Standard for Fermented Soybean Paste

REGIONAL STANDARD FOR FERMENTED SOYBEAN PASTE

Asia

CXS 298R-2009

Adopted in 2009. Amended in 2012, 2013, 2020, 2023.

2023 Amendments

Following decisions taken at the Forty-sixth Session of the Codex Alimentarius Commission in December 2023, amendments were made in Section 8.3 Labelling of non-retail containers.

1. SCOPE

This standard applies to the product defined in Section 2 below and offered for direct consumption including for catering purposes or for repacking if required. It does not apply to the product when indicated as being intended for further processing.

2. DESCRIPTION

2.1 Product definition

Fermented soybean paste is a fermented food whose essential ingredient is soybean. The product is a paste type which has various physical properties such as semi-solid and partly retained shape of soybean and which is manufactured from the ingredients stipulated in Sections 3.1.1 and 3.1.2 through the following processes:

a) boiled or steamed soybeans, or the mixture of boiled or steamed soybeans and grains, are fermented with naturally occurring or cultivated microorganisms;

b) mixed with salt or brine and others;

c) the mixture or solid part of the mixture shall be aged for a certain period of time until the quality of the product meets the requirements stipulated in Section 3.2 Quality factors; and

d) processed by heat or other appropriate means, before or after being hermetically sealed in a container, so as to prevent spoilage.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Composition

3.1.1 Basic ingredients

a) soybeans;

b) salt;

c) potable water; and

d) naturally occurring or cultivated microorganisms (*Bacillus* spp. and/or *Aspergillus* spp., which are not pathogenic and do not produce toxins).

3.1.2 Optional ingredients

a) grains and/or flour (wheat, rice, barley, etc.);

b) yeast and/or yeast extracts;

c) *Lactobacillus* and/or *Lactococcus;*

d) distilled ethyl alcohol derived from agricultural products (tapioca, sugar cane, sweet potato, etc.);

e) sugars;

f) starch syrup; and

g) natural flavouring raw materials (powder or extract from dried fish or seaweed, spices and herbs, etc.).

3.2 Quality factors

	Fermented soybean paste manufactured with soybean only	Fermented soybean paste manufactured with soybean and grains
Total nitrogen (w/w)[i]	No less than 1.6%	No less than 0.6%
Amino nitrogen (w/w)	No less than 0.3%	No less than 0.12%
Moisture (w/w)	No more than 60%	

The product shall have the flavour, odour, colour, and texture characteristic of the product.

[i] The nitrogen conversion factor of 5.71 should be used.

3.3 Classification of defectives

Any container that fails to meet the applicable quality requirements, as set out in Section 3.2, should be considered a defective.

3.4 Lot acceptance

A lot should be considered as meeting the applicable quality requirements referred to in Section 3.2, when the number of defectives, as defined in Section 3.3, does not exceed the acceptance number (c) of the appropriate sampling plans.

4. FOOD ADDITIVES

Acidity regulators, antioxidants, colours, flavours enhancers, preservatives, stabilizers and sweeteners listed in Table 3 of the *General Standard for Food Additives* (CXS 192-1995)[1] are acceptable for use in food conforming to this standard.

4.1 Acidity regulator

INS No.	Name of food additive	Maximum level
334	L(+)-tartaric acid	1000 mg/kg as tartaric acid
335(ii)	sodium L(+)-tartrate	
337	potassium sodium L(+)-tartrate	

4.2 Antioxidant

INS No.	Name of food additive	Maximum level
539	Sodium thiosulphate	30 mg/kg as sulphur dioxide

4.3 Colour

INS No.	Name of food additive	Maximum level
101(i)	Riboflavin, synthetic	10 mg/kg

4.4 Preservatives

INS No.	Name of food additive	Maximum level
200	Sorbic acid	1000 mg/kg as sorbic acid, singly or in combination
202	Potassium sorbate	
203	Calcium sorbate	
210	Benzoic acid	1000 mg/kg as benzoic acid, singly or in combination
211	Sodium benzoate	
212	Potassium benzoate	

4.5 Sweeteners

INS No.	Name of food additive	Maximum level
950	Acesulfame potassium	350 mg/kg
954(iv)	Sodium saccharin	200 mg/kg

4.6 Processingaids

INS No.	Name of processing aid
	Protease
	Hemicellulase
	Lipase
472c	Citric and fatty acid esters of glycerol
270	Lactic acid
452(i)	Sodium polyphosphates, glassy
452(ii)	Potassium polyphosphates

5. CONTAMINANTS

The products 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).[2]

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

6. 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] and other relevant Codex texts, such as 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).[4]

7. WEIGHTS AND MEASURES

7.1 Minimum fill

The container should be well filled with the product 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 value of distilled water at 20 ºC which the sealed container will hold when completely filled. Taking into account various characteristics of the products, minimum fill may not be applied to some types of products.

7.2 Classification of defectives

A container that fails to meet the requirement for minimum fill of Section 7.1 should be considered as defective.

7.3 Lot acceptance

A lot should be considered as meeting the requirements of Section 7.1 when the number of defectives, as defined in Section 7.2 does not exceed the number (c) of the appropriate sampling plan.

8. LABELLING

The products covered by the provisions of this standard shall be labelled in accordance with the *General Standard for the Labelling of Pre-packaged Foods* (CXS 1-1985).[5]

8.1 Product name

The name of the product shall be "Fermented soybean paste". Other names may be used if allowed by national legislation in the country where the product is consumed. The name of the product may include the name of an ingredient which characterizes the product.

8.2 “Halal” claim

Claims on “Halal” fermented soybean paste shall follow the appropriate section of the *General Guidelines for Use of the Term “Halal”* (CXG 24-1997).[6]

8.3 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).[7]

9. METHODS OF ANALYSIS AND SAMPLING

9.1 Determination of total nitrogen

According to AOAC 984.13.

9.2 Determination of amino nitrogen

According to AOAC 920.154 B (*Sorensen* Method) on the following conditions:

Preparation of test samples

Weigh 2 g of sample into a 250 ml beaker and mix the sample with 100 ml of cold (15 °C) NH_3-free H_2O and then stir the mixture for 60 min. Next, decant the mixture through a quantitative filter and collect the filtrate in a 100 ml volumetric flask.

Endpoint

A pH meter shall be used to determine the endpoint instead of optical verification of colours.

9.3 Determination of moisture

According to AOAC 934.01 at a drying temperature of 70 ºC or lower.

NOTES

[1] FAO and WHO. 1995. *Codex General Standard for Food Additives.* Codex Alimentarius Standard, No. CXS 192-1995. Codex Alimentarius Commission. Rome.

[2] FAO and WHO. 1995. *General Standard for Contaminants and Toxins in Food and Feed.* Codex Alimentarius Standard, No. CXS 193-1995. 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. 1997. *Principles and Guidelines for the Establishment and Application of Microbiological Criteria Related to Foods.* Codex Alimentarius Guideline, No. CXG 21-1997. Codex Alimentarius Commission. Rome.

[5] FAO and WHO. 1985. *General Standard for the Labelling of Pre-packaged Foods*. Codex Alimentarius Standard, No. CXS 1-1985. Codex Alimentarius Commission. Rome.

[6] FAO and WHO. 1997. *General Guidelines for Use of the Term "Halal"*. Codex Alimentarius Guideline, No. CXG 24-1997. Codex Alimentarius Commission. Rome.

[7] 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.

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