CODEX ALIMENTARIUS
INTERNATIONAL FOOD STANDARDS

Food and Agriculture Organization of the United Nations
World Health Organization

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STANDARD FOR QUICK-FROZEN SHRIMPS OR PRAWNS

CXS 92-1981

Adopted in 1981. Revised in 1995 and 2017. Amended in 2011, 2013, 2014 and 2024.

2024 Amendments

Following decisions taken at the Forty-seventh Session of the Codex Alimentarius Commission in November 2024, amendments were made in Section 6.4 Labelling of non-retail containers by replacing the text with a reference to the *General standard for the labelling of non-retail containers of foods* (CXS 346-2021); and Section 7 Sampling, examination and analysis was amended by replacing methods of analysis and numeric performance criteria with a reference to the *Recommended methods of analysis and sampling* (CXS 234-1999).

1. SCOPE

This standard applies to quick-frozen raw or partially or fully cooked shrimps or prawns,[i] peeled or unpeeled.

2. DESCRIPTION

2.1 Product definition

Quick-frozen shrimp is the product obtained from species of the following families:

- Penaeidae
- Pandalidae
- Crangonidae
- Palaemonidae

The pack shall not contain a mixture of genera but may contain a mixture of species of the same genus which have similar sensory properties.

2.2 Process definition

The water used for cooking and cooling shall be of potable quality or clean seawater.

The product, after any suitable preparation, shall be subjected to a freezing process and shall comply with the conditions laid down hereafter. The freezing process shall be carried out in appropriate equipment in such a way that the range of temperature of maximum crystallization is passed quickly. The quick-freezing process shall not be regarded as complete unless and until the product temperature has reached -18 ºC or colder at the thermal centre after thermal stabilization. The product shall be kept deep frozen so as to maintain the quality during transportation, storage and distribution.

Quick-frozen shrimps shall be processed and packaged so as to minimize dehydration and oxidation.

2.3 Presentation

Any presentation of the product shall be permitted provided that it:

- meets all requirements of this standard; and
- is adequately described on the label to avoid confusing or misleading the consumer.

The shrimp may be packed by count per unit of weight or per package.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Shrimp

Quick-frozen shrimp shall be prepared from sound shrimp which are of a quality fit to be sold fresh for human consumption.

3.2 Glazing

If glazed, the water used for glazing or preparing glazing solutions shall be of potable quality or shall be clean seawater. Potable water is freshwater fit for human consumption. Standards of potability shall not be less than those contained in the latest edition of the World Health Organization's *Guidelines for drinking-water quality*.[1] Clean seawater is seawater which meets the same microbiological standards as potable water and is free from objectionable substances.

3.3 Other ingredients

The packing medium and all other ingredients used shall be of food-grade quality and conform to all applicable Codex standards.

3.4 Final product

Products shall meet the requirements of this standard when lots examined in accordance with Section 9 comply with the provisions set out in Section 8. Products shall be examined by the methods given in Section 7.

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[i] Hereafter referred to as shrimp.

4. FOOD ADDITIVES

Acidity regulators, antioxidants, colours, humectants and preservatives used in accordance with Tables 1 and 2 of the *General standard for food additives* (CXS 192-1995)[2] in food category 09.2.1 (Frozen fish, fish fillets, and fish products, including molluscs, crustaceans, and echinoderms) and its parent food categories are acceptable for use in foods conforming to this standard.

5. HYGIENE

It is recommended that the products covered by the provisions of this standard be prepared and handled in accordance with the appropriate sections of the *General principles of food hygiene* (CXC 1-1969),[3] the *Code of practice for fish and fishery products* (CXC 52-2003),[4] the *Code of practice for the processing and handling of quick-frozen foods* (CXC 8-1976)[5] and other relevant Codex codes of hygienic practice and codes of practice.

The products should comply with any microbiological criteria established in accordance with the *Principles and guidelines for the establishment and application of microbiological criteria related to foods* (CXG 21-1997).[6]

6. LABELLING

In addition to the provisions of the *General standard for the labelling of pre-packaged foods* (CXS 1-1985)[7] the following specific provisions apply:

6.1 Name of the food

The name of the product as declared on the label shall be "shrimps" or "prawns" according to the law, custom or practice in the country in which the product is to be distributed.

There shall appear on the label, reference to the presentation in close proximity to the name of the product in such descriptive terms that will adequately and fully describe the nature of the presentation of the product to avoid misleading or confusing the consumer.

In addition to the specified labelling designations above, the usual or common trade names of the variety may be added so long as it is not misleading to the consumer in the country in which the product will be distributed.

Products shall be designated as cooked, or partially cooked, or raw as appropriate.

If the product has been glazed with seawater, a statement to this effect shall be made.

The term "quick-frozen", shall also appear on the label, except that the term "frozen" may be applied in countries where this term is customarily used for describing the product processed in accordance with subsection 2.2 of this standard.

