25 S	.00	055	32.40	.46	325	30.90 s	-3.99		
409	10.64	1.74	027	7.65	-.47	Meth: 010.11 PCT										
096	7.79	.09	368	7.99 R	-.48	Total Nitrogen										
027	7.63	.02	232	7.61	-.51	Modified Comprehensive										
Avg	7.63		450	7.39	-.68	260	32.62	.84	029	32.27	.33	405	32.33	.28		
Meth: 002.XX PCT																
Nitrate Nitrogen																
230	20.40	2.08	090	32.24	.43	Avg	31.84		292	32.34	.27	200	32.47 X	.61		
420	10.58	.06	Avg	30.66	-1.27	Meth: 010.12 PCT										
368	7.24	-.23	371	7.98	-.47	Total Nitrogen										
420	4.95	-1.55	368	7.99 R	-.48	Salicylic										
Meth: 001.XX PCT																
Ammoniacal Nitrogen																
057	31.79 s	17.19	027	7.65	-.54	185	31.82	1.27	255	32.24	-.08	422	34.29 s	4.06		
409	10.64	1.97	232	7.61	-.55	Avg	31.24	.75	231	32.20	-.15	233	32.93	1.55		
405	9.72 X	1.30	450	7.39	-.59	455	30.97	-.57	275	32.19	-.17	023	32.85	1.42		
090	8.04	.09	Meth: 005.00 PCT													
230	7.96	.04	Nitrogen From Urea													
Avg	7.90		232	16.82	.71	254	30.91	-1.00	037	32.20	-.21	409	32.72	1.17		
096	7.79	-.09	Meth: 010.60 PCT													
456	7.74	-.12	Total Nitrogen													
232	7.72	-.13	Combustion													
027	7.63	-.20	422	34.29 s	5.96	450	32.12	-.56	041	32.06	-.57	009	32.55	.85		
450	7.53	-.27	Percent Biuret	233	32.93	2.01	450	32.15	-.49	32.15	-.49	260	32.62	.97		
368	7.24	-.48	Spec (as Biuret)	023	32.85	1.80	450	32.12	-.56	096	32.57	.88	073	32.54	.83	
330	7.05 R	-.62	Avg	1.02	.87	451	32.27 R	1.64	041	32.06	-.57	371	32.50	.76		
420	4.95	-2.13	090	0.94		368	32.75	1.55	162	32.01	-.74	330	32.45	.72		
Meth: 010.XX PCT																
Total Nitrogen																
420	30.53 s	-4.97	090	0.86	-.87	409	32.72	1.40	035	31.98	-.77	200	32.47 X	.71		
Meth: 010.99 PCT																
Total Nitrogen																
Other																
200	32.47 X	.61	324	32.65	1.04	096	32.57	.94	177	31.90	-1.03	131	32.46	.67		
Avg	32.25		096	32.57	.94	Meth: 010.60 PCT										
255	32.03	-1.06	Total Nitrogen													
Meth: 010.60 PCT																
Total Nitrogen																
422	34.29 s	4.06	Combustion													
233	32.93	1.55	Total Nitrogen													
023	32.85	1.42	Combustion													
368	32.75	1.26	422	34.29 s	5.96	450	32.12	-.56	041	32.06	-.57	009	32.55	.85		
409	32.72	1.17	233	32.93	2.01	450	32.15	-.49	32.15	-.49	260	32.62	.97	073	32.54	.83
451	32.27 R	1.09	Avg	31.24	.75	450	32.12	-.56	096	32.57	.88	073	32.54	.83		
324	32.65	1.04	455	30.97	-.57	450	32.12	-.56	096	32.57	.88	371	32.50	.76		
260	32.62	.97	254	30.91	-1.00	451	32.27 R	1.64	041	32.06	-.57	330	32.45	.72		
