

- Pass 1 Results for 82 Labs - - Pass 2 Results for 77 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, Other		001.99	2	23.18	26.69	0.15	2	23.18	26.69	0.15
Nitrate Nitrogen, Other		002.99	1	0.13	0.18	0.25	1	0.13	0.18	0.25
Nitrogen From Urea, Urease (as N)	959.03	005.00	3	46.05	0.19	0.16	3	46.05	0.19	0.16
Nitrogen From Urea, Other		005.99	4	45.76	0.24	0.08	3	45.76	0.27	0.01
Method Group 005.XX PCT			7	45.89	0.26	0.12	7	45.89	0.26	0.12
Percent Urea, Other		007.99	1	45.64	0.08	0.12	1	45.64	0.08	0.12
Percent Biuret, Spec (as Biuret)	960.04	008.10	2	0.84	0.01	0.00	2	0.84	0.01	0.00
Percent Biuret, Other		008.99	1	0.85	0.00	0.00	1	0.85	0.00	0.00
Method Group 008.XX PCT			3	0.84	0.01	0.00	3	0.84	0.01	0.00
Ammon & Nitrate N, Devarda	892.01	009.10	1	45.85	0.07	0.10	1	45.85	0.07	0.10
Total Nitrogen, Modified Comprehensive	978.02	010.11	9	46.35	0.19	0.05	9	46.35	0.19	0.05
Total Nitrogen, Salicylic	955.04D	010.12	3	45.95	0.18	0.01	3	45.95	0.18	0.01
Total Nitrogen, Combustion		010.60	47	46.29	0.33	0.19	45	46.30	0.32	0.16
Total Nitrogen, Other		010.99	6	46.16	0.35	0.29	6	46.16	0.35	0.29
Method Group 010.XX PCT			65	46.27	0.32	0.17	62	46.27	0.31	0.14
Total Phosphate, Spectrometric	958.01	020.20	1	22.50	0.00	0.00	1	22.50	0.00	0.00
Total Phosphate, ICP		020.50	1	0.11	0.01	0.01	1	0.11	0.01	0.01
Total Phosphate, Other		020.99	1	0.00	0.00	0.00	1	0.00	0.00	0.00
Method Group 020.XX PCT			3	7.54	11.59	0.00	3	7.54	11.59	0.00
Dir Available Phosphate, ICP		041.50	2	0.01	0.01	0.00	2	0.01	0.01	0.00
Soluble Potash, STPB Oxalate	958.02	050.00	13	21.78	0.25	0.07	12	21.73	0.18	0.05
Soluble Potash, STPB Citrate	969.04	050.10	2	21.84	0.14	0.13	2	21.84	0.14	0.13
Soluble Potash, AA (Oxalate)		050.30	9	21.74	0.61	0.23	9	21.74	0.61	0.23
Soluble Potash, AA (Citrate)		050.31	1	22.64	0.04	0.05	1	22.64	0.04	0.05
Soluble Potash, ICP (Oxalate)		050.50	7	21.43	0.69	0.24	7	21.43	0.69	0.24
Soluble Potash, ICP (Citrate)		050.51	10	21.93	0.64	0.22	10	21.93	0.64	0.22
Soluble Potash, Flame (Oxalate)	983.02(a)	050.60	6	21.91	0.57	0.36	6	21.91	0.57	0.36
Soluble Potash, Flame (Citrate)	983.02(b)	050.61	7	21.98	0.40	0.22	7	21.98	0.40	0.22
Soluble Potash, Other		050.99	17	21.83	0.63	0.35	15	21.79	0.53	0.16
Method Group 050.XX PCT			72	21.82	0.56	0.23	68	21.82	0.53	0.17
Free Water, Vacuum Oven	965.08B	060.00	3	0.06	0.02	0.01	3	0.06	0.02	0.01
Free Water, Vacuum Desiccate	965.08A	060.10	1	0.08	0.00	0.00	1	0.08	0.00	0.00
Method Group 060.XX PCT			4	0.06	0.02	0.01	4	0.06	0.02	0.01
Acid Soluble Calcium, ICP		101.30	12	0.19	0.02	0.00	11	0.19	0.02	0.00
Acid Soluble Magnesium, AA	984.01	121.00	14	11.17	0.34	0.21	13	11.21	0.30	0.18
Acid Soluble Magnesium, ICP		121.30	34	11.56	0.69	0.24	31	11.51	0.66	0.15
Acid Soluble Magnesium, Other		121.99	2	11.57	0.56	0.05	2	11.57	0.56	0.05
Method Group 121.XX PCT			50	11.45	0.62	0.23	47	11.41	0.60	0.17
Water Soluble Magnesium, AA		131.00	2	9.91	1.39	0.32	2	9.91	1.39	0.32

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Water Soluble Magnesium, ICP		131.30	4	11.16	1.28	0.60	3	11.60	0.97	0.09
Method Group 131.XX PCT			6	10.74	1.40	0.50	5	10.92	1.39	0.18
