RSNI

Draft Indonesian National Standards

Eco-labelling criteria

Organic fertilizer

Contents

Foreword

The Draft Indonesian National Standard (RSNI) XXXX is titled "Ecolabel Criteria – Organic Fertilizer."

The criteria contained in this document fall under the type I multi-criteria ecolabel category, accompanied by an evaluation by a competent third party and the inclusion of the ecolabel mark on products and/or product packaging that meet these criteria. Various stakeholders have actively participated in and supported the formulation of these criteria.

The formulation of these criteria is based on a scientific technical review of the environmental aspects throughout the life cycle of the relevant product category.

This standard was prepared by Technical Committee XXXX, discussed in the Technical Meeting, and agreed upon in the Consensus Meeting on XXXX in Jakarta. The meeting was attended by relevant stakeholders, including representatives from the government, business actors, consumers, and experts.

This standard has undergone a public consultation process from [date] to [date] 202Y, resulting in the final RSNI.

It should be noted that some elements in this standard document may be patented. The National Standardization Agency is not responsible for identifying any or all existing patents

Committee Representation

Eco-labelling criteria - Organic fertilizer

1. Scope

This product criteria document specifies the requirements for organic fertilizers that are used to increase the nutrient and organic matter content of the soil and improve the physical, chemical and biological properties of the soil.

2. Normative reference

The following documents are referred to in the text in such a way that some or all of their content constitutes the requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies:

SNI 7763:2018 – Specification for Solid Organic Fertilizer

Minister of Environment Regulation No. 5 of 2014 on Wastewater Quality Standards

Government Regulation No. 50 of 2012 on Occupational Safety and Health Management Systems

Minister of Environment and Forestry Regulation No. 6/2021 on management of hazardous and toxic waste

Minister of Agriculture No. 70/Permentan/SR.140/10/2011 concerning Organic Fertilizers, Biological Fertilizers, and Soil Amendments

Commission Decision (EU) 2022/1244 - Establishing the EU Ecolabel Criteria for Growing Media and Soil Improvers

3. Terms and definitions

For the purpose of this document, the following terms and definitions apply:

3.1 Organic Fertilizer

Organic fertilizer is a type of fertilizer that contains organic matter or is derived from natural materials such as decaying plants, animal manure, and/or other organic waste that is free from pathogenic substances. This fertilizer contains one or more primary nutrients such as nitrogen (N), phosphorus (P), potassium (K), as well as magnesium (Mg).
Sources: SIRIM, Permentan Nomor 70 Tahun 2011

3.2 pH

pH is a measure for the acidic or basic character of an aqueous solution, which indicates the acidity or alkalinity of the soil and affects the availability of nutrients for plants.
Sources: ISO 23496:2019, Mas et al., (2024)

3.3 Pathogen

A pathogen is a microorganism that can cause disease in its host by inducing tissue changes through genetic alterations.
Sources: Ihsan, (2021)

3.4 Toxicity

Toxicity is the effect of a chemical compound that causes damage to the target organism.
Sources: Aprilyanie et al., (2023)

3.5 PAH

PAH16 refers to the total concentration of 16 polycyclic aromatic hydrocarbons, including naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene, pyrene, fluoranthene, chrysene, benzo[a]anthracene, benzo[k]fluoranthene, benzo[b]fluoranthene, benzo[a]pyrene, dibenzo[a,h]anthracene, indeno[1,2,3-cd]pyrene, and benzo[ghi]perylene.

4 Eco-labelling criteria

4.1 General Requirements
4.1.1 The quality of organic fertilizer shall comply with National or International Standard such as SNI 7763:2018 – Spesifikasi Pupuk Organik Padat or others relevant international standard.

4.1.2 The production process shall comply with national or local environmental regulation such as in the case of Indonesia, which are:

a) **Minister of Environment Regulation No. 5 of 2014 on Wastewater Quality Standards.** The production of organic fertilizers shall ensure that any wastewater generated during the process meets the required quality standards before discharged to prevent environmental pollution.
b) **Regulation No. 50 of 2012 on Occupational Safety and Health Management Systems.** The employers shall establish and implement a safety and health management system to protect workers from work-related risks.
c) **Minister of Environment and Forestry Regulation No. 6/2021 on management of hazardous and toxic waste.** The producers shall ensure that hazardous and toxic waste is

properly managed, including its storage, transport, and disposal, to prevent environmental contamination and protect human health.

