

# codex alimentarius commission



FOOD AND AGRICULTURE  
ORGANIZATION  
OF THE UNITED NATIONS

WORLD  
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ORGANIZATION



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Agenda Item 11

CX/FFP 08/29/9

## JOINT FAO/WHO FOOD STANDARDS PROGRAMME CODEX COMMITTEE ON FISH AND FISHERY PRODUCTS

Twenty-ninth Session  
Trondheim, Norway, 18 - 23 February 2008

### PROPOSED DRAFT STANDARD FOR FISH SAUCE (at Step 3)

(Prepared by Vietnam and Thailand with the assistance of China, Germany and Indonesia)

Governments and international organizations wishing to submit comments at Step 3 on the proposed draft Standard for Fish Sauce are invited to do so by **no later than 15 January 2008** to: Secretary, Codex Alimentarius Commission, Joint FAO/WHO Food Standards Programme, Via delle Terme di Caracalla, 00153 Rome, Italy (Fax No + 39.06.5705.4593; E-mail: [codex@fao.org](mailto:codex@fao.org)), with a copy to Codex Contact Point, Norwegian Food Control Authority, P.O. Box 8187 Dep. 0034 Oslo, Norway, Fax: +47.74.11.32.01, E-mail: [cffp@mattilsynet.no](mailto:cffp@mattilsynet.no).

### BACKGROUND

1. The 28<sup>th</sup> Session of the Committee on Fish and Fishery Products agreed to undertake new work on the elaboration of a Proposed Draft Standard for Fish Sauce, subject to the approval of the Commission. It was agreed that Vietnam and Thailand with assistance of China, Germany and Indonesia would prepare a Proposed Draft Standard for consideration by the next session (ALINORM 07/30/18, paras 126-127). This new work was approved by the 30<sup>th</sup> Session of the Codex Alimentarius Commission (ALINORM 07/30/REP, para. 96, Appendix VII).
2. Fish sauce is a traditional product of many countries in the Asia region (especially in South East Asia). It is a fermented product of fish protein basically consisting of water, salt and soluble nitrogen compounds. It is not only used as a condiment but also as a kind of ingredient in cooking of dishes. The fish sauce of high quality is characterized by high essential amino acid content for human body such as valine, leucine, isoleucine, threonine, methionine, lysine, phenylalanine, triptophane, histidine and etc. Its name is different in different countries as shown in Table 1

Table 1 Name of fish sauce in different countries

Country	Name
Myanmar	Ngam-pya-ye
Japan	Shotturu
Malaysia	Budu
Philippines	Patis
Thailand	Nam-pla
Vietnam	Nuoc-mam

3. The raw materials for manufacturing fish sauce in South-East Asia are usually of the fish Genera *Stolephorus*, *Engraulis*, *Clupeoides*, *Decapterus* and *Dorosoma*. The best fish sauce is coming from *Stolephorus*, *Engraulis*.

4. The process of making fish sauce is simple, the fish is mixed with salt in a large vat or cement tank and kept submerged under the brine which is formed. The fermenting time for small fish is shorter than it is for larger fish and varies from 6-18 months. At the end of fermentation, the liquid is drained off and may be left exposed to the sun for a period of 1-4 months before packing. The colour of the end product varies from yellow straw to amber to dark reddish brown. The product has strong flavour and odour.

#### **MAIN ASPECTS TO BE COVERED IN THE PROPOSED DRAFT STANDARD FOR FISH SAUCE**

5. The Proposed Draft Standard for Fish Sauce covers safety and quality aspects of the fish sauce. Processing technology and its characteristics are identified. The essential quality factors concerned in the draft standard are both organoleptic criteria (appearance, odour and taste) and chemical properties (total nitrogen content, amino acid nitrogen content, and salt content).

6. Moreover, it is also required that fish sauce must be clear, without any sediment, except salt crystals. Since fish sauce normally has been used as a condiment, consumption of fish sauce per day is rather small. The proposed histamine content is not more than 40 mg/100g<sup>1</sup> of fish sauce. However, it is noted that the proposed histamine level shall apply only to species associated with a high amount of histidine. Sensory evaluation of fish sauce is assessed by aroma and flavour.

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<sup>1</sup> For instance average consumption of fish sauce for Thai people is 20 ml/person/day. (Ch. Wongkhalaung: Industrialization of Thai fish sauce (Nam Pla) in: Industrialization of indigenous fermented foods edited by K.H. Steinkraus, Marcel Dekker Inc. 2004.

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**PROPOSED DRAFT STANDARD FOR FISH SAUCE**

(At Step 3 of the Procedure)

**1. SCOPE**

This standard applies to fish sauce produced by means of natural fermentation of fish and salt medium. 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 or enzyme preparations not derived from fish.

**2. DESCRIPTION****2.1. Product definition**

Fish sauce is a clear liquid product with a salty taste and mild fish flavour obtained from natural fermentation of a mixture of fish and salt.

**2.2 Process Definition**

The product is prepared by mixing fish with salt and is put in covered containers or tanks. The fermentation of the mixture is left itself at ambient temperature not less than 6 months until the liquid is obtained as a result of protein hydrolysis. Optional ingredients (e.g. sucrose or caramel colour) may be added to the product.

**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**

**Fish:** Fish sauce shall be prepared from sound and wholesome fish and in a quality fit for human consumption.

**Salt:** Salt used shall be of food grade quality.

**Other ingredients:** All other ingredients used shall be of food grade quality and conform with all applicable Codex standards.

**Water:** portable water.

**3.2. Quality criteria**

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

**Appearance**

Fish sauce must be clear and free from sediments except salt crystals.

**Odour and taste**

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

**3.2.2 Foreign matter**

This product shall be free from foreign matter.

**3.3. Chemical properties**

- total nitrogen content: not less than 10g/l;

- amino acid nitrogen content: not less than 40% of total nitrogen content;

- pH: The pH shall be not more than 6;

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

### **3.4. Decomposition**

The product shall not contain more than 40mg/100g of histamine based on the average of the sample unit tested.

### **4. FOOD ADDITIVES**

The use of food additives shall comply with the Codex General Standard for Food Additives (CODEX STAN 192-2007).

### **5. HYGIENE AND HANDLING**

5.1. It is recommended that the products covered by provisions of this standard be prepared and handled in accordance with the appropriate sections of the Recommended International Code of Practice – General Principles of Food Hygiene (CAC/RCP 1-1969) and other relevant Codex texts such as Codes of Hygienic Practice and Codes of Practice.

5.2. The products should comply with any microbiological criteria established in accordance with the Principles for the Establishment and Application of Microbiological Criteria for Foods (CAC/GL 21-1997).

### **6. LABELLING**

In addition to the provisions of the Codex General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985) the following specific provisions apply:

#### **6.1. Name of the product**

The name of the product shall be “fish sauce”, and may be preceded or followed by the common or usual name of the fish 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.

#### **6.2. Labelling of non-retail containers**

Information on the above provisions 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, lot identification, and the name and address of the manufacturer or packer may be replaced by an identification mark provided that such a mark is clearly identified with the accompanying document.

### **7. SAMPLING, EXAMINATION AND ANALYSIS**

#### **7.1. Sampling**

Sampling of lots for examination of the final product shall be in accordance with the Codex General Guidelines on Sampling (CAC/GL 50-2004). [A sample unit is the individually packed product (bottle) or a 1 l portion from bulk containers].

#### **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 **Annex A**.

#### **7.3. Test methods for chemical properties**

7.3.1 Determination of total nitrogen: AOAC 940.25

7.3.2 Determination of pH: The pH shall be measured using a pH meter

7.3.3 Determination of amino acid nitrogen: AOAC (1980) 2.065

7.3.4 Determination of sodium chloride: FAO 1981, Technical Paper 219 See AOAC 937.13 or 976.18 or 976.19.

**8. DEFINITION OF DEFECTIVES**

The sample unit shall be considered as 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 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.

**8.2. Appearance**

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

**8.3. Odour and taste**

Off odour and taste which is not characteristic for fish sauce. The following criteria are unacceptable for fish sauce:

Odour: distinct objectionable odour, e.g. rotten, putrid, rancid, gamey and pungent smells.

Taste: distinct objectionable taste, e.g. bitter, sour, metallic, taint, etc.

**9. LOT ACCEPTANCE**

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

- (i) the total number of defective sample units as classified according to Section 8 does not exceed the acceptance number (c) of the appropriate sampling plan in Section 8; and
- (ii) the food additives, hygiene and labelling requirements of Sections 4, 5, 6, 7 are met.

**SENSORY AND PHYSICAL EXAMINATION**

1. Complete external packaging unit examination for the presence of any integrity defects, particularly cracks or leakage or loose pieces of the packaging units.
2. Examination of the product for clarity and foreign matter.
3. Evaluation of odour and taste by trained persons.