The label shall state that the product should be maintained under conditions that will maintain the quality during transportation, storage and distribution.

6.2 Net contents (glazed products)

Where the food has been glazed, the declaration of net contents of the food shall be exclusive of the glaze.

6.3 Storage instructions

The label shall include terms to indicate that the product shall be stored at a temperature of -18 ^{o}C or colder.

6.4 Labelling of non-retail containers

The labelling of non-retail containers should be in accordance with the *General standard for the labelling of non-retail containers of foods* (CXS 346-2021).[8]

7. SAMPLING, EXAMINATION AND ANALYSIS

7.1 Sampling

- Sampling of lots for examination of the end product as prescribed in Section 3.3 shall be in accordance with an appropriate sampling plan with an AQL of 6.5. The sample unit is the primary container or for individually quick-frozen products is at least a 1 kg portion of the sample unit.
- Sampling of lots for examination of net weight shall be carried out in accordance with an appropriate sampling plan meeting the criteria established by the Codex Alimentarius Commission.

7.2 Examination

7.2.1 *Sensory and physical examination*

Samples taken for sensory and physical examination shall be assessed by persons trained in such examination and in accordance with procedures elaborated in the *Recommended methods of analysis and sampling* (CXS 234-1999) [9] and the *Guidelines for the sensory evaluation of fish and shellfish in laboratories* (CXG 31-1999).[10]

7.2.2 *Determination of count*

When declared on the label, the count of shrimp shall be determined by counting the numbers of shrimp in the container or a representative sample thereof and dividing the count of shrimp by the actual deglazed weight to determine the count per unit weight.

7.3 Analysis

For checking the compliance with this standard, the methods of analysis and sampling contained in CXS 234-1999 relevant to the provisions in this standard shall be used.

8. DEFINITION OF DEFECTIVES

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

8.1 Deep dehydration

Greater than 10 percent of the weight of the shrimp in the sample unit or greater than 10 percent of the surface area of the block exhibits excessive loss of moisture clearly shown as white or yellow abnormality on the surface which masks the colour of the flesh and penetrates below the surface and cannot be easily removed by scraping with a knife or other sharp instrument without unduly affecting the appearance of the shrimp.

8.2 Foreign matter

The presence in the sample unit of any matter which has not been derived from shrimp, 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.

8.3 Odour/Flavour

Shrimp affected by persistent and distinct objectionable odours or flavours indicative of decomposition or rancidity or of feed.

8.4 Discolouration

Distinct blackening or green or yellow discolouration, singly or in combination of more than 10 percent of the surface area of individual shrimp which affects more than 25 percent of the sample unit.

9. LOT ACCEPTANCE

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

- the total number of defectives as classified according to Section 8 does not exceed the acceptance number (c) of the appropriate sampling plan with an AQL of 6.5;
- the total number of sample units not meeting the count designation as defined in Section 2.3 does not exceed the acceptance number (c) of the appropriate sampling plan with an AQL of 6.5;
- 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
- the food additives, hygiene and labelling requirements of Sections 4, 5 and 6 are met.

NOTES

[1] WHO. 2017. *Guidelines for drinking-water quality: fourth edition incorporating the first addendum*. Geneva. www.who.int/publications/i/item/9789241549950

[2] FAO and WHO. 1995. *General standard for food additives*. Codex Alimentarius Standard, No. CXS 192-1995. Codex Alimentarius Commission. Rome.

[3] FAO and WHO. 1969. *General principles of food hygiene*. Codex Alimentarius Code of Practice, No. CXC 1-1969. Codex Alimentarius Commission. Rome.

[4] FAO and WHO. 2003. *Code of practice for fish and fishery products*. Codex Alimentarius Code of Practice, No. CXC 52-2003. Codex Alimentarius Commission. Rome.

[5] FAO and WHO. 1976. *Code of practice for the processing and handling of quick-frozen foods*. Codex Alimentarius Code of Practice, No. CXC 8-1976. Codex Alimentarius Commission. Rome.

[6] FAO and WHO. 1997. *Principles and guidelines for the establishment and application of microbiological criteria for foods*. Codex Alimentarius Guideline, No. CXG 21-1997. Codex Alimentarius Commission. Rome.

[7] FAO and WHO. 1985. *General standard for the labelling of pre-packaged foods*. Codex Alimentarius Standard, No. CXS 1-1985. Codex Alimentarius Commission. Rome.

[8] FAO and WHO. 2021. *General standard for the labelling of non-retail containers of foods.* Codex Alimentarius Standard, No. CXS 346-2021. Codex Alimentarius Commission. Rome.

[9] FAO and WHO. 1999. *Recommended methods of analysis and sampling.* Codex Alimentarius Standard, No. CXS 234-1999. Codex Alimentarius Commission. Rome.

[10] FAO and WHO. 1999. *Guidelines for the sensory evaluation of fish and shellfish in laboratories.* Codex Alimentarius Guideline, No. CXG 31-1999. Codex Alimentarius Commission. Rome.