



## DRAFT TANZANIA STANDARD

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**Aqueous coconut milk and coconut cream products—  
Specification**

DRAFT FOR STAKEHOLDER'S COMMENTS

# Aqueous coconut milk and coconut cream products — Specification

## 0 Foreword

Coconut milk and coconut cream shall be prepared by 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 reconstituting coconut cream powder with potable water; or dispersing finely comminuted dehydrated coconut endosperm with potable water; and processed by heat, in an appropriate manner, before or after being hermetically sealed in a container, so as to prevent spoilage.

This Tanzania Standard has been prepared to ensure the safety and quality of aqueous coconut milk and coconut cream products produced in, exported or imported into the country.

In the preparation of this Tanzania Standard assistance was derived from:  
CODEX - STAN 240-2003, *Coconut milk and coconut cream* published by the Codex Alimentarius Commission

In reporting the results of a test or analysis made in accordance with this Tanzania Standard, if the final value, observed or calculated is to be rounded off, it shall be done in accordance with TZS 4 (see clause 2).

## 1 Scope

This Tanzania Standard prescribes the requirements and sampling and test methods for packaged aqueous coconut milk and coconut cream products for direct human consumption.

## 2 Reference

The following referenced documents are indispensable for the application of this Tanzania Standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies:

CODEX STAN 192, *General standards for food additives*

TZS 4, *Rounding off numerical values*

TZS 54, *Animal and vegetable fats and oils — Sampling*

TZS 48, *Margarine — Specification*

TZS 1326, *Animal and vegetable fats and oils — Determination of moisture and volatile matter*

TZS 1335, *Animal and vegetable fats and oils — Determination of copper, iron and nickel content-graphite furnace atomic absorption*

TZS 268, *General atomic absorption spectrophotometric method for determination of lead in food stuffs*

TZS 76, *Methods for determination of arsenic content*

TZS 109, *Food processing units — Code of hygiene — General*

TZS 538, *Packaging and labelling of foods*

TZS 118, *Microbiology of food and animal feeding stuffs — Horizontal method for enumeration of micro-organisms — Colony count technique at 30 °C*

TZS 122, *Microbiology of food and feeding stuffs — Horizontal method for the detection of salmonella spp*

TZS 125, *Microbiology of food and animal feeding stuffs — Horizontal method for enumeration of coagulase — Positive staphylococci; Staphylococcus aureus and other species*

TZS 131, *Microbiology — General guidance for enumeration of yeast and moulds — Colony count technique at 25 °C*

TZS 731, *Microbiology of food and feeding-stuffs — Horizontal method for the detection and enumeration of presumptive Escherichia Coli — Most probable number technique*

### **3 Terms and definitions**

For the purpose of this Tanzania Standard the following terms and definitions shall apply:

#### **3.1 coconut milk**

dilute emulsion of comminuted coconut endosperm (kernel) in water with the soluble and the suspended solid distributed.

#### **3.2 light coconut milk**

product obtained from either the bottom portion of centrifuged coconut milk or by further dilution of coconut milk.

#### **3.3 coconut cream**

emulsion extracted from matured endosperm (kernel) of the coconut fruit with or without any addition of coconut water/water.

#### **3.4 coconut cream concentrate**

product obtained after the partial removal of water from coconut cream.

#### **3.5 coconut cream powder**

product obtained after the complete removal of water from coconut cream.

### **4 Requirements**

#### **4.1 General requirements**

##### **4.1.1 Basic ingredients for aqueous coconut milk and coconut cream products**

- a) Coconut cream powder;
- b) Endosperm (kernel) of coconut palm (*Cocos nucifera* L.);
- c) Water

##### **4.1.2 Other permitted ingredients for aqueous coconut milk and coconut cream products**

- a) Coconut water;
- b) Maltodextrin;
- c) Sodium caseinate

**4.1.3** Aqueous coconut milk and coconut cream products shall have colour, flavour and odour characteristic of the referred products.

**4.1.4** Aqueous coconut milk and coconut cream products shall be free from foreign matter and harmful substances.

#### 4.2 Specific requirements

Aqueous coconut milk and coconut cream products shall comply with the requirements given in table 1.

