

CODEx ALIMENTARIUS

INTERNATIONAL FOOD STANDARDS



Food and Agriculture
Organization of
the United Nations



World Health
Organization

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STANDARD FOR CANNED TROPICAL FRUIT SALAD

CXS 99-1981

Formerly CAC/RS 99-1978. Adopted in 1981. Amended in 2017.

1. DESCRIPTION

1.1 Product definition

Canned tropical fruit salad is the product prepared from a mixture of basic fruits as specified in Section 1.2 (a) to which may be added one or more optional fruits as specified in Section 1.2 (b). Such fruits may be fresh, frozen or canned; the fruit mixture is packed with water or other suitable liquid packing medium and may be packed with nutritive sweeteners and processed by heat in an appropriate manner before or after being sealed in a container so as to prevent spoilage.

1.2 Kinds and styles of fruits

The fruit ingredients shall consist of each of the three fruit groups listed under basic fruits to which may be added any one or more of the fruits listed under optional fruits. The fruit shall be peeled, cored, trimmed, deseeded or pitted as may be applicable for the respective fruit in normal culinary preparation.

(a) Basic fruits

Pineapple (*Ananas comosus* (L.) Merrill) – tidbits, pieces, dices, chips or crisp cut.

Papaya (*Carica papaya* L.) or **Mango** (*Mangifera indica* L.) – singly or in combination – slices, dices or sections.

Banana (cultivated edible species of *Musa*) – slices or dices.

(b) Optional fruits

Litchi (*Litchi chinensis* SONN.) – whole or broken segments.

Cashew (*Anacardium occidentale* L.) – as flesh.

Guava (**Guayaba**) – (*Psidium guajava* L.) – quarters, slices, dices or puree.

Longan (*Euphoria longan*) (LOUR. STEUD.) – whole or broken segments.

Oranges (*Citrus sinensis* (L.) OSBECK and *Citrus reticulata* BLANCO) (including **Mandarin**) whole segments.

Grapefruit (*Citrus paradisi* MACFAD) – whole or half segments.

Grapes (cultivated edible species of *Vitis*) – whole grapes of any seedless variety.

Maraschino cherries – (prepared from fruit conforming with the characteristics of *Prunus avium* L.) whole or halves (and pitted).

Passion fruit (cultivated edible species of *Passiflora*) – pulp (flesh) with or without seeds.

Jack fruit (*Artocarpus integrifolia* L.) – slices.

Melon (*Cucumis melo* L.) – slices, dices or balls.

Rambutan (*Nephelium lappaceum* L.) – whole or broken segments.

Peach (*Prunus persica* L. BATSCH) – pieces, dices or slices.

Pears (*Pyrus communis* L.) – pieces, dices or slices.

2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

2.1 Proportion of fruits (basic ingredients)

2.1.1 Fruits shall be in the following proportions, based on the individual drained fruit weights in relation to the drained weights of all the fruits:

	Minimum	Maximum
Basic fruits		
Pineapple	45%	65%
Papaya or Mango (singly or in combination)	25%	50%
Banana	5%	20%

Optional fruits

Litchi	5%	20%
Melon	5%	20%
Longan	5%	20%
Guava (Guayaba) (except puree, as specified in 2.1.2)	5%	20%

2.1.2 The following optional fruits are not considered in the determination of proportions of fruit as their consistency after processing prevents an accurate determination of their drained weight. However, it is recommended that they make up following percentages of the fruit ingredients present:

	Minimum	Maximum
Guava puree (see 2.1.1)	5%	20%
Cashew	2%	5%
Passion fruit	1%	5%
Jack fruit	5%	15%
Grape	3%	20%
Rambutan	5%	20%
Oranges (including Mandarin)	3%	15%
Maraschino cherries	1%	4%
Peach	5%	20%
Grapefruit	3%	15%
Pears	5%	20%
Water melon	5%	15%
Carambola	5%	20%

2.1.3 Acceptance

A lot will be considered as meeting the requirements for proportions of fruits when:

- the average of the individual fruit proportions (except those in 2.1.2 above) from all containers in the sample is within the range required for the individual fruits; and
- the number of individual containers, which are not within the range for any or one or more fruits, does not exceed the acceptance number (c) of an appropriate sampling plan with an acceptable quantity level (AQL) of 6.5 (see relevant Codex texts on methods of analysis and sampling).

