

# PHILIPPINE NATIONAL STANDARD

PNS/BAFS 154:2015  
ICS 67.080

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**Fresh fruit – Sweet Tamarind –  
Classification and grading**



**BUREAU OF PHILIPPINE STANDARDS (BPS)**

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## **Foreword**

The Philippine National Standard for Fresh fruit – Sweet Tamarind – Classification and grading (PNS/BAFS 154:2015) was developed by the Technical Working Group (TWG) on the Development of PNS for Sweet Tamarind. The group was organized by the Bureau of Agriculture and Fisheries Standards (BAFS) through a Special Order No. 169, Series of 2014 to present common information and understanding on the quality and safety requirements for Sweet Tamarind. The TWG conducted technical reviews and public consultations in the three major islands of the country to generate further scientific data and opinions needed prior to the finalization of this Standard.

PNS/BAFS 154:2015 aims to provide common understanding on the scope, definitions, minimum requirements, classification, size classification, tolerances, sampling, packaging, marking and labeling, contaminants, and hygiene.

**Fresh fruit – Sweet Tamarind – Classification and grading**

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**1 Scope**

This Standard applies to Sweet Tamarind of commercial varieties grown from *Tamarindus indica* Linn. of the Caesalpiniaceae family to be supplied fresh to the consumer after preparation and packaging.

Sweet Tamarind for industrial processing is excluded.

**2 References**

The titles of the standard publications referred to in this standard are listed on the inside back cover.

**3 Definition**

For purposes of this standard, the following definitions shall apply:

**3.1****clean**

practically free from stain, pests and diseases, cuts and bruises, dirt or other foreign matter

**3.2****damage**

any specific defect, which detracts from the appearance of the edible or marketing quality of Sweet Tamarind caused by pests and diseases, cuts and bruises, and physiological disorder

**3.3****foreign matter**

shall include, but not limited to pest, dust, dirt, plastic and stone, which are extraneous or foreign to Sweet Tamarind

**3.4****practically free**

almost free of the concerned items (e.g. damages and foreign matters)

**3.5****sound**

free from rotting and deterioration

## **4 Provisions concerning quality**

### **4.1 Minimum requirements**

**4.1.1** In all classes, subject to the special provisions for each class and the tolerances allowed, the Sweet Tamarind must be:

- whole;
- fresh;
- characteristic of the variety;
- clean, practically free of any visible foreign matter.;
- sound, free of defect and deterioration in quality that may make it unfit for consumption;
- practically free of physical and/or physiological damage caused by low and/or high temperature;
- practically free of pests and damage caused by them affecting the general appearance of the produce;
- free of abnormal external moisture, excluding condensation following removal from cold storage; and
- free of any foreign smell and/or taste;

The peduncle should be neatly cut and not be more than 0.5 cm.

**4.1.2** The Sweet Tamarind must be harvested and have reached an appropriate degree of maturity (approximately 130 days from the onset of flowering), depending on the variety, season and the area in which they are grown and should have a maximum Titratable Acidity (TA) of 4%.

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

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

### **4.2 Classification**

Sweet Tamarind is classified in three classes defined below:

#### **4.2.1 “Extra” class**

Sweet Tamarind in this class must be of superior quality. 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.

#### **4.2.2 Class I**

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

- slightly irregular in shape;
- slight deviation from the normal color; and
- slight skin defects. The total area affected shall not exceed 5% of the total surface area.

**4.2.3 Class II**

This class includes Sweet Tamarind which does not qualify for inclusion in the higher classes, but satisfy the minimum requirements specified in Section 4.1 above. The following defects, however, may be allowed provided the Sweet Tamarind retains its essential characteristics as regards the quality, the keeping quality and presentation:

- irregular in shape;
- slight deviation from the normal color; and
- skin defects. The total area affected shall not exceed 10% of the total surface area.

**5 Provisions concerning sizing**

Size is determined by number of seed per pod or the length of the individual fruit, in accordance with the Table 1.

**Table 1 – Size classification of Sweet Tamarind**

<b>Size classification</b>	<b>Number of seed or locule per pod</b>	<b>Length<sup>a)</sup> (cm)</b>
Large (L)	> 6	> 10.0
Medium (M)	4 - 6	> 7 - 10
Small (S)	1 - 3	5 - 7
<sup>a)</sup> Use only for straight pod		

**6 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.

## **6.1 Quality tolerances**

### **6.1.1 "Extra" Class**

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

### **6.1.2 Class I**

Ten percent by number or weight of Sweet Tamarind not satisfying the requirements of the class, but meeting those of Class II or, exceptionally, coming within the tolerances of that class.

### **6.1.3 Class II**

Ten percent by number or weight of Sweet Tamarind 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.

