

CODEX STANDARD FOR CANNED PINEAPPLE¹**CODEX STAN 42-1981****1. DESCRIPTION****1.1 Product Definition**

Canned pineapple is the product (a) prepared from fresh, frozen, or previously canned, mature pineapple, conforming to the characteristics of *Ananas comosus* (L) Merr. (*Ananas sativus* (L) Lindl.) and from which peel and core have been removed, (b) packed with water or other suitable liquid medium; it may be packed with nutritive sweeteners, as specified in sub-section 2.1.1.1.3, seasonings, or other 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.

1.2 Varietal Type

Any commercially cultivated variety suitable for canning may be used.

1.3 Styles

Canned pineapple may be packed in the following styles:

1.3.1 **Whole:** cylindrical whole unit with the core removed.

1.3.2 **Slices or Spiral Slices or Whole Slice or Rings:** uniformly cut circular slices or rings cut across the axis of the peeled, cored pineapple cylinders.

1.3.3 **Half Slices:** uniformly cut, approximately semi-circular halves of slices.

1.3.4 **Quarter Slices:** uniformly cut, one-fourth portions of slices.

1.3.5 **Broken Slices:** arc-shaped portions which may not be uniform in size and/or shape.

1.3.6 **Spears or Fingers:** long, slender pieces cut radially and lengthwise or the cored pineapple cylinder, predominantly 65 mm or longer.

1.3.7 **Tidbits:** reasonably uniform, wedge-shaped sectors cut from slices or portions thereof, predominantly from 8 mm to 13 mm thick.

1.3.8 **Chunks:** short, thick pieces cut from thick slices and/or from peeled cored pineapple and predominantly more than 12 mm in both thickness and width, and less than 38 mm in length.

1.3.9 **Diced or Cubes:** reasonably uniform, cube-shaped pieces, predominantly 14 mm or less in the longest edge dimensions.

¹ Formerly CAC/RS 42-1970 Rev. 1 as amended.

1.3.10 **Pieces:** irregular shapes and sizes not identifiable as a specific style and does not include "chunks" or "chips" styles.

1.3.11 **Chips:** small, irregular shapes and sizes of pineapple pieces similar to that left over after dicing of pineapple and which may be included in crushed style.

1.3.12 **Crushed or Crisp Cut:** finely cut or shredded or grated or diced pieces of pineapple and which may include chips in the crushed mass.

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**

Canned pineapple may be packed in the following types of pack:

1.5.1 **Regular Pack:** with a liquid packing medium.

1.5.2 **Heavy Pack:** "Chips" or "Crushed" styles with or without sweetening ingredients and containing at least 73% drained fruit weight.

1.5.3 **Solid Pack:** "Chips" or "Crushed" styles with or without sweetening ingredients and containing at least 78% drained fruit weight.

2. **ESSENTIAL COMPOSITION AND QUALITY FACTORS**

2.1 **Basic Ingredients**

Pineapple with or without liquid packing media or with dry nutritive sweeteners appropriate to the product and other optional ingredients as follows:

2.1.1 **Packing media**²

2.1.1.1 Where a packing medium is used, it may consist of:

2.1.1.1.1 **Water:** in which water, or any mixture of water and pineapple juice, is the sole liquid packing medium;

2.1.1.1.2 **Juice:** in which natural pineapple juice, or clarified pineapple juice, is the sole liquid packing medium;

2.1.1.1.3 **Dry nutritive sweetener:** with one or more of the following nutritive sweeteners - sucrose, invert sugar, dextrose, dried glucose syrup - and without added liquid except such slight amounts of steam, water, or natural juice as occur in the normal canning of the product;

2.1.1.1.4 **Syrup:** in which water or juice is combined with one or more of the following nutritive sweeteners - sucrose, invert sugar, dextrose, dried glucose syrup, glucose syrup - and classified on the basis of cut-out strength as:

Extra Light Syrup: - not less than 10° Brix

Light Syrup: - not less than 14° Brix

Heavy Syrup: - not less than 18° Brix

Extra Heavy Syrup: - not less than 22° Brix

2.1.1.2 The cut-out strength of syrup shall be determined on sample average, but no container may have a Brix value lower than that of the minimum of the next category below.

