MAGRUDER - Fertilizer Check Sample No. - 200112 Grade 19-19-19

Method	AOAC Ref.	Method Code	- Pass 1 Results for 81 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	3	12.015	7.3072	0.1500	3	12.015	7.3072	0.1500
Ammon & Nitrate N, Devarda	892.01	009.10	2	12.763	5.4710	0.1250	2	12.763	5.4710	0.1250
Total Nitrogen, Reduced Iron		010.10	2	20.933	0.0900	0.0950	2	20.933	0.0900	0.0950
Total Nitrogen, Modified Comprehensive	978.02	010.11	11	20.861	0.2599	0.1670	10	20.879	0.2423	0.1157
Total Nitrogen, Salicylic	955.04D	010.12	6	20.964	0.1922	0.0955	6	20.964	0.1922	0.0955
Total Nitrogen, Comprehensive	970.02	010.17	1	21.310	0.0000	0.0000	1	21.310	0.0000	0.0000
Total Nitrogen, Combustion		010.60	46	21.212	0.2129	0.1142	43	21.202	0.1979	0.0827
Total Nitrogen, Other		010.99	4	21.281	0.4079	0.1875	4	21.281	0.4079	0.1875
Method Group 010.XX PCT			70	21.133	0.2694	0.1229	64	21.118	0.2372	0.0867
Total Phosphate, Grav Quimociac	962.02	020.10	6	18.731	0.3146	0.2083	5	18.656	0.2213	0.0920
Total Phosphate, Spectrometric	958.01	020.20	16	18.629	0.2432	0.0688	15	18.624	0.2483	0.0554
Total Phosphate, Alka. Quimociac	969.02	020.30	1	18.840	0.0569	0.0804	1	18.840	0.0569	0.0804
Total Phosphate, Automated	978.01	020.40	8	18.618	0.2975	0.1238	8	18.618	0.2975	0.1238
Total Phosphate, ICP		020.50	4	18.503	0.4156	0.1266	5	18.270	0.6141	0.1073
Total Phosphate, Other		020.99	1	18.950	0.3536	0.5000	1	18.950	0.3536	0.5000
Method Group 020.XX PCT			36	18.644	0.2936	0.1230	34	18.622	0.2741	0.0923
Insoluble Phosphate, Grav Quimociac ...	963.03C	030.10	1	0.0850	0.0071	0.0100	1	0.0850	0.0071	0.0100
Insoluble Phosphate, Spectrometric	963.03C	030.20	2	0.3025	0.2865	0.0250	2	0.3025	0.2865	0.0250
Insoluble Phosphate, Automated	978.01	030.40	3	0.0583	0.0293	0.0167	3	0.0583	0.0293	0.0167
Insoluble Phosphate, Other		030.99	1	0.0600	0.0000	0.0000	1	0.0600	0.0000	0.0000
Method Group 030.XX PCT			7	0.1321	0.1785	0.0157	7	0.1321	0.1785	0.0157
InDir Available Phosphate, Grav Quim ..	960.02	040.10	1	18.820	0.0283	0.0400	1	18.820	0.0283	0.0400
InDir Available Phosphate, Spectrometri	960.02	040.20	2	18.328	0.1917	0.0950	2	18.328	0.1917	0.0950
InDir Available Phosphate, Automated ..	960.02	040.40	3	18.722	0.1038	0.1300	3	18.722	0.1038	0.1300
InDir Available Phosphate, Other		040.99	1	18.645	0.1061	0.1500	1	18.645	0.1061	0.1500
Method Group 040.XX PCT			7	18.612	0.2255	0.1100	7	18.612	0.2255	0.1100
Dir Available Phosphate, Grav Quim	960.03E	041.10	17	18.738	0.1921	0.1190	17	18.738	0.1921	0.1190
Dir Available Phosphate, Spectrometric	960.03D	041.20	3	18.273	0.1544	0.0874	3	18.273	0.1544	0.0874
Dir Available Phosphate, Alka. Quim ...	960.03C	041.30	1	18.795	0.0495	0.0700	1	18.795	0.0495	0.0700
Dir Available Phosphate, Automated	978.01	041.40	6	18.641	0.3556	0.1717	6	18.641	0.3556	0.1717
Dir Available Phosphate, ICP		041.50	7	18.589	0.3275	0.1386	6	18.598	0.3395	0.0800
Dir Available Phosphate, EDTA Extract .	993.01	041.60	12	18.646	0.3878	0.1532	11	18.661	0.3855	0.0989
Dir Available Phosphate, Other		041.99	2	18.413	0.1548	0.1250	2	18.413	0.1548	0.1250
Method Group 041.XX PCT			48	18.640	0.3092	0.1342	46	18.645	0.3076	0.1131
Water Soluble Phosphate, Spectrometric	970.01	048.20	4	16.700	0.2560	0.1350	4	16.700	0.2560	0.1350
Water Soluble Phosphate, Other		048.99	1	18.075	0.0495	0.0700	1	18.075	0.0495	0.0700
Method Group 048.XX PCT			5	16.975	0.6224	0.1220	5	16.975	0.6224	0.1220
Soluble Potash, STPB Oxalate	958.02	050.00	22	17.908	0.1990	0.1091	21	17.924	0.1848	0.0971
Soluble Potash, STPB Citrate	969.04	050.10	1	18.453	0.0894	0.1264	1	18.453	0.0894	0.1264

