

MAGRUDER - Fertilizer Check Sample No. - 200209 Grade 31-0-0(A) Micronutrients (B)

- Pass 1 Results for 76 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, Other		001.99	1	0.0000	0.0000	0.0000	1	0.0000	0.0000	0.0000
Water Insoluble Nitrogen, Meth I	945.01	003.10	5	18.791	7.6008	0.1324	5	18.791	7.6008	0.1324
Water Insoluble Nitrogen, Other		003.99	1	24.380	0.3536	0.5000	1	24.380	0.3536	0.5000
Method Group 003.XX PCT			6	19.722	7.2120	0.1937	6	19.722	7.2120	0.1937
Nitrogen From Urea, Urease (as N)	959.03	005.00	3	12.932	14.926	0.1633	3	12.932	14.926	0.1633
Nitrogen From Urea, Other		005.99	1	2.7866	0.1695	0.2397	1	2.7866	0.1695	0.2397
Method Group 005.XX PCT			4	10.395	13.461	0.1824	4	10.395	13.461	0.1824
Percent Urea, Other		007.99	2	2.3975	0.3775	0.0850	2	2.3975	0.3775	0.0850
Ammon & Nitrate N, Devarda	892.01	009.10	2	14.618	12.953	0.0850	2	14.618	12.953	0.0850
Total Nitrogen, Reduced Iron		010.10	2	32.138	0.2910	0.3550	2	32.138	0.2910	0.3550
Total Nitrogen, Modified Comprehensive	978.02	010.11	8	31.549	0.3746	0.0806	7	31.475	0.3344	0.0507
Total Nitrogen, Salicylic	955.04D	010.12	6	31.563	0.6090	0.1373	6	31.563	0.6090	0.1373
Total Nitrogen, Combustion		010.60	47	31.962	0.2061	0.0822	44	31.960	0.2058	0.0671
Total Nitrogen, Other		010.99	5	31.367	0.3762	0.1452	5	31.367	0.3762	0.1452
Method Group 010.XX PCT			69	31.853	0.3780	0.0989	67	31.846	0.3783	0.0864
Total Phosphate, Spectrometric	958.01	020.20	1	2.7550	0.0212	0.0300	1	2.7550	0.0212	0.0300
Total Phosphate, ICP		020.50	1	0.8600	0.0141	0.0200	1	0.8600	0.0141	0.0200
Method Group 020.XX PCT			2	1.8075	1.0942	0.0250	2	1.8075	1.0942	0.0250
Dir Available Phosphate, Grav Quim	960.03E	041.10	1	0.9800	0.0707	0.1000	1	0.9800	0.0707	0.1000
Soluble Potash, AA (Oxalate)		050.30	1	0.1750	0.0071	0.0100	1	0.1750	0.0071	0.0100
Soluble Potash, ICP (Oxalate)		050.50	1	0.1350	0.0071	0.0100	1	0.1350	0.0071	0.0100
Method Group 050.XX PCT			2	0.1550	0.0238	0.0100	2	0.1550	0.0238	0.0100
Free Water, Vacuum Oven	965.08B	060.00	2	0.9225	0.4821	0.0050	2	0.9225	0.4821	0.0050
Acid Soluble Calcium, ICP		101.30	8	2.5608	0.1648	0.0282	7	2.5976	0.1390	0.0186
Acid Soluble Magnesium, AA	984.01	121.00	3	0.8647	0.0264	0.0140	3	0.8647	0.0264	0.0140
Acid Soluble Magnesium, ICP		121.30	7	0.8773	0.0519	0.0287	7	0.8773	0.0519	0.0287
Method Group 121.XX PCT			10	0.8735	0.0454	0.0243	10	0.8735	0.0454	0.0243
Sulfur, Gravimetric	980.02a	144.01	12	6.4113	0.1031	0.0384	12	6.4113	0.1031	0.0384
Sulfur, Gravimetric	980.02b	144.02	1	6.1800	0.0141	0.0200	1	6.1800	0.0141	0.0200
Sulfur, Spectrometric		144.70	1	7.6000	0.1414	0.2000	1	7.6000	0.1414	0.2000
Sulfur, Other		144.99	19	6.8042	0.8285	0.1446	18	6.8883	0.7621	0.1148
Method Group 144.XX PCT			35	6.6703	0.6891	0.1075	34	6.7109	0.6535	0.0906
Arsenic, ICP		151.30	5	624.41	147.83	25.316	5	624.41	147.83	25.316
Arsenic, Other		151.99	1	523.26	12.226	17.290	1	523.26	12.226	17.290
Method Group 151.XX PPM			6	607.55	139.44	23.978	6	607.55	139.44	23.978
Acid Soluble Boron, Spectrometric	982.01	165.00	7	0.5455	0.0451	0.0087	6	0.5306	0.0257	0.0052
Acid Soluble Boron, Titrimetric	949.02	165.70	1	0.5700	0.0141	0.0200	1	0.5700	0.0141	0.0200
Acid Soluble Boron, Other		165.99	13	0.5411	0.0702	0.0211	12	0.5315	0.0629	0.0158
Method Group 165.XX PCT			21	0.5439	0.0608	0.0169	20	0.5383	0.0558	0.0135

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Method	AOAC Ref.	Method Code	No. of Labs	Grand Avq.	Std. Dev.	Average Range of Dups	No. of Labs	Grand Avq.	Std. Dev.	Average Range of Dups
