US COMPOSTING COUNCIL

Seal of Testing Assurance

OCRRA
100 Elwood Davis Road
North Syracuse NY 13212
Tel: 315-295-0734
Fax: 315-453-2872

Product Name: 1/4" Premium Compost

Lab ID: C10614

Report Date: 06/20/2018

Compost Technical Data Sheet

Compost Parameters	***Reported as** (units of measure)*	***Test Results***	***Test Results***
Plant Nutrients:	*%, weight basis*	*% wet weight basis*	*% dry weight basis*
Nitrogen	Total N	0.99	1.69
Phosphorus	P_2O_5	0.35	0.60
Potassium	K_2O	0.44	0.74
Calcium	Ca	3.97	6.78
Magnesium	Mg	0.52	0.89
Moisture Content	%, wet weight basis	41.48	
Organic Matter Content	%, dry weight basis	54.00	
pH	unitless	8.08	
Soluble Salts *(electrical conductivity)*	dS/m (mmhos/cm)	4.00	
Particle Size	< 9.5 mm	99.30	
Stability Indicator *(respirometry)* CO_2 Evolution	mg CO_2-C/G TS/day, AND mg CO_2-C/G OM/day	1.89 3.47	
Maturity Indicator *(bioassay)* Percent Emergence, AND Percent Seedling Vigor	% of control %	96.67 100.00	
Select Pathogens	PASS/FAIL: per US EPA Class A standard, 40 CFR § 503.32(a)	PASS: Salmonella < 3 MPN per 4·g of dry solids	
Trace Metals	PASS/FAIL: per US EPA Class A standard, 40 CFR § 503.13, Tables 1 and 3	PASS: As, Cd, Cu, Pb, Hg, Mo, Ni, Se, and Zn are less than limits specifed by US EPA Class A Standard 40 CFR § 503.13, Tables 1 and 3	

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.

Sampled 5/29/18 @ 8:00 AM.

US COMPOSTING COUNCIL

Seal of Testing Assurance

OCRRA
100 Elwood Davis Road
North Syracuse NY 13212
Tel: 315-295-0734
Fax: 315-453-2872

Product Name: 1/4" Premium Compost

Lab ID: C10614

Report Date: ___06/20/2018

Compost Technical Data Sheet

Compost Parameters	***Reported as*** *(units of measure)*	***Test Results***
Plant Nutrients:		Not reported
Moisture Content	%, wet weight basis	41.48
Organic Matter Content	%, dry weight basis	54.00
pH	unitless	8.08
Soluble Salts *(electrical conductivity)*	dS/m (mmhos/cm)	4.00
Particle Size	< 9.5 mm	99.30
Stability Indicator *(respirometry)* CO_2 Evolution	mg CO_2-C/G TS/day, AND mg CO_2-C/G OM/day	1.89 3.47
Maturity Indicator *(bioassay)* Percent Emergence, AND Percent Seedling Vigor	% of control %	96.67 100.00
Select Pathogens	PASS/FAIL: per US EPA Class A standard, 40 CFR § 503.32(a)	PASS: Salmonella < 3 MPN per 4·g of dry solids
Trace Metals	PASS/FAIL: per US EPA Class A standard, 40 CFR § 503.13, Tables 1 and 3	PASS: As, Cd, Cu, Pb, Hg, Mo, Ni, Se, and Zn are less than limits specifed by US EPA Class A Standard 40 CFR § 503.13, Tables 1 and 3

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.

INTERPRETATION

pH

pH is a measure of active acidity in the feedstock or compost. The pH scale is 0 (acidic) to 14 (basic) with 7 being neutral. Most finished composts will have pH values in the range of 5.0 to 8.5. Ideal pH depends on compost use. A lower pH is preferred for certain ornamental plants while a neutral pH is suitable for most other applications. pH is not a measure of the total acidity or alkalinity and cannot be used to predict the effect of compost on soil pH.

