

CODEX ALIMENTARIUS COMMISSION



Food and Agriculture
Organization of the
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World Health
Organization

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JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON FRESH FRUITS AND VEGETABLES

Twenty-second Session

REVISION TO THE PROPOSED LAYOUT FOR STANDARDS FOR FRESH FRUITS AND VEGETABLES

(Prepared by the in-session working group)

Standard for {name of produce}

CODEX STAN {number of the Standard} {year of the first adoption}

INTRODUCTION

- This Layout is for use by the Codex Committee on Fresh Fruits and Vegetables (CCFFV).
- The Standard Layout must be followed when developing new or revising existing Codex/FFV Standards. However, it is permissible to use other appropriate texts in the Standard Layout to reflect individual FFV characteristics and current trade practices.

In the text the following conventions are used:

- {name of produce} must be replaced by the common name of the produce to be covered by the standard.
- {text}: For text which explains the use of the Standard Layout. This text does not appear in the standards.
- <text>: For optional texts or text for which several alternatives exist, depending on the products. Depending on the nature of produce the provision(s) in brackets may be removed as not applicable/necessary.

1. SCOPE

The purpose of the standard is to define the quality requirements for {name of produce} after preparation and packaging. When it is applied at stages following packaging, products may show in relation to the requirements of the standard:

- a slight lack of freshness and turgidity;
- a 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 <part of the produce being standardized of> commercial varieties¹ (cultivars) of {name(s) of produce} grown from {Latin botanical reference}² from the {Latin botanical reference}²¹ family to be supplied fresh to the consumer < {Name of produce} for industrial processing is/are excluded.>.

{The Latin botanical reference is given in accordance with the International Code of Botanical Nomenclature}

{Additional provisions concerning the definition of the produce may be included under is heading.}

3. PROVISIONS CONCERNING QUALITY

¹ Varieties suitable for trade

² All information on botanical names is taken from the GRIN database (www.ars-grin.gov) or Mansfeld's World Database of Agricultural and Horticultural Crops (<http://mansfeld.ipk-gatersleben.de/apex/f?p=185:3:0>) or any other suitable database.

3.1 MINIMUM REQUIREMENTS

In all classes, subject to the special provisions for each class and the tolerances allowed, the {name of produce} must be display the following characteristics, deviations from which shall be observed by the naked eye or corrected 20/20 vision³ when appropriate:

- intact {depending on the nature of the produce, a deviation from the provision or additional provisions are allowed};
- sound; produce affected by rotting or deterioration such as to make it unfit for consumption is excluded;
- firm;
- clean, practically free of any visible foreign matter;
- practically free from pests⁴;
- <practically free of damage caused by pests {For fresh fruits and vegetables with edible skin²>{or};
- <free of damage caused by pests affecting the flesh {For fresh fruits and vegetables with inedible skins or skins that are peeled off prior to consumption²>};
- free of abnormal external moisture excluding condensation following removal from cold storage;
- free of any foreign smell and/or taste;
- fresh in appearance;
- free of damage caused by low and/or high temperature;
- {Additional provisions may be made for specific standards, depending on the nature of the produce}.
- The development and condition of the {name of produce} must be such as to enable them:
 - To withstand transportation and handling; and
 - To arrive in satisfactory condition at the place of destination.

3.1.1 Minimum Maturity Requirements

The {name of produce} must have reached an appropriate degree of development and/or maturity in accordance with criteria proper to the variety <and/or commercial type>, to the time of harvesting/picking/etc.>, and to the area in which they are grown.

The {name of produce} must display sufficient development for the intended purpose in accordance with criteria appropriate to the variety and to the area in which they are grown {for non-climacteric fruit}.

The development and state of maturity of {name of produce} must be such as to enable them to continue their ripening process and to reach the degree of ripeness required in relation to the varietal characteristics <and the growing area> {for climacteric fruit}.

