

CODEX ALIMENTARIUS

INTERNATIONAL FOOD STANDARDS



Food and Agriculture
Organization of
the United Nations



World Health
Organization

E-mail: codex@fao.org - www.codexalimentarius.org

STANDARD FOR QUICK-FROZEN PEACHES

CXS 75-1981

Adopted in 1981. Amended in 2019, 2022.

2022 Amendment

Following decisions taken at the Forty-fifth Session of the Codex Alimentarius Commission in December 2022, amendments were made in Section 6.4. Labelling of non-retail containers.

1. SCOPE

This standard (formerly CAC/RS 75-1976) shall apply to quick-frozen peaches of the species *Prunus persica* L. as defined below and offered for direct consumption without further processing, except repacking, if required. It does not apply to the product when indicated as intended for further processing or for other industrial purposes.

2. DESCRIPTION

2.1 Product definition

Quick-frozen peaches is the product prepared from fresh, sound, properly ripened fruit conforming to the characteristics of *Prunus persica* L., but excluding nectarine varieties, which fruit is packed with or without a dry sugar of a syrup and is packaged.

2.2 Process definition

Quick-frozen peaches is the product subjected to a freezing process in appropriate equipment and complying with the conditions laid down hereafter. This freezing operation shall be carried out in such a way that the range of temperature of maximum crystallization is passed quickly. The quick-freezing process shall not be regarded as complete unless and until the product temperature has reached -18 °C (0 °F) at the thermal centre after thermal stabilization. The recognized practice of repacking quick-frozen products under controlled conditions is permitted.

2.3 Handling practice

The product shall be handled under such conditions as will maintain the quality during transportation, storage and distribution up to and including the time of final sale. It is recommended that during storage, transportation, distribution and retail, the product be handled in accordance with the provisions in the Code of Practice for the Processing and Handling of Quick Frozen Foods (CXC 8-1976).¹

2.4 Presentation

2.4.1 Varietal type

Peaches of distinct varietal types shall be designated:

"freestone" – where the pit separates readily from the flesh; or

"clingstone" – where the pit adheres to the flesh

2.4.2 Colour type

Peaches of distinct varietal differences shall be designated according to the colour of the ripe flesh:

- (a) **white** – varietal types in which the predominant colour ranges from white to yellow-white;
- (b) **yellow** – varietal types in which the predominant colour ranges from pale yellow to light range;
- (c) **red** – varietal types in which the colour ranges from orange red to red with more or less pronounced variegated red colouring other than that associated with the pit cavity; and
- (d) **green** – varietal types in which the predominant colour is light green, but which are fully mature and properly ripened.

2.4.3 Style

Quick-frozen peaches shall be presented in the following styles:

- (a) **whole** – unpitted whole peaches;
- (b) **halves** – pitted and cut into two approximately equal parts;
- (c) **quarters** – pitted and cut into four approximately equal parts following the longitudinal axis;
- (d) **sliced** – pitted and cut into wedge-shaped sectors of approximately equal size;
- (e) **pieces** – (regular or irregular) – pitted and comprising regular or irregular shapes and sizes; and
- (f) **diced** – pitted and cut into cube-like parts having a maximum size of 15 mm long on one edge.

2.4.4 Other styles

Any other presentation of the product shall be permitted provided that it:

- (a) is sufficiently distinctive from other forms of presentation laid down in this standard;
- (b) meets all other requirements of this standard; and
- (c) is adequately described on the label to avoid confusing or misleading the consumer.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Optional ingredients

Sugars (sucrose, invert sugar, invert sugar syrup, dextrose, fructose, glucose syrup, dried glucose syrup).

3.2 Composition

3.2.1 *Peaches prepared with dry sugars*

The total soluble solids content of the liquid extracted from the thawed, comminuted sample shall not be more than 35 percent m/m nor less than 18 percent m/m, as determined by refractometer at 20 °C.

3.2.2 *Peaches prepared with syrup*

The amount of syrup used shall be no more than that required to cover the peaches and fill the spaces between them. The total soluble solids content of the liquid extracted from the thawed, comminuted sample shall not be more than 30 percent m/m nor less than 15 percent m/m, as determined by refractometer at 20 °C.

3.2.3 *Definition of "defective" for composition*

Any sample unit that falls outside the limits for the soluble solids range specified in Section 3.2.1 and Section 3.2.2 shall be regarded as a "defective" provided it does not exceed the limits of the range by more than five percent m/m soluble solids.

3.2.4 *Lot acceptance for composition*

A lot is considered acceptable for compositional criteria when the number of "defectives" as defined in Section 3.2.3 does not exceed the acceptance number (c) of an appropriate sampling plan with an acceptable quality limit (AQL) of 6.5. (See relevant Codex texts on methods of analysis and sampling).

