



ASEAN STANDARD FOR DRAGON FRUIT (ASEAN Stan 42:2015)

1. DEFINITION OF PRODUCE

This standard applies to commercial varieties of dragon fruit/pitahaya grown from the genus *Hylocereus* and *Selenicereus* of the Cactaceae family, to be supplied fresh to the consumer. Dragon fruit 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 dragon fruit must be:

- whole;
- fresh;
- characteristic of the variety;
- firm;
- free of cracks;
- 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 and damage caused by them affecting the general appearance of the produce;
- practically free from mechanical and physiological damage such as low and/or high temperature;
- free of abnormal external moisture, excluding condensation following removal from cold storage;
- free of any foreign smell and/or taste; and
- free of pronounced blemishes.

The peduncle or stem, if present, should not exceed 2.5 cm and without thorns.

2.1.1 The dragon fruit must have been harvested and have reached an appropriate degree of development and ripeness in accordance with criteria proper to the variety and the area in which they are grown. The development and condition of the dragon fruit must be such as to enable them:

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

2.2 CLASSIFICATION

Dragon fruit is classified in three classes defined below:

2.2.1 "Extra" Class

Dragon fruit in this class must be of superior quality. It must be free of defects, with the exception of very slight superficial defects, provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package.

2.2.2 Class I

Dragon fruit 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:

- slight defects in shape; and
- slight defects such as bruising, scratches or other mechanical damage. The total area affected shall not exceed 5% of the total surface.

The defects must not, in any case, affect the pulp of the fruit.

2.2.3 Class II

This class includes dragon fruit which do not qualify for inclusion in the higher classes, but satisfy the minimum requirements specified in Section 2.1 above. The following may be allowed, provided the Dragon fruit retain their essential characteristics as regards the quality, the keeping quality and presentation:

- defects in shape; and
- defects such as bruising, scratches or other mechanical damage. The total area affected shall not exceed 10% of the total surface.

The defects must not, in any case, affect the pulp of the fruit.

3. PROVISIONS CONCERNING SIZING

Size is determined by weight with the following table:

Size Code	Unit weight (in grams)	
	Yellow	Red/White
1	>360	>700
2	>260-360	>600-700

3	>200-260	>500-600
4	->150-200	->400-500
5	110-150	->300-400
6	-	->250-300
7	-	>200-250
8	-	>150-200
9	-	110-150

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 dragon fruit 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 dragon fruit 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

Ten percent by number or weight of dragon fruit satisfying neither the requirements of the class nor the minimum requirements and without rotten fruit.

4.2 SIZE TOLERANCES

For all classes, 10% by number or weight of dragon fruit 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 dragon fruit of the same origin, variety, 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

Dragon fruit 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 labelling has been done with non-toxic ink or glue.

Dragon fruit 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 dragon fruit. Packages (or lot for produce presented in bulk) must be free of all foreign matter and smell.

6. MARKING OR LABELLING

6.1 CONSUMER PACKAGES

In addition to the requirements of the *Codex General Standard for the Labelling 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 labelled as to the name of the produce and may be labelled 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 indelibly¹ 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.

¹ impossible to remove

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

- Produce name;
- Variety name (optional);
- Class;
- Size;
- Number of units (optional); and
- Net weight (optional).

6.2.5 Official Inspection Mark (optional)

7. CONTAMINANTS

7.1 PESTICIDE RESIDUES

Dragon fruit shall comply with those maximum residue limits established by the Codex Alimentarius Commission, ASEAN Harmonized MRLs for Pesticides, and/or by authority for this commodity.

7.2 OTHER CONTAMINANTS

Dragon fruit 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. 4-2003), 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.

References:

Draft Thai Agricultural Standard for Dragon Fruit. TAS xx-2015.

Malaysian Standard MS 2201:2008 Fresh Pitahaya – Specification
(ICS:67.080.10)

VERNACULAR NAMES OF DRAGON FRUIT/PITAHAYA IN THE ASEAN REGION

Country	Common name
Brunei Darussalam	Buah Naga
Cambodia	Phlae Srakaneak
Indonesia	Buah Naga
Lao PDR	Mak Mang Kohn
Malaysia	Buah Naga, pitaya
Myanmar	
Philippines	Dragon fruit
Singapore	
Thailand	Kaew mung korn
Vietnam	Thanh Long