MAGRUDER - Fertilizer Check Sample No. - 200201 Grade 6-24-24

Method	AOAC Ref.	Method Code	- Pass 1 Results for 80 Labs - No. of Labs	Grand Avg.	Std. Dev.	Average Range of Dups	- Pass 2 Results for 80 Labs - No. of Labs	Grand Avg.	Std. Dev.	Average Range of Dups
Ammoniacal Nitrogen, Other		001.99	2	5.5150	0.0790	0.0300	2	5.5150	0.0790	0.0300
Nitrate Nitrogen, Other		002.99	1	0.0300	0.0283	0.0400	1	0.0300	0.0283	0.0400
Water Insoluble Nitrogen, Meth II(Katz)	970.04	003.20	1	5.7750	0.0636	0.0900	1	5.7750	0.0636	0.0900
Ammon & Nitrate N, Devarda	892.01	009.10	2	5.3825	0.1362	0.1650	2	5.3825	0.1362	0.1650
Total Nitrogen, Modified Comprehensive	978.02	010.11	11	5.6738	0.1124	0.0413	11	5.7011	0.1346	0.0341
Total Nitrogen, Salicylic	955.04D	010.12	9	5.6117	0.0692	0.0311	9	5.6117	0.0692	0.0311
Total Nitrogen, Comprehensive	970.02	010.17	1	5.6450	0.0778	0.1100	1	5.6450	0.0778	0.1100
Total Nitrogen, Combustion		010.60	46	5.6563	0.0939	0.0440	44	5.6546	0.0940	0.0385
Total Nitrogen, Other		010.99	6	5.6398	0.1188	0.0318	6	5.6398	0.1188	0.0318
Method Group 010.XX PCT			73	5.6519	0.0966	0.0419	69	5.6465	0.0905	0.0374
Total Phosphate, Grav Quimociac	962.02	020.10	7	22.481	0.3847	0.1600	6	22.433	0.3723	0.0800
Total Phosphate, Spectrometric	958.01	020.20	15	22.442	0.2090	0.0953	15	22.442	0.2090	0.0953
Total Phosphate, Alka. Quimociac	969.02	020.30	1	22.609	0.0668	0.0945	1	22.609	0.0668	0.0945
Total Phosphate, Automated	978.01	020.40	6	22.488	0.1038	0.1217	6	22.488	0.1038	0.1217
Total Phosphate, ICP		020.50	2	22.301	0.5076	0.0196	2	22.301	0.5076	0.0196
Total Phosphate, Other		020.99	2	22.594	0.1088	0.0135	2	22.594	0.1088	0.0135
Method Group 020.XX PCT			34	22.482	0.2746	0.1056	33	22.473	0.2682	0.0894
Insoluble Phosphate, Grav Quimociac ...	963.03C	030.10	1	0.3250	0.0212	0.0300	1	0.3250	0.0212	0.0300
Insoluble Phosphate, Spectrometric	963.03C	030.20	2	0.4575	0.2225	0.0150	2	0.4575	0.2225	0.0150
Insoluble Phosphate, Automated	978.01	030.40	3	0.3267	0.0484	0.0133	3	0.3267	0.0484	0.0133
Insoluble Phosphate, Other		030.99	1	0.2950	0.0495	0.0700	1	0.2950	0.0495	0.0700
Method Group 030.XX PCT			7	0.3593	0.1297	0.0243	7	0.3593	0.1297	0.0243
InDir Available Phosphate, Grav Quim ..	960.02	040.10	1	22.260	0.0424	0.0600	1	22.260	0.0424	0.0600
InDir Available Phosphate, Spectrometri	960.02	040.20	3	22.505	0.8042	0.0500	3	22.505	0.8042	0.0500
InDir Available Phosphate, Automated ..	960.02	040.40	2	22.103	0.0591	0.0950	2	22.103	0.0591	0.0950
InDir Available Phosphate, Other		040.99	1	22.130	0.0707	0.1000	1	22.130	0.0707	0.1000
Method Group 040.XX PCT			7	22.301	0.5349	0.0714	7	22.301	0.5349	0.0714
Dir Available Phosphate, Grav Quim	960.03E	041.10	18	22.276	0.1960	0.0984	18	22.276	0.1960	0.0984
Dir Available Phosphate, Spectrometric	960.03D	041.20	4	22.440	0.6050	0.2111	4	22.440	0.6050	0.2111
Dir Available Phosphate, Alka. Quim ...	960.03C	041.30	1	21.515	0.1061	0.1500	1	21.515	0.1061	0.1500
Dir Available Phosphate, Automated	978.01	041.40	5	22.227	0.3174	0.0506	5	22.227	0.3174	0.0506
Dir Available Phosphate, ICP		041.50	6	22.133	0.3801	0.1300	6	22.133	0.3801	0.1300
Dir Available Phosphate, EDTA Extract .	993.01	041.60	9	22.524	0.2136	0.0870	9	22.524	0.2136	0.0870
Dir Available Phosphate, Other		041.99	1	22.150	0.2121	0.3000	1	22.150	0.2121	0.3000
Method Group 041.XX PCT			45	22.280	0.3535	0.1163	45	22.280	0.3535	0.1163
Water Soluble Phosphate, Spectrometric	970.01	048.20	4	17.354	0.3235	0.1725	4	17.354	0.3235	0.1725
Water Soluble Phosphate, Other		048.99	1	19.870	0.0566	0.0800	1	19.870	0.0566	0.0800
Method Group 048.XX PCT			5	17.857	1.0988	0.1540	5	17.857	1.0988	0.1540
Soluble Potash, STPB Oxalate	958.02	050.00	21	27.012	0.3243	0.0835	20	27.061	0.2442	0.0867