3.3 Quality factors

3.3.1 *General requirements*

Quick-frozen peaches shall be:

- (a) clean and practically free from foreign material;
- (b) free from foreign flavour and odour;
- (c) of similar varietal characteristics; and
- (d) of good, reasonably uniform colour characteristic of the varietal type.

and with respect to visual or other defects subject to a tolerance, shall be:

- (e) practically free from dark discolouration or green areas (except for green in green types);
- (f) practically free from blemished units;
- (g) practically free from stalks (stems), or portions thereof, or other extraneous vegetable matter (EVM);
- (h) practically intact units for the style and may be materially altered in shape due to excess trimming or mechanical damage;
- (i) reasonably free from fibrous units;
- (j) reasonably free from overripe, mushy or disintegrated fruit;
- (k) reasonably free from peel;
- (l) free from whole pits (stones) except in whole style; and
- (m) practically free from pit fragments.

3.3.2 *Definition of visual defects*

- (a) **Discolouration** – discolouration due to oxidation or bruising and which materially detracts from the appearance of the product;
- (b) **Blemish** – units affected by insect injury or scab pathological damage or other similar means;
- (c) **Stalks (stems)** – the immediate stalk which attaches the peach to the branch of the peach tree;
- (d) **Extraneous Vegetable Matter (EVM)** – harmless vegetable material such as pieces of leaf;
- (e) **Excess trim and mechanical damage** – units gouged or severely trimmed such that the apparent appearance and shape of the unit is materially altered;

- (f) **Fibrous units** – units with tough fibres that are objectionable when eaten;
- (g) **Overripe or mushy** – units that are excessively soft or disintegrated to the extent that they have lost their normal shape; and
- (h) **Pit fragments** – pieces of pit which are hard and sharp and are at least 3 mm in any dimension.

3.3.3 Standard sample sizes

The sample size for segregating, classifying and enumerating visual defects is as follows:

Style	Standard sample size
Whole	20 units (whole fruits)
Halved and quartered	30 units (halves and quarters)
Sliced, diced, pieces	300 grams

The above sample units are made up of drained fruit (see relevant Codex texts on methods of analysis and sampling).

3.3.4 Tolerances for defects

TABLE 1
Whole style (20 units)

Defect	Unit of measurement	Defect categories			
		Minor	Major	Serious	Total
(a) Discolouration or green	Each 4 cm ²	1			
(b) Blemish	Each 0.5 cm ² to 1 cm ² > 1 cm ² Very dark, penetrating the flesh	1	2	4	
(c) Stalks (stems), EVM	Each piece		2		
(d) Excess trim and mechanical damage	Each unit		2		
(e) Fibrous unit	Each unit		2		
(f) Overripe, mushy	Each unit		2		
(g) Peel	Each 1 cm ²	1			
TOTAL ALLOWABLE POINTS		25	8	4	25

TABLE 2
Halved and quartered styles (30 units)

Defect	Unit of measurement	Defect categories			
		Minor	Major	Serious	Total
(a) Discolouration or green	Each 4 cm ²	1			
(b) Blemish	Each 0.5 cm ² to 1 cm ² > 1 cm ² Very dark, penetrating the flesh	1	2	4	
(c) Stalks (stems), EVM	Each piece		2		
(d) Excess trim and mechanical damage	Each unit		2		
(e) Overripe, mushy	Each unit	1			
(f) Fibrous units	Each unit		2		
(g) Peel	Each 1 cm ²	1			
(h) Pit fragments	Each piece		2		
TOTAL ALLOWABLE POINTS		25	8	4	25
(i) Whole pits (stones) 1 per 3 kgs					

TABLE 3
Sliced, diced, pieces styles (300 g drained fruit)

Defect	Unit of measurement	Defect categories			
		Minor	Major	Serious	Total
(a) Discolouration or green	Each 4 cm ²	1			
(b) Blemish	up to 1 cm ² > 1 cm ² Very dark, penetrating the flesh	1	2	4	
(c) Stalks (stems), other EVM	Each piece		2		
(d) Excess trim	Each unit	1			
(e) Overripe, mushy	Each 5 g	1			
(f) Fibrous	Each unit		2		
(g) Peel	Each cm ²	1			
(h) Pit fragments	Each piece		2		
TOTAL ALLOWABLE POINTS		25	6	4	25
(i) Whole pits (stones)	1 per 3 kgs				

3.3.5 Definition of "defective" for quality factors

Any sample unit taken in accordance with an appropriate sampling plan with an AQL of 6.5, (see relevant Codex texts on methods of analysis and sampling), and which is adjusted to a standard sample unit size for applying the tolerances relating to visual defects, shall be regarded as "defective" for the respective characteristics, as follows:

- (a) any sample unit that fails to meet the general requirements of Section 3.3.1; and
- (b) any sample unit that fails the total allowable points for defect categories minor, major, or serious; or which fails the total allowable points for the combined **total** of the respective defect categories (3.3.4).

3.3.6 Lot acceptance for quality factors

A lot is considered acceptable when the number of "defectives" as defined in paragraph 3.3.5 does not exceed the acceptance number (c) of an appropriate sampling plan with an AQL of 6.5, provided that, with respect to all styles except "whole", the number of whole pits (stones) does not exceed the tolerance on a sample average basis.

4. FOOD ADDITIVES

Maximum level

- | | | |
|-----|---------------|-----------------------------------------------|
| 4.1 | Ascorbic acid | 750 mg/kg |
| 4.2 | Citric acid | Limited by good manufacturing practices (GMP) |

5. HYGIENE

- 5.1 It is recommended that the product 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),² and other codes of practice recommended by the Codex Alimentarius Commission which are relevant to this product.
- 5.2 To the extent possible in GMP, the product shall be free from objectionable matter.
- 5.3 When tested by appropriate methods of sampling and examination, the product:
- shall be free from microorganisms in amounts which may represent a hazard to health;
 - shall be free from parasites which may represent a hazard to health; and
 - shall not contain any substance originating from microorganisms in amounts which may represent a hazard to health.

6. LABELLING

In addition to the requirements of the Codex General Standard for the Labelling of Pre-packaged Foods (CXS 1-1985),³ the following specific provisions apply:

6.1 The name of the food

- 6.1.1 The name of the product as declared on the label shall include the designation "peaches".
- 6.1.2 In addition, there shall appear on the label in conjunction with or in close proximity to the word "peaches":
- (a) the style, as appropriate: "whole", "halves", "quarters", "slices", "pieces" or "diced"; and
 - (b) the packing medium: "with (name of the sweetener and whether as such or as the syrup)".
- 6.1.3 If the product is produced in accordance with subsection 2.4.4, the label shall contain in close proximity to the word "peaches" such additional words or phrases that will avoid misleading or confusing the consumer.
- 6.1.4 Peaches of distinct varietal types shall be designated: "freestone" or "clingstone", as appropriate (see subsection 2.4.1).
- 6.1.5 In addition, there shall appear on the label the words "quick-frozen" except that the term "frozen"ⁱ may be applied in countries where this term is customarily used for describing the product processed in accordance with subsection 2.2 of this standard.
- 6.1.6 The colour type of the flesh of the peaches shall be declared either by illustration or by nomenclature.

6.2 Additional requirements

The packages shall bear clear directions for keeping from the time they are purchased from the retailer to the time of their use, as well as directions for thawing.

6.3 Bulk packs

In the case of quick-frozen peaches in bulk, the information required above shall either be placed on the container or be given in accompanying documents, except that the name of the food accompanied by the words "quick-frozen" (the term "frozen" may be applied in countries where this term is customarily used for describing the product processed in accordance with subsection 2.2 of this standard) and the name and address of the manufacturer or packer shall appear on the container.

ⁱ The term "frozen" is used as an alternative to "quick-frozen" in some English-speaking countries.

6.4 Labelling of 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).⁴

7. PACKAGING

Packaging used for quick-frozen peaches shall:

- (a) protect the organoleptic and quality characteristics of the product;
- (b) protect the product from bacteriological and other contamination;
- (c) protect the product from dehydration and, where appropriate, leakage as far as technologically practicable; and
- (d) not pass on to the product any odour, taste, colour or other foreign characteristics.

8. METHODS OF ANALYSIS AND SAMPLING

For checking the compliance with this standard, the methods of analysis and sampling contained in the *Recommended Methods of Analysis and Sampling* (CXS 234-1999)⁵ relevant to the provisions in this standard shall be used.

NOTES

¹ FAO and WHO.1976. *Code of Practice for the Processing and Handling of Quick Frozen Foods*. Codex Alimentarius Code of Practice, No. CXC 8-1976. Codex Alimentarius Commission. Rome.

² FAO and WHO.1969. *General Principles of Food Hygiene*. Codex Alimentarius Code of Practice, No. CXC 1-1969. Codex Alimentarius Commission. Rome.

³ FAO and WHO. 1985. *Codex General Standard for the Labelling of Pre-packaged Foods*. Codex Alimentarius Standard, No. CXS 1-1985. Codex Alimentarius Commission. Rome.

⁴ FAO and WHO. 2021. *General Standard for the Labelling of Non-Retail Containers of Foods*. Codex Alimentarius Standard, No. CXS 346-2021. Codex Alimentarius Commission. Rome.

⁵ FAO and WHO. 1999. *Recommended Methods of Analysis and Sampling*. Codex Alimentarius Standard, No. CXS 234-1999. Codex Alimentarius Commission. Rome.