Sulfur, Gravimetric	980.02a	144.01	18	22.49	0.46	0.20	17	22.46	0.44	0.17
Sulfur, Gravimetric	980.02b	144.02	2	22.27	0.80	0.07	2	22.27	0.80	0.07
Sulfur, Other		144.99	24	22.55	0.76	0.20	23	22.59	0.73	0.17
Method Group 144.XX PCT			44	22.51	0.65	0.19	42	22.52	0.63	0.16
Arsenic, Atomic Absorption		151.00	1	0.26	0.02	0.03	1	0.26	0.02	0.03
Arsenic, ICP		151.30	1	5.48	0.02	0.03	1	5.48	0.02	0.03
Method Group 151.XX PPM			2	2.87	3.02	0.03	2	2.87	3.02	0.03
Acid Soluble Boron, Other		165.99	6	0.004	0.001	0.000	6	0.004	0.001	0.000
Cadmium, ICP		181.30	4	0.44	0.68	0.07	4	0.44	0.68	0.07
Water Soluble Chlorine, Other		190.99	1	1.52	0.01	0.01	1	1.52	0.01	0.01
Chromium, Atomic Absorption		191.00	1	126.00	0.00	0.00	1	126.00	0.00	0.00
Chromium, ICP		191.30	11	123.61	23.03	4.44	10	125.26	23.25	2.58
Chromium, Other		191.99	1	45.75	5.82	8.23	1	45.75	5.82	8.23
Method Group 191.XX PPM			13	117.80	29.95	4.39	12	118.70	30.87	2.84
Acid Soluble Cobalt, AA		202.00	1	14.50	0.28	0.40	1	14.50	0.28	0.40
Acid Soluble Cobalt, ICP	965.11	202.30	8	2.74	0.76	0.24	8	2.74	0.76	0.24
Acid Soluble Cobalt, Other		202.99	1	1.94	0.01	0.01	1	1.94	0.01	0.01
Method Group 202.XX PPM			10	3.83	3.72	0.23	10	3.83	3.72	0.23
Acid Soluble Copper, Atomic Absorption	975.01	221.00	4	0.0005	0.0002	0.0001	4	0.0005	0.0002	0.0001
Acid Soluble Copper, ICP		221.30	12	0.0007	0.0006	0.0000	11	0.0008	0.0006	0.0000
Acid Soluble Copper, Other		221.99	1	0.0002	0.0000	0.0000	1	0.0002	0.0000	0.0000
Method Group 221.XX PCT			17	0.0006	0.0005	0.0001	15	0.0007	0.0006	0.0000
Acid Soluble Iron, ICP		241.30	12	0.10	0.01	0.00	12	0.10	0.01	0.00
Lead, Atomic Absorption		251.00	1	17.20	0.42	0.60	1	17.20	0.42	0.60
Lead, ICP		251.30	2	8.08	9.42	1.57	2	8.08	9.42	1.57
Method Group 251.XX PPM			3	11.12	8.69	1.25	3	11.12	8.69	1.25
Acid Soluble Manganese, ICP	972.02a	261.30	8	0.002	0.000	0.000	7	0.002	0.000	0.000
Mercury, Other		281.99	1	0.51	0.01	0.02	1	0.51	0.01	0.02
Molybdenum, ICP		289.30	6	12.08	0.69	0.18	6	12.08	0.69	0.18
Nickel, Atomic Absorption		291.00	1	85.55	0.64	0.90	1	85.55	0.64	0.90
Nickel, ICP		291.30	7	69.09	9.50	2.32	6	72.06	6.01	1.27
Method Group 291.XX PPM			8	71.15	10.48	2.15	7	73.98	7.39	1.21
Selenium, ICP		301.30	1	0.00	0.00	0.00	1	0.00	0.00	0.00
Sodium, Other		311.99	5	0.82	0.03	0.01	5	0.82	0.03	0.01
Acid Soluble Zinc, ICP		321.30	5	0.002	0.001	0.000	4	0.001	0.001	0.000

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 001.99 PCT Ammoniacal Nitrogen			Meth: 005.XX PCT Nitrogen From Urea			Meth: 010.11 PCT Total Nitrogen			Meth: 010.60 PCT Total Nitrogen			Meth: 010.99 PCT Total Nitrogen		
<u>Other</u>			<u>Other</u>			<u>Modified Comprehensi</u>			<u>Combustion</u>			<u>Other</u>		
095	46.29	.87	029	45.47	-1.62	Avg	46.35		232	46.40	.45	354	47.44	S 3.69
Avg	23.18		Meth: 007.99 PCT Percent Urea			322	46.33	-.12	102	46.35	.41	255	46.60	1.65
105	0.07	-.87	<u>Other</u>			220	46.32	-.35	025	46.43	.41	420	46.35	.69
Meth: 002.99 PCT Nitrate Nitrogen			444	45.64	.71	029	46.31	-.43	029	46.39	.37	200	46.17	.03
<u>Other</u>			Meth: 008.10 PCT Percent Biuret			416	46.19	-.88	377	46.40	.33	Avg	46.16	