Method	AOAC Ref.	Method Code	- Pass 1 Results for 80 Labs - No. of Labs	Grand Avg.	Std. Dev.	Average Range of Dups	- Pass 2 Results for 80 Labs - No. of Labs	Grand Avg.	Std. Dev.	Average Range of Dups
Soluble Potash, STPB Citrate	969.04	050.10	1	27.128	0.0000	0.0000	1	27.128	0.0000	0.0000
Soluble Potash, AA (Oxalate)		050.30	9	26.738	0.7522	0.1560	8	26.720	0.7882	0.0868
Soluble Potash, ICP (Oxalate)		050.50	2	26.585	0.4721	0.1917	2	26.585	0.4721	0.1917
Soluble Potash, ICP (Citrate)		050.51	7	27.129	0.5910	0.0614	7	27.129	0.5910	0.0614
Soluble Potash, Flame (Oxalate)	983.02(a	050.60	3	27.997	0.7172	0.2867	3	27.997	0.7172	0.2867
Soluble Potash, Flame (Citrate)	983.02(b	050.61	7	27.296	0.2059	0.1671	7	27.296	0.2059	0.1671
Soluble Potash, Other		050.99	15	26.516	0.8401	0.2991	13	26.510	0.8098	0.1590
Method Group 050.XX PCT			66	26.961	0.6968	0.1606	60	26.980	0.6282	0.0941
Free Water, Vacuum Oven	965.08B	060.00	6	0.9112	0.3151	0.0376	6	0.9112	0.3151	0.0376
Acid Soluble Calcium, AA	945.04	101.00	1	6.0100	0.0707	0.1000	1	6.0100	0.0707	0.1000
Acid Soluble Calcium, ICP		101.30	7	5.8793	0.2469	0.1100	6	5.8667	0.2389	0.0367
Method Group 101.XX PCT			8	5.8957	0.2348	0.1088	7	5.8872	0.2267	0.0457
Acid Soluble Magnesium, AA	984.01	121.00	2	0.2865	0.0196	0.0220	2	0.2865	0.0196	0.0220
Acid Soluble Magnesium, ICP		121.30	7	0.2720	0.0174	0.0142	6	0.2723	0.0139	0.0066
Method Group 121.XX PCT			9	0.2752	0.0184	0.0160	8	0.2759	0.0161	0.0104
Water Soluble Magnesium, AA		131.00	1	0.0300	0.0000	0.0000	1	0.0300	0.0000	0.0000
Sulfur, Gravimetric	980.02a	144.01	4	0.5999	0.2102	0.0077	4	0.5999	0.2102	0.0077
Sulfur, Other		144.99	6	0.6356	0.1798	0.0084	6	0.6356	0.1798	0.0084
Method Group 144.XX PCT			10	0.6213	0.1879	0.0081	10	0.6213	0.1879	0.0081
Arsenic, ICP		151.30	3	3.6869	0.4975	0.3975	3	3.6869	0.4975	0.3975
Arsenic, Other		151.99	2	4.4750	0.6185	0.1500	2	4.4750	0.6185	0.1500
Method Group 151.XX PPM			5	4.0022	0.6562	0.2985	5	4.0022	0.6562	0.2985
Acid Soluble Boron, Other		165.99	1	0.0216	0.0013	0.0019	1	0.0216	0.0013	0.0019
Cadmium, Atomic Absorption		181.00	3	1.8609	0.1984	0.1002	3	1.8609	0.1984	0.1002
Cadmium, ICP		181.30	10	1.9348	0.1615	0.1689	10	1.9348	0.1615	0.1689
Cadmium, Other		181.99	1	2.0000	0.0000	0.0000	1	2.0000	0.0000	0.0000
Method Group 181.XX PPM			14	1.9236	0.1645	0.1421	14	1.9236	0.1645	0.1421
Water Soluble Chlorine, Titrimetric ...	928.02	190.00	1	20.755	0.0071	0.0100	1	20.755	0.0071	0.0100
Water Soluble Chlorine, Other		190.99	1	21.296	0.0571	0.0808	1	21.296	0.0571	0.0808
Method Group 190.XX PCT			2	21.026	0.3141	0.0454	2	21.026	0.3141	0.0454
Chromium, Atomic Absorption		191.00	2	38.500	1.2910	1.0000	2	38.500	1.2910	1.0000
Chromium, ICP		191.30	5	39.094	10.912	1.4855	5	39.094	10.912	1.4855
Method Group 191.XX PPM			7	38.924	9.1045	1.3468	7	38.924	9.1045	1.3468
Acid Soluble Cobalt, AA		202.00	2	5.7500	0.9574	0.5000	2	5.7500	0.9574	0.5000
Acid Soluble Cobalt, ICP	965.11	202.30	7	2.0153	0.8468	0.2666	7	2.0153	0.8468	0.2666
Acid Soluble Cobalt, Other		202.99	2	2.5000	0.5774	0.0000	2	2.5000	0.5774	0.0000
Method Group 202.XX PPM			11	2.7825	1.6454	0.2606	10	2.4107	1.1687	0.1867
Acid Soluble Copper, Atomic Absorption	975.01	221.00	4	0.0013	0.0005	0.0001	3	0.0014	0.0005	0.0000
Acid Soluble Copper, ICP		221.30	9	0.0007	0.0002	0.0000	8	0.0007	0.0002	0.0000

