



Association of  
American Plant  
Food Control  
Officials

# Magruder Certificate of Analysis

## Magruder Sample #180611 Grade 18-3-6

Analyte	Value	± Standard Uncertainty	# Labs
Ammoniacal Nitrogen (%)	1.290	0.121	20
Total Nitrogen (18%)	18.23	0.03	75
Total Phosphorus as P <sub>2</sub> O <sub>5</sub> (%)	3.178	0.031	45
Direct Available Phosphorus as P <sub>2</sub> O <sub>5</sub> (3%)	3.108	0.022	40
Soluble Potassium as K <sub>2</sub> O (6%)	5.839	0.043	79
Acid Soluble Cadmium (ppm)	1.232	0.076	17
Acid Soluble Chromium (ppm)	16.43	0.83	16
Acid Soluble Zinc (%)	0.0020	0.00020	21

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)