



Association of  
American Plant  
Food Control  
Officials

# Magruder Certificate of Analysis

## Magruder Sample #200811 WS 20-20-20 w/micros

Analyte	Value	± Standard Uncertainty	# Labs
Ammoniacal N (%)	3.298	0.141	21
Total N (20%)	20.14	0.09	60
Total P2O5 (%)	14.72	0.15	32
Direct Available P2O5 (20%)	14.75	0.12	33
Soluble K2O (20%)	23.54	0.26	66
Acid Soluble B (0.02%)	0.01961	0.00052	31
Acid Soluble Cu (0.05%)	0.04892	0.00074	45
Acid Soluble Fe (0.1%)	0.1014	0.0016	46
Acid Soluble Mn (0.05%)	0.0480	0.00065	45
Acid Soluble Mo (5ppm)	4.532	0.560	19
Acid Soluble Zn (0.05%)	0.04966	0.00030	49

1. Data obtained from participant results in the Magruder Check Sample Program.
2. Guaranteed concentrations noted by the value preceding the unit in Analyte name.
3. Values are robust means. Standard uncertainty determined as  $1.25 \times \text{robust standard deviation} / \sqrt{\text{\#Labs}}$ . Results only shown for analytes tested by 16 or more labs. Values and uncertainties for analytes tested by less than 16 labs are available in Analyte Reports.
4. Technical information on Certificate of Analysis available at [www.magruderchecksample.org/prod/Articles.html](http://www.magruderchecksample.org/prod/Articles.html)