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DRAFT TANZANIA STANDARD

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

DRAFT STANDARD

TANZANIA BUREAU OF STANDARDS

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0 Foreword

This Tanzania Standard was published under the authority of the Board of Directors of Tanzania Bureau of Standards.

Tanzania Bureau of Standards (TBS) is the statutory national standards body for Tanzania established by the Standards Act Cap. 130.

Tanzania Standards are developed through Technical Committees that are representative of key stakeholders including government, academia, consumer groups, private sector and other interested parties. The Technical Committees work under the supervision of Divisional (sectoral) Committees. The Standards are developed in accordance with the Guide and Procedure for Development of Tanzania Standards and TZS 0, *Guide for presentation of Tanzania Standards*.

Tanzania Standards are subject to review, to keep pace with science and technological advances. Users of the Tanzania Standards are therefore expected to ensure that they always have the latest versions of the standards they are implementing.

This Tanzania Standard was developed under the supervision of Agriculture and Food Divisional Standards Committee [AFDC]. The Technical Committee responsible for the standard is AFDC 04, Edible fats and oils

This (*second edition*) cancels and replaces the first edition (TZS 1769:2020), which has been technically revised.

The reporting of 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, shall be done in accordance with TZS 4.

Aqueous coconut milk and coconut cream products — Specification

1 Scope

This Tanzania Standard specifies the requirements, sampling and test methods for aqueous coconut milk and coconut cream products intended for human consumption.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

CXS 192, *General standards for food additives*

CXS 193, *General standard for contaminants and toxins in food and feed*

TZS 4, *Rounding off numerical values*

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

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

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*

TZS 2623, *Butter, edible oil emulsions and spreadable fats - Determination of fat content (Reference method)*

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 solids 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 shall be:

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

4.1.2 Other permitted ingredients may be used for aqueous coconut milk and coconut cream products and shall comply with the relevant standards;

- 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 specific requirements given in Table 1 when tested in accordance with the test methods specified therein.

Table 1 — Specific requirements for aqueous coconut milk and coconut cream products

S/N	Parameter	Product type				Test methods
		Light coconut milk	Coconut milk	Coconut cream	Coconut cream concentrate	
1.	Total solids (% m/m)	6.6-12.6	12.7-25.3	25.4-37.3	Min.37	Annex A
2.	Non - fat solids (% m/m)	1.6-2.6	2.7-5.3	5.4-8.3	Min 8.4	Annex B
3.	Fat (% m/m)	5.0-9.9	10.0-19.9	20.0-28.9	Min 29	TZS 2623
4.	Moisture and volatile matter (% m/m)	87.4-93.4	74.7-87.3	62.7-74.6	Max 62.6	TZS 1326
5.	pH	Min 5.9				Annex C

5 Food additives

Aqueous coconut milk and coconut cream products may contain permitted food additives in accordance with CXS 192.

6 Hygiene

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

6.2 Aqueous coconut milk and coconut cream products shall conform to microbiological limits given in Table 2 when tested in accordance with the test methods specified therein.

Table 2 — Microbiological limits for aqueous coconut milk and coconut cream products

S/N	Micro-organism	Limits	Test method
1	Yeast and moulds cfu/g, max.	10 ²	TZS 131
2	E. Coli MPN/g	Shall be absent	TZS 731
3	Salmonella per 25g	Shall be absent	TZS 122
4	Total Plate Count cfu/g, max	10 ³	TZS 118
5	<i>S. aureus</i> cfu/g	Shall be absent	TZS 125

7 Contaminants

7.1 Heavy metal

Aqueous coconut milk and coconut cream products shall not exceed the limits for heavy metal when tested in accordance with CXS 193.

7.2 Pesticide residues

Aqueous coconut milk and coconut cream products shall comply with those maximum residue limits as established by Codex Alimentarius Commission online database.

8 Sampling and test methods

8.1 Sampling

Aqueous coconut milk and coconut cream products shall be sampled in accordance with TZS 54.

8.2 Test methods

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

9 Packaging, marking and labelling

9.1 Aqueous coconut milk and coconut cream products shall be packaged in containers made from food grade packaging material and sealed in a manner that will safeguard the hygienic, safety, nutritional and organoleptic properties of the product.

9.2 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 as either (light coconut milk, coconut milk, coconut cream or coconut cream concentrate);
- b) trade name or brand, if any;
- c) physical and postal address of the manufacturer and/or packer;
- d) date of manufacture;
- e) expiry date;
- f) a complete list of ingredients in descending order of proportion;
- g) net content in metric units;
- h) batch number;
- i) country of origin; and
- j) nutritional information(optional)

9.3 The language on the label shall be "Kiswahili" or "Kiswahili and English". Any other language may be used depending on the designated market.

9.4 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.

9.5 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.

9.6 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 aqueous coconut milk and coconut cream products

A.1 Preparation of sample

Completely homogenise the sample

A.2 Apparatus

- a) Flat-bottomed dishes with lid
- b) pipette
- d) Drying oven
- e) Analytical balance
- f) Pipette filler
- h) Desiccator

A.3 Procedure

- a) Dry the dish and lid in the oven for 30 min at $102\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$.
- b) Place the lid and dish in the desiccator to cool for 30 min.
- c) Weigh the dish with the lid to at least four decimal places.
- d) Weigh three grams of a well-mixed sample into the dish with lid
- 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
- i) Replace lid and transfer to a desiccator, cool for 30 min and weigh as before. Loss of mass between successive weightings should not exceed 0.5 mg

A.4 Calculation

% 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

Calculation

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

Annex C

(normative)

Determination of pH of Aqueous coconut milk and coconut cream products

C.1 Apparatus and glassware

- a) Beaker /conical flask
- b) pH meter

C.2 Procedure

Determine the pH of 50 mL of the sample in a flask using a glass electrode at 20 °C, and record the reading

Bibliography

CXS 240-2003, *Coconut milk and coconut cream* published by the Codex Alimentarius Commission