



Food and Agriculture
Organization of the
United Nations



World Health
Organization

**CODEX
ALIMENTARIUS**
INTERNATIONAL FOOD STANDARDS

CODEX ALIMENTARIUS
STANDARD

**STANDARD FOR
FISH SAUCE**
CXS 302-2011



ADOPTED 2011
AMENDED 2024

CXS 302-2011

History of the standard

This publication was redesigned and published in 2026.

2026 Corrigendum

The numbering of paragraphs was removed to align with standard layout practices. A correction was made in Section 7.1.2: “Classification of defectives” to remove the inverted commas around the word “defectives” and to reword “considered a defective” to “considered defective”.

2024 Amendments

Following decisions taken at the Forty-seventh Session of the Codex Alimentarius Commission in November 2024, amendments were made in Section 8.2: “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 9: “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).

Amendments made prior to 2024:

Amended in 2012, 2013 and 2018.

Adopted in 2011.

1 Scope

This standard applies to fish sauce produced by means of fermentation by mixing fish and salt and may include other ingredients added to assist the fermentation process. The product is intended for direct consumption as a seasoning, or condiment or ingredient for food. This standard does not apply to fish sauce produced by acid hydrolysis.

2 Description

2.1 Product definition

Fish sauce is a translucent, not turbid liquid product with a salty taste and fish flavour obtained from fermentation of a mixture of fish and salt.

2.2 Process definition

The product is prepared by mixing fish with salt and is fermented in covered containers or tanks. Generally, the fermentation process takes not less than six months.

Succeeding extractions may follow by adding brine to further the fermentation process in order to extract the remaining protein, fish flavour and odour. Other ingredients may be added to assist the fermentation process.

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.

3 Essential composition and quality factors

3.1 Raw material

3.1.1 Fish

Fish sauce shall be prepared from sound and wholesome fish or parts of fish in a condition fit to be sold fresh for human consumption.

3.1.2 Salt

Salt used shall be of food-grade quality and conform to the *Standard for food-grade salt* (CXS 150-1985).¹

3.1.3 Water

Water for preparing brine shall be potable.

3.2 Other ingredients

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

3.3 Quality criteria

Organoleptic criteria shall be acceptable in terms of appearance, odour and taste as follows:

3.3.1 Appearance

Fish sauce must be translucent, not turbid and free from sediments except salt crystals.

3.3.2 Odour and taste

Fish sauce shall have an odour and taste characteristic of the product.

3.3.3 Foreign matter

This product shall be free from foreign matter.

3.4 Chemical properties

Total nitrogen content: not less than 10 g/l. Competent authorities may also specify a lower level of total nitrogen if it is the preference of that country.

Amino acid nitrogen content: not less than 40 percent of total nitrogen content.

pH: between 5.0 – 6.5 typical for a traditional product; but not lower than 4.5 if ingredients are used to assist fermentation.

Salt: not less than 200 g/l, calculated as NaCl.

3.5 Final product

The product shall meet the requirements of this standard when lots examined in accordance with Section 11: “Lot acceptance” comply with the provisions set out in Section 10: “Definition of defectives”. The products shall be examined by the methods given in Section 9.2: “Examination” and Section 9.3: “Analysis”. The packaging for the final product shall be free from any integrity defects, such as cracks, leakage or loose pieces of the packaging units.

4 Food additives

Acidity regulators, colours, preservatives, and sweeteners used in accordance with Table 1 and Table 2 of the *General standard for food additives* (CXS 192-1995)² in food category 12.6.4 (Clear sauces (e.g. fish sauce)) and its parent food categories and only certain Table 3 acidity regulators, emulsifiers, flavour enhancers, and stabilizers 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.

5 Contaminants

The product covered by this standard shall comply with the maximum levels of the *General standard for contaminants and toxins in food and feed* (CXS 193-1995).³

Raw material fish for fish sauce shall not contain marine biotoxins (e.g. ciguatera, tetrodotoxin and paralytic shellfish poison (PSP)) in amounts which could present a risk to human health.

Product made using aquaculture fish shall comply with the maximum residue limits for veterinary drugs established by the Codex Alimentarius Commission.

6 Hygiene and handling

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

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

The product 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

The product shall not contain more than 40 mg histamine /100 g of fish sauce in any sample unit tested.

7 Weights and measures

7.1 Fill of containers

7.1.1 Minimum fill

The container should be well filled with fish sauce, which should occupy not less than 90 percent (minus any necessary head space according to good manufacturing practices) of the water capacity of the container. The water capacity of the container is the volume of distilled water at 20 °C which the sealed container will hold when completely filled.

Flexible containers should be filled as full as commercially practicable.

7.1.2 Classification of defectives

A container that fails to meet the requirement for minimum fill of Section 7.1.1: "Minimum fill" should be considered as defective.

7.1.3 Lot acceptance

A lot shall be considered as meeting the requirement of Section 7.1.1: "Minimum fill" when the number of defectives as defined in Section 7.1.2: "Classification of defectives" does not exceed the acceptance number (c) of the appropriate sampling plan with an AQL of 6.5. In addition, the average net weight or net volume shall be equal or greater than the declared net weight or net volume.

8 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:

8.1 Name of the product

The name of the product shall be "fish sauce" or other names, 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 may be preceded or followed by the common or usual name of the fish.

8.2 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

8.3 Labelling of nitrogen content

Competent authorities may require that total nitrogen (refer to Section 3.4: “Chemical properties”) be declared on the fish sauce label in g/l. Competent authorities may also require descriptors that reflect the total nitrogen level as an indicator of quality of the fish sauce.

9 Sampling, examination and analysis

9.1 Sampling

Sampling of lots for examination of the final product shall be in accordance with the *General guidelines on sampling* (CXG 50-2004).⁹ A sample unit is the individually packed product (bottle) or a 1 l portion from bulk containers.

9.2 Examination

9.2.1 Sensory and physical examination

Samples taken for sensory and physical examination shall be assessed by persons trained in such examination in accordance with the *Recommended methods of analysis and sampling* (CXS 234-1999)¹⁰ and the *Guidelines for the sensory evaluation of fish and shellfish in laboratories* (CXG 31-1999).¹¹

9.3 Analysis

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

10 Definition of defectives

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

10.1 Foreign matter

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

10.2 Appearance

The presence of any sediments (except NaCl crystals) and/or cloudiness.

10.3 Odour

A sample unit affected by distinct objectionable odour, e.g. rotten, putrid, rancid, gamey, pungent, etc.

10.4 Taste

A sample unit affected by distinct objectionable taste, e.g. bitter, sour, metallic, taint, etc.

11 Lot acceptance

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

- the total number of defective sample units as classified according to Section 10: “Definition of defectives” does not exceed the acceptance number (c) of the appropriate sampling plan (AQL of 6.5); and
- the essential composition and quality factors, food additives, contaminants, hygiene and handling, and labelling requirements of Section 3: “Essential composition and quality factors”, Section 4: “Food additives”, Section 5: “Contaminants”, Section 6: “Hygiene and handling” and Section 8: “Labelling” are met.

Referenced texts

- 1 *Standard for food-grade salt* (CXS 150-1985).
- 2 *General standard for food additives* (CXS 192-1995).
- 3 *General standard for contaminants and toxins in food and feed* (CXS 193-1995).
- 4 *General principles of food hygiene* (CXC 1-1969).
- 5 *Code of practice for fish and fishery products* (CXC 52-2003).
- 6 *Principles and guidelines for the establishment and application of microbiological criteria for foods* (CXG 21-1997).
- 7 *General standard for the labelling of pre-packaged foods* (CXS 1-1985).
- 8 *General standard for the labelling of non-retail containers of foods* (CXS 346-2021).
- 9 *General guidelines on sampling* (CXG 50-2004).
- 10 *Recommended methods of analysis and sampling* (CXS 234-1999).
- 11 *Guidelines for the sensory evaluation of fish and shellfish in laboratories* (CXG 31-1999).

Codex Alimentarius

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