Method	AOAC Ref.	Method Code	- Pass 1 Results for 80 Labs - No. of Labs	Grand Avg.	Std. Dev.	Average Range of Dups	- Pass 2 Results for 80 Labs - No. of Labs	Grand Avg.	Std. Dev.	Average Range of Dups
Acid Soluble Copper, Other		221.99	2	0.0011	0.0002	0.0002	2	0.0011	0.0002	0.0002
Method Group 221.XX PCT			16	0.0009	0.0004	0.0001	14	0.0009	0.0004	0.0000
Acid Soluble Iron, ICP		241.30	8	0.4935	0.0366	0.0062	8	0.4935	0.0366	0.0062
Method Group 241.XX PCT			8	0.4935	0.0366	0.0062	8	0.4935	0.0366	0.0062
Lead, Atomic Absorption		251.00	3	2.6444	1.8463	0.2069	3	2.6444	1.8463	0.2069
Lead, ICP		251.30	5	4.7630	2.2448	0.7220	5	4.7630	2.2448	0.7220
Lead, Other		251.99	1	8.0000	0.0000	0.0000	1	8.0000	0.0000	0.0000
Method Group 251.XX PPM			9	4.4165	2.5219	0.4701	8	3.9498	2.2353	0.2914
Acid Soluble Manganese, AA	972.02a	261.00	1	0.0170	0.0014	0.0020	1	0.0170	0.0014	0.0020
Acid Soluble Manganese, ICP	972.02a	261.30	7	0.0157	0.0008	0.0004	7	0.0157	0.0008	0.0004
Method Group 261.XX PCT			8	0.0158	0.0009	0.0006	8	0.0158	0.0009	0.0006
Mercury, ICP		281.30	1	0.1050	0.0212	0.0300	1	0.1050	0.0212	0.0300
Mercury, Other		281.99	1	0.0200	0.0000	0.0000	1	0.0200	0.0000	0.0000
Method Group 281.XX PPM			2	0.0625	0.0506	0.0150	2	0.0625	0.0506	0.0150
Molybdenum, ICP		289.30	8	4.3235	0.3960	0.2320	7	4.3126	0.3941	0.1509
Molybdenum, Other		289.99	2	5.4750	0.6397	0.2500	2	5.4750	0.6397	0.2500
Method Group 289.XX PPM			10	4.5538	0.6416	0.2356	9	4.5709	0.6620	0.1729
Nickel, Atomic Absorption		291.00	2	11.375	4.7891	0.8500	2	11.375	4.7891	0.8500
Nickel, ICP		291.30	8	7.6818	1.1429	0.5774	8	7.6818	1.1429	0.5774
Nickel, Other		291.99	1	6.4950	0.4879	0.6900	1	6.4950	0.4879	0.6900
Method Group 291.XX PPM			11	8.2454	2.5730	0.6372	10	7.5200	1.0940	0.6010
Selenium, ICP		301.30	1	1.0500	0.0707	0.1000	1	1.0500	0.0707	0.1000
Selenium, Other		301.99	3	0.2033	0.0437	0.0133	3	0.2033	0.0437	0.0133
Method Group 301.XX PPM			4	0.4150	0.3946	0.0350	4	0.4150	0.3946	0.0350
Sodium, Atomic Absorption	983.04	311.00	1	0.2965	0.0064	0.0090	1	0.2965	0.0064	0.0090
Sodium, Other		311.99	5	0.6684	0.1794	0.0080	5	0.6684	0.1794	0.0080
Method Group 311.XX PCT			6	0.6064	0.2174	0.0082	6	0.6064	0.2174	0.0082
Acid Soluble Zinc, Atomic Absorption ..	975.02	321.00	6	0.0043	0.0020	0.0003	5	0.0037	0.0014	0.0001
Acid Soluble Zin, ICP		321.30	11	0.0041	0.0010	0.0002	11	0.0041	0.0010	0.0002
Acid Soluble Zinc, Other		321.99	3	0.0055	0.0022	0.0003	3	0.0055	0.0022	0.0003
Method Group 321.XX PCT			20	0.0044	0.0016	0.0002	19	0.0042	0.0014	0.0002

MAGRUDER - Fertilizer Check Sample No. - 200201 Grade 6-24-24

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index
--	Method 001.99	--
320	5.5800	.82
Avg	5.5150	
247	5.4500	-.91
--	Method 002.99	--
247	0.0300	.71
--	Method 003.20	--
391	5.7750	.71
--	Method 009.10	--
030	5.4000	.13
Avg	5.3825	
258	5.3650	-1.22
--	Method 010.11	--
405	5.9550	1.89
363	5.9400 S	1.79
414	5.7900	.66
Avg	5.6772	
288	5.6850	-.16
322	5.6669	-.30
029	5.6600	-.31
114	5.6550	-.36
028	5.6250	-.58
220	5.6400 R	-.69
211	5.5900	-.88
157	5.5750	-.94
148	5.5700	-.98
--	Method 010.12	--
162	5.7500	2.13
137	5.6700	.84
351	5.6340	.33
Avg	5.6117	
397	5.6069	-.19
326	5.6000	-.22
416	5.6026	-.39
--	Method 010.12	--
102	5.5500	-.89
415	5.5514	-1.03
185	5.5400	-1.04
--	Method 010.17	--
262	5.6450	.71
--	Method 010.60	--
043	5.8800 s	2.67
356	5.8750	2.42
325	5.8700	2.30
025	5.8250	1.81
234	5.8200	1.79
027	5.7725	1.25
086	5.7355	1.11
409	5.7000 R	1.07
029	5.7450	.96
037	5.7300	.91
360	5.6850 R	.86
292	5.7250	.75
106	5.7050	.60
330	5.7000	.48
275	5.6950	.43
376	5.6900	.39
251	5.6550	.37
369	5.6800	.27
377	5.6750	.27
131	5.6765	.23
024	5.6750	.22
028	5.6650	.19
401	5.6550	.05
Avg	5.6546	
390	5.6400	-.19
157	5.6450	-.19
035	5.6500	-.22
334	5.6340	-.22
220	5.6250	-.35
096	5.6250	-.41
--	Method 010.60	--
372	5.6250	-.41
041	5.6250	-.49
007	5.6500	-.53
040	5.6050	-.55
361	5.6050	-.55
324	5.6400	-.55
136	5.6000	-.58
142	5.5950	-.65
296	5.5850	-.76
247	5.5900	-.76
023	5.5850	-.79
057	5.5800	-.86
049	5.5700	-.92
095	5.5650	-.97
389	5.5600	-1.03
232	5.5300	-1.33
233	5.4750	-1.92
009	5.4300	-2.41
--	Method 010.99	--
090	5.8450	1.73
024	5.6850	.48
300	5.6450	.13
Avg	5.6398	
362	5.6150	-.24
153	5.5695	-.59
177	5.4790	-1.36
--	Method 010.XX	--
405	5.9550 A	3.41
363	5.9400 s	3.26
043	5.8800 s	2.85
356	5.8750	2.60
325	5.8700	2.48
090	5.8450	2.20
025	5.8250	1.97
234	5.8200	1.95
414	5.7900	1.59
--	Method 010.XX	--
027	5.7725	1.39
162	5.7500	1.27
086	5.7355	1.22
409	5.7000 R	1.16
029	5.7450	1.09
037	5.7300	1.02
360	5.6850 R	.93
292	5.7250	.87
106	5.7050	.70
330	5.7000	.59
024	5.6850	.58
007	5.6500	.55
275	5.6950	.54
376	5.6900	.49
288	5.6850	.46
251	5.6550	.40
369	5.6800	.37
377	5.6750	.36
322	5.6669	.33
131	5.6765	.33
024	5.6750	.32
028	5.6650	.26
137	5.6700	.26
035	5.6500	.22
114	5.6550	.19
029	5.6600	.19
401	5.6550	.11
Avg	5.6465	
390	5.6400	-.13
334	5.6340	-.14
351	5.6340	-.15
300	5.6450	-.17
157	5.6450	-.17
220	5.6250	-.29
028	5.6250	-.29
096	5.6250	-.36
372	5.6250	-.36
362	5.6150	-.39
--	Method 010.XX	--
041	5.6250	-.45
397	5.6069	-.46
361	5.6050	-.49
040	5.6050	-.49
136	5.6000	-.51
326	5.6000	-.53
324	5.6400	-.56
416	5.6026	-.56
142	5.5950	-.59
262	5.6450	-.61
296	5.5850	-.70
247	5.5900	-.71
023	5.5850	-.73
211	5.5900	-.77
220	5.6400 R	-.78
057	5.5800	-.81
157	5.5750	-.81
148	5.5700	-.85
153	5.5695	-.85
049	5.5700	-.87
095	5.5650	-.92
389	5.5600	-.98
102	5.5500	-1.07
415	5.5514	-1.13
185	5.5400	-1.18
232	5.5300	-1.29
177	5.4790	-1.85
233	5.4750	-1.90
009	5.4300	-2.42
--	Method 020.10	--
114	22.905	1.29
162	22.770 R	1.25
148	22.690	.69
090	22.585	.42
Avg	22.433	
300	22.350	-.29
313	22.270	-.44

