



Food and Agriculture  
Organization of the  
United Nations



World Health  
Organization

**CODEX**  
**ALIMENTARIUS**  
INTERNATIONAL FOOD STANDARDS

CODEX ALIMENTARIUS  
STANDARD

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**REGIONAL STANDARD  
FOR NON-FERMENTED  
SOYBEAN PRODUCTS (ASIA)**  
CXS 322R-2015



ADOPTED 2015  
AMENDED 2025

CXS 322R-2015

# History of the standard

## **2025 Amendments**

Following decisions taken at the Forty-eighth Session of the Codex Alimentarius Commission in November 2025, amendments were made in Section 4: “Food additives” to align with the General standard for food additives (CXS 192-1995).

This publication was redesigned and published in 2025.

Amended 2017.

## **2016 Amendment**

The Thirty-ninth Session of the Codex Alimentarius Commission in June 2016 adopted an amendment to the *Codex Alimentarius Commission Procedural Manual* in recognition that the *Recommended methods of analysis and sampling* (CXS 234-1999) would be the single reference for methods of analysis and sampling. The methods section in this standard has been included in the *Recommended methods of analysis and sampling* (CXS 234-1999) and accordingly an amendment was made to Section 9: “Methods of analysis and sampling”.

Adopted in 2015.

# 1 Scope

This standard applies to products, as defined in Section 2: “Description”, and offered for direct consumption, including for catering purposes, repacking or further processing if required.

# 2 Description

## 2.1 Product definition

Non-fermented soybean products are the products, the main ingredients of which are the soybean and/or soy derivative(s) (e.g. soybean flour, soybean concentrates, soybean isolates or defatted soya) and water which are produced without a fermentation process.<sup>i</sup>

## 2.2 Classification

### 2.2.1 Soybean beverages and related products<sup>ii</sup>

#### 2.2.1.1 Plain soybean beverage

Plain soybean beverage is the milky liquid, prepared from soybeans with eluting protein and other components in hot/cold water or other physical means, without adding optional ingredients. Fibres can be removed from the products.

#### 2.2.1.2 Composite/flavoured soybean beverages

Composite/flavoured soybean beverages are the milky liquid, prepared by adding optional ingredients to plain soybean beverages. It includes products such as sweetened soybean beverages, spiced soybean beverages, salted soybean beverages.

#### 2.2.1.3 Soybean-based beverages

Soybean-based beverages are the milky liquid products prepared by adding optional ingredients to soybean beverages, with lower protein content than composite/flavoured soybean beverages (Section 2.2.1.2: “Composite/flavoured soybean beverages”).

### 2.2.2 Soybean curd and related products

#### 2.2.2.1 Semisolid soybean curd

Semisolid soybean curd is the semisolid product in which soybean protein is coagulated by adding coagulant into the soybean liquid preparation.

#### 2.2.2.2 Soybean curd

Soybean curd is the solid product with higher water content and is made from soybean liquid preparation and coagulated by adding coagulant.

### 2.2.3 Compressed soybean curd

Compressed soybean curd is partially dehydrated soybean curd, of which the water content is much lower than soybean curd and has a chewy texture.

### 2.2.4 Dehydrated soybean curd film

Dehydrated soybean curd film is obtained from the uncovered still surface of soybean liquid preparation, with or without folding up, which will be dehydrated. It may be dipped in salt solution prior to dehydration.

<sup>i</sup> The products should be processed in an appropriate manner to reduce/eliminate antinutrient level in the products and prevent spoilage.

<sup>ii</sup> In a number of countries, these products are referred to as soybean milk.

## 3 Essential composition and quality factors

### 3.1 Basic ingredients

- soybean and/or soy derivative(s); and
- water.

### 3.2 Optional ingredients

- edible oil;
- sugars;
- salts;
- spices, seasoning and condiments; and
- other ingredients as appropriate.

### 3.3 Quality criteria

The non-fermented soybean products shall have the characteristic flavour, odour, colour and texture of the product. There are no visible foreign matters in the products.

### 3.4 Component requirement

The non-fermented soybean products should comply with the requirements listed in Table 1.

**Table 1**

	Type	Moisture g/100 g	Protein g/100 g
	Plain soybean beverage (2.2.1.1)	-	≥ 2.0
Soybean beverages and related products (2.2.1)	Composite/flavoured soybean beverages (2.2.1.2)	-	≥ 2.0
	Soybean-based beverages (2.2.1.3)	-	≥ 0.8 but < 2.0
Soybean curd and related products (2.2.2)	Semisolid soybean curd (2.2.2.1)	> 92.0	≥ 2.5
	Soybean curd (2.2.2.2)	≤ 92.0	≥ 3.5
Compressed soybean curd (2.2.3)		≤ 75.0	≥ 13.0
Dehydrated soybean curd film (2.2.4)		≤ 20.0	≥ 30.0

### 3.5 Classification of defectives

Any products in minimal package that fail to meet the quality requirements, set out in Section 3.3: “Quality criteria” and Section 3.4: “Component requirement”, shall be considered defective.

