

PHILIPPINE NATIONAL STANDARD

**PNS/BAFS 422:2026
ICS 65.080**

Agricultural-Grade Salt Fertilizer — Product Standard — Specifications



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Foreword

In 1995, the Republic Act no. 8172 (An Act for Salt Iodization Nationwide [ASIN]) was enacted which requires all producers and manufacturers of food-grade salt to iodize the salt that they produce, manufacture, import, trade, or distribute. The main purpose of the law is to address the micronutrient malnutrition in the country, specifically iodine deficiency, through the cost-effective preventive measure of salt iodization (ASIN Law, 1995). However, this led to the steep decline of salt production as most of the small-scale producers opted to halt their salt operations due to the lack of training and funds to comply with the mandatory requirements. (DA-National Fisheries Research and Development Institute [NFRDI]. 2024).

In 2024, Republic Act No. 11985 (Philippine Salt Industry Development Act) was enacted to revitalize the salt industry. The law mandates to formulate and implement the Philippine Salt Industry Development Roadmap (PSIDR). The PSIDR outlines short-term (2025–2029), medium-term (2030–2034), and long-term (2035–2040) strategies, programs, and activities to address industry challenges, strengthen the value chain, and enhance the sustainability and competitiveness of Philippine salt production (DA-Bureau of Fisheries and Aquatic Resources [BFAR], 2025).

The development of Philippine National Standards (PNS) for Seasalt, both Product Standard and Code of Practice, was identified as one of the short-term PSIDR. By establishing science-based and harmonized specifications and guidelines for the production, handling, and specifications of salt, these PNS seek to safeguard consumer health, support industry growth, and enhance the competitiveness of Philippine salt in both domestic and international markets.

In the same year, the DA-BFAR proposed the development of PNS for each classification of seasalt to have a clear understanding of the parameters for food, non-food, industrial, and/or artisanal salts. Further, the established PNS will help ensure a harmonized standard for identified industrial salts (i.e., animal feed and agricultural-grade salt fertilizer) under the mandates of DA.

The development of these standards is carried out pursuant to the mandate of the Bureau of Agriculture and Fisheries Standards (BAFS)-DA to set, develop, and implement science-based food safety standards for fresh plants, animals, fisheries, and aquaculture foods including those for organic agriculture provided by Section 61 (Bureau of Agriculture and Fisheries Standards) and 62 (Coverage) of Republic Act No. 8435 (Agriculture and Fisheries Modernization Act [AFMA] of 1997) and Section 16 (Specific Responsibilities of the Department of Agriculture) of Republic Act No. 10611 (Food Safety Act [FSA] of 2013). In addition, Rule 16.6 of the Implementing Rules and Regulations (IRR) of Republic Act 10611 further elaborates the role of BAFS in adopting, and/or amending/revising food safety standards and codes of practice for primary and postharvest foods.

To support the development of the PNS on Seasalt, the Standards Research Division (SRD) of the DA-BAFS conducted a research study entitled “Evaluation of the Sea Salt Specifications in the Top Six Producing Provinces in the Philippines”. This study

aimed to provide technical and scientific information on the parameters for quality specifications and safety limits of seasalt produced through solar evaporation in ponds (i.e., clay tiles) and using Polyethylene Plastic (PEP) sheets (White or High Density Polyethylene [HDPE]) from top-producing provinces (i.e., Pangasinan, Bulacan, Occidental Mindoro, Iloilo, Negros Occidental, and Misamis Oriental) in the Philippines.

In November 2025, the DA-BAFS, as requested by the DA Office of the Secretary (OSec), through the Office of the Undersecretary for Policy, Planning, and Regulations (OUPPR), initiated the development of the PNS on Agricultural-Grade Salt Fertilizer — Product Standard — Specifications. The OUPPR emphasized the exigency of the development of this standard to assist the salt producers in revitalizing the salt industry.

The development was guided by the Technical Working Group (TWG) officially created under Special Order (SO) No. 1752, series of 2025 (Amendment to Special Order (SO) No.745, series of 2025 - Recomposition of Technical Working Group [TWG] and Project Management Team [PMT] for the Development of the Philippine National Standards [PNS] for Agricultural and Fishery Products and Machinery). The TWG was composed of representatives from the relevant government agencies, academe/research institutions, private sector organizations, and Civil Society Organizations (CSO). The draft PNS underwent a series of TWG writeshops and stakeholder consultations conducted via online platforms before its endorsement to the DA Secretary.

This document was written in accordance with the formatting and editorial rules of the Standardization Guide No.1 (Writing the PNS) developed by the SDD of the BAFS-DA.

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1 Scope

This standard specifies the minimum requirements for seasalt to be used as an agricultural-grade fertilizer.

2 Normative References

The following documents are referred to in the text in such a way that some or all their contents constitute the requirements of this document. The latest edition of the referenced document (including any amendments) applies.

Association of Official Analytical Chemist (AOAC) International. (2023). Official Method 928.02.55 (Chlorine [Water-soluble] in fertilizers). In Official Methods of Analysis of AOAC International (22nd ed.). AOAC International.

AOAC International. (2023). Official Method 925.55 (Loss on drying [Moisture content]). In Official Methods of Analysis of AOAC International (22nd ed.). AOAC International.

AOAC International. (2023). Official Method: 950.01 (Water [Total] in fertilizers). In Official Methods of Analysis of AOAC International (22nd ed.). AOAC International.

American Society for Testing and Materials (ASTM) International. (2018). Standard test methods for chemical analysis of sodium chloride (ASTM E534-18). ASTM International. <https://doi.org/10.1520/E0534-18>

Bureau of Agriculture and Fisheries Standards (BAFS)-Department of Agriculture (DA). (2021). Organic Soil Amendments and Plant Supplements (OSAPS) — Product standard — Specifications (PNS/BAFS 183:2023).

Codex Alimentarius Commission (CAC). (2012). Standard for food-grade salt (CXS 150-1985, rev. 2012). https://www.fao.org/fao-who-codexalimentarius/sh-proxy/en/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252FStandards%252FCXS%2B150-1985%252FCXS_150e.pdf

Fertilizer and Pesticide Authority (FPA)-Department of Agriculture (DA). (2019). Fertilizer regulatory policies and implementing guidelines. <https://fpa.da.gov.ph/NW/images/FPAfiles/DATA/Regulation/Pesticide/Book2020/PoliciesandImplementingGuidelines2020.pdf>

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ISO. (1982). ISO 6227:1982 — Chemical products for industrial use — General method for determination of chloride ions — Potentiometric method. ISO.

ISO. (2017). ISO 20702:2017 — Fertilizers and soil conditioners — Determination of microamounts of inorganic anions in fertilizers by ion chromatography. ISO.

3 Terms and Definitions

For the purposes of this Standard, the following terms and definitions apply:

3.1

agricultural-grade salt fertilizer (AGSF)

naturally occurring seasalt produced for agricultural use which specifically contains chloride, an essential nutrient for plant growth and development (BFAR-DA, 2025, *modified*)

3.2

competent authority

official government agency having jurisdiction (CAC, 2013); also refers to the bureau or agency mandated by law with responsibility and competence for ensuring and supervising the implementation of sanitary and phytosanitary (SPS) measures, regulations, or standards (BAFS-DA, 2025)

4 Essential Composition and Quality Factors

4.1 Physical appearance

The AGSF shall be white to off-white and free from foreign matter.

4.2 Minimum moisture content

The moisture content of AGSF shall not be more than 14%.

4.3 Minimum chloride content

The chloride content of AGSF shall be at least 50% on a dry matter basis.

5 Contaminants

5.1

Plastics, wrappers, stones, and other physical contaminants shall be removed from the product.

- 5.2** Based on risk considerations, the maximum levels (MLs) for heavy metals such as mercury, arsenic, cadmium, and lead, shall be observed, as applicable, to safeguard soil health, prevent heavy-metal accumulation, and mitigate potential risks to crops and the environment.
- a) AGSF with organic claims: MLs established under PNS/BAFS 183:2023 (Organic Soil Amendments and Plant Supplements [OSAP] — Product standard — Specifications); and
 - b) AGSF with inorganic claims: MLs established under Fertilizer Regulatory Policies and Implementing Guidelines (Blue Book) of the FPA-DA.

6 Packaging

AGSF should be packed in clean, dry, and moisture-resistant materials, such as but not limited to, multi-layered polyethylene bags, woven polypropylene bags with inner polyethylene lining, or other approved packaging with appropriate thickness that prevents contamination and moisture.

7 Labeling and Marking

- 7.1** The AGSF label shall provide the following details in accordance with the requirements of the competent authority:

- a) Name of product;
- b) Name of distributor/manufacturer/producer;
- c) Address of distributor/manufacturer/producer;
- d) Date produced;
- e) Net content;
- f) Product information/description;
- g) Lot/Batch number;
- h) Direction for Use;
- i) Target crop; and
- j) Guaranteed analysis.

- 7.2** Additional information may be provided as deemed necessary.

- a) Declaration of “Produced in the Philippines” or an equivalent statement;
- b) Warning or precaution (i.e., not for human consumption); and
- c) Intended use (i.e., for agricultural use or used as fertilizer).

8 Sampling and Methods of Analysis

The methods of sampling and analysis to be employed for the determination of the compositional and quality factors should include, but is not limited to those detailed below:

8.1 Testing, inspection, and sampling

- 8.1.1 Testing shall be carried out in conformance with the methods specified in the relevant standards.
- 8.1.2 Inspection shall be conducted by the relevant competent authority or its authorized representative to verify conformity of the product with the requirements of this standard.
- 8.1.3 Sampling scheme shall be in accordance with the prescribed method specified by the relevant competent authority and/or third-party laboratory.

8.2 Methods of analysis

8.2.1 Determination of the loss on drying (Conventional moisture)

The method to determine moisture content should be in conformance with ISO 2483-1973 (Determination of the loss of mass at 110 °C), AOAC 950.01 (Water [Total] in fertilizers), AOAC 925.55 (Loss on drying [Moisture content]), ASTM E534-18 (Standard test methods for chemical analysis of sodium chloride), or other accepted and validated method.

8.2.2 Determination of chloride

The method to determine chloride content should be in conformance with ISO 6227:1982 (Chemical products for industrial use — General method for determination of chloride ions — Potentiometric method), ISO 20702:2017 (Fertilizers and soil conditioners — Determination of microamounts of inorganic anions in fertilizers by ion chromatography), AOAC 928.02 (Chlorine [Water-soluble] in fertilizers), or other accepted and validated method.

8.2.3 Determination of contaminants

The method to determine heavy metals should be in conformance with the methods listed in Annex A (Recommended methods of analysis for heavy metals for AGSF), or other accepted and validated methods.

Annex A
(Informative)

**Recommended methods of analysis for heavy metals for AGSF (CAC, 2012,
modified)**

Heavy Metal	Methods of Analysis
Arsenic	<p>EuSalt/AS 015-2007(Determination of elements emission spectrometric method [ICP-OES])</p> <p>Graphite Furnace (GF) - Atomic Absorption Spectrophotometry (AAS)</p> <p>Hydride Vapor Generation - Atomic Absorption Spectrophotometry (AAS)</p>
Cadmium	<p>EuSalt/AS 014-2005 (Determination of total cadmium content - flame atomic absorption spectrometric method)</p> <p>EuSalt/AS 015-2007(Determination of elements emission spectrometric method [ICP-OES])</p> <p>Inductively Coupled Plasma (ICP) – Optical Emission Spectrometry (OES)</p> <p>Graphite Furnace (GF) - Atomic Absorption Spectrophotometry (AAS)</p>
Lead	<p>EuSalt/AS 013-2005 (Determination of total lead content - flame atomic absorption spectrometric method)</p> <p>EuSalt/AS 015-2007 (Determination of elements emission spectrometric method [ICP-OES])</p> <p>Inductively Coupled Plasma (ICP) – Optical Emission Spectrometry (OES)</p> <p>Graphite Furnace (GF) - Atomic Absorption Spectrophotometry (AAS)</p>

Heavy Metal	Methods of Analysis
Mercury	EuSalt/AS 012-2005 (Determination of total mercury content - cold vapour atomic absorption spectrometric method) EuSalt/AS 015-2007 (Determination of elements emission spectrometric method [ICP-OES]). Direct Mercury Analyzer (Thermal Decomposition, Amalgamation, and Atomic Absorption Spectrophotometry)

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https://lawphil.net/statutes/repacts/ra2024/ra_11985_2024.html

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