CODEX STANDARD FOR AQUEOUS COCONUT PRODUCTS  
– Coconut Milk and Coconut Cream - 

(CODEX STAN 240-2003)

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

2.2.1 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.

2.2.2 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.

2.2.3 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.

2.2.4 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.);
(c) Water.

3.1.2 Other Permitted Ingredients
(a) Coconut water;
(b) Maltodextrin;
(c) Sodium caseinate.

3.1.3 Other Composition

<table>
<thead>
<tr>
<th>Product</th>
<th>Total Solids (% m/m)</th>
<th>Non-fat Solids (% m/m)</th>
<th>Fat (% m/m)</th>
<th>Moisture (% m/m)</th>
<th>pH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Min. – max.</td>
<td>min.</td>
<td>min.</td>
<td>max.</td>
<td>min.</td>
</tr>
<tr>
<td>(a) Light Coconut Milk</td>
<td>6.6 - 12.6</td>
<td>1.6</td>
<td>5.0</td>
<td>93.4</td>
<td>5.9</td>
</tr>
<tr>
<td>(b) Coconut Milk</td>
<td>12.7 - 25.3</td>
<td>2.7</td>
<td>10.0</td>
<td>87.3</td>
<td>5.9</td>
</tr>
<tr>
<td>(c) Coconut Cream</td>
<td>25.4 - 37.3</td>
<td>5.4</td>
<td>20.0</td>
<td>74.6</td>
<td>5.9</td>
</tr>
<tr>
<td>(d) Coconut Cream Concentrate</td>
<td>37.4 min.</td>
<td>8.4</td>
<td>29.0</td>
<td>62.6</td>
<td>5.9</td>
</tr>
</tbody>
</table>

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 AQL of 6.5.

4 FOOD ADDITIVES

4.1 BLEACHING AGENTS

<table>
<thead>
<tr>
<th>INS No.</th>
<th>Name of the Food Additive</th>
<th>Maximum Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>223</td>
<td>Sodium metabisulphite</td>
<td>30 mg/kg</td>
</tr>
<tr>
<td>224</td>
<td>Potassium metabisulphite</td>
<td></td>
</tr>
</tbody>
</table>
### 4.2 Emulsifiers

<table>
<thead>
<tr>
<th>INS No.</th>
<th>Name of the Food Additive</th>
<th>Maximum Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>432</td>
<td>Polyoxyethylene (20) sorbitan monolaurate</td>
<td></td>
</tr>
<tr>
<td>433</td>
<td>Polyoxyethylene (20) sorbitan monooleate</td>
<td></td>
</tr>
<tr>
<td>434</td>
<td>Polyoxyethylene (20) sorbitan monopalmitate</td>
<td>1000 mg/kg</td>
</tr>
<tr>
<td>435</td>
<td>Polyoxyethylene (20) sorbitan monostearate</td>
<td></td>
</tr>
<tr>
<td>436</td>
<td>Polyoxyethylene (20) sorbitan tristearate</td>
<td></td>
</tr>
<tr>
<td>471</td>
<td>Mono- and diglycerides</td>
<td>Limited by GMP</td>
</tr>
<tr>
<td>473</td>
<td>Sucrose esters of fatty acid</td>
<td>1500 mg/kg</td>
</tr>
</tbody>
</table>

### 4.3 Preservatives

<table>
<thead>
<tr>
<th>INS No.</th>
<th>Name of the Food Additive</th>
<th>Maximum Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>211</td>
<td>Sodium benzoate</td>
<td>1000 mg/kg only for pasteurized coconut milk</td>
</tr>
</tbody>
</table>

### 4.4 Stabilizers/Thickeners

<table>
<thead>
<tr>
<th>INS No.</th>
<th>Name of the Food Additive</th>
<th>Maximum Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>412</td>
<td>Guar gum</td>
<td>Limited by GMP</td>
</tr>
<tr>
<td>415</td>
<td>Xanthan gum</td>
<td></td>
</tr>
<tr>
<td>418</td>
<td>Gellan gum</td>
<td></td>
</tr>
<tr>
<td>466</td>
<td>Sodium carboxymethyl cellulose</td>
<td></td>
</tr>
</tbody>
</table>

## 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 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 Codex Alimentarius Commission 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 Recommended International Code of Practice – General Principles of Food Hygiene (CAC/RCP 1-1969), Recommended International Code of Hygienic Practice for Aseptically Processed and Packaged Low-Acid Foods (CAC/RCP 40-1993), Recommended International Code of Hygienic Practice for Low-Acid and Acidified Low-Acid Canned Foods (CAC/RCP 23-1979) 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 for the Establishment and Application of Microbiological Criteria for Foods (CAC/GL 21-1997).
7 WEIGHTS AND MEASURES

7.1 FILL OF CONTAINER

7.1.1 Minimum Fill

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

7.1.1.2 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 AQL of 6.5.

8 LABELLING

The products covered by the provisions of this Standard shall be labelled in accordance with the Codex General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985). In addition, the following specific provisions apply:

8.1 NAME OF THE PRODUCT

8.1.1 The name of the product shall be:

(a) Light coconut milk
(b) Coconut milk
(c) Coconut cream
(d) Coconut cream concentrate

8.1.2 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.

8.1.3 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.

9 METHODS OF ANALYSIS AND SAMPLING

See relevant Codex texts on methods of analysis and sampling.