

# CODEX ALIMENTARIUS

INTERNATIONAL FOOD STANDARDS



Food and Agriculture  
Organization of  
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Organization

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## **GENERAL STANDARD FOR DRIED FRUITS**

**CXS 360-2020**

**Adopted in 2020**

## 1. SCOPE

This standard applies to dried fruits in general, as defined in Section 2 (Description) below and also provides specific provisions for products covered in the annexes. In all cases, this standard covers products offered for direct consumption, including for catering purposes or for repackaging if required. It does not apply to the product when indicated as being intended for further processing. The provisions in the general standard apply to all products unless specified otherwise.

## 2. DESCRIPTION

### 2.1 Product definition

Dried fruits are the products:

- (1) prepared from substantially sound fruits, reasonably mature, sufficiently developed or ripe fruits, and as defined in the individual annexes;
- (2) processed by drying either by the sun or by other recognized methods of drying and or dehydration into a form of marketable dried products, with or without sweetening solution and may be coated with one or more of the ingredients as defined in Section 3 (Essential composition and quality factors) and in the individual annexes. Dried fruits being prepared by frying are excluded;
- (3) that may undergo operations such as washing or pasteurizing, peeling, coring, pitting, seed removing, stemming, slicing, cutting, sorting, grading, etc. depending on the type of product. However, none of their essential characteristic elements should be removed;
- (4) packaged in suitable containers to assure preservation and protection of the product; and
- (5) that may be considered as “untreated dried fruits”, “treated dried fruits” or specifically “preserved dried fruits” as follows:
  - untreated dried fruits – products processed by drying without treating with any additive before or after drying;
  - treated dried fruits – products processed by drying and treated with preservatives or preserved by other means (e.g. pasteurization); and
  - preserved dried fruits – products processed by drying and processing (e.g. salting, sugaring) before or after drying. The products may be treated with preservatives.

### 2.2 Styles

Dried fruits may be presented in the following styles. For products covered by annexes, only styles in the corresponding annex or Section 2.2.1 (Other styles) apply.

- (1) whole – peeled and unpeeled, with core and coreless/unpitted or pitted of an entire fruit;
- (2) halves – peeled and unpeeled, with core and coreless/unpitted or pitted fruits that have been cut longitudinally into two approximately equal parts;
- (3) quarters – peeled and unpeeled, with core and coreless/unpitted or pitted fruits that have been cut into four approximately equal parts;
- (4) slices – peeled and unpeeled with coreless /pitted fruits that have been cut longitudinally into slices or rings;
- (5) half slices – uniformly cut, approximately semi-circular halves of slices;
- (6) broken slices – arc-shaped portions which are not required to be uniform in size and/or shape;
- (7) tidbits – reasonably uniform wedge-shaped sectors;
- (8) chunks – short and thick units;
- (9) dices or cubes – reasonably uniform, cube-shaped units;
- (10) strips – long fine narrow pieces;
- (11) sticks – long thin straight pieces;
- (12) spears – slender sectors cut radially and lengthwise;
- (13) pieces – (or mixed pieces or irregular pieces) irregular shapes and sizes not identifiable as a specific style;
- (14) flattened – flattened whole, half or portions of fruits of irregular shape, size and thickness;

- (15) sheets – a large piece of thin dried fruits;
- (16) shreds/chips – small, thin pieces and irregular shapes and sizes;
- (17) granules – broken shreds/chips or small pieces and irregular shapes and sizes; and
- (18) coins – small flat round pieces.

### 2.2.1 **Other styles**

Any other presentation of the product is permitted provided that the product:

- (1) is sufficiently distinctive from other forms of presentation laid down in the general standard or annex, as appropriate; and
- (2) is adequately described on the label to avoid confusing or misleading the consumer.

### 2.3 **Species and varietal types**

Any variety or type of fruit suitable for human consumption that is suitable for drying may be used.

## 3. **ESSENTIAL COMPOSITION AND QUALITY FACTORS**

### 3.1 **Composition**

#### 3.1.1 **Basic ingredients**

Fruits as defined in Section 2 (Description) and the individual annexes.

#### 3.1.2 **Optional ingredients**

See individual annexes for optional ingredients for the products covered by the annexes. Optional ingredients for dried fruits not covered in an annex may include, but are not limited to:

- (1) flour (e.g. rice flour, corn flour); and/or
- (2) edible vegetable oils.

#### 3.1.2.1 **Preserved dried fruits**

- (1) sugars and/or other foodstuffs with sweetening properties such as honey as defined in the *Standard for sugars* (CXS 212-1999)<sup>1</sup> and the *Standard for honey* (CXS 12-1981)<sup>2</sup> respectively;
- (2) spices and culinary herbs and/or their extracts;<sup>i</sup>
- (3) edible stuffing material from fruits;
- (4) salt; and
- (5) fruit juice.

### 3.2 **Quality criteria**

#### 3.2.1 **Colour, flavour, odour and texture**

Dried fruits shall have normal colour,<sup>ii</sup> flavour and odour characteristic of dried fruit, corresponding to the fruit involved, the type of treatment and added optional ingredients used and shall possess texture characteristic of the product.

#### 3.2.2 **Moisture content**

For products covered by the annexes, in accordance with the relevant provisions in the corresponding annexes.

For products not covered by the annexes, dried fruits shall comply with the maximum moisture content specific to the individual fruit variety; and dried fruits shall be sufficiently dried to ensure food safety, taking into consideration the effects of preservatives, etc., when used.

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<sup>i</sup> In accordance with the relevant Codex standards for spices and culinary herbs when available.

<sup>ii</sup> On certain types of fruits, slight browning or a darker colour may occur.

### 3.2.3 *Dried fruits should be*

- (1) clean;
- (2) practically free of any visible foreign matter;
- (3) free from mouldy fruits; and
- (4) free from living pests whatever their stage of development, including the presence of dead insects and/or mites, their debris or excreta.

