

## PROPOSED SECOND DRAFT STANDARD FOR DRIED AND DEHYDRATED GARLIC

### 1 SCOPE

This Standard applies to plant products in their 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. It excludes the product for industrial processing.

### 2 DESCRIPTIONS

#### 2.1 PRODUCT DEFINITION

Dried/Dehydrate garlic is a finished product obtained on drying the cloves of garlic (*Allium sativum* L) without any blanching or precooking, the cloves being sound and practically free from moulds, diseases, soil, stems, leaves and root.

#### 2.2 Styles/forms

Spices and culinary herbs may be:

- Whole,
- Cracked/broken, or
- Ground/powdered
- Other styles distinctly different for those three are allowed, provided they are labeled accordingly.

### 3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

#### 3.1 COMPOSITION

Product shall belong to the one defined in para 2.1 and shall conform to requirements set in Annexes I and II (Chemical and Physical properties of Dried and Dehydrated Garlic)

#### 3.2 QUALITY FACTORS

##### 3.2.1 Odour, flavor and color:

The product shall have a characteristic aroma, color (white and pale cream) and flavor which can vary depending on geo-climatic factors/conditions and shall be free from any foreign odour or flavour.

##### 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

To facilitate the retention of powdered state of the product, anticaking agents that are listed in Table 3 of the Codex General Standard for Food Additives (GSFA) may be used.

### 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* (CODEX STAN 193-1995).

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

### 6 FOOD 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* (CAC/RCP 1-1969 the *Code Of Hygienic Practice For Low-Moisture Foods* (CAC/RCP 75-2015) Annex III Spices and Aromatic Herbs 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 for the Establishment and Application of Microbiological Criteria for Foods* (CAC/GL 21-1997).

## 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* (CODEX STAN 1-1985). In addition, 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/country of harvest

#### 8.4 Commercial Identification

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

#### 8.5 Inspection mark (optional)

### 8.6 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.

## 9. METHODS OF ANALYSIS AND SAMPLING

### 9.1 Methods of Analysis<sup>1</sup>

Parameter	Method	Principle
Moisture	ISO 939 AOAC 2001.12 ASTA 2.0	Distillation
Total Ash	ISO 928 AOAC 950.49 ASTA 3.0	Gravimetry
Acid Insoluble Ash	ISO 930 ASTA 4.0	Gravimetry
Volatile Oil	ISO 6571 AOAC 962.17 ASTA 5.0	Distillation
Extraneous Matter	ISO 927 ASTA 14.1	Visual Examination

Foreign Matter	ISO 927	Visual Examination
Insect Damage	Method V-8 Spices, Condiments, Flavors and Crude Drugs (Macroanalytical Procedure Manual, FDA Technical Bulletin Number 5) <a href="http://www.fda.gov/Food/FoodScienceResearch/LaboratoryMethods/ucm084394.htm#v-32">http://www.fda.gov/Food/FoodScienceResearch/LaboratoryMethods/ucm084394.htm#v-32</a>	Visual Examination
Insects/Excreta/Insect Fragments	Method appropriate for particular spice from AOAC Chapter 16, subchapter 14	Visual Examination
Cold Water Soluble Extract	ISO 941	Distillation
Volatile Organic Sulfur Compounds Content	ISO 5567	Distillation followed by Titrimetry

<sup>1</sup> Latest edition or version of the approved method should be used

## 9.2 SAMPLING PLAN

To be developed

## ANNEX I

<b>A. Chemical Properties for Dried and Dehydrated Garlic</b>	
<b>Parameter</b>	<b>Requirement</b>
Moisture, % w/w (max)	
(i) In case of Powdered Garlic	5
(ii) Other than Powdered Garlic	8
Total ash on dry basis, % w/w (max)	5.5
Acid Insoluble Ash, on dry basis, % w/w (max)	0.5
Volatile organic sulfur 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 Properties for Dried and Dehydrated Garlic</b>	
<b>Parameter</b>	<b>Requirements</b>
Extraneous matter, % w/w (max)	0.5
Foreign matter	0
Mould visible, maximum, % mass fraction	0
Live Insects	0
Dead insects, insect fragments, rodent contamination max % mass fraction	0