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

MAGRUDER - Fertilizer Check Sample No. - 200201 Grade 6-24-24

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index
--	Method 020.10 --	
095	21.800	-1.70
--	Method 020.20 --	
392	23.055 s	2.95
391	22.700	1.32
258	22.700	1.25
362	22.645	.98
234	22.560	.68
324	22.545	.64
369	22.445	.55
292	22.525	.43
376	22.480	.38
363	22.495	.33
Avg	22.442	
220	22.395	-.23
232	22.360	-.40
288	22.325	-.57
334	22.315	-.62
356	22.245	-.98
030	21.900	-2.60
262	21.640 s	-3.84
--	Method 020.30 --	
416	22.609	-.71
--	Method 020.40 --	
193	22.520	1.67
035	22.565	.97
142	22.530	.42
Avg	22.488	
247	22.480	-.39
409	22.445	-.60
096	22.385	-1.04
--	Method 020.50 --	
330	22.615 S	3.20
361	22.740	.87
Avg	22.301	
--	Method 020.50 --	
157	21.861	-.87
389	20.750 S	-3.06
--	Method 020.99 --	
153	22.688	.87
Avg	22.594	
320	22.500	-.86
--	Method 020.XX --	
330	22.615 s	5.97
392	23.055	2.19
114	22.905	1.65
162	22.770 R	1.63
361	22.740	1.00
391	22.700	.92
258	22.700	.86
148	22.690	.81
153	22.688	.80
193	22.520	.66
362	22.645	.65
416	22.609	.54
090	22.585	.45
234	22.560	.44
035	22.565	.42
324	22.545	.42
376	22.480	.26
292	22.525	.23
142	22.530	.22
363	22.495	.19
247	22.480	.15
320	22.500	.10
Avg	22.473	
409	22.445	-.20
220	22.395	-.29
096	22.385	-.35
232	22.360	-.42
369	22.445	-.44
300	22.350	-.53
--	Method 020.XX --	
288	22.325	-.56
334	22.315	-.60
313	22.270	-.76
356	22.245	-.87
030	21.900	-2.14
157	21.861	-2.28
095	21.800	-2.51
262	21.640 s	-3.11
389	20.750 s	-6.43
--	Method 030.10 --	
090	0.3250	.71
--	Method 030.20 --	
363	0.6500	.87
Avg	0.4575	
220	0.2650	-.87
--	Method 030.40 --	
409	0.3600	.72
247	0.3550	.59
Avg	0.3267	
096	0.2650	-1.28
--	Method 030.99 --	
320	0.2950	-.71
--	Method 030.XX --	
363	0.6500	2.24
409	0.3600	.08
Avg	0.3593	
247	0.3550	-.05
090	0.3250	-.29
320	0.2950	-.56
220	0.2650	-.73
096	0.2650	-.73
--	Method 040.10 --	
090	22.260	.71
--	Method 040.20 --	
372	23.530	1.28
Avg	22.505	
220	22.130	-.47
363	21.855	-.81
--	Method 040.40 --	
096	22.120	.74
Avg	22.103	
409	22.085	-.98
--	Method 040.99 --	
247	22.130	.71
--	Method 040.XX --	
372	23.530	2.30
Avg	22.301	
090	22.260	-.10
220	22.130	-.32
247	22.130	-.33
096	22.120	-.35
409	22.085	-.42
363	21.855	-.84
--	Method 041.10 --	
296	22.640	1.86
414	22.510	1.42
041	22.470	1.22
211	22.480	1.04
028	22.440	.84
322	22.436	.83
137	22.395	.61
086	22.280	.41
Avg	22.276	
057	22.245	-.18
029	22.175	-.52
--	Method 041.10 --	
131	22.190	-.57
177	22.161	-.60
049	22.130	-.76
040	22.195	-.80
136	22.100	-.93
009	22.085	-.98
405	22.025	-1.29
326	22.015	-1.34
--	Method 041.20 --	
415	23.214	1.28
106	22.715	.55
Avg	22.440	
362	21.920	-.88
397	21.913	-.89
--	Method 041.30 --	
260	21.515	.71
--	Method 041.40 --	
023	22.725	1.58
025	22.395	.54
Avg	22.227	
029	22.090	-.43
131	22.040	-.59
027	21.884	-1.08
--	Method 041.50 --	
007	23.300 S	3.24
023	22.650	1.38
360	22.320	.63
102	22.200	.32
Avg	22.133	
361	22.115	-.06
325	22.045	-.24
251	21.470	-1.75