**Table 1 – Physical and chemical requirements of aqueous coconut milk and coconut cream products**

Product	light coconut milk	Coconut milk	Coconut cream	Coconut cream concentrate	Test methods
Total solids (% m/m)	6.6 – 12.6	12.7 – 25.3	25.4 – 37.3	Min 37.4	Annex A
Non-fat solids (% m/m)	1.6 – 2.6	2.7 – 5.3	5.4 – 8.3	Min 8.4	Annex B
Fat (% m/m)	5.0 – 9.9	10.0 – 19.9	20.0 – 28.9	Min 29	TZS 48 Annex A.1 or A.2
Moisture and volatile matter (% m/m)	87.4 – 93.4	74.7 – 87.3	62.7 – 74.6	Max 62.6	TZS 1326
pH	5.9 – 7.0				pH meter

#### 4.3 Food additives

Aqueous coconut milk and coconut cream products may contain additives which are prescribed in Codex Stan 192.

### 5 Hygiene

5.1 Aqueous coconut milk and coconut cream products shall be produced, processed, and handled in accordance with TZS 109.

5.2 Aqueous coconut milk and coconut cream products shall conform to microbiological requirements in table 2.

**Table 2 – Microbiological limits for aqueous coconut milk and coconut cream products**

Micro-organism	Requirement	Test method
Yeast and moulds cfu/g, max.	$1 \times 10^2$	TZS 131
E. Coli MPN/g	Shall be absent	TZS 731
Salmonella per 25g	Shall be absent	TZS 122
Total Plate Count cfu/g, max	$1 \times 10^3$	TZS 118
S. aureus cfu/g	Shall be absent	TZS 125

### 6 Contaminants

The acceptable requirements of metal contaminants in aqueous coconut milk and coconut cream products shall conform to the requirements specified in table 2.

Table 2 – Requirements for metal in aqueous coconut milk and coconut cream products

Metal Contaminant	Requirements	Test method
Lead, mg/kg, max	0.1	TZS 268
Arsenic, mg/kg, max	0.1	TZS 76
Nickel, mg/kg, max	0.1	TZS 1335

## 7 Sampling and tests

### 7.1 Sampling

The material shall be sampled as prescribed in TZS 54.

### 7.2 Tests

7.2.1 Testing shall be done as provided in the respective tables and Annex of this Tanzania Standard.

#### 7.2.2 Quality of reagents

Unless specified otherwise, analytical grade chemicals and distilled water shall be used in tests.

## 8 Packaging, marking and labelling

8.1 Aqueous coconut milk and coconut cream products shall be supplied in suitably sealed and closed food grade containers of material protecting the product from spoilage or contamination without adversely affecting the physical, chemical and sensory quality of the product.

8.2 Aqueous coconut milk and coconut cream products shall be marked and labelled in accordance with TZS 538.

In addition, each container of aqueous coconut milk and coconut cream products shall be legibly and indelibly marked with the following information:

- a) Name of the product (light coconut milk, coconut milk, coconut cream or coconut cream concentrate)
- b) Physical and postal address of the manufacturer and/or packer
- c) Date of manufacture and expiry date
- d) Language – Kiswahili / English or Kiswahili and English
- e) A complete list of ingredients in descending order of proportion
- f) Net content
- g) Batch number in clear or code
- h) Manufacturers registered trade mark
- i) Country of origin
- j) Nutritional information(optional)

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

8.4 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.

8.5 The containers shall also be marked with the TBS Standards Mark of Quality.

NOTE – The TBS Standards Mark of Quality may be used by the manufacturers only under licence from TBS. Particulars of conditions under which the licences are granted may be obtained from TBS.

**Annex A**  
**(normative)**  
**Determination of total solids in milk**

**A.1 Preparation of sample**

Completely homogenous the sample

**A.2 Apparatus**

- a) **Flat-bottomed dishes** with lid
- b) 3 ml **pipette**
- c) **Water bath**
- d) **Drying oven**
- e) **Analytical balance**
- f) **Pipette filler**
- h) **Desiccator**

**A.3 Procedure**

- a) Dry the dish in the oven for 30 min at 102 °C ± 2 °C.
- b) Replace the lid and place the dish in the desiccators to cool for 30 min.
- c) Weigh the dish with the lid to the at least four decimal place.
- d) Pipette into the dish three millilitre of a well-mixed sample and weigh quickly with the lid on the dish
- e) Transfer the dish and lid into the oven
- f) After two hours in the oven, replace the lid, and transfer the dish to a desiccator
- g) Allow to cool and weigh
- h) Return the dish and lid to the oven and heat again for one hour with the dish uncovered
- l) Replace lid and transfer to desiccator, cool for 30 min and weigh as before. Loss of mass between successive weighing should not exceed 0.5 mg

**A.4 Calculation**

$$\% \text{ total solids} = \frac{\text{Mass of the dry solids} \times 100}{\text{Mass of the sample taken}}$$

**Annex B**  
**(normative)**  
**Determination of non-fat solids**

**B.1 Calculation**

% Non-fat solids = % total solids - % Fat

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