

# CODEX ALIMENTARIUS

INTERNATIONAL FOOD STANDARDS



Food and Agriculture  
Organization of  
the United Nations



World Health  
Organization

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**REGIONAL STANDARD FOR TEMPE**

**CODEX STAN 313R-2013**

**Adopted in 2013. Amendment: 2015.**

## 1. SCOPE

This standard applies to tempe as defined in Section 2 below and intended for human consumption. It does not apply to those that undergone further processing other than freezing.

## 2. DESCRIPTION

Tempe is a compact, white, cake-form product, prepared from dehulled boiled soybeans through solid state fermentation with *Rhizopus* spp.

## 3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

### 3.1. Composition

Product covered by this standard shall consist of the following ingredients:

- (a) Soybeans (any variety);
- (b) Mould of *Rhizopus* spp. (*R.oligosporus*, *R.oryzae* and/or *R.stolonifer*) mix with cooked rice powder, rice bran powder and/or wheat bran powder as an inocula.

### 3.2. Quality Factors

#### 3.2.1 Organoleptic

- (a) Texture: Compact and not easily disintegrated upon cutting with knife.
- (b) Colour: White colour of luxurious growth of mycellium of *Rhizopus* spp.
- (c) Flavour: Characteristic of tempe flavour, nutty, meaty, and mushroom-like.
- (d) Odour: Characteristic of fresh tempe odour without ammonia smell.

#### 3.2.2 Foreign Matters

Tempe shall be free from foreign matters (e.g. other beans, small stone, husk etc).

#### 3.2.3 Analytical Requirements

- (a) Moisture content 65% w/w max.
- (b) Protein content 15% w/w min.
- (c) Lipid content 7% w/w min.
- (d) Crude fibre 2.5% w/w max.

### 3.3 Classification of “defectives”

Any container that fails to meet the applicable quality requirements referred to in Section 3.2 should be considered as a “defective”.

## 4. FOOD ADDITIVES

4.1 None permitted.

4.2 Processing aids.

Processing aids can be used in these products to control acidity during soaking the beans.

Processing aids used in products covered by this standard shall comply with the *Guidelines on substances used as processing aids* (CAC/GL 75-2010).

## 5. CONTAMINANTS

5.1 The products covered by this Standard shall comply with the maximum levels (MLs) of the *General Standard for Contaminants and Toxins in Food and Feed* (CODEX STAN 193-1995).

5.2 The products covered by this Standard shall comply with the maximum residue limits (MRLs) for pesticides established by the Codex Alimentarius Commission.

## 6. HYGIENE

- 6.1 It is recommended that the product covered by the provisions of this Standard be prepared and handled in accordance with the appropriate sections of the *General Principles of Food Hygiene* (CAC/RCP 1-1969), and other relevant Codex texts such as Codes of Hygienic Practice and Codes of Practice.
- 6.2 The products should comply with the microbiological criteria established in accordance with the *Principles and Guidelines for the Establishment and Application of Microbiological Criteria related to Foods* (CAC/GL 21-1997).

## 7. LABELLING

- 7.1. The products covered by the provisions of this Standard shall be labelled in accordance with the *General Standard for the Labelling of Prepacked Foods* (CODEX STAN 1-1985)

### 7.2 Name of the product

The name of the product to be shown on the label shall be "Tempe".

## 8. METHODS OF ANALYSIS AND SAMPLING

Provision	Method	Principle	Type
Moisture Content	AOAC 925.09   AACCI 44-40.1	Gravimetry (vacuum oven)	I
Protein Content	NMKL 6, 2004 or AOAC 988.05 or AACCI 46-16.01 (Nitrogen factor 5.71)	Titrimetry, Kjeldahl digestion	I
Lipid Content	ISO 1211 IDF 1:2010	Gravimetry	I
Crude Fibre	ISO 5498:1981 or AOAC 962.09 or AACCI 32 – 10.01	Ceramic fiber filtration	I