

3745-560-130

**Compost quality standards for class I composting facilities.**

[Comment: For dates of non regulatory government publications, publications of recognized organizations and associations, test methods, federal rules, and federal statutory provisions referenced in this rule, see rule 3745-500-03 of the Administrative Code titled "Incorporation by reference."]

(A) The compost quality standards in this paragraph are applicable to all compost produced from yard waste, animal waste, agricultural waste, food scraps, and alternative materials. The owner or operator shall have the samples collected pursuant to rule 3745-560-125 of the Administrative Code analyzed to demonstrate that concentration limits are not exceeded for the parameters listed in the following tables:

Table 1 - Heavy metals

<u>Parameter</u>	<u>Concentration limit mg/kg dry weight</u>	<u>Preparation methods</u>	<u>Analytical methods</u>	<u>TMECC equivalent methods</u>
<u>Arsenic</u>	<u>41</u>	<u>SW-846 3050B or SW-846 3051A</u>	<u>SW-846 6010C or SW-846 6020A or SW-846 7010</u>	<u>TMECC 04.06-As</u>
<u>Boron</u>	<u>See Table 4</u>			
<u>Cadmium</u>	<u>35</u>	<u>SW-846 3050B or SW-846 3051A</u>	<u>SW-846 6010C or SW-846 6020A or SW-846 7000B or SW-846 7010</u>	<u>TMECC 04.06-Cd</u>
<u>Copper</u>	<u>1500</u>	<u>SW-846 3050B or SW-846 3051A</u>	<u>SW-846 6010C or SW-846 6020A or SW-846 7000B or SW-846 7010</u>	<u>TMECC 04.06-Cu</u>
<u>Lead</u>	<u>300</u>	<u>SW-846 3050B or SW-846 3051A</u>	<u>SW-846 6010C or SW-846 6020C or SW-846 7000B or SW-846 7010</u>	<u>TMECC 04.06-Pb</u>
<u>Mercury</u>	<u>7.8</u>	<u>SW-846 7471B</u>	<u>SW-846 7471B SW-846 6010C or SW-846 6020A or</u>	<u>TMECC 04.06-Hg</u>

			<u>SW-846 7000B</u> <u>or SW-846 7010</u>	
<u>Nickel</u>	<u>420</u>	<u>SW-846 3050B</u> <u>or SW-846</u> <u>3051A</u>	<u>SW-846 6010C</u> <u>or SW-846</u> <u>6020A or</u> <u>SW-846 7010</u>	<u>TMECC 04.06-Ni</u>
<u>Selenium</u>	<u>100</u>	<u>SW-846 3050B</u> <u>or SW-846</u> <u>3051A</u>	<u>SW-846 6010C</u> <u>or SW-846</u>	<u>TMECC 04.06-Se</u>
<u>Zinc</u>	<u>2800</u>	<u>SW-846 3050B</u> <u>or SW-846</u> <u>3051A</u>	<u>6020A or</u> <u>SW-846 7000B</u> <u>or SW-846 7010</u>	<u>TMECC 04.06-Zn</u>

Table 2 - Pathogens

<u>Parameter</u>	<u>Microbial count</u>	<u>Preparation method</u>	<u>Analytical method</u>	<u>TMECC equivalent method</u>
<u>Fecal coliform</u>	<u>Limit of less than 1000 Most Probable Number per gram of total solids (dry weight) (1000 MPN/GTS)</u>	<u>Standard methods part 9221E or part 9222D</u>	<u>Standard methods 9260D and either 9222D or 9221E</u>	<u>TMECC 07.01-B</u>
<u>Salmonella spp.</u>	<u>Limit of less than 3 Most Probable Number per 4 grams of total solids (3MPN/4GTS)</u>	<u>Standard method part 9260D</u>	<u>Standard methods 9260D and either 9222D or 9221E</u>	<u>TMECC 07.02</u>

Table 3 - Foreign/inert matter

<u>Parameter</u>	<u>Concentration limit mg/kg dry weight</u>	<u>Preparation method</u>	<u>Analytical method</u>	<u>TMECC equivalent method</u>
<u>Foreign/inert</u>	<u>1.0% by weight</u>	<u>SW-846 160.3</u>	<u>Detailed below</u>	<u>TMECC 03.08</u>

<u>matter</u>	<u>on No. 5 sieve (four mm screen) and no more than a fourth of this foreign matter may be plastic</u>			
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Method for determining percent foreign matter.