Cadmium, Atomic Absorption		181.00	3	10.499	2.1915	0.4860	3	10.499	2.1915	0.4860
Cadmium, ICP		181.30	10	25.324	18.200	2.8537	10	25.324	18.200	2.8537
Cadmium, Other		181.99	1	12.340	1.6546	2.3400	1	12.340	1.6546	2.3400
Method Group 181.XX PPM			14	21.220	16.671	2.3097	13	20.275	16.898	1.7950
Chromium, Atomic Absorption		191.00	1	422.50	9.1924	13.000	1	422.50	9.1924	13.000
Chromium, ICP		191.30	9	526.29	105.73	24.262	9	526.29	105.73	24.262
Method Group 191.XX PPM			10	515.91	105.01	23.136	10	515.91	105.01	23.136
Acid Soluble Cobalt, AA		202.00	2	242.00	8.8541	13.115	2	242.00	8.8541	13.115
Acid Soluble Cobalt, ICP	965.11	202.30	8	210.13	37.249	15.406	8	210.13	37.249	15.406
Method Group 202.XX PPM			10	216.50	35.761	14.947	10	216.50	35.761	14.947
Acid Soluble Copper, Atomic Absorption	975.01	221.00	25	1.7540	0.1353	0.0573	24	1.7539	0.1357	0.0492
Acid Soluble Copper, ICP		221.30	23	1.8669	0.1214	0.0536	22	1.8622	0.1202	0.0469
Acid Soluble Copper, Other		221.99	1	1.6500	0.0141	0.0200	1	1.6500	0.0141	0.0200
Method Group 221.XX PCT			49	1.8049	0.1405	0.0548	47	1.8024	0.1393	0.0475
Acid Soluble Iron, Atomic Absorption	980.01	241.00	22	24.183	1.1160	0.6301	21	24.235	1.0794	0.5368
Acid Soluble Iron, ICP		241.30	16	22.533	3.7547	0.7063	16	21.724	4.5070	0.6082
Acid Soluble Iron, Titrimetric	967.01	241.70	1	24.770	0.3253	0.4600	1	24.770	0.3253	0.4600
Method Group 241.XX PCT			39	23.521	2.6588	0.6570	34	24.056	1.7478	0.5224
Lead, Atomic Absorption		251.00	2	5640.8	996.70	178.30	2	5640.8	996.70	178.30
Lead, ICP		251.30	6	4302.5	666.79	460.83	6	4302.5	666.79	460.83
Lead, Other		251.99	1	3874.2	201.07	284.35	1	3874.2	201.07	284.35
Method Group 251.XX PPM			9	4552.3	917.75	378.44	9	4552.3	917.75	378.44
Acid Soluble Manganese, AA	972.02a	261.00	18	4.6789	0.2380	0.0821	17	4.6568	0.2234	0.0710
Acid Soluble Manganese, AA	972.02b	261.11	3	4.5500	0.0966	0.0761	3	4.5500	0.0966	0.0761
Acid Soluble Manganese, ICP	972.02a	261.30	17	4.8498	0.3967	0.0992	17	4.8498	0.3967	0.0992
Acid Soluble Manganese, ICP	972.02b	261.31	2	4.6900	0.6291	0.3600	2	4.6900	0.6291	0.3600
Acid Soluble Manganese, Other		261.99	2	4.4800	0.4386	0.0900	2	4.4800	0.4386	0.0900
Method Group 261.XX PCT			42	4.7299	0.3474	0.1022	41	4.7431	0.3378	0.0900
Water Soluble Manganese, Atomic Abs.	972.03	271.00	1	1.9000	0.0000	0.0000	1	1.9000	0.0000	0.0000
Water Soluble Manganese, ICP	972.03	271.30	1	1.8300	0.0000	0.0000	1	1.8300	0.0000	0.0000
Method Group 271.XX PCT			2	1.8650	0.0404	0.0000	2	1.8650	0.0404	0.0000
Mercury, Atomic Absorption		281.00	1	1887.5	116.67	165.00	1	1887.5	116.67	165.00
Mercury, ICP		281.30	3	293.82	207.49	17.300	3	293.82	207.49	17.300
Mercury, Other		281.99	2	458.98	6.3634	9.9600	2	458.98	6.3634	9.9600
Method Group 281.XX PPM			6	614.49	616.72	39.470	5	359.88	176.65	14.364
Molybdenum, Atomic Absorption		289.00	1	200.00	14.142	20.000	1	200.00	14.142	20.000
Molybdenum, ICP		289.30	8	198.93	33.092	7.9261	8	198.93	33.092	7.9261
Molybdenum, Other		289.99	2	216.20	28.788	26.800	2	216.20	28.788	26.800
Method Group 289.XX PPM			11	202.17	30.920	12.455	10	199.15	29.585	8.3409

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Nickel, Atomic Absorption		291.00	3	513.24	117.56	4.6167	3	513.24	117.56	4.6167
Nickel, ICP		291.30	8	377.94	68.891	28.235	8	377.94	68.891	28.235
Nickel, Other		291.99	1	416.50	111.02	157.00	1	416.50	111.02	157.00