096	32.57	.88	Meth: 010.60 PCT													
009	32.55	.85	Total Nitrogen													
073	32.54	.83	Combustion													
371	32.45	.76	422	34.29 s	5.96	450	32.12	-.56	041	32.06	-.57	009	32.55	.85		
428	31.20 R	-3.14	233	32.93	2.01	450	32.15	-.49	32.15	-.49	260	32.62	.97	073	32.54	.83
157	31.15 s	-3.42	023	32.85	1.80	450	32.12	-.56	096	32.57	.88	073	32.54	.83		
325	30.90 s	-3.99	451	32.27 R	1.64	451	32.27 R	1.64	041	32.06	-.57	371	32.50	.76		
042	30.70 s	-4.70	368	32.75	1.55	451	32.27 R	1.64	162	32.01	-.74	330	32.45	.72		
420	30.53 s	-4.97	409	32.72	1.40	368	32.75	1.55	035	31.98	-.77	200	32.47 X	.71		
Meth: 010.99 PCT																
Total Nitrogen																
Other																
200	32.47 X	.61	324	32.65	1.04	409	32.72	1.40	307	32.07	-.80	360	32.45	.68		
Avg	32.25		096	32.57	.94	324	32.65	1.19	177	31.90	-1.03	131	32.46	.67		
255	32.03	-1.06	Meth: 010.60 PCT													
Total Nitrogen																
Meth: 010.60 PCT																
Total Nitrogen																
422	34.29 s	4.06	Combustion													
233	32.93	1.55	Total Nitrogen													
023	32.85	1.42	Combustion													
368	32.75	1.26	422	34.29 s	5.96	450	32.12	-.56	041	32.06	-.57	009	32.55	.85		
409	32.72	1.17	233	32.93	2.01	450	32.15	-.49	32.15	-.49	260	32.62	.97	073	32.54	.83
451	32.27 R	1.09	Avg	31.24	.75	450	32.12	-.56	096	32.57	.88	073	32.54	.83		
324	32.65	1.04	455	30.97	-.57	450	32.12	-.56	096	32.57	.88	371	32.50	.76		
260	32.62	.97	254	30.91	-1.00	451	32.27 R	1.64	041	32.06	-.57	330	32.45	.72		
096	32.57	.88	Meth: 010.60 PCT													
009	32.55	.85	Total Nitrogen													
073	32.54	.83	Combustion													
371	32.45	.76	422	34.29 s	5.96	450	32.12	-.56	041	32.06	-.57	009	32.55	.85		
428	31.20 R	-3.14	233	32.93	2.01	450	32.15	-.49	32.15	-.49	260	32.62	.97	073	32.54	.83
157	31.15 s	-3.42	023	32.85	1.80	450	32.12	-.56	096	32.57	.88	073	32.54	.83		
325	30.90 s	-3.99	451	32.27 R	1.64	451	32.27 R	1.64	041	32.06	-.57	371	32.50	.76		
042	30.70 s	-4.70	368	32.75	1.55	451	32.27 R	1.64	162	32.01	-.74	330	32.45	.72		
420	30.53 s	-4.97	409	32.72	1.40	368	32.75	1.55	035	31.98	-.77	200	32.47 X	.71		
Meth: 010.99 PCT																
Total Nitrogen																
Other																
200	32.47 X	.61	324	32.65	1.04	409	32.72	1.40	307	32.07	-.80	360	32.45	.68		
Avg	32.25		096	32.57	.94	324	32.65	1.19	177	31.90	-1.03	131	32.46	.67		
255	32.03	-1.06	Meth: 010.60 PCT													
Total Nitrogen																
Meth: 010.60 PCT																
Total Nitrogen																
422	34.29 s	4.06	Combustion													