Soluble Salts

Soluble salts are determined by measuring electrical conductivity (EC) in a 1:5 (compost:water, weight ratio) slurry. EC is related to the total soluble salts dissolved in the slurry and is measured in units of millimhos/cm (mmhos/cm). Compost soluble salt levels typically range from 1 to 10 mmhos/cm. High salinity may be toxic to plants. Ideal soluble salt levels will depend on the end use of the compost. Final compost blends with soil or container media/potting mixes should be tested for soluble salts.

% Solids, % Moisutre

The ideal moisture content for composting will depend on the water holding capacity of the materials being composted. In general, high organic matter materials have a higher water holding capacity and a higher ideal moisture content. A typical starting compost mix will have an ideal % solids content of 35-55 % (65-45 % moisture). Finished compost should have a % solids content of 50-60 % (50-40 % moisture).

% Organic Matter

There is no ideal organic matter level for feedstocks or finished compost. Organic matter content will decrease during composting. The organic matter content (dry weight basis) of typical feedstocks and starting mixes will be greater than 60 % while that of finished compost will be in the range of 30-70 %. An organic matter content (dry weight basis) of 50-60 % is desirable for most compost uses.

Nitrogen : Total, Organic, Ammonium, and Nitrate

Total nitrogen (N) includes all forms of nitrogen: organic N, ammonium N (NH_4-N), and nitrate N (NO_3-N). Total N will normally range from less than 1 % to around 5 % (dry weight basis) in most feedstocks and from 0.5 to 2.5 % (dry weight basis) in finished composts. NO_3-N (an optional test) is generally present in only low concentrations in immature composts, although it may increase as the compost matures. NH_4-N levels may be high during initial stages of the composting process, but decrease as maturity increases. Organic N is determined by subtracting the inorganic N forms, NH_4-N and NO_3-N, from total N. However, because NO_3-N levels are generally very low, total nitrogen minus NH_4-N provides a good estimate of organic N in most composts and is the value shown on the front of this report. In stable, finished composts, most of the N should be in the organic form. While NH_4-N and NO_3-N are immediately available to plants, organic N is only slowly available, approximately 10 to 20 % per year. However, mineralization or break-down of organic N into available inorganic forms depends on the C: N ratio (see below) as well as factors such as soil moisture and temperature.

Total Carbon

Total carbon (C) is a direct measurement of all organic and inorganic carbon in the compost sample. Unless the sample has a high pH (> 8.3) or is known to contain carbonates, essentially all carbon will be in the organic form. Compost organic matter typically contains around 54 % organic carbon by weight. The carbon content of individual feedstocks may vary from this ratio.

Carbon: Nitrogen Ratio

This is the ratio of total carbon (C) to total nitrogen (N) in the compost sample provided. C:N ratio may be used as an indicator of compost stability and N availability. Compost C:N ratio typically decreases during composting if the starting C:N ratio is > 25, but may increase if the starting C:N ratio is low (< 15) and N is lost during the composting process. Composts with high C:N ratios (> 30) will likely immobilize or tie-up N if applied to soil, while those with low C:N ratios (< 20) will mineralize or break-down organic N to inorganic (plant-available) N.

Phosphorus, Potassium

Phosphorus (P) and potassium (K) are plant macronutrients. Values reported are for total amounts given in the oxide forms (P_2O_5 and K_2O). These results provide an indication of the nutrient value of the compost sample. However, plant availability of total phosphorus and potassium in compost has not yet been established.

Nitrogen, Phosphorus, Potassium Balance

When compost is applied on the basis of nitrogen (N), most composts will have an excess of phosphorus (P) and potassium (K) relative to crop demand. These mineral elements and salts can accumulate to above optimum levels with repeated application. Growers using compost should regularly soil test to monitor P, K and salt accumulation and should consider using other nutrient sources or nitrogen fixing legumes in their crop rotation especially when P and K levels are above optimum.