Method	AOAC Ref.	Method Code	Pass 1 Results for 81 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, AA (Oxalate)		050.30	10	17.888	0.5952	0.2358	10	17.888	0.5952	0.2358
Soluble Potash, ICP (Oxalate)		050.50	4	17.789	0.7478	0.3104	4	17.789	0.7478	0.3104
Soluble Potash, ICP (Citrate)		050.51	7	17.721	0.4431	0.0743	7	17.721	0.4431	0.0743
Soluble Potash, Flame (Oxalate)	983.02(a	050.60	3	17.628	0.4924	0.1167	3	17.628	0.4924	0.1167
Soluble Potash, Flame (Citrate)	983.02(b	050.61	7	17.916	0.1484	0.1014	7	17.916	0.1484	0.1014
Soluble Potash, Other		050.99	15	17.699	0.5282	0.1637	13	17.625	0.4874	0.0935
Method Group 050.XX PCT			71	17.833	0.4766	0.1527	67	17.831	0.4525	0.1227
Free Water, Vacuum Oven	965.08B	060.00	7	0.9958	0.1647	0.0979	7	0.9958	0.1647	0.0979
Acid Soluble Calcium, ICP		101.30	7	0.2155	0.0242	0.0046	7	0.2155	0.0242	0.0046
Acid Soluble Magnesium, AA	984.01	121.00	1	0.2150	0.0057	0.0080	1	0.2150	0.0057	0.0080
Acid Soluble Magnesium, ICP		121.30	8	0.2726	0.0208	0.0053	8	0.2726	0.0208	0.0053
Method Group 121.XX PCT			9	0.2662	0.0270	0.0056	9	0.2662	0.0270	0.0056
Water Soluble Magnesium, AA		131.00	1	0.0235	0.0007	0.0010	1	0.0235	0.0007	0.0010
Sulfur, Gravimetric	980.02a	144.01	3	0.6159	0.0111	0.0020	3	0.6159	0.0111	0.0020
Sulfur, Other		144.99	7	0.6077	0.0231	0.0171	7	0.6077	0.0231	0.0171
Method Group 144.XX PCT			10	0.6102	0.0203	0.0126	10	0.6102	0.0203	0.0126
Arsenic, Atomic Absorption		151.00	1	5.2350	0.0636	0.0900	1	5.2350	0.0636	0.0900
Arsenic, ICP		151.30	3	4.8790	0.9825	0.2113	3	4.8790	0.9825	0.2113
Arsenic, Other		151.99	2	6.3550	0.4196	0.1100	2	6.3550	0.4196	0.1100
Method Group 151.XX PPM			6	5.4303	0.9853	0.1573	6	5.4303	0.9853	0.1573
Acid Soluble Boron, Other		165.99	1	0.0180	0.0000	0.0000	1	0.0180	0.0000	0.0000
Cadmium, Atomic Absorption		181.00	1	2.4000	0.4243	0.6000	1	2.4000	0.4243	0.6000
Cadmium, ICP		181.30	8	1.5571	0.6102	0.2221	7	1.4724	0.5802	0.1252
Cadmium, Other		181.99	1	2.0000	0.0000	0.0000	1	2.0000	0.0000	0.0000
Method Group 181.XX PPM			10	1.6857	0.6176	0.2377	9	1.6341	0.6118	0.1641
Water Soluble Chlorine, Titrimetric ...	928.02	190.00	1	14.320	0.0283	0.0400	1	14.320	0.0283	0.0400
Water Soluble Chlorine, Other		190.99	2	14.083	0.0519	0.0850	2	14.083	0.0519	0.0850
Method Group 190.XX PCT			3	14.162	0.1297	0.0700	3	14.162	0.1297	0.0700
Chromium, Atomic Absorption		191.00	1	28.000	0.0000	0.0000	1	28.000	0.0000	0.0000
Chromium, ICP		191.30	4	38.137	1.6646	1.0125	4	38.137	1.6646	1.0125
Method Group 191.XX PPM			5	36.109	4.5191	0.8100	5	36.109	4.5191	0.8100
Acid Soluble Cobalt, ICP	965.11	202.30	6	1.6525	0.6118	0.2357	5	1.6530	0.6247	0.0628
Acid Soluble Cobalt, Other		202.99	3	1.9067	0.1480	0.0333	3	1.9067	0.1480	0.0333
Method Group 202.XX PPM			9	1.7372	0.5137	0.1682	8	1.7481	0.5075	0.0518
Acid Soluble Copper, Atomic Absorption	975.01	221.00	4	0.0006	0.0004	0.0001	4	0.0006	0.0004	0.0001
Acid Soluble Copper, ICP		221.30	10	0.0004	0.0002	0.0000	9	0.0003	0.0001	0.0000
Acid Soluble Copper, Other		221.99	1	0.0004	0.0000	0.0000	1	0.0004	0.0000	0.0000
Method Group 221.XX PCT			15	0.0004	0.0002	0.0000	15	0.0004	0.0002	0.0000
Acid Soluble Iron, Atomic Absorption ..	980.01	241.00	1	0.5200	0.0000	0.0000	1	0.5200	0.0000	0.0000

