



## **ASEAN STANDARD FOR TARO LEAVES** (ASEAN Stan 61:2019)

### **1. DEFINITION OF PRODUCE**

This standard applies to commercial varieties of fresh taro leaves grown from *Colocasia esculenta* (L.) Schott. of the family Araceae to be supplied fresh to the consumers. Taro leaves for industrial processing is 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 taro leaves shall be:

- whole;
- fresh in appearance;
- characteristic of the variety;
- sound, produce affected by deterioration such as to make it unfit for consumption is excluded;
- clean, practically free of any visible foreign matter;
- practically free of pests<sup>1</sup>;
- practically free of damage caused by pests affecting the general appearance of the produce;
- practically free from damage caused by low or high temperature;
- free of abnormal external moisture, excluding condensation following removal from cold storage; and
- free of any foreign odour and/or taste.

The development and condition of the taro leaves shall 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> The Provision for pest applies without prejudice to the applicable plant protection rules applied by governments in line with the International Plant Protection Convention (IPPC).

### **2.1.1 Minimum Maturity Requirements**

Taro leaves shall be harvested and have reached an appropriate degree of development for harvesting depending on variety, season and area in which they are grown.

## **2.2 CLASSIFICATION**

Taro leaves are classified into three classes defined below:

### **2.2.1 "Extra" Class**

Taro leaves in this class shall be of superior quality. They shall be free of defects, with the exception of very slight superficial defects, provided these do not affect the general appearance of the produce, quality, keeping quality and presentation in the package.

### **2.2.2 Class I**

Taro leaves in this class shall be of good quality. The following defects may be allowed, provided these do not affect the general appearance of the produce, quality, keeping quality and presentation in the package:

- slight defects in shape;
- slight defects in color;
- slight lack of freshness; and
- slight damage on leaves, such as cracks, bruises, holes or tears not exceeding 5% of the total surface area of the leaf.

### **2.2.3 Class II**

This class includes taro leaves which do not qualify for inclusion in the higher classes, but satisfy the minimum requirements specified in Section 2.1 above. The following defects, however, may be allowed, provided that the taro leaves retain their essential characteristics with regards to the quality, keeping quality and presentation:

- defects in shape;
- defects in color; and
- slight damage on leaves, such as cracks, bruises, holes or tears not exceeding 10% of the total surface area of the leaf.

### 3. PROVISIONS CONCERNING SIZING

Size code is determined by the leaf width in accordance with the following table:

Table 1: Classification of taro leaves based on the leaf width

Size code <sup>2</sup>	Leaf width (cm)
1	24 – 30
2	16 – < 24
3	>10 – <16

### 4. PROVISIONS CONCERNING TOLERANCES

At all marketing stages, tolerances in respect to quality and size shall be allowed in each lot for produce not satisfying the requirements of the class indicated. Conformity assessment for the produce should be conducted in accordance with the relevant provisions in the *ASEAN Principles and Guidelines for National Food Control System*, *ASEAN Principles for Food Import and Export Inspection and Certification (CAC/GL 20 MOD)* and/or the *Codex Guidelines for Food Import Control System (CXG 47-2003)*.

#### 4.1 QUALITY TOLERANCES

##### 4.1.1 "Extra" Class

Five percent by number or weight of taro leaves 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 taro leaves satisfying the requirements of the class, but meeting those of Class II or exceptionally, coming within tolerances of that class.

##### 4.1.3 Class II

Ten percent by number or weight of taro leaves 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.

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<sup>2</sup> The width is based on the widest part of the leaf blade.

## **4.2 SIZE TOLERANCES**

For all classes, 10% by weight of taro leaves 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 shall be uniform and contain only taro leaves of the same origin, variety, quality and size. For “Extra” Class, the colour shall be uniform. The visible part of the contents of the package shall be representative of the entire contents.

### **5.2 PACKAGING**

Taro leaves shall be packed in such a way as to protect the produce properly. The materials used inside the package shall be new, clean, non-toxic and of a 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 labelling has been done with non-toxic ink or glue.

Taro leaves 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* (CXC 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 taro leaves. Packages shall be free from foreign matter and odour.

## **6. MARKING OR LABELLING**

### **6.1 CONSUMER PACKAGES**

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

### **6.1.1 Name of Produce**

Each package shall be labelled as to the name of the produce and may be labelled as to the name of the variety and/or commercial type.

