

Southern Cross University

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ABN: 41 995 651 524

ROUTINE COMPOST ANALYSIS REPORT

1 sample supplied by Hardwood Residue Solutions on 23/09/2020. Lab Job No.J8706 Analysis requested by Ray Loy. Your Job: Compost 455 Armidale Road SOLITH GRAFTON NSW 2460

455 Armidale Road SOUTH GRAFTON NSW 2460		Sample 1	COMPOST
	Product Name:	Compost	
	Product Type:	compost	
	Client:	Hardwood	
		Residue	Indicativo
Parameter	Method reference	J8706/1	guidelines only
Moisture Content (%)	**Inhouse S2 (105°C)	43	(20 - 55)
Soluble Calcium (mg/kg)		4,081	(2,600 - 5,800)
Soluble Magnesium (mg/kg)	**Inhouse S10 - Morgan 1	2,549	(1,000 - 2,100)
Soluble Potassium (mg/kg)		11,901	(3,600 - 7,800)
Soluble Phosphorus (mg/kg)		3,218	(150 - 850)
	**Rayment & Lyons 2011 - 9E2 (Bray 1)	2,588	(200 - 950)
Phosphorus (mg/kg P)	**Rayment & Lyons 2011 - 9B2 (Colwell)	5,314	(600 - 2,250)
	**Inhouse S3A (Bray 2)	4,706	(1,300 - 3,400)
Nitrate Nitrogen (mg/kg N)		03	(0 - 120)
Ammonium Nitrogen (mg/kg N)	**Inhouse S37 (KCI)	934	(30 - 550)
Sulfur (mg/kg S)		680.8	(100 - 1,450)
рН	Rayment & Lyons 2011 - 4A1 (1:5 Water)	7.90	(6 - 9)
Electrical Conductivity (dS/m)	Rayment & Lyons 2011 - 3A1 (1:5 Water)	9.071	(1 - 10)
Estimated Organic Matter (% OM)	**Calculation: Total Carbon x 1.75	57.1	(20 - 60)
Exchangeable Calcium (mg/kg)	Poyment & Lyone 2011 15D1	3746	(2,800 - 6,000)
Exchangeable Magnesium (mg/kg)	(Ammonium Acetate including pre-treatment for	1012	(850 - 1,500)
Exchangeable Potassium (mg/kg)	Soluble Salts)	6079	(2,300 - 4,500)
Exchangeable Sodium (mg/kg)		1040	(250 - 900)
Exchangeable Aluminium (mg/kg)	**Inhouse S37 (KCI)	21	(0 - 15)
Exchangeable Hydrogen (mg/kg)	**Rayment & Lyons 2011 - 15G1 (Acidity Titration)	<1	(0 - 60)
Effective Cation Exchange Capacity (ECEC) (cmol ₊ /kg)	**Calculation: Sum of Ca,Mg,K,Na,Al,H (cmol,/kg)	47.33	(20 - 70)
Calcium (%)		39.5	(30 - 70)
Magnesium (%)		17.6	(15 - 30)
Potassium (%)	**Base Saturation Calculations -	32.9	(10 - 30)
Sodium - ESP (%)	Cation cmol₄/kg / ECEC x 100	9.6	(1 - 15)
Aluminium (%)		0.5	(0 - 0 5)
Hydrogen (%)		0.0	(0 0.0)
Zinc (mg/kg)		123	(25 - 125)
Manganese (mg/kg)	Rayment & Lyons 2011 - 12A1 (DTPA)	45	(25 - 130)
Iron (mg/kg)		49	(75 - 450)
Copper (mg/kg)		11	(1 - 15)
Boron (mg/kg)	**Rayment & Lyons 2011 - 12C2 (Hot CaCl ₂)	1	(1 - 10)
Silicon (mg/kg Si)	**Inhouse S11 (Hot CaCl2)	104	(30 - 160)
Total Carbon (%)	Inhouse S4a (LECO Trumac Analyser)	34.50	(15 - 35)
Total Nitrogen (%)		1.68	(0.5 - 3)
Carbon/Nitrogen Ratio	**Calculation: Total Carbon/Total Nitrogen	20.5	(5 - 30)
Total Calcium (mg/kg)		19,319	(10,000 - 50,000)
Total Magnesium (mg/kg)		6,039	(1,000 - 7,000)
Total Potassium (mg/kg)	Rayment & Lyons 2011 - 17C1 Aqua Regia	17,815	(3,000 - 14,000)
Total Sodium (mg/kg)		3,463	(1,000 - 6,000)
Total Sulfur (mg/kg)		4,350	(1,000 - 7,000)







