



## ASEAN STANDARD FOR GARLIC (ASEAN Stan 13:2009)

### 1. DEFINITION OF PRODUCE

This standard applies to commercial varieties of garlic grown from *Allium sativum* L. of the Alliaceae family, to be supplied fresh<sup>1</sup> to the consumer. Garlic for industrial processing are excluded.

### 2. PROVISIONS CONCERNING QUALITY

#### 2.1 MINIMUM REQUIREMENTS

In all classes, subject to the special provisions for each class and the tolerances allowed, the garlic must be:

- whole, covered with outer skin;
- whole bulb with dry pseudo stem not more than 2 cm from the neck of the bulb;
- sound; produce affected by rotting or deterioration such as to make it unfit for consumption is excluded;
- clean, practically free of any visible foreign matter;
- practically free of pests affecting the general appearance of the produce;
- practically free of damage caused by pests,
- practically free of mechanical and/or physiological damage;
- free of any foreign smell and/or taste;
- have a shape, colour and taste characteristic of the variety;
- free of visible sprouts and roots

**2.1.1** The garlic must have been carefully harvested and have reached an appropriate degree of development and accordance with criteria proper to the variety and to the area in which they are grown.

The development and condition of the garlic must be such as to enable them:

- to withstand transport and handling; and
- to arrive in satisfactory condition at the place of destination

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<sup>1</sup> Garlic for fresh consumption means produce in which the pseudo stem and the outer skin of the bulb and the skin surrounding each clove are completely dry.

## 2.2 CLASSIFICATION

Garlic is classified in three classes defined below:

### 2.2.1 "Extra" Class

Garlic in this class must be of superior quality. It must be characteristic of the variety and/or commercial type. It must be practically free of defects provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package. The cloves must be compact.

### 2.2.2 Class I

Garlic in this class must be of good quality. It must be characteristic of the variety and/or commercial type. Slight defects of shape, colour, firmness and tears in the outer skin of the bulb may be allowed provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package.

### 2.2.3 Class II

This class includes garlic which do not qualify for inclusion in the higher classes, but satisfy the minimum requirements specified in Section 2.1 above. Garlic in this class must be of good quality. It must be characteristic of the variety and/or commercial type. No more than two (2) missing cloves are allowed. Defects of shape, colour, firmness and tears in the outer skin of the bulb may be allowed provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package.

## 3. PROVISIONS CONCERNING SIZING

Size is determined by the diameter of the equatorial section of the bulb, in accordance with the following table:

Size Code	Diameter of bulb (in millimeters)
1	> 35
2	30 - <35
3	25 - <30
4	15 - <25
5	<15

## **4. PROVISIONS CONCERNING TOLERANCES**

Tolerances in respect of quality and size shall be allowed in each package (or in each lot for produce presented in bulk) for produce not satisfying the requirements of the class indicated.

### **4.1 QUALITY TOLERANCES**

#### **4.1.1 "Extra" Class**

Five percent by number or weight of garlic is not satisfying the requirements of the class, but meeting those of Class I or, exceptionally, coming within the tolerances of that class.

#### **4.1.2 Class I**

Ten percent by number or weight of garlic is satisfying neither the requirements of the class nor the minimum requirements, with the exception of produce affected by rotting or any other deterioration rendering it unfit for consumption.

#### **4.1.3 Class II**

Fifteen percent by number or weight of garlic is satisfying neither the requirements of the class nor the minimum requirements and without rotten bulb.

### **4.2 SIZE TOLERANCES**

For all classes, ten percent by number or weight of garlic not satisfying the requirements as regards sizing, but falling within the size immediately above or below those indicated in Section 3.

## **5. PROVISIONS CONCERNING PRESENTATION**

### **5.1 UNIFORMITY**

The contents of each package (or lot for produce presented in bulk) must be uniform and contain only garlic of the same variety, origin, quality and size. The visible part of the contents of the package (or lot for produce presented in bulk) must be representative of the entire contents.

## **5.2 PACKAGING**

Garlic must be packed in such a way as to protect the produce properly. The materials used inside the package must be clean and of good quality such as to avoid causing any external or internal damage to the produce. The use of materials, particularly of paper or stamps bearing trade specifications is allowed, provided the printing or labeling has been done with non-toxic ink or glue.

Garlic shall be packed in each container in compliance with the *Recommended International Code of Practice for Packaging and Transport of Tropical Fresh Fruits and Vegetables (CAC/RCP 44-1995, Amd. 1-2004)*.

### **5.2.1 Description of Containers**

The containers shall meet the quality, hygiene, ventilation and resistance characteristics to ensure suitable handling, shipping and preserving of the garlic. Packages (or lot for produce presented in bulk) must be practically free of all foreign matter and smell.

## **6. MARKING OR LABELING**

### **6.1 CONSUMER PACKAGES**

In addition to the requirements of the Codex General Standard for the Labeling of Prepackaged Foods (CODEX STAN 1-1985, Rev. 1-1991), the following specific provisions apply:

#### **6.1.1 Nature of Produce**

If the produce is not visible from the outside, each package shall be labeled as to the name of the produce and may be labeled as to the name of the variety and/or commercial type.

### **6.2 NON-RETAIL CONTAINERS**

Each package must bear the following particulars, in letters grouped on the same side, legibly and indelibly marked, and visible from the outside, or in the documents accompanying the shipment. For produce transported in bulk these particulars must appear on a document accompanying the goods.

#### **6.2.1 Identification**

Name and address of Exporter, Packer and/or Dispatcher. Identification code (optional).

### **6.2.2 Nature of Produce**

Name of produce if the contents are not visible from the outside. Name of variety and/or commercial type.

### **6.2.3 Origin of Produce**

Country of origin and, optionally, district where grown or national, regional or local place name.

### **6.2.4 Commercial Identification**

- Class;
- Size (size code or average weight in grams);
- Number of units (optional);
- Net weight (optional).

### **6.2.5 Official Inspection Mark (optional)**

## **7. CONTAMINANTS**

### **7.1 PESTICIDE RESIDUES**

Garlic shall comply with those maximum residue limits established by the Codex Alimentarius Commission and/or by authority for this commodity.

### **7.2 OTHER CONTAMINANTS**

Garlic shall comply with those maximum levels for heavy metals established by the Codex Alimentarius Commission and/or by authority for this commodity.

## **8. HYGIENE**

**8.1** 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 Recommended International Code of Practice – General Principles of Food Hygiene (CAC/RCP 1-1969, Rev. 3-1997), and other relevant Codex texts such as Codes of Hygienic Practice and Codes of Practice.

**8.2** The product 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).

## **9. METHODS OF ANALYSIS AND SAMPLING**

Analytical and sampling methods to be used for ascertaining conformance to the requirements of this specification shall be in accordance with relevant text in Codex Methods of Analysis and Sampling, Volume 13.

**References:**

National Standard of Indonesia for Garlic (*Allium sativum*) SNI-01- 3160-1992

Myanmar National Standard for Garlic

Philippine National Standard for Garlic (PNS/BAFPS 51:2007 ICS 065.020.20)

Thailand Agricultural Standard for Garlic (TAS 1508-2008)