105	0.13	.71	<u>Spec (as Biuret)</u>			211	46.02	-1.81	421	46.30	.31	402	46.09	-.27
Meth: 005.00 PCT Nitrogen From Urea			415	0.84	.92	Meth: 010.12 PCT Total Nitrogen			042	46.31	.16	397	46.05	-.36
<u>Urease (as N)</u>			Avg			<u>Salicylic</u>			425	46.33	.10	105	45.73	-1.45
220	46.21	.94	397	0.83	-.81	351	46.12	.96	394	46.33	.10	Meth: 010.XX PCT Total Nitrogen		
232	46.10	.60	Meth: 008.99 PCT Percent Biuret			455	46.00	.27	Avg	46.30		230	47.90	s 6.77
Avg	46.05		<u>Other</u>			Avg	45.95		426	46.29	-.08	096	47.96	s 5.47
231	45.85	-1.12	394	0.85	.00	185	45.73	-1.23	234	46.27	-.14	354	47.44	s 3.79
Meth: 005.99 PCT Nitrogen From Urea			Meth: 008.XX PCT Percent Biuret			Meth: 010.60 PCT Total Nitrogen			037	46.17	-.40	034	46.86	1.90
<u>Other</u>			<u>Devarda</u>			<u>Combustion</u>			131	46.24	-.44	324	46.75	1.63
394	47.37	s 6.93	394	0.85	1.06	230	47.90	s 6.45	369	46.24	-.53	255	46.60	R 1.60
300	46.08	X 1.14	415	0.84	.34	096	47.96	s 5.18	372	46.12	-.55	390	46.75	1.57
Avg	45.76		Avg	0.84		034	46.86	1.75	231	46.10	-.68	114	46.71	1.43
309	45.75	-.05	397	0.83	-1.13	324	46.75	1.50	360	46.08	-.77	393	46.67	1.29
193	45.76	R -.55	Meth: 009.10 PCT Ammon & Nitrate N			390	46.75	1.43	041	46.02	-.86	451	46.65	X 1.22
029	45.47	-1.09	<u>Other</u>			393	46.67	1.16	262	46.02	-.87	007	46.55	1.22
Meth: 005.XX PCT Nitrogen From Urea			030	45.85	.71	007	46.55	1.11	452	46.06	-1.00	162	46.53	1.18
394	47.37	s 6.89	Meth: 010.11 PCT Total Nitrogen			451	46.55	X 1.09	028	46.01	-1.07	136	46.63	1.18
220	46.21	1.27	<u>Modified Comprehensi</u>			451	46.65	X 1.09	043	45.92	-1.23	291	46.61	1.11
232	46.10	.91	114	46.71	1.87	162	46.53	1.08	444	45.90	-1.26	177	46.54	1.03
300	46.08	X .73	291	46.61	.99	136	46.63	1.05	292	45.88	-1.37	406	46.57	.98
Avg	45.89		177	46.54	.93	291	46.61	.99	442	46.02	R -1.39	296	46.56	.93
231	45.85	-.24	406	46.57	.86	291	46.61	.99	325	46.25	R -1.41	024	46.48	.70
309	45.75	-.53	296	46.56	.81	291	46.61	.99	035	45.63	-2.09	023	46.43	.65
193	45.76	-.76	114	46.71	1.87	177	46.54	.93	055	45.65	-2.15	247	46.46	.65
			405	46.46	.56	406	46.57	.86	073	45.52	-2.44	405	46.46	.62
			105	46.45	.48	296	46.56	.81	443	45.15	S -3.60	040	46.44	.58
			309	46.41	.30	024	46.48	.60	361	44.84	s -4.54	105	46.45	.57
						023	46.43	.56	428	44.80	s -4.71	420	46.35	.55
						247	46.46	.55				232	46.40	.53
						040	46.44	.48				025	46.43	.51

* 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			Meth: 010.XX PCT			Meth: 050.00 PCT			Meth: 050.30 PCT			Meth: 050.60 PCT		
<u>Total Nitrogen</u>			<u>Total Nitrogen</u>			<u>Soluble Potash</u>			<u>Soluble Potash</u>			<u>Soluble Potash</u>		
102	46.35	.47	185	45.73	-1.75	<u>STPB Oxalate</u>			<u>AA (Oxalate)</u>			<u>Flame (Oxalate)</u>		
309	46.41	.46	105	45.73	-1.93	073	22.36 R	3.47	428	20.53 S	-2.26	443	24.66 S	4.86
029	46.39	.45	035	45.63	-2.09	220	22.01	1.49	Meth: 050.31 PCT			406	22.60	1.22
377	46.40	.42	055	45.65	-2.16	022	21.95	1.22	<u>Soluble Potash</u>			055	22.06	.80
421	46.30	.34	073	45.52	-2.45	416	21.92	1.00	<u>AA (Citrate)</u>			105	22.07	.31
029	46.31	.26	443	45.15 s	-3.66	043	21.91	.98	095 22.64 .71			131	22.00	.18
