

هيئة التقييس لدول مجلس التعاون لدول الخليج العربية GCC STANDARDIZATION ORGANIZATION (GSO)

مشروع مواصفة نهائي
Final Draft of Standard FDS

إعداد اللجنة الفنية الخليجية رقم TC05

Prepared by GSO Technical Committee No. TC05

GSO 05 / FDS / 2212:2022
GSO 2212:2015

عجينة فول الصويا (المتخمّر)
Fermented Soybean Paste

ICS: 67.060

This document is a draft Gulf Standard/Technical Regulation circulated for comments. It is, therefore, subject to alteration and modification and may not be referred to as a Gulf Standard/Technical Regulation until approved by GSO.

هذه الوثيقة مشروع لمواصفة قياسية/لائحة فنية خليجية تم توزيعها لإبداء الملحوظات بشأنها، لذلك فإنها عرضة للتغيير والتبديل، ولا يجوز الرجوع إليها كمواصفة قياسية/لائحة فنية خليجية إلا بعد اعتمادها من الهيئة.

تقديم

هيئة التقييس لدول مجلس التعاون لدول الخليج العربية هيئة إقليمية تضم في عضويتها الأجهزة الوطنية للمواصفات والمقاييس في دول الخليج العربية، ومن مهام الهيئة إعداد المواصفات القياسية واللوائح الفنية الخليجية بواسطة لجان فنية متخصصة.

قرر مجلس إدارة هيئة التقييس لدول مجلس التعاون لدول الخليج العربية في اجتماعه رقم () الذي عقد بتاريخ / / هـ، الموافق / / م اعتماد تحديث اللائحة الفنية الخليجية رقم(2212:2022 GSO)(عجينة فول الصويا (المتخم)/ Fermented Soybean Paste) التي تم دراستها وتحديثها ضمن برنامج عمل اللجنة الفنية الخليجية للمنتجات الغذائية والزراعية رقم (TC05) المدرجة في خطة دولة قطر.

Fermented Soybean Paste

1 Scope:

This standard applies to the product defined in Clause 3 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 Complimentary references:

- 2.1 GSO 9 “Labeling of prepackaged foodstuffs”.
- 2.2 GSO 150-2 “Expiration periods of food product”. Expiration dates for food products - Part 2: Voluntary expiration dates
- 2.3 GSO 1016 “Microbiological criteria for foodstuffs – Part 1”.
- 2.4 GSO 1694 “General principles of food hygiene”.
- 2.5 **GSO 2055-1 “HALAL food - Part 1: General requirements”.**
- 2.6 **GSO193 “Contaminants & toxins in food and feed”.**
- 2.7 **GSO 2500 " Additives Permitted For Use In Food Stuffs"**

3 Definitions:

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 Sub-Clauses 4/1/1 and 4/1/2 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 4.2 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.

4 Essential composition and quality factors:

4.1 Composition:**4.1.1 Basic Ingredients:**

- (a) Soybeans
- (b) Salt
- (c) Potable water
- (d) Naturally occurring or cultivated microorganisms (*Bacillus* spp. and/or *Aspergillus* spp., which are not pathogenic and do not produce toxins)

4.1.2 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
- (g) Natural flavouring raw materials (powder or extract from dried fish or seaweed, spices and herbs, etc.)

4.2 Quality Factors:**Table 1: Quality Factors**

	Fermented soybean paste manufactured with soybean only	Fermented soybean paste manufactured with soybean and cereal grains
Total nitrogen (w/w) ¹	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)	Not more than 60 %	

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

4.3 Classification of “Defectives”:

Any container that fails to meet the applicable quality requirements, as set out in Clause 4/2, should be considered as "defective".

4.4 Lot Acceptance:

¹ The nitrogen conversion factor of 5.71 should be used.

A lot should be considered as meeting the applicable quality requirements referred to in Clause 4/2, when the number of "defectives", as defined in Clause 4/3, does not exceed the acceptance number (c) of the appropriate sampling plans.

5 Food additives:

Acidity regulators, antioxidants, colors, flavor enhancers, preservatives, stabilizers and sweeteners listed in the standard referred to in Clause 2/7 are acceptable for use in food conforming to this standard.

5.1 Acidity Regulator:

Table 2: 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	

5.2 Antioxidant:

Table 3: Antioxidant

INS no.	Name of Food Additive	Maximum level
539	Sodium thiosulphate	30 mg/kg as sulphur dioxide

5.3 Colour:

Table 4: Colour

INS no.	Name of Food Additive	Maximum level
101 (i)	Riboflavin, synthetic	10 mg/kg

5.4 Preservatives:

Table 5: Preservatives

INS no.	Name of Food Additive	Maximum level
200	Sorbic acid	1000 mg/kg as sorbic acid, singly or in combination

INS no.	Name of Food Additive	Maximum level
202	Potassium sorbate	1000 mg/kg as benzoic acid, singly or in combination
203	Calcium sorbate	
210	Benzoic acid	
211	Sodium benzoate	
212	Potassium benzoate	

5.5 Sweeteners:

Table 6: Sweeteners

INS no.	Name of Food Additive	Maximum level
950	Acesulfame potassium	350 mg/kg
954 (iv)	Sodium saccharin	200 mg/kg

5.6 Processing Aids:

Table 7: Processing Aids:

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

6 Contaminants:

The products covered by this Standard shall comply with the maximum levels of residues mentioned in the standard referred to in Clause 2/6. The

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

7 Hygiene:

7.1 It is recommended that the products covered by the provisions of this Standard be prepared and handled in accordance with the appropriate Clauses of the standard referred to in Clause 2/4, and other relevant Codex texts, such as Codes of Hygienic Practice and Codes of Practice.

7.2 The products should comply with any microbiological criteria established in accordance with the standard referred to in Clause 2/3.

8 Weights and Measures:**8.1 Minimum Fill**

The container should be well filled with the product which should occupy not less than 90% (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.

8.2 Classification of Defectives

A container that fails to meet the requirement for minimum fill of Clause 8/1 should be considered as a “defective”.

8.3 Lot Acceptance

A lot should be considered as meeting the requirements of Clause 8/1 when the number of “defectives”, as defined in Clause 8/2 does not exceed the number (c) of the appropriate sampling plan.

9 Labeling:

Without prejudice to what is stated in the Gulf standards mentioned in items 2/1 and 2/2, the following shall be included in the label:

9.1 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.

9.2 “HALAL” Claim

Claims on “Halal” fermented soybean paste shall be according to the standard referred to in Clause 2/5.

9.3 Labeling of non-retail containers

Information for non-retail containers shall be given on the container or in accompanying documents, except that the name of the product, lot identification and the name and address of the manufacturer, packer or distributor, as well as storage instructions, shall appear on the container. However, lot identification, and the name and address of the manufacturer, packer or distributor may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

10 Methods of analysis and sampling:**10.1 Determination of Total Nitrogen**

According to AOAC 984.13.

10.2 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 colors.

10.3 Determination of Moisture

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