<The {name of produce} must be sufficiently developed and comply such in relation to the varietal characteristics <and the growing area>.>

3.2 CLASSIFICATION⁵

The {name of produce} are/is classified into three classes defined below:

3.2.1 “Extra” Class

{Name of produce} in this class must be of superior quality. They must be characteristic of the variety <and/or commercial type>. They must be free from 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

³ Loupe, binocular or other magnifying equipment should not be used when assessing defects.

⁴ The provision for pests applies without prejudice to the applicable plant protection rules applied by governments in line with the International Plant Protection Convention (IPPC).

⁵ See Annex I for Alternative format

presentation in the package.

<They must be:

.....

>

{Add additional Provisions/defects allowed, depending on the nature of the produce.}

3.2.2 Class I

{Name of produce} in this class must be of good quality. They must be characteristic of the variety <and/or commercial type>.

<They must be:

.....

>

{Add additional Provisions/defects allowed, depending on the nature of the produce.}

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;
- slight defects in colouring;
- slight skin defects;

.....

{Add additional provisions/defects allowed, depending on the nature of the produce.}

<The defects must not, in any case, affect the <flesh/pulp/etc.> of the <fruit/produce/etc.> or {name of produce}>.

3.2.3 Class II

This class includes {name of produce} that do not qualify for inclusion in the higher classes but satisfy the minimum requirements specified in Section 3.1 above.

<They must be:

.....

>

{Add additional provisions/defects allowed, depending on the nature of the produce.}

The following defects may be allowed, provided the {name of produce} retain their essential characteristics as regards the quality, the keeping quality and presentation:

- defects in shape;
- defects in colouring;
- skin defects;

<The flesh must be free from major defects.>

4. PROVISIONS CONCERNING SIZING

{Sizing should not be a factor in classification unless there is a direct correlation between size and sufficient

development and market acceptance.)

{Name of produce} may be sized by < diameter, count, length or weight>; < or in accordance with existing trade practices. When sized in accordance with existing trade practices, the package must be labelled with the size and method used.>

- A. When sized by count, size is determined by the number of individual fruits per package< in accordance with the following table>. <The following table is a guide and may be used on an optional basis.>
- B. When sized by length, size is determined by the length of the longitudinal axis <excluding the peduncle>.
- C. When sized by diameter, size is determined by either the maximum diameter of the equatorial section of each fruit or a diameter range per package < in accordance with the following table>. <The following table is a guide and may be used on an optional basis.>.
- D. When sized by weight, size is determined based on the individual weight of each fruit or a weight range per package. < in accordance with the following table>. <The following table is a guide and may be used on an optional basis.>
- E. The minimum size shall be {should be only defined in cases to guarantee sufficient development}

{In case when minimum sizes are established the size requirements might not apply to miniature produce: In case of introduction of the exemption for miniature produce, it should be checked whether other provisions on maturity and/or ripeness sufficiently developed are already in the standard or should be introduced, to guarantee the adequate development of miniature produce.}

<The size requirements shall not apply to miniature produce. Miniature produce means produce obtained from a variety or cultivar of vegetable, obtained by plant breeding and/or special cultivation techniques. These produce though smaller in size than the minimum size requirement in the standard when applicable), however, they must meet all other requirements of the standard.].>

- A) <There is no sizing requirement for {name of produce, variety, commercial type or class depending on the nature of produce}.>

<To ensure uniformity in size, the range in size between produce in the same package shall not exceed ...>

- a) For fruit sized by diameter: x mm.
- b) For fruit sized by weight: x grams.
- c) For fruit sized by count: the difference in size should be consistent with the difference indicated in point (a).
- d) In case size codes are applied, the codes and ranges in the following table have to be respected.

{When tables and size codes are used to define uniformity in size, the size codes should be arranged in descending order ... example to be included}

<There is no sizing uniformity requirement for Class II.>

{Provisions can be added on minimum and maximum sizes and size range, depending on the nature of produce, the variety, the commercial type and possibly the individual classes}.