220	46.32	.23	361	44.84 s	-4.64	211	21.75	.08	Meth: 050.50 PCT			Avg	21.91	
042	46.31	.21	428	44.80 s	-4.82	Avg 21.73			<u>Soluble Potash</u>			200	21.70	-.37
322	46.33	.20	073	44.52 s	-5.69	114	21.71	-.20	Meth: 050.61 PCT			309	21.03	-1.77
425	46.33	.19	Meth: 020.20 PCT			372	21.69	-.27	<u>ICP (Oxalate)</u>			Meth: 050.61 PCT		
394	46.33	.19	<u>Total Phosphate</u>			055	21.70	-.32	405 22.48 1.53			<u>Soluble Potash</u>		
423	46.29	.19	<u>Spectrometric</u>			231	21.66	-.51	292 22.14 1.03			<u>Flame (Citrate)</u>		
426	46.29	.10	262	22.50	.00	028	21.61	-.68	444 21.54 .17			041	22.64	1.67
Avg	46.27		Meth: 020.50 PCT			102	21.47	-1.41	Avg 21.43			025	22.30	.83
234	46.27	-.11	<u>Total Phosphate</u>			009	21.42	-1.71	324 21.30 -.24			035	22.03	.47
416	46.19	-.28	<u>ICP</u>			230	19.15 s	-15.29	420 21.28 -.41			Avg 21.98		
200	46.17	-.32	389	0.11	-.71	Meth: 050.10 PCT			425 20.69 -1.15			030	21.95	-.15
037	46.17	-.33	Meth: 020.99 PCT			<u>Soluble Potash</u>			426 20.59 -1.23			105	21.90	-.32
233	46.24	-.34	<u>Total Phosphate</u>			<u>STPB Citrate</u>			Meth: 050.51 PCT			034	21.56	-1.14
131	46.24	-.43	<u>Other</u>			117	24.20 S	17.50	<u>Soluble Potash</u>			029	21.51	-1.17
351	46.12	-.47	443 0.00 .00			300	21.94 X	.85	Meth: 050.99 PCT			Meth: 050.99 PCT		
372	46.12	-.49	Meth: 020.50 PCT			Avg 21.84			389 24.30 S 3.69			<u>Soluble Potash</u>		
369	46.24	-.52	<u>Total Phosphate</u>			444 21.74 -.89			452 23.01 1.70			<u>Other</u>		
402	46.09	-.62	Meth: 020.99 PCT			Meth: 050.30 PCT			023 22.52 .94			432	22.65 R	2.48
231	46.10	-.64	<u>Other</u>			<u>Soluble Potash</u>			007 22.39 .84			255	22.37	1.16
360	46.08	-.73	443 0.00 .00			<u>AA (Oxalate)</u>			291 22.19 .41			360	22.30	1.01
397	46.05	-.73	Meth: 020.50 PCT			369 22.69 1.58			009 22.01 .18			177	22.28	.94
041	46.02	-.82	<u>Total Phosphate</u>			234 22.35 .99			Avg 21.93			131	22.26	.94
262	46.02	-.83	262 22.50 1.29			040 22.07 .54			423 21.79 -.29			354	22.24	.86
211	46.02	-.85	Avg 7.54			185 21.85 .44			377 21.75 -.29			232	22.11	.61
455	46.00	-.87	389 0.11 -.64			136 21.83 .18			043 21.72 -.39			455	21.95	.29
452	46.06	-.98	443 0.00 -.65			Avg 21.74			361 21.05 -1.38			105	21.80	.29
028	46.01	-1.04	Meth: 041.50 PCT			442 21.74 -.36			096 20.90 -1.61			322	21.94	.28
043	45.92	-1.20	<u>Dir Available Phosph</u>			351 21.38 -.62			Avg 21.79			Avg	21.79	
444	45.90	-1.23	<u>ICP</u>			262 21.04 -1.15			247 21.72 -.19			397	21.50	-.55
292	45.88	-1.34	325 0.01 .87			193 20.75 -1.63								
442	46.02 R	-1.40	Avg 0.01											
325	46.25 R	-1.46	377 0.00 -.87											

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

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
Meth: 050.99 PCT			Meth: 050.XX PCT			Meth: 050.XX PCT			Meth: 101.30 PCT			Meth: 121.30 PCT		
<u>Soluble Potash</u>			<u>Soluble Potash</u>			<u>Soluble Potash</u>			<u>Acid Soluble Calcium</u>			<u>Acid Soluble Magnesi</u>		
<u>Other</u>									<u>ICP</u>			<u>ICP</u>		
402	21.39	-.77	220	22.01	.36	361	21.05	-1.46	009	0.20	1.04	372	12.54	1.56
390	21.30	-.92	131	22.00	.35	262	21.04	-1.47	389	0.20	.87	300	12.52	X 1.53
325	21.20	-1.13	030	21.95	.27	042	21.60	R -1.56	420	0.19	.28	390	12.40	R 1.47
