

# CODEX ALIMENTARIUS

INTERNATIONAL FOOD STANDARDS



Food and Agriculture  
Organization of  
the United Nations



World Health  
Organization

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## STANDARD FOR DRIED OR DEHYDRATED GARLIC CXS 347-2019

Adopted in 2019. Amended in 2022.

### 2022 Amendment

The following amendments were made to the text of the standard following decisions taken at the forty-fifth session of the Codex Alimentarius Commission in December 2022.

Page	Location	Original text	Printed text
3	Section 8.5 Labelling of non-retail containers	Information for non-retail containers shall be given either 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, distributor or importer, as well as storage instructions, shall appear on the container. However, lot identification, and the name and address of the manufacturer, packer, distributor or importer may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.	The labelling of non-retail containers should be in accordance with the <i>General Standard for the Labelling of Non-Retail Container of Foods</i> (CXS 346-2021).

## 1. SCOPE

This standard applies to garlic in its dried or dehydrated form as spices or culinary herbs, defined in Section 2.1 below, offered for direct consumption, as an ingredient in food processing, or for repacking if required. This standard does not apply to products intended for industrial processing.

## 2. DESCRIPTION

### 2.1 Product definition

Dried/dehydrated garlic is a finished product obtained on drying the cloves and/or bulb of garlic (*Allium sativum* L.).

### 2.2 Styles

#### 2.2.1 Dried roots, rhizomes and bulbs may be:

- Whole, defined as peeled, dry/dehydrated solo garlic and/or intact cloves.
- Cracked/broken.
- Ground/powdered.
- Of other styles distinct from those above, provided they are labelled accordingly.

#### 2.2.2 The particle size of pieces and ground/powdered styles is determined by contractual agreement between buyer and seller.

## 3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

### 3.1 Composition

The product shall belong to the one defined in Section 2.1 and shall conform to requirements contained in Annexes I and II (chemical and physical characteristics of dried or dehydrated garlic). The general name may be used if the product is a blend of the different varieties listed under the general name for that commodity. When a specific name is used, the product must contain a minimum of 80 percent of the variety listed for that specific name.

### 3.2 Quality factors

#### 3.2.1 Odour, flavour, and colour

The product shall have a characteristic aroma, colour and flavour, which may vary depending on geo-climatic factors/conditions/varieties, and shall be free from any foreign odour, colour, flavour and especially from mustiness.

#### 3.2.2 Chemical and physical characteristics

The generic product shall comply with the requirements specified in Annex I (Chemical characteristics) and Annex II (Physical characteristics). The defects allowed must not affect the general appearance of the product as regards to its quality, keeping quality and presentation in the package. There shall not be any form of adulteration in the product.

## 4. FOOD ADDITIVES

Anticaking agents may be used in the powdered form of the product in accordance with Table 3 of the *General Standard for Food Additives* (CXS 192-1995).<sup>1</sup>

## 5. CONTAMINANTS

### 5.1 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>2</sup>

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

## 6. HYGIENE

### 6.1 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),<sup>3</sup> the *Code of Hygienic Practice For Low-Moisture Foods* (CXC 75-2015),<sup>4</sup> the *Code of Practice for the Prevention and Reduction of Mycotoxins in Spices* (CXC 78-2017)<sup>5</sup> and other relevant Codex texts such as codes of hygienic practice and codes of practice.

### 6.2 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).<sup>6</sup>

## 7. WEIGHTS AND MEASURES

Containers shall be as full as practicable without impairment of quality and shall be consistent with a proper declaration of contents for the product.

## 8. LABELLING

8.1 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).<sup>7</sup> In particular, the following specific provisions apply:

### 8.2 Name of the product

8.2.1 The name of the product shall be as described in Section 2.1.

8.2.2 The name of the product may include an indication of the style as described in Section 2.2.

8.2.3 Species, variety or cultivar may be listed on the label.

### 8.3 Country of origin and country of harvest

8.3.1 Country of origin shall be indicated.

8.3.2 Country of harvest (optional)

8.3.3 Region of harvest and year of harvest (optional)

### 8.4 Commercial identification

- Class/Grade, if applicable
- Size (optional)

### 8.5 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 in Foods* (CXS 346-2021).<sup>8</sup>

## 9. METHODS OF ANALYSIS AND SAMPLING

### 9.1 Methods of analysis

For checking the 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.

### 9.2 Sampling plan

To be developed.

## ANNEX I

<b>A. Chemical characteristics of dried or dehydrated garlic</b>	
<b>Parameter</b>	<b>Requirement</b>
Moisture, % w/w (max)	
(i) In case of powdered garlic	7.0
(ii) Other than powdered garlic	8.0
Total ash on dry basis, % w/w (max)	6.0
Acid insoluble ash on dry basis, % w/w (max)	0.5
Volatile organic sulphur compounds content, % (m/m) on dry basis (min)	0.3
Cold-water-soluble extract, % (m/m) on dry basis,	
(min)	70
(max)	90

## ANNEX II

<b>B. Physical characteristics of dried or dehydrated garlic</b>	
<b>Parameter</b>	<b>Requirements<sup>a</sup></b>
Extraneous matter, % w/w (max) <sup>b</sup>	0.5
Foreign matter, % w/w (max) <sup>c</sup>	0.5
Mould visible, % w/w (max)	1.0
Live insects, count/100 g (max)	0
Dead insects, insect fragments, rodent contamination, max % mass fraction	0.5
Excreta mammalian, mg/kg (max)	1.0

<sup>a</sup> These requirements apply to all styles.

<sup>b</sup> Vegetative matter associated with the plant from which the product originates but not accepted as part of the final product.

<sup>c</sup> Any visible/detectable objectionable foreign matter or material not usually associated with the natural components of the spice plant, such as sticks, stones, burlap bagging, metal, etc.

## NOTES

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<sup>1</sup> FAO and WHO. 1995. *General Standard for Food Additives*. Codex Standard, No. CXS 192-1995. Codex Alimentarius Commission. Rome.

<sup>2</sup> FAO and WHO. 1995. *General Standard for Contaminants and Toxins in Food and Feed*. Codex Standard, No. CXS 193-1995.

<sup>3</sup> FAO and WHO. 1969. *General Principles of Food Hygiene*. Codex Code of Practice, No. CXC 1-1969. Codex Alimentarius Commission. Rome.

<sup>4</sup> FAO and WHO. 2015. *Code of Hygienic Practice for Low-Moisture Foods*. Codex Code of Practice, No. CXC 75-2015. Codex Alimentarius Commission. Rome.

<sup>5</sup> FAO and WHO. 2017. *Code of Practice for the Prevention and Reduction of Mycotoxins in Spices*. Codex Code of Practice, No. CXC 78-2017. Codex Alimentarius Commission. Rome.

<sup>6</sup> FAO and WHO. 1997. *Principles and Guidelines for the Establishment and Application of Microbiological Criteria Related to Foods*. Codex Guideline, No. CXG 21-1997. Codex Alimentarius Commission. Rome.

<sup>7</sup> FAO and WHO. 1985. *General Standard for the Labelling of Pre-packaged Foods*. Codex Standard, No. CXS 1-1985. Codex Alimentarius Commission. Rome.

<sup>8</sup> FAO and WHO. 2021. *General Standard for the Labelling of Non-Retail Containers in Foods*. Codex Standard, No. CXS 346-2021. Codex Alimentarius Commission. Rome.

<sup>9</sup> FAO and WHO. 1999. *Recommended Methods of Analysis and Sampling*. Codex Standard, No. CXS 234-1999. Codex Alimentarius Commission. Rome.