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

MAGRUDER - Fertilizer Check Sample No. - 200201 Grade 6-24-24

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index
--	Method 041.60 --	
296	22.830	1.44
377	22.830	1.43
397	22.658	.80
351	22.535	.05
Avg	22.524	
037	22.490	-.21
028	22.475	-.42
177	22.317	-.97
043	22.315	-1.06
288	22.270	-1.20
095	21.555 s	-4.61
--	Method 041.99 --	
401	22.150	.71
--	Method 041.XX --	
007	23.300 s	3.10
415	23.214	2.64
296	22.830	1.56
377	22.830	1.56
106	22.715	1.34
023	22.725	1.27
397	22.658	1.11
023	22.650	1.07
296	22.640	1.02
414	22.510	.78
351	22.535	.72
041	22.470	.67
037	22.490	.60
028	22.475	.59
211	22.480	.57
028	22.440	.46
322	22.436	.45
360	22.320	.44
025	22.395	.33
137	22.395	.33
043	22.315	.26
177	22.317	.11
--	Method 041.XX --	
Avg	22.280	
288	22.270	-.09
057	22.245	-.11
086	22.280	-.23
029	22.175	-.30
131	22.190	-.32
177	22.161	-.34
102	22.200	-.36
049	22.130	-.43
040	22.195	-.45
361	22.115	-.47
136	22.100	-.53
029	22.090	-.54
009	22.085	-.55
401	22.150	-.56
325	22.045	-.67
131	22.040	-.68
405	22.025	-.73
326	22.015	-.76
362	21.920	-1.07
397	21.913	-1.08
027	21.884	-1.12
095	21.555	-2.11
260	21.515	-2.18
251	21.470	-2.29
--	Method 048.20 --	
247	17.765	1.27
362	17.370	.31
Avg	17.354	
363	17.320	-.24
193	16.960	-1.31
--	Method 048.99 --	
275	19.870 X	.71
--	Method 048.XX --	
275	19.870 X	1.83
--	Method 048.XX --	
Avg	17.857	
247	17.765	-.08
362	17.370	-.45
363	17.320	-.49
193	16.960	-.83
--	Method 050.00 --	
131	28.525 s	6.00
416	27.500	1.81
090	27.305	1.06
345	27.275	1.02
350	27.270	.86
057	27.225	.69
326	27.220	.65
211	27.190	.60
220	27.190	.53
391	27.100	.44
049	27.105	.39
029	27.100	.16
Avg	27.061	
028	27.015	-.21
148	27.000	-.25
095	27.035	-.36
258	26.930	-.54
137	26.905	-.64
043	26.880	-.75
296	26.830	-.99
162	26.735	-1.35
392	26.410	-2.67
414	26.040 A	-4.18
300	22.745 s	-17.68
009	22.730 s	-17.74
--	Method 050.10 --	
322	27.128	.00
--	Method 050.30 --	
114	43.870 s	21.76
--	Method 050.30 --	
095	27.865	1.46
397	27.313	.75
136	27.175	.58
040	26.885 R	.50
234	27.095	.48
Avg	26.720	
142	26.450	-.34
193	26.350	-.48
405	26.285	-.56
351	25.227	-1.89
185	24.000 S	-3.45
--	Method 050.50 --	
157	26.980	.84
Avg	26.585	
324	26.190	-.89
106	22.230 S	-9.24
--	Method 050.51 --	
023	28.030	1.53
389	27.750	1.05
361	27.195	.11
Avg	27.129	
007	27.000	-.22
377	26.950	-.31
102	26.800	-.56
251	26.180	-1.61
--	Method 050.60 --	
390	28.755	1.06
Avg	27.997	
356	27.980	-.56
288	27.255	-1.03
415	24.565 S	-4.79
--	Method 050.61 --	
030	27.600	1.55
041	27.335	.97
--	Method 050.61 --	
035	27.340	.67
025	27.340	.26
Avg	27.296	
037	27.275	-.38
028	27.195	-.54
029	26.990	-1.49
--	Method 050.99 --	
360	27.675	1.50
325	27.600	1.35
177	27.527	1.26
363	27.360 R	1.26
232	26.835	.41
376	26.745	.31
275	26.645 X	.24
247	26.535	.07
Avg	26.510	
153	26.277	-.29
260	26.250	-.34
027	26.228	-.35
372	26.040	-.58
401	25.750 R	-1.23
262	25.300	-1.49
369	24.975	-1.91
330	24.960 S	-3.00
--	Method 050.XX --	
114	43.870 s	26.89
390	28.755	2.83
131	28.525	2.46
356	27.980 R	1.71
023	28.030	1.67
095	27.865	1.41
360	27.675 R	1.24
389	27.750	1.23
363	27.360 R	1.08
030	27.600	1.00
325	27.600	.99

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

MAGRUDER - Fertilizer Check Sample No. - 200201 Grade 6-24-24

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index
--	Method 050.XX	--
177	27.527	.87
416	27.500	.83
041	27.335	.64
035	27.340	.61
025	27.340	.57
090	27.305	.53
397	27.313	.53
345	27.275	.51
037	27.275	.48
350	27.270	.46
288	27.255	.44
057	27.225	.39
326	27.220	.38
211	27.190	.35
028	27.195	.35
361	27.195	.34
220	27.190	.33
136	27.175	.33
391	27.100	.25
049	27.105	.24
322	27.128	.24
029	27.100	.19
234	27.095	.18
095	27.035	.16
028	27.015	.07
148	27.000	.04
007	27.000	.03
029	26.990	.02
Avg	26.980	
258	26.930	-.08
157	26.980	-.08
377	26.950	-.09
137	26.905	-.12
043	26.880	-.17
232	26.835	-.24
296	26.830	-.26
102	26.800	-.29
162	26.735	-.40

