

CODEX STANDARD FOR CITRUS MARMALADE¹**CODEX STAN 80-1981****1. SCOPE**

This standard applies to the product prepared from citrus fruit and commonly referred to as "Marmalade" and covers general and specific provisions.

1.2 This standard does not apply to:

- (a) products prepared from fruits other than citrus;
- (b) products made from ginger, pineapple, or figs (with or without the addition of citrus fruit) which are customarily described as marmalades of such fruit(s) but which conform to the requirements for jams and which are covered by the Joint FAO/WHO Codex Alimentarius Recommended International Standard for Jams (Fruit Preserves) and Jellies (Ref. CODEX STAN. 79-1981);
- (c) products prepared with non-carbohydrate sweeteners and designated as "diabetic" or "dietetic" or products with a low sugar content, which do not comply with the minimum requirement of this standard and which in some countries are commonly described as marmalade;
- (d) products clearly intended and marked as for manufacturing use.

2. DESCRIPTION**2.1 Product Definitions**

2.1.1 "Marmalade" is the product obtained by processing prepared citrus fruit (as defined in 2.2.1):

- (a) which may be whole fruit, fruit pulp, or fruit puree with some or all of the peel removed; and
- (b) with or without citrus juice and the extraction of peel; and
- (c) mixed with a carbohydrate sweetener, with or without water; and
- (d) processed to a suitable consistency.

¹ Formerly CAC/RS 80-1976.

2.1.2 "Jelly Marmalade" is the product as described in sub-section 2.1.1 from which all of the insoluble solids, or all of the insoluble solids except for a small proportion of thinly cut peel, have been removed.

2.2 Other Definitions

2.2.1 "Prepared citrus fruit" or "Prepared citrus fruit ingredient" means the product:

- (a) prepared from fruit which is fresh, processed, or preserved other than by drying; and
- (b) prepared from substantially sound, clean citrus fruit from which stems, calyces, and seeds have been removed and includes pulps, juices, concentrated juices, extractives and preserved peels; and
- (c) containing all natural soluble solids (extractives) except for those lost during preparation under good manufacturing practices.

3. ESSENTIAL COMPOSITION AND QUALITY CRITERIA

3.1 Composition

3.1.1 Basic ingredients

- prepared citrus fruit ingredient as defined in 2.2.1;
- one or more of the carbohydrate sweetener(s) (sugar(s)) defined by the Codex Alimentarius Commission, including sucrose, dextrose, invert sugar, invert sugar syrup, fructose, fructose syrup, glucose syrup, dried glucose syrup.

3.1.2 Optional ingredients

- citrus juice;
- essential oils;
- spirituous liquors;
- butter, margarine, other edible vegetable or animal oils (used as anti-foaming agents);
- honey.

3.2 Formulation

The product shall contain not less than 20 parts, by weight of prepared citrus fruit ingredient for each 100 parts, by weight, of finished marmalade. Peel in excess of amounts normally associated with the fruits is not considered a part of the fruit ingredient for purposes of compliance with minimum fruit content.

When concentrated or diluted citrus fruit ingredient is used, the formulation is based upon the equivalent of single strength fruit ingredient as determined by the relationship between the soluble solids of the concentrate or the dilution and the soluble solids of the natural (single strength) fruit ingredient.

3.3 Soluble Solids (Finished Product)

The soluble solids value of the finished product shall not be less than 65 percent.

3.4 Quality Criteria

3.4.1 General Requirements

The end product shall be viscous or semi-solid, have a colour and flavour normal for the type of citrus fruit used taking into consideration any flavour imparted by optional ingredients. The product shall be practically free from seeds, or seed particles, and extraneous plant material, and shall be reasonably free from other defects normally associated with the fruit.

3.4.2 Classification of "defectives"

A container that fails to meet one or more of the applicable quality requirements, as set out in sub-section 3.4.1 shall be considered a "defective".

3.4.3 Lot Acceptance

A lot will be considered as meeting the applicable quality requirements referred to in sub-section 3.4.1 when the number of "defectives", as defined in sub-section 3.4.2, does not exceed the acceptance number (c) of the appropriate sampling plan (AQL-6.5) in the Joint FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (Ref. No. CAC/RM 42-1969) (see Codex Alimentarius Volume 13).