## **6.2 Size tolerances**

For all classes, 10% by number or weight for individual fruit corresponding to the size immediately above and/or below that indicated on the package.

## **7 Sampling**

Sampling for ascertaining the conformance shall be in accordance with PNS/ISO 874:2011 Fresh Fruits and Vegetables – Sampling.

## **8 Provisions concerning presentation**

### **8.1 Uniformity**

The contents of each package must be uniform and contain only Sweet Tamarind of the same origin, variety, quality and size. The visible part of the contents of the package must be representative of the entire contents.

### **8.2 Packaging**

Sweet Tamarind must be packed in such a way as to protect the produce properly. The materials used inside the packages must be new<sup>1</sup>, clean 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 that the printing or labeling has been done with a non-toxic ink or glue.

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<sup>1</sup> For the purposes of this Standard, this includes recycled material of food grade quality.

Sweet Tamarind shall be packed in each container in compliance with the Recommended Code of Practice for Packaging and Transport of Fresh Fruits and Vegetables (CAC/RCP 44-1995).

### **8.3 Description of Containers**

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

## **9 Marking and labelling**

### **9.1 Consumer packages**

In addition to the requirements of the Codex General Standard for the Labeling of Prepackaged Foods (CODEX STAN 1-1985), each package shall be legibly labeled with the following information:

**9.1.1** Name of produce, variety;

**9.1.2** Class;

**9.1.3** Net weight;

**9.1.4** Name and address of producer, trader, exporter, packer and/or dispatcher. Identification code (optional)<sup>2</sup>;

**9.1.5** Place of origin (farm and optionally province where grown or name of local place);

**9.1.6** Date of harvest;

**9.1.7** Official inspection mark and/or product certification mark (optional);

**9.1.8** Expiration Date/Best Before Date;

**9.1.9** Product of the Philippines.

### **9.2 Non-retail containers**

Each package must bear the abovementioned particulars, in letters grouped on the same side, legibly and indelibly marked and visible from the outside or on the accompanying documents.

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<sup>2</sup> 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.

## **10 Contaminants**

### **10.1 Heavy metals**

Sweet Tamarind shall comply with those maximum levels for heavy metals established by the Codex Alimentarius Commission or authority for this commodity (Annex 1).

### **10.2 Pesticide residues**

Sweet Tamarind shall comply with those maximum residue limits established by the Codex Alimentarius Commission or authority for this commodity.

## **11 Hygiene**

**11.1** It is recommended that the produce covered by the provisions of this Standard be prepared and handled in accordance with the appropriate sections of the Recommended Code of Practice – General Principles of Food Hygiene (CAC/RCP 1-1969, Rev. 3-1997), Recommended Code of Hygienic Practice for Fresh Fruits and Vegetables (CAC/RCP 53-2003), and other relevant Codex texts such as Codes of Hygienic Practice and Codes of Practice.

**11.2** The produce shall comply with the microbiological criteria established in accordance with the Principles for the Establishment and Application of Microbiological Criteria for Foods (CAC/GL 21-1997).



## Annex 1

Table 2 – Heavy metals for Sweet Tamarind

Heavy metal	Maximum level (mg/kg)
Lead (Pb)	0.3
Source: CODEX STAN 193-1995. Codex General Standard for Contaminants and Toxins in Food and Feed. ( <a href="http://www.codexalimentarius.org">www.codexalimentarius.org</a> )	

## References

**PNS/BAFS 154:2015**

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

CAC/GL 21-1997. Principles for the Establishment and Application of Microbiological Criteria for Foods

CAC/RCP 53-2003. Recommended Code of Hygienic Practice for Fresh Fruits and Vegetables

CAC/RCP 44-1995. Recommended Code of Practice for Packaging and Transport of Fresh Fruits and Vegetables

CAC/RCP 1-1969. Recommended Code of Practice – General Principles of Food Hygiene

CODEX STAN 193-1995. Codex General Standard for Contaminants and Toxins in Food and Feed

CODEX STAN 1-1985. Codex General Standard for the Labeling of Prepackaged Foods

PNS/ISO 874-2011. Fresh Fruits and Vegetables – Sampling

Final Draft ASEAN Standard for Sweet Tamarind (ASEAN Stan 39:2014 as of April 30, 2014)

El-Siddig, Gunasena, Prasad, Pushpakumara, Ramana, Vijayanand, Williams (2006) Tamarind, *Tamarindus indica*. Southampton Center for Underutilized Crops, Southampton, UK.

USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network - (GRIN). [Online Database] National Germplasm Resources Laboratory, Beltsville, Maryland. Available: <http://www.ars-grin.gov/cgi-bin/npgs/acc/display.pl?1894359> (09 July 2014)



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