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	-	
Product Name:	Compost	
Product Type:	compost	
Client:	Hardwood	
Method reference	J8706/1	Indicative guidelines only
Rayment & Lyons 2011 - 17C1 Aqua Regia	6,167	(3,000 - 10,000)
	203	(110 - 270)
	193	(130 - 450)
	3,281	(6,400 - 18,000)
	42	(15 - 90)
	14	(10 - 40)
	1,306	(400 - 1,400)
	1736.1	(1,500 - 6,000)
	1.1	(0.5 - 6)
	3.5	(0.1 - 4)
	0.7	(1 - 1.8)
	<0.5	(0 - 1)
	5.7	(0 - 15)
	4.2	(0 - 5)
	6.6	(0 - 30)
	4.5	(0 - 10)
	<0.1	(0 - 1)
	<1	(0 - 1)
Sub** - Symbio Laboratories B951445-A	Not detected	Absent in 25 g
Sub** - Symbio Laboratories B951445-A	Not detected	< 100 MPN/g
Sub** - Symbio Laboratories B951445-A	Not detected	< 1000 MPN/g
AS4454:2012 Appendix M	Nil	
AS4454:2012 Appendix M	Nil	Nil after 21 days
	Product Name: Product Type: Client: Method reference Rayment & Lyons 2011 - 17C1 Aqua Regia	Product Name:Compost compost Hardwood ResidueMethod reference38706/1Method reference6,1672031933,2813,28142141,3061736.11,113,50,710,55,774,24,24,21,3061736.11,113,50,70,55,74,26,64,50,70,55,74,26,64,50,1-11-1Sub** - Symbio Laboratories B951445-ANot detectedSub** - Symbio Laboratorie

Notes:

1. All results presented as a 40°C oven dried weight. Soil sieved and lightly crushed to < 2 mm.

2. Methods from Rayment and Lyons, 2011. Soil Chemical Methods - Australasia. CSIRO Publishing: Collingwood.

3. Soluble Salts not included in Exchangeable Cations - PRE-WASH removes the Soluble Salts before analysis.

4. 'Morgan 1 Extract' adapted from 'Science in Agriculture', 'Non-Toxic Farming' and LaMotte Soil Handbook.

5. Guidelines for phosphorus have been reduced for Australian soils.

6. Indicative guidelines are based on 'Albrecht' and 'Reams' concepts.

7. Total Acid Extractable Nutrients indicate a store of nutrients.

8. National Environmental Protection (Assessment of Site Contamination) Measure 2013,

Schedule B(1) - Guideline on Investigation Levels for Soil and Groundwater. Table 5-A Background Ranges.

9. Information relating to testing colour codes is available on sheet 2 - 'Understanding your agricultural soil results'.

10. Conversions for 1 cmol₊/kg = 230 mg/kg Sodium, 390 mg/kg Potassium,

122 mg/kg Magnesium, 200 mg/kg Calcium

11. Conversions to kg/ha = mg/kg x 2.24

12. The chloride calculation of Cl mg/L = EC x 640 is considered an estimate, and most likely an over-estimate

13. All testing parameters have been facilitated by a NATA accredited laboratory.

** NATA accreditation does not cover the performance of this service.

14. Analysis conducted between sample arrival date and reporting date.

15. This report is not to be reproduced except in full. Results only relate to the item tested.

16. All services undertaken by EAL are covered by the EAL Laboratory Services Terms and Conditions (refer scu.edu.au/eal).

17. This report was issued on 02/10/2020.

Quality Checked: Brian Smith

Compost & Landscape Soils Co-Ordinator



