

CODEX ALIMENTARIUS

INTERNATIONAL FOOD STANDARDS



Food and Agriculture
Organization of
the United Nations



World Health
Organization

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STANDARD FOR AQUEOUS COCONUT PRODUCTS Coconut milk and coconut cream

CXS 240-2003

Adopted in 2003. Amended in 2019, 2022 and 2024.

2024 Amendment

Following decisions taken at the Forty-fifth Session of the Codex Alimentarius Commission in December 2022, an amendment was made in Section 4. Food additives.

2022 Amendments

Following decisions taken at the Forty-fifth Session of the Codex Alimentarius Commission in December 2022, amendments were made in Section 8.2 Labelling of non-retail containers.

1. SCOPE

This standard applies to packaged aqueous coconut milk and coconut cream products, as defined in Section 2 below, and offered for direct consumption, including for catering purposes or for repacking if required. It does not apply to the product when indicated as being intended for further processing or to sweetened and/or flavoured coconut milk or cream.

2. DESCRIPTION

2.1 Product definition

Coconut milk and coconut cream are the products:

- (a) prepared by:
 - (i) using a significant amount of separated, whole, disintegrated, macerated or comminuted fresh endosperm (kernel) of coconut palm (*Cocos nucifera* L.) and expelled, where most filterable fibres and residues are excluded, with or without coconut water, and/or with additional water; or
 - (ii) reconstituting coconut cream powder with potable water; or
 - (iii) dispersing finely comminuted dehydrated coconut endosperm with potable water; or
 - (iv) combining (i) and (iii) above.
- (b) processed by heat, in an appropriate manner, before or after being hermetically sealed in a container, so as to prevent spoilage.

2.2 Styles

Light coconut milk

Light coconut milk shall be the product obtained from either the bottom portion of centrifuged coconut milk or by further dilution of coconut milk and complies with the requirements in Section 3 of this standard.

Coconut milk

Coconut milk is the dilute emulsion of comminuted coconut endosperm (kernel) in water with the soluble and the suspended solids distributed and complies with the requirements in Section 3 of this standard.

Coconut cream

Coconut cream is the emulsion extracted from matured endosperm (kernel) of the coconut fruit with or without any addition of coconut water/water and complies with the requirements in Section 3 of this standard.

Coconut cream concentrate

Coconut cream concentrate is the product obtained after the partial removal of water from coconut cream and complies with the requirements in Section 3 of this standard.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Composition

3.1.1 ***Basic ingredients***

- a) coconut cream powder;
- b) endosperm (kernel) of coconut palm (*Cocos nucifera* L.); and
- c) water.

3.1.2 ***Other permitted ingredients***

- a) coconut water;
- b) maltodextrin; and
- c) sodium caseinate.

3.1.3 Other composition

Product	Total solids (% m/m)	Non-fat solids (% m/m)	Fat (% m/m)	Moisture (% m/m)	pH
	min. – max.	min.	min.	max.	min.
(a) Light coconut milk	6.6 – 12.6	1.6	5.0	93.4	5.9
(b) Coconut milk	12.7 – 25.3	2.7	10.0	87.3	5.9
(c) Coconut cream	25.4 – 37.3	5.4	20.0	74.6	5.9
(d) Coconut cream concentrate	37.4 min.	8.4	29.0	62.6	5.9

3.2 Quality criteria

Coconut milk and coconut cream shall have normal colour, flavour and odour characteristic of the products.

3.3 Classification of “defectives”

A container that fails to meet one or more of the applicable quality requirements, as set out in Sections 3.1.3 and 3.2 should be considered as a “defective”.

3.4 Lot acceptance

A lot should be considered as meeting the applicable quality requirements referred to in Sections 3.1.3 and 3.2 when the number of “defectives”, as defined in Section 3.3, does not exceed the acceptance number (c) of an appropriate sampling plan with an acceptable quality limit (AQL) of 6.5.

