



**US COMPOSTING
COUNCIL**

*Seal of Testing
Assurance*

McFarlane's Bark Inc.

Traci Crawley
13345 SE Johnson Rd.
Milwaukie
OR 97222

Date Sampled/Received: 15 Jun. 22 / 21 Jun. 22

Product Identification
Yard Debris Compost (Compo-Stuff)

COMPOST TECHNICAL DATA SHEET

LABORATORY: Soil Control Lab; 42 Hangar Way; Watsonville, CA 95076 tel: 831.724.5422 fax: 831.724.3188			
<i>Compost Parameters</i>	<i>Reported as (units of measure)</i>	<i>Test Results</i>	<i>Test Results</i>
Plant Nutrients:	%, weight basis	Not reported	Not reported
Moisture Content	%, wet weight basis	64.0	
Organic Matter Content	%, dry weight basis	69.8	
pH	units	7.83	
Soluble Salts <i>(electrical conductivity EC₅)</i>	dS/m (mmhos/cm)	0.61	
Particle Size or Sieve Size	maxium aggregate size, inches	0.64	
Stability Indicator (<i>respirometry</i>)		<i>Stability Rating:</i>	
CO ₂ Evolution	mg CO ₂ -C/g OM/day	1.9	Very Stable
	mg CO ₂ -C/g TS/day	1.3	
Maturity Indicator (bioassay)			
Percent Emergence	average % of control	93.3	
Relative Seedling Vigor	average % of control	100.0	
Select Pathogens	PASS/FAIL: per US EPA Class A standard, 40 CFR § 503.32(a)	Pass	<i>Fecal coliform</i>
		Pass	<i>Salmonella</i>
Trace Metals	PASS/FAIL: per US EPA Class A standard, 40 CFR § 503.13, Tables 1 and 3.	Pass	<i>As,Cd,Cr,Cu,Pb,Hg</i> <i>Mo,Ni,Se,Zn</i>

Participants in the US Composting Council's Seal of Testing Assurance Program have shown the commitment to test their compost products on a prescribed basis and provide this data, along with compost end use instructions, as a means to better serve the needs of their compost customers.

Laboratory Group: Jun22D Laboratory Number: 2060438-1/1

Analyst: Assaf Sadeh

www.compostlab.com



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Compost Parameters	Reported as (units of measure)	Test Results	Test Results
Plant Nutrients:	%, weight basis	%, wet weight basis	%, dry weight basis
Nitrogen	Total N	0.51	1.4
Phosphorus	P ₂ O ₅	0.14	0.39
Potassium	K ₂ O	0.24	0.66
Calcium	Ca	0.65	1.8
Magnesium	Mg	0.10	0.28
Moisture Content	%, wet weight basis	64.0	
Organic Matter Content	%, dry weight basis	69.8	
pH	units	7.83	
Soluble Salts (electrical conductivity EC ₅)	dS/m (mmhos/cm)	0.61	
Particle Size or Sieve Size	% under 9.5 mm, dw basis	96.9	
Stability Indicator (respirometry)		Stability Rating:	
CO ₂ Evolution	mg CO ₂ -C/g OM/day	1.9	Very Stable
	mg CO ₂ -C/g TS/day	1.3	
Maturity Indicator (bioassay)			
Percent Emergence	average % of control	93.3	
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		Pass	Salmonella
Trace Metals	PASS/FAIL: per US EPA Class A standard, 40 CFR § 503.13, Tables 1 and 3.	Pass	As,Cd,Cr,Cu,Pb,Hg Mo,Ni,Se,Zn

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Seal of Testing Assurance



Oregon
Department of Transportation

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Date Sampled/Received: 15 Jun. 22 / 21 Jun. 22

Compost Technical Data Sheet for Oregon State DOT Projects

LABORATORY: Soil Control Lab; 42 Hangar Way; Watsonville, CA 95076 tel: 831.724.5422 fax: 831.724.3188

