



Anaheim Office
May 10, 2023
Report 23-121-0029

Zanker Landscape Materials
San Jose, CA 95134
675 Los Esteros Road

Attn: Marin & Beto

RE: Soil Amendment processed 05/01/2023

The first sheet is the actual test data and the second sheet evaluates the potential rate limiting factors in the top table and in this case, boron is the only potentially rate limiting factor. Boron does not limit the use of this material at the recommended amendment rate. The bottom table on that sheet uses an example rate of 43% based on organic content. At the example rate, the degree to which the compost would satisfy the immediate requirement for each required nutrient is indicated.

Approximately 84.9% of the amendment passes the 6.4 mm (1/4 inch) screen and 41.6% passes the 2.36 mm (about 1/8 inch). Actual organic matter content is favorable at 226 pounds per cubic yard. Organic content at 69.1% is favorable. The as-received moisture level is a little low at 19.0% and this may lead to some dustiness.

The carbon to nitrogen ratio at 54.4 indicates there will be a consumption of nitrogen as the microbes break down the less resistant organic matter. To ensure that this does not compete with the plants for nitrogen this could be dealt with at the time of use by simultaneously incorporating Ureaform 38-0-0 (27% water insoluble nitrogen) at a rate of 1 pound per cubic yard of amendment. This slow release product should offset the requirement of the amendment but the planting should still be on a regular nitrogen fertilization program.

Reaction is slightly acidic at a pH of 6.9. Salinity, sodium and boron are safely low for use at the recommended rate.

At the example rate of 43% volume this material would provide an abundant amount of zinc and organic matter. A moderate amount of potassium, calcium, manganese and sulfate will also be supplied. These contributions at the example rate are noted on the last page. This volume rate is equivalent to 8 cubic yards per 1000 square feet for blending to 6 inches depth. This would be adding 1808 pounds organic matter, which would increase organic content of a sandy loam soil by about 6.6% on a dry weight basis. This type of product will often be used at between 2 and 6 cubic yards per 1000 ft.² for incorporation to a 6 inch depth.

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

A handwritten signature in black ink, appearing to read "J.K.", is positioned above the typed name of the sender.

Joe Kiefer, CCA
jkiefer@waypointanalytical.com

Emailed 3 pages: marin.villalpando@greenwaste.com & beto.choa@greenwaste.com

COMPOST / AMENDMENT EVALUATION

Send To : Zanker Landscape Materials 675 Los Esteros Road San Jose CA 95134	Project : Soil Amendment	Report Number : 23-121-0029 Customer Number : 01002 Date printed : 05/08/2023 Date received : 05/01/2023 Page : 1 of 2 Lab Number : 59398
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Sample Id : **Soil Amendment**

Nutrient	Total - Dry Weight	Extractable - Dry Weight	Saturation Extract	Sufficiency Factor
Nitrogen (N)	0.76 %	481 ppm		1.0
NH ₄ -N		454 ppm		
NO ₃ -N		27 ppm		
Phosphorus (P)		26 ppm		0.1
Phosphorus (P ₂ O ₅)		60 ppm		
Potassium (K)		1233 ppm	4.6 meq/L	1.5
Potassium (K ₂ O)		1492 ppm		
Calcium (Ca)		3975 ppm	7.5 meq/L	1.1
Magnesium (Mg)		36 ppm	5.3 meq/L	0.1
Sodium (Na)			4.7 meq/L	
Sulfur (S)				
Sulfate (SO ₄)			8.8 meq/L	2.9
Chloride (Cl)				
Copper (Cu)		1.6 ppm		0.7
Zinc (Zn)		24 ppm		2.5
Manganese (Mn)		30 ppm		1.4
Iron (Fe)		12 ppm		0.1
Dilute Acid Fe		0.12 %		
Boron (B)			1.03 ppm	3.4

Test	Result
pH (sat paste)	6.9 s.u.
% Half Sat.	230
TEC	189 meq/kg
Qualitative Lime	None
Salinity (EC of sat ext.)	1.9 dS/m
SAR (Sodium adsorption ratio)	1.86
Sodium as % of ECe	23 %
Bulk Density - Dry	328 lbs/yd ³
Bulk Density - As Received	405 lbs/yd ³
Moisture - As Received	19.0 %
Organic	69.1 %
Weight of organic / yd ³	226 lbs/yd ³
Weight of mineral / yd ³	101 lbs/yd ³
C/N Ratio	54.4

Gradation	
Wt Percent Retained 1"	0.0 %
Wt Percent Retained 1/2"	3.7 %
Fraction Passing 1/2 inch Screen - Dry Weight Basis	
Screen Opening	% Passing
Passing 9.5mm	98.0 %
Passing 6.4mm (1/4")	84.9 %
Passing 4.75mm	74.1 %
Passing 2.36mm	41.6 %
Passing 1.00mm	20.2 %
Passing 0.50mm	12.5 %

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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.	72 %								
NH ₄ -N	No Limit								
Available									
Nitrogen	No Limit								
PO ₄ P	No Limit								
Copper	No Limit								
Zinc	No Limit								

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%).

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