

PHILIPPINE NATIONAL STANDARD

PNS/BAFS _____:2015
ICS _____

Live Mangrove Crab



BUREAU OF AGRICULTURE AND FISHERIES STANDARDS

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Foreword

This Philippine National Standard (PNS) for Live Mangrove Crab (PNS/BAFS____:2015) was developed by the Technical Working Group (TWG) organized by the Bureau of Agriculture and Fisheries Standards (BAFS) through a Department of Agriculture (DA) Special Order No.734, Series of 2014.

The TWG is composed of members representing the Bureau of Fisheries and Aquatic Resources (BFAR), Department of Science and Technology – Industrial Technology Development Institute (DOST-ITDI), University of the Philippines Visayas – College of Fisheries and Ocean Sciences (UPV-CFOS), Philippine Association of Crab Processors, Incorporated (PACPI) with BAFS as Technical Secretariat.

The proposed standard was presented and reviewed during the consultative meetings with the concerned stakeholders conducted in the cities of Naga (Region V), Iloilo (Region VI), Mandaue (Region VII), Zamboanga City (IX) and Quezon (Region NCR). Comments gathered during the consultations were carefully evaluated by the TWG and included accordingly in the final version of this standard.

This PNS for live mangrove crab aims to provide a common understanding on the scope of the standard, product description, process description, essential composition and quality factors, food additives, contaminants, hygiene and handling, packaging and labeling, methods of sampling, examination and analysis, definition of defectives and lot acceptance.

Live Mangrove Crab

1 Scope

This standard applies to mangrove crab or mud crab, locally known as *alimango*, marketed live. The species (Keenan et al., 1998) covered by this standard are the following:

- a) *Scylla serrata* (Giant mangrove crab);
- b) *Scylla olivacea* (Orange mangrove crab);
- c) *Scylla tranquebarica* (Purple mangrove crab); and
- d) *Scylla paramamosain* (Green mangrove crab).

2 References

The titles of the standards and publications referred to in this Standard are listed on the back cover.

3 Definition of terms

For the purpose of the standard, the following terms shall mean:

3.1 Clean seawater refers to seawater which meets the same microbiological standards as potable water and is free from objectionable substances. (*CODEX STAN 36-1981, Standard for Quick Frozen Finfish, Uneviscerated and Eviscerated*)

3.2 Hazard refers to a biological, chemical or physical agent in, or condition of, food with the potential to cause an adverse health effect. (*CAC/RCP 52-2003, Amd.2013*)

3.3 Label refers to any tag, brand, mark, pictorial, or other descriptive matter, written, printed, stenciled, marked, embossed or impressed on, or attached to, a container of food. (*CODEX STAN 1-1985, Amd.2010 – General Standard for the Labeling of Prepackaged Foods*)

3.4 Labeling refers to any written, printed or graphic matter that is present on the label, accompanies the food, or is displayed near the food, including that for the purpose of promoting its sale or disposal. (*CODEX STAN 1-1985, Amd.2010*)

3.5 Lot refers to a definitive quantity of a commodity produced essentially under the same conditions. (*CODEX STAN 1-1985, Amd.2010*)

3.6 Packaging refers to the process of packing that is part of the production cycle applied to bulk product to obtain the finished product. Any material, including printed material, employed in the packaging of a product, including any outer packaging used for transportation of shipment. Packaging materials are referred to as primary or secondary according to whether or not they are intended to be in direct contact with the product. (*BFAD AO 153 s. 2004 – Revised Guidelines on Current Good Manufacturing Practice in Manufacturing, Packing, Repacking, or Holding Food*)

3.7 Potable Water refers to water suitable (both health and acceptability considerations) for drinking and cooking purposes (*BAFS PNS 136:2014*)

4 Description

4.1 Product description

Live mangrove crab, cultured or wild-caught which are free from any defects and harmful substances. The products may have not more than two (2) broken or detached limbs.

4.2 Process description

Properly caught live mangrove crab is:

- washed and rinsed with clean seawater or potable water;
- tied individually;
- graded according to size, sex and maturity;
- packed in appropriate container; and
- stored in moist and cool place.

