Woods End Laboratories, Inc.

290 Belgrade Road, P.O. Box 297
Mount Vernon, ME 04352/USA
207-293-2457 www.woodsend.org lab@woodsend.org

Account: 2277
· James Bunchuck
· Town of Southold
· PO Box 962
· Cutchogue NY 11935

Code: Project:
Date Received : 2013-11-14
Date Reported : 2013-11-15
Lab ID Number : 8822.0
Quality Control :

COMPOSITION ANALYSIS

Sample Identification: Compost: leaf compost, leaves, sawdust, wood chips, seed bed pulp

VARIABLE MEASURED	Unit	dry basis	as is basis	Notations †
Bulk Density	$lbs \cdot ft^3$	-	29	792 lbs/yd^3
Total Solids (dry matter)	%	100.0	55.5	1110 lbs/ton
Moisture Content	%	0.0	44.5	107 gals/ton
Water Holding Capacity (*calc*)	%	155	61	146 gals/ton
Inert and Oversize Particles	%	~	15.0	300.2 lbs/ton
pH (sat. paste in H_2O)	$-\log H^+$	~	7.59	Medium High
Free Carbonates (CO_3)	(Range 1-3)	~	1	None
Total Organic Matter	%	47.4	26.3	526 lbs/ton
Water Soluble Organic Carbon	ppm	3310	1837	Medium
Conductivity (salinity)	$dS \cdot m^{-1}$	~	1.5	Low
Water Soluble C_s:N_s	w:w	12.1	12.1	Medium
Seedling Response Assay, Biological Stability				
Seedling Germination	%	~	100	Not Plant-toxic
Seedling Vigor	% of control	~	45	Low
Cress Emergence	% of total	~	100	No Inhibition
Cress Biomass	% of Control	~	17	Extremely Limited
Respiration, Volumetric	(Solvita 1-8)	~	7.37	Low
Ammonia Volatization	(Solvita 1-5)	~	5.00	low or none

†For explanation of data, see Woods End Laboratories, Inc. Interpretation Sheet at www.woodsend.org

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MINERALS ANALYSIS

Sample Identification: Compost: leaf compost, leaves, sawdust, wood chips, seed bed pulp

VARIABLE MEASURED	Unit	dry basis	as is basis	pounds/ton *as is*
Mineral Nutrients				
Soluble Nitrogen	%	0.027	0.015	0.3 VL
Phosphorus (P) *total*	%	0.101	0.056	1.1 L
Extractable & Total Cations				
Ammonium (NH_4-N) *soluble*	ppm	94	52	0.1
Potassium (K) *total*	%	0.06	0.04	0.7
Sodium (Na) *total*	%	0.09	0.05	1.0
Calcium (Ca) *total*	%	2.00	1.11	22.2
Magnesium (Mg) *total*	%	0.41	0.23	4.5
Extractable Anions				
Nitrate (NO_3-N)	ppm	1	0.4	trace
Nitrite (NO_2-N) *soluble*	ppm	429.0	238.1	-
Chloride (Cl) *soluble*	ppm	1451	806	1.6
Sulfate (SO_4-S) *soluble*	ppm	171	95	0.2

Notes: percent x 10,000 = ppm; ppm = mg/kg; < = less than the MLD (minimum level of detection); nd = none detected

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METALS and NON-METALS ANALYSIS

Sample Identification: Compost: leaf compost, leaves, sawdust, wood chips, seed bed pulp

VARIABLE MEASURED	Unit	dry basis	as is basis†	lbs/ton Rating‡*as is*
Copper (Cu)	$mg \cdot kg^{-1}$	50	28	0.06 Low
Manganese (Mn)	$mg \cdot kg^{-1}$	296	164.5	77.3 MH
Iron (Fe)	$mg \cdot kg^{-1}$	5988	3323	1562.0 H
Zinc (Zn)	$mg \cdot kg^{-1}$	77	43	0.09 Low
Lead (Pb)	$mg \cdot kg^{-1}$	161.1	89.4	0.2 High
Chromium (Cr)	$mg \cdot kg^{-1}$	39.5	-	-
Cadmium (Cd)	$mg \cdot kg^{-1}$	<0.8	< 0.4	n.a
Nickel (Ni)	$mg \cdot kg^{-1}$	29.1	-	-