### 3.6 Lot acceptance

A lot can be considered as meeting the applicable quality requirements referred to in Section 3.3: “Quality criteria” and Section 3.4: “Component requirement”, when the number of defectives, defined in Section 3.5: “Classification of defectives”, does not exceed the acceptance number (c) of the appropriate sampling plan with an AQL of 6.5 (Annex I and Annex II).

## 4 Food additives

### 4.1 General requirements

Only those additive functional classes indicated as technologically justified in Table 2 may be used for the product categories specified.

In accordance with Section 4.1 of the Preamble to the *General standard for food additives* (CXS 192-1995),<sup>1</sup> additional additives may be present in non-fermented soybean products as a result of carry-over from soybean ingredients.

No food additives are permitted for “plain soybean beverage” in food category 06.8.1 (soybean-based beverages).

Acidity regulators, antioxidants, colours, emulsifiers, flavour enhancers, stabilizers and sweeteners in “composite/flavoured soybean beverages” and “soybean-based beverages” in food category 06.8.1 (soybean-based beverages), preservatives in food category 06.8.2 (soybean-based beverage film), acidity regulators and firming agents in “semisolid soybean curd” and acidity regulators, firming agents and stabilizers in “soybean curd” in food category 06.8.3 (soybean curd (tofu)), acidity regulators, firming agents and preservatives in food category 06.8.4 (semi dehydrated soybean curd) and its subcategories used in accordance with Table 1 and Table 2 of the *General standard for food additives* (CXS 192-1995) are acceptable for use in foods conforming to this standard.

Acidity regulators, antioxidants, colours, emulsifiers, firming agents, flavour enhancers, preservatives, stabilizers and sweeteners used in accordance with Table 3 of the *General standard for food additives* (CXS 192-1995) are acceptable for use in products as specified in Table 2 of this section, in foods conforming to this standard.

Table 2

Product category	Soybean beverages and related products (2.2.1)			Soybean curd and related products (2.2.2)		Compressed soybean curd (2.2.3)	Dehydrated soybean curd film (2.2.4)
	Plain soybean beverage (2.2.1.1)	Composite/flavoured soybean beverages (2.2.1.2)	Soybean-based beverages (2.2.1.3)	Semisolid soybean curd (2.2.2.1)	Soybean curd (2.2.2.2)		
GSFA* food category		06.8.1			06.8.3	06.8.4	06.8.2
Acidity regulators	-	X	X	X	X	X	-
Antioxidants	-	X	X	-	-	-	-
Colours	-	X	X	-	-	-	-
Emulsifiers	-	X	X	-	-	-	-
Firming agents	-	-	-	X	X	X	-
Flavour enhancer	-	X	X	-	-	-	-
Preservatives	-	-	-	-	-	X	X
Stabilizers	-	X	X	-	X	-	-
Sweeteners	-	X	X	-	-	-	-

**Notes:**

\* General standard for food additives (CXS 192-1995).

X The use of food additives belonging to the functional class is technologically justified.

- The use of food additives belonging to the functional class is not technologically justified.

## 4.2 Flavourings

The flavourings used in products covered by this standard shall comply with the *Guidelines for the use of flavourings* (CXG 66-2008).<sup>2</sup>

## 4.3 Processing aids

Processing aids with antifoaming, controlling acidity for coagulant and for extracting soybean beverages and carrier functions can be used in the products covered by this standard.

Processing aid used in products covered by this standard shall comply with the *Guidelines on substances used as processing aids* (CXG 75-2010).<sup>3</sup>

## 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).<sup>4</sup>

## 6 Hygiene

It is recommended that the products to which this standard applies should be manufactured and handled in compliance with the *General principles of food hygiene* (CXC 1-1969)<sup>5</sup> and with other relevant Codex texts such as codes of hygienic practice and codes of practice.

This 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).<sup>6</sup>

## 7 Weights and measures

### 7.1 Net weight

The weight of the products covered by the provisions of this standard shall be indicated in accordance with the *General standard for the labelling of pre-packaged foods* (CXS 1-1985).<sup>7</sup>

#### 7.1.1 Classification of defectives

A container that fails to meet the net weight declared on the label should be considered as a defective.

#### 7.1.2 Lot acceptance

A lot should be considered as meeting the requirement of Section 7.1: "Net weight" when the number of defectives, as defined in Section 7.1.1: "Classification of defectives", does not exceed the acceptance number (c) of the appropriate sampling plan with an AQL of 6.5 (Annex I and Annex II).

## 8 Labelling

The product 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).