Foreign matter content shall be determined by passing a dried, weighed sample of not less than one hundred grams of compost through a U.S. standard No. 5 sieve (four millimeter). The material remaining on the screen shall be inspected and the foreign matter shall be separated and weighed. The weight of the foreign matter divided by the total weight of the compost sample and multiplied by one hundred shall be the per cent dry weight of the foreign matter content.

Table 4 - General parameters

<u>Parameter</u>	<u>Analytical method</u>
<u>Boron</u>	<u>TMECC 04.05-B or Preparation: SW-846 3050B or SW-846 3051A and Analytical: SW-846 6010C or SW-846 6020A</u>
<u>Maturity</u>	<u>TMECC 05.08-A Specific Oxygen Uptake Rate or TMECC 05.08-B Carbon Dioxide Evolution Rate or TMECC 05.08-C In-situ Oxygen Refresh Rate or TMECC 05.08-D Dewar Self-Heating Test or TMECC 05.08-E Solvita® Maturity Index or TMECC 05.08-F Biologically Available Carbon</u>
<u>pH</u>	<u>TMECC 04.11-A or North central regional (NCR) publication 221 or SW-846 9045D soil pH or ASTM D2976</u>
<u>Salinity</u>	<u>TMECC 04.10 A or NCR publication 221</u>
<u>Total nitrogen</u>	<u>AOAC 968.06 or TMECC 04.02-D or TMECC 04.02-A</u>
<u>Total organic carbon</u>	<u>SW-846 9060 A or TMECC 04.01-A</u>
<u>Total phosphorus</u>	<u>TMECC 04.03-A or Preparation: SW-846 3050B or SW-846 3051A and Analytical:</u>

	SW-846 6010C or SW-846 6020A
<u>Total potassium</u>	<u>TMECC 04.04-A or Preparation: SW-846 3050B or SW-846 3051A and Analytical: SW-846 6010C or SW-846 6020A or SW-846 7000B</u>

[Comment: The parameters identified for testing in table 4 have no associated concentration limits. The analysis is necessary to ensure that compost quality is appropriate for the recipient's specific use of the compost product.]

Acceptable levels of maturity will vary according to end-user application (note: check date of maturity test).

Acceptable pH level will vary according to end-user application and will generally be in the 5.5 - 8.5 range.

Acceptable levels of soluble salts will vary according to end-user applications. The optimal ranges for growing media (compost amended soil) is 0.5 to 4.5 millimho per centimeter.

Compost producers may provide pH and soluble salts information in product literature for the intended end-user application that reflect user industry standards.]

(B) Supplementary compost quality standards. Additional information or testing of feedstocks, bulking agents, additives, compost, or compost product may be required to ensure the standards are appropriately protective of public health or safety or the environment.

(1) Upon written notification by the director, the owner or operator shall provide information regarding the feedstocks, bulking agents, additives, compost, or compost product including but not limited to the following:

(a) A description of the agricultural, industrial, or commercial process used to produce the feedstock, bulking agents, additives, compost, or compost product.

(b) A description of the chemical and biological constituents.

(c) A description of any known or potential heavy metals and organic compounds that may threaten to cause an adverse effect to public health or safety or the environment.

(2) Upon written notification by the director, the owner or operator shall sample and test for additional parameters as deemed necessary to ensure the standards are appropriately protective of public health and safety and the

environment.

- (3) Upon review of such additional information, the director may establish additional conditions or quality standards for the compost. The director shall provide written notification to the owner or operator of such conditions or standards.

[Comment: Compost containing mixed solid waste does not have testing parameters as it may only be distributed in accordance with paragraph (A)(1) of rule 3745-560-120 of the Administrative Code.]

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R.C. 119.032 review dates: 04/02/2017

CERTIFIED ELECTRONICALLY

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Certification

02/16/2012

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Date

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