### 3.2.4 *Uniformity*

For products covered by the annexes, in accordance with the relevant provisions in the corresponding annexes. In addition, the following apply to products covered by the annexes and other dried fruit:

The contents of each package shall be uniform in size and contain only dried fruits of the same quality and variety. The visible part of the contents of the package shall be representative of the entire contents.

However, a mixture of dried fruits of distinctly different species may be packed together in a sales package, provided they are uniform in quality. However, in case of those mixtures, uniformity in size among species is not required.

### 3.2.5 *Defects*

#### 3.2.5.1 *Definition of defects*

| Defects                       | Definitions   |
|-------------------------------|---|
| Blemished unit                | Scars, discolouration, sunburn, dark spots, blacknose or similar abnormalities in surface appearance.                                       |
| Mouldy fruit                  | Fruit affected internally or externally by mould filaments, visible to the naked eye.   |
| Damage caused by pests        | Visible damage caused by insects, mites, rodents or other animal pests.   |
| Foreign matter                | All organic and inorganic materials other than extraneous vegetable material.   |
| Extraneous vegetable material | Harmless vegetable matter associated with the product (such as, but not limited to a leaf or portion thereof or a stem or portion thereof). |

#### 3.2.5.2 *Defects and allowances*

Dried fruits should be reasonably free from visible defects such as blemished units and practically free from mouldy fruits and damage caused by pests.

For products covered by the annexes, specific defects and allowances shall be in accordance with the relevant provisions in the corresponding annexes.

### 3.3 *Classification of defectives*

A container that fails to meet one or more of the applicable quality requirements, as set out in Section 3.2 (Quality criteria) (except those based on sample averages), should be considered as a defective.

Any standard sample unit, which fails to comply with the quality requirements, as set out in Section 3.2.5 (Defects) shall be regarded as a defective.

### 3.4 *Lot acceptance*

A lot should be considered as meeting the applicable quality requirements referred to in Section 3.2 (Quality criteria) when:

- (1) for those requirements which are not based on averages, the number of defectives, as defined in Section 3.3 (Classification of defectives), does not exceed the acceptance number (c) of the appropriate sampling plan with an acceptance quality limit (AQL) of 6.5; and
- (2) the requirements of Section 3.2 (Quality criteria), which are based on sample averages, are complied with.

#### 4. FOOD ADDITIVES

For products covered in the annexes, in accordance with the relevant provisions in the individual annexes.

For products not covered in the annexes, the food additive classes as presented in Section 4.1 may be used.

- 4.1** Acidity regulators, antioxidants, colours,<sup>iii</sup> glazing agents, preservatives,<sup>iv</sup> sweeteners,<sup>v</sup> and sequestrants used in accordance with Table 1 and Table 2 of the *General standard for food additives* (CXS 192-1995)<sup>3</sup> in food category 04.1.2.2 (Dried fruit) and food category 04.1.2.7 (Candied fruit)<sup>vi</sup> or listed in Table 3 of the *General standard for food additives* are acceptable for use in foods conforming to this standard.
- 4.2** Flavourings used in products covered by this standard (i.e. products covered in annexes that allow flavourings, and products not covered by annexes) should comply with the *Guidelines for the use of flavourings* (CXG 66-2008).<sup>4</sup>

#### 5. CONTAMINANTS

- 5.1** The products 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).<sup>5</sup>
- 5.2** The products covered by this standard shall comply with the maximum residue limits for pesticides established by the Codex Alimentarius Commission.

#### 6. HYGIENE

- 6.1** It is recommended that the products 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)<sup>6</sup> and other relevant Codex texts such as codes of hygienic practice and codes of practice.
- 6.2** The products 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).<sup>7</sup>

#### 7. WEIGHTS AND MEASURES

##### 7.1 Fill of container

###### 7.1.1 Net weight

The container should be filled with product as full as commercially practicable without impairment of quality and shall be consistent with a proper declaration of contents for the product.

###### 7.1.2 Lot acceptance

The requirements for net weight should be deemed to be complied with when the average net weight of all containers examined is not less than the declared weight, provided that there is no unreasonable shortage in individual containers.

#### 8. LABELLING

- 8.1** The products covered by the provisions of this standard shall be labelled in accordance with the *General standard for the labelling of pre-packaged foods* (CXS 1-1985).<sup>8</sup> In addition, the following specific provisions apply:
- 8.2 Name of the product**
- 8.2.1** The names of the dried fruits shall appear on the label, such as “dried XXX”, “dehydrated XXX” and/or “freeze dried XXX” where XXX is the name of the fruit; or as defined in the individual annexes.
- 8.2.2** The name of the product shall include indication of the style as set out in Section 2.2 (Styles) or as indicated in the individual annex, as appropriate.
- 8.2.3 Other styles** – If the product is produced in accordance with the other styles provision (Section 2.2.1), the label should contain in close proximity to the name of the product such additional words or phrases that will avoid misleading or confusing the consumer.
- 8.2.4** If an added ingredient, as defined in Section 3.1.2 (Optional ingredients), alters the flavour characteristic of the product, the name of the food shall be accompanied by the term “flavoured with X” or “X flavoured” as appropriate.

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<sup>iii</sup> For use in preserved dried fruits only.

<sup>iv</sup> Excluding products defined as “untreated dried fruits”.

<sup>v</sup> See note iii above.

<sup>vi</sup> For preserved dried fruits only.

- 8.2.5** The name of the product may include the varietal type.
- 8.2.6** Where a characteristic coating or similar treatment has been used, appropriate terms shall be included as part of the name of the product or in close proximity to the name: e.g. "sugar coated", "coated with X".
- 8.2.7** When dried fruits are sized, the size (or sizes when sizes are mixed), as defined in the individual annex, may be declared as part of the name or in close proximity to the name of the product.

**8.3 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).<sup>9</sup>

**9. METHODS OF ANALYSIS AND SAMPLING**

For checking the compliance with this standard, the methods of analysis contained in the *Recommended methods of analysis and sampling* (CXS 234-1999)<sup>10</sup> relevant to the provisions in this standard shall be used.