4. FOOD ADDITIVES**4.1 Bleaching agents**

INS No.	Name of the food additive	Maximum level
223	Sodium metabisulphite	30 mg/kg
224	Potassium metabisulphite	

4.2 Emulsifiers

INS No.	Name of the food additive	Maximum level
432	Polyoxyethylene (20) sorbitan monolaurate	1 000 mg/kg
433	Polyoxyethylene (20) sorbitan monooleate	
434	Polyoxyethylene (20) sorbitan monopalmitate	
435	Polyoxyethylene (20) sorbitan monostearate	
436	Polyoxyethylene (20) sorbitan tristearate	
471	Mono and diglycerides	Limited by good manufacturing practices (GMP)
473	Sucrose esters of fatty acid	1 500 mg/kg

4.3 Preservatives

INS No.	Name of the food additive	Maximum level
211	Sodium benzoate	1 000 mg/kg only for pasteurized coconut milk

4.4 Stabilizers/Thickeners

INS No.	Name of the food additive	Maximum level
412	Guar gum	Limited by GMP
415	Xanthan gum	
418(i)	Gellan gum	
466	Sodium carboxymethyl cellulose	

5. CONTAMINANTS

5.1 Heavy metals

The products covered by the provisions of this standard shall comply with those maximum levels for heavy metals established by the Codex Alimentarius Commission (CAC) for these products.

5.2 Pesticide residues

The products covered by the provisions of this standard shall comply with those maximum pesticide residue limits established by the CAC for these products.

6. HYGIENE

6.1 It is recommended that the products covered by the provisions of this standard be prepared and handled in accordance with the appropriate sections of the *General principles of food hygiene* (CXC 1-1969),¹ *Code of hygienic practice for aseptically processed and packaged low-acid foods* (CXC 40-1993),² *Code of Hygienic practice for low-acid and acidified low-acid canned foods* (CXC 23-1979)³ and other relevant Codex texts such as codes of hygienic practice and codes of practice.

6.2 The products should comply with any microbiological criteria established in accordance with the *Principles and Guidelines for the establishment and application of microbiological criteria related to foods* (CXG 21-1997).⁴

7. WEIGHTS AND MEASURES

7.1 Fill of container

7.1.1 Minimum fill

The hermetically sealed container should be well filled with the product, and it should occupy not less than 90 percent 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.

Flexible containers should be filled as full as commercially practicable.

7.1.2 Classification of “defectives”

A container that fails to meet the requirement for minimum fill as described in Section 7.1.1 should be considered as a “defective”.

7.1.3 Lot acceptance

A lot should be considered as meeting the requirement of Section 7.1.1 when the number of “defectives”, as defined in Section 7.1.2, does not exceed the acceptance number (c) of an appropriate sampling plan with an acceptable quality limit (AQL) of 6.5.

8. LABELLING

The products covered by the provisions of this standard shall be labelled in accordance with the *General standard for the labelling of pre-packaged foods* (CXS 1-1985).⁵ In addition, the following specific provisions apply:

8.1 Name of the product

The name of the product shall be:

- | | |
|-------------------------------|---|
| (a) Light coconut milk | |
| (b) Coconut milk | according to the product definitions and composition in |
| (c) Coconut cream | Sections 2 and 3 |
| (d) Coconut cream concentrate | |

Coconut milk and coconut cream prepared by reconstituting coconut cream powder or the finely comminuted dehydrated coconut endosperm shall be labelled to indicate that these are reconstituted products.

An appropriate description of the heat treatment should be given, either as part of the name or in a prominent position in the same field of vision.

8.2 Labelling of non-retail containers.

The labelling of non-retail containers should be in accordance with the *General standard for the labelling of non-retail containers of foods* (CXS 346-2021).⁶

9. METHODS OF ANALYSIS AND SAMPLING

For checking the compliance with this standard, the methods of analysis and sampling contained in the *Recommended methods of analysis and sampling* (CXS 234-1999)⁷ 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.1993. *Code of hygienic practice for aseptically processed and packaged low-acid foods*. Codex Alimentarius Code of Practice, No. CXC 40-1993. Codex Alimentarius Commission. Rome.

³ FAO and WHO.1979. *Code of hygienic practice for low-acid and acidified low-acid canned foods*. Codex Alimentarius Code of Practice, No. CXC 23-1979. Codex Alimentarius Commission. Rome.

⁴ FAO and WHO.1997. *Principles and guidelines for the establishment and application of microbiological criteria related to foods*. Codex Alimentarius Guideline, No. CXG 21-1997. Codex Alimentarius Commission. Rome.

⁵ FAO and WHO.1985. *General standard for the labelling of pre-packaged foods*. Codex Alimentarius Standard, No. CXS 1-1985. Codex Alimentarius Commission. Rome.

⁶ FAO and WHO.2021. *General standard for the labelling of non-retail containers of foods*. Codex Alimentarius Standard, No. CXS 346-2021. Codex Alimentarius Commission. Rome.

⁷ FAO and WHO.1999. *Recommended methods of analysis and sampling*. Codex Alimentarius Standard, No. CXS 234-1999. Codex Alimentarius Commission. Rome.