Lab	Average*	Index
--	Method 050.XX	--
376	26.745	-.40
275	26.645 X	-.58
040	26.885 R	-.59
247	26.535	-.71
142	26.450	-.84
392	26.410	-.91
193	26.350	-1.01
405	26.285	-1.11
153	26.277	-1.12
260	26.250	-1.17
027	26.228	-1.20
251	26.180	-1.28
324	26.190	-1.28
372	26.040	-1.50
414	26.040	-1.50
401	25.750 R	-2.21
262	25.300	-2.67
351	25.227	-2.79
369	24.975 A	-3.20
415	24.565 s	-3.85
330	24.960 s	-4.38
185	24.000 s	-4.74
300	22.745 s	-6.74
009	22.730 s	-6.77
106	22.230 s	-7.57
--	Method 060.00	--
193	1.5450	2.01
Avg	0.9112	
362	0.8900	-.07
363	0.9000	-.10
416	0.8271	-.29
007	0.6550	-.82
361	0.6500	-.83
--	Method 101.00	--
043	6.0100	.71

Lab	Average*	Index
--	Method 101.30	--
361	6.1800	1.31
131	5.9550 R	1.21
009	6.0462	.75
096	6.0400	.73
Avg	5.8667	
324	5.6750	-.82
102	5.6542	-.89
035	5.6050	-1.10
--	Method 101.XX	--
361	6.1800	1.29
131	5.9550 R	1.25
009	6.0462	.70
096	6.0400	.68
043	6.0100	.58
Avg	5.8872	
324	5.6750	-.96
102	5.6542	-1.03
035	5.6050	-1.25
--	Method 121.00	--
086	0.2980	1.05
Avg	0.2865	
043	0.2750	-.64
193	0.1345 S	-7.74
--	Method 121.30	--
102	0.2864	1.03
324	0.2800	.91
247	0.2750	.41
009	0.2734	.08
131	0.2725	.04
Avg	0.2723	
035	0.2465	-1.85
096	0.2700 R	-2.16
--	Method 121.XX	--
086	0.2980	1.73

Lab	Average*	Index
--	Method 121.XX	--
102	0.2864	.68
324	0.2800	.67
Avg	0.2759	
009	0.2734	-.15
131	0.2725	-.21
043	0.2750	-.31
247	0.2750	-.31
035	0.2465	-1.82
096	0.2700 R	-1.90
193	0.1345 s	-8.77
--	Method 131.00	--
193	0.0300	.00
--	Method 144.01	--
043	0.7250	.60
288	0.7200	.57
102	0.6946	.45
Avg	0.5999	
193	0.2600	-1.62
--	Method 144.99	--
035	0.7490	.63
096	0.7350	.55
009	0.7029	.37
324	0.7000	.36
401	0.6720	.20
Avg	0.6356	
247	0.2550	-2.12
--	Method 144.XX	--
035	0.7490	.68
096	0.7350	.61
043	0.7250	.55
288	0.7200	.52
009	0.7029	.43
324	0.7000	.42
102	0.6946	.39

Lab	Average*	Index
401	0.6720	.27
Avg	0.6213	
193	0.2600	-1.92
247	0.2550	-1.95
--	Method 151.30	--
389	4.1500	.98
247	3.7500	.52
Avg	3.6869	
102	3.1608	-1.13
--	Method 151.99	--
409	5.0000	.85
Avg	4.4750	
220	3.9500	-.88
--	Method 151.XX	--
409	5.0000	1.52
389	4.1500	.32
Avg	4.0022	
220	3.9500	-.24
247	3.7500	-.54
102	3.1608	-1.32
--	Method 165.99	--
009	0.0216	.71
--	Method 181.00	--
193	2.8500 S	4.99
220	2.1000	1.31
Avg	1.8609	
300	1.7500	-.61
397	1.7327	-.65
--	Method 181.30	--
324	2.1500	1.62
035	2.0200	1.29
096	2.0000	.40