Method	AOAC Ref.	Method Code	- Pass 1 Results for 81 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 Iron, ICP		241.30	8	0.5287	0.0436	0.0125	8	0.5287	0.0436	0.0125
Method Group 241.XX PCT			9	0.5278	0.0411	0.0111	9	0.5278	0.0411	0.0111
Lead, Atomic Absorption		251.00	1	7.3000	0.2828	0.4000	1	7.3000	0.2828	0.4000
Lead, ICP		251.30	5	2.8790	3.0143	0.6020	5	2.8790	3.0143	0.6020
Lead, Other		251.99	1	2.0000	0.0000	0.0000	1	2.0000	0.0000	0.0000
Method Group 251.XX PPM			7	3.3850	3.0244	0.4871	6	3.3058	3.2623	0.2983
Acid Soluble Manganese, AA	972.02a	261.00	1	0.0126	0.0005	0.0007	1	0.0126	0.0005	0.0007
Acid Soluble Manganese, ICP	972.02a	261.30	7	0.0118	0.0006	0.0002	7	0.0118	0.0006	0.0002
Method Group 261.XX PCT			8	0.0119	0.0007	0.0003	8	0.0119	0.0007	0.0003
Mercury, Atomic Absorption		281.00	1	0.0260	0.0071	0.0100	1	0.0260	0.0071	0.0100
Molybdenum, ICP		289.30	8	3.8784	1.7634	0.2387	7	3.5039	1.5301	0.1300
Molybdenum, Other		289.99	1	4.0000	0.0000	0.0000	1	4.0000	0.0000	0.0000
Method Group 289.XX PPM			9	3.8919	1.6569	0.2122	8	3.5659	1.4345	0.1137
Nickel, Atomic Absorption		291.00	1	7.4000	0.5657	0.8000	1	7.4000	0.5657	0.8000
Nickel, ICP		291.30	8	6.4129	1.8787	0.8966	7	6.1576	1.6632	0.3961
Nickel, Other		291.99	1	6.0000	0.0000	0.0000	1	6.0000	0.0000	0.0000
Method Group 291.XX PPM			10	6.4703	1.7089	0.7973	9	6.2781	1.5177	0.3969
Selenium, Other		301.99	3	0.1047	0.0901	0.0273	3	0.1047	0.0901	0.0273
Sodium, Atomic Absorption	983.04	311.00	1	0.4365	0.0120	0.0170	1	0.4365	0.0120	0.0170
Sodium, Other		311.99	4	0.4743	0.0734	0.0095	4	0.4743	0.0734	0.0095
Method Group 311.XX PCT			5	0.4668	0.0668	0.0110	5	0.4668	0.0668	0.0110
Acid Soluble Zinc, Atomic Absorption	975.02	321.00	5	0.0022	0.0008	0.0004	5	0.0022	0.0008	0.0004
Acid Soluble Zin, ICP		321.30	10	0.0025	0.0006	0.0001	10	0.0025	0.0006	0.0001
Acid Soluble Zinc, Other		321.99	3	0.0025	0.0003	0.0001	3	0.0025	0.0003	0.0001
Method Group 321.XX PCT			18	0.0024	0.0006	0.0002	17	0.0024	0.0006	0.0001
Water Soluble Zinc, ICP		325.30	1	0.0424	0.0004	0.0006	1	0.0424	0.0004	0.0006

MAGRUDER - Fertilizer Check Sample No. - 200112 Grade 19-19-19

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index
--	Method 001.99 --	
096	21.445	1.29
Avg	12.015	
320	7.5000	-.62
376	7.1000	-.67
--	Method 009.10 --	
030	17.500	.87
Avg	12.763	
200	8.0250	-.87
--	Method 010.10 --	
072	20.990	1.01
Avg	20.933	
028	20.875	-.70
--	Method 010.11 --	
288	21.185	1.28
073	21.045	.88
090	21.075	.83
395	21.040	.69
363	20.975	.41
414	20.910	.21
211	20.880	.17
Avg	20.879	
148	20.570	-1.27
029	20.550	-1.37
322	20.557	-1.48
114	20.680 R	-1.62
--	Method 010.12 --	
416	21.200	1.23
137	21.125	.85
397	21.035	.40
Avg	20.964	
162	20.925	-.68
351	20.777	-1.02
326	20.725	-1.27
415	19.850 s	-6.20
--	Method 010.17 --	
102	21.310	.00
--	Method 010.60 --	
402	21.445 R	2.34
231	21.590	2.00
234	21.485 R	1.77
049	21.505	1.54
275	21.475	1.44
394	21.470	1.37
361	21.465	1.33
027	21.438	1.19
360	21.430	1.16
035	21.400	1.08
136	21.375	.90
324	21.365	.83
037	21.330	.76
292	21.300	.67
247	21.270	.65
024	21.300	.53
040	21.280	.42
028	21.260	.36
041	21.250	.35
401	21.250	.35
330	21.250	.35
029	21.265	.34
131	21.255	.32
Avg	21.202	
007	21.200	-.01
070	21.200	-.10
095	21.200	-.20
142	21.160	-.24
296	21.155	-.25
025	21.165	-.34
262	21.145	-.37
377	21.145	-.48
334	21.100	-.52
376	21.090	-.57
072	21.090	-.57
--	Method 010.60 --	
073	21.095	-.69
390	21.080	-.83
325	21.025	-.89
057	21.010	-.97
389	20.990	-1.07
220	20.990	-1.11
233	20.980	-1.12
023	21.150 R	-1.29
232	20.890	-1.58
043	20.850	-1.78
009	20.835	-1.88
369	20.770	-2.24
157	20.215 s	-4.99
409	18.665 s	-12.84
--	Method 010.99 --	
354	21.897	1.53
Avg	21.281	
177	21.051	-.56
405	21.045	-.58
300	21.130	-.72
--	Method 010.XX --	
354	21.897 A	3.31
402	21.445 R	2.16
231	21.590	2.02
234	21.485 R	1.77
049	21.505	1.64
275	21.475	1.55
394	21.470	1.49
361	21.465	1.47
027	21.438	1.35
360	21.430	1.32
035	21.400	1.24
136	21.375	1.10
023	21.150 R	1.06
300	21.130 R	1.06
324	21.365	1.04
--	Method 010.XX --	
037	21.330	.96
292	21.300	.86
102	21.310	.81
247	21.270	.79
024	21.300	.79
040	21.280	.70
029	21.265	.63
028	21.260	.62
131	21.255	.60
330	21.250	.60
401	21.250	.60
041	21.250	.60
095	21.200	.39
070	21.200	.36
416	21.200	.35
007	21.200	.35
288	21.185	.34
377	21.145	.34
025	21.165	.31
262	21.145	.22
142	21.160	.20
296	21.155	.17
137	21.125	.11
Avg	21.118	
334	21.100	-.07
072	21.090	-.12
376	21.090	-.12
090	21.075	-.26
177	21.051	-.28
405	21.045	-.34
395	21.040	-.37
073	21.095	-.37
397	21.035	-.37
325	21.025	-.39
057	21.010	-.45
390	21.080	-.49
389	20.990	-.54
233	20.980	-.58
--	Method 010.XX --	
220	20.990	-.59
363	20.975	-.61
072	20.990	-.61
073	21.045	-.65
414	20.910	-.89
232	20.890	-.96
162	20.925	-.97
211	20.880	-1.02
028	20.875	-1.03
043	20.850	-1.13
009	20.835	-1.22
351	20.777	-1.46
369	20.770	-1.53
326	20.725	-1.67
148	20.570	-2.31
114	20.680 R	-2.34
029	20.550	-2.40
322	20.557	-2.46
157	20.215 s	-3.81
415	19.850 s	-5.63
409	18.665 s	-10.36
--	Method 020.10 --	
114	19.105 R	2.70
090	18.905	1.13
095	18.830	.79
148	18.680	.12
Avg	18.656	
300	18.425	-1.06
162	18.440	-1.21
--	Method 020.20 --	
334	20.000 s	5.54
262	19.095	1.90
369	18.975	1.42
392	18.820	.79
200	18.805	.73
234	18.695 R	.61