Method Group 291.XX PPM			12	414.97	100.54	33.061	11	414.84	102.39	21.793
Sodium, Atomic Absorption	983.04	311.00	1	0.2640	0.0113	0.0160	1	0.2640	0.0113	0.0160
Sodium, Flame Photometric	974.01	311.30	1	0.3200	0.0000	0.0000	1	0.3200	0.0000	0.0000
Sodium, Other		311.99	4	0.3255	0.0436	0.0157	4	0.3255	0.0436	0.0157
Method Group 311.XX PCT			6	0.3144	0.0422	0.0131	5	0.3077	0.0419	0.0063
Acid Soluble Zinc, Atomic Absorption ..	975.02	321.00	22	6.6439	0.5093	0.1488	20	6.7043	0.4854	0.1046
Acid Soluble Zin, ICP		321.30	18	7.1339	0.4650	0.1758	16	7.2181	0.3974	0.1090
Acid Soluble Zinc, Other		321.99	2	6.5975	0.1044	0.1550	2	6.5975	0.1044	0.1550
Method Group 321.XX PCT			43	6.8086	0.5988	0.1569	38	6.9150	0.5064	0.1091
Water Soluble Zinc, Atomic Absorption .		325.00	3	4.3400	2.0939	0.0267	3	4.3400	2.0939	0.0267

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
--	Method 001.99	--	--	Method 007.99	--	--	Method 010.60	--	--	Method 010.60	--	--	Method 010.XX	--
354	0.0000	.00	029	2.7200	.85	007	32.350	1.91	024	31.795	-.81	390	32.095	.75
			Avg	2.3975		034	32.345	1.87	055	31.765	-.95	360	32.090	.72
--	Method 003.10	--	394	2.0750 X	-.88	232	32.320	1.76	009	31.790 R	-1.10	231	32.110	.70
372	27.985	1.21				376	32.275	1.54	029	31.710	-1.22	288	32.065	.69
023	25.750	.92	--	Method 009.10	--	106	32.180	1.20	372	31.695	-1.29	234	32.095	.67
Avg	18.791		030	25.835	.87	096	32.185	1.10	402	31.695	-1.35	131	32.095	.67
029	16.140 X	-.35	Avg	14.618		035	32.180	1.07	023	31.630	-1.62	220	32.060	.61
090	15.835	-.39	169	3.4001	-.87	324	32.090 R	1.04	086	31.599	-1.84	042	32.000	.53
397	8.2448	-1.39				390	32.095 R	.93	102	31.499	-2.24	296	32.020	.47
			--	Method 010.10	--	360	32.090	.86	041	31.300 s	-4.47	025	31.995	.39
--	Method 003.99	--	405	32.185	.16	231	32.110	.74	073	30.060 s	-10.55	377	31.990	.39
251	24.380	.71	Avg	32.138		234	32.095	.68	330	2.1000 s	-145.12	028	31.980	.36
			114	32.090	-1.21	131	32.095	.68				361	31.975	.34
--	Method 003.XX	--				042	32.000	.66	--	Method 010.99	--	293	31.970	.34
372	27.985	1.15	--	Method 010.11	--	220	32.060	.65	354	34.314 s	7.84	393	31.970	.34
023	25.750	.84	137	33.620 s	6.41	296	32.020	.33	177	31.670	.82	070	31.935	.31
251	24.380	.65	288	32.065 R	1.82	377	31.990	.18	300	31.645	.77	029	31.940	.25
Avg	19.722		029	31.940	1.39	025	31.995	.17	397	31.574	.56	142	31.925	.21
029	16.140 X	-.50	395	31.700	.67	293	31.970	.15	Avg	31.367		247	31.925	.21
090	15.835	-.54	105	31.575	.30	393	31.970	.15	105	31.170	-.66	136	31.920	.20
397	8.2448	-1.59	090	31.555	.29	028	31.980	.11	420	30.775	-1.58	394	31.915	.19
			Avg	31.475		361	31.975	.10				040	31.910	.17
--	Method 005.00	--	211	31.385	-.27	Avg	31.960		--	Method 010.XX	--	262	31.850	.13
330	32.200	1.29	363	31.335	-.44	247	31.925	-.17	354	34.314 s	6.54	022	31.890	.13
Avg	12.932		322	30.836	-1.92	142	31.925	-.19	137	33.620 s	4.69	037	31.885	.12
395	3.3700	-.64				136	31.920	-.19	095	32.750	2.39	325	31.890	.12
372	3.2250	-.65	--	Method 010.12	--	040	31.910	-.25	416	32.589	1.97	233	31.880	.09
			416	32.589	1.69	394	31.915	-.25	275	32.355	1.35	049	31.870	.08
--	Method 005.99	--	260	31.800	.47	325	31.890	-.34	007	32.350	1.34	251	31.870	.07
354	2.7866	.71	351	31.643	.15	022	31.890	-.35	034	32.345	1.32	Avg	31.846	
			Avg	31.563		070	31.935	-.38	232	32.320	1.26	043	31.830	-.07
--	Method 005.XX	--	102	31.538	-.08	037	31.885	-.38	376	32.275	1.14	027	31.820	-.08
330	32.200	1.62	185	30.965	-1.00	233	31.880	-.39	114	32.090 R	1.13	024	31.795	-.14