2.2 Packing media

2.2.1 Canned tropical fruit salad may be packed in any one of the following packing media:

- water** – in which water is the sole packing medium;
- water and fruit juice** – in which water and fruit juice(s) from the specified fruits, is the sole liquid packing medium;
- fruit juice** – in which one or more fruit juice(s) from the specified fruits, which may be strained or filtered, is the sole liquid packing medium; or
- with sugar(s)** – any of the foregoing packing media (a) through (c), may have one or more of the following sugars added: sucrose, invert sugar syrup, dextrose, dried glucose syrup, glucose syrup, fructose and fructose syrup.

2.2.2 Classification of packing media when sugars are added

- (a) When sugars are added to fruit juice(s), the liquid media shall be not less than 14 °Brix, and they are classified on the basis of the cut-out strength as follows:

lightly sweetened: (name of fruit) juice not less than 14 °Brix

heavily sweetened: (name of fruit) juice not less than 18 °Brix

- (b) When sugars are added to water or water and one or more fruit juices, the liquid media shall be classified on the basis of the cut-out strength as follows:

Basic syrup strengths

Light syrup not less than 14 °Brix

Heavy syrup not less than 18 °Brix

Optional packing media

When not prohibited in the country of sale, the following packing media may be used:

slightly sweetened water } not less than 10 °Brix

water slightly sweetened } but less than 14 °Brix

extra light syrup }

extra heavy syrup not less than 22 °Brix

2.2.3 Compliance with packing media classification

Cut-out strength of sweetened juice or 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, if applicable.

2.3 Quality criteria

2.3.1 Colour

Canned tropical fruit salad shall have a colour characteristic of the mixed processed fruit, except that a slight bleaching of colour from the coloured cherries is acceptable.

2.3.2 Flavour

Canned tropical fruit salad shall have a normal flavour and odour characteristic for the particular blend of fruit.

2.3.3 Texture

The texture of the fruit ingredient shall be appropriate for the respective fruit.

2.3.4 Defects and allowances

Canned tropical fruit salad shall be substantially free from defects within the following prescribed limits.

	Defect	Maximum limits
(a)	Blemished fruit pieces (consisting of pieces of fruit with dark surface areas, spots penetrating the fruit, and other abnormalities)	2 pieces/100 g of drained fruit

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|-----|--|--|
| (b) | Peel (based on averages) (considered a defect only when occurring on or from those fruits which are peeled) | 6.5 cm ² /500 g of total contents |
| (c) | Seeds (other than Passion fruit seeds)
Seed material and extraneous vegetable matter | 2 g/500 g of total contents |

2.3.5 Classification of “defectives”

A container shall be considered a “defective” that fails to meet one or more of the applicable quality requirements in 2.3.1 through 2.3.4.

2.3.6 Lot acceptance

A lot will be considered as meeting the applicable quality and other requirements referred to in 2.3.5 when:

- (a) for those requirements which are not based on average – the number of “defectives”, as defined in subsection 2.3.5, does not exceed the acceptance number (c) of an appropriate sampling plan with an AQL of 6.5 (see relevant Codex texts on methods of analysis and sampling); and
- (b) the requirements which are based on sample averages are complied with.