Notes: $mg \cdot kg^{-1}$ = ppm (parts per million); MPN = most probable number

< signifies *less than MLD* (minimum level of detection) for the particular factor tested

† "as is" = wet basis ‡ Rating of Metals Based on international soil standard and is not a Sludge Rule EPA503 process

Woods End Laboratories
INCORPORATED

Auxinic Herbicide Bioassay Report

PO Box 297 -
Mt Vernon MAINE 04352
207-293-2 457 fx 293-2488

Customer: 2277

Town of Southold
James Bunchuck
P.O. Box 962
Cutchogue, NY 11935-0962

Date entered: December 3, 2013

Unit	Sample Description	Lab ID	Sample wet density g/cc	% v/v Sample in Medium[a]	actual % sample w/w	Injury Symptomology for Red Clover by Observer[b] RS	WB	TT	Mean Injury Ranking
1	*Compost: leaf compost, leaves, sawdust, wood chips, seed bed pulp*	8822.0	0.473	50.0	75.9	n		n	0.0
2									
3									
4									
5									
6									
7									
8									
9									
10									
	Spearman Rank Correlation of Evaluators (r_s):					#N/A	#N/A	#N/A	#N/A

Observed Effect Key:	Inury Ranking	[b] Description of observed injury	Notation
Initials denote visual symptom	n = 0	none = no symptoms observed	Estimated level of plant injury based on the scale of ranking 0 - 5 in severity
	sl = 1	Slight = slight leaf curl, first observed level	
	s-m = 1.5	Slight-Mod - less than a moderate effect	
	m = 2.0	Moderate leaf curl - very noticable	
	msv = 2.5	Mod-Severe - less than a severe effect	
	sv = 3.0	Severe = pronounced leaf curl and distortion	
	ex = 4	Extreme - close to total inhibition	

[a] % sample employed in medium on volume blending basis

▸ Disclaimer re Clopyralid Equivalents

*** level of estimated herbicide is based on calibration assays with clopyralid herbicide. The herbicide has not been directly analysed. Any other auxinic herbicide may have caused a similar effect but at another higher or lower concentration.*

Estimated Mean Concentration in Source Material

*(ppb - based on known minimum level of detection)***

	Lab ID	Effects	RS	WB	TT	MLD?	MEAN	Stdev ↕
1	8822.0	<	4		4	<	4.0	0.0
2		as is						nd
3		as is						nd
4		as is						nd
5		as is						nd
6		as is						nd
7		as is						nd
8		as is						nd
9		as is						nd
10		as is						nd

If MLD note "<" is present it means the lowest value is beneath detectability

↕ Standard Deviation is plus/minus value for range of possibility due to observed injury

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Compost Auxinic Risk Analysis

PO Box 297 -
Mt Vernon MAINE 04352
207-293-2 457 fx 293-2488

RESIDUE ADVISORY LEVEL FOR COMPOST PRODUCT

Row	Sample ID	Insensitive Crops Corn, Grains, Sudan, Grasses, Beets	Moderately (Tomatoes, Beans, Squash, Lettuce)	Sensitive Crops (Peas, Sunflowers, Tomatoes,Clover)	Level Noted
1	8822.0	N	N	N	4

N- no warning, SL Cautionary, M Warning, SV Danger, ** Extreme Warning

FIELD (TON/ACRE) APPLICATION RATE GUIDELINE TO AVOID INJURY

Row	Sample ID	Insensitive Crops Corn, Grains, Sudan, Grasses, Beets	Moderately (Tomatoes, Beans, Squash, Lettuce)	Sensitive Crops (Peas, Sunflowers, Tomatoes,Clover)
1	8822.0	200	50	50

GARDEN (cu.ft/100 sq.ft) APPL. RATE GUIDELINE TO AVOID INJURY

Row	Sample ID	Insensitive Crops Corn, Grains, Sudan, Grasses, Beets	Moderately (Tomatoes, Beans, Squash, Lettuce)	Sensitive Crops (Peas, Sunflowers, Tomatoes,Clover)
1	8822.0	25	6	4