US COMPOSTING COUNCIL

Seal of Testing Assurance

OCRRA
100 Elwood Davis Road
North Syracuse NY 13212
Tel: 315-295-0734
Fax: 315-453-2872

Product Name: 1/2" General Use Compost

Lab ID: C10613

Report Date: 06/20/2018

Compost Technical Data Sheet

Compost Parameters	***Reported as** (units of measure)*	***Test Results***	***Test Results***
Plant Nutrients:	*%, weight basis*	*% wet weight basis*	*% dry weight basis*
Nitrogen	Total N	1.02	1.90
Phosphorus	P_2O_5	0.31	0.59
Potassium	K_2O	0.40	0.75
Calcium	Ca	2.80	5.25
Magnesium	Mg	0.36	0.68
Moisture Content	%, wet weight basis	46.66	
Organic Matter Content	%, dry weight basis	59.05	
pH	unitless	8.07	
Soluble Salts *(electrical conductivity)*	dS/m (mmhos/cm)	4.91	
Particle Size	< 9.5 mm	99.56	
Stability Indicator *(respirometry)* CO_2 Evolution	mg CO_2-C/G TS/day, AND mg CO_2-C/G OM/day	2.32 4.01	
Maturity Indicator *(bioassay)* Percent Emergence, AND Percent Seedling Vigor	% of control %	100.00 100.00	
Select Pathogens	PASS/FAIL: per US EPA Class A standard, 40 CFR § 503.32(a)	PASS: Salmonella < 3 MPN per 4·g of dry solids	
Trace Metals	PASS/FAIL: per US EPA Class A standard, 40 CFR § 503.13, Tables 1 and 3	PASS: As, Cd, Cu, Pb, Hg, Mo, Ni, Se, and Zn are less than limits specifed by US EPA Class A Standard 40 CFR § 503.13, Tables 1 and 3	

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.

Sampled 5/29/18 @ 8:15 AM.

US COMPOSTING COUNCIL

Seal of Testing Assurance

OCRRA
100 Elwood Davis Road
North Syracuse NY 13212
Tel: 315-295-0734
Fax: 315-453-2872

Product Name: 1/2" General Use Compost

Lab ID: C10613

Report Date: ___06/20/2018

Compost Technical Data Sheet

Compost Parameters	***Reported as*** *(units of measure)*	***Test Results***
Plant Nutrients:		Not reported
Moisture Content	%, wet weight basis	46.66
Organic Matter Content	%, dry weight basis	59.05
pH	unitless	8.07
Soluble Salts *(electrical conductivity)*	dS/m (mmhos/cm)	4.91
Particle Size	< 9.5 mm	99.56
Stability Indicator *(respirometry)* CO_2 Evolution	mg CO_2-C/G TS/day, AND mg CO_2-C/G OM/day	2.32 4.01
Maturity Indicator *(bioassay)* Percent Emergence, AND Percent Seedling Vigor	% of control %	100.00 100.00
Select Pathogens	PASS/FAIL: per US EPA Class A standard, 40 CFR § 503.32(a)	PASS: Salmonella < 3 MPN per 4·g of dry solids
Trace Metals	PASS/FAIL: per US EPA Class A standard, 40 CFR § 503.13, Tables 1 and 3	PASS: As, Cd, Cu, Pb, Hg, Mo, Ni, Se, and Zn are less than limits specifed by US EPA Class A Standard 40 CFR § 503.13, Tables 1 and 3

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.

LSL Life Science Laboratories, Inc.

Greg Gelewski
O.C.R.R.A.
100 Elwood Davis Road
North Syracuse, NY 13212

Phone: (315) 453-2866
FAX: (315) 453-2872
Authorization: PO# 0013132

Laboratory Analysis Report

For

O.C.R.R.A.

Client Project ID:

Compost Samples "Salmonella"

LSL Project ID: **1808016**

Receive Date/Time: 05/29/18 9:05

Life Science Laboratories, Inc.

LSL Central Lab
5854 Butternut Drive
East Syracuse, NY 13057
Tel. (315) 445-1900
Fax (315) 445-1104

LSL North Lab
131 St. Lawrence Avenue
Waddington, NY 13694
Tel. (315) 388-4476
Fax (315) 388-4061

LSL Finger Lakes Lab
16 N. Main St., PO Box 424
Wayland, NY 14572
Tel. (585) 728-3320
Fax (585) 728-2711

LSL Southern Tier Office
Cuba, NY
Tel. (585) 209-4032

LSL MidLakes Office
Canandaigua, NY
Tel. (585) 728-3320

This report was reviewed by: JLJ *Date:* 6/11/18

Dr. Joseph L. Jeraci, Lead Tech. Director

A copy of this report was sent to:

Date Printed: 6/1/18

-- LABORATORY ANALYSIS REPORT --

O.C.R.R.A. *North Syracuse, NY*

Sample ID: **Amboy 1/2" screen Comp.** **LSL Sample ID:** **1808016-001**
Location:
Sampled: 05/29/18 8:15 **Sampled By:** Client
Sample Matrix: SHW Dry Wt, Compost

Analytical Method / Analyte	Result	Prep Method / Units	Prep Date	Analysis Date & Time	Analyst Initials
(1) SM 2540 B-97,-11 Total Solids					
Total Solids @ 103-105 C	58	%		5/29/18	MM
The NYS DOH ELAP does not offer certification for this method in this matrix.					
(1) Std. Methods 18th 9260D Salmonella MPN					
Salmonella	<3	MPN/4g Dry		5/29/18 13:45	DA

Sample ID: **Amboy 1/4" Premium Comp.** **LSL Sample ID:** **1808016-002**
Location:
Sampled: 05/29/18 8:00 **Sampled By:** Client
Sample Matrix: SHW Dry Wt, Compost

Analytical Method / Analyte	Result	Prep Method / Units	Prep Date	Analysis Date & Time	Analyst Initials
(1) SM 2540 B-97,-11 Total Solids					
Total Solids @ 103-105 C	61	%		5/29/18	MM
The NYS DOH ELAP does not offer certification for this method in this matrix.					
(1) Std. Methods 18th 9260D Salmonella MPN					
Salmonella	<3	MPN/4g Dry		5/29/18 13:45	DA

Analysis performed at: *(1) LSL Central, (2) LSL North, (3) LSL Finger Lakes*

Life Science Laboratories, Inc.

1808016

OCRRA

CHAIN OF CUSTODY RECORD

2274

LSL Central Lab.
5854 Butternut Drive
E. Syracuse, NY 13057
Phone: 315-445-1105
Fax: 315-445-1301

LSL North Lab.
131 St. Lawrence Ave.
Waddington, NY 13694
Phone: 315-388-4476
Fax: 315-388-4061

LSL Finger Lakes Lab.
16 N. Main St., PO Box 424
Wayland, NY 14572
Phone: 585-728-3320
Fax: 585-728-2711

LSL Southern Tier Lab.
30 East Main St.
Cuba, NY 14727
Phone: 585-968-2640
Fax: 585-968-2640

Canandaigua, NY 14424
Phone: 585-396-0270
Fax: 585-396-0377

Turnaround Time

Normal: 14 DAY [X]

Pre-Authorized: Next Day* [ ] 2-Day * [ ] 3-Day * [ ] 7-Day* [ ]

*Additional Charges may apply

Report Address:

Name: OCRRA / Greg Tekiewski
Company: OCRRA
Street: 100 Elwood Davis Rd
City/State: N. Syracuse NY
Zip: 13212
Phone: 315-453-2816
Fax: 315-453-2879
Email: gtekiewski@ocrra.org

Date Needed or Special Instructions:

Authorization or P.O. #: Blanket

Client Project ID/Client Site ID: Compost Samples "Salmonella"

Client's Sample Identifications	Sample Date	Sample Time	Type grab/comp	Matrix	Preserv. Added	Containers #	Containers size/type	Analyses	Preserv Check	LSL ID#
Amboy 1/2" Screen	5/29/18	0815	Comp	Compost	Ice	1	1gal/bag	Salmonella		001
Amboy 1/4" premium	5/29/18	0800	Comp	Compost	Ice	1	1gal/bag	Salmonella		002

LSL use only:

Samples Received On Ice: 4.0°C

Temp. of samples:

Containers this C-O-C:

Custody Transfers

		Date	Time
Sampled By:	Received By:		
Relinquished By:	Received By:		
Relinquished By:	Rec'd for Lab By: Ryan VanDerWater	5/29/18	0905
Shipment Method:	Received Intact: Y / N		

*** All areas of this Chain of Custody Record MUST be filled out in order to process samples in a timely manner IN PEN ONLY***

COC