If soybean derived from modern biotechnology is used in the process, consideration shall be given to the *Compilation of Codex texts relevant to the labelling of foods derived from modern biotechnology* (CXG 76-2011).<sup>8</sup>

## 8.1 Name of the product

The product should be designated with the appropriate term in Section 2.2: "Classification". Other names may be used in accordance with the law and custom of the country of retail sale and in a manner not to mislead consumers.

# 9 Methods of analysis and sampling

For checking compliance with this standard, the methods of analysis and sampling contained in the *Recommended methods of analysis and sampling* (CXS 234-1999)<sup>9</sup> relevant to the provisions in this standard shall be used.

## Sampling plan 1

## ANNEX I

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### Sampling plans

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The appropriate inspection level is selected as follows:

Inspection level I – Normal sampling

Inspection level II – Disputes, (Codex referee purposes sample size), enforcement or need for better lot estimate

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**Sampling plan 1**  
**(Inspection level I, AQL = 6.5)**

<b>Net weight is equal to or less than 1 kg (2.2 lb)</b>		
<b>Lot size (N)</b>	<b>Sample size (n)</b>	<b>Acceptance number (c)</b>
4 800 or less	6	1
4 801 - 24 000	13	2
24 001 - 48 000	21	3
48 001 - 84 000	29	4
84 001 - 144 000	38	5
144 001 - 240 000	48	6
more than 240 000	60	7
<b>Net weight is greater than 1 kg (2.2 lb) but not more than 4.5 kg (10 lb)</b>		
<b>Lot size (N)</b>	<b>Sample size (n)</b>	<b>Acceptance number (c)</b>
2 400 or less	6	1
2 401 - 15 000	13	2
15 001 - 24 000	21	3
24 001 - 42 000	29	4
42 001 - 72 000	38	5
72 001 - 120 000	48	6
more than 120 000	60	7
<b>Net weight greater than 4.5 kg (10 lb)</b>		
<b>Lot size (N)</b>	<b>Sample size (n)</b>	<b>Acceptance number (c)</b>
600 or less	6	1
601 - 2 000	13	2
2 001 - 7 200	21	3
7 201 - 15 000	29	4
15 001 - 24 000	38	5
24 001 - 42 000	48	6
more than 42 000	60	7

**Sampling plan 2**  
**(Inspection level II, AQL = 6.5)**

**ANNEX II**

<b>Net weight is equal to or less than 1 kg (2.2 lb)</b>		
<b>Lot size (N)</b>	<b>Sample size (n)</b>	<b>Acceptance number (c)</b>
<b>4 800 or less</b>	13	2
<b>4 801 - 24 000</b>	21	3
<b>24 001 - 48 000</b>	29	4
48 001 - 84 000	38	5
84 001 - 144 000	48	6
144 001 - 240 000	60	7
more than 240 000	72	8
<b>Net weight is greater than 1 kg (2.2 lb) but not more than 4.5 kg (10 lb)</b>		
<b>Lot size (N)</b>	<b>Sample size (n)</b>	<b>Acceptance number (c)</b>
<b>2 400 or less</b>	13	2
<b>2 401 - 15 000</b>	21	3
<b>15 001 - 24 000</b>	29	4
24 001 - 42 000	38	5
42 001 - 72 000	48	6
72 001 - 120 000	60	7
more than 120 000	72	8
<b>Net weight greater than 4.5 kg (10 lb)</b>		
<b>Lot size (N)</b>	<b>Sample size (n)</b>	<b>Acceptance number (c)</b>
<b>600 or less</b>	13	2
<b>601 - 2 000</b>	21	3
<b>2 001 - 7 200</b>	29	4
7 201 - 15 000	38	5
15 001 - 24 000	48	6
24 001 - 42 000	60	7
more than 42 000	72	8

## Referenced texts

- 1 *General standard for food additives* (CXS 192-1995).
- 2 *Guidelines for the use of flavourings* (CXG 66-2008).
- 3 *Guidelines on substances used as processing aids* (CXG 75-2010).
- 4 *General Standard for contaminants and toxins in food and feed* (CXS 193-1995).
- 5 *General principles of food hygiene* (CXC 1-1969).
- 6 *Principles and Guidelines for the establishment and application of microbiological criteria related to foods* (CXG 21-1997).
- 7 *General standard for the labelling of pre-packaged foods* (CXS 1-1985).
- 8 *Compilation of Codex texts relevant to the labelling of foods derived from modern biotechnology* (CXG 76-2011).
- 9 *Recommended methods of analysis and sampling* (CXS 234-1999).

### **Codex Alimentarius**

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FAO and WHO, 2025. *Regional standard for non-fermented soybean products (Asia)*. Codex Alimentarius Standard, No. CXS 322R-2015. Codex Alimentarius Commission. Rome. <https://openknowledge.fao.org/handle/20.500.14283/cd8959en>

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