



BIOSCIENCE PTY LTD ABN: 26 547 517 746
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ANALYSIS REPORT

CLIENT:	Eclipse	REPORT NO:	2022_0807_1
TEST REQUEST:	AS 4454-2012 Test Methods B-G, I-J ⁽¹⁾	LAB SAMPLE ID:	2022_0807
ADDRESS:	40 Subiaco Square Rd, Subiaco WA	DATE RECEIVED:	12/09/2023
CLIENT SAMPLE ID:	#1 Boutique Mulch (ES676)	DATE TESTED:	12/09/23-6/10/23
SAMPLING LOCATION:	Abercrombie	DATE REPORTED:	6/10/2023

TEST RESULTS

Analyte	Result	Unit	AS4454 Compliance Requirement	
			Composted product	Mature compost
Electrical Conductivity	0.51	mS/cm	≤10	≤10
pH _(H₂O)	6.42		> 5	>5
pH _(CaCl₂)	6.20			
Ammonium-N (in extract)	0.170	mg/L	<200	<100
Ammonium-N (dry weight)	0.891	mg/kg		
Nitrate-N (in extract)	0.150	mg/L		
Nitrate-N (dry weight)	0.787	mg/kg	≥10 ⁽²⁾	≥10 ⁽²⁾
Total N (dry weight)	0.165	%	≥ 0.8 ⁽²⁾	≥ 0.8 ⁽²⁾
Phosphate-P (in extract)	0.918	mg/L	≤ 5 ⁽³⁾ , <1 ⁽⁴⁾	≤ 5 ⁽³⁾ , <1 ⁽⁴⁾
Phosphate-P (dry weight)	4.81	mg/kg		
Total P (dry weight)	0.01	%	≤ 0.1 ⁽³⁾	≤ 0.1 ⁽³⁾
Carbon (dry weight)	42.1	%	≥ 20	≥ 20
C:N Ratio	256			
Organic Matter (dry weight)	71.6	%		
Calcium (dry weight)	6700	mg/kg		
Magnesium (dry weight)	700	mg/kg		
Sodium (dry weight)	410	mg/kg	< 10 000	< 10 000
Potassium (dry weight)	760	mg/kg		
Chemical Contaminants⁽⁵⁾				
Arsenic	<2	mg/kg	≤ 20	≤ 20
Cadmium	<0.1	mg/kg	≤ 1	≤ 1
Chromium	8.7	mg/kg	≤ 100	≤ 100
Copper	12	mg/kg	≤ 150 ⁽⁶⁾	≤ 150 ⁽⁶⁾
Lead	2.7	mg/kg	≤ 150	≤ 150
Mercury	<0.02	mg/kg	≤ 1	≤ 1
Nickel	2.7	mg/kg	≤ 60	≤ 60
Zinc	26	mg/kg	≤ 300 ⁽⁶⁾	≤ 300 ⁽⁶⁾



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TEST RESULTS

Analyte	Result	Unit	AS4454 Compliance Requirement	
			Composted product	Mature compost
Phytotoxicity	110	Growth Index %	>70	>70
Apparent Density	0.28	kg/L		
Dry Bulk Density	0.23	kg/L		
Moisture content (as received)	24.0	%	25-77.6 ⁽⁷⁾	25-77.6 ⁽⁷⁾
Particle Size Grading				
• > 16mm	54.1	%		
• > 5mm to < 16mm	32.4	%		
• < 5mm	13.4	%		
Physical Contaminants				
• glass, metal and hard plastic > 2mm	0	%	≤ 0.5	≤ 0.5
• light plastic, plastic film > 5mm	0	%	≤ 0.05	≤ 0.05
• stones and clods of clay >5mm	1.3	%	≤ 5	≤ 5

1) Appendix D includes the following parameters not tested by Bioscience Pty. Ltd.: boron, selenium, molybdenum, organohalides, chlorinated organic pesticides (OCPs), polychlorinated biphenyls (PCBs), and pathogens (Salmonella, Escherichia coli, thermotolerant coliforms).

(2) If a contribution to plant nutrition is claimed.

(3) For products that claim to be for P-sensitive plants.

(4) If applied to sandy soils.

(5) Where there are no currently applicable federal and state or territory provisions for composts, soil conditioners and mulches, products shall comply with the list of chemical contaminant upper limit values and labelling provisions as listed here. Note: non-conformance with this Standard does not indicate that the product may not otherwise be suitable for a range of specified applications that comply with other state or territory government regulations, guidelines or specified end user requirements. (From AS 4454-2012 Clause 2.1).

(6) A product that contains levels of total copper between 100-150 mg/kg and/or total zinc between 200-300 mg/kg (dry weight) whilst not exceeding the limit values, shall provide a warning label in accordance with the labelling requirements of Clause 5.3 of AS 4454-2012.

(7) Maximum = % OM + 6, when OM > 40%; maximum = % OM + 10 when OM < 40%.

Analysis: Sample was processed and sampled in accordance with AS 4454-2012 Standards. Electrical conductivity, pH, Ammonium-N, Nitrate-N and Phosphate-P AS 4454-2012 Appendix B. Total N, Carbon, C:N Ratio calculation, Organic Matter calculation AS 4454-2012 Appendix C. Total P, calcium, magnesium, sodium, potassium, arsenic, cadmium, chromium, copper, lead, mercury, nickel, zinc AS 4454-2012 Appendix D.

Phytotoxicity/Bioassay alternate method AS 4454-2012 Appendix F as per Zucconi et al. 1981. Wettability AS 4454-2012 Appendix E. Apparent density and dry bulk density calculation AS 4454-2012 Appendix J. Moisture content AS 4454-2012 Appendix I. Particle size grading AS 4454-2012 Appendix G. Contamination AS 4454-2012 Appendix I.

Replaces previously issued certificate: 2023_0807.

Particle size and contaminants re-tested.

These results reflect our findings for the received sample only.

Tested by: SM HF GN

Date: 6/10/2023

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