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

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Laboratory Averages & Accuracy Indexes

Lab	Average*	Index
--	Method 020.20	--
362	18.765	.57
231	18.750	.54
363	18.705	.39
Avg	18.624	
220	18.540	-.34
288	18.585	-.34
030	18.500	-.50
390	18.495	-.55
232	18.465	-.66
324	18.365	-1.06
395	18.295	-1.33
292	18.205	-1.69
--	Method 020.30	--
416	18.840	.71
--	Method 020.40	--
142	18.840	.75
035	18.800	.63
394	18.795	.61
409	18.720	.56
096	18.770	.53
247	18.730	.44
Avg	18.618	
376	18.240	-1.31
193	18.050	-1.92
--	Method 020.50	--
330	19.880 S	2.63
361	19.070	1.30
157	18.619	.57
Avg	18.503	
396	18.220	-.13
402	18.105	-.38
389	17.335 S	-1.52
--	Method 020.99	--
320	18.950	.71

Lab	Average*	Index
--	Method 020.XX	--
334	20.000 s	5.03
330	19.880 s	4.61
114	19.105 R	2.28
262	19.095	1.73
361	19.070	1.64
320	18.950 R	1.51
369	18.975	1.29
090	18.905	1.04
416	18.840	.81
142	18.840	.80
095	18.830	.76
392	18.820	.72
035	18.800	.68
200	18.805	.67
394	18.795	.64
409	18.720	.59
234	18.695	.56
096	18.770	.56
362	18.765	.53
231	18.750	.50
247	18.730	.47
363	18.705	.36
148	18.680	.22
Avg	18.622	
157	18.619	-.03
220	18.540	-.30
288	18.585	-.30
030	18.500	-.44
390	18.495	-.49
232	18.465	-.59
300	18.425	-.73
162	18.440	-.88
324	18.365	-.95
395	18.295	-1.20
376	18.240	-1.43
396	18.220	-1.48
292	18.205	-1.52
402	18.105	-1.98

Lab	Average*	Index
--	Method 020.XX	--
193	18.050	-2.09
389	17.335 s	-4.69
--	Method 030.10	--
090	0.0850	.71
--	Method 030.20	--
363	0.5500	.86
Avg	0.3025	
220	0.0550	-.87
--	Method 030.40	--
247	0.0850	.93
409	0.0650	.28
Avg	0.0583	
096	0.0250	-1.25
--	Method 030.99	--
320	0.0600	.00
--	Method 030.XX	--
363	0.5500	2.34
Avg	0.1321	
090	0.0850	-.27
247	0.0850	-.27
409	0.0650	-.38
320	0.0600	-.40
220	0.0550	-.45
096	0.0250	-.61
--	Method 040.10	--
090	18.820	.71
--	Method 040.20	--
220	18.485	.83
Avg	18.328	
363	18.170	-.90

Lab	Average*	Index
--	Method 040.40	--
394	18.765	.54
096	18.745	.33
Avg	18.722	
409	18.655	-1.45
--	Method 040.99	--
247	18.645	.71
--	Method 040.XX	--
090	18.820	.93
394	18.765	.70
409	18.655	.63
096	18.745	.60
247	18.645	.36
Avg	18.612	
220	18.485	-.57
363	18.170	-1.99
--	Method 041.10	--
137	19.815 s	5.61
296	19.120	1.99
211	19.040	1.66
009	19.050	1.64
414	18.800	.84
322	18.777	.56
049	18.760	.19
027	18.745	.09
233	18.750	.08
Avg	18.738	
177	18.700	-.20
029	18.675	-.34
028	18.685	-.52
326	18.610	-.72
057	18.575	-.87
136	18.575	-.91
041	18.610	-.95
040	18.555	-1.13
131	18.520	-1.15

Lab	Average*	Index
--	Method 041.20	--
362	18.415	.93
415	18.290	.75
Avg	18.273	
397	18.113	-1.04
--	Method 041.30	--
260	18.795	-.71
--	Method 041.40	--
049	19.105	1.35
023	18.900	.90
072	18.670	.16
Avg	18.641	
131	18.625	-.16
025	18.465	-.56
029	18.080	-1.58
--	Method 041.50	--
354	19.590 s	4.32
007	19.100	1.51
361	18.770	.51
360	18.655	.25
Avg	18.598	
325	18.595	-.02
393	18.420	-.53
070	18.535 R	-.75
102	18.050	-1.62
--	Method 041.60	--
296	19.250	1.55
397	19.041 X	1.01
351	18.971	.81
043	18.870	.55
072	18.815	.40
177	18.701	.29
Avg	18.661	
028	18.655	-.09
037	18.480	-.55