Avg	10.395		415	30.842	-1.19	251	31.870	-.44	106	32.180	.93	055	31.765	-.21
395	3.3700	-.52				049	31.870	-.45	096	32.185	.90	029	31.710	-.36
372	3.2250	-.53	--	Method 010.60	--	262	31.850	-.59	405	32.185	.90	395	31.700	-.39
354	2.7866	-.57	095	32.750 s	3.84	043	31.830	-.64	035	32.180	.89	372	31.695	-.40
			275	32.355	1.92	027	31.820	-.68	324	32.090 R	.79	009	31.790	-.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	Lab	Average*	Index
--	Method 010.XX	--	--	Method 050.30	--	--	Method 121.30	--	--	Method 144.70	--	--	Method 144.XX	--
260	31.800	-.44	234	0.1750	.71	096	0.8600	-.67	231	7.6000	.71	377	6.8000 X	.14
402	31.695	-.46				247	0.8400	-.72				Avg	6.7109	
177	31.670	-.49	--	Method 050.50	--	361	0.8250	-1.01	--	Method 144.99	--	043	6.5450	-.25
351	31.643	-.55	247	0.1350	.71				354	9.8115 S	3.85	029	6.5150	-.30
300	31.645	-.58				--	Method 121.XX	--	035	8.2300	1.77	260	6.5350	-.32
023	31.630	-.59	--	Method 050.XX	--	035	0.9560	1.89	232	7.9950 X	1.45	114	6.5000	-.32
105	31.575	-.72	234	0.1750	.87	131	0.9350	1.36	330	7.8050	1.20	405	6.4900	-.34
086	31.599	-.72	Avg	0.1550		102	0.8813	.68	023	7.8015	1.20	324	6.4800	-.36
397	31.574	-.72	247	0.1350	-.87	105	0.8960	.57	136	7.5650	.89	233	6.4700	-.37
090	31.555	-.78				Avg	0.8735		419	7.4250	.71	105	6.4400	-.41
102	31.538	-.82	--	Method 060.00	--	193	0.8550	-.42	009	6.9563	.24	102	6.4360	-.42
102	31.499	-.92	361	1.3400	.87	391	0.8430	-.67	131	6.9650	.10	288	6.4300	-.43
211	31.385	-1.22	Avg	0.9225		009	0.8438	-.68	Avg	6.8883		106	6.4850	-.44
363	31.335	-1.36	007	0.5050	-.87	096	0.8600	-.72	377	6.8000 X	-.12	028	6.3750	-.52
105	31.170	-1.83				247	0.8400	-.74	376	6.8150	-.16	220	6.3300	-.58
041	31.300 s	-2.22	--	Method 101.30	--	361	0.8250	-1.07	260	6.5350	-.49	137	6.3100	-.61
185	30.965	-2.35	035	2.7250	.92				029	6.5150	-.49	363	6.3050 X	-.62
415	30.842	-2.66	361	2.7000	.74	--	Method 144.01	--	106	6.4850	-.58	096	6.2950	-.64
322	30.836	-2.67	096	2.6950	.70	095	7.5300 s	10.95	028	6.3750	-.67	395	6.2000	-.78
420	30.775	-2.83	009	2.6235	.22	043	6.5450	1.30	096	6.2950	-.78	361	6.1800	-.81
073	30.060 s	-5.48	Avg	2.5976		114	6.5000	.88	394	5.9750	-1.20	394	5.9750	-1.13
330	2.1000 s	-78.62	041	2.5750	-.17	324	6.4800	.82	040	5.7600	-1.48	351	5.9360	-1.19
			131	2.5600	-.35	405	6.4900	.77	397	5.6912	-1.57	040	5.7600	-1.46
--	Method 020.20	--	247	2.3050	-2.11	233	6.4700	.58	360	5.2900 R	-2.14	397	5.6912	-1.56
234	2.7550	.71	102	2.3033 R	-2.15	288	6.4300	.43				360	5.2900 R	-2.24
						105	6.4400	.28	--	Method 144.XX	--			
--	Method 020.50	--	--	Method 121.00	--	102	6.4360	.26	354	9.8115 s	4.76	--	Method 151.30	--
247	0.8600	.71	105	0.8960	1.28	Avg	6.4113		035	8.2300	2.33	009	886.50	1.77
			Avg	0.8647		220	6.3300	-.81	232	7.9950 X	1.97	247	627.00	.02
--	Method 020.XX	--	193	0.8550	-.41	137	6.3100	-.99	330	7.8050	1.68	Avg	624.41	
234	2.7550	.87	391	0.8430	-.83	363	6.3050 X	-1.12	023	7.8015	1.67	231	592.00	-.26
Avg	1.8075					395	6.2000	-2.05	231	7.6000	1.37	102	523.34	-.69
247	0.8600	-.87	--	Method 121.30	--	351	5.9360 s	-4.61	136	7.5650	1.31	232	493.20	-.90
			035	0.9560	1.58				095	7.5300	1.27			
--	Method 041.10	--	131	0.9350	1.12	--	Method 144.02	--	419	7.4250	1.10	--	Method 151.99	--
009	0.9800	.71	102	0.8813	.58	361	6.1800	.71	009	6.9563	.46	040	523.26	.71
			Avg	0.8773					131	6.9650	.39			
			009	0.8438	-.66				376	6.8150	.22			

* 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
--	Method 151.XX	--	--	Method 165.XX	--	--	Method 181.30	--	--	Method 191.30	--	--	Method 202.XX	--