233	32.93	1.55	Total Nitrogen													
023	32.85	1.42	Combustion													
368	32.75	1.26	422	34.29 s	5.96	450	32.12	-.56	041	32.06	-.57	009	32.55	.85		
409	32.72	1.17	233	32.93	2.01	450	32.15	-.49	32.15	-.49	260	32.62	.97	073	32.54	.83
451	32.27 R	1.09	Avg	31.24	.75	450	32.12	-.56	096	32.57	.88	073	32.54	.83		
324	32.65	1.04	455	30.97	-.57	450	32.12	-.56	096	32.57	.88	371	32.50	.76		
260	32.62	.97	254	30.91	-1.00	451	32.27 R	1.64	041	32.06	-.57	330	32.45	.72		
096	32.57	.88	Meth: 010.60 PCT													
009	32.55	.85	Total Nitrogen													
073	32.54	.83	Combustion													
371	32.45	.76	422	34.29 s	5.96	450	32.12	-.56	041	32.06	-.57	009	32.55	.85		
428	31.20 R	-3.14	233	32.93	2.01	450	32.15	-.49	32.15	-.49	260	32.62	.97	073	32.54	.83
157	31.15 s	-3.42	023	32.85	1.80	450	32.12	-.56	096	32.57	.88	073	32.54	.83		
325	30.90 s	-3.99	451	32.27 R	1.64	451	32.27 R	1.64	041	32.06	-.57	371	32.50	.76		
042	30.70 s	-4.70	368	32.75	1.55	451	32.27 R	1.64	162	32.01	-.74	330	32.45	.72		
420	30.53 s	-4.97	409	32.72	1.40	368	32.75	1.55	035	31.98	-.77	200	32.47 X	.71		
Meth: 010.99 PCT																
Total Nitrogen																
Other																
200	32.47 X	.61	324	32.65	1.04	409	32.72	1.40	307	32.07	-.80	360	32.45	.68		
Avg	32.25		096	32.57	.94	324	32.65	1.19	177	31.90	-1.03	131	32.46	.67		
255	32.03	-1.06	Meth: 010.60 PCT													
Total Nitrogen																
Meth: 010.60 PCT																
Total Nitrogen																
422	34.29 s	4.06	Combustion													
233	32.93	1.55	Total Nitrogen													
023	32.85	1.42	Combustion													
368	32.75	1.26	422	34.29 s	5.96	450	32.12	-.56	041	32.06	-.57	009	32.55	.85		
409	32.72	1.17	233	32.93	2.01	450	32.15	-.49	32.15	-.49	260	32.62	.97	073	32.54	.83
451	32.27 R	1.09	Avg	31.24	.75	450	32.12	-.56	0							

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index		
Meth: 010.XX PCT																
Total Nitrogen																
040	32.35	.55	117	31.25 R	-1.67	Meth: 040.99 PCT									Meth: 121.30 PCT	
049	32.39	.54	428	31.20	-1.73	InDir Available Phos									Acid Soluble Magnesi	
247	32.36	.50	157	31.15 R	-1.92	Other									ICP	
007	32.35	.49	455	30.97	-2.06	Meth: 041.50 PCT									Meth: 144.01 PCT	
034	32.34	.45	325	30.90	-2.26	Dir Available Phosph									Sulfur	
292	32.34	.45	254	30.91	-2.26	ICP									Gravimetric	
405	32.33	.45	416	30.66	-2.63	325 4.80 .87									470 14.77 s 20.24	
354	32.33	.45	042	30.70 R	-2.72	Avg 4.64									029 6.31 2.28	
029	32.27	.39	420	30.53	-2.87	354 4.48 -.86									296 5.84 1.28	
