



Transform Compost Products

healthy soil, healthy future

Soil Conditioner Verification Process

July 2021

Transform's soil conditioner is produced according to the requirements specified by the Canadian General Standards Board Document CAN/CGSB-32.311-2015 Amended March 2018 – Organic Production Systems Permitted Substances Lists. The requirements also refer and comply with CAN/CGSB-32.310 215E – General Principles and Management Standards; and the CCME Guidelines for Compost Quality.

Table 4.2 in CAN/CGSB-32.311 identifies the requirements for Compost from off farm sources:

“Compost obtained from off-farm sources shall conform to the criteria specified in Table 4.2 Compost feedstocks. If compost is obtained from another farm, feedstock sources shall be documented. Compost obtained from all other sources shall comply to the following:

- a) shall not exceed the maximum levels of arsenic, cadmium, chromium, lead and mercury (mg/kg) and foreign matter outlined for unrestricted use compost (Category A), as specified in the Guidelines for Compost Quality;*
- b) shall meet criteria for acceptable levels (MPN/g total solids) of human pathogens as specified in Guidelines for Compost Quality; and*
- c) shall not cause heavy metal buildup in soil through repeated application.”*

The compost feedstocks used to create Transform Compost Products' soil conditioner is a blend of liquid dairy cattle manure, poultry broiler litter, and clean white wood chips. The dairy and poultry manures are sourced from animals that from one farm which are able to roam freely in a barn, and are not kept permanently in the dark, which conforms to the criteria specified in 5.5.1 of CAN/CGSB-32.310 which states:

“Animal manure produced on the operation shall be used first. When all available manure is used up, organic manure from other sources may be used. If organic manure is not commercially available, non-organic manure is permitted provided that:

- a) the non-organic source is not a fully caged system in which livestock cannot turn 360°, and*
- b) livestock is not permanently kept in the dark, and*
- c) the source and quantity of manure, type of livestock, and evaluation of the criteria in 5.5.1 a) and 5.5.1 b) shall be recorded.”*

The wood chips used in the process are clean softwood chips sourced from Valley Carriers in Abbotsford. The compost is screened to 3/8” after composting, which allows the wood chips to be recycled back into the composting process.

The levels of trace elements and foreign matter conform to the requirements in the Guidelines for Soil Quality:

Trace Element	CCME	TCP
	Class A	Soil Conditioner ^a
mg/kg dry weight		
Arsenic	13	BDL
Cadmium	3	BDL
Chromium	210	2.63
Lead	150	BDL
Mercury	0.8	BDL
a - June 29, 2021 analysis - A&L Labs		
BDL - below detection limits		



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Transform Compost Products's soil conditioner contains no foreign matter or other contaminants. The sharp foreign matter and total foreign matter is below detection limits (attached analysis).

Transform Compost Products' soil conditioner has a fecal coliform content of <3 MPN/g dry solids and no Salmonella (analysis attached), which meets the limits for acceptable levels of human pathogens as specified in the Guidelines for Compost Quality:

"Organism content shall meet the following: "Fecal coliforms < 1000 most probable number (MPN/g) of total solids calculated on a dry weight basis, and No Salmonella sp. With a detection level <MPN/4g total solids calculated on a dry weight basis"

Best practices known to eliminate human pathogens during the composting process have been used, including temperatures exceeding 55 C throughout all of the material for a specified time, and by adequately stabilizing the compost (Respiration rate < 4 mg CO₂-C/g OM/day – CCME Guidelines for Compost Quality)

This report prepared by John Paul, PhD PAG



REPORT NO.
C21181-70002

ACCOUNT NUMBER
02653

A & L Canada Laboratories Inc.

