



Magruder Certificate of Analysis

Magruder Sample #210211 Grade 22-3-11

Analyte	Value	± Standard Uncertainty	# Labs
Ammoniacal N (%)	0.9577	0.0998	27
Urea N (%)	20.62	0.24	17
Total N (22%)	21.72	0.06	78
Total P2O5 (%)	3.572	0.037	43
Direct Available P2O5 (3%)	3.524	0.043	49
Soluble K2O (11%)	20.11	0.15	82
Acid Soluble Mg (%)	1.701	0.053	18
Acid Soluble Cd (ppm)	3.833	0.194	22
Acid Soluble Cr (ppm)	43.26	2.15	20
Acid Soluble Fe (%)	0.1281	0.0023	18
Acid Soluble Ni (ppm)	14.60	0.84	21
Acid Soluble Zn (%)	0.00701	0.00032	28

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