5 Essential composition and quality factors

5.1 Basic ingredient

5.1.1 Raw material

Only live mangrove crab shall be used.

5.2 Final product

5.2.1 The final product shall meet the requirements of this standard when lots examined in accordance with Section 12 – Lot Acceptance and comply with the provisions set out in Section 11 – Definition of defectives. Products shall be examined by the methods given in Section 10 – Method of Sampling, Examination and Analysis.

5.2.2 The final product shall meet the size classification specified in Table 1 – *Scylla serrata* and Table 2 – Other *Scylla* spp.

Table 1 – Size classification of male and female mangrove crabs, *Scylla serrata*

	Male	Female
Grade	Body weight(g)	Body weight(g)
XLarge/Oversize	> 1,000	> 700
Large	701 – 1,000	501 – 700
Medium	501 – 700	401 – 500
Small	301 – 500	201 – 400

Table 2 – Size classification of male and female mangrove crabs, other *Scylla* spp.

	Male	Female
Grade	Body weight(g)	Body weight(g)
XLarge/Oversize	> 500	> 400
Large	401 – 500	301 – 400
Medium	301 – 400	201 – 300
Small	201 – 300	151 – 200

Source: consolidated feedback from Capiz farmers, traders, growers and forwarders

NOTE: Live Mud Crab (*S. serrata*), carapace length of less than 10 cm and weight of less than 200 g is prohibited for export (DTI Inter-Agency Committee on Executive Order No. 1016 Resolution No. 1, s. 2013, December 27, 2013, Annex A- List of Prohibited and Regulated Products for Export)

5.2.4 The final product shall conform to the following microbiological quality requirements in Table 3.

Table 3 – Microbiological quality requirements

Test/Microorganisms	Limit
1. <i>Escherichia coli</i> , MPN/g	11
2. <i>Salmonella</i> /25g	Absent
3. <i>Shigella</i> /25g	Absent

Sources:

- 1 BFAR FAO No. 210, s. 2001 (Rules and Regulations on the exportation of fresh, chilled and frozen fish and fishery/aquatic products)
- 2 PNS/BAFPS 72-2009. Philippine National Standard for Live, Chilled/Frozen Abalone
- 3 PNS/BAFPS 73-2009. Philippine National Standard for Live, Chilled/Frozen Grouper

7. Food Additives

No additives permitted

8 Contaminants

8.1 The products shall comply with the maximum level of contaminants and veterinary drug residues as specified in Table 4. Anaesthetic drugs residue shall be absent.

Table 4 – Acceptable levels of heavy metals and veterinary drug residues in mangrove crab

Heavy metals	MRL
Cadmium	0.5 ppm
Lead	0.3 ppm
Total mercury	0.5 ppm
Legend: Veterinary drug	MRPL
ppb = parts per billion	
MRPL = Minimum reportable performance limit	
Chloramphenicol	0.3 ppb
Nitrofurans	1 ppb
Malachite green	2 ppb

Legend: ppm = parts per million
 ppb = part per billion
 MRL = Maximum Residue Limit
 MRPL = Minimum Reportable Performance Limit

Note: FAO prohibits the use of specified banned veterinary drugs

Sources:

- 1 CODEX STAN 193-1995 (*Codex General Standard for Contaminants and Toxins in Food and Feed*)
- 2 DA-BFAR FAO No. 210, s. 2001 (*Rules and Regulations on the Exportation of Fresh, Chilled and Frozen Fish and Fishery/Aquatic Products*)
- 3 DA-BFAR FOO No. 313, s. 2006 (*Amendments to the Supplemental Requirements on Quality Standards for the Exportation of Fresh, Chilled and Frozen Fish and Fishery/Aquatic Products*)

8.2 The products shall comply with the maximum residue limits for pesticides established by the Codex Alimentarius Commission.

9 Hygiene and handling

The products shall be prepared under hygienic conditions in accordance with the Code of Practice for Fish and Fishery Products (CAC/RCP 52-2003), and the following recommended guidelines in the handling and transporting mangrove crab:

- a) Crabs must be tied to allow them to be handled safely and prevent them from damaging one another;
- b) They must be kept in cool and moist condition; and
- c) Dead crabs, weak or crabs manifesting any degree of bubbling of the mouth in a container should be immediately removed.

