



Association of
American Plant
Food Control
Officials

Magruder Certificate of Analysis

Magruder Sample #190811 11-52-0 MAP

Analyte	Value	± Standard Uncertainty	# Labs
Ammoniacal Nitrogen (%)	11.03	0.08	29
Total Nitrogen (11%)	11.10	0.03	74
Total Phosphorus as P2O5 (%)	51.85	0.25	47
Direct Available Phosphorus as P2O5 (52%)	52.11	0.13	41
Water Soluble Phosphorus as P2O5 (%)	46.50	0.57	16
Acid Soluble Cadmium (ppm)	63.83	2.72	18
Acid Soluble Chromium (ppm)	280.7	21.0	19
Acid Soluble Nickel (ppm)	46.03	2.15	17
Acid Soluble Zinc (%)	0.09153	0.00299	27

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