



ASEAN STANDARD FOR CARAMBOLAS (STARFRUITS)

(ASEAN Stan 72:20xx)

1. DEFINITION OF PRODUCE

This Standard applies to the fruit of commercial varieties of carambolas grown from *Averrhoa carambola* L., of the Oxalidaceae family, to be supplied fresh to the consumer, after preparation and packaging. Carambolas 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 carambolas shall be:

- whole;
- fresh in appearance;
- firm;
- 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 pronounced blemishes;
- free of any foreign smell/odour and/or taste;
- practically free of pests¹;
- practically free of damage caused by pests affecting the general appearance of the produce;
- free of damage caused by low and/or high temperatures;
- practically free of mechanical damage;
- free of abnormal external moisture, excluding condensation following removal from cold storage; and
- sufficiently developed and display satisfactory ripeness, depending on the nature of the produce.

The development and condition of the carambolas shall be such as to enable them:

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

2.1.1 Minimum Maturity Requirements

The carambolas shall reach an appropriate degree of development and maturity in accordance with criteria proper to the variety and to the area in which they are grown.

¹ Provisions for pests and damage caused by pests apply without prejudice to the applicable plant protection rules applied by governments in line with the International Plant Protection Convention (IPPC).

2.2 CLASSIFICATION

Carambolas are classified into three classes defined below:

2.2.1 “Extra” Class

Carambolas in this class shall be of superior quality. They shall be characteristic of the variety, well-formed and free of blemishes, with the exception of very slight superficial defects in the skin and ribs due to rubbing and bruises, 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

Carambolas in this class shall be of good quality. They shall be characteristic of the variety, fairly well-formed and with slight blemishes. Slight superficial defects in the skin and the ribs due to rubbing and bruises may be allowed, provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package. The total surface area affected shall not exceed 5%.

2.2.3 Class II

This class includes carambolas which do not qualify for inclusion in the higher classes, but satisfy the minimum requirements specified in Section 2.1 above. They shall be reasonably well-formed and with reasonable blemishes. Slight defects in the skin and the ribs due to rubbing and bruises may be allowed, provided the carambolas retain their essential characteristics as regards the quality, the keeping quality and presentation. The total surface area affected shall not exceed 10%.

3. PROVISIONS CONCERNING SIZING

Size is determined by weight based on the individual weight of each fruit. The following table is a guide and may be used on an optional basis.

<i>Size Code</i>	<i>Weight (in grams)</i>
<i>1</i>	<i>>200</i>
<i>2</i>	<i>>160 - 200</i>
<i>3</i>	<i>>120 - 160</i>
<i>4</i>	<i>80-120</i>

4. PROVISIONS CONCERNING TOLERANCES

At all marketing stages, tolerances with 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 Systems* (CAC/GL 82-2013- Principles and Guidelines for National Food Control

Systems, MOD), *ASEAN Principles for Food Import and Export Inspection and Certification* (CAC/GL 20-1995-Principles for Food Import and Export Inspection and Certification, MOD) and/or the *Codex Guidelines for Food Import Control Systems* (CXG 47-2003).

4.1 QUALITY TOLERANCES

4.1.1 “Extra” Class

Five percent (5%) by number or weight of carambolas 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 (10%) by number or weight of carambolas not satisfying the requirements of the class, but meeting those of Class II or, exceptionally, coming within the tolerances of that class.

4.1.3 Class II

Ten percent (10%) by number or weight of carambolas 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.

4.2 SIZE TOLERANCES

For all classes, 10% by number or weight of carambolas 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) shall be uniform and contain only carambolas of the same origin, variety, quality and size. For “Extra” Class, colour and maturity should be uniform. The visible part of the contents of the package (or lot for produce presented in bulk) shall be representative of the entire contents.

5.2 PACKAGING

Carambolas shall be packed in such a way as to protect the produce properly. The materials used inside the package shall be of food-grade quality, 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 the printing or labelling has been done with non-toxic ink or glue.

Carambolas shall be packed in each container in compliance with the Recommended International Code of Practice for Packaging and Transport of Fresh Fruits and Vegetables (CXC 44-1995).

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 carambolas. Packages (or lot for produce presented in bulk) shall be free of all foreign matter and smell/odour.

6. PROVISIONS CONCERNING MARKING OR LABELLING

6.1 CONSUMER PACKAGES

In addition to the requirements of the Codex General Standard for the Labelling of Prepackaged Foods (CXS 1-1985), 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 labeled 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.

6.2 NON-RETAIL CONTAINERS

The labelling of non-retail containers should be in accordance with the General Standard for the Labelling of Non-Retail Containers of Foods (CXS 346-2021). In addition, the following specific requirements shall apply:

Each package shall bear the following particulars, in letters grouped on the same side, legibly and indelibly marked, and visible from the outside.

6.2.1 Origin of Produce

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

6.2.2 Commercial Specifications

- Class;
- Size (if sized)

6.2.3 Official control mark (optional)

7. FOOD ADDITIVES

Food additives listed in Tables 1 and 2 of the General Standard for Food Additives (CXS 192-1995) in Food Category 04.1.1.2 (Surface-treated fresh fruit) are acceptable for use in carambolas conforming to this standard.

8. CONTAMINANTS

8.1 Carambolas 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 competent authority.

8.2 Carambolas shall comply with the maximum levels of the *Codex General Standard for Contaminants and Toxins in Food and Feed* (CXS 193-1995).

9. HYGIENE

9.1 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 *ASEAN Good Agricultural Practices (GAP)*, *ASEAN General Principles for Food Hygiene, Recommended International Code of Practice – General Principles of Food Hygiene* (CXC 1-1969), *Code of Hygienic Practice for Fresh Fruits and Vegetables* (CXC 53-2003), and other relevant Codex texts such as *Codes of Hygienic Practice* and *Codes of Practice*.

9.2 The produce should comply with any microbiological criteria established in accordance with the *Principles and Guidelines 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 General Principle for Food Hygiene, Recommended International Code of Practice – General Principles of Food Hygiene (CXC 1-1969)

ASEAN Good Agricultural Practices (GAP).

ASEAN Harmonized MRLs of Pesticides.

ASEAN Principles and Guidelines for National Food Control System (CAC/GL 82-2013- Principles and Guidelines for National Food Control Systems, MOD).

ASEAN Principles for Food Import and Export Inspection and Certification (CAC/GL 20-1995-PRINCIPLES FOR FOOD IMPORT AND EXPORT INSPECTION AND CERTIFICATION, MOD).

Codex Code of Hygienic Practice for Fresh Fruits and Vegetables (CXC 53-2003).

Codex Code of Practice for Packaging and Transport of Fresh Fruits and Vegetables. (CXC 44-1995).

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

Codex General Standard for the Labelling of Non-retail Containers of Foods (CXS 346-2021).

Codex General Standard for the Labelling of Prepackaged Foods (CXS 1-1985).

Codex Guidelines for Food Import Control Systems (CXG 47-2003).

Codex Principles for the Establishment and Application of Microbiological Criteria for Foods (CXG 21-1997).

Codex Principles and Guidelines for National Food Control Systems (CXC/GL 82-2013).

Codex Recommended International Code of Practice – General Principles of Food Hygiene (CXC 1-1969).

Codex Recommended Methods of Analysis and Sampling (CXS 234-1999).

Codex Standard for Carambola (CODEX STAN 187-1993).

Malaysian Standard on Fresh Starfruit (*Averrhoa carambola* L.) – Specification (MS 1127:2017).

ANNEX 1

VERNACULAR NAMES OF CARAMBOLA IN THE ASEAN REGION

Country	Vernacular Name
Brunei Darussalam	Belimbing
Cambodia	Speu
Indonesia	Belimbing
Lao PDR	Mak feuang
Malaysia	Belimbing
Myanmar	Zaung Lyar
Philippines	Balimbing
Singapore	Starfruit
Thailand	Ma-Fueang
Vietnam	KHẾ