



Anaheim Office  
November 5, 2024  
Report 24-299-0014

Zanker Landscape Materials  
675 Los Esteros Road  
San Jose Ca 95134

Attn: Marin

**RE: Dark Brown Mulch**

The product submitted is from recycled wood that has not been fully composted. Visually, this material has a nice black color and is free of contaminants.

Approximately 9.7% of the material is retained on a 1 inch screen and approximately 35.9% is retained in the 1/2" screen. Of the material passing the 1/2 inch screen 19.9% of the amendment passes the 6.4 mm (1/4 inch) screen and 1.1% passes the 2.36 mm (about 1/8 inch). The particle size distribution is favorable for a surface mulch product.

The product is comprised of 81.7% organic matter by weight with 153 lbs. of organic matter per cubic yard.

The product is slightly acidic with pH 6.1. Soluble salts are favorably low. Boron is elevated at 1.14 ppm but should pose no hazard at normal incorporation rates.

The carbon to nitrogen ratio is higher than ideal and if this material is incorporated into soil there will be potential competition between plants and soil microorganisms for available nitrogen. Nitrogen draw is not expected to be an issue if the material is used as a surface mulch. Nitrogen can be supplemented in a slow release form such as sulfur coated urea (43-0-0) or similar to help mitigate any nitrogen drawdown.

The current grind is favorable if the goal is to reduce surface water evaporation. In addition to aiding in water retention, the mulch is expected to help with weed control and soil temperature regulation, the mulch will also improve the organic content of the soil as it decomposes.

If we can be of any further assistance, please feel free to contact us.

A handwritten signature in black ink, appearing to read "M. Schwebel".

Matt Schwebel  
[Mschwebel@waypointanalytical.com](mailto:Mschwebel@waypointanalytical.com)  
(714)-552-5228

**COMPOST / AMENDMENT EVALUATION**

Send To : Greenwaste-Zanker Landscape Materials 675 Los Esteros Road San Jose CA 95134	Project : Dark Brown Mulch	Report Number : <b>24-299-0014</b> Customer Number : 01002 Date printed : 10/31/2024 Date received : 10/25/2024 Page : 1 of 2 Lab Number : 71087
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Sample Id : **Dark Brown Mulch**

Nutrient	Total - Dry Weight	Extractable - Dry Weight	Saturation Extract	Sufficiency Factor
Nitrogen (N)	0.35 %	28 ppm		0.1
NH <sub>4</sub> -N		26 ppm		
NO <sub>3</sub> -N		2 ppm		
Phosphorus (P )		61 ppm		0.2
Phosphorus (P <sub>2</sub> O <sub>5</sub> )		140 ppm		
Potassium (K)		129 ppm	1.6 meq/L	0.2
Potassium (K <sub>2</sub> O )		156 ppm		
Calcium (Ca)		425 ppm	1.5 meq/L	0.4
Magnesium (Mg)		73 ppm	0.6 meq/L	0.3
Sodium (Na)			3.2 meq/L	
Sulfur (S)				
Sulfate (SO <sub>4</sub> )			3.0 meq/L	1.0
Chloride (Cl)				
Copper (Cu)		1.6 ppm		9.9
Zinc (Zn)		5 ppm		7.7
Manganese (Mn)		16 ppm		11.7
Iron (Fe)		262 ppm		42.7
Dilute Acid Fe		0.02 %		
Boron (B)			1.14 ppm	3.8

Test	Result
pH (sat paste)	6.1 s.u.
% Half Sat.	276
TEC	13 meq/kg
Qualitative Lime	None
Salinity (EC of sat ext.)	0.7 dS/m
SAR (Sodium adsorption ratio)	3.12
Sodium as % of ECE	40 %
Bulk Density - Dry	188 lbs/yd <sup>3</sup>
Bulk Density - As Received	303 lbs/yd <sup>3</sup>
Moisture - As Received	38.1 %
Organic	81.7 %
Weight of organic / yd <sup>3</sup>	153 lbs/yd <sup>3</sup>
Weight of mineral / yd <sup>3</sup>	34 lbs/yd <sup>3</sup>
C/N Ratio	139.8

Gradation	
Wt Percent Retained 1"	9.7 %
Wt Percent Retained 1/2"	35.9 %
<b>Fraction Passing 1/2 inch Screen - Dry Weight Basis</b>	
Screen Opening	% Passing
Passing 9.5mm	68.6 %
Passing 6.4mm ( 1/4")	19.9 %
Passing 4.75mm	5.9 %
Passing 2.36mm	1.1 %
Passing 1.00mm	1.1 %
Passing 0.50mm	1.1 %

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### POTENTIAL RATE LIMIT FACTORS

Test	% Volume rate limit	Cubic yard amendment per 1000 sf to 6"							
		1	2	3	4	5	6	7	8
		Volume % amendment blend with sandy loam							
		5	11	16	22	27	32	38	43
EC sat. ext.	No Limit								
Sodium sol.	No Limit								
Chloride sol.									
Boron sol.	65 %								
NH <sub>4</sub> -N	No Limit								
Available									
Nitrogen	No Limit								
PO <sub>4</sub> P	No Limit								
Copper	40 %								
Zinc	52 %								

Rate limit estimates based on amending a non-problematic sandy loam

### RELATIVE IMMEDIATE NUTRIENT AND ORGANIC VALUE

* Example Rate 40 %	Slight	Moderate	Abundant
Nitrogen			
Phosphorus			
Potassium			
Calcium			
Magnesium			
Copper			
Zinc			
Manganese			
Iron			
Sulfate			
Organic Matter			

\* If no chemical characteristics are rate limiting, the example rate is based on organic content of the amendment (up to a max of 43%).