* 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. - 200112 Grade 19-19-19

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index
--	Method 041.60 --	
288	18.350	-.81
073	18.485 R	-1.07
095	18.185	-1.23
377	17.950	-1.85
--	Method 041.99 --	
405	18.525	.74
Avg	18.413	
401	18.300	-.97
--	Method 041.XX --	
354	19.590 s	4.66
137	19.815 s	3.80
296	19.250	1.99
049	19.105	1.55
296	19.120	1.55
007	19.100	1.51
211	19.040	1.32
009	19.050	1.32
397	19.041 X	1.31
351	18.971	1.06
023	18.900	1.03
043	18.870	.74
414	18.800	.70
072	18.815	.55
322	18.777	.54
260	18.795	.50
361	18.770	.41
049	18.760	.39
177	18.701	.38
233	18.750	.34
027	18.745	.33
028	18.685	.30
360	18.655	.21
072	18.670	.18
177	18.700	.18
028	18.655	.12
029	18.675	.11
--	Method 041.XX --	
Avg	18.645	
325	18.595	-.16
131	18.625	-.19
326	18.610	-.20
057	18.575	-.26
136	18.575	-.31
405	18.525	-.40
131	18.520	-.43
041	18.610	-.44
040	18.555	-.48
037	18.480	-.65
025	18.465	-.66
393	18.420	-.73
362	18.415	-.75
070	18.535 R	-.87
288	18.350	-.96
401	18.300	-1.17
415	18.290	-1.21
073	18.485 R	-1.33
095	18.185	-1.50
397	18.113	-1.73
029	18.080	-1.84
102	18.050	-1.94
377	17.950	-2.27
--	Method 048.20 --	
247	16.995	1.19
362	16.810	.49
Avg	16.700	
363	16.610	-.36
193	16.385	-1.31
--	Method 048.99 --	
275	18.075	.71
--	Method 048.XX --	
275	18.075	1.77
247	16.995	.12
--	Method 048.XX --	
Avg	16.975	
362	16.810	-.28
363	16.610	-.59
193	16.385	-.97
--	Method 050.00 --	
131	19.060 s	6.22
009	18.265	1.87
416	18.178	1.38
095	18.160	1.28
090	18.070	.93
162	17.950	.88
326	18.045	.87
057	17.985	.57
043	17.970	.37
300	17.980	.32
220	17.945	.14
029	17.930 X	.11
Avg	17.924	
148	17.920	-.06
392	17.895	-.18
049	17.915	-.41
345	17.900	-.45
072	17.840	-.48
350	17.830	-.52
211	17.770	-.85
028	17.650	-1.48
231	17.650	-1.49
023	17.550	-2.11
296	17.570 R	-2.15
--	Method 050.10 --	
322	18.453	.71
--	Method 050.30 --	
114	19.235 S	2.46
390	18.835	1.60
137	18.520	1.06
--	Method 050.30 --	
040	18.315	.93
142	18.385	.84
Avg	17.888	
136	17.795	-.16
095	17.745	-.45
234	17.530	-.65
193	17.335	-.96
351	17.238	-1.09
397	17.178	-1.21
--	Method 050.31 --	
233	16.650 S	.00
--	Method 050.50 --	
324	18.590	1.11
157	18.082	.39
Avg	17.789	
402	17.725	-.11
354	16.761	-1.45
--	Method 050.51 --	
389	18.255	1.21
361	18.070	.79
377	18.050	.75
Avg	17.721	
007	17.700	-.23
393	17.570	-.35
070	17.505	-.49
102	16.900	-1.85
--	Method 050.60 --	
415	19.814 S	4.45
030	18.250	1.30
Avg	17.628	
200	17.360	-.55
396	17.275	-.72
--	Method 050.61 --	
037	18.035	1.02
025	18.045	.88
072	18.025	.75
035	17.950	.58
Avg	17.916	
049	17.910	-.08
029	17.740	-1.21
028	17.710	-1.52
041	16.770 s	-7.81
--	Method 050.99 --	
395	18.595 R	2.07
394	18.395	1.58
177	18.066	.94
363	17.775 R	.77
369	17.935	.65
232	17.915	.60
376	17.855	.51
325	17.840	.44
360	17.790	.36
260	17.755	.31
Avg	17.625	
247	17.600	-.08
027	17.358	-.56
405	17.000	-1.28
262	16.860	-1.57
401	16.750	-1.80
275	15.580 S	-4.21
--	Method 050.XX --	
415	19.814 s	4.39
114	19.235 s	3.35
131	19.060	2.74
390	18.835	2.23
395	18.595 R	1.79
324	18.590	1.75
137	18.520	1.52
322	18.453	1.38