### Sampling plans

The appropriate inspection level is selected as follows:

|                            |   |
|----------------------------|---|
| <b>Inspection level I</b>  | <b>– Normal sampling</b>  |
| <b>Inspection level II</b> | <b>– Disputes (Codex referee purposes sample size), enforcement or need for better lot estimate</b> |

#### SAMPLING PLAN 1 (Inspection level I, AQL = 6.5)

| <b>NET WEIGHT IS EQUAL TO OR LESS THAN 1 KG (2.2 LB)</b>                         |                 |                       |
|--|-----------------|-----------------------|
| Lot size (N)   | Sample size (n) | Acceptance number (c) |
| 4 800 or less  | 6               | 1                     |
| 4 801–24 000   | 13              | 2                     |
| 24 001–48 000  | 21              | 3                     |
| 48 001– 84 000   | 29              | 4                     |
| 84 001–144 000   | 38              | 5                     |
| 144 001–240 000  | 48              | 6                     |
| more than 240 000  | 60              | 7                     |
| <b>NET WEIGHT IS GREATER THAN 1 KG (2.2 LB) BUT NOT MORE THAN 4.5 KG (10 LB)</b> |                 |                       |
| Lot size (N)   | Sample size (n) | Acceptance number (c) |
| 2 400 or less  | 6               | 1                     |
| 2 401–15 000   | 13              | 2                     |
| 15 001–24 000  | 21              | 3                     |
| 24 001–42 000  | 29              | 4                     |
| 42 001–72 000  | 38              | 5                     |
| 72 001–120 000   | 48              | 6                     |
| more than 120 000  | 60              | 7                     |
| <b>NET WEIGHT GREATER THAN 4.5 KG (10 LB)</b>                                    |                 |                       |
| Lot size (N)   | Sample size (n) | Acceptance number (c) |
| 600 or less  | 6               | 1                     |
| 601–2 000  | 13              | 2                     |
| 2 001–7 200  | 21              | 3                     |
| 7 201–15 000   | 29              | 4                     |
| 15 001–24 000  | 38              | 5                     |
| 24 001–42 000  | 48              | 6                     |
| more than 42 000   | 60              | 7                     |

**SAMPLING PLAN (Inspection level II, AQL = 6.5)**

| <b>NET WEIGHT IS EQUAL TO OR LESS THAN 1 KG (2.2 LB)</b>                         |                        |                              |
|--|------------------------|------------------------------|
| <b>Lot size (N)</b>  | <b>Sample size (n)</b> | <b>Acceptance number (c)</b> |
| 4 800 or less  | 13                     | 2                            |
| 4 801–24 000   | 21                     | 3                            |
| 24 001–48 000  | 29                     | 4                            |
| 48 001–84 000  | 38                     | 5                            |
| 84 001–144 000   | 48                     | 6                            |
| 144 001–240 000  | 60                     | 7                            |
| more than 240 000  | 72                     | 8                            |
| <b>NET WEIGHT IS GREATER THAN 1 KG (2.2 LB) BUT NOT MORE THAN 4.5 KG (10 LB)</b> |                        |                              |
| 2 400 or less  | 13                     | 2                            |
| 2 401–15 000   | 21                     | 3                            |
| 15 001–24 000  | 29                     | 4                            |
| 24 001–42 000  | 38                     | 5                            |
| 42 001–72 000  | 48                     | 6                            |
| 72 001–120 000   | 60                     | 7                            |
| more than 120 000  | 72                     | 8                            |
| <b>NET WEIGHT GREATER THAN 4.5 KG (10 LB)</b>                                    |                        |                              |
| 600 or less  | 13                     | 2                            |
| 601–2 000  | 21                     | 3                            |
| 2 001–7 200  | 29                     | 4                            |
| 7 201–15 000   | 38                     | 5                            |
| 15 00 –24 000  | 48                     | 6                            |
| 24 001–42 000  | 60                     | 7                            |
| more than 42 000   | 72                     | 8                            |



## DRIED APRICOTS

In addition to the general provisions applicable to dried fruits, the following specific provisions apply:

### 1. DESCRIPTION

#### 1.1 Product definition

Dried apricots is the product:

- (1) prepared from clean, sound ripe fruit of a quality suitable for human consumption, of varieties of *Armeniaca vulgaris Lam. (Prunus armeniaca L.)*; and
- (2) processed by drying either by the sun or by other recognized methods of dehydration, which may be preceded by sulphuring, into a form of marketable dried product.

#### 1.2 Styles

The product shall be presented in one of the following styles:

- (1) whole, unpitted;
- (2) whole, pitted;
- (3) halves – unpitted or pitted fruits that have been cut longitudinally into two approximately equal parts;
- (4) quarters – unpitted or pitted fruits that have been cut into four approximately equal parts;
- (5) granules – broken shreds/chips or small pieces and irregular shapes and sizes; and
- (6) slabs – whole and half apricots of irregular shape, size and thickness, which have lost their normal contour and have become definitely flattened at the edge or rim.

### 2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

#### 2.1 Composition

##### 2.1.1 Basic ingredients

Apricots as defined in Section 1.1 (Product definition).

##### 2.1.2 Optional ingredients

- (1) flour (e.g. rice flour, corn flour); and
- (2) edible vegetable oil.

#### 2.2 Quality criteria

##### 2.2.1 Moisture content

- (1) untreated dried apricots shall have a moisture not more than 25 percent (by mass); and
- (2) dried apricots treated with preservatives or preserved by other means (e.g. pasteurization) shall have a moisture content between above 25 percent and 40 percent (by mass).

##### 2.2.2 Sizing (optional)

Dried apricots may be sized by:

- (1) the number of fruits per kg (1 000 g);
- (2) diameter (diameter means the shortest measurement across the face of the apricot half when restored to its normal position); or
- (3) in accordance with existing trade practices. When sized in accordance with existing trade practices, the method used and sized must be indicated.