5. PROVISIONS CONCERNING TOLERANCES⁵

5.1 QUALITY TOLERANCES

At all marketing stages, 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 fail conformity assessment, may be allowed to be resorted and brought into conformity in accordance with the relevant provisions in the Guidelines for Food Import Control System (CXG 47-2003).

{The tolerances for decay may be established depending on the characteristics/ nature of produce and current trade practices.}

5.1.1 “Extra” Class

Five percent 5.0%, by number or weight, of {name of produce} not satisfying the requirements of the class, but meeting those of Class I. <Included therein, is one percent [0.5%; 0.75%; 1%; 0.5 - 1%; either 0.5% or up to 1%]; tolerance for decay, soft rot and/or internal breakdown.>

{Add possible tolerances for individual defects, depending on the nature of the produce.}

5.1.2 Class I

Ten percent, 10.0% by number or weight, of {name of produce} not satisfying the requirements of the class but meeting those of Class II. Included therein, is one percent tolerance for decay, soft rot and/or internal breakdown.

{Add possible tolerances for individual defects, depending on the nature of the produce.}

5.1.3 Class II

Ten percent, 10.0% by number or weight, of {name of produce} not satisfying the requirements of the class. Included therein, is two percent tolerance for decay, soft rot and/or internal breakdown.

{Add possible tolerances for individual defects, depending on the nature of the produce.}

{The percentages for decay shall be adapted to the characteristics of the produce.}

5.2 SIZE TOLERANCES

For all classes if sized: Ten percent 10.0% by number or weight of {name of produce} not satisfying the requirements as regards to sizing.

6. PROVISIONS CONCERNING PRESENTATION

6.1 UNIFORMITY

The contents of each package < (or lot for produce presented in bulk in the transport vehicle)> must be uniform and contain only {name of produce} of the same origin, quality and size < (if sized)>.

<However, a mixture of {name of produce} of distinctly different <species> <varieties> <commercial types> <colours> may be packed together in a <package> <sales package>, provided they are uniform in quality and, for each <species> <variety> <commercial type> <colour> concerned, in origin.>

{It is recommended, not to require uniformity in size for this type of mixtures.}

{In addition, for individual standards, uniformity concerning variety and/or commercial type may be laid down, depending on the nature of the produce.}

{If specific requirements, including net weight limits of sales packages, are needed, they can be added within the context of individual standards.}

{Other possible provisions, depending on the nature of the produce.}

The visible part of the contents of the package < (or lot for produce presented in bulk in the transport vehicle)> must be representative of the entire contents.

6.2 PACKAGING

{Name of produce} 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.>

{Name of produce} shall be packed in each container in compliance with the Code of Practice for Packaging and Transport of Fresh Fruits and Vegetables (CAC/RCP 44-1995).

6.2.1 Description of Containers

The container shall meet the quality, hygiene, ventilation and resistance characteristics to ensure suitable handling, shipping and preserving of the {name of produce}.

Packages < (or lots for produce presented in bulk)> must be free of all foreign matter and smell.

7. PROVISIONS CONCERNING MARKING OR LABELLING

7.1 CONSUMER PACKAGES

In addition to the requirement of the General Standard for the Labelling of Pre-packaged Foods (CXS 1-1985), the following specific provisions apply:

7.1.1 Name of Produce

Each shall be labelled as to the name of the produce and may be labelled as to name of the variety <and/or commercial type>.

7.1.2 Origin of Produce

Country of origin⁶ and optionally, district where grown, or national, regional or local place name.

<In the case of a mixture of distinctly different varieties <species> of {name of produce} of different origins, the indication of each country of origin shall appear next to the name of the variety<species> concerned.>

7.2 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 applies:

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

7.2.1 Origin of produce

Country of origin⁷ and, optionally, district where grown, or national, regional or local place name. <In the case of a mixture of distinctly different varieties <species> of {name of produce} of different origins, the indication of each country of origin shall appear next to the name of the variety<species> concerned.>

7.2.2 Commercial Specifications

- class;
- Size < (if sized)>

{Add other possible particulars, depending on the nature of the produce}.