Compost Parameters	Specification Requirements			Test Results			
	% , dry weight passing through			% , dry weight passing through			
Size Classification	Sieve Size	Fine	Medium	Coarse	Sieve Size		
TMECC 02.02-B	3"	100	100	100	3"	100.0	
	1"	99 – 100	95 – 100	90 – 100	1"	100.0	
	3/4"	99 – 100	95 – 100	70 – 100	3/4"	100.0	
	5/8"	95 – 100	70 – 100	70 – 100	5/8"	100.0	
	1/2"	80 – 100	70 – 100	60 – 100	1/2"	97.9	
	1/4"	75 - 100	70 – 90	30 – 60	1/4"	88.4	
Maximum Particle Length:		98% < 3 in.	98% < 3 in.	98% < 6 in.	% < 3 in.	100.0	
					% < 6 in.	100.0	
Status:		Pass	Pass	Fail			
Filter Sock:	1/4"	30 max.	Status:	Fail	1/4"	88.4	
Filter Berm:	1/4"	50 max.	Status:	Fail	1/4"	88.4	
Manufactured Inerts TMECC 03.08-A % dry weight basis		1.0 max.				< 0.5	Status: Pass
pH TMECC 04.11-A 1:5 slurry		6.0 min. and 8.5 max.				7.8	Pass
Organic Matter Content TMECC 05.07-A Loss-on-Ignition % dry weight basis		35 min.				69.8	Pass
Soluble Salts TMECC 04.10-A 1:5 Slurry dS/m (mmohs/cm)		5.0 max.				0.61	Pass
Carbon to Nitrogen Ratio TMECC 04.02-D		< 25:1	< 30:1	< 35:1		26	Pass
Stability Indicator TMECC 05.08-B Carbon Dioxide Evolution Rate		8 max. (mg CO ₂ -C/g OM/day)				1.9	Pass
Maturity Indicator TMECC 05.05 A Cucumber Bioassay % average of control		Germination: 80% or greater			Germination:	93	Pass
		Vigor: 80% or greater			Vigor:	100	Pass
Moisture Content TMECC 03.09-A		35 - 60%				64.0	Fail

This compost product has been sampled and tested as required by the Seal of Testing assurance Program on the United States Composting Council (USCC), using certain methods from the "Test Methods for the Examination of Compost and Composting" manual. Test results are available upon request by contacting the compost producer (address at top of page). The USCC makes no warranties regarding this product or its content, quality, or suitability for any particular use.

Laboratory Group: Jun22D

Laboratory Number: 2060438-1/1

Analyst: Assaf Sadeh

Date Reported: 8-Jul-22

SOIL CONTROL LAB

42 HANGAR WAY
WATSONVILLE
CALIFORNIA
95076
USA

Account #: 2060438-1/1-946
Group: Jun22D #10
Reporting Date: July 8, 2022

McFarlane's Bark Inc.
13345 SE Johnson Rd.
Milwaukie, OR 97222
Attn: Traci Crawley

Date Received: 21 Jun. 22
Sample Identification: Yard Debris Compost (Compo-Stuff)
Sample ID #: 2060438 - 1/1

