



Anaheim Office  
November 5, 2024  
Report 24-299-0012

Zanker Landscape Materials  
675 Los Esteros Road  
San Jose Ca 95134

Attn: Marin

**RE: Black 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 8.7% of the material is retained on a 1 inch screen and approximately 34.2% is retained in the 1/2" screen. Of the material passing the 1/2 inch screen 21.1% of the amendment passes the 6.4 mm (1/4 inch) screen and 0.4% 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 92.5% organic matter by weight with 159 lbs. of organic matter per cubic yard.

The product is moderately acidic with pH 5.8. Soluble salts are favorably low. The only nutrient of significance is potassium. Boron is elevated at 1.19 ppm but should pose no hazard at normal incorporation rates.

The carbon to nitrogen ratio is favorable and if this material is incorporated into soil there will be limited 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.

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", is written over a light blue horizontal line.

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 : Black Mulch	Report Number : <b>24-299-0012</b> Customer Number : 01002 Date printed : 10/31/2024 Date received : 10/25/2024 Page : 1 of 2 Lab Number : 71085
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Sample Id : **Black Mulch**

Nutrient	Total - Dry Weight	Extractable - Dry Weight	Saturation Extract	Sufficiency Factor
Nitrogen (N)	2.59 %	11 ppm		0
NH <sub>4</sub> -N		8 ppm		
NO <sub>3</sub> -N		3 ppm		
Phosphorus (P )		71 ppm		0.2
Phosphorus (P <sub>2</sub> O <sub>5</sub> )		163 ppm		
Potassium (K)		157 ppm	1.4 meq/L	0.2
Potassium (K <sub>2</sub> O )		190 ppm		
Calcium (Ca)		397 ppm	1.7 meq/L	0.4
Magnesium (Mg)		77 ppm	0.8 meq/L	0.3
Sodium (Na)			3.3 meq/L	
Sulfur (S)				
Sulfate (SO <sub>4</sub> )			3.1 meq/L	1.0
Chloride (Cl)				
Copper (Cu)		1.2 ppm		7.2
Zinc (Zn)		5 ppm		7.5
Manganese (Mn)		15 ppm		11.0
Iron (Fe)		13 ppm		2.2
Dilute Acid Fe		0.02 %		
Boron (B)			1.19 ppm	4.0

Test	Result
pH (sat paste)	5.8 s.u.
% Half Sat.	247
TEC	13 meq/kg
Qualitative Lime	None
Salinity (EC of sat ext.)	0.7 dS/m
SAR (Sodium adsorption ratio)	2.98
Sodium as % of ECe	42 %
Bulk Density - Dry	170 lbs/yd <sup>3</sup>
Bulk Density - As Received	287 lbs/yd <sup>3</sup>
Moisture - As Received	40.6 %
Organic	93.5 %
Weight of organic / yd <sup>3</sup>	159 lbs/yd <sup>3</sup>
Weight of mineral / yd <sup>3</sup>	11 lbs/yd <sup>3</sup>
C/N Ratio	21.6

Gradation	
Wt Percent Retained 1"	8.7 %
Wt Percent Retained 1/2"	34.2 %
<b>Fraction Passing 1/2 inch Screen - Dry Weight Basis</b>	
<b>Screen Opening</b>	<b>% Passing</b>
Passing 9.5mm	56.0 %
Passing 6.4mm ( 1/4")	21.1 %
Passing 4.75mm	7.1 %
Passing 2.36mm	0.4 %
Passing 1.00mm	0.4 %
Passing 0.50mm	0.4 %

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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.	62 %								
NH <sub>4</sub> -N	No Limit								
Available									
Nitrogen									
PO <sub>4</sub> P	No Limit								
Copper	56 %								
Zinc	53 %								

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

### RELATIVE IMMEDIATE NUTRIENT AND ORGANIC VALUE

* Example Rate 43 %	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%).