

Report Number: C16155-10033
 Account Number: 98043

A & L Canada Laboratories Inc.

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



C16155-10033



To: ESSEX-WINDSOR SWA
 360 FAIRVIEW AVE WEST
 SUITE 211
 ESSEX, ON N8M 3G4

For: ROW "Z-15"

519-776-6370

Reported Date: 2016-06-07
 Printed Date: Jun 13, 2016

COMPOST REPORT

Sample Number	Lab Number	pH	Lime Index	Available Organic Matter %	Phosphorus P ppm	Potassium K ppm	Magnesium Mg ppm	Calcium Ca ppm
ROW	23044	8.0	6.9	28.7	831	4945	1480	4238

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) (%)	Moisture %
135	35.4	39	234	3.3	5.9	214	14	1.5	2.15	

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	
47.0	100.0	26.99	25.91	45.11	1.98	12.68	12.17	21.19	0.93	1:1	2:1	
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.

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

Results Authorized By:

Ian McLachlin, Vice President

REPORT NO.
C16155-70003

ACCOUNT NUMBER
98043

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TO: ESSEX-WINDSOR SWA
360 FAIRVIEW AVE WEST
SUITE 211
ESSEX, ON N8M 3G4
CANADA

ATTN: RALPH REISER

Phone: 800-563-3377
Fax: 519-776-6370



CERTIFICATE OF ANALYSIS

PAGE: 1 / 3

PROJECT NO:
PO#:
LAB NUMBER: 1557009
SAMPLE ID: ROW "Z-15"

SAMPLE MATRIX: COMPOST
DATE SAMPLED: 2016-05-30
DATE RECEIVED: 2016-06-03
DATE REPORTED: 2016-06-10
DATE PRINTED: 2016-06-13

PARAMETER	RESULT	UNIT	DETECTION LIMIT	METHOD REFERENCE
Arsenic	6.42	ug/g	1.00	EPA 3050/6010 (mod) *
Cadmium	BDL*	ug/g	1.00	TMECC.04.06;EPA 3050/6010(mod)*
Cobalt	3.47	ug/g	1.00	TMECC.04.06;EPA 3050/6010(mod)
Chromium	17.35	ug/g	1.00	TMECC.04.06;EPA 3050/6010(mod)*
Copper	50.65	ug/g	1.00	TMECC.04.06;EPA 3050/6010(mod)
Mercury	BDL*	ug/g	0.10	EPA 7471 *
Molybdenum	2.4	ug/g	1.0	TMECC.04.06;EPA 3050/6010(mod)*
Nickel	9.35	ug/g	1.00	TMECC.04.06;EPA 3050/6010(mod)
Lead	28.90	ug/g	1.00	TMECC.04.06;EPA 3050/6010(mod)
Selenium	BDL*	ug/g	1.00	EPA 3050/6010 (mod) *
Zinc	132.65	ug/g	1.00	TMECC.04.06;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.



C16155-70003

Results Authorized By:

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

REPORT NO.
C16155-70003

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CERTIFICATE OF ANALYSIS

PAGE: 2 / 3

PROJECT NO:
PO#:
LAB NUMBER: 1557010
SAMPLE ID: ROW "Z-15"

SAMPLE MATRIX: COMPOST
DATE SAMPLED: 2016-05-30
DATE RECEIVED: 2016-06-03
DATE REPORTED: 2016-06-10
DATE PRINTED: 2016-06-13