The following tables are guides; however, uniformity in size can be achieved according to one of the following options:

(1) **By count:**

| Size code | No. of unpitted wholes<br>per kg | No. of pitted wholes<br>per kg | No. of halves<br>per kg |
|-----------|----------------------------------|--------------------------------|-------------------------|
| 1         | More than 205                    | 241–500                        | 481–800                 |
| 2         | 150–205                          | 166–240                        | 331–480                 |
| 3         | 115–149                          | 131–165                        | 261–330                 |
| 4         | 95–114                           | 100–130                        | 200–260                 |
| 5         | Less than 95                     | Less than 100                  | Less than 200           |

(2) **By diameter:**

| Range (mm) | Range (inches) |
|------------|----------------|
| >34        | >1 3/8         |
| >31–34     | >1 1/4–1 3/8   |
| >28–31     | >1 1/8–1 1/4   |
| >25–28     | >1–1 1/8       |
| 20–25      | 13/16–1        |
| <20        | <13/16         |

(3) Size ranges other than option (1) or (2) and size codes other than option (1) are allowed provided that the range used is labelled accordingly such as:

| Grade code | Number of whole fruits without stones per kg |    |                  |
|------------|--|----|------------------|
| A          | 140 and less                                 | or | 32 mm and larger |
| B          | 141–180                                      | or | 30 mm–32 mm      |
| C          | 181–220                                      | or | 26 mm–29 mm      |
| D          | 221–260                                      | or | 21 mm–25 mm      |
| E          | 261 and more                                 | or | Less than 20 mm  |

(4) **Or by count:**

| Size code | Number of fruits per kg |
|-----------|-------------------------|
| 1         | ≤100                    |
| 2         | 101–120                 |
| 3         | 121–140                 |
| 4         | 141–160                 |
| 5         | 161–180                 |
| 6         | 181–200                 |
| 7         | 201–220                 |
| 8         | ≥221                    |

**2.2.3 Uniformity**

Generally uniform in size within any count category, where declared.

**2.2.4 Size tolerance**

Size tolerance 10 percent by weight or number for produce not conforming to the size indicated by diameter (if sized). (If the sizing is determined by the number of fruits per kilogram, not applicable).

**2.2.5 Definition of defects**

- (1) Damaged fruit – fruit affected by any damage or blemish on the surface resulting from factors such as hail, etc. affecting more than 5 mm<sup>2</sup> of fruit surface.
- (2) Broken fruit – fruit affected by any damage resulting from improper halving or other mechanical action.
- (3) Immature fruit – fruit which is generally deficient in sugar and may be sour in taste.
- (4) Damage caused by pests – visible damage caused by insects, mites, rodents or other animal pests.
- (5) Dirty fruit – fruit affected by embedded dirt or any other foreign material.

**2.2.6 Defects and allowances**

- (1) Free from damaged, broken, mouldy and immature fruit for styles as in Sections 1.2 (1) to (3) as described in Section 2.2.5 (see Section 3.2.5.1 in the general standard for description of mouldy) and subject to tolerances provided for in Section 2.2.6(2);
- (2) The following allowances for defects shall apply to all the styles with the exception of the "slab" style:

This table does not apply to dried apricots that are processed or for industrial processing, except when mixed with other products for direct consumption without further preparation.

| <b>Defects allowed</b>   | <b>Tolerances allowed<br/>Percentage defective produce by<br/>number* or weight†</b> |
|--|--|
| <b>1. Tolerances for produce not satisfying the following minimum requirements, of which no more than:</b> | <b>20</b>  |
| 1.1 Mouldy   | 1  |
| 1.2 Rotten   | 2  |
| 1.3 Damage caused by pests   | 4  |
| 1.4 Fermented (untreated)  | 5  |
| 1.5 Fermented (treated)  | 2  |
| 1.6 Substantial defects in colour or texture, heat injury and sunburn                                      | 10   |
| 1.7 Spotted  | 10   |
| 1.8 Lesions and calluses   | 8  |
| <b>2. Tolerance for other defects</b>  |  |
| 2.1 Extraneous vegetable materials except pits, pit fragments in pitted fruit (by mass)                    | 0.5  |
| 2.2 Presence of pits, pit fragments and pedicels in pitted fruit (per 100 apricot units)                   | 2  |
| 2.3 Presence of apricot pieces among whole fruit and halves  | 6  |
| 2.4 Dried apricots belonging to varieties other than that indicated  | 10   |

**Note:** All sample units for the inspection for defects shall be a minimum of 1 kg.

\* Percent based on count of defective units divided by count of total units.

† % m/m.

**3. FOOD ADDITIVES**

Only preservatives used in accordance with Table 1 and Table 2 of the *General standard for food additives* (CXS 192-1995)<sup>3</sup> in food category 04.1.2.2 (Dried fruit) or listed in Table 3 of the *General standard for food additives* are acceptable for use in foods conforming to Annex A of this standard.

**4. LABELLING**

Dried apricots that have a moisture content between above 25 percent (by mass) and 40 percent (by mass), shall be labelled as high moisture or equivalent denomination.

## DATES

In addition to the general provisions applicable to dried fruits, the following specific provisions apply:

### 1. DESCRIPTION

#### 1.1 Product definition

Dates are the product prepared from sound fruit of the date palm tree (*Phoenix dactylifera* L.), which fruit:

- (1) is harvested at the appropriate stage of maturity;
- (2) is sorted and cleaned to remove defective fruit and extraneous material;
- (3) may be pitted and capped;
- (4) may be dried or hydrated to adjust moisture content;
- (5) may be washed and/or pasteurized; and
- (6) is packaged in suitable containers to assure preservation and protection of the product.

#### 1.2 Varietal types

Varietal types are classified as:

- (1) cane sugar varieties (containing mainly sucrose) such as *Daglat Nuur* (*Deglet Noor*) and *Daglat Beidha* (*Deglet Beidha*); and
- (2) invert sugar varieties (containing mainly invert sugar – glucose, and fructose) such as *Barhi* (*Barhee*), *Saiidi* (*Saidy*), *Khadhraawi* (*Khadrawy*), *Hallaawi* (*Halawy*), *Zahdi* (*Zahidi*), and *Sayir* (*Sayer*).

#### 1.3 Styles

##### 1.3.1 Unpitted in their natural state (or intact). May be classified as substyles as follows:

- (1) in clusters (consisting mainly of the rachis and the stems to which the fruit is attached naturally);
- (2) in stems (stems which are separated from the rachis and to which the fruit is attached naturally);
- (3) unpressed or separated in individual fruit, pedicel may be missing, arranged in layers, or loose in the package; and
- (4) stems presented in clusters or separated from the rachis must be at least 10 cm in length and carry an average of four fruits per 10 cm of length.

Where the dates are presented in stems or clusters, there may be a maximum of 10 percent of loose dates.

The ends of the stems must be cleanly cut.

##### 1.3.2 Pitted and capped in their natural state. May be classified as sub-styles as follows:

- (1) unpressed or separated in individual fruit, arranged in layers, or loose in the package; and
- (2) pressed – dates which are compressed into layers using mechanical force.

## 2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

### 2.1 Composition

#### 2.1.1 Basic ingredients

Dates as defined in Section 1.1 (Product definition).

#### 2.1.2 Optional ingredients

- (1) glucose syrup
- (2) white rice flour

## 2.2 Quality criteria

### 2.2.1 Moisture content

| Varietal type          | Maximum moisture content<br>% (by mass)                    |
|------------------------|--|
| Cane sugar varieties   | 26   |
| Deglet Noor            | 30<br>(not processed in accordance with 1.1(4) and 1.1(5)) |
| Invert sugar varieties | 30   |

### 2.2.2 Sizing (optional)

2.2.2.1 Dates may be sized depending on the varieties. When sized, in accordance with existing trade practices, the method used and sized must be indicated.

#### 2.2.2.2 Size tolerance

Size tolerance 10 percent by weight or number for produce not conforming to the size indicated (if sized).

### 2.2.3 Definition of defects

- (1) Blemishes – scars, discolouration, sunburn, dark spots, blacknose or similar abnormalities in surface appearance affecting an aggregate area greater than that of a circle 7 mm in diameter or 5 mm long or wide.
- (2) Damaged – dates affected by mashing and/or tearing of the flesh exposing the pit or to such an extent that it significantly detracts from the visual appearance of the date.
- (3) Unpollinated dates – dates not pollinated as evidenced by thin flesh, immature characteristics and no pit in unpitted dates.
- (4) Damage by pests – visible damage caused by insects, mites, rodents or other animal pests.
- (5) Scouring – breakdown of the sugars into alcohol and acetic acid by yeasts and bacteria.
- (6) Decay – dates that are in a state of decomposition and very objectionable in appearance.

### 2.2.4 Defects and allowances

- (1) Unpitted dates shall not show significant damage.
- (2) Dates should be practically free from dates belonging to other varieties than that indicated on the package.
- (3) The maximum allowances for certain defects defined in Section 2.2.3 shall be:

| Defects allowed  | Tolerances allowed<br>Percentage of defective produce<br>by number or weight |
|--|--|
| <b>1. Tolerances for produce not satisfying the following minimum requirements, of which no more than:</b> | <b>20</b>  |
| 1.1 Immature or unpollinated fruit   | 4  |
| 1.2 Sour, decayed or mouldy fruit  | 1  |
| 1.3 Damaged by pest  | 12   |
| 1.4 Blemished, discoloured or blacknose, sunburnt, cracking of the flesh                                   | 7  |
| 1.5 Dates belonging to other varieties than that indicated on the package.                                 | 5  |

| Defects allowed  | Tolerances allowed<br>Percentage of defective produce<br>by number or weight |
|--|--|
| <b>2. Tolerance for other defects</b>                                      |  |
| 2.1 Foreign matter (by weight)   | 1  |
| 2.2 Unpitted among pitted fruit (by number)                                | 2  |
| 2.3 Presence of perianths or part of perianth in pitted fruits (by number) | 2 per 100 dates  |
| 2.4 Pits (stones) (in pitted style)  | Not more than two pits or four pieces of pit per 100 dates                   |

### 3. FOOD ADDITIVES

Only humectants used in accordance with Table 1 and Table 2 of the *General standard for food additives* (CXS 192-1995)<sup>3</sup> in food category 04.1.2.2 (Dried fruit) or listed in Table 3 of the *General standard for food additives* are acceptable for use in foods conforming to Annex B of this standard.

### 4. LABELLING

4.1 The name of the product shall be “dates” or optionally “dates coated with glucose syrup”.

4.2 The style shall be indicated as “pitted” or “unpitted”, as is applicable.

4.3 The name of the product may include the name of the varietal type, such as *Hallawi*, *Saher*, *Khadhrawi*, *Deglet Noor*, *Barhee*, *Majhoul*, *Boufeggous*, *Najda* or others, the substyle as “pressed” or “unpressed”, and the size designation.

### 5. METHODS OF ANALYSIS AND SAMPLING

#### 5.1 Special provisions for sampling of dates

##### 5.1.1 Gross sample

Select at random not less than two individual packages per each 1 000 kg portion of the lot. From each individual package draw a sample of 300 g and in any case sufficient to obtain a gross sample of not less than 3 000 g. Use the gross sample for checking carefully for live infestation and general cleanliness of the product prior to its examination for compliance with other provisions of the standard.

## RAISINS

In addition to the general provisions applicable to dried fruits, the following specific provisions apply:

### 1. DESCRIPTION

#### 1.1 Product definition

Raisins or sound dried grapes is the product:

- (1) prepared from fruits or bunch of berries of the varieties conforming to the characteristics of *Vitis vinifera* L. (but excluding currant types); and
- (2) processed by drying in an appropriate manner into a form of marketable raisin with or without coating with suitable optional ingredients.

