

# C O D E X   A L I M E N T A R I U S

INTERNATIONAL FOOD STANDARDS



Food and Agriculture  
Organization of  
the United Nations



World Health  
Organization

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## **STANDARD FOR KIWIFRUIT**

**CXS 338-2020**

**Adopted in 2020.**

## 1. SCOPE

The purpose of the Standard is to define the quality requirements for kiwifruit after preparation and packaging. When applied at stages following packaging, products may show in relation to the requirements of the Standard:

- a slight lack of freshness and turgidity;
- slight deterioration due to their development and their tendency to perish.

The holder/seller of products may not display such products or offer them for sale, or deliver or market them in any manner other than in conformity with this Standard. The holder/seller shall be responsible for observing such conformity.

## 2. DEFINITION OF PRODUCE

This Standard applies to kiwifruit (also known as actinidia) of varieties (cultivars) derived from *Actinidia chinensis* Planch and *A. deliciosa* (A. Chev.) C.F. Liang & A.R. Ferguson and hybrids derived from at least one of them, from the *Actinidiaceae* family, to be supplied fresh to the consumer. Kiwifruit for industrial processing are excluded.

## 3. PROVISIONS CONCERNING QUALITY

### 3.1 Minimum Requirements

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

- intact (but free of peduncle);
- sound; produce affected by rotting or deterioration such as to make it unfit for consumption is excluded;
- adequately firm; not soft, shrivelled or water-soaked;
- well formed; double/multiple fruit being excluded;
- clean, practically free of any visible foreign matter;
- practically free of pests<sup>1</sup>;
- practically free of damage caused by pests<sup>1</sup>;
- free of abnormal external moisture, excluding condensation following removal from cold storage;
- free of any foreign smell and/or taste;
- fresh in appearance;

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

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

#### 3.1.1 Minimum Maturity Requirements

The kiwifruit must have reached an appropriate degree of maturity, in accordance with characteristics of the variety, to allow for development of satisfactory organoleptic characteristics.

The fruit must have attained a degree of maturity of at least 6.2° Brix or an average dry matter content of 15%<sup>2</sup>.

### 3.2 Classification

Kiwifruit are classified into three classes, as defined below:

#### 3.2.1 "Extra" Class

Kiwifruit in this class must be of superior quality. They must be characteristic of the variety (cultivar). The flesh must be sound. Fruit must be round or oval in cross section (not flattened), and the ratio of the minimum equatorial diameter to the maximum equatorial diameter of the fruit must be 0.8 or greater.

They 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.

<sup>1</sup> The provisions for pests applies without prejudice to the applicable plant protection rules applied by governments in line with the International Plant Protection Convention (IPPC).

<sup>2</sup> This should ensure that fruit reach a minimum degree of ripeness of 9.5° Brix when entering the distribution chain.

### 3.2.2 Class I

Kiwifruit in this class must be of good quality. They must be characteristic of the variety (cultivar). The flesh must be sound. Fruit must be round or oval in cross section (not flattened), and the ratio of the minimum equatorial diameter to the maximum equatorial diameter of the fruit must be 0.7 or greater.

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 (but free of swelling or malformations);
- slight defects in colouring;
- slight, superficial skin defects, provided the total area affected does not exceed 1 cm<sup>2</sup>;
- small “Hayward marks” (longitudinal lines) without protuberance.

### 3.2.3 Class II

This class includes kiwifruit which do not qualify for inclusion in the higher classes, but satisfy the minimum requirements specified in Section 3.1 above. The flesh should not show any serious defects. The following defects, however, may be allowed, provided the kiwifruit retain their essential characteristics as regards the quality, the keeping quality and presentation:

- defects in shape including flattened fruit;
- defects in colouring;
- skin defects provided that the total area affected does not exceed 2 cm<sup>2</sup>;
- several more-pronounced “Hayward marks” with a slight protuberance;
- slight bruising.

## 4. PROVISIONS CONCERNING SIZING

Kiwifruit may be sized by weight or count, or in accordance with existing trading practices, and labelled accordingly. When sized in accordance with existing trade practices, the package must be labelled with the size and method used.

(A) For fruit sized by weight:

For *A. chinensis* and *A. deliciosa* and hybrids between these species, the minimum weight for “Extra” Class is 90g, for Class I is 70g and for Class II is 65g.