* 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. - 200112 Grade 19-19-19

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index	Lab	Average*	Index
--	Method 050.XX --		--	Method 050.XX --		--	Method 060.00 --		--	Method 131.00 --		--	Method 151.30 --	
040	18.315 R	1.33	360	17.790	-.16	007	0.8600	-.84	193	0.0235	.71	247	5.8500	1.00
394	18.395	1.25	029	17.740	-.21	361	0.8050	-1.16				102	5.0870	.22
142	18.385	1.23	260	17.755	-.24				--	Method 144.01 --		Avg	4.8790	
030	18.250	.98	402	17.725	-.26	--	Method 101.30 --		193	1.2150 S	54.02	389	3.7000	-1.20
009	18.265	.97	028	17.710	-.33	361	0.2550	1.64	288	0.6300	1.27			
389	18.255	.94	007	17.700	-.36	247	0.2370	.89	Avg	0.6159		--	Method 151.99 --	
416	18.178	.77	028	17.650	-.40	009	0.2236	.34	401	0.6100	-.54	376	6.7100	.89
095	18.160	.73	231	17.650	-.41	Avg	0.2155		102	0.6076	-.77	Avg	6.3550	
177	18.066	.58	247	17.600	-.51	096	0.2100	-.23				409	6.0000	-.85
090	18.070	.56	095	17.745	-.53	102	0.2058	-.42	--	Method 144.99 --				
157	18.082	.56	393	17.570	-.58	041	0.1950	-.87	027	19.683 s	824.72	--	Method 151.XX --	
361	18.070	.53	023	17.550	-.67	035	0.1820	-1.38	361	0.6350	1.20	376	6.7100	1.30
326	18.045	.53	296	17.570	-.70				035	0.6230	.93	409	6.0000	.58
037	18.035	.50	070	17.505	-.72	--	Method 121.00 --		393	0.6250	.78	247	5.8500	.45
377	18.050	.50	234	17.530	-.74	193	0.2150	.71	Avg	0.6077		Avg	5.4303	
025	18.045	.48	363	17.775 R	-.77				247	0.6050	-.25	231	5.2350	-.20
162	17.950	.44	200	17.360	-1.04	--	Method 121.30 --		220	0.6050	-.66	102	5.0870	-.36
072	18.025	.43	027	17.358	-1.06	041	0.3000	1.32	009	0.5861	-1.03	389	3.7000	-1.76
057	17.985	.39	193	17.335	-1.14	131	0.2922	1.00	096	0.5750	-1.43			
300	17.980	.33	396	17.275	-1.23	102	0.2816	.49				--	Method 165.99 --	
043	17.970	.33	351	17.238	-1.31	361	0.2750	.27	--	Method 144.XX --		009	0.0180	-.71
035	17.950	.32	397	17.178	-1.47	Avg	0.2726		027	19.683 s	938.47			
369	17.935	.27	405	17.000	-1.84	247	0.2725	-.07	193	1.2150 s	29.76	--	Method 181.00 --	
220	17.945	.25	102	16.900	-2.06	009	0.2682	-.24	361	0.6350	1.25	193	2.4000	-.71
049	17.915	.25	262	16.860	-2.15	096	0.2600	-.60	288	0.6300	.98			
345	17.900	.23	041	16.770	-2.37	035	0.2310	-2.00	035	0.6230	.97	--	Method 181.30 --	
029	17.930 X	.22	401	16.750	-2.39				393	0.6250	.77	231	5.2850 s	6.57
376	17.855	.22	354	16.761 R	-2.48	--	Method 121.XX --		Avg	0.6102		247	2.3500	1.51
148	17.920	.20	233	16.650 s	-2.72	041	0.3000	1.25	401	0.6100	-.05	324	2.1500 R	1.40
232	17.915	.19	275	15.580 s	-4.99	131	0.2922	1.00	102	0.6076	-.16	157	1.7750	.53
049	17.910	.18				102	0.2816	.60	247	0.6050	-.35	232	1.6500	.40
392	17.895	.15	--	Method 060.00 --		361	0.2750	.38	220	0.6050	-.78	102	1.5218	.10
072	17.840	.07	193	1.2900	1.81	247	0.2725	.24	009	0.5861	-1.28	Avg	1.4724	
325	17.840	.05	363	1.1000	.88	009	0.2682	.12	096	0.5750	-1.75	009	1.4000	-.24
Avg	17.831		Avg	0.9958		Avg	0.2662					376	1.2250	-.43
350	17.830	-.04	362	0.9550	-.29	096	0.2600	-.23	--	Method 151.00 --		389	0.3850	-1.87
136	17.795	-.10	416	0.9759	-.37	035	0.2310	-1.30	231	5.2350	.71			
211	17.770	-.15	247	0.9850	-.40	193	0.2150	-1.90						

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MAGRUDER - Fertilizer Check Sample No. - 200112 Grade 19-19-19