2136 Jetstream Road, London, ON, N5V 3P5 Tel: (519) 457-2575 Fax: (519) 457-2664



TO: TRANSFORM COMPOST PRODUCTS
3911 MT LEHMAN RD
ABBOTSFORD, BC V2T5W5
CANADA
Canada

FOR: SOIL CONDITIONER

ATTN: JOHN PAUL

Phone: 605-856-2722



CERTIFICATE OF ANALYSIS

PAGE: 1 / 3

PROJECT NO:
PO#: TCP 2021
LAB NUMBER: 1817003
SAMPLE ID: SOIL CONDITIONER

SAMPLE MATRIX: COMPOST
DATE SAMPLED: 2021-06-29
DATE RECEIVED: 2021-06-30
DATE REPORTED: 2021-07-08
DATE PRINTED: 2021-07-09

PARAMETER	RESULT	UNIT	DETECTION LIMIT	METHOD REFERENCE
Arsenic	BDL	ug/g	1.00	EPA 3050B/6010B(mod) *
Cadmium	BDL	ug/g	1.00	EPA 3050B/6010B(mod) *
Cobalt	BDL	ug/g	1.00	TMECC 4.06; EPA 3050/6010(mod)*
Chromium	2.63	ug/g	1.00	TMECC.04.06; EPA 3050/6010(mod)*
Copper	265.50	ug/g	1.00	TMECC 4.06; EPA 3050/6010(mod)*
Mercury	BDL	ug/g	0.10	EPA 7471 *
Molybdenum	2.7	ug/g	1.0	TMECC.04.06; EPA 3050/6010(mod)*
Nickel	5.90	ug/g	1.00	TMECC 4.06; EPA 3050/6010(mod)*
Lead	BDL	ug/g	1.00	EPA 3050B/6010B(mod) *
Selenium	BDL	ug/g	1.00	EPA 3050/6010 (mod) *
Zinc	456.30	ug/g	1.00	TMECC 4.06; EPA 3050/6010(mod)*

Comment:

Results reported on a dry weight basis

* - accredited test

BDL - Below detectable levels

The results of this report relate to the sample submitted and analyzed.



C21181-70002

Results Authorized By:

Haifeng Song, Ph.D., C.Chem. Lab Director

A&L Canada Laboratories Inc. is accredited by the Standards Council of Canada for specific tests as listed on www.scc.ca and by the Canadian Association for Laboratory Accreditation as listed on www.cala.ca

Additional information available upon request

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SAMPLE MATRIX: COMPOST
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DATE RECEIVED: 2021-06-30
DATE REPORTED: 2021-07-08
DATE PRINTED: 2021-07-09

PARAMETER	RESULT	UNIT	DETECTION LIMIT	METHOD REFERENCE
Nitrogen (Total)	1.01	%	0.10	Combustion
E. coli	<3	MPN/g dry	3	TMECC 07.01
Salmonella spp.	NEGATIVE	P-A/25.0g(ml)	1 CFU	MFLP-75 *
Fecal Coliform	<3	MPN/g dry	3	TMECC 07.01
Total Potassium (as K2O)	3.08	%	0.05	ICP
Total sharps > 2.8 mm*	BDL	pieces/500ml		TMECC 03.08
Total sharps > 12.5 mm	BDL	pieces/500ml		TMECC 03.08
Total FM > 2.8 mm*	BDL	%	0.01	TMECC 03.08
Total FM > 25 mm	BDL	pieces/500ml		TMECC 03.08
Total plastics > 2.8 mm*	BDL	%	0.01	TMECC 03.08
Total Phosphorus (as P2O5)	4.00	%	0.05	ICP
Total Organic Matter @ 550 deg C	83.46	%	0.10	LOI@550C
Moisture	34.47	%	0.10	TMECC.03.09-A
Conductivity (@ 25 deg C)	11.25	ms/cm	0.02	TMECC.04.10
Sieve 2 Inch (% Passing)	100.00	%	0.10	ASTMD422
Sieve 1 Inch (% Passing)	100.00	%	0.10	ASTMD422
Sieve 1/2 Inch (% Passing)	99.90	%	0.10	ASTMD422
Sieve 3/8 Inch (% Passing)	99.80	%	0.01	ASTMD422
Sieve 1/4 Inch (% Passing)	95.20	%	0.10	ASTMD422
Compost Stability Index	8	---		TMECC.05.08-B
Respiration-mgCO2-C/g OM/day	0.30	mgCO2-C/ gOM/day	0.01	TMECC.05.08-B
Respiration - mgCO2-C/g TS/day	0.30	mgCO2-C/gTS/ day	0.01	TMECC.05.08-B

Results reported on a dry weight basis

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BDL - Below detectable levels

The results of this report relate to the sample submitted and analyzed.



