

**CODEX STANDARD FOR GRAPEFRUIT JUICE
PRESERVED EXCLUSIVELY BY PHYSICAL MEANS¹
CODEX STAN 46-1981
(World-wide Standard)**

1. **DESCRIPTION**

Unfermented but fermentable juice, intended for direct consumption obtained by a mechanical process from the endocarp of sound, ripe grapefruit (*Citrus paradisi* Macfayden), preserved exclusively by physical means.² The juice may have been concentrated and later reconstituted with water suitable for the purpose of maintaining the essential composition and quality factors of the juice.

2. **ESSENTIAL COMPOSITION AND QUALITY FACTORS**

2.1 **Soluble Solids**

The soluble grapefruit solids content of grapefruit juice (exclusive of added sugars) shall be not less than 9% m/m as determined by refractometer at 20 °C, uncorrected for acidity and read as °Brix on the International Sucrose Scales.

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.

2.3 **Ethanol Content**

The ethanol content shall not exceed 3 g/kg.

2.4 **Essential Oils**

The essential oils content shall not exceed 0.3 ml/kg.

2.5 **Organoleptic Properties**

The product shall have the characteristic colour, aroma and flavour of grapefruit juice. Natural volatile grapefruit juice components may be restored to any grapefruit juice from which natural volatile grapefruit juice components have been removed.

2.6 **Use of Concentrates**

The addition of concentrate to juice is permitted. Only concentrate from

¹ Formerly CAC/RS 46-1971.

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

grapefruit (*Citrus paradisi* Macfayden) may be used.

3. CONTAMINANTS

	<u>Maximum level</u>
3.1 Arsenic (As)	0.2 mg/kg
3.2 Lead (Pb)	0.3 mg/kg ¹
3.3 Copper (Cu)	5 mg/kg
3.4 Zinc (Zn)	5 mg/kg
3.5 Iron (Fe)	15 mg/kg
3.6 Tin (Sn)	250 mg/kg ¹
3.7 Sum of copper, zinc and iron	20 mg/kg
3.8 Sulphur dioxide	10 mg/kg

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

The grapefruit 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:

¹ These limits remain under review.

6.1.1 The Name of the Food

6.1.1.1 The name of the product shall be "grapefruit juice", except that where sugar or sugars have been added in a quantity greater than 15 g/kg the word "x added" shall plainly and conspicuously accompany the name "grapefruit juice", where "x" represents the name or names of the sugar or sugars added.

6.1.1.2 If the ratio of the total soluble solids, as determined in 2.1, to the total titratable acid expressed as anhydrous citric acid is more than 12 to 1, the word "sweetened" may be used in lieu of the statement "x added".

6.1.2 List of Ingredients

6.1.2.1 A complete list of ingredients shall be declared on the label in descending order of proportion, except that water added for reconstitution of juice according to Section 1 need not be declared.

6.1.2.2 In the case of grapefruit juice made from concentrate, the fact of reconstitution shall be declared in the list of ingredients as follows: "grapefruit juice made from concentrate" or "reconstituted grapefruit juice" or "grapefruit juice made from concentrated grapefruit juice". If there are no ingredients to be listed in accordance with Section 6.1.2.1, the expression "grapefruit juice made from concentrate" or "reconstituted grapefruit juice" or "grapefruit juice made from concentrated grapefruit juice" shall appear on the label.

6.1.3 Additional Requirements

The following additional specific provisions shall apply:

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

6.1.3.2 Where grapefruit 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 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.

6.1.5 Storage Instructions

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

6.2 Non-Retail Containers

In the case of grapefruit 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.