#### 1.2 Style

##### 1.2.1 Type groups

- (1) Seedless – prepared from grapes that are naturally seedless or almost seedless.
- (2) Seed-bearing – prepared from grapes that possess seeds, which may or may not be removed in processing.

##### 1.2.2 Forms

- (1) Non-seeded (or unseeded) – with seeds not removed in seed-bearing types.
- (2) Seeded – with seeds removed mechanically in seed-bearing types.
- (3) Clusters – with main bunch stem attached.

### 2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

#### 2.1 Composition

##### 2.1.1 Basic ingredients

Raisins as defined in Section 1.1 (Product definition).

##### 2.1.2 Optional ingredients

- (1) flour (e.g. rice flour, corn flour); and
- (2) edible vegetable oil.

#### 2.2 Quality criteria

##### 2.2.1 Moisture content

**Maximum moisture content  
% (by mass)**

|                                    |    |
|------------------------------------|----|
| Malaga Muscatel type               | 31 |
| Monukka and seed-bearing varieties | 19 |
| All other styles and/or types      | 18 |

##### 2.2.2 Sizing

Size is optional. However, when sized, size is determined by:

- (1) screening, i.e. minimum diameter; or
- (2) count, i.e. maximum number of berries per unit of 100 g.



### 2.2.3 Definitions of defects

- (1) Piece of stem – refers to a portion of the branch or main stem.
- (2) Cap-stem – the dried small woody stem that attaches the individual grape to the bunch exceeding 3 mm in length which attaches the grape to the branch of the bunch and whether or not attached to a raisin. (Cap-stems are not considered a defect in “unstemmed” Malaga Muscatel type raisins or lots presented with cap-stems. In considering allowances for cap-stems on a “percentage by count” basis, cap-stems that are loose are counted as being on a raisin).
- (3) Immature or undeveloped raisins – refers to raisins that:
  - (i) are extremely light-weight berries, lacking in sugary tissue indicating incomplete development;
  - (ii) are completely shrivelled with practically no flesh; and
  - (iii) may be hard.
- (4) Damaged raisins – raisins affected by sunburn, scars, mechanical injury, or other similar means which seriously affect the appearance, edibility, keeping quality, or shipping quality.  
 In the “seedless” type, normal mechanical injury resulting from removal of cap-stems is not considered “damage”.
- (5) Sugared raisins – raisins with external or internal sugar crystals which are readily apparent and seriously affect the appearance of the raisin. Raisins that are sugar coated or to which sugar is added intentionally are not considered “sugared raisins”.
- (6) Seeds (in seeded forms) – substantially whole, fully developed seeds which have not been successfully removed during processing of seeded forms.

### 2.2.4 Defects and allowances

- (1) Raisins shall not contain excessive defects (whether or not specifically defined or as allowed in this standard). Certain common defects as defined in Section 2.2.3 (Definition of defects) may not exceed the limitations specified as follows:

| Defect allowed   | Percent by weight |              | Pieces by count in 100 g |              |
|--|-------------------|--------------|--------------------------|--------------|
|  | Seedless          | Seed-bearing | Seedless                 | Seed-bearing |
| <b>1. Tolerances for produce not satisfying the following requirements.</b>              |                   |              |                          |              |
| Total tolerance  | 15                | 15           | -                        | -            |
| 1.1 Underdeveloped berries   | 5                 | 8            | -                        | -            |
| 1.2 Mouldy   | 4                 | 4            | -                        | -            |
| 1.3 Damage by pests, sunburn, mechanical damage  | 3                 | 3            | -                        | -            |
| 1.4 Berries having seeds in seedless types   | -                 | -            | 1                        | -            |
| 1.5 Berries with cap-stem attached (applies only to raisins presented without cap-stems) | -                 | -            | 3                        | 1            |

|   |      |      |   |   |
|---|------|------|---|---|
| <b>2. Tolerances for other defects</b>                      |      |      |   |   |
| 2.1 Extraneous vegetable material excluding pieces of stems | 0.03 | 0.03 | - | - |
| 2.2 Foreign matter  | 0.01 | 0.01 | - | - |
| 2.3 Sugared   | 15   | 15   | - | - |
| 2.4 Pieces of stem (maximum number of pieces in 1 kg)       | -    | -    | 2 | 2 |

### 3. FOOD ADDITIVES

- 3.1** Humectants used in accordance with Table 1 and Table 2 of the *General standard for food additives* (CXS 192-1995)<sup>3</sup> in food category 04.1.2.2 (Dried fruit) or listed in Table 3 of the *General standard for food additives* are acceptable for use in foods conforming to Annex C of this standard.
- 3.2** Sulphur dioxide (INS 220) as a bleaching agent for bleached raisins used in accordance with Table 1 and Table 2 of the *General standard for food additives* in food category 04.1.2.2 (Dried fruit) is acceptable for use in foods conforming to Annex C of this standard.

### 4. LABELLING

#### 4.1 Name of the food

- 4.1.1** The name of the product shall be “raisins”; or it shall be “sultanas” in those countries where the name sultana is used to describe certain types of raisins.
- 4.1.2** If the raisins are bleached, part of the name shall include a meaningful term as customarily understood and used in the country of sale, such as “bleached”, “golden”, or “golden bleached”.
- 4.1.3** If raisins are of the seed-bearing type, the name of the product shall include, as appropriate:
- (1) the description “seeded” or “with seeds removed”;
  - (2) the description “non-seeded”, “unseeded”, “with seeds”, or similar description indicating that the raisins are naturally not seedless, except in cluster form and Malaga Muscatel type.
- 4.1.4** If raisins are in cluster form, the name of the product shall include the description “clusters”, or a similar appropriate description.
- 4.1.5** If raisins intentionally do not have cap-stems removed, the name of the product shall include the description “unstemmed” or a similar appropriate description, except in cluster form and Malaga Muscatel type.
- 4.1.6** Where a characteristic coating or similar treatment has been used, appropriate terms may be included as part of the name of the product or in close proximity to the name: e.g. “sugar coated”, “coated with X”

#### 4.2 Optional declarations

- 4.2.1** Raisins may be described as “natural” when they have not been subjected to dipping in an alkaline lye as an aid to drying nor subjected to bleach treatment, and in accordance with the *General guidelines on claims* (CXG 1-1979).<sup>11</sup>
- 4.2.2** Raisins may be described as “seedless” when they are of that type.
- 4.2.3** The product name may include the variety or varietal type group of raisins.