C21181-70002

Results Authorized By:

Haifeng Song, Ph.D., C.Chem. Lab Director

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DATE RECEIVED: 2021-06-30
DATE REPORTED: 2021-07-08
DATE PRINTED: 2021-07-09

PARAMETER	RESULT	UNIT	DETECTION LIMIT	METHOD REFERENCE
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Comment:

Maturity Index: 8 - Inactive, highly matured compost, very well aged, possibly over-aged, like soil; no limitations for usage.

1. FM (Foreign matter) = glass, metal, plastic
2. Sharps = foreign matter pieces of a size or shape that can cause human or animal injury
3. 8 mesh screen = 2.36mm
4. *2.8mm screen is used since 3.0mm screen does not exist

Results reported on a dry weight basis

* - accredited test

BDL - Below detectable levels

The results of this report relate to the sample submitted and analyzed.



C21181-70002

Results Authorized By: _____

Haifeng Song, Ph.D., C.Chem. Lab Director

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Report Number: C21183-10099
 Account Number: 02653

A & L Canada Laboratories Inc.

2136 Jetstream Road, London, Ontario, N5V 3P5
 Telephone: (519) 457-2575 Fax: (519) 457-2664



C21183-10099



To: TRANSFORM COMPOST PRODUCTS
 3911 MT LEHMAN RD
 ABBOTSFORD, BC V2T5W5

For: SOILCONDITIONERPLUS

P.O. Number: TCP2021

Reported Date:
 Printed Date: Jul 9, 2021

COMPOST REPORT

Page: 1 / 1

Sample Number	Lab Number	pH	Lime Index	Available Organic Matter %	Phosphorus P ppm	Potassium K ppm	Magnesium Mg ppm	Calcium Ca ppm
SOILCONDITIONE	25926	7.3	6.5	72.3	3309	7327	1639	2743

Sulfur S ppm	Zinc Zn ppm	Manganese Mn ppm	Iron Fe ppm	Copper Cu ppm	Boron B ppm	Sodium Na ppm	Nitrate-N NO3-N ppm	Soluble Salt ms/cm	Nitrogen (Total) (%)	Chloride ppm
1080	91.5	122	47	6.6	3.8	1144	62	7.3	2.59	8120

INTERPRETATION

CEC		Percent Base Saturation				Proportional Equivalents (meq)				Cation Ratio		C/N Ratio
meq/100g	% BS	% K	% Mg	% Ca	% Na	K	Mg	Ca	Na	Mg/K	Ca/Mg	
51.4	99.2	36.58	26.25	26.71	9.69	18.79	13.48	13.72	4.97	1:1	1:1	19:1
Optimum Range:		3 - 5	8 - 20	60 - 80		0.5 - 1.3				7:1	5:1	

CQA

* Results reported on a dry weight basis.

The results of this report relate to the sample submitted and analyzed.

* Crop yield is influenced by a number of factors in addition to soil fertility.

No guarantee or warranty concerning crop performance is made by A & L.

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Results Authorized By:

Ian McLachlin, Vice President

A & L Canada Laboratories Inc.

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REPORT NUMBER: C21183-10099
ACCOUNT NUMBER: 02653

REPORT OF ANALYSIS

TO: TRANSFORM COMPOST PRODUCTS
3911 MT LEHMAN RD
ABBOTSFORD, BC V2T5W5
CANADA

RE: SOILCONDITIONERPLUS

DATE RECEIVED: 2021-07-02
DATE REPORTED: 2021-07-09
PAGE: 1 / 1
P.O. NUMBER: TCP2021

LAB NO.	SAMPLE ID	ANALYSIS	RESULT	UNIT	METHOD
25926	SOILCONDITIONERF	Nitrogen (Total)	2.6	%	TMECC.04.02-D



C21183-10099

Results Authorized By: