

CODEX STANDARD FOR CANNED TOMATOES¹**CODEX STAN 13-1981****1. DESCRIPTION****1.1 Product Definition**

Canned tomatoes is the product:

- (a) prepared from washed, ripened tomatoes, conforming to the characteristics of the fruit of *Lycopersicon esculentum* P. Mill, of red or reddish varieties (cultivars) which are clean and which are substantially sound;
- (b) packed with or without a suitable liquid packing medium (other than added water), and seasoning ingredients appropriate to the product; and
- (c) processed by heat, in an appropriate manner, before or after being sealed in a container, so as to prevent spoilage. The tomatoes shall have had the stems and calices removed and shall have been cored, except where the internal core is insignificant as to texture and appearance.

1.2 Varietal Type

Tomatoes of distinct varietal groups with respect to shape or other similar physical characteristics may be designated as:

1.2.1 **Round:** globular or semi-globular shape.

1.2.2 **Pear or Egg or Plum:** elongated shape.

1.3 Styles

Canned tomatoes in these styles are normally prepared with peel removed; if the peel is not removed, the style is considered additionally as "Unpeeled":

1.3.1 Whole

1.3.2 Whole and Pieces

1.3.3 Pieces

1.3.4 Diced

1.3.5 Sliced

1.3.6 Wedges

¹ Formerly CAC/RS 13-1969 Rev. 1

1.4 Other Styles

Any other presentation of the product shall be permitted provided that the product:

- (a) is sufficiently distinctive from other forms of presentation laid down in this standard;
- (b) Meets all relevant requirements of this standard, including requirements relating to limitations on defects, drained weight, and any other requirements in this standard which are applicable to that style in the standard which most closely resembles the style or styles intended to be provided for under this provision.
- (c) is adequately described on the label to avoid confusing or misleading the consumer.

1.5 Types of Pack

1.5.1 Regular Pack - with a liquid medium added.

1.5.2 Solid Pack - without any added liquid.

1.5.3 Flavoured or Stewed or Seasoned - packed with vegetable ingredients, such as onions, peppers, and celery, not exceeding 10% m/m of the product.

2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

2.1 Packing Media

Canned tomatoes may be packed in the following packing media:

2.1.1 Juice: the unconcentrated, undiluted liquid from ripened tomatoes.

2.1.2 Residual material: the liquid strained from the residue from preparing tomatoes for canning.

2.1.3 Puree or Pulp: tomato puree or pulp (concentrated tomato juice).

2.1.4 Paste: tomato paste (highly concentrated tomato liquid).

2.2 Other Ingredients

2.2.1 Spices, spice oils, seasoning, starch.

2.2.2 Natural vegetable products such as onion, peppers, celery, and basil leaf, not exceeding in total 10% m/m of the product.

2.2.3 Salt.

2.2.4 When acidifying agents are used, sucrose, dextrose, and dried glucose syrup.

2.3 Quality Criteria

2.3.1 Definitions

2.3.1.1 **Whole or Almost Whole:** a tomato of any size in which the contour is not materially altered by coring or trimming; the unit may be readily restored to practically its original conformation; it may be slightly cracked or split but not to the extent that there is a material loss of placenta.

2.3.1.2 **Objectionable core material:** internal core material of tough and fibrous texture or tomato tissue representing the tomato core that is definitely objectionable as to appearance and edibility.

2.3.1.3 **Blemishes:** areas which are abnormal and contrast strongly in colour and/or texture with the normal tomato tissue and which would normally be removed in the preparation of tomatoes for culinary use.

2.3.1.4 **Extraneous plant material:** tomato leaves, stems, calyx bracts, and similar plant material.

2.3.1.5 **Peel (or skin):** considered a defect except in "Unpeeled" styles; it is that which adheres to the tomato flesh or is found loose in the container.

2.3.2 Colour

The colour of the drained tomatoes shall have normal colour characteristics for tomatoes that have been properly prepared and properly processed. Canned tomatoes containing other permitted ingredients shall be considered to be of characteristic colour when there is no abnormal discoloration for the respective ingredients used.

2.3.3 Flavour

Canned tomatoes shall have a normal flavour and odour free from flavours or odours foreign to the product and canned tomatoes with special ingredients shall have a flavour characteristic of that imparted by the tomatoes and the other substances used.

2.3.4 Size or Wholeness

Size or wholeness, as such, is only a factor in the style designated as "Whole" style. Canned tomatoes of "Whole" style shall consist of not less than 80% m/m of drained tomatoes in whole or almost whole units, except that in any container there may be one unit that is not whole or almost whole.

2.3.5 Allowances for Defects

The finished product shall be prepared from such materials and under such practices that it shall be substantially free from objectionable core material and extraneous plant material and shall not contain excessive defects whether specifically mentioned in this standard or not. Certain common defects shall not be present in amounts greater than the following limitations:

2.3.5.1 **Peel** (except in "Unpeeled" styles)

Average - not more than 15 square centimetres aggregate area per kg of total contents.

2.3.5.2 **Blemishes**

Average - not more than 3.5 square centimetres aggregate area per kg of total contents.

2.3.5.3 **Mould Count** (in accordance with the AOAC Method - see Codex Alimentarius Volume 13)

The juice or liquid portion may not have more than 50% positive fields.

2.3.6 **Classification of "Defectives"**

A container that fails to meet one or more of the applicable quality requirements as set out in sub-sections 2.3.2 through 2.3.5 (except peel and blemishes which are based on an average) shall be considered a "defective".

2.3.7 **Acceptance**

A lot will be considered as meeting the applicable quality requirements referred to in sub-section 2.3.6 when:

- (a) for those requirements which are not based on averages, the number of "defectives", as defined in sub-section 2.3.6, does not exceed the acceptance number (c) of the appropriate sampling plan in the Joint FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (1969) (AQL-6.5 (Ref. CAC/RM 42-1969) (See Codex Alimentarius Volume 13), and
- (b) the requirements which are based on sample averages are complied with.

3. **FOOD ADDITIVES**

3.1 **Acidifying Agents**

Maximum level

Acetic acid)
 Citric acid)
 Lactic acid)
 Malic acid)
 L-Tartaric acid)

Limited by GMP

3.2 **Firming Agents**

Calcium chloride)
 Calcium sulphate)
 Calcium citrate)
 Mono-calcium)
 content

0.80% total calcium ion content
 in the end product in the styles
 "diced", "sliced" and "wedges";
 0.045% total calcium ion

content

phosphate)
 Calcium lactate)

in the end product in the styles
 "whole", "whole and pieces"

and

Calcium gluconate)

"pieces".

4. **CONTAMINANTS**

Lead (Pb) 1 mg/kg
 Tin (Sn) 250 mg/kg calculated as Sn

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 method 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 containers shall be well filled with tomatoes and the product (including packing medium) 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 "Defective"

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

6.1.3 Acceptance

A lot will be considered as meeting the requirement of sub-section 6.1.1 when the number of "defectives" as defined in sub-section 6.1.2, does not exceed the acceptance number (c) of the appropriate sampling plan in the Joint FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (1969) (AQL-6.5) (Ref. CAC/RM 42-1969) (see Codex Alimentarius Volume 13).

6.1.4 Minimum Drained Weight

6.1.4.1 The drained weight of the product shall be not less than 50% of the weight of distilled water at 20°C which the sealed container will hold when completely filled.

6.1.4.2 The requirements for minimum drained weight shall be deemed to be complied with when the average drained weight of all containers examined is not less than the minimum required, provided that there is no unreasonable shortage in individual containers.

7. LABELLING

In addition to the requirements of the General Standard for the Labelling of Prepackaged Foods (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 include:

- (a) the designation "tomatoes", and
- (b) if the peel has not been removed, the word "Unpeeled".

7.1.2 The following shall be included as part of the name or in close proximity to the name of the product:

- the packing material: "tomato puree", "tomato pulp", or "tomato paste", where appropriate.

7.1.3 The following shall be so stated on the label as to be easily discernible by the consumer:

- (a) the style: "diced", "sliced", or "wedges", where appropriate.
- (b) the type: "flavoured", "seasoned", or "stewed", where appropriate, whichever of these terms is commonly used in the country concerned, or a declaration of the vegetable ingredients e.g. "with X", where appropriate.

7.1.4 The name of the product may, if the product complies with the requirements set out in sub-section 2.3.4, include:

the style: "Whole":

7.1.5 If the product is produced in accordance with the other styles provision (sub-section 1.4), the label shall contain in close proximity to the name of the product such additional words or phrases that will avoid misleading or confusing the consumer.

7.1.6 The following may be stated on the label:

- (a) the type: "solid pack" if the pack complies with sub-section 1.4.2;
- (b) the packing material: "juice" or "residual material" if the packing medium complies with sub-section 2.1.1 or 2.1.2, as appropriate.

8. METHODS OF ANALYSIS AND SAMPLING

See Codex Alimentarius Volume 13.