042	21.60	R -1.55	022	21.95	.27	096	20.90	-1.74	131	0.19	.15	452	12.40	1.40
027	20.50	-2.44	300	21.94	X .26	309	21.03	R -1.74	035	0.19	.09	041	12.39	1.33
			455	21.95	.24	193	20.75	-2.01	Avg	0.19		096	12.32	1.22
			322	21.94	.24	425	20.69	-2.20	247	0.18	-.31	432	11.82	R .94
			105	21.90	.23	426	20.59	-2.32	232	0.17	-.85	389	12.05	.82
Meth: 050.XX PCT			416			027			102			354		
<u>Soluble Potash</u>			21.92			20.50			0.17			12.00		
443	24.66	s 5.37	043	21.91	.19	428	20.53	s -2.73	433	0.17	-1.09	232	11.89	.58
389	24.30	s 4.69	136	21.83	.13	230	19.15	s -5.48	423	0.17	-1.24	433	11.84	.50
117	24.20	s 4.59	Avg	21.82								231	11.70	.32
432	22.65	R 2.46	211	21.75	-.14	Meth: 060.00 PCT			Meth: 121.00 PCT			027	11.55	.10
452	23.01	2.27	377	21.75	-.15	<u>Free Water</u>			<u>Acid Soluble Magnesi</u>			Avg	11.51	
369	22.69	1.69	444	21.74	-.20	<u>Vacuum Oven</u>			<u>AA</u>			009	11.41	-.15
041	22.64	1.57	114	21.71	-.21	007	0.08	.93	177	11.61	1.33	423	11.41	-.18
095	22.64	1.54	200	21.70	-.22	416	0.06	.33	034	11.59	1.26	291	11.39	-.18
406	22.60	1.47	423	21.79	-.22	Avg	0.06		105	11.47	1.06	420	11.43	-.24
023	22.52	1.35	247	21.72	-.23	105	0.03	-1.23	028	11.50	1.01	073	11.32	-.30
405	22.48	1.27	055	21.70	-.24	Meth: 060.10 PCT			220	11.33	.81	037	11.27	-.36
007	22.39	1.20	372	21.69	-.25	<u>Free Water</u>			200	11.30	.28	421	11.25	-.40
255	22.37	1.11	105	21.80	-.30	<u>Vacuum Desiccate</u>			Avg	11.21		361	11.21	-.45
073	22.36	1.05	043	21.72	-.32	372	0.08	.00	397	11.15	-.27	131	11.19	-.48
234	22.35	1.01	231	21.66	-.32	Meth: 060.XX PCT			043	11.13	-.32	360	11.19	-.49
360	22.30	.97	028	21.61	-.40	<u>Free Water</u>			040	11.11	-.40	444	11.24	-.58
055	22.06	R .93	442	21.74	-.44	372	0.08	.86	029	11.03	-.75	247	11.11	-.60
025	22.30	.93	444	21.54	-.54	007	0.08	.66	296	11.03	-.84	023	11.14	-.60
177	22.28	.90	029	21.51	-.58	416	0.06	.12	095	10.91	-1.05	426	11.12	-.60
131	22.26	.90	034	21.56	-.59	Avg	0.06		351	10.66	-1.89	102	11.14	-.62
354	22.24	.81	397	21.50	-.60	105	0.03	-1.52	055	10.64	R -2.26	292	10.93	-.89
291	22.19	.71	102	21.47	-.65	Meth: 101.30 PCT			309	8.78	s -8.14	324	10.80	-1.06
292	22.14	.61	009	21.42	-.76	<u>Acid Soluble Calcium</u>			Meth: 121.30 PCT			255	10.23	-1.92
232	22.11	.56	402	21.39	-.82	<u>ICP</u>			<u>Acid Soluble Magnesi</u>			022	9.90	-2.43
035	22.03	.53	351	21.38	-.85	390	0.22	R 2.18	<u>ICP</u>			114	6.19	s -8.01
105	22.07	.49	390	21.30	-.97	405	0.22	2.06	035	12.85	2.02	405	4.98	s -9.82
040	22.07	.48	324	21.30	-.99				117	12.09	R 1.58			
185	21.85	.48	420	21.28	-1.11									
009	22.01	.40	325	21.20	-1.18									

* 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: 121.99 PCT			Meth: 121.XX PCT			Meth: 131.30 PCT			Meth: 144.02 PCT			Meth: 144.XX PCT		
<u>Acid Soluble Magnesi</u>			<u>Acid Soluble Magnesi</u>			<u>Water Soluble Magnes</u>			<u>Sulfur</u>			<u>Sulfur</u>		
<u>Other</u>			<u>ICP</u>			<u>Gravimetric</u>			<u>Gravimetric</u>			<u>Gravimetric</u>		
042	12.05	.86	220	11.33	-.39	432	9.85 R	-2.11	220	22.96	.86	390	23.70	1.93
Avg	11.57		360	11.19	-.39	397	11.15	-.44	Avg	22.27		232	23.34	1.32