086	32.28	.36	470	28.25 s	-7.07	Meth: 048.20 PCT									095 5.32 .19	
291	32.27	.32	Meth: 050.50 PCT												Avg 5.23	
043	32.25	.30	Water Soluble Phosph												324 5.11 -.28	
090	32.24	.29	Spectrometric												102 5.08 -.33	
450	32.12	.28	420 0.13 .71												043 5.07 -.35	
028	32.15	.28	Meth: 050.50 PCT												055 5.07 -.42	
255	32.24	.28	422 0.38 1.25												254 5.00 -.50	
234	32.21	.25	Avg 0.18												073 4.86 R -.85	
037	32.20	.23	354 0.12 -.36												231 4.80 -.93	
275	32.19	.20	420 0.03 -.90												230 4.76 -1.01	
231	32.20	.20	Meth: 020.50 PCT												Meth: 144.02 PCT	
232	32.19	.19	Total Phosphate												Sulfur	
136	32.15	.11	ICP												Gravimetric	
Avg	32.09		422 5.44 .71												292 12.25 .87	
102	32.03	-.13	Meth: 050.99 PCT												Avg 8.87	
351	32.05	-.13	Soluble Potash												200 5.48 X -.87	
041	32.06	-.14	Other												Meth: 144.99 PCT	
035	31.98	-.21	479 0.18 .89												Sulfur	
162	32.01	-.24	232 0.14 .41												Other	
177	31.90	-.39	Avg 0.11												157 13.60 .87	
307	32.07	-.39	325 0.00 -1.24												117 13.60 .87	
389	31.85	-.45	Meth: 050.XX PCT												291 13.38 .80	
185	31.82	-.54	Soluble Potash												377 13.20 .75	
255	32.03	-.59	422 0.38 1.74												049 13.09 .71	
393	31.70	-.72	479 0.18 R .38												037 12.94 .67	
230	31.70	-.90	232 0.14 .07												479 12.93 .66	
095	31.50	-1.10	Avg 0.13												090 12.88 .65	
027	31.35	-1.36	354 0.12 -.12													
377	31.35	-1.36														

* 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: 144.99 PCT															
Sulfur															
Other			057	12.54	.87										
351	12.82	.63	368	12.34	.82										
422	12.69	.59	292	12.25	.79										
023	12.66	.58	247	12.03 R	.74										
009	12.55	.54	389	12.00	.73	Meth: 165.99 PCT									
232	12.54	.54	450	11.68	.64	Acid Soluble Boron									
057	12.54	.54	231	11.62	.63	Other									
368	12.34	.48	255	10.77	.40	354	0.341 R	2.90	354	0.341 R	2.90	354	0.341 R	2.90	
247	12.03	.39	Avg	9.26	.17	422	0.305	1.35	422	0.305	1.35	422	0.305	1.35	
389	12.00	.37	035	8.82	-.12	232	0.273	.17	232	0.273	.17	232	0.273	.17	
450	11.68	.27	360	7.26	-.53	Avg	0.269		Avg	0.269		Avg	0.269		
231	11.62	.25	029	6.31	-.78	009	0.261	-.31	009	0.261	-.31	009	0.261	-.31	
Avg	10.80		296	5.84	-.91	389	0.235	-1.25	389	0.235	-1.25	389	0.235	-1.25	
255	10.77	-.02	200	5.48 X	-1.00	Meth: 165.99 PCT									
035	8.82	-.62	095	5.32	-1.04	Acid Soluble Boron									
360	7.26	-1.10	324	5.11	-1.10	354	0.341	1.36	354	0.341	1.36	354	0.341	1.36	
