

BIOCHAR 'TOTALS' ANALYSIS REPORT

1 sample supplied by Macclesfield Community Association on the 2 February, 2021 - Lab Job No. K2963.

Analysis requested by Brian Lewis.

PO Box 535 MACCLESFIELD SA 5153

		Product Name: Product Type: Manufacturing Site: Manufactured Date: Application: Test Applicable:	Sample 1 Maccybiochar Biochar MCA 28/01/2021 .. SS-PACK-111
Parameter	Method Reference	K2963/1	
Bulk Density (kg/L)	AS4454:2012 Appendix J	0.2	
Moisture Content (%)	**Inhouse S2 (105°C)	53.2	
Volatile Matter (%)	Inhouse 750°C	88.6	
Ash Content (% ash)		11.4	
pH	Rayment & Lyons 2011 - 4A1 (1:5 Water)	9.96	
Electrical Conductivity (dS/m)	Rayment & Lyons 2011 - 3A1 (1:5 Water)	0.83	
Total Organic Carbon (%)	LECO Trumac Analyser - Inhouse S15b	84.3	
Total Carbon (%)		84.3	
Total Nitrogen (%)		0.41	
Acid Neutralising Capacity (% CaCO ₃)	AS4454:2012 Appendix H	10.22	
Total Calcium (%)		3.96	
Total Magnesium (%)		0.26	
Total Potassium (%)	Rayment & Lyons 2011 - 17C1 Aqua Regia	0.27	
Total Sodium (%)		0.14	
Total Sulphur (%)		0.02	
Total Phosphorus (%)	Rayment & Lyons 2011 - 17C1 Aqua Regia	0.11	
METALS			
Total Zinc (mg/kg)		40.0	
Total Manganese (mg/kg)		412	
Total Iron (mg/kg)		2,538	
Total Copper (mg/kg)		10.9	
Total Boron (mg/kg)		22.1	
Total Silicon (mg/kg)		1,145	
Total Aluminium (mg/kg)		1,023	
Total Molybdenum (mg/kg)	Rayment & Lyons 2011 - 17C1 Aqua Regia	<1	
Total Cobalt (mg/kg)		<1	
Total Selenium (mg/kg)		<1	
Total Cadmium (mg/kg)		<0.5	
Total Lead (mg/kg)		<1	
Total Arsenic (mg/kg)		<2	
Total Chromium (mg/kg)		5.52	
Total Nickel (mg/kg)		1.78	
Total Mercury (mg/kg)		<0.1	

Notes:

- All analysis is dry weight – Samples reported on an oven dried basis at 105°C (testing conducted on finely ground sample dried at 40°C).
- Methods from Rayment and Lyons, 2011. *Soil Chemical Methods - Australasia*. CSIRO Publishing: Collingwood.
- Indicative guidelines are based on those in AS4454:2012 for a composted product.
- Total Acid Extractable Nutrients indicate a store of nutrients.
- Information relating to testing colour codes is available on sheet 2 - 'Understanding your agricultural soil results'.
- Conversions for 1 mg/kg = 1 ppm; 1 % = 10,000 ppm
- Conversions to kg/ha = mg/kg x 2.24
- The chloride calculation of Cl mg/L = EC x 640 is considered an estimate, and most likely an over-estimate
- Analysis conducted between sample arrival date and reporting date.
- This report is not to be reproduced except in full.
- All testing parameters have been facilitated by a NATA accredited laboratory.

Quality Checked: Brian Smith
 Compost & Landscape Soils Co-ordinator