Nutrients				Stability Indicator:			
	Dry wt.	As Rcvd.	units	CO2 Evolution		Respirometry	
Total Nitrogen:	1.4	0.51	%	mg CO ₂ -C/g OM/day		1.9	
Ammonia (NH ₄ -N):	10	3.6	mg/kg	mg CO ₂ -C/g TS/day		1.3	
Nitrate (NO ₃ -N):	< 1.0	< 0.4	mg/kg	<i>Stability Rating</i>		<i>very stable</i>	
Org. Nitrogen (Org.-N):	1.4	0.51	%	Maturity Indicator: Cucumber Bioassay			
Phosphorus (as P ₂ O ₅):	0.38	0.14	%	Compost:Vermiculite (v:v)		1:2	
Phosphorus (P):	1700	600	mg/kg	Emergence (%)		93	
Potassium (as K ₂ O):	0.67	0.24	%	Seedling Vigor (%)		100	
Potassium (K):	5500	2000	mg/kg	<i>Description of Plants</i>		<i>healthy</i>	
Calcium (Ca):	1.8	0.65	%	Pathogens			
Magnesium (Mg):	0.28	0.10	%	Fecal Coliform	< 7.5	MPN/g	<i>pass</i>
Sulfate (SO ₄ -S):	34	12	mg/kg	Salmonella	< 3	MPN/4g	<i>pass</i>
Boron (Total B):	26	9.5	mg/kg	Date Tested: 21 Jun. 22			
Moisture:	0	64.0	%	Physical Contaminants** % by weight			
Sodium (Na):	0.028	0.010	%	Total Plastic		< 0.1	
Chloride (Cl):	0.033	0.012	%	Film Plastic		< 0.1	
pH Value:	NA	7.83	unit	Glass		< 0.1	
Bulk Density :	13	37	lb/cu ft	Metal		< 0.1	
Carbonates (CaCO ₃):	<0.1	<0.1	lb/ton	Sharps		ND	
Conductivity (EC5):	0.61	NA	mmhos/cm	Total		< 0.5	
Organic Matter:	69.8	25.1	%	Size Distribution			
Organic Carbon:	37.0	13.0	%	MM	% by weight		
Ash:	30.2	10.9	%	> 50	0.0		
C/N Ratio	26	26	ratio	25 to 50	0.0		
AgIndex	> 10	> 10	ratio	16 to 25	0.0		
Metals				Size Distribution			
	Dry wt.	EPA Limit	units	9.5 to 16	3.1		
Aluminum (Al):	6100	-	mg/kg	6.3 to 9.5	8.5		
Arsenic (As):	2.0	41	mg/kg	4.0 to 6.3	12.8		
Cadmium (Cd):	< 1.0	39	mg/kg	2.0 to 4.0	25.1		
Chromium (Cr):	15	-	mg/kg	< 2.0	50.5		
Cobalt (Co)	4.4	-	mg/kg	**Greater than 4mm in size (Sharps greater than 2mm)			
Copper (Cu):	26	1500	mg/kg				
Iron (Fe):	9300	-	mg/kg				
Lead (Pb):	68	300	mg/kg				
Manganese (Mn):	460	-	mg/kg				
Mercury (Hg):	< 1.0	17	mg/kg				
Molybdenum (Mo):	1.3	75	mg/kg				
Nickel (Ni):	9.2	420	mg/kg				
Selenium (Se):	< 1.0	100	mg/kg				
Zinc (Zn):	130	2800	mg/kg				

Analyst: Assaf Sadeh



*Sample was received and handled in accordance with TMECC procedures.

Account No.:
2060438 - 1/1 - 946
Group: Jun22D No. 10

Date Received
Sample i.d.
Sample I.d. No.

21 Jun. 22
Yard Debris Compost (Compo-Stuff)
1/1 2060438

INTERPRETATION:

Is Your Compost Stable?

Respiration Rate
1.9 mg CO₂-C/
g OM/day
+++++++
< Stable >|< Moderately Unstable>|< Unstable >|< High For Mulch

Is Your Compost Mature?

Ammonia/Nitrate N ratio
NA Ratio
Ratio does not apply due to low concentrations of both Ammonia N and Nitrate N.
VeryMature>|< Mature >|< Immature

Ammonia N ppm
10 mg/kg
dry wt.
+
VeryMature>|< Mature >|< Immature

Nitrate N ppm
< 1.0 mg/kg
dry wt.
+
< Immature >|< Mature

Cucumber Emergence
93.3 percent
+++++++
< Immature >|< Mature

Is Your Compost Safe Regarding Health?

Fecal Coliform
< 1000 MPN/g dry wt.
+++++++
< Safe >|< High Fecal Coliform

Salmonella
Less than 3 /4g dry wt.
+++++++
< Safe (none detected) >|< High Salmonella Count(> 3 per 4 grams)

Metals US EPA 503
Pass dry wt.
+++++++
< All Metals Pass >|< One or more Metals Fail

Does Your Compost Provide Nutrients or Organic Matter?

Nutrients (N+P₂O₅+K₂O)
2.4 Percent
dry wt.
+++++++
< Low >|< Average >|< High Nutrient Content

AgIndex (Nutrients / Sodium and Chloride Salts) $((N+P_2O_5+K_2O) / (Na + Cl))$
15 Ratio
+++++++
Na & Cl >|< Nutrient and Sodium and Chloride Provider >|< Nutrient Provider

Plant Available Nitrogen (PAN) Estimated release for first season
1 lbs/ton
wet wt.
++++
Low Nitrogen Provider>|< Average Nitrogen Provider >|< High Nitrogen Provider

C/N Ratio
26 Ratio
+++++++
< Nitrogen Release >|< N-Neutral >|< N-Demand>|< High Nitrogen Demand

Soluble Available Nutrients & Salts (EC₅ w/w dw)
0.61 mmhos/cm
dry wt.
+++
SloRelease>|< Average Nutrient Release Rate >|< High Available Nutrients

Lime Content (CaCO₃)
0 Lbs/ton
dry wt.
+
< Low >|< Average >|< High Lime Content (as CaCO₃)

What are the physical properties of your compost?