330	5.05	-1.78	102	5.08	-1.11	393	0.315	1.27	393	0.315	1.27	393	0.315	1.27	
027	4.89	-1.83	043	5.07	-1.11	422	0.305	.39	422	0.305	.39	422	0.305	.39	
230	4.61	-1.92	055	5.07	-1.11	Avg	0.288		Avg	0.288		Avg	0.288		
307	4.57	-1.93	330	5.05	-1.12	232	0.273	-.33	232	0.273	-.33	232	0.273	-.33	
354	4.54	-1.94	254	5.00	-1.13	009	0.261	-.60	009	0.261	-.60	009	0.261	-.60	
Meth: 144.99 PCT															
Sulfur															
470	14.77	1.46	073	4.86	-1.17	389	0.235	-1.18	389	0.235	-1.18	389	0.235	-1.18	
157	13.60	1.15	231	4.80	-1.18	Meth: 181.30 PPM									
117	13.60	1.15	230	4.76	-1.19	Cadmium									
291	13.38	1.09	230	4.61 R	-1.24	ICP									
377	13.20	1.05	307	4.57	-1.24	037	264.66	1.01	037	264.66	1.01	037	264.66	1.01	
049	13.09	1.02	354	4.54	-1.25	102	257.84	.68	102	257.84	.68	102	257.84	.68	
037	12.94 R	.98	Meth: 151.30 PPM												
479	12.93	.97	Arsenic												
090	12.88	.96	037	12.55	1.08	232	226.80	-.88	232	226.80	-.88	232	226.80	-.88	
351	12.82	.95	102	10.92	.62	393	216.50	-1.38	393	216.50	-1.38	393	216.50	-1.38	
422	12.69	.91	037	12.55	1.08	Meth: 190.00 PCT									
023	12.66	.90	102	10.92	.62	Water Soluble Chlori									
009	12.55	.87	Avg	9.50		Titrimetric									
232	12.54	.87	009	9.00	-.18	422	0.01	.00	422	0.01	.00	422	0.01	.00	
Meth: 144.99 PCT															
Sulfur															
470	14.77	1.46	037	12.55	1.08	Meth: 241.30 PCT									
157	13.60	1.15	102	10.92	.62	Acid Soluble Iron									
117	13.60	1.15	037	12.55	1.08	ICP									
291	13.38	1.09	102	10.92	.62	009	546.05 R	2.28	009	546.05 R	2.28	009	546.05 R	2.28	
377	13.20	1.05	035	12.69	.91	102	516.68	1.20	102	516.68	1.20	102	516.68	1.20	
049	13.09	1.02	023	12.66	.90	037	492.16	.42	037	492.16	.42	037	492.16	.42	
037	12.94 R	.98	009	12.55	.87	Avg	478.37		Avg	478.37		Avg	478.37		
479	12.93	.97	009	12.55	.87	232	470.15	-.26	232	470.15	-.26	232	470.15	-.26	
090	12.88	.96	232	12.54	.87	479	434.50	-1.34	479	434.50	-1.34	479	434.50	-1.34	
351	12.82	.95	009	12.55	.87	131	2.29	.16	131	2.29	.16	131	2.29	.16	
422	12.69	.91	232	12.54	.87	Avg	2.28		Avg	2.28		Avg	2.28		
023	12.66	.90	009	12.55	.87	041	2.21	-.59	041	2.21	-.59	041	2.21	-.59	
009	12.55	.87	232	12.54	.87	102	2.20	-1.00	102	2.20	-1.00	102	2.20	-1.00	
232	12.54	.87	009	12.55	.87	389	2.05	-1.13	389	2.05	-1.13	389	2.05	-1.13	
Meth: 251.30 PPM															
Lead															
470	14.77	1.46	027	4.89	-1.16	420	0.20 s	-10.14	420	0.20 s	-10.14	420	0.20 s	-10.14	
157	13.60	1.15	073	4.86	-1.17	Meth: 261.30 PCT									
117	13.60	1.15	231	4.80	-1.18	Acid Soluble Manganese									