* 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
--	Method 181.30 --	
389	2.0000	.40
157	1.9350	.03
Avg	1.9348	
232	1.8800	-.36
102	1.9078	-.43
009	1.8050	-.90
106	1.9000	-1.26
376	1.7500	-1.47
247	0.5000 s	-8.88
--	Method 181.99 --	
409	2.0000	.00
--	Method 181.XX --	
193	2.8500 s	5.64
324	2.1500	1.65
035	2.0200	1.30
220	2.1000	1.23
096	2.0000	.46
389	2.0000	.46
409	2.0000	.46
157	1.9350	.08
Avg	1.9236	
232	1.8800	-.29
102	1.9078	-.40
009	1.8050	-.82
300	1.7500	-1.10
397	1.7327	-1.16
106	1.9000	-1.22
376	1.7500	-1.39
247	0.5000 s	-8.66
--	Method 190.00 --	
027	20.755	-.71
--	Method 190.99 --	
009	21.296	.71
--	Method 190.XX --	
009	21.296	.87
Avg	21.026	
027	20.755	-.86
--	Method 191.00 --	
193	39.500	.87
Avg	38.500	
220	37.500	-.87
--	Method 191.30 --	
096	58.800	1.81
009	39.215	.11
Avg	39.094	
035	35.000	-.38
102	32.403	-.61
247	30.050	-.83
--	Method 191.XX --	
096	58.800	2.19
009	39.215	.13
193	39.500	.08
Avg	38.924	
220	37.500	-.17
035	35.000	-.43
102	32.403	-.72
247	30.050	-.98
--	Method 202.00 --	
193	6.5000	.94
Avg	5.7500	
220	5.0000	-.78
--	Method 202.30 --	
009	3.8200	2.13
102	2.1873	.25
Avg	2.0153	
106	1.9500	-.10
247	1.9000	-.38
--	Method 202.30 --	
232	1.6500	-.47
389	1.3500	-.79
324	1.2500	-.95
--	Method 202.99 --	
409	3.0000	.87
Avg	2.5000	
320	2.0000	-.87
--	Method 202.XX --	
193	6.5000 R	3.53
220	5.0000	2.22
009	3.8200	1.21
409	3.0000	.50
Avg	2.4107	
102	2.1873	-.22
320	2.0000	-.35
106	1.9500	-.40
247	1.9000	-.51
232	1.6500	-.66
389	1.3500	-.91
324	1.2500	-1.02
--	Method 221.00 --	
086	0.0035 S	4.28
029	0.0025 S	2.40
390	0.0020	1.20
Avg	0.0014	
193	0.0013	-.18
234	0.0011 R	-.61
397	0.0009	-1.01
--	Method 221.30 --	
247	0.0014 s	4.11
102	0.0008	.99
106	0.0008	.71
232	0.0008	.52
009	0.0008	.47
--	Method 221.30 --	
330	0.0007	.12
389	0.0007	.12
Avg	0.0007	
324	0.0006	-.67
035	0.0005 R	-.82
157	0.0003	-2.25
--	Method 221.99 --	
409	0.0013	.73
Avg	0.0011	
220	0.0010	-.98
--	Method 221.XX --	
086	0.0035 s	6.19
029	0.0025 s	3.91
390	0.0020	2.55
247	0.0014	1.08
193	0.0013	.91
409	0.0013	.80
234	0.0011 R	.50
220	0.0010 R	.36
Avg	0.0009	
397	0.0009	-.09
102	0.0008	-.17
106	0.0008	-.27
232	0.0008	-.35
009	0.0008	-.36
330	0.0007	-.50
389	0.0007	-.50
324	0.0006	-.81
035	0.0005	-.86
157	0.0003	-1.44
--	Method 241.00 --	
193	0.2605 S	.00
--	Method 241.30 --	
096	0.5400	1.27
--	Method 241.30 --	
324	0.5350	1.14
131	0.5050	.34
057	0.5030	.27
247	0.5000	.18
Avg	0.4935	
102	0.4803	-.43
035	0.4565	-1.01
009	0.4285	-1.78
--	Method 241.XX --	
096	0.5400	1.27
324	0.5350	1.14
131	0.5050	.34
057	0.5030	.27
247	0.5000	.18
Avg	0.4935	
102	0.4803	-.43
035	0.4565	-1.01
009	0.4285	-1.78
193	0.2605 s	-6.36
--	Method 251.00 --	
220	5.0000	1.28
Avg	2.6444	
193	1.7000	-.54
397	1.2333 X	-.76
--	Method 251.30 --	
324	8.1500	1.57
247	5.2500	.30
376	4.9500	.14
Avg	4.7630	
389	3.6000	-.52
157	1.8650	-1.29
--	Method 251.99 --	
409	8.0000	.00

* 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
--	Method 251.XX	--
324	8.1500 R	1.93
409	8.0000	1.81
247	5.2500	.62
220	5.0000	.47
376	4.9500	.46
Avg	3.9498	
389	3.6000	-.16
157	1.8650	-.93
193	1.7000	-1.02
397	1.2333 X	-1.22
--	Method 261.00	--
Avg	0.0170	
086	0.0170	-.71
193	0.0105 S	-4.61
--	Method 261.30	--
096	0.0166	1.18
247	0.0163	.80
324	0.0163	.75
Avg	0.0157	
057	0.0155	-.33
102	0.0153	-.65
009	0.0154	-.81
035	0.0144	-1.65
--	Method 261.XX	--
086	0.0170	1.62
096	0.0166	.82
247	0.0163	.50
324	0.0163	.47
Avg	0.0158	
057	0.0155	-.44
102	0.0153	-.69
009	0.0154	-.76
035	0.0144	-1.57
193	0.0105 s	-5.67
--	Method 281.30	--
376	0.1050	.71
--	Method 281.99	--
220	0.0200	.00
--	Method 281.XX	--
376	0.1050	.89
Avg	0.0625	
220	0.0200	-.84
--	Method 289.30	--
009	8.5300 s	10.82
057	5.0000	1.74
247	4.4000 R	1.04
232	4.6500	.94
102	4.3530	.11
Avg	4.3126	
157	4.1350	-.45
389	4.0000	-.79
106	3.9500	-.93
324	4.1000	-.93
--	Method 289.99	--
409	6.0000	.82
Avg	5.4750	
220	4.9500	-.91
--	Method 289.XX	--
009	8.5300 s	6.05
409	6.0000	2.16
220	4.9500	.69
057	5.0000	.65
232	4.6500	.26
Avg	4.5709	
102	4.3530	-.33
247	4.4000 R	-.66
157	4.1350	-.66
324	4.1000	-.84
--	Method 289.XX	--
389	4.0000	-.86
106	3.9500	-.94
--	Method 291.00	--
193	15.500	.87
Avg	11.375	
220	7.2500	-.86
--	Method 291.30	--
247	8.8000	.98
102	8.3798	.62
157	8.3400	.58
232	8.1000	.45
096	8.0000	.28
Avg	7.6818	
009	7.5850	-.36
376	6.9000	-1.04
324	5.3500	-2.08
--	Method 291.99	--
409	28.000 S	44.08
035	6.4950	.71
Avg	6.4950	
--	Method 291.XX	--
409	28.000 s	18.72
193	15.500 A	7.31
247	8.8000	1.17
102	8.3798	.79
157	8.3400	.75
232	8.1000	.60
096	8.0000	.44
009	7.5850	.37
Avg	7.5200	
220	7.2500	-.40
035	6.4950	-.99
376	6.9000	-1.00
324	5.3500	-2.03
--	Method 301.30	--
247	1.0500	.71
--	Method 301.99	--
220	0.2500	1.07
389	0.2050	.12
Avg	0.2033	
131	0.1550	-1.16
--	Method 301.XX	--
247	1.0500	1.61
Avg	0.4150	
220	0.2500	-.42
389	0.2050	-.53
131	0.1550	-.66
--	Method 311.00	--
193	0.2965	.71
--	Method 311.99	--
096	1.0000	1.85
Avg	0.6684	
102	0.6279	-.23
009	0.6123	-.32
324	0.5850	-.47
035	0.5170	-.85
--	Method 311.XX	--
096	1.0000	1.81
102	0.6279	.10
009	0.6123	.04
Avg	0.6064	
324	0.5850	-.10
035	0.5170	-.41
193	0.2965	-1.43
--	Method 321.00	--
390	0.0165 S	9.34
234	0.0075 R	2.80
029	0.0060	1.69
028	0.0038	.07
Avg	0.0037	
095	0.0035	-.19
397	0.0031	-.40
193	0.0020	-1.20
--	Method 321.30	--
057	0.0061	2.03
009	0.0056	1.52
330	0.0046	.53
389	0.0045	.42
Avg	0.0041	
324	0.0038	-.41
247	0.0037	-.46
232	0.0036	-.49
106	0.0036	-.52
102	0.0034	-.67
035	0.0032	-.88
157	0.0029	-1.24
--	Method 321.99	--
320	0.0350 S	13.19
409	0.0084	1.26
Avg	0.0055	
096	0.0046	-.42
220	0.0036	-.86
--	Method 321.XX	--
320	0.0350 s	21.46
390	0.0165 s	8.59
409	0.0084	2.88
234	0.0075 R	2.32
057	0.0061	1.32
029	0.0060	1.25
009	0.0056	.97
096	0.0046	.30
330	0.0046	.29