### **6.1.2 Origin of Produce**

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

### **6.1.3 Preparation instructions<sup>3</sup>**

A statement indicating the following is required:

- Taro leaves shall not be eaten raw;
- Use of hand gloves to avoid skin irritation during preparation;
- Taro leaves shall be fully cooked before consumption; and
- Rinsing water should not be consumed or used for other food preparation purposes.

## **6.2 NON-RETAIL CONTAINERS**

Each package shall 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.

### **6.2.1 Identification**

Name and address of Exporter, Packer and/or Dispatcher. Identification code<sup>4</sup> (optional).

### **6.2.2 Name 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 Specification**

- Name of Produce;
- Origin of Produce

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<sup>3</sup> In case of unpackaged taro leaves, information on safe handling and preparation should be made available to the consumer at the point of sale.

<sup>4</sup> The national legislation of a number of countries requires the explicit declaration of the name and address. However, in the case where a code mark is used, the reference “packer and/or dispatcher (or equivalent abbreviations)” has to be indicated in close connection with the code mark.

- Class;
- Size; and
- Number of units and/ or Net weight.

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

### **7. FOOD ADDITIVES**

No food additives are permitted in this product.

### **8. CONTAMINANTS**

**8.1** Taro leaves shall comply with maximum residue limits for pesticides established by the ASEAN Harmonized MRLs of Pesticides and/or Codex Alimentarius Commission. In cases where the MRLs of pesticide are not included in the databases of ASEAN and Codex Alimentarius Commission, the commodity shall conform with the established MRL of the national authority.

**8.2** Taro leaves shall comply with the maximum levels of the ASEAN Harmonized Maximum Residue Limits for Contaminants and/or the Codex General Standard for Contaminants and Toxins in Food and Feed (CXS 193-1995)

### **9. HYGIENE**

**9.1** 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 *ASEAN Standard on Good Agricultural Practices (GAP)*, *ASEAN Standard General Principle for Food Hygiene (CAC/RCP 1-1969, Rev. 4 MOD)*, *Recommended International Code of Practice – General Principles of Food Hygiene (CXC 1-1969)*, and other relevant Codex texts such as Codes of Hygienic Practice and Codes of Practice.

**9.2** The product should comply with any microbiological criteria established in accordance with the *Principles for the Establishment and Application of Microbiological Criteria for Foods (CXG 21-1997)*.

### **10. 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.

**References:**

ASEAN Harmonized MRLs

ASEAN Harmonized Maximum Residue Limits for Contaminants

ASEAN Principles and Guidelines for National Food Control System,

ASEAN Principles for Food Import and Export Inspection and Certification (CAC/GL 20 MOD)

ASEAN Standard for Chinese Cabbage (ASEAN Stan 41: 2015)

ASEAN Standard for Water Convolvulus (ASEAN Stan 46: 2015)

ASEAN Standard on Good Agricultural Practices (GAP)

ASEAN Standard General Principle for Food Hygiene (CAC/RCP 1-1969, Rev. 4 MOD)

Bureau of Agriculture and Fisheries Standards. 2006. Philippine National Standard on Taro (*Colocasia esculenta* (L.) Schott) leaves (PNS/BAFS 37:2006 ICS 67.080).

Codex Alimentarius Commission. 1991. General Standard for the Labelling of Prepackaged Foods (Codex Stan 1-1985, Rev. 1-1991)

Codex Alimentarius Commission. 1995. General Standard for Contaminants and Toxins in Food and Feed (CXS 193-1995)

Codex Alimentarius Commission. 2003. Codex Guidelines for Food Import Control System (CXG 47-2003)

Codex Alimentarius Commission. 2010. Codex Standard for Bitter Cassava (Codex Stan 300-2010)

International Plant Protection Convention (IPPC).

## ANNEX 1

### VERNACULAR NAMES OF TARO LEAVES IN THE ASEAN REGION

Country	Vernacular Name
Brunei Darussalam	Daun Keladi
Cambodia	Sleuk Trav
Indonesia	Daun Talas Daun Keladi
Lao PDR	Bay bone
Malaysia	Daun Keladi
Myanmar	Pein yauik
Philippines	Dahon ng Gabi
Singapore	Taro leaves
Thailand	Bai bon
Viet Nam	Lá mùng