234	11.09	-.87	043	11.13	-.48	043	11.13	-.48	292	21.58	-.87	220	23.33	1.28
			247	11.11	-.50	Meth: 131.XX PCT						360	23.33	1.28
			426	11.12	-.51	<u>Water Soluble Magnes</u>						262	23.29	1.22
Meth: 121.XX PCT			040	11.11	-.52	300	12.25 X	.96	Meth: 144.99 PCT			040	23.18	1.04
<u>Acid Soluble Magnesi</u>			023	11.14	-.52	452	12.19	.92	<u>Sulfur</u>			055	23.05 R	.98
035	12.85	2.41	444	11.24	-.55	220	11.10 X	.24	<u>Other</u>			029	23.05	.85
372	12.54	1.89	102	11.14	-.55	Avg	10.92		300	24.10 X	2.07	040	22.90	.70
300	12.52 X	1.86	234	11.09	-.55	027	10.35	-.41	389	23.75	1.59	220	22.96	.69
117	12.09 R	1.85	029	11.03	-.67	432	9.85 R	-1.09	390	23.70	1.57	452	22.89	.68
390	12.40 R	1.79	296	11.03	-.70	309	8.73	-1.59	232	23.34	1.05	296	22.75	.41
452	12.40	1.71	292	10.93	-.83	Meth: 144.01 PCT			220	23.33	1.01	324	22.75	.37
041	12.39	1.64	095	10.91	-.85	<u>Sulfur</u>			360	23.33	1.01	102	22.63	.17
096	12.32	1.52	324	10.80	-1.02	<u>Gravimetric</u>			040	23.18	.80	105	22.57	.14
432	11.82 R	1.14	351	10.66	-1.27	262	23.29	1.90	452	22.89	.51	291	22.57	.10
389	12.05	1.07	055	10.64	-1.42	055	23.05 R	1.54	Avg	22.59		Avg	22.52	
042	12.05	1.07	255	10.23	-1.97	029	23.05	1.37	291	22.57	-.07	095	22.51	-.04
354	12.00	1.00	022	9.90	-2.54	040	22.90	1.13	131	22.49	-.14	131	22.49	-.05
232	11.89	.80	309	8.78 s	-4.41	296	22.75	.71	023	22.48	-.18	096	22.46	-.12
433	11.84	.72	114	6.19 s	-8.74	324	22.75	.68	096	22.46	-.19	023	22.48	-.14
231	11.70	.50	405	4.98 s	-10.76	102	22.63	.39	177	22.39	-.27	043	22.52	-.15
177	11.61	.34				105	22.57	.30	351	22.35	-.33	231	22.42	-.21
105	11.47	.34				043	22.52	.25	423	22.27	-.46	177	22.39	-.21
034	11.59	.31	Meth: 131.00 PCT			095	22.51	.13	421	22.19	-.60	351	22.35	-.28
027	11.55	.25	<u>Water Soluble Magnes</u>			Avg	22.46		255	22.15	-.62	028	22.35	-.29
420	11.43	.24	<u>AA</u>			231	22.42	-.20	035	22.00	-.82	423	22.27	-.43
028	11.50	.23	220	11.10 X	.88	028	22.35	-.27	354	21.96	-.87	114	22.26	-.46
423	11.41	.12	Avg	9.91		114	22.26	-.54	009	21.89	-.97	200	22.20	-.51
Avg	11.41		309	8.73	-.85	200	22.20	-.59	027	21.71	-1.20	421	22.19	-.59
009	11.41	-.01	Meth: 131.30 PCT			444	22.09	-.85	247	21.68	-1.25	255	22.15	-.62
291	11.39	-.07	<u>Water Soluble Magnes</u>			030	22.05	-.93	361	21.42	-1.60	444	22.09	-.69
200	11.30	-.18	<u>ICP</u>			255	21.91	-1.25	372	21.49 R	-1.64	030	22.05	-.75
073	11.32	-.19	300	12.25 X	.68	193	21.55	-2.14	Meth: 144.XX PCT			035	22.00	-.84
037	11.27	-.24	452	12.19	.62	230	18.45 s	-11.31	<u>Sulfur</u>			354	21.96	-.90
421	11.25	-.29	Avg	11.60					300	24.10 X	2.51	255	21.91	-.97
361	11.21	-.34	027	10.35	-1.29				389	23.75	1.96	009	21.89	-1.01
131	11.19	-.37										027	21.71	-1.29

* 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
<u>Meth: 144.XX PCT Sulfur</u>			<u>Meth: 181.30 PPM Cadmium</u>			<u>Meth: 191.XX PPM Chromium</u>			<u>Meth: 202.XX PPM Acid Soluble Cobalt</u>			<u>Meth: 221.99 PCT Acid Soluble Copper Other</u>		
247	21.68	-1.34	ICP			452	160.02	1.35	452	24.60 s	5.61	231	0.0002	.00
292	21.58	-1.50	Avg	0.44		096	159.00	1.31	136	14.50	2.87	402	0.0050 S	.00
193	21.55	-1.59	324	0.15	-.43	390	146.00	.89	450	4.15	.09	Avg	0.0002	