291	13.38	1.09	230	4.76	-1.19	ICP									
377	13.20	1.05	230	4.61 R	-1.24	035	0.4425	1.47	035	0.4425	1.47	035	0.4425	1.47	
049	13.09	1.02	307	4.57	-1.24	041	0.4370	1.34	041	0.4370	1.34	041	0.4370	1.34	
037	12.94 R	.98	354	4.54	-1.25	354	0.4075 R	1.08	354	0.4075 R	1.08	354	0.4075 R	1.08	
479	12.93	.97	Meth: 221.30 PCT												
090	12.88	.96	Acid Soluble Copper												
351	12.82	.95	037	12.55	1.08	ICP			ICP			ICP			
422	12.69	.91	102	10.92	.62	035	0.4425	1.47	035	0.4425	1.47	035	0.4425	1.47	
023	12.66	.90	037	12.55	1.08	041	0.4370	1.34	041	0.4370	1.34	041	0.4370	1.34	
009	12.55	.87	102	10.92	.62	102	0.4175	.67	102	0.4175	.67	102	0.4175	.67	
232	12.54	.87	037	12.55	1.08	422	0.4000	.08	422	0.4000	.08	422	0.4000	.08	
Meth: 241.30 PCT															
Acid Soluble Iron															
470	14.77	1.46	037	12.55	1.08	Avg	0.3977		Avg	0.3977		Avg	0.3977		
157	13.60	1.15	102	10.92	.62	232	0.3850	-.42	232	0.3850	-.42	232	0.3850	-.42	
117	13.60	1.15	037	12.55	1.08	009	0.3808	-.57	009	0.3808	-.57	009	0.3808	-.57	
291	13.38	1.09	102	10.92	.62	479	0.3900	-.70	479	0.3900	-.70	479	0.3900	-.70	
377	13.20	1.05	037	12.55	1.08	420	0.3750	-.89	420	0.3750	-.89	420	0.3750	-.89	
049	13.09	1.02	037	12.55	1.08	393	0.3517	-1.51	393	0.3517	-1.51	393	0.3517	-1.51	
037	12.94 R	.98	102	10.92	.62	Meth: 241.30 PCT									
479	12.93	.97	037	12.55	1.08	Acid Soluble Iron									
090	12.88	.96	102	10.92	.62	ICP									
351	12.82	.95	037	12.55	1.08	432	2.41	.91	432	2.41	.91	432	2.41	.91	
422	12.69	.91	102	10.92	.62	Meth: 261.30 PCT									
023	12.66	.90	Avg	9.50		Acid Soluble Manganese									
009	12.55	.87	009	9.00	-.18	ICP									
232	12.54	.87	037	12.55	1.08	041	1.645	-1.10	041	1.645	-1.10	041	1.645	-1.10	
Meth: 241.30 PCT															
Acid Soluble Iron															
470	14.77	1.46	037	12.55	1.08	354	1.617	-1.42	354	1.617	-1.42	354	1.617	-1.42	
157	13.60	1.15	102	10.92	.62	Meth: 261.30 PCT									
117	13.60	1.15	037	12.55	1.08	Acid Soluble Manganese									
291	13.38	1.09	102	10.92	.62	ICP									
377	13.20	1.05	037	12.55	1.08	420	2.160 s	4.34	420	2.160 s	4.34	420	2.160 s	4.34	
049	13.09	1.02	102	10.92	.62	102	1.873	1.33	102	1.873	1.33	102	1.873	1.33	
037	12.94 R	.98	037	12.55	1.08	035	1.865	1.23	035	1.865	1.23	035	1.865	1.23	
479	12.93	.97	037	12.55	1.08	009	1.797	.67	009	1.797	.67	009	1.797	.67	
090	12.88	.96	102	10.92	.62	422	1.757	.10	422	1.757	.10	422	1.757	.10	
351	12.82	.95	037	12.55	1.08	Avg	1.748		Avg	1.748		Avg	1.748		
422	12.69	.91	102	10.92	.62	131	1.740	-.43	131	1.740	-.43	131	1.740	-.43	
