



Magruder Certificate of Analysis

Magruder Sample #230811 Grade 4-3-4

Analyte	Value	± Uncertainty	# Labs
Ammoniacal N (%)	0.3807	0.0455	17
Total N (4%)	4.048	0.020	63
Total P2O5 (%)	4.551	0.106	38
Direct Available P2O5 (3%)	4.066	0.104	42
Soluble K2O (4%)	4.326	0.042	72
Acid Soluble Ca (%)	7.559	0.076	46
Acid Soluble Mg (1%)	1.956	0.028	54
Total S (5%)	6.222	0.177	39
Acid Soluble Cr (ppm)	43.26	4.91	16
Acid Soluble Cu (%)	0.01841	0.00045	24
Acid Soluble Zn (%)	0.03231	0.00086	25

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. 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.