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index
--	Method 181.99 --	
409	2.0000	.00
--	Method 181.XX --	
231	5.2850 s	5.97
193	2.4000	1.34
247	2.3500	1.17
324	2.1500 R	1.12
409	2.0000	.60
232	1.6500	.25
157	1.7750	.24
Avg	1.6341	
102	1.5218	-.19
009	1.4000	-.43
376	1.2250	-.67
389	0.3850	-2.04
--	Method 190.00 --	
027	14.320	.71
--	Method 190.99 --	
220	14.090	.60
Avg	14.083	
009	14.075	-1.07
--	Method 190.XX --	
027	14.320	1.23
Avg	14.162	
220	14.090	-.60
009	14.075	-.79
--	Method 191.00 --	
193	28.000	.00
--	Method 191.30 --	
009	40.205	1.28
096	38.800	.44
Avg	38.137	
102	37.042	-.78
--	Method 191.30 --	
247	36.500	-1.03
--	Method 191.XX --	
009	40.205	.91
096	38.800	.60
102	37.042	.26
247	36.500	.14
Avg	36.109	
193	28.000	-1.79
--	Method 202.00 --	
072	10.715 S	.00
193	8.7000 S	.00
Avg	0.0000	
--	Method 202.30 --	
009	2.7550	1.77
102	1.6600	.04
Avg	1.6530	
247	1.4500	-.33
232	1.4000	-.40
324	1.6500 R	-.88
389	1.0000	-1.05
--	Method 202.99 --	
320	2.0000	.63
409	2.0000	.63
Avg	1.9067	
393	1.7200	-1.31
--	Method 202.XX --	
072	10.715 s	17.67
193	8.7000 s	13.73
009	2.7550	1.99
320	2.0000	.50
409	2.0000	.50
Avg	1.7481	
393	1.7200	-.11
--	Method 202.XX --	
102	1.6600	-.18
247	1.4500	-.60
232	1.4000	-.69
324	1.6500 R	-1.10
389	1.0000	-1.47
--	Method 221.00 --	
029	0.0020 S	3.98
043	0.0009	.80
193	0.0008	.52
072	0.0007	.30
Avg	0.0006	
390	0.0000	-1.58
--	Method 221.30 --	
231	0.0033 s	33.96
402	0.0040 s	31.93
157	0.0008 R	3.59
102	0.0005	1.55
232	0.0005	1.39
393	0.0004	1.03
Avg	0.0003	
330	0.0003	-.21
247	0.0003	-.55
009	0.0003	-.59
324	0.0002	-.76
041	0.0002	-.86
389	0.0002	-1.05
--	Method 221.99 --	
409	0.0004	.00
--	Method 221.XX --	
231	0.0033 s	16.40
402	0.0040 s	15.30
029	0.0020 s	6.50
043	0.0009	1.77
157	0.0008	1.36
--	Method 221.XX --	
193	0.0008	1.36
072	0.0007	1.04
102	0.0005	.36
232	0.0005	.28
393	0.0004	.10
Avg	0.0004	
409	0.0004	-.10
330	0.0003	-.51
247	0.0003	-.67
009	0.0003	-.69
324	0.0002	-.78
041	0.0002	-.82
389	0.0002	-.92
390	0.0000	-1.74
--	Method 241.00 --	
193	0.5200	.00
--	Method 241.30 --	
102	0.5921	1.46
041	0.5778	1.12
131	0.5595	.80
096	0.5300	.23
Avg	0.5287	
057	0.5169	-.27
247	0.4960	-.75
009	0.4886	-.94
035	0.4690	-1.38
393	0.3217 s	-4.75
--	Method 241.XX --	
102	0.5921	1.57
041	0.5778	1.22
131	0.5595	.87
096	0.5300	.25
Avg	0.5278	
193	0.5200	-.19
057	0.5169	-.27
--	Method 241.XX --	
247	0.4960	-.77
009	0.4886	-.97
035	0.4690	-1.44
393	0.3217 s	-5.02
--	Method 251.00 --	
193	7.3000	.71
--	Method 251.30 --	
324	7.9500	1.70
231	3.8600	.42
Avg	2.8790	
376	1.3000	-.52
157	1.2050	-.56
389	0.0800	-.93
--	Method 251.99 --	
409	2.0000	.00
--	Method 251.XX --	
324	7.9500	1.44
193	7.3000	1.23
231	3.8600 R	.30
Avg	3.3058	
409	2.0000	-.40
376	1.3000	-.61
157	1.2050	-.64
389	0.0800	-.99
--	Method 261.00 --	
193	0.0126	.71
--	Method 261.30 --	
096	0.1300 s	189.43
041	0.0127	1.40
009	0.0121	.86
057	0.0122	.68
102	0.0120	.36

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MAGRUDER - Fertilizer Check Sample No. - 200112 Grade 19-19-19

Laboratory Averages & Accuracy Indexes

Lab	Average*	Index
--	Method 261.30 --	
Avg	0.0118	
247	0.0114	-.72
393	0.0111	-1.05
035	0.0110	-1.25
--	Method 261.XX --	
096	0.1300 s	181.42
041	0.0127	1.20
193	0.0126	1.17
009	0.0121	.73
057	0.0122	.50
102	0.0120	.24
Avg	0.0119	
247	0.0114	-.83
393	0.0111	-1.16
035	0.0110	-1.35
--	Method 281.00 --	
376	0.0260	-.71
--	Method 289.30 --	
009	12.545 s	5.91
231	7.1050	2.35
376	6.5000 R	1.99
Avg	3.5039	
057	3.0000	-.33
157	2.9800	-.34
324	2.9500	-.38
232	2.9000	-.40
102	2.8425	-.43
247	2.7500	-.49
--	Method 289.99 --	
409	4.0000	.00
--	Method 289.XX --	
009	12.545 s	6.26
231	7.1050	2.47
376	6.5000 R	2.07
409	4.0000	.30
Avg	3.5659	
057	3.0000	-.39
157	2.9800	-.41
324	2.9500	-.44
232	2.9000	-.47
102	2.8425	-.51
247	2.7500	-.57
--	Method 291.00 --	
193	7.4000	-.71
--	Method 291.30 --	
376	13.850 S	4.65
231	9.8400	2.22
232	8.2000 R	1.80
157	6.2250	.04
Avg	6.1576	
096	6.0000	-.09
102	5.7632	-.26
009	5.4250	-.46
247	5.0500	-.67
324	4.8000	-.92
--	Method 291.99 --	
409	6.0000	.00
--	Method 291.XX --	
376	13.850 s	5.01
231	9.8400	2.35
232	8.2000 R	1.92
193	7.4000	.78
Avg	6.2781	
157	6.2250	-.04
409	6.0000	-.18
096	6.0000	-.18
102	5.7632	-.36
--	Method 291.XX --	
009	5.4250	-.58
247	5.0500	-.81
324	4.8000	-1.08
--	Method 301.99 --	
376	0.2190	1.28
Avg	0.1047	
131	0.0500	-.65
389	0.0450	-.66
--	Method 311.00 --	
193	0.4365	.71
--	Method 311.99 --	
247	0.5750	1.37
102	0.4795	.17
Avg	0.4743	
009	0.4599	-.20
035	0.3830	-1.24
--	Method 311.XX --	
247	0.5750	1.62
102	0.4795	.26
Avg	0.4668	
009	0.4599	-.10
193	0.4365	-.47
035	0.3830	-1.25
--	Method 321.00 --	
043	0.0120 s	12.13
072	0.0029	.89
029	0.0025	.71
193	0.0027	.62
Avg	0.0022	
028	0.0021	-.13
390	0.0009	-1.67
--	Method 321.30 --	
376	0.0045 S	3.37
057	0.0040	2.37
389	0.0031	.99
232	0.0027	.51
Avg	0.0025	
324	0.0024	-.17
231	0.0024	-.21
157	0.0023	-.37
102	0.0022	-.50
330	0.0020	-.82
247	0.0020	-.84
035	0.0020	-.91
402	0.0000 S	-4.09
--	Method 321.99 --	
096	0.0027	.92
409	0.0026	.36
Avg	0.0025	
320	0.0021	-1.23
--	Method 321.XX --	
043	0.0120 s	15.06
376	0.0045 s	3.36
057	0.0040	2.41
389	0.0031	1.09
072	0.0029	.83
029	0.0025 R	.79
232	0.0027	.60
096	0.0027	.50
193	0.0027	.48
409	0.0026	.23
Avg	0.0024	
324	0.0024	-.01
231	0.0024	-.13
157	0.0023	-.23
102	0.0022	-.33
320	0.0021	-.48
028	0.0021	-.48
--	Method 321.XX --	
330	0.0020	-.64
247	0.0020	-.66
035	0.0020	-.72
390	0.0009	-2.43
402	0.0000 s	-3.76
--	Method 325.30 --	
041	0.0424	.71