## ANNEX D

## DRIED LONGANS

In addition to the general provisions applicable to dried fruits, the following specific provisions apply:

## 1. DESCRIPTION

### 1.1 Product definition

Dried longan is the product prepared from fresh mature fruit of *Dimocarpus longan* Lour., of Sapindaceae family which has been peeled or unpeeled, pitted or unpitted and dehydrated without immersing longans in sugar solution prior to drying.

### 1.2 Style

- (1) Dried whole longan – fruit, unpeeled and unpitted.
- (2) Dried longan flesh – peeled and pitted whole fruit of irregular shape, size and thickness.
- (3) Dried longan stuffed with fruit paste – peeled and pitted whole fruit of irregular shape, size and thickness and stuffed with fruit paste.

## 2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

### 2.1 Composition

#### 2.1.1 Basic ingredients

Longans as defined in Section 1.1.

#### 2.1.2 Optional ingredients

Edible stuffing material such as fruit paste.

### 2.2 Quality criteria

#### 2.2.1 Moisture content

| Dried longans                          | Maximum moisture content<br>% (by mass)                                    |
|--|--|
| Dried whole longans                    | 13.5<br>(whole fruit including flesh, seed and peel)<br>17<br>(flesh only) |
| Dried longan flesh                     | 18   |
| Dried longans stuffed with fruit paste | Shall be sufficiently dried to ensure food safety                          |

#### 2.2.2 Classification

In accordance with the defects allowed in Section 2.2.6 (Defects and allowances), the following two styles of dried longans can be classified into the following classes:

- (1) dried whole longan – extra class, class I, class II, class III; and
- (2) dried longan flesh – extra class, class I, class II.

The defects allowed must not affect the general appearance of the produce as regards quality, keeping quality and presentation in the package.

### 2.2.3 Sizing

Sizing of dried longans is optional. However, when sized, size for the following two styles of dried longans is determined as follows:

(1) Dried whole longan

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

| Size code | Diameter (cm) |
|-----------|---------------|
| 1         | ≥2.8          |
| 2         | <2.8–2.5      |
| 3         | <2.5–2.2      |
| 4         | <2.2–2.0      |
| 5         | <2.0–1.8      |

(2) Dried longan flesh

Size is determined by the number of fruits per 100 g in accordance with the following table:

| Size code | Number of peeled and pitted whole fruits per 100 g |
|-----------|--|
| 1         | 50–60  |
| 2         | 61–70  |
| 3         | 71–85  |
| 4         | 86 and over  |

### 2.2.4 Size tolerances

For all classes, 10 percent tolerances by number or weight of dried longans corresponding to the size immediately above or below that indicated on the package.

### 2.2.5 Definition of defects

| Defects         | Definition   |
|-----------------|--|
| Cracks          | Broken on fruit surface, caused by mechanical actions.   |
| Defect in shape | Deformation of peel caused by drying process affecting more than 20% of the total surface area of dried whole longans. |
| Syrup stains    | Stains caused by the seeping of longan syrup through the cracks or peduncle during dehydration.                        |
| Broken flesh    | Dried longan flesh affected by tearing of the flesh into two or more parts.  |

### 2.2.6 Defects and allowances

The allowances for the defects defined in Section 2.2.6 shall be:

(1) Dried whole longans

| Defects         | Maximum allowed % (by mass) |         |          |           |
|-----------------|-----------------------------|---------|----------|-----------|
|                 | Extra class                 | Class I | Class II | Class III |
| Crack           | 1                           | 2       | 3        | 4         |
| Defect in shape | 3                           | 5       | 7        | 10        |
| Syrup stains    | 1                           | 5       | 10       | 15        |

(2) Dried longan flesh

| Defects                       | Maximum allowed % (by mass) |         |          |
|-------------------------------|-----------------------------|---------|----------|
|                               | Extra class                 | Class I | Class II |
| Broken flesh                  | 1                           | 2       | 10       |
| Extraneous vegetable material | 1                           | 2       | 5        |

(3) Freeze-dried longan stuffed with fruit paste

The maximum allowance for broken flesh shall be 7 percent by mass.

## 3. FOOD ADDITIVES

### 3.1 "Dried whole longan"

None permitted.

### 3.2 "Dried longan flesh" and "freeze-dried longan stuffed with fruit paste"

Only preservatives used in accordance with Table 1 and Table 2 of the *General standard for food additives* (CXS 192-1995)<sup>3</sup> in food category 04.1.2.2 (Dried fruit) or listed in Table 3 of the *General standard for food additives* are acceptable for use in "dried longan flesh" and "freeze-dried longan stuffed with fruit paste" conforming to Annex D of this standard.

## 4. LABELLING

4.1 The name of the product shall be "dried longan", "dehydrated longan" or "freeze-dried longan" as appropriate.

4.2 The style shall be indicated as "dried whole longan", "dried longan flesh", "freeze-dried longan flesh" or "freeze-dried longan flesh stuffed with" as appropriate.

## DRIED PERSIMMONS

In addition to the general provisions applicable to dried fruits, the following specific provisions apply:

### 1. DESCRIPTION

#### 1.1 Product definition

Dried persimmon is the product:

- (1) prepared from clean sound ripe fruit of a quality suitable for human consumption, of the varieties conforming to the characteristics of *Diospyros kaki Thunb*; and
- (2) processed by drying either by the sun or by other methods of dehydration into a form of marketable dried product.