7.2.3 Official control mark (optional)

⁶ The full or a commonly used name should be indicated.

⁷ The full or a commonly used name should be indicated.

8. FOOD ADDITIVES

<No food additives are permitted in these products.>

<For untreated {name of vegetables}, food additives listed in Tables 1 and 2 of the *General Standard for Food Additives* (CODEX STAN 192-1995) in Food Category 04.2.1.1 (Untreated fresh vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes (including soybeans), and aloe vera), seaweeds, and nuts and seeds) are acceptable for use in foods conforming to this standard. >

{For untreated fruits, as currently no food additives are permitted according to the GSFA. Therefore, only untreated vegetables are mentioned as above.}.

<For treated {name of produce} Food additives listed in Tables 1 and 2 of the *General Standard for Food Additives* (CODEX STAN 192-1995) in Food Categories 04.1.1.2 (Surface-treated fresh fruit) or 04.2.1.2 (Surface- treated fresh vegetables, (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), seaweeds, and nuts and seeds) are acceptable for use in foods conforming to this Standard.>

{Include the appropriate provisions, depending on the nature of the produce}.

9. CONTAMINANTS

9.1 The produce covered by this Standard shall comply with the maximum residue limits for pesticides established by the Codex Alimentarius Commission.

9.2 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).

10 HYGIENE

10.1 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.

10.2 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).

11 METHODS OF ANALYSIS AND SAMPLING

{Methods of analysis to be included as appropriate / necessary}.

Annex Glossary

[To be Developed]

The following is alternate method of arranging Section 3 on Classification and Section 5 on Tolerances in FFV standards. Within this format the text indicating the tolerances/requirements for each FFV class is not used. It also allows the indication of specific defects and their individual tolerance limits

Within the table all the defects in Part (a) are tabulated against the indicated total tolerance. Also, a single defect except Decay, Soft Rot and Internal Breakdown can use the total tolerance. Since Decay, Soft Rot and Internal Breakdown is considered as the most serious defect, it is limited by the indicated.

3.1 CLASSIFICATION

In accordance with <sizing requirements in Section 4 – Provision concerning Sizing (when applicable) and> Section 5 – Provisions concerning Tolerances, {name of produce} are classified into the following class(es). “Extra” Class, Class I and Class II

5.1 QUALITY TOLERANCES

At all marketing stages, 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 fail conformity assessment, may be allowed to be resorted and brought into conformity in accordance with the Guidelines for Food Import Control System (CAC/GL 47-2003) paragraphs 9, 10 and 27.

{The tolerances for decay may be established depending on the characteristics/ nature of produce and current trade practices.}

Tolerances in respect of quality and size shall be allowed in each package for produce not satisfying the minimum requirements of the class indicated.

| Quality Tolerances | Tolerances allowed percentage of defective produce by count or weight | | |
|--|---|-----------|-----------|
| | Extra Class | Class I | Class II |
| (a) Total Tolerance {name of produce} not satisfying the quality requirements | 5 | 10 | 10 |
| of which no more than {examples given below} | | | |
| Condition (Progressive) Defects | | | |
| Shriveling | | | |
| Unhealed bruises | | | |
| Mechanical damage | | | |
| Pest damage | | | |
| Quality (Non-Progressive) Defects | | | |
| Sunburn | | | |
| Misshapen | | | |
| Immature/not sufficiently developed | | | |
| [Decay, soft rot, internal breakdown | 1 | 1 | 2] |
| (b) Size Tolerances- off size from what is indicated/marked | 10 | 10 | 10 |
| (c) Produce belonging to other similar varieties than marked | | | |