To ensure uniformity in size, the range in size between produce in the same package that is sized by weight shall not exceed:

- 10 g for fruit less than or equal to 85 g;
- 15 g for fruit weighing greater than 85 g and up to 120 g;
- 20 g for fruit weighing greater than 120 g and up to 150 g;
- 40 g for fruit weighing greater than 150 g.

## 5. PROVISIONS CONCERNING TOLERANCES

### 5.1 Quality Tolerances

Tolerances in respect of quality and size shall be allowed in each lot for produce not satisfying the requirements of the class indicated. Produce that fails conformity assessment, may be allowed to be re-sorted and brought into conformity in accordance with the relevant provisions in the *Guidelines for Food Import Control Systems* (CXG 47-2003).

#### 5.1.1 “Extra” Class

Five percent, by number or weight, of kiwifruit not satisfying the requirements of the class but meeting those of Class I. Included therein is 0.5% tolerance for decay, soft rot and/or internal breakdown which only applies beyond the export control point.

#### 5.1.2 Class I

Ten percent, by number or weight, of kiwifruit not satisfying the requirements of the class but meeting those of Class II. Included therein is 1% tolerance for decay, soft rot and/or internal breakdown.

### 5.1.3 **Class II**

Ten percent by number or weight of kiwifruit satisfying neither the requirements of the class nor the minimum requirements. Included therein not be more than 2% of in total may consist of produce affected by decay, soft rot and/or internal breakdown.

### 5.2 **Size Tolerances**

For all classes (if sized), 10% by number or weight of kiwifruit not satisfying the requirements as regards sizing is allowed.

## 6. **PROVISIONS CONCERNING PRESENTATION**

### 6.1 **Uniformity**

The contents of each package must be uniform and contain only kiwifruit of the same origin, variety (cultivar), quality and size. However, a mixture of kiwifruit of distinctly different varieties may be packed together in a package provided they are uniform in quality and, for each variety concerned, uniform in origin.

The visible part of the contents of the package must be representative of the entire contents.

### 6.2 **Packaging**

Kiwifruit must be packed in such a way as to protect the produce properly. The materials used inside the package must 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.

Stickers individually affixed to the produce shall be such that, when removed, they neither leave visible traces of glue nor lead to skin defects.

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

#### 6.2.1 **Description of Containers**

The containers shall meet the quality, hygiene, ventilation and resistance characteristics to ensure suitable handling, shipping and preserving of the kiwifruit.

Packages must be free of all foreign matter and smell.

## 7. **PROVISIONS CONCERNING MARKING OR LABELLING**

### 7.1 **Consumer Packages**

In addition to the requirements of the *General Standard for the Labelling of Prepackaged Foods* (CXS 1-1985), the following specific provisions apply:

#### 7.1.1 **Name of Produce**

Each package shall be labelled as to the name of the produce and optionally the name of the variety(ies) or cultivar(s) or the predominant flesh colour.

#### 7.1.2 **Origin of Produce**

Country of origin<sup>3</sup> and, optionally, district where grown, or national, regional or local place name.

### 7.2 **Non-retail Containers**

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

For kiwifruit transported in bulk (direct loading into a transport vehicle) these particulars must appear on a document accompanying the goods, and attached in a visible position inside the transport vehicle unless the document is replaced by an electronic solution. In that case the identification must be machine readable and easily accessible.

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<sup>3</sup> The full or a commonly used name should be indicated.

### 7.2.1 Identification

Name and address of exporter, packer and/or dispatcher. Identification code (optional)<sup>4</sup>.

### 7.2.2 Name of Produce

Name of the produce and optionally the name of the variety(ies) or cultivar(s) or the predominant flesh colour

The name of the variety can be replaced by a synonym. A trade name<sup>5</sup> can only be given in addition to the variety or the synonym.

### 7.2.3 Origin of Produce

Country of origin<sup>3</sup> and, optionally, district where grown or national, regional or local place name.

### 7.2.4 Commercial Specifications

- class;
- size (if sized), expressed
  - by the minimum and maximum weight of the fruit; or
  - by number of fruit and the net fruit weight; or
  - by the size and method used.

### 7.2.5 Official Inspection Mark (optional)

## 8. CONTAMINANTS

- 8.1 The produce covered by this Standard shall comply with the maximum residue limits for pesticides established by the Codex Alimentarius Commission.
- 8.2 The produce covered by this Standard shall comply with the maximum levels of the *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 *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 Related to Foods* (CXG 21-1997).

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<sup>4</sup> 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.

<sup>5</sup> A trade name can be a trade mark for which protection has been sought or obtained or any other commercial type.