PARAMETER	RESULT	UNIT	DETECTION LIMIT	METHOD REFERENCE
E. coli	<3	MPN/g dry		TMECC 07.01
Salmonella spp.	NEGATIVE	P-A/25.0g(ml)		MFLP-75 *
Total FM >8 mesh	0.21	%	0.01	TMECC 03.08
Total FM > 2.8 mm*	0.21	%	0.01	TMECC 03.08
Total FM > 25 mm	0.09	%	0.01	TMECC 03.08
Total FM > 25 mm	3	pieces/500ml		TMECC 03.08
Total plastics > 8 mesh	0.11	%	0.01	TMECC 03.08
Total plastics > 2.8 mm*	0.11	%	0.01	TMECC 03.08
Total sharps > 2.36 mm	BDL*	pieces/500ml		TMECC 03.08
Total sharps > 2.8 mm*	BDL*	pieces/500ml		TMECC 03.08
Total FM > 12.5 mm	4	pieces/500ml		TMECC03.08
Total Organic Matter @ 550 deg C	48.34	%	0.10	LOI@550C
Moisture	23.76	%	0.10	TMECC.03.09-A
C:N Ratio	16:1			TMECC.05.02-A
Sieve 2 Inch (% Passing)	100.00	%	0.10	ASTMD422
Sieve 1 Inch (% Passing)	100.00	%	0.10	ASTMD422
Sieve 1/2 Inch (% Passing)	99.40	%	0.10	ASTMD422
Sieve 3/8 Inch (% Passing)	97.50	%	0.01	ASTMD422
Sieve 1/4 Inch (% Passing)	89.70	%	0.10	ASTMD422
Compost Stability Index	8	---		TMECC.05.08-B
Respiration-mgCO ₂ -C/g OM/day	1.70	mgCO ₂ -C/ gOM/day	0.01	TMECC.05.08-B
Respiration - mgCO ₂ -C/g TS/day	0.80	mgCO ₂ -C/gTS/ day	0.01	TMECC.05.08-B

Comment:

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Results Authorized By:

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Lab Director

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CERTIFICATE OF ANALYSIS

PAGE: 3 / 3

PROJECT NO:
PO#:
LAB NUMBER: 1557010
SAMPLE ID: ROW "Z-15"

SAMPLE MATRIX: COMPOST
DATE SAMPLED: 2016-05-30
DATE RECEIVED: 2016-06-03
DATE REPORTED: 2016-06-10
DATE PRINTED: 2016-06-13

PARAMETER	RESULT	UNIT	DETECTION LIMIT	METHOD REFERENCE
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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

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BDL - Below detectable levels

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C16155-70003

Results Authorized By:

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

Compost Quality Alliance

Summary of Analysis Report

To: Essex-Windsor Solid Waste Authority
 360 Fairview Ave - Suite 211
 Essex, ON N8M 3G4

Account # 98043
 Report # C16155-10033
 C16155-70003

Attention: Ralph Reiser

Sampled Date: 30-May-16
 Reported Date: 13-Jun-16

CQA Product Quality Test Requirements

Sample ID#	Recommended Product Use	pH	Total Organic Matter (550°C)	C:N Ratio	Moisture
Row "Z-15"	Soil/agricultural amendment,topdressing	8	48.3%	16:1	23.8%

General Recommendations

Recommendations for product use are only a suggestion based on the analysis that was performed on this material. The suggested use is meant only as a guide for interpretation on what the best end use may be.

Particle Size	This compost indicates a fine texture and is primarily suited for soil/agricultural amendments and topdressing end uses due to the physical and chemical properties.
90%< 1/4 in	
Heavy Metals	The sample "Row "Z-15" (May 30, 2016)" meets the current CCME Category A and Ontario Category AA compost standards for maximum allowable trace metal content in compost.
see comment	
Microbiology	The results of our testing indicate this sample meets the current CCME and Ontario compost standards for maximum allowable microbiological levels.
E.Coli <3	
Salmonella neg	
CO₂ Respiration	The CO ₂ respiration is 1.70 mg CO ₂ -C/g O.M./day and meets CCME guidelines for a mature compost.
1.70 mg CO ₂ -C/g O.M./day	
Stability	The Solvita rating of this compost suggests a stable and mature material.
8	
Foreign Matter	This compost exceeds the CCME and Ontario Category B compost standard for foreign matter due to foreign matter greater than 25mm per 500ml of compost.
Total 0.21%	
Plastics 0.11%	
Sharps BDL	
Soluble Salts	This material has a high base saturation of sodium at 1.98%Na . From a sodium prespective anything above 2% Na could cause plant injury when used as a top dressing or a soil mix. It is safe to use as an agricultural amendment. We recommend blending this material at a minimum of 2-3 parts soil to compost to dilute the sodium concentration.
1.5 ms/cm	