REGIONAL STANDARD FOR FERMENTED SOYBEAN PASTE

Asia

CXS 298R-2009

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

<table>
<thead>
<tr>
<th></th>
<th>Fermented soybean paste manufactured with soybean only</th>
<th>Fermented soybean paste manufactured with soybean and grains</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total nitrogen (w/w)</td>
<td>No less than 1.6%</td>
<td>No less than 0.6%</td>
</tr>
<tr>
<td>Amino nitrogen (w/w)</td>
<td>No less than 0.3%</td>
<td>No less than 0.12%</td>
</tr>
<tr>
<td>Moisture (w/w)</td>
<td>No more than 60%</td>
<td></td>
</tr>
</tbody>
</table>

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

---

1 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

<table>
<thead>
<tr>
<th>INS No.</th>
<th>Name of food additive</th>
<th>Maximum level</th>
</tr>
</thead>
<tbody>
<tr>
<td>334</td>
<td>L(+)-tartaric acid</td>
<td>1000 mg/kg as tartaric acid</td>
</tr>
<tr>
<td>335(ii)</td>
<td>sodium L(+)-tartrate</td>
<td></td>
</tr>
<tr>
<td>337</td>
<td>potassium sodium L(+)-tartrate</td>
<td></td>
</tr>
</tbody>
</table>

4.2 Antioxidant

<table>
<thead>
<tr>
<th>INS No.</th>
<th>Name of food additive</th>
<th>Maximum level</th>
</tr>
</thead>
<tbody>
<tr>
<td>539</td>
<td>Sodium thiosulphate</td>
<td>30 mg/kg as sulphur dioxide</td>
</tr>
</tbody>
</table>

4.3 Colour

<table>
<thead>
<tr>
<th>INS No.</th>
<th>Name of food additive</th>
<th>Maximum level</th>
</tr>
</thead>
<tbody>
<tr>
<td>101(i)</td>
<td>Riboflavin, synthetic</td>
<td>10 mg/kg</td>
</tr>
</tbody>
</table>

4.4 Preservatives

<table>
<thead>
<tr>
<th>INS No.</th>
<th>Name of food additive</th>
<th>Maximum level</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>Sorbic acid</td>
<td>1000 mg/kg, singly or in combination</td>
</tr>
<tr>
<td>202</td>
<td>Potassium sorbate</td>
<td></td>
</tr>
<tr>
<td>203</td>
<td>Calcium sorbate</td>
<td></td>
</tr>
<tr>
<td>210</td>
<td>Benzoic acid</td>
<td>1000 mg/kg, singly or in combination</td>
</tr>
<tr>
<td>211</td>
<td>Sodium benzoate</td>
<td></td>
</tr>
<tr>
<td>212</td>
<td>Potassium benzoate</td>
<td></td>
</tr>
</tbody>
</table>

4.5 Sweeteners

<table>
<thead>
<tr>
<th>INS No.</th>
<th>Name of food additive</th>
<th>Maximum level</th>
</tr>
</thead>
<tbody>
<tr>
<td>950</td>
<td>Acesulfame potassium</td>
<td>350 mg/kg</td>
</tr>
<tr>
<td>954(iv)</td>
<td>Sodium saccharin</td>
<td>200 mg/kg</td>
</tr>
</tbody>
</table>
4.6 Processing aids

<table>
<thead>
<tr>
<th>INS No.</th>
<th>Name of processing aid</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Protease</td>
</tr>
<tr>
<td></td>
<td>Hemicellulase</td>
</tr>
<tr>
<td></td>
<td>Lipase</td>
</tr>
<tr>
<td>472c</td>
<td>Citric and fatty acid esters of glycerol</td>
</tr>
<tr>
<td>270</td>
<td>Lactic acid</td>
</tr>
<tr>
<td>452(i)</td>
<td>Sodium polyphosphates, glassy</td>
</tr>
<tr>
<td>452(ii)</td>
<td>Potassium polyphosphates</td>
</tr>
</tbody>
</table>

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 °C 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) NH₃-free H₂O 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 °C or lower.

NOTES

Members of the Codex Alimentarius Commission in the region of Asia are indicated on the Codex website at https://www.fao.org/fao-who-codexalimentarius