2.1.2 **Other permitted ingredients**

Spices, spice oils, mint, vinegar.

2.2 **Quality Criteria**

2.2.1 **Definition of Defects**

2.2.1.1 **Blemish** - surface areas and spots which contrast strongly or colour or texture with the normal pineapple tissue or which may penetrate into the flesh. Such blemishes are normally removed in preparation of pineapple for culinary use and include deep fruit eyes, pieces of shell, brown spots, bruised portions and other abnormalities.

2.2.1.2 **Broken** - (considered a defect only in Sliced and Spear styles). A unit severed into definite parts; all of such portions that equal the size of a full-size unit are considered one defect in applying the allowances herein.

2.2.1.3 **Excessive Trim** - (considered a defect only in the styles of Whole, Slices including Spiral Slices, Half Slices, Quarter Slices and Spears). A unit trimmed to the extent that its normal shape and conformation

² See Annex to Part I.

is destroyed and detracts from the appearance of such unit. Trim will be considered "excessive" if the portion trimmed away exceeds five percent of the apparent physical bulk of the perfectly formed unit and if such trimming destroys the normal circular shape of the outer or inner edge of the unit.

2.2.2 **Flavour**

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

2.2.3 **Colour**

The colour of the product shall be normal for the varietal type. White radiating streaks may be present. Canned pineapple containing special ingredients shall be considered to be of characteristic colour when there is no abnormal discolouration for the respective ingredient used.

2.2.4 **Texture**

The canned pineapple shall have a reasonably good texture, the fruitlets shall be reasonably compact in structure, and the product shall be fairly free from porosity. The drained pineapple - of all styles - may contain no more than 7% by weight of "core material".³ In determining, the percentage of core material, the areas which consist of core material are trimmed from the pineapple unit and weighed against the drained fruit ingredient in the container.

2.2.5 **Uniformity of Size and Shape**

These requirements do not apply to canned pineapple in the styles of: Whole, Broken Slices, Pieces, Chips or Crushed.

2.2.5.1 ***Slices or Spiral Slices or Whole Slices or Rings*** - the weight of the largest slice in a container shall not be more than 1.4 times the weight of the smallest.

2.2.5.2 ***Half slices or quarter slices*** - the weight of the largest unit in a container shall be not more than 1.75 times the weight of the smallest, except for an occasional broken piece due to splitting or an occasional whole slice not completely cut through.

2.2.5.3 ***Spears or fingers*** - the weight of the largest unbroken unit in a container shall be not more than 1.4 times the weight of the smallest unbroken unit.

2.2.5.4 ***Tidbits*** - not more than 15% of the drained weight of pineapple in the container may consist of tidbits, each of which shall weigh less than three-fourths of the average weight of the untrimmed tidbits.

2.2.5.5 ***Chunks*** - not more than 15% of the drained weight of pineapple in the container may consist of pieces which weigh less than 5 grammes each.

³ The hard fibrous centre portion of the fruit.

2.2.5.6 **Cubes or Diced**

- (a) not more than 10% of the drained weight of pineapple in the container may consist of units of such size that they will pass through a screen that has square openings of 8 mm;
- (b) not more than 15% of the drained weight of pineapple in the container may consist of pieces which weight more than 3 grammes each.

2.2.6 **Allowances for Defects**

Canned pineapple shall not contain excessive defects (whether or not specifically defined or as allowed in this standard). Certain common defects shall not be present in amounts greater than the following limitations:

Styles	Units with Excessive Trim	Blemishes or Blemished Units
Whole	10% by count of fruit units (cylinders) ⁴	3 blemishes per fruit unit (cylinder)
Slices or Spiral Slices or Whole Slices; Half Slices; Quarter Slices	1 unit if 10 or less per can; 2 units if over 10 but not over 27 per can; <u>or</u> 7.5% by count if over 27 per can	1 unit if 5 or less per can; 2 units if over 5 but not over 10 per can; 4 units if over 10 but not over 32 per can; <u>or</u> 12.5% by count if over 32 per can
Spears	15% by count of all units	Same as for Slices and Half Slices
Broken Slices; Tidbits; Chunks; Cubes; Pieces	Not applicable	12.5% by count of all units
Chips; Crushed	Not applicable	Not more than 1.5% by weight of the drained fruit

2.2.7 **Classification of "Defectives"**

A container that fails to meet one or more of the applicable quality requirements as set out in sub-sections 2.2.2 through 2.2.6 (except units with excessive trim in "Whole" style which are based on sample average), shall be considered a "defective".

2.2.8 **Acceptance**

⁴ Based on average from all containers in the sample.

A lot will be considered as meeting the applicable quality requirements referred to in sub-section 2.2.7 when:

- (a) for those requirements which are not based on averages - the number of "defectives", as defined in sub-section 2.2.7, does not exceed the acceptance number (c) of the appropriate sampling plan in the Joint FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (AQL-6.5) (CAC/RM 42-1969), (see Codex Alimentarius Volume 13).
- (b) the requirement which is based on sample average is complied with.

3. **FOOD ADDITIVES**

3.1 **Flavours** **Maximum Level**

3.1.1 Natural fruit essences Limited by GMP

3.1.2 Mint flavour (mint oil) Limited by GMP

3.2 **Acidifying Agent**

Citric acid Limited by GMP

3.3 **Anti-foaming Agent**

Dimethylpolysiloxane 10 mg/kg

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 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 fruit 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 "Defectives"

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 (AQL-6.5) (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 the following percentages, calculated on the basis of the weight of distilled water at 20°C which the sealed container will hold when completely filled:

- (a) All styles other than Whole or
Crushed or Chips styles - 58%
- (b) Regular packs:
Crushed or Chips styles - 63%
- (c) Heavy pack:
Crushed or Chips styles when
designated as "Heavy Pack" - 73%
- (d) Solid pack:
Crushed or Chips styles when
designated as "Solid Pack" - 78%

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 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 "pineapple".

7.1.2 The style, as appropriate, shall be declared:

"Whole"

"Slices" or "Spiral Slices" or "Whole Slices" or "Rings"

"Half Slices"

"Quarter Slices"

"Broken Slices"

"Spears" or "Fingers"

"Tidbits"

"Chunks"

"Diced" or "Cubes"

"Pieces"

"Chips"

"Crushed" or "Crisp Cut"

7.1.3 If the product is produced in accordance with the other styles provision (sub-section 1.3), 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.

7.1.4 The packing medium shall be declared as part of the name or in close proximity to the name: "Water", "Juice", the name of the dry sweetener, "Extra Light Syrup" "Light Syrup", "Heavy Syrup" or "Extra Heavy Syrup", as appropriate.

7.1.5 As part of the name or in close proximity to the name, any seasoning which characterizes the product shall be declared, e.g. "With X", when appropriate.

7.1.6 When "Crushed" or "Crisp Cut" style is packed in natural pineapple juice (whether clarified or not), the following may be stated on the label in addition to the declaration of packing medium:

"Unsweetened" or "No sugar added"

7.1.7 When "Crushed" or "Crisp Cut" style is packed in pineapple juice and sugar, the packing medium may be declared as:

"Lightly Sweetened" in lieu of "Light Syrup"
"Heavily Sweetened" in lieu of "Heavy Syrup"
"Extra Heavily Sweetened" in lieu of "Extra Heavy Syrup".

7.1.8 The type of "Heavy Pack" or "Solid Pack" for "Crushed" or "Crisp Cut" or "Chips" styles may be stated on the label, if the pack complies with the appropriate requirements of sub-section 6.1.4.1.

7.1.9 The varietal type may be declared.

7.2 **List of Ingredients**

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, except that dimethylpolysiloxane and water need not be declared.

8. **METHODS OF ANALYSIS AND SAMPLING**

See Codex Alimentarius Volume 13.