009	886.50	2.00	055	0.7900 s	4.54	096	14.500	-.60	324	483.50	-.42	009	267.54	1.44
247	627.00	.14	391	0.7580 s	4.01	102	13.875	-.63	102	471.64	-.53	377	252.00 X	1.04
Avg	607.55		354	0.6565 R	2.25	035	13.800	-.64	376	423.00	-.98	193	242.50	.78
231	592.00	-.19	360	0.6400	1.83	232	7.8550	-.96	232	336.20	-1.81	397	241.50	.70
040	523.26	-.61	137	0.6350	1.75	376	4.5500	-1.15				Avg	216.50	
102	523.34	-.61	324	0.5750	.66				--	Method 191.XX	--	247	210.00	-.23
232	493.20	-.84	028	0.5740	.64	--	Method 181.99	--	395	1446.0 s	8.86	231	210.00	-.33
			043	0.5700	.60	040	12.340	.71	035	654.00	1.34	324	201.50	-.43
			231	0.5650	.49				009	655.74	1.34	040	205.30	-.49
--	Method 165.00	--	361	0.5600	.39	--	Method 181.XX	--	247	605.00	.85	102	190.17	-.75
055	0.7900 S	10.16	251	0.5600	.39	324	61.500	2.44	377	575.00 X	.56	232	144.50	-2.02
391	0.7580 S	9.00	330	0.5550	.31	231	45.000	1.47	096	532.50	.19			
137	0.6350 R	4.10	393	0.5520	.25	009	39.310	1.13	Avg	515.91		--	Method 221.00	--
028	0.5740	1.69	106	0.5400	.18	377	33.500 R	.83	324	483.50	-.33	351	1.9180	1.21
393	0.5520	.84	247	0.5400	.03	Avg	20.275		102	471.64	-.43	363	1.8900	1.16
Avg	0.5306		Avg	0.5383		247	19.350	-.07	376	423.00	-.89	037	1.8850	.99
023	0.5215	-.36	023	0.5215	-.30	096	14.500	-.34	193	422.50	-.89	193	1.8550	.93
029	0.5200	-.41	029	0.5200	-.33	102	13.875	-.39	232	336.20	-1.72	391	1.7560 R	.92
040	0.5110	-.78	397	0.5226 X	-.42	035	13.800	-.39				055	1.8650	.82
220	0.5050	-1.01	040	0.5110	-.49	193	12.950	-.43	--	Method 202.00	--	028	1.8550	.79
			220	0.5050	-.60	040	12.340	-.47	395	400.00 S	17.85	105	1.8600	.78
--	Method 165.70	--	419	0.4750	-1.17	394	10.440	-.58	193	242.50	1.19	220	1.8500	.74
043	0.5700	-.71	232	0.4246	-2.08	397	8.1072	-.72	Avg	242.00		390	1.8400	.65
			009	0.4206	-2.11	232	7.8550	-.74	397	241.50	-.30	029	1.8369 X	.61
--	Method 165.99	--				376	4.5500	-.94				177	1.8325	.58
354	0.6565 R	2.10	--	Method 181.00	--				--	Method 202.30	--	395	1.7900	.27
360	0.6400	1.73	193	12.950	1.12	--	Method 191.00	--	009	267.54	1.55	095	1.7800	.21
324	0.5750	.70	Avg	10.499		395	1446.0 S	111.34	377	252.00 X	1.16	234	1.7650	.09
231	0.5650	.54	394	10.440	-.21	193	422.50	.71	Avg	210.13		Avg	1.7539	
251	0.5600	.45	397	8.1072	-1.09	Avg	422.50		247	210.00	-.13	137	1.7450	-.34
361	0.5600	.45							324	201.50	-.25	043	1.7150	-.34
330	0.5550	.38	--	Method 181.30	--	--	Method 191.30	--	231	210.00	-.27	090	1.7000	-.42
106	0.5400	.21	324	61.500	1.99	035	654.00	1.24	040	205.30	-.38	262	1.6750	-.58
247	0.5400	.14	231	45.000	1.09	009	655.74	1.23	102	190.17	-.56	296	1.6850	-.65
			009	39.310	.77	247	605.00	.75	232	144.50	-1.77	397	1.6613	-.70
397	0.5226 X	-.31	377	33.500 X	.51	377	575.00 X	.46				260	1.6650	-.81
419	0.4750	-.93	Avg	25.324		096	532.50	.12	--	Method 202.XX	--	030	1.5000	-1.87
232	0.4246	-1.74	247	19.350	-.33	Avg	526.29		395	400.00 s	5.13	405	1.4750	-2.06
009	0.4206	-1.77												

* 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
--	Method 221.00	--	--	Method 221.XX	--	--	Method 221.XX	--	--	Method 241.30	--	--	Method 241.XX	--
233	1.4500	-2.24	361	1.9300	.92	419	1.6500	-1.10	023	24.614	.64	037	24.435	.24
			376	1.9250	.89	232	1.6215	-1.33	106	24.450	.61	106	24.450	.23
--	Method 221.30	--	363	1.8900	.85	402	1.6150	-1.37	131	24.030	.54	233	24.350	.19
360	2.0900	1.92	351	1.9180	.84	030	1.5000	-2.17	096	24.070	.52	040	24.203	.10
041	2.0100	1.25	377	1.9150 X	.81	405	1.4750	-2.36	231	23.000	.29	096	24.070	.04
