

**CODEX STANDARD FOR CONCENTRATED ORANGE JUICE**  
**PRESERVED EXCLUSIVELY BY PHYSICAL MEANS**<sup>1</sup>  
**CODEX STAN 64-1981**  
**(World-wide Standard)**

1. **DESCRIPTION**

Concentrated orange juice is the unfermented product which is capable of fermentation after reconstitution, preserved exclusively by physical means,<sup>2</sup> obtained by the process of concentration (as defined in Section 1.1) from the raw materials as described in Section 1.2.

1.1 **Process Definition**

The process of concentration consists of the physical removal of water until the product has a soluble orange solids content of not less than 20% m/m as determined by refractometer at 20 °C, uncorrected for acidity and read as ° Brix on the International Sucrose Scales (exclusive of added sugars), and may include the addition of (1) juice or concentrate or of water suitable for the purpose of maintaining the essential composition and quality factors of the concentrate and (2) natural volatile orange juice components where these have been removed.

1.2 The raw material from which this product is obtained is unfermented but fermentable orange juice obtained by a mechanical process from sound, ripe oranges (*Citrus sinensis* (L.) Osbeck).

2. **ESSENTIAL COMPOSITION AND QUALITY FACTORS**

2.1 **Requirements for the Juice after Reconstitution**

The product obtained by reconstituting the concentrated orange juice in accordance with Section 6.8 of this standard shall comply with all the provisions of the Codex Standard for Orange Juice Preserved Exclusively by Physical Means (Ref. No. CODEX STAN 45-1981), except that the soluble orange solids shall be not less than 11% m/m (exclusive of added sugars) as determined in Section 1.1.

2.2 **Sugars**

One or more solid sugars, as defined by the Codex Alimentarius Commission may be added. The total quantity of added sugars shall not exceed 50 g/kg in the product obtained by reconstituting the concentrated orange juice to 11 °Brix (exclusive of added sugars) as determined in Section 1.1 and in accordance with Section 6.8 of this standard.

2.3 The juice or concentrate of *Citrus reticulata* Blanco may be added in such quantity that the weight of soluble solids of *Citrus reticulata* Blanco

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<sup>1</sup> Formerly CAC/RS 64-1972.

<sup>2</sup> For the purpose of this standard and at this time preservation by physical means does not include ionizing radiation.

contributed by such addition does not exceed 10% of the weight of total soluble solids in the finished concentrate.

### 3. CONTAMINANTS

When orange juice concentrate is reconstituted in accordance with Section 6.8 of this standard, the limits of contaminants shall not exceed those laid down in Section 3 of the Codex Standard for Orange Juice Preserved Exclusively by Physical Means (Ref. No. CODEX STAN 45-1981).

### 4. HYGIENE

4.1 It is recommended that the products covered by the provisions of this standard be prepared in accordance with the Recommended International Code of Hygienic Practice for Canned Fruit and Vegetable Products (Ref. No. CAC/RCP 2-1969) and the General Principles of Food Hygiene (Ref. No. CAC/RCP 1-1969, Rev. 2-1985) recommended by the Codex Alimentarius Commission.

4.2 When tested by appropriate methods of sampling and examination, the product:

(a) shall be free from microorganisms capable of development under normal conditions of storage; and

(b) shall not contain any substances originating from microorganisms in amounts which may represent a hazard to health.

### 5. WEIGHTS AND MEASURES

#### 5.1 Fill of Container

##### 5.1.1 Minimum Fill (exclusive of bulk packs)

The concentrated orange juice shall occupy not less than 90% v/v of the water capacity of the container. The water capacity of the container is the volume of distilled water at 20 °C which the sealed container will hold when completely filled.

### 6. MARKING OR LABELLING

#### 6.1 Containers Destined for the Final Consumer

In addition to the requirements of the Codex General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985, Codex Alimentarius, Volume 1), the following specific provisions apply:

##### 6.1.1 The Name of the Food

6.1.1.1 The name of the product shall be "concentrated orange juice", except that where sugar or sugars have been added in a quantity greater than 15 g/kg in the product obtained by reconstituting the concentrated orange juice in accordance with Section 6.8 of this standard, the words "x added" shall plainly and conspicuously accompany the name "concentrated orange juice" where "x" represents the name or names of the sugar or sugars added. If the ratio of the total soluble solids, as determined in Section 1.1, to the total titratable acid

expressed as anhydrous citric acid is more than 15 to 1, the word "sweetened" may be used in lieu of the statement "x added".

#### 6.1.2 List of Ingredients

A complete list of ingredients shall be declared on the label in descending order of proportion except that the components mentioned in 1.1 need not be declared.

#### 6.1.3 Additional Requirements

The following specific provisions shall apply:

6.1.3.1 No fruit or fruit juice may be represented pictorially on the label except oranges or orange juice.

6.1.3.2 Where concentrated orange juice requires to be kept under conditions of refrigeration, there shall be information for keeping and, if necessary, thawing of the product.

#### 6.1.4 Degree of Concentration

Instructions for dilution shall be given on the container by stating the percentage of soluble orange solids (exclusive of added sugar), by weight as determined by refractometer at 20 °C, uncorrected for acidity, and read as °Brix on the International Sucrose Scales, or, in the case of prepackaged products, by stating the number of parts by volume of water which are required to be added to one part by volume of the concentrated juice in order to obtain juice which complies with all the provisions of the Codex Standard for Orange Juice Preserved Exclusively by Physical Means (Ref. No. CODEX STAN 45-1981), except that the soluble solids shall be not less than 11% m/m (exclusive of added sugars) as determined in Section 1.1.

#### 6.1.5 Date Marking

The "date of minimum durability" shall be declared by the month and year in uncoded numerical sequence except that for products with a shelf-life of more than 18 months the year will suffice.

#### 6.1.6 Storage Instructions

Where practicable, storage instructions should be in close proximity to the date-marking.

### 6.2 Non-Retail Containers

In the case of concentrated orange juice in bulk, the information required by Section 6.1 shall either be given on the container or in accompanying documents except that the name of the product and the name and address of the manufacturer or packer should appear on the container. However, the name and address of the manufacturer or packer may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

## 7. METHODS OF ANALYSIS AND SAMPLING

See Part VI of this publication.