CODEX ALIMENTARIUS
INTERNATIONAL FOOD STANDARDS

Food and Agriculture Organization of the United Nations
World Health Organization

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STANDARD FOR CANNED FINFISH

CXS 119 - 1981

Adopted in 1981. Revised in 1995. Amended in 2011, 2013, 2016, 2018.

1. SCOPE

This standard applies to canned finfish packed in water, oil or other suitable packing medium. It does not apply to speciality products where the canned finfish constitutes less than 50% m/m of the net contents of the can or to canned finfish covered by other Codex product standards.

2. DESCRIPTION

2.1 Product Definition

Canned finfish is the product produced from the flesh of any species of finfish (other than canned finfish covered by other Codex product standards) which is suitable for human consumption and may contain a mixture of species, with similar sensory properties, from within the same genus.

2.2 Process Definition

Canned finfish are packed in hermetically sealed containers and shall have received a processing treatment sufficient to ensure commercial sterility.

2.3 Presentation

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

(i) meets all requirements of this standard; and

(ii) is adequately described on the label to avoid confusing or misleading the consumer.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Fish

The product shall be prepared from sound finfish from which the heads, tails and viscera have been removed. The raw material shall be of a quality fit to be sold fresh for human consumption.

3.2 Other Ingredients

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

3.3. Decomposition

Canned finfish of the families *Scombridae*, *Scombresocidae*, *Clupeidae*, *Coryphaenidae* and *Pomatomidae* shall not contain more than 10 mg/100 g of histamine based on the average of the sample units tested.

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.

4. FOOD ADDITIVES

Only certain Table 3 acidity regulators, emulsifiers, gelling agents, stabilizers and thickeners as indicated in Table 3 of the General Standard for Food Additives (CXS 192-1995) are acceptable for use in foods conforming to this Standard.

The flavourings used in products covered by this standard should comply with the Guidelines for the *Use of Flavourings* (CXG 66-2008). Only natural flavouring substances, natural flavouring complexes and smoke flavourings are permitted in products covered by 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), the *Code of Practice for Fish and Fishery Products* (CXC 52-2003), the *Code of Hygienic Practice for Low and Acidified Low-Acid Canned Foods* (CXC 23-1979) 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).

The final product shall be free from any foreign material that poses a threat to human health.

When tested by appropriate methods of sampling and examination prescribed by the Codex Alimentarius Commission, the product:

(i) shall be free from micro-organisms capable of development under normal conditions of storage; and

(ii) no sample unit shall contain histamine that exceeds 20 mg per 100 g. This applies only to species of the families *Scombridae, Clupeidae, Coryphaenidae, Scombresocidae* and *Pomatomidae*.

(iii) shall not contain any other substance including substances derived from microorganisms in amounts which may represent a hazard to health in accordance with standards established by the Codex Alimentarius Commission; and

(iv) shall be free from container integrity defects which may compromise the hermetic seal.

6. LABELLING

In addition to the provisions of the *General Standard for the Labelling of Prepackaged Foods* (CXS 1-1985) the following specific provisions apply.

6.1 Name of the Food

The name of the product declared on the label shall be the common or usual name applied to the species in accordance with the law and custom of the country in which the product is sold, and in a manner not to mislead the consumer.

The name of the product shall be qualified by a term descriptive of the presentation.

The name of the packing medium shall form part of the name of the food.

Where a mixture of species of the same genus are used, they shall be indicated on the label.

In addition, the label shall include other descriptive terms that will avoid misleading or confusing the consumer.

7. SAMPLING, EXAMINATION AND ANALYSES

7.1 Sampling

(i) Sampling of lots for examination of the final product as prescribed in Section 3.4 shall be in accordance with an appropriate sampling plan with an AQL of 6.5.

(ii) Sampling of lots for examination of net weight and drained weight, where appropriate, shall be carried out in accordance with an appropriate sampling plan meeting the criteria established by the CAC.

7.2 Sensory and Physical Examination

Samples taken for sensory and physical examination shall be assessed by persons trained in such examination and in accordance with Sections 7.3 through 7.5, Annex A and the *Guidelines for the Sensory Evaluation of Fish and Shellfish in Laboratories* (CXG 31 - 1999).

7.3 Determination of Net Weight

The net weight of all sample units shall be determined by the following procedure:

(i) Weigh the unopened container.

(ii) Open the container and remove the contents.

(iii) Weigh the empty container, (including the end) after removing excess liquid and adhering meat.

(iv) Subtract the weight of the empty container from the weight of the unopened container. The resultant figure will be the net content.

7.4 Determination of Drained Weight

The drained weight of all sample units shall be determined by the following procedure:

(i) Maintain the container at a temperature between 20°C and 30°C for a minimum of 12 hours prior to examination.

(ii) Open and tilt the container to distribute the contents on a pre-weighed circular sieve which consists of wire mesh with square openings of 2.8 mm x 2.8 mm.

(iii) Incline the sieve at an angle of approximately 17-20° and allow the fish to drain for two minutes, measured from the time the product is poured into the sieve.

(iv) Weigh the sieve containing the drained fish.

(v) The weight of drained fish is obtained by subtracting the weight of the sieve from the weight of the sieve and drained product.

7.5 Determination of Washed Drained Weight (for packs with sauces)

(i) Maintain the container at a temperature between 20°C and 30°C for a minimum of 12 hours prior to examination.

(ii) Open and tilt the container and wash the covering sauce and then the full contents with hot tap water (approx. 40°C), using a wash bottle (e.g. plastic) on the tared circular sieve.

(iii) Wash the contents of the sieve with hot water until free of adhering sauce; where necessary separate optional ingredients (spices, vegetables, fruits) with pincers. Incline the sieve at an angle of approximately 17-20° and allow the fish to drain two minutes, measured from the time the washing procedure has finished.

(iv) Remove adhering water from the bottom of the sieve by use of paper towel. Weigh the sieve containing the washed drained fish.

(v) The washed drained weight is obtained by subtracting the weight of the sieve from the weight of the sieve and drained product.

7.6. Determination of Histamine

Methods meeting the following method performance criteria may be used:

ML (mg/100g)	Minimum applicable range (mg/100 g)	LOD (mg/100 g)	LOQ (mg/100g)	RSDR (%)	Recovery	Applicable methods that meet the criteria
10 (average)	8 – 12	1	2	16.0	90 – 107	AOAC 977.13 | NMKL 99, 2013 NMKL 196, 2013
20 (each unit)	16 – 24	2	4	14.4	90 – 107	AOAC 977.13 | NMKL 99, 2013 NMKL 196, 2013

8. DEFINITION OF DEFECTIVES

A sample unit will be considered defective when it exhibits any of the properties defined below.

8.1 Foreign Matter

The presence in the sample unit of any matter, which has not been derived from fish or the packing medium, 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.

8.2 Odour/Flavour

A sample unit affected by persistent and distinct objectionable odours or flavours indicative of decomposition or rancidity.

8.3 Texture

(i) Excessive mushy flesh uncharacteristic of the species in the presentation; or

(ii) Excessively tough flesh uncharacteristic of the species in the presentation; or

(iii) Honey combed flesh in excess of 5% of the drained contents.

8.4 Discolouration

A sample unit affected by distinct discolouration of the flesh indicative of decomposition or rancidity or by sulphide staining of more than 5% of the drained contents.

8.5 Objectionable Matter

A sample unit affected by Struvite crystals - any struvite crystal greater than 5 mm in length.

9. LOT ACCEPTANCE

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

(i) the total number of defectives as classified according to Section 8 does not exceed the acceptance number (c) of an appropriate sampling plan with an AQL of 6.5;

(ii) the total number of sample units not meeting the presentation defined in Section 2.3 does not exceed the acceptance number (c) of an appropriate sampling plan with an AQL of 6.5;

(iii) the average net weight and the average drained weight where appropriate of all sample units examined is not less than the declared weight, and provided there is no unreasonable shortage in any individual container;

(iv) the Food Additives, Hygiene and Handling and Labelling requirements of Sections 4, 5, and 6 are met.

"ANNEX A"

SENSORY AND PHYSICAL EXAMINATION

1. Complete external can examination for the presence of container integrity defects or can ends which may be distorted outwards.

2. Open can and complete weight determination according to defined procedures in Sections 7.3, 7.4 and 7.5.

3. Examine the product for the form of presentation.

4. Examine product for discolouration, foreign and objectionable matter. The presence of a hard bone is an indicator of underprocessing and will require an evaluation for sterility.

5. Assess odour, flavour and texture in accordance with the *Guidelines for the Sensory Evaluation of Fish and Shellfish in Laboratories* (CXG 31-1999).