4. FOOD ADDITIVES

4.1 Acidifying and pH Regulating Agents

Maximum Level

4.1.1 Citric acid	}	In sufficient amount to maintain
4.1.2 Malic acid	}	the pH at a level of 2.8-3.5
4.1.3 Lactic acid	}	
4.1.4 L-Tartaric acid }	}	L-tartaric acid
4.1.5 Fumaric acid	}	and fumaric acid
4.1.6 Sodium, potassium and calcium salts of any the	}	and their salts expressed as
of the acids listed in 4.1.1 through 4.1.5	}	acid, 3000 mg/kg
4.1.7 Sodium and potassium carbonates	}	

- 4.1.8 Sodium and potassium bicarbonates }
- 4.2 **Anti-Foaming Agents**
- 4.2.1 Mono and diglycerides of fatty acids of edible oils } Not more than is necessary to
} inhibit foaming
- 4.2.2 Dimethyl polysiloxane 10 mg/kg

Maximum Level

- 4.3 **Thickening Agents**
- 4.3.1 Pectins Limited by GMP
- 4.4 **Colours**
- 4.4.1 Caramel (not made by the Ammonia sulphite process) } Limited by GMP
}
- 4.4.2 Caramel (made by the Ammonia sulphite process) 1.5 g/kg
- 4.4.3 Sunset Yellow FCF 200 mg/kg
- 4.4.4 Tartrazine } 100 mg/kg, singly or in
} combination (in Lime
- 4.4.5 Fast Green FCF } Marmalade only)
- 4.5 **Preservatives**
- 4.5.1 Sorbic acid and potassium sorbate 500 mg/kg, singly or in
combination
- 4.5.2 Sulphur dioxide (as a carryover from raw material) 100 mg/kg based on the end
product)
- 4.6 **Flavours**
- Natural citrus fruit essences Limited by GMP
- 4.7 **Antioxidant**
- L-ascorbic acid 500 mg/kg
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 Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1-1969, Rev. 2 (1985) Codex Alimentarius Volume 1), and other Codes of Practice recommended by the Codex Alimentarius Commission which are relevant to this product.

5.2 To the extent possible in Good Manufacturing Practice, 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. WEIGHTS AND MEASURES

6.1 Fill of Container

6.1.1 Minimum Fill

The container shall be well filled with the product. When packed in rigid containers the product shall occupy not less than 90% 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.

6.1.2 Classification of "defectives"

A container that fails to meet the requirement for minimum fill (90 percent container capacity) of 6.1.1 shall be considered a "defective".

6.1.3 Lot Acceptance

A lot will be considered as meeting the requirements of 6.1.1 when the number of "defectives" does not exceed the acceptance number (c) of the appropriate sampling plan (AQL-6.5) in the Joint FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (Ref. No. CAC/RM 42-1969) (see Codex Alimentarius Volume 13).

7. LABELLING

In addition to the requirements of the Codex General Standard for the Labelling of Prepackaged Foods (Ref. No. CODEX STAN 1-1985), (Rev. 1-1991) Codex Alimentarius Volume 1, the following specific provisions apply:

7.1 The Name of the Food

7.1.1 The name of the product shall be "Marmalade" or "Jelly Marmalade" as appropriate.

7.1.2 Where the product is not made exclusively from oranges, the designation shall include the citrus fruits from which the product was prepared, except that this shall not be necessary where the proportion of citrus fruit other than orange does not exceed 10% by weight of the fruit content.

7.1.3 Except as provided for in 7.1.2, where the product is prepared from two or more citrus fruits, the designation shall include each citrus fruit present, with the fruits listed in the order of predominance.

7.1.4 The name of the product may include the name of the variety of citrus fruit (e.g. "Valencia Orange Marmalade").

7.1.5 The product may be designated according to the amount and type of peel present, depending upon the practice in the country in which it is sold.

7.1.6 When any ingredient has been added which imparts to the food the distinctive flavour of the ingredient, the name of the food shall be accompanied by the term "flavoured with X" or "X flavoured" as appropriate.

7.2 List of Ingredients

7.2.1 A complete list of ingredients shall be declared on the label in descending order of proportion in accordance with the General Standard for the Labelling of Prepackaged Foods (Ref. No. CODEX STAN. 1-1985), (Rev. 1-1991), Codex Alimentarius Volume 1.

7.2.2 If ascorbic acid is added to preserve colour, its presence shall be declared in the list of ingredients as ascorbic acid.

8. METHODS OF ANALYSIS AND SAMPLING

See Codex Alimentarius Volume 13.