394	1.9700 R	1.22	324	1.8900	.81	233	1.4500	-2.53	330	21.775	.25	Avg	24.056	
330	1.9850	1.16	251	1.9100	.79				377	22.400 X	.15	030	23.900	-.25
102	1.9769	1.10	193	1.8550	.66	--	Method 241.00	--	035	21.850	.03	029	23.519 X	-.31
035	1.9500	.77	037	1.8850	.63	395	26.270	1.89	Avg	22.380		043	23.490	-.33
324	1.8900	.63	131	1.8700	.49	137	26.130	1.76	360	20.985	-.16	351	23.579	-.34
361	1.9300	.57	028	1.8550	.45	234	25.130	1.03	232	18.400	-.74	090	23.440	-.35
376	1.9250	.54	055	1.8650	.45	095	24.870 X	.95	247	15.100	-1.47	296	23.485	-.39
377	1.9150 X	.44	105	1.8600	.41	028	25.150	.88	102	14.598	-1.58	131	24.030	-.43
251	1.9100	.43	220	1.8500	.40	177	25.031	.75	251	11.880 S	-2.19	231	23.000	-.63
131	1.8700	.06	231	1.8500	.35	262	24.850	.66	402	5.5500 S	-3.59	193	22.850	-.74
Avg	1.8622		023	1.8490	.34	405	24.885	.60				055	22.810	-.75
247	1.8500	-.10	247	1.8500	.34	037	24.435	.24	--	Method 241.70	--	390	23.105 R	-.92
231	1.8500	-.13	390	1.8400	.31	233	24.350	.18	220	24.770	.71	397	22.448	-.92
023	1.8490	-.14	106	1.8400	.27	Avg	24.235					377	22.400 X	-.95
106	1.8400	-.18	029	1.8369 X	.25	040	24.203	-.09	--	Method 241.99	--	035	21.850	-1.26
354	1.8345	-.25	354	1.8345	.25	030	23.900	-.48	419	12.900 S	.00	330	21.775 R	-1.45
393	1.8075	-.46	177	1.8325	.22	105	24.100	-.66				360	20.985	-1.76
042	1.7700	-.77	393	1.8075	.04	029	23.519 X	-.66	--	Method 241.XX	--	232	18.400	-3.24
040	1.7680	-.80	Avg	1.8024		351	23.579	-.70	324	27.475	1.96	247	15.100 A	-5.12
009	1.7111	-1.29	395	1.7900	-.09	043	23.490	-.70	354	27.287	1.94	102	14.598 A	-5.41
232	1.6215	-2.03	095	1.7800	-.18	090	23.440	-.74	395	26.270	1.27	419	12.900 s	-6.38
402	1.6150	-2.08	042	1.7700	-.23	296	23.485	-.78	137	26.130	1.19	251	11.880 s	-6.97
			234	1.7650	-.27	193	22.850	-1.35	361	25.665	.92	402	5.5500 s	-10.59
--	Method 221.99	--	040	1.7680	-.28	055	22.810	-1.37	009	24.828 R	.86	073	5.4850 s	-10.63
419	1.6500	.71	137	1.7450	-.52	390	23.105 R	-1.59	234	25.130	.72			
			043	1.7150	-.65	397	22.448	-1.66	095	24.870 X	.66	--	Method 251.00	--
--	Method 221.XX	--	009	1.7111	-.71	073	5.4850 s	-17.37	028	25.150	.64	193	6495.0	.87
360	2.0900	2.09	090	1.7000	-.75				177	25.031	.56	Avg	5640.8	
041	2.0100	1.51	262	1.6750	-.92	--	Method 241.30	--	262	24.850	.50	397	4786.5	-.86
394	1.9700 R	1.40	296	1.6850	-.93	324	27.475	1.28	405	24.885	.47			
330	1.9850	1.39	391	1.7560 R	-.96	354	27.287	1.26	220	24.770	.43	--	Method 251.30	--
102	1.9769	1.34	397	1.6613	-1.03	361	25.665	.87	105	24.100	.40	009	4778.5	1.14
035	1.9500	1.08	260	1.6650	-1.09	009	24.828 R	.75	023	24.614	.34	231	4750.0	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
--	Method 251.30	--	--	Method 261.00	--	--	Method 261.99	--	--	Method 261.XX	--	--	Method 281.XX	--
324	4886.5	.88	043	4.4500	-.95	Avg	4.4800		296	4.4950	-.75	296	460.20	.57
Avg	4302.5		390	4.2650	-1.77	419	4.1050	-.88	095	4.4550	-.86	040	457.76	.55
035	4200.0	-.24	090	4.2300	-1.95				043	4.4500	-.88	231	455.00	.54
232	3645.0	-.99	405	3.2000 s	-6.52	--	Method 261.XX	--	402	4.4100	-.99	040	397.80	.25
247	3555.0	-1.12				330	5.6350	2.64	390	4.2650	-1.42	Avg	359.88	
			--	Method 261.11	--	354	5.5200	2.32	090	4.2300	-1.54	376	28.650	-1.88
--	Method 251.99	--	040	4.6465	1.16	360	5.2150	1.43	042	4.1900 R	-1.86			
040	3874.2	.71	Avg	4.5500		324	5.1900	1.34	419	4.1050	-1.91	--	Method 289.00	--
			397	4.5484	-.22	231	5.1000	1.06	232	4.0315	-2.11	220	200.00	.71
--	Method 251.XX	--	095	4.4550	-1.05	220	5.0550	1.01	405	3.2000 s	-4.57			