4.1.3 Proper handling:

Regulation of the Minister of Agriculture No. 70/Permentan/SR.140/10/2011 concerning Organic Fertilizers, Biological Fertilizers, and Soil Amendments. The production of organic fertilizers must adhere to proper handling practices, including compliance with SNI standards, obtaining production permits, meeting distribution rules, and undergoing supervision.

4.2 Environmental Requirements

4.2.1 The main source of organic fertilizer shall be declared on the product label and shall only be derived from the following:

4.2.1.1 Agricultural residues

Organic fertilizers can be produced from a wide range of agricultural residues such as straw, stalks, corn cobs, sugarcane bagasse, and coconut husks

4.2.1.2 Animal Manure

Organic fertilizers can be produced from a wide range of animal manure except pig and human feces.

4.2.2 The product shall contain minimum concentration of organic components or recycled/ recovered materials as stated in Table 1.

Table 1: Minimum concentration of organic components or recycled/recovered materials in organic fertilizer.

Category of organic fertilizer	Concentration
organic components	>30% by volume of the product.
recycled/recovered mineral materials	>30% by dry weight of input materials.

Source: Commission Decision (EU) 2022/1244 - Establishing the EU Ecolabel Criteria for Growing Media and Soil Improvers

Method of examination: EN 16181.

4.2.3 The concentration of heavy metals in the product shall not exceed the threshold limit as stated in Table 2.

Table 2. Heavy Metal Threshold Limits for Organic Fertilizers

Heavy metal	Maximum content in the product (mg/kg DM)
Cadmiun (Cd)	1
Chromium total (Cr total)	100
Copper (Cu)	200
Mercury (Hg)	0.45
Nickel (Ni)	40
Lead (Pb)	100
Zinc (Zn)	300
Inorganic Arsenic (As)	20

Note: DM – dry matters

Source: Commission Decision (EU) 2022/1244 - Establishing the EU Ecolabel Criteria for Growing Media and Soil Improvers

Method of Examination: Commission Decision (EU) 2022/1244 - Establishing the EU Ecolabel Criteria for Growing Media and Soil Improvers

4.2.4 The content of primary pathogens in the product shall not exceed the maximum levels as shown in Table 3.

Table 3. Threshold Limits for Harmful Pathogens in Organic Fertilizer

Micro-organisms to be tested	Sampling plans			Limit
	n	c	m	M
Salmonella spp.	5	0	0	Absence in 25 g or 25 ml
Escherichia coli or Enterococcaceae	5	5	0	1 000 CFU in 1 g or 1 ml

CFU = colony-forming units

Where:
— n is the number of samples to be tested,
— c is the number of samples where the number of bacteria expressed in CFU is between m and M,
— m is the threshold value for the number of bacteria expressed in CFU that is considered satisfactory, and
— M is the maximum value of the number of bacteria expressed in CFU.

Source: Commission Decision (EU) 2022/1244 - Establishing the EU Ecolabel Criteria for Growing Media and Soil Improvers

Method of Examination: Commission Decision (EU) 2022/1244 - Establishing the EU Ecolabel Criteria for Growing Media and Soil Improvers (Table 6 Standard test method for the detection of specific pathogens) or equivalent.

4.2.5 pH

The pH range for all organic fertilizers must be between 4 and 9, as specified in the minimum technical requirements for organic fertilizers, biofertilizers, and soil amendments under the Decree of Minister of Agriculture No. 261/2019.

Test method: ISO 23496:2019 - Determination of pH value — Reference buffer solutions for the calibration of pH measuring equipment

4.2.6 The concentration of Polycyclic Aromatic Hydrocarbons (PAH) in the product shall be lower than the values stated in Table 4.

Table 4. Threshold Limits for Polycyclic Aromatic Hydrocarbons (PAH) in Organic Fertilizer

Pollutant	**Maximum content in the product (mg/kg dry weight)**	**Test Method**
PAH16	6	US EPA Method 8270D (SW 846) or equivalent

Source: Commission Decision (EU) 2022/1244 - Establishing the EU Ecolabel Criteria for Growing Media and Soil Improvers

5. Marking

Each product and/or packaging should be clearly and indelibly marked with the following:

a) brand name;

b) source of organic fertilizer;

c) eco-labelling mark; and

d) manufacturer’s contact information.

6. Certification mark

Each product and its packaging, may by arrangement with XXXXXX, be marked with its eco-labelling certification mark, provided the product conforms to the requirements of this criteria document.

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