* 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. - 200112 Grade 19-19-19

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	3	0.0000	1.12	0.01	060.XX	7	0.0000	0.97	0.34
001.XX	3	0.0000	1.12	0.01	101.30	7	0.0000	1.03	0.13
009.10	2	0.0000	1.22	0.01	101.XX	7	0.0000	1.03	0.13
009.XX	2	0.0000	1.22	0.01	121.30	8	0.0000	1.02	0.17
010.10	2	0.0000	0.90	0.58	121.XX	9	0.0000	1.02	0.13
010.11	11	-0.0745	0.96	0.51	144.01	4	13.5054	27.03	0.25
010.12	7	-0.8281	2.37	0.88	144.99	8	103.0902	291.58	0.76
010.60	48	-0.3211	2.20	0.46	144.XX	12	80.6855	270.27	0.71
010.99	4	0.0000	1.01	0.33	151.30	3	0.0000	1.11	0.11
010.XX	69	-0.1929	1.79	0.51	151.99	2	0.0000	1.20	0.19
020.10	6	0.3381	1.21	0.79	151.XX	6	0.0000	1.04	0.09
020.20	17	0.3427	1.64	0.19	181.30	9	0.8598	2.35	0.29
020.40	8	0.0000	1.00	0.23	181.XX	11	0.6191	2.01	0.29
020.50	6	0.4370	1.42	0.15	190.99	2	0.0000	0.20	0.85
020.XX	39	0.2022	1.65	0.36	190.XX	3	0.0000	1.06	0.29
030.20	2	0.0000	1.22	0.06	191.30	4	0.0000	1.02	0.32
030.40	3	0.0000	1.04	0.33	191.XX	5	0.0000	1.05	0.10
030.XX	7	0.0000	1.04	0.06	202.00	2	0.0000	0.00	0.00
040.20	2	0.0000	1.16	0.27	202.30	6	-0.0008	0.95	0.37
040.40	3	0.0000	0.56	0.79	202.99	3	0.0000	1.09	0.20
040.XX	7	0.0000	0.99	0.30	202.XX	11	2.8339	6.47	0.45
041.10	18	0.3115	1.60	0.38	221.00	5	0.7966	2.01	0.09
041.20	3	0.0000	0.98	0.43	221.30	12	4.9255	10.83	7.14
041.40	6	0.0000	1.00	0.30	221.XX	18	1.8326	4.55	2.87
041.50	8	0.3420	1.36	1.16	241.30	9	-0.5274	1.85	0.17
041.60	12	-0.0380	0.97	0.32	241.XX	10	-0.5017	1.85	0.18
041.99	2	0.0000	1.03	0.47	251.30	5	0.0000	1.05	0.15
041.XX	42	0.0968	1.15	0.70	251.XX	7	0.0243	0.96	0.12
048.20	4	0.0000	1.02	0.30	261.30	8	23.6791	66.98	0.26
048.XX	5	0.0000	1.05	0.11	261.XX	9	20.1574	60.48	0.29
050.00	23	0.1841	1.63	0.43	289.30	9	0.8741	2.19	0.12
050.30	11	0.2058	1.16	0.39	289.XX	10	0.8305	2.21	0.12
050.50	4	0.0000	1.03	0.27	291.30	9	0.6503	1.78	0.49
050.51	7	0.0000	1.03	0.11	291.XX	11	0.5687	1.76	0.49
050.60	4	1.1098	2.39	0.20	301.99	3	0.0000	1.10	0.17
050.61	8	-0.9659	2.87	0.56	301.XX	3	0.0000	1.10	0.17
050.99	16	-0.1184	1.50	0.27	311.99	4	0.0000	1.08	0.09
050.XX	70	-0.0026	1.39	0.32	311.XX	5	0.0000	1.05	0.10
060.00	7	0.0000	0.97	0.34	321.00	6	2.0112	5.01	0.58

MAGRUDER - Fertilizer Check Sample No. - 200112 Grade 19-19-19

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
321.30	12	-0.0689	1.82	0.27					
321.99	3	0.0000	1.11	0.12					
321.XX	21	0.6963	3.57	0.44					