

CODEX STANDARD FOR APPLE JUICE
PRESERVED EXCLUSIVELY BY PHYSICAL MEANS¹
CODEX STAN 48-1981
(World-wide Standard)

1. **DESCRIPTION**

Unfermented but fermentable juice, intended for direct consumption, obtained by a mechanical process from sound, ripe apples (*Pyrus malus* L.) preserved exclusively by physical means.² The juice may be turbid or clear. The juice may be clarified. 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 apple solids content of apple juice shall be not less than 10% m/m as determined by refractometer at 20 °C, uncorrected for acidity and read as °Brix on the International Sucrose Scales.

2.2 **Ethanol Content**

The ethanol content shall not exceed 5 g/kg.

2.3 **Volatile Acids**

The volatile acids content shall not exceed 0.4 g/kg expressed as acetic acid.

2.4 **Organoleptic Properties**

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

2.5 **Use of Concentrates**

The addition of concentrate to juice is permitted. Only concentrate from apples (*Pyrus malus* L.) may be used.

2.6 **Use of Carbon Dioxide**

The apple juice may be carbonated.

¹ Formerly CAC/RS 48-1971.

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

3. **FOOD ADDITIVES**Maximum level

3.1 L-ascorbic acid Limited by GMP

3.2 **Processing Aids**

3.2.1 Clarifying and filtering agents as approved by the Codex Alimentarius Commission and used in accordance with good manufacturing practices.

Maximum level

3.2.2 Vegetable carbon)

3.2.3 Nitrogen)

Limited by GMP

3.2.4 Carbon dioxide)

4. **CONTAMINANTS**Maximum level

4.1 Arsenic (As) 0.2 mg/kg

4.2 Lead (Pb) 0.3 mg/kg ¹

4.3 Copper (Cu) 5 mg/kg

4.4 Zinc (Zn) 5 mg/kg

4.5 Iron (Fe) 10 mg/kg

4.6 Tin (Sn) 150 mg/kg ¹

4.7 Sum of copper, zinc and iron 20 mg/kg

4.8 Sulphur dioxide 10 mg/kg

4.9 Mineral impurities insoluble in 10% hydrochloric acid shall not exceed 20 mg/kg.

5. **HYGIENE**

5.1 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.

5.2 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.

¹ These limits remain under review.

6. WEIGHTS AND MEASURES

6.1 Fill of Container

6.1.1 Minimum Fill

The apple 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.

7. MARKING OR LABELLING

7.1 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:

7.1.1 The Name of the Food

The name of the product shall be "apple juice".

7.1.2 List of Ingredients

7.1.2.1 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 and the processing aids specified in Section 3.2 need not be declared.

7.1.2.2 In the case of apple juice made from concentrate the fact of reconstitution shall be declared in the list of ingredients as follows: "apple juice made from concentrate" or "reconstituted apple juice" or "apple juice made from concentrated apple juice". If there are no ingredients to be listed in accordance with Section 7.1.2.1, the expression "apple juice made from concentrate" or "reconstituted apple juice" or "apple juice made from concentrated apple juice" shall appear on the label.

7.1.2.3 The addition of L-ascorbic acid shall be declared in the list of ingredients as:

- (a) "L-ascorbic acid as antioxidant", or
- (b) "antioxidant".

7.1.3 Additional Requirements

The following additional specific provisions shall apply:

7.1.3.1 No claims shall be made in respect of "Vitamin C" nor shall the term "Vitamin C" appear on the label unless the product contains such quantity of "Vitamin C" as would be accepted by national authorities in the country in which the product is sold as warranting such claim or the use of such term.

7.1.3.2 Where the product contains more than 2 g/kg of carbon dioxide the term "carbonated" shall appear in close proximity to the name and "carbon dioxide" shall also be declared in the list of ingredients.

7.1.3.3 No fruit or fruit juice may be represented pictorially on the label except apple or apple juice.

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

7.1.4 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.

7.1.5 Storage Instructions

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

7.2 Non-Retail Containers

In the case of apple juice in bulk, the information required in Section 7.1 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.

8. METHODS OF ANALYSIS AND SAMPLING

See Part VI of this publication.