Percent Ash
30.2 Percent
dry wt.
+++++++
< High Organic Matter >|< Average >|< High Ash Content

Sieve Size % > 6.3 MM (0.25")
11.6 Percent
dry wt.
+++++++
All Uses >|< Size May Restrict Uses for Potting mix and Golf Courses

Account No.:
2060438 - 1/1 - 946
Group: Jun22D No. 10

Date Received
Sample i.d.
Sample I.d. No.

21 Jun. 22
Yard Debris Compost (Compo-Stuff)
1/1 2060438

INTERPRETATION:

Is Your Compost Stable?

Respiration Rate

1.9 Low: Good for all uses mg CO2-C/g OM/day

The respiration rate is a measurement of the biodegradation rate of the organic matter in the sample (as received). The respiration rate is determined by measuring the rate at which CO2 is released under optimized moisture and temperature conditions.

Is Your Compost Mature?

Ammonia:Nitrate N ratio

NA NA*

Ammonia N ppm

10 very mature

Nitrate N ppm

< 1.0 immature

Composting to stabilize carbon can occur at such a rapid rate that sometimes phytotoxins remain in the compost and must be neutralized before using in high concentrations or in high-end uses. This step is called curing. Typically ammonia is in excess with the break-down of organic materials resulting in an increase in pH. This combination results in a loss of volatile ammonia (it smells). Once this toxic ammonia has been reduced and the pH drops, the microbes convert the ammonia to nitrates. A low ammonia + high nitrate score is indicative of a mature compost, however there are many exceptions. For example, a compost with a low pH (<7) will retain ammonia, while a compost with high lime content can lose ammonia before the organic fraction becomes stable. Composts must first be stable before curing indicators apply.

*Ratio does not apply due to low concentrations of both Ammonia N and Nitrate N.

Cucumber Bioassay

93.3 Percent

Cucumbers are chosen for this test because they are salt tolerant and very sensitive to ammonia and organic acid toxicity. Therefore, we can germinate seeds in high concentrations of compost to measure phytotoxic effects without soluble salts being the limiting factor. Values above 80% for both percent emergence and vigor are indicative of a well-cured compost. Exceptions include very high salts that affect the cucumbers, excessive concentrations of nitrates and other nutrients that will be in range when formulated to make a growing media.

Is Your Compost Safe Regarding Health?

Fecal Coliform

< 1000 / g dry wt.

Fecal coliforms can survive in both aerobic and anaerobic conditions and is common in all initial compost piles. Most human pathogens occur from fecal matter and all fecal matter is loaded in fecal coliforms. Therefore fecal coliforms are used as an indicator to determine if the chosen method for pathogen reduction (heat for compost) has met the requirements of sufficient temperature, time and mixing. If the fecal coliforms are reduced to below 1000 per gram dry wt. it is assumed all others pathogens are eliminated. Potential problems are that fecal coliform can regrow during the curing phase or during shipping. This is because the conditions are now more favorable for growth than during the composting process.

Salmonella Bacteria

Less than 3 3 / 4g dry wt. Salmonella is not only another indicator organism but also a toxic microbe. It has been used in the case of biosolids industry to determine adequate pathogen reduction.

Metals

Pass

The ten heavy metals listed in the EPA 503 regulations are chosen to determine if compost can be applied to ag land and handled without toxic effects. Most high concentrations of heavy metals are derived from woodwaste feedstock such as chrome-arsenic treated or lead painted demolition wood. Biosolids are rarely a problem.

Does Your Compost Provide Nutrients or Organic Matter?

Nutrients (N+P2O5+K2O)

2.4 Average nutrient content

This value is the sum of the primary nutrients Nitrogen, Phosphorus and Potassium. Reported units are consistent with those found on fertilizer formulations. A sum greater than 5 is indicative of a compost with high nutrient content, and best used to supply nutrients to a receiving soil. A sum below 2 indicates low nutrient content, and is best-used to improve soil structure via the addition of organic matter. Most compost falls between 2 and 5.