#### 1.2 Style

Styles may be classified as:

- (1) whole – whole fruit, unpeeled or peeled, unpitted or pitted and flattened; and
- (2) sliced/pieces – peeled, pitted, and sliced persimmon flesh of irregular shape, size and thickness.

### 2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

#### 2.1 Composition

##### 2.1.1 Basic ingredients

Fruits as defined in Section 1.1.

##### 2.1.2 Optional ingredients

- (1) flour (e.g. rice flour, corn flour);
- (2) edible vegetable oils; and
- (3) edible material as may be appropriate to stuffing the product.

#### 2.2 Quality criteria

##### 2.2.1 Colour, flavour, odour and texture

Dried persimmon shall have normal colour, flavour and odour characteristic of dried persimmons, corresponding to the variety of persimmons.

##### 2.2.2 Moisture content

| Dried persimmon                                      | Moisture content % (by mass)          |
|--|---------------------------------------|
| (1) Dried whole persimmon                            | Not less than 20 and not more than 35 |
| (2) High moisture, semi-dried fruit                  | Not less than 35 and not more than 60 |
| (3) Dried persimmon flesh, peeled, pitted and sliced | Not less than 15 and not more than 40 |

### 2.2.3 Sizing

Sizing of dried persimmons is optional. However, when sized, size is determined as follows:

- (1) dried whole persimmon may be sized in accordance with Table 1.

**Table 1** Dried whole persimmon

| Size code | No. of fruit per 1 kg |
|-----------|-----------------------|
| 1         | Over 34               |
| 2         | 26–33                 |
| 3         | 21–25                 |
| 4         | 16–20                 |
| 5         | Less than 15          |

- (2) high moisture/semi-dried whole persimmon may be sized in accordance with Table 2.

**Table 2** High moisture/Semi-dried whole persimmon

| Size code | No. of fruit per 1 kg |
|-----------|-----------------------|
| 1         | Over 21               |
| 2         | 16–20                 |
| 3         | 11–15                 |
| 4         | Less than 10          |

### 2.2.4 Size tolerance

Size tolerance 10 percent for produce not conforming to the size indicated, if sized.

### 2.2.5 Definition of defects

- (a) cracks – broken on fruit surface;
- (b) defect in shape – deformation in circular shape caused by drying process affecting more than 20 percent of the total surface area of dried whole persimmons; and
- (c) unclean fruit – fruit affected by imbedded dirt or any other visible foreign material.

### 2.2.6 Defects and allowances

| Defect allowed   | Tolerances allowed percentage of defective produce, by weight |
|--|---|
| <b>1. Tolerances for produce not satisfying the following minimum requirements, of which no more than</b>  | 10  |
| 1.1 Injuries calluses and damage caused by heat during drying, cuts/broken flesh, cracks, defects in shape | 5   |
| 1.2 Mouldy   | 3   |
| 1.3 Damaged by pests, rotting or deterioration   | 3   |

| Defect allowed                                     | Tolerances allowed percentage of defective produce, by weight |
|--|---|
| 1.4 Extraneous matter, skin fragments among peeled | 2   |
| 1.5 Foreign matter                                 | 1   |
| <b>2. Presence of pieces among whole peeled</b>    | 10  |

**Note:** All sample units for the inspection for defects shall be a minimum of 1 kg.

### 3. FOOD ADDITIVES

Only preservatives used in accordance with Table 1 and Table 2 of the *General standard for food additives* (CXS 192-1995)<sup>3</sup> in food category 04.1.2.2 (Dried fruit) or listed in Table 3 of the *General standard for food additives* are acceptable for use in foods conforming to Annex E of this standard.

### 4. LABELLING

- 4.1** The name of the product shall be “dried persimmon”, “dehydrated persimmon” or “semi-dried whole persimmon” as appropriate.
- 4.2** The style shall be indicated as “dried whole peeled persimmon” or “dried slices or pieces peeled persimmon” as appropriate.



## NOTES

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- <sup>1</sup> FAO and WHO. 1999. *Standards for sugars*. Codex Alimentarius Standard, No. CXS 212-1999. Codex Alimentarius Commission. Rome.
- <sup>2</sup> FAO and WHO. 1981. *Standard for honey*. Codex Alimentarius Standard, No. CXS 12-1981. Codex Alimentarius Commission. Rome.
- <sup>3</sup> FAO and WHO. 1995. *General standard for food additives*. Codex Alimentarius Standard, No. CXS 192-1995. Codex Alimentarius Commission. Rome.
- <sup>4</sup> FAO and WHO. 2008. *Guidelines for the use of flavourings*. Codex Alimentarius Guideline, No. CXG 66-2008. Codex Alimentarius Commission. Rome.
- <sup>5</sup> FAO and WHO. 1995. *General standard for contaminants and toxins in food and feed*. Codex Alimentarius Standard, No. CXS 193-1995. Codex Alimentarius Commission. Rome.
- <sup>6</sup> FAO and WHO. 1969. *General principles of food hygiene*. Codex Alimentarius Code of Practice, No. CXC 1-1969. Codex Alimentarius Commission. Rome. <https://doi.org/10.4060/cc6125en>
- <sup>7</sup> FAO and WHO. 1997. *Principles and Guidelines for the establishment and application of microbiological criteria related to foods*. Codex Alimentarius Guideline, No. CXG 21-1997. Codex Alimentarius Commission. Rome.
- <sup>8</sup> FAO and WHO. 1985. *General standard for the labelling of pre-packaged foods*. Codex Alimentarius Standard, No. CXS 1-1985. Codex Alimentarius Commission. Rome.
- <sup>9</sup> 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.
- <sup>10</sup> FAO and WHO. 1999. *Recommended methods of analysis and sampling*. Codex Alimentarius Standard, No. CXS 234-1999. Codex Alimentarius Commission. Rome.
- <sup>11</sup> FAO and WHO. 1979. *General guidelines on claims*. Codex Alimentarius Guideline, No. CXG 1-1979. Codex Alimentarius Commission. Rome.