ASEAN STANDARD FOR LIMES

(ASEAN Stan 60:2019)

1. DEFINITION OF PRODUCE

This Standard applies to commercial varieties of Limes grown from *Citrus latifolia* Tanaka (Persian lime) and grown from *C. aurantifolia* Swingle (Mexican Lime), of the Rutaceae family, to be supplied fresh to the consumer. Limes 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 lime shall be:

- whole with or without peduncle, in case without the peduncle the area around the peduncle detachment should not be torn;
- firm;
- 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 pests[1];
- practically free of the 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.

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

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

[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 Minimum Maturity Requirements

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

The minimum juice content is calculated in relation to the total weight of the fruit.

Table 1: Minimum juice content (%) of lime

Species	Minimum Juice Content (by percentage)
Citrus latifolia Tanaka	42%
Citrus aurantifolia Swingle	40%

Colouring shall be typical of the variety on at least two-thirds of the surface of the fruit. The fruit should be green but may show discolouring (yellow patches) up to 30% of its surface

2.2 CLASSIFICATION

Limes are classified into three classes defined below:

2.2.1 "Extra" Class

Limes in this class shall be of superior quality. They shall be characteristic of the variety. 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, the quality, the keeping quality and presentation in the package.

2.2.2 Class I

Limes in this class shall be of good quality. They shall be characteristic of the variety. 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:

- slight defects in shape;
- slight defects in colouring; and
- slight skin defect not exceeding more than 5% of surface area.

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

2.2.3 Class II

This class includes lime 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 the lime retain their essential characteristics as regards the quality, the keeping quality and presentation:

- defects in shape;
- defects in colouring; and
- skin defect not exceeding more than 10% of surface area.

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

3. PROVISIONS CONCERNING SIZING

Size is determined by the maximum diameter of the equatorial section of the fruit, in accordance with the following table:

Table 2: Classification of *Citrus latifolia* Tanaka based on equatorial diameter

Size code	Equatorial diameter (mm)
1	> 55
2	> 50 – 55
3	> 45 – 50
4	40 – 45

Table 3: Classification of *Citrus aurantifolia* Swingle based on equatorial diameter

Size code	Equatorial diameter (mm)
1	> 50
2	> 46 – 50
3	> 42– 46
4	> 38 – 42
5	> 34 – 38
6	30 – 34

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 limes 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 limes 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 by number or weight of limes 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.

4.2 SIZE TOLERANCES

For all classes, 10% by number or weight of lime corresponding to the size immediately above or below that indicated on the package.

5. PROVISIONS CONCERNING PRESENTATION

5.1 UNIFORMITY

The contents of each package shall be uniform and contain only limes 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

Limes 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.

Limes 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 limes. Packages shall be free of all 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 (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 code[2] (optional).

[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.

6.2.2 Name of Produce
Name of the produce “limes” and the commercial type if the contents are not visible from the outside. Name of the variety (optional).

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;
- 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 Limes shall comply with maximum residue limits for pesticides established by 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 Limes 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. Codex Methods of Analysis and Sampling

Codex Alimentarius Commission. 1999. Codex Standard for Limes (CODEX STAN 213 – 1999)

Codex Alimentarius Commission. 1999. Codex Standards for Mexican Limes (CODEX STAN 217 – 1999)

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

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)

Department of Agriculture – Ministry of Industry and Primary Resources, Brunei Darussalam. Proposed Draft Brunei Standard for Calamondin/Calamansi (BS/FFV 06/03/02 – 2006)

Information from FAMA Standards (FS 035 – 2006), Malaysia

National Bureau of Agricultural Commodity and Food Standards. 2017. Thai Agricultural Standard for Limes (TAS 27-2017)

ANNEX 1

VERNACULAR NAMES OF LIMES IN THE ASEAN REGION

Country	**Vernacular Name**	
	Citrus latifolia Tanaka	*Citrus aurantifolia* Swingle
Brunei Darussalam	Limau Kapas Limau Nipis	Limau Kapas Limau Nipis
Cambodia	Krouch Chhmar	Krouch Chhmar
Indonesia	Jeruk Nipis	Jeruk Nipis
Lao PDR	Maknao	Maknao noi
Malaysia	Limau Nipis	Limau Nipis
Myanmar	Than Payar Thee	
Philippines	Dayap	Dayap
Singapore	Lime	Lime
Thailand	Manow	Manow
Viet Nam	Quả chanh/cây chanh	Quả chanh/cây chanh