023	12.66	.90	Avg	9.50		232	1.692	-.60	232	1.692	-.60	232	1.692	-.60	
009	12.55	.87	009	9.00	-.18	041	1.645	-1.10	041	1.645	-1.10	041	1.645	-1.10	
232	12.54	.87	037	12.55	1.08	354	1.617	-1.42	354	1.617	-1.42	354	1.617	-1.42	

* 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: 321.XX PCT

<u>Acid Soluble Zinc</u>	
055	32.775 -1.05
043	32.600 -1.14
420	32.475 -1.20
354	33.043 R -1.29
255	31.811 -1.52
296	30.930 -1.94
307	30.733 -2.03
041	30.625 -2.11
330	18.900 s -7.69
035	3.705 s -14.96

Meth: 325.30 PCT

<u>Water Soluble Zinc</u>	
ICP	
393	35.530 .87
Avg	19.910
479	4.290 -.87

Meth: 325.99 PCT

<u>Water Soluble Zinc</u>	
Other	
450	35.230 .82
Avg	34.440
157	33.650 -.91

Meth: 325.XX PCT

<u>Water Soluble Zinc</u>	
393	35.530 .59
450	35.230 .57
157	33.650 .46
Avg	27.175
479	4.290 -1.62

* 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	6	- 0.25	1.13	0.08	202.30	6	0.00	1.04	0.10
001.99	7	1.99	5.36	0.02	202.XX	6	0.00	1.04	0.10
001.XX	13	1.27	4.87	0.04	221.30	10	0.0322	0.9276	0.4381
002.99	6	- 0.03	0.95	0.18	221.XX	10	0.0322	0.9276	0.4381
002.XX	7	- 0.07	0.97	0.05	241.30	13	- 0.78	2.95	0.40
008.10	2	0.00	1.22	0.04	241.XX	13	-	2.95	0.40
008.XX	2	0.00	1.22	0.04	251.30	5	0.00	1.01	0.28
009.10	2	0.00	1.21	0.15	251.XX	5	0.00	1.01	0.28
009.XX	2	0.00	1.21	0.15	261.30	9	0.482	1.720	0.248
010.11	3	0.00	1.12	0.02	261.XX	10	0.000	1.019	0.124
010.12	4	0.00	0.89	0.53	281.XX	2	0.000	1.225	0.005
010.60	54	- 0.28	1.71	0.46	289.30	6	0.00	1.05	0.04
010.99	2	0.00	0.87	0.61	289.XX	6	0.00	1.05	0.04
010.XX	63	- 0.14	1.46	0.30	291.30	5	0.00	1.04	0.20
020.20	3	0.00	1.12	0.03	291.XX	5	0.00	1.04	0.20
020.XX	4	0.00	1.08	0.03	301.30	2	0.00	1.21	0.12
041.50	2	0.00	1.22	0.10	301.XX	3	0.00	1.05	0.30
041.XX	2	0.00	1.22	0.10	311.99	4	0.24	1.02	1.26
050.50	3	0.00	1.12	0.04	311.XX	4	0.24	1.02	1.26
050.99	3	0.00	1.09	0.20	321.00	7	0.000	1.036	0.090
050.XX	6	0.05	0.96	0.09	321.30	35	- 0.614	3.205	0.271
060.00	2	0.00	1.21	0.15	321.99	4	0.000	1.065	0.154
060.XX	2	0.00	1.21	0.15	321.XX	47	- 0.357	2.743	0.238
101.30	10	6.73	21.30	0.26	325.30	2	0.000	1.225	0.005
101.XX	10	6.73	21.30	0.26	325.99	2	0.000	0.931	0.562
121.30	10	0.00	1.03	0.01	325.XX	3	0.539	0.071	0.039
121.XX	10	0.00	1.03	0.01					
144.01	12	1.62	5.94	0.11					
144.02	2	0.00	1.22	0.01					
144.99	27	0.00	1.01	0.04					
144.XX	39	0.05	0.99	0.15					
151.30	4	0.00	1.05	0.21					
151.XX	4	0.00	1.05	0.21					
165.99	5	0.528	1.498	0.551					
165.XX	6	0.000	0.857	0.552					
181.30	5	0.00	1.05	0.15					
181.XX	5	0.00	1.05	0.15					
191.30	5	0.41	1.31	0.45					
191.XX	5	0.41	1.31	0.45					