361	21.42	-1.75	247	0.07	-.54	009	132.65	.45	Avg	3.83				
372	21.49 R	-1.80	372	0.00	-.64	220	126.00	.24	009	3.40	-.12			
230	18.45 s	-7.97				035	120.00	.05	232	2.95	-.24	<u>Meth: 221.XX PCT Acid Soluble Copper</u>		
			<u>Meth: 190.99 PCT Water Soluble Chlori Other</u>			Avg	118.70		035	2.83	-.28	402	0.0050 s	7.81
<u>Meth: 151.00 PPM Arsenic Atomic Absorption</u>			009	1.52	.71	232	118.30	-.03	247	2.38	-.39	444	0.0020	2.39
136	0.26	.71				102	116.02	-.09	102	2.26	-.42	433	0.0017	1.88
			<u>Meth: 191.00 PPM Chromium Atomic Absorption</u>			247	109.50	-.30	324	2.15	-.46	452	0.0014	1.22
			220	126.00	.00	444	107.10 R	-.53	231	1.94	-.51	043	0.0009	.33
						324	102.55	-.53	372	1.77	-.55	389	0.0007	.05
<u>Meth: 151.30 PPM Arsenic ICP</u>						372	88.57	-.98	<u>Meth: 221.00 PCT Acid Soluble Copper Atomic Absorption</u>			Avg	0.0007	
372	5.48	.71				231	45.75	-2.37	043	0.0009	1.50	035	0.0005	-.31
			<u>Meth: 191.30 PPM Chromium ICP</u>			<u>Meth: 202.00 PPM Acid Soluble Cobalt AA</u>			Avg	0.0005		428	0.0005 R	-.36
			452	160.02	1.51	136	14.50	.71	428	0.0005	-.48	442	0.0004	-.47
			096	159.00	1.45				442	0.0004	-.53	405	0.0004	-.49
			390	146.00	.89	<u>Meth: 202.30 PPM Acid Soluble Cobalt ICP</u>			095	0.0004	-.86	247	0.0004	-.57
			009	132.65	.32	452	24.60 s	28.83	247	0.0004	-.58	009	0.0004	-.58
			Avg	125.26		450	4.15	1.86	095	0.0004	-.86	095	0.0004	-.59
<u>Meth: 165.99 PCT Acid Soluble Boron Other</u>			035	120.00	-.23	009	3.40	.88	<u>Meth: 221.30 PCT Acid Soluble Copper ICP</u>			372	0.0003	-.66
009	0.006	1.66	232	118.30	-.30	035	2.83	.39	444	0.0020	2.03	232	0.0003	-.67
423	0.005	.65	102	116.02	-.40	009	3.40	.88	433	0.0017	1.57	450	0.0003	-.67
444	0.004	.15	247	109.50	-.68	232	2.95	.29	452	0.0014	.98	324	0.0003 R	-.81
Avg	0.004		444	107.10 R	-.92	Avg	2.74		Avg	0.0008		231	0.0002	-.85
433	0.003	-.44	324	102.55	-.99	247	2.38	-.48	389	0.0007	-.09	<u>Meth: 241.30 PCT Acid Soluble Iron ICP</u>		
389	0.003	-.83	372	88.57	-1.58	102	2.26	-.62	035	0.0005	-.41	390	0.11	1.16
232	0.003	-1.19				324	2.15	-.90	405	0.0004	-.58	433	0.11	.93
			<u>Meth: 191.99 PPM Chromium Other</u>			372	1.77	-1.27	247	0.0004	-.64	009	0.11	.91
			231	45.75	.71	<u>Meth: 202.99 PPM Acid Soluble Cobalt Other</u>			009	0.0004	-.66	405	0.11	.86
						232	0.0003	-.72	372	0.0003	-.72	389	0.11	.62
						450	0.0003	-.74	450	0.0003	-.74	131	0.11	.56
						324	0.0003 R	-.86	324	0.0003 R	-.86	035	0.10	.13
												Avg	0.10	

* 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: 241.30 PCT Acid Soluble Iron			Meth: 281.99 PPM Mercury			Meth: 291.XX PPM Nickel								
<u>ICP</u>			<u>Other</u>			<u>Avg</u> 73.98								
232	0.09	-.30	372	0.51 X	.71	102	69.43	-.62	232	68.65	-.72	247	67.90	-.82
423	0.09	-.37				232	68.65	-.72	247	67.90	-.82	035	67.65	-.87
102	0.08	-1.04	Meth: 289.30 PPM Molybdenum			035	67.65	-.87	037	51.29 R	-3.13			
247	0.08	-1.45	<u>ICP</u>			037	51.29 R	-3.13						
444	0.07	-1.89	035	13.00	1.34	Meth: 301.30 PPM Selenium								
Meth: 251.00 PPM Lead			009	12.90	1.19	<u>ICP</u>								
<u>Atomic Absorption</u>			Avg	12.08		372	0.00	.00						