193	6495.0	2.13				035	5.0500	.95				--	Method 289.30	--
009	4778.5	.69	--	Method 261.30	--	361	5.0500	.91	--	Method 271.00	--	377	242.00 X	1.34
231	4750.0	.64	330	5.6350	1.98	137	5.0100	.79	395	1.9000	.00	009	228.06	.88
324	4886.5	.37	354	5.5200	1.71	105	4.9950	.75				231	225.50	.81
397	4786.5	.26	360	5.2150	.96	023	4.9695	.73	--	Method 271.30	--	247	211.50	.40
			231	5.1000	.63	028	4.9450	.60	419	1.8300	.00	251	200.00	.03
035	4200.0	-.41	035	5.0500	.55	377	4.7800 X	.37				Avg	198.93	
040	3874.2	-.75	361	5.0500	.51	394	4.8550	.33	--	Method 271.XX	--	102	173.79	-.76
232	3645.0	-.99	023	4.9695	.38	106	4.8300	.27	395	1.9000	.87	324	155.50	-1.32
247	3555.0	-1.09	Avg	4.8498		395	4.7900	.14	Avg	1.8650		232	155.10	-1.33
			106	4.8300	-.09	177	4.7575	.08	419	1.8300	-.87			
--	Method 261.00	--	096	4.7450	-.27	096	4.7450	.04				--	Method 289.99	--
220	5.0550 R	1.88	377	4.7800 X	-.35	Avg	4.7431		--	Method 281.00	--	040	232.40	1.09
137	5.0100	1.58	131	4.7150	-.38	055	4.7200	-.07	232	1887.5	.71	Avg	216.20	
105	4.9950	1.52	009	4.6757	-.51	233	4.7000	-.17				419	200.00	-.56
028	4.9450	1.29	251	4.6250	-.57	037	4.6850	-.19	--	Method 281.30	--			
395	4.7900	.60	102	4.5942	-.65	131	4.7150	-.21	231	455.00	.78	--	Method 289.XX	--
260	4.7300	.52	247	4.5000	-.88	260	4.7300	-.27	040	397.80	.51	377	242.00 X	1.50
177	4.7575	.46	402	4.4100	-1.11	234	4.6450	-.29	Avg	293.82		040	232.40 R	1.44
055	4.7200	.28	232	4.0315	-2.07	040	4.6465	-.33	376	28.650	-1.28	009	228.06	.98
233	4.7000	.26				251	4.6250	-.35				231	225.50	.89
037	4.6850	.17	--	Method 261.31	--	009	4.6757	-.36	--	Method 281.99	--	247	211.50	.44
Avg	4.6568		324	5.1900	.80	351	4.6330	-.38	296	460.20	1.12	220	200.00	.34
234	4.6450	-.09	Avg	4.6900		193	4.5950	-.44	Avg	458.98		251	200.00	.03
193	4.5950	-.28	042	4.1900	-.93	102	4.5942	-.44	040	457.76	-.50	419	200.00	.03
351	4.6330	-.31				397	4.5484	-.58				Avg	199.15	
262	4.5200	-.63	--	Method 261.99	--	262	4.5200	-.67	--	Method 281.XX	--	102	173.79	-.86
296	4.4950	-.76	394	4.8550	.86	247	4.5000	-.72	232	1887.5 R	8.66	324	155.50	-1.49

* 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
--	Method 289.XX	--	--	Method 311.00	--	--	Method 321.00	--	--	Method 321.XX	--	--	Method 321.XX	--
232	155.10	-1.50	193	0.2640	.71	043	6.3700	-.69	354	8.7260 s	3.60	090	6.2800	-1.26
						395	6.3650	-.70	360	8.0650	2.27	042	6.2850 R	-1.46
--	Method 291.00	--	--	Method 311.30	--	090	6.2800	-.89	231	7.7000	1.56	262	6.1500	-1.51
395	664.58	1.29	247	0.3200	.00	262	6.1500	-1.15	330	7.6500	1.45	390	6.0950 R	-1.72
Avg	513.24					390	6.0950 R	-1.39	095	7.6350	1.43	073	5.9850 R	-1.93
193	446.50	-.57	--	Method 311.99	--	073	5.9850 R	-1.60	324	7.4700	1.10	030	5.4500	-2.89
397	428.63	-.72	102	0.3718	1.06	030	5.4500	-2.59	023	7.4615	1.09	402	5.0000 A	-3.78
			035	0.3475	.74				105	7.3550	.98	232	4.7674 s	-4.24
--	Method 291.30	--	Avg	0.3255		--	Method 321.30	--	102	7.3078	.82			
377	511.50 X	1.96	096	0.3150	-.27	354	8.7260 S	3.84	131	7.2950	.76	--	Method 325.00	--
247	413.00	.58	009	0.2678	-1.32	360	8.0650	2.13	035	7.2950	.76	137	6.9400	1.24
102	406.20	.42				231	7.7000	1.24	055	7.2200	.64	Avg	4.3400	
Avg	377.94		--	Method 311.XX	--	330	7.6500	1.09	106	7.2200	.60	395	3.6800	-.32
376	367.50	-.17	102	0.3718	1.53	023	7.4615	.65	391	7.1155	.47	030	2.4000	-.93
231	370.50	-.39	035	0.3475 R	1.10	324	7.4700	.64	377	7.0750 X	.32			
324	357.00	-.40	247	0.3200	.29	102	7.3078	.39	169	7.0587	.32			