3. FOOD ADDITIVES

	Maximum level
Additives	
3.1 Colouring matter	
Erythrosine (to colour cherries)	Limited by good manufacturing practice
3.2 Flavourings	
3.2.1 Cherry laurel oil (<i>artificially coloured cherries only</i>)	10 mg/kg in the total
3.2.2 Bitter almond oil (<i>artificially coloured cherries only</i>)	40 mg/kg in the total
3.2.3 Natural and synthetic flavourings	Limited by good manufacturing practice
3.3 Antioxidant	
L-ascorbic acid	700 mg/kg
3.4 Acidifying agent	
Citric acid	Limited by good manufacturing practice
3.5 Firming agents	
3.5.1 Calcium chloride	} 350 mg/kg singly or } in combination, calculated } as Ca
3.5.2 Calcium lactate	
3.5.3 Calcium gluconate	
4. CONTAMINANTS	
Tin (Sn)	250 mg/kg, calculated as Sn
Lead (Pb)	1 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 <i>General Principles of Food Hygiene</i> (CXC 1-1969), 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) and shall occupy not less than 90 percent 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 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 requirement of 6.1.1 when the number of “defectives” as defined in subsection 6.1.2 does not exceed the acceptance number (c) of an appropriate sampling plan with an AQL of 6.5 (see relevant Codex texts on methods of analysis and sampling).

6.2 Minimum drained weight

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

6.2.2 The requirements for minimum drained weight shall be deemed to have been 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 Pre-packaged Foods* (CXS 1-1985),² the following specific provisions apply:

7.1 The name of the food

7.1.1 The name of the product shall be “Tropical Fruit Salad”, “Tropical Fruit Cocktail” or “Tropical Fruit Mix”.

7.1.2 When the packing medium is composed of water, or water and one or more fruit juices in which water predominates, the packing medium shall be declared as part of the name or in close proximity thereto, as:

“In water” or “Packed in water”.

7.1.3 When the packing medium is composed solely of a single fruit juice, the packing medium shall be declared as part of the name or in close proximity thereto, as:

“In (name of fruit) juice”

7.1.4 When the packing medium is composed of two or more fruit juices, it shall be declared as part of the name or in close proximity thereto:

“In (name of fruits) juice”

or

“In fruit juices”

or

“In mixed fruit juices”

7.1.5 When sugars are added to one or more fruit juices, the packing medium shall be declared as may be appropriate:

“Lightly sweetened (name of fruit) juice”

or

“Heavily sweetened (name of fruits) juice(s)”

or

“Lightly sweetened fruit juices”

or

“Heavily sweetened mixed fruit juice(s)”

7.1.6 When sugars are added to water, or water and one or more fruit juices, the packing medium shall be declared as may be appropriate:

“Light syrup” or “Heavy syrup”

or

“Water slightly sweetened” or “slightly sweetened water”

or

“Extra light syrup” or “Extra heavy syrup”

7.1.7 When the packing medium contains water and one or more fruit juice(s), in which the fruit juice comprises 50 percent or more by volume of the packing medium, the packing medium shall be designated to indicate the preponderance of such fruit juice, as, for example:

“(name of fruits) juice(s) and water”

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 Pre-packaged Foods* (CXS 1-1985),² except as provided for in 7.2.2 and 7.2.3.

7.2.2 The declaration of Maraschino cherries shall be:

“Cherries artificially coloured with added flavourings”

7.2.3 If L-ascorbic acid is added to preserve colour, its presence shall be declared in the list of ingredients in the following manner:

“L-ascorbic acid added as an antioxidant”

8. METHODS OF ANALYSIS AND SAMPLING

For checking compliance with this standard, the methods of analysis and sampling contained in the *Recommended Methods of Analysis and Sampling* (CXS 234-1999)³ relevant to the provisions in this standard shall be used.

NOTES

¹ FAO and WHO. 1969. *General Principles of Food Hygiene*. Codex Alimentarius Code of Practice, No. CXC 1-1969. Codex Alimentarius Commission. Rome.

² FAO and WHO. 1985. *General Standard for the Labelling of Pre-packaged Foods*. Codex Alimentarius Standard No. CXS 1-1985. Codex Alimentarius Commission. Rome.

³ FAO and WHO. 1999. *Recommended Methods of Analysis and Sampling*. Codex Alimentarius Standard No. CXS 234-1999. Codex Alimentarius Commission. Rome.