136	17.20	.71	247	12.03	-.12									
Meth: 251.30 PPM Lead			232	11.70	-.62									
<u>ICP</u>			102	11.52	-.83									
452	16.16	.87	433	11.32	-1.10	Meth: 311.99 PCT Sodium								
Avg	8.08		Meth: 291.00 PPM Nickel			<u>Other</u>								
372	0.00	-.86	136	85.55	.71	009	0.85	1.10	232	0.84	1.01	035	0.82	.28
Meth: 251.XX PPM Lead			<u>Atomic Absorption</u>			035	0.82	.28	Avg	0.82		423	0.80	-.93
136	17.20	.70	136	85.55	.71	423	0.80	-.93	102	0.79	-1.15			
452	16.16	.61	Meth: 291.30 PPM Nickel			Meth: 321.30 PCT Acid Soluble Zinc								
Avg	11.12		<u>ICP</u>			<u>ICP</u>								
372	0.00	-1.28	444	98.19 s	4.92	009	1.300 s	2324.03	035	0.002 R	2.15	423	0.002	1.43
Meth: 261.30 PCT Acid Soluble Mangane			390	83.45	1.90	035	0.002 R	2.15	423	0.002	1.43	389	0.001	.17
<u>ICP</u>			009	75.25	.56	Avg	0.001		389	0.001	.17	Avg	0.001	
444	0.003 R	1.72	Avg	72.06		444	0.001		444	0.001	-.48	444	0.001	-.48
433	0.003	1.40	102	69.43	-.45	444	0.001		433	0.001	-1.09			
423	0.003	.72	232	68.65	-.57	Meth: 291.XX PPM Nickel								
389	0.003	.55	247	67.90	-.69	444	98.19 s	3.77						
009	0.003	.53	035	67.65	-.76	136	85.55	1.57						
Avg	0.002		037	51.29 R	-3.53	390	83.45	1.28						
035	0.002	-.88				009	75.25	.22						
232	0.002	-1.07												
102	0.002	-1.23												

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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
001.99	2	0.00	1.22	0.00	151.XX	2	0.00	1.22	0.00
001.XX	2	0.00	1.22	0.00	165.99	6	0.000	1.047	0.050
005.00	3	0.00	0.98	0.44	165.XX	6	0.000	1.047	0.050
005.99	5	1.17	2.75	1.66	181.30	4	0.00	1.08	0.08
005.XX	8	0.71	2.22	1.39	181.XX	4	0.00	1.08	0.08
008.10	2	0.00	1.14	0.32	191.30	11	- 0.07	1.00	0.17
008.XX	3	0.00	1.09	0.19	191.XX	13	- 0.03	0.98	0.12
010.11	10	- 0.96	3.19	0.27	202.30	9	3.19	9.62	0.83
010.12	3	0.00	1.12	0.03	202.XX	11	0.51	1.94	0.16
010.60	52	- 0.07	1.70	0.70	221.00	4	0.0000	1.0294	0.2832
010.99	7	0.53	1.60	0.51	221.30	12	- 0.068	1.0049	0.0764
010.XX	69	0.01	1.69	0.70	221.99	2	0.0000	0.0000	0.0000
020.XX	3	0.00	1.12	0.00	221.XX	18	0.3738	2.0803	0.0865
041.50	2	0.00	1.22	0.00	241.30	12	0.00	1.01	0.17
041.XX	2	0.00	1.22	0.00	241.XX	12	0.00	1.01	0.17
050.00	14	- 0.76	4.01	1.68	251.30	2	0.00	1.21	0.12
050.10	3	5.71	9.91	2.13	251.XX	3	0.00	1.11	0.11
050.30	10	- 0.20	1.13	0.41	261.30	8	0.055	0.939	0.639
050.50	7	0.00	1.01	0.22	261.XX	8	0.055	0.939	0.639
050.51	11	0.34	1.46	0.21	289.30	6	0.00	1.03	0.16
050.60	7	0.69	2.01	0.45	289.XX	6	0.00	1.03	0.16
050.61	7	0.00	0.98	0.32	291.30	8	0.11	2.27	0.86
050.99	17	0.07	1.02	0.61	291.XX	9	0.02	1.82	0.66
050.XX	70	0.10	1.57	0.50	311.99	5	0.00	1.02	0.25
060.00	3	0.00	1.09	0.20	311.XX	5	0.00	1.02	0.25
060.XX	4	0.00	1.06	0.18	321.30	6	386.54	945.80	72.839
101.30	12	0.18	1.15	0.19	321.XX	5	463.95	1035.9	79.791
101.XX	12	0.18	1.15	0.19					
121.00	15	- 0.67	2.30	0.46					
121.30	36	- 0.42	2.31	0.31					
121.99	2	0.00	1.22	0.06					
121.XX	53	- 0.39	2.21	0.31					
131.00	2	0.00	1.21	0.15					
131.30	4	- 0.45	1.28	0.55					
131.XX	6	- 0.13	1.00	0.32					
144.01	19	- 0.41	2.32	1.57					
144.02	2	0.00	1.22	0.06					
144.99	24	- 0.06	1.02	0.20					
144.XX	42	- 0.20	1.41	0.76					