009	316.69	-.89	096	0.3150	.21	131	7.2950	.27	247	7.0050	.18			
232	281.10	-1.42	Avg	0.3077		035	7.2950	.27	177	6.9870	.18			
			009	0.2678	-.95	106	7.2200	.00	376	6.9800	.15			
--	Method 291.99	--	193	0.2640	-1.06	Avg	7.2181		028	6.9650	.10			
035	416.50	.71				377	7.0750 X	-.37	361	6.9200	.02			
			--	Method 321.00	--	247	7.0050	-.54	Avg	6.9150				
--	Method 291.XX	--	095	7.6350	1.92	376	6.9800	-.61	397	6.8073	-.23			
395	664.58	2.44	105	7.3550	1.43	361	6.9200	-.75	251	6.7800	-.27			
377	511.50 X	.96	055	7.2200	1.09	251	6.7800	-1.11	037	6.7650	-.32			
035	416.50 R	.77	391	7.1155	.89	009	6.6407	-1.50	351	6.7305	-.36			
193	446.50	.31	169	7.0587	.75	040	6.6250	-1.51	234	6.7100	-.40			
397	428.63	.14	177	6.9870	.59	394	6.6350 R	-1.68	363	6.6950	-.44			
Avg	414.84		028	6.9650	.54	042	6.2850 R	-2.54	040	6.6250	-.60			
102	406.20	-.10	397	6.8073	.23	402	5.0000 s	-5.58	009	6.6407	-.62			
247	413.00	-.19	037	6.7650	.18	232	4.7674 s	-6.17	220	6.6250	-.62			
376	367.50	-.47	351	6.7305	.05				296	6.5950	-.63			
231	370.50	-.50	234	6.7100	.01	--	Method 321.99	--	419	6.5700	-.69			
324	357.00	-.59	Avg	6.7043		220	6.6250	1.13	394	6.6350 R	-.85			
009	316.69	-.96	363	6.6950	-.04	Avg	6.5975		193	6.4200	-.98			
232	281.10	-1.32	296	6.5950	-.23	419	6.5700	-.47	029	6.4117	-.99			
			193	6.4200	-.59				043	6.3700	-1.08			
			029	6.4117	-.60				395	6.3650	-1.09			

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

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
003.10	5	0.0000	1.06	0.01	202.XX	11	0.4665	1.81	0.22
003.XX	6	0.0000	1.05	0.02	221.00	25	0.0006	0.96	0.31
005.00	3	0.0000	1.12	0.01	221.30	23	0.0390	0.97	0.31
005.XX	4	0.0000	1.08	0.01	221.XX	49	0.0178	0.97	0.28
007.99	2	0.0000	1.21	0.14	241.00	23	-0.8007	3.73	0.41
007.XX	2	0.0000	1.21	0.14	241.30	18	-0.1611	1.29	0.12
009.10	2	0.0000	1.22	0.00	241.XX	43	-1.0816	2.90	0.27
009.XX	2	0.0000	1.22	0.00	251.00	2	0.0000	1.21	0.12
010.10	2	0.0000	0.23	0.85	251.30	6	0.0000	0.89	0.50
010.11	9	0.9087	2.33	0.17	251.XX	9	0.0000	0.98	0.31
010.12	6	0.0000	1.04	0.14	261.00	19	-0.2494	1.83	0.24
010.60	51	-3.0051	20.37	0.88	261.11	3	0.0000	0.99	0.42
010.99	6	1.3059	3.33	0.25	261.30	17	0.0000	1.00	0.17
010.XX	71	-0.9874	9.46	0.44	261.31	2	0.0000	1.12	0.34
020.XX	2	0.0000	1.22	0.01	261.99	2	0.0000	1.21	0.14
050.XX	2	0.0000	1.19	0.21	261.XX	43	-0.1443	1.21	0.22
060.00	2	0.0000	1.22	0.01	271.XX	2	0.0000	1.22	0.00
060.XX	2	0.0000	1.22	0.01	281.30	3	0.0000	1.12	0.06
101.30	8	-0.2647	1.22	0.15	281.99	2	0.0000	0.27	0.84
101.XX	8	-0.2647	1.22	0.15	281.XX	5	1.6527	4.04	0.23
121.00	3	0.0000	1.05	0.31	289.30	8	0.0000	1.02	0.15
121.30	7	0.0000	0.97	0.36	289.99	2	0.0000	0.80	0.66
121.XX	10	0.0000	0.96	0.36	289.XX	11	0.1022	1.01	0.33
144.01	14	0.4457	3.36	0.45	291.00	3	0.0000	1.12	0.03
144.99	20	0.0869	1.38	0.15	291.30	8	0.0000	1.01	0.23
144.XX	36	0.0714	1.31	0.14	291.XX	12	0.0014	0.97	0.26
151.30	5	0.0000	1.05	0.10	311.99	4	0.0000	1.03	0.28
151.XX	6	0.0000	1.04	0.10	311.XX	6	0.1581	1.02	0.25
165.00	9	2.5563	4.23	0.70	321.00	22	-0.1244	1.03	0.24
165.99	13	0.1530	1.11	0.25	321.30	21	-0.5605	2.23	0.34
165.XX	23	0.4595	1.57	0.29	321.99	2	0.0000	0.37	0.82
181.00	3	0.0000	1.11	0.14	321.XX	45	-0.2155	1.41	0.24
181.30	10	0.0000	1.02	0.10	325.00	3	0.0000	1.12	0.01
181.XX	14	0.0559	1.00	0.10	325.XX	2	0.1576	1.53	0.01
191.00	2	55.6711	78.73	0.50					
191.30	9	0.0000	1.02	0.13					
191.XX	11	0.8052	2.84	0.12					
202.00	3	5.9484	10.30	0.71					
202.30	8	0.0000	1.01	0.22					