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

MAGRUDER - Fertilizer Check Sample No. - 200201 Grade 6-24-24

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
--	Method 321.XX --													
389	0.0045	.21												
Avg	0.0042													
028	0.0038	-.31												
324	0.0038	-.34												
247	0.0037	-.39												
232	0.0036	-.42												
106	0.0036	-.44												
220	0.0036	-.44												
095	0.0035	-.53												
102	0.0034	-.54												
035	0.0032	-.69												
397	0.0031	-.75												
157	0.0029	-.93												
193	0.0020	-1.52												

* 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
001.99	2	0.0000	1.16	0.27	101.30	7	0.0528	0.96	0.44
001.XX	2	0.0000	1.16	0.27	101.XX	8	0.0374	0.96	0.44
009.10	2	0.0000	0.18	0.86	121.00	3	-2.5800	4.51	0.52
009.XX	2	0.0000	0.18	0.86	121.30	7	-0.0236	0.90	0.87
010.11	12	-0.0378	0.97	0.20	121.XX	10	-0.9132	2.88	0.72
010.12	9	0.0000	0.97	0.34	144.01	4	0.0000	1.08	0.03
010.60	47	0.0681	1.00	0.36	144.99	6	0.0000	1.05	0.03
010.99	6	0.0000	1.04	0.15	144.XX	10	0.0000	1.03	0.03
010.XX	70	0.1395	1.14	0.35	151.30	3	0.0000	1.00	0.41
020.10	7	0.1292	1.01	0.35	151.99	2	0.0000	1.20	0.17
020.20	17	-0.0534	1.51	0.28	151.XX	5	0.0000	1.02	0.26
020.40	6	0.0000	0.63	0.77	181.00	4	1.2464	2.63	0.31
020.50	4	-0.6088	1.80	1.57	181.30	11	-0.8075	2.76	0.67
020.99	2	0.0000	1.22	0.09	181.XX	16	-0.1889	2.76	0.58
020.XX	37	-0.2134	1.51	1.02	190.XX	2	0.0000	1.22	0.09
030.20	2	0.0000	1.22	0.04	191.00	2	0.0000	1.10	0.39
030.40	3	0.0000	1.10	0.15	191.30	5	0.0000	1.06	0.08
030.XX	7	0.0000	1.03	0.12	191.XX	7	0.0000	1.04	0.09
040.20	3	0.0000	1.12	0.04	202.00	2	0.0000	1.11	0.37
040.40	2	0.0000	0.42	0.81	202.30	7	0.0000	1.02	0.20
040.XX	7	0.0000	1.04	0.07	202.99	2	0.0000	1.22	0.00
041.10	18	0.0000	0.95	0.34	202.XX	11	0.3181	1.43	0.17
041.20	4	0.0000	1.06	0.20	221.00	6	0.9614	1.97	0.58
041.40	5	0.0000	1.05	0.10	221.30	10	0.3339	1.63	0.13
041.50	7	0.4385	1.49	0.44	221.99	2	0.0000	0.98	0.52
041.60	10	-0.4538	1.71	0.36	221.XX	18	0.5735	1.86	0.41
041.XX	39	0.0239	1.08	0.34	241.30	8	0.0000	1.03	0.11
048.20	4	0.0000	1.02	0.31	241.XX	9	-0.7071	2.33	0.11
048.XX	5	0.0000	1.06	0.08	251.00	3	0.0000	1.11	0.09
050.00	24	-1.4000	5.32	0.22	251.30	5	0.0000	1.03	0.22
050.30	11	1.6833	6.79	0.15	251.XX	9	0.2088	1.15	0.17
050.50	3	-3.0750	5.39	0.34	261.00	2	-2.2981	3.25	0.56
050.51	7	0.0000	1.04	0.07	261.30	7	0.0000	0.97	0.35
050.60	4	-1.1962	2.54	0.29	261.XX	9	-0.6271	2.06	0.47
050.61	7	0.0000	0.89	0.50	281.XX	2	0.0000	1.19	0.21
050.99	16	-0.1127	1.08	0.65	289.30	9	1.2138	3.66	0.69
050.XX	70	-0.1291	3.79	0.43	289.99	2	0.0000	1.16	0.28
060.00	6	0.0000	1.05	0.07	289.XX	11	0.5202	2.02	0.39
060.XX	6	0.0000	1.05	0.07	291.00	2	0.0000	1.22	0.09

MAGRUDER - Fertilizer Check Sample No. - 200201 Grade 6-24-24

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
291.30	8	0.0000	0.96	0.35					
291.99	2	22.0382	31.17	0.50					
291.XX	12	2.1678	5.68	0.35					
301.99	3	0.0000	1.09	0.21					
301.XX	4	0.0000	1.08	0.07					
311.99	5	0.0000	1.06	0.03					
311.XX	6	0.0000	1.05	0.02					
321.00	7	1.7209	3.59	0.43					
321.30	11	0.0000	1.01	0.14					
321.99	4	3.2795	6.62	0.67					
321.XX	21	1.3954	5.02	0.52					