



DRAFT TANZANIA STANDARD

Drinking Chocolate — Specification

DRAFT STANDARD FOR PUBLIC COMMENTS

TANZANIA BUREAU OF STANDARDS

0. Foreword

Drinking chocolate is a product made from combination of cocoa powder and other ingredients such as milk, emulsifiers, sugars and flavouring agent. The establishment of this standard for drinking chocolate is necessary step in addressing safety, quality and trade issues.

In the preparation of this Tanzania standard, assistance was derived from KS 436 Cocoa powder (Cocoa – sugar mixtures) – Specification and IS 6762 Specification for Drinking Chocolate (reaffirmed 2012 Second Revision).

In reporting the results of a test or analysis made in accordance with this standard, if the final value observed or calculated is to be rounded off, it shall be done in accordance with TZS 4

1. Scope

This Tanzania Standard specifies the requirements, methods of sampling and test of Drinking Chocolate intended for direct human consumption.

2. Normative References

The following referenced documents are indispensable for the application 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.

AOAC 986.15, Cadmium, Lead, Selenium and zinc in human and pet foods. Multi-element method

Codex Stan 192, General Standard for Food Additives

CAC/GL 50, General guidelines on sampling.

ISO 6731, Determination of the total solids content of milk, cream and evaporated milk.

TZS 2615, Foodstuffs-Determination of Ochratoxin A-High performance liquid chromatographic method with immunoaffinity column cleanup and fluorescence detection

TZS 109, food processing units — Codes of hygiene

TZS, 3749, Determination of moisture content in cocoa products

TZS 799, Foodstuffs — Determination of aflatoxin B1, and the total content of aflatoxins B1, B2, G1