



ASEAN STANDARD FOR TOMATOES (Proposed ASEAN Stan 63:2019)

1. DEFINITION OF PRODUCE

This Standard applies to commercial varieties of tomatoes grown from *Solanum lycopersicum*, of the *Solanaceae* family, to be supplied fresh to the consumer. Tomatoes for industrial processing are excluded.

Tomatoes may be classified into the following commercial types:

- “Round”;
- “Ribbed”;
- “Oblong” or “Elongated”;
- “Cherry” tomatoes; and
- “Cocktail” tomatoes

2. PROVISIONS CONCERNING QUALITY

2.1 MINIMUM REQUIREMENTS

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

- whole;
- fresh in appearance;
- 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 pests¹;
- practically free of damage caused by pests affecting the general appearance of the produce;
- free of abnormal external moisture, excluding condensation following removal from cold storage;
- free from damage caused by low or high temperature; and
- free of any foreign odour and/or taste.

In the case of trusses of tomatoes, the stalks shall be fresh, healthy, clean and free of all leaves and any visible foreign matter.

¹ 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 The development and condition of the tomatoes shall be such as to enable them:

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

2.1.2 Minimum Maturity Requirements

The tomatoes shall be sufficiently developed and display satisfactory ripeness. The development and state of maturity of the tomatoes shall be such as to enable them to continue their ripening process and to reach the appropriate degree of ripeness.

2.2 CLASSIFICATION

Tomatoes are classified in three classes defined below:

2.2.1 “Extra” Class

Tomatoes in this class shall be of superior quality. They shall have firm flesh and shall be characteristic of the variety as regards shape, appearance and development. They shall be uniform in terms of size and colouring. Their colouring, according to their state of ripeness, shall be such as to satisfy the requirements set out in Section 2.1.1. They shall be free of greenbacks disorder and other 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

Tomatoes in this class shall be of good quality. They shall have reasonably firm flesh and shall be characteristic of the variety as regards shape, appearance and development. They shall be uniform in terms of size. They shall be free of cracks and visible greenbacks disorder. The following slight 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:

- a slight defect in shape and development;
- a slight defect in colouring;
- slight skin defects; and
- very slight bruises.

Furthermore, “ribbed” tomatoes may show:

- shallow healed cracks not more than 1 cm long;
- no excessive protuberances;
- small umbilicus but not suberization;
- suberization of the stylar end up to 1 cm²;
- a linear scar no longer than two thirds of the greatest diameter of the fruit.

2.2.3 Class II

This class includes tomatoes which do not qualify for inclusion in the higher classes, but satisfy the minimum requirements specified in Section 2.1 above. They shall have reasonably firm flesh (but may be slightly less firm than in Class I) and shall not show unhealed cracks.

The following defects, however, may be allowed, provided the tomatoes retain their essential characteristics as regards the quality, the keeping quality and presentation:

- defects in shape and development;
- defects in colouring;
- skin defects or bruises, provided the fruit is not seriously affected; and
- shallow healed cracks not more than 3 cm in length or 25% of the length for round, ribbed and oblong or elongated tomatoes only.

Furthermore, “ribbed” tomatoes may show:

- more pronounced protuberances than allowed under Class I, but without being misshapen;
- one umbilicus;
- suberization of the stylar end up to 2 cm²;
- fine blossom scar in elongated form (like a seam).

3. PROVISIONS CONCERNING SIZING

When sized by diameter, size is determined by the maximum diameter of the equatorial section. Sizing does not apply to trusses of tomatoes. Sizing is not compulsory for Class II. Tomatoes are sized with one of the following options:

(a) Tomatoes may be sized according to the following table:

Table 1: Classification of tomatoes based on diameter

Size Code	Diameter (mm)
1	>100
2	> 90 – 100
3	> 80 – 90
4	> 70 – 80
5	> 60 – 70
6	> 50 – 60
7	> 40 – 50
8	> 30 – 40
9	> 20 – 30
10	10 – 20

or

(b) Tomatoes may be sized according to the following uniformity provision. The maximum difference in diameter between tomatoes in the same package shall be limited to:

- 10 mm, if the diameter of the smallest fruit (as indicated on the package) is under 50 mm;
- 15 mm, if the diameter of the smallest fruit (as indicated on the package) is 50 mm and over but under 70 mm;
- 20 mm, if the diameter of the smallest fruit (as indicated on the package) is 70 mm and over but under 100 mm;
- There is no limitation of difference in diameter for fruit equal or over 100 mm.

or

(c) Tomatoes may be sized by count, diameter or weight, according to the provisions of the legislation of the importing country.

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 tomatoes 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 tomatoes not satisfying the requirements of the class, but meeting those of Class II or, exceptionally, coming within the tolerances of that class. In the case of trusses of tomatoes, 5% by number or weight of tomatoes detached from the stalk in each package.

4.1.3 Class II

Ten percent by number or weight of tomatoes satisfying neither the requirements of the class nor the minimum requirements, with the exception of produce affected by rotting, marked bruising or any other deterioration rendering it unfit for consumption. In the case of trusses of tomatoes, 10% by number or weight of tomatoes detached from the stalk in each package.

4.2 SIZE TOLERANCES

For all classes, 10 % by number or weight of tomatoes not satisfying the requirements as regards sizing but have a diameter greater or less than 10 mm of the size marked.

5. PROVISIONS CONCERNING PRESENTATION

5.1 UNIFORMITY

The contents of each package shall be uniform and contain only tomatoes of the same origin, variety or commercial type, quality and size (if sized). The ripeness and colouring of tomatoes in “Extra” Class and Class I shall be practically uniform. In addition, the length of “oblong” tomatoes shall be sufficiently uniform. The visible part of the contents of the package shall be representative of the entire contents.

5.2 PACKAGING

Tomatoes 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.

Tomatoes shall be packed in each container in compliance with the *Recommended International Code of Practice for Packaging and Transport of Fresh Fruit 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 tomatoes. Packages shall be free of all foreign matter and odour.

5.3 PRESENTATION

The tomatoes may be presented as follows:

- (i) as individual tomatoes, with or without calyx and short stalk;
- (ii) as trusses of tomatoes, in other words, in entire inflorescence or part of inflorescence, where each inflorescence or part of each inflorescence should comprise at least the following number of tomatoes:
 - 3 (2 if prepackaged), or
 - in the case of trusses of “cherry” tomatoes, 6 (4 if prepackaged).

6. 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, 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.

6.2 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 code² (optional).

6.2.2 Name of Produce

Name of the produce “tomatoes” or “trusses of tomatoes” and the commercial type if the contents are not visible from the outside. These details shall always be provided for “cherry” and “cocktail” tomatoes, whether in trusses or not; Name of the variety (optional).

6.2.3 Origin of Produce

² 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.

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 Variety name (optional);
- Class;
- Size code (size code or minimum and maximum weight or diameters in grams or mm, respectively); 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 Tomatoes 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 Tomatoes 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 produce 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,)*, *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 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 of Pesticides.

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 on Good Agricultural Practices (GAP).

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

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

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

Codex Alimentarius Commission. Methods of Analysis and Sampling.

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

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

Codex Alimentarius Commission. 2004. Recommended International Code of Practice for Packaging and Transport of Tropical Fresh Fruits and Vegetables. (CXC 44-1995, Amd. 1-2004).

Codex Alimentarius Commission. 2003. Recommended International Code of Practice – General Principles of Food Hygiene (CXC 1-1969, Rev 4-2003)

Malaysian Standard. Fresh Tomatoes – Specification (Third Revision) (MS 893:2010).

Philippine National Standard. Fresh vegetables – Tomatoes (PNS 26:2006)

Department of Agriculture and Agri-Food, Ministry of Primary Resources and Tourism, Brunei Darussalam, 2018

National Bureau of Agricultural Commodity and Food Standards, Tomato TAS 1503-2007

UNECE STANDARD FFV-36 Concerning the marketing and commercial quality control of Tomatoes

ANNEX 1

VERNACULAR NAMES OF TOMATO IN THE ASEAN REGION

Country	Vernacular Name
Brunei Darussalam	Tomato Tomato ceri
Cambodia	Peng Poh
Indonesia	Tomat
Lao PDR	Maklen
Malaysia	Tomato Tomato ceri
Myanmar	Ka Yan Chin Thee
Philippines	Kamatis
Singapore	Tomato
Thailand	Makhua Tead
Viet Nam	Cà chua