



Magruder Certificate of Analysis

Magruder Sample #210112 Micronutrients

Analyte	Value	± Standard Uncertainty	# Labs
Acid Soluble Ca (5%)	6.236	0.125	67
Acid Soluble Mg (9.5%)	0.3610	0.0478	21
Total S (%)	9.773	0.067	50
Acid Soluble As (ppm)	3.893	0.205	18
Acid Soluble B (1.25%)	1.155	0.015	54
Acid Soluble Cd (ppm)	11.66	0.59	22
Acid Soluble Cr (ppm)	35.00	3.5	20
Acid Soluble Co (ppm)	20.96	1.21	19
Acid Soluble Cu (%)	0.01955	0.00046	30
Acid Soluble Fe (%)	0.8234	0.0384	18
Acid Soluble Pb (ppm)	142.6	5.2	23
Acid Soluble Mn (5%)	5.191	0.047	63
Acid Soluble Ni (ppm)	147.9	6.9	22
Acid Soluble Zn (7.5%)	8.646	0.150	68

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