



# Magruder Certificate of Analysis

## Magruder Sample #210911 Grade 8-5-1

Analyte	Value	± Standard Uncertainty	# Labs
Ammoniacal N (%)	0.9882	0.1640	19
Total N (8%)	8.070	0.015	80
Total P2O5 (%)	4.265	0.094	43
Direct Available P2O5 (5%)	4.094	0.153	45
Soluble K2O (1%)	1.270	0.027	78
Acid Soluble Mg (%)	0.2444	0.0093	17
Acid Soluble Cr (ppm)	57.80	6.65	22
Acid Soluble Co (ppm)	31.86	5.05	21
Acid Soluble Cu (%)	0.01708	0.00054	35
Acid Soluble Fe (%)	0.2542	0.0106	17
Acid Soluble Pb (ppm)	2.453	0.201	17
Acid Soluble Mo (ppm)	5.364	0.372	21
Acid Soluble Ni (ppm)	30.51	2.25	22
Acid Soluble Zn (%)	0.02084	0.00052	35

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)