10 Packaging and labeling

10.1 Packaging

10.1.1 Each mangrove crab shall be properly tied with appropriate material and packed in perforated or well ventilated containers like plastic crates, woven baskets; and wooden, polystyrene and carton boxes.

10.1.2 Each container shall have mangrove crab of the same species; and of same sizes and quality.

10.2 Labeling

The product shall be labeled according to the provisions of the Codex General Standard for the Labeling of Prepackaged Foods (CODEX STAN 1-1985), the Rules and Regulations Governing the Labeling of Prepackaged Food Products Distributed in the Philippines (DOH-BFAD/FDA Administrative Order No. 88-B series of 1984) and its future amendments.

10.2.1 Retail package/container

Each retail product package shall be labeled and marked with the following information:

- a) The name of the product shall be “live” and followed by corresponding English or common/local name, e.g. “Live Mangrove Crab” or “Live *Alimango*”. The products may be called by other common/local names provided that such names are accepted in the place/country of distribution;
- b) The net content by weight in metric system and/or number of pieces per pack. The net weight based on other systems of measurement required by importing countries shall appear in parenthesis after the metric net weight;
- c) The label shall state the conditions during transport, storage and distribution (e.g. store at 20 °C to 25 °C) of the product to maintain the best quality;
- d) The name and address of either of the following: manufacturer, packer, distributor, importer, exporter or vendor;
- e) The lot identification code/number;
- f) The words “Product of the Philippines” or the country of origin, if imported; and
- g) A pictorial presentation (optional) of the product on the label should not mislead the consumer with respect to the product so illustrated.

10.2.2 Non-retail container

Information on the above provisions (Section 9.2.1) shall be given either on the container or in accompanying documents, except that the name of the product, lot identification, and the name and address of the manufacturer or packer as well as storage instructions, shall appear on the container.

However, the lot identification and the name and address of the manufacturer or packer may be replaced by an identification mark, provided that such mark is clearly identifiable with the accompanying documents.

11 Methods of sampling, examination and analysis

11.1 Method of sampling

Sampling of lots for examination of the final product shall be in accordance with the General

Guidelines on Sampling (CAC/GL 50-2004). A sample unit is one piece of product from the package.

11.2 Method of sensory and physical examinations

Samples taken for sensory and physical examination may be assessed by persons trained in such examination using the Guidelines for the Sensory Evaluation of Fish and Shellfish in Laboratories (CAC/GL 31-1999).

11.3 Method of Analysis

11.3.1 Determination of microorganisms in Table 3

According to the procedure described by FDA Bacteriological Analytical Manual (BAM), published by AOAC (the latest edition) or an equivalent analysis method.

11.3.2 Determination of heavy metals

According to the Codex Recommended Methods of Analysis and Sampling (CODEX STAN 234-1999) or an equivalent analysis method.

12 Definition of defectives

The sample unit shall be considered as defective when it exhibits any of the properties defined below.

12.1 Foreign matter

The presence of any matter which has not been derived from mangrove crab (excluding tying and packing materials), does not pose a threat to human health, and is readily recognized without magnification or is present at a level determined by any method including magnification that indicates non-compliance with good manufacturing and sanitation practices. Add another sentence (c/o TWG).

12.2 Condition of animal

Mangrove crabs that are manifest bubbling of the mouth, bleeding, weak movement and unresponsive.

12.3 Broken or detached part

Mangrove crab with more than two (2) broken or detached limbs.

12.4 Odor

The presence of persistent ammoniacal odor not characteristic of the raw material.

12.5 Parasites

The presence of parasites.

13 Lot acceptance

A lot shall be considered as meeting the requirements of this standard when:

- a) the total number of defective sample units as classified according to Section 11 does not exceed the acceptance number (c) of the appropriate sampling plan (AQL-6.5);
- b) the average net weight of all sample units is not less than the declared weight, provided there is no unreasonable shortage in any individual container; and
- c) the essential composition and quality factors, food additives, contaminants, hygiene and handling, and labeling requirements of Sections 5, 6, 7, 8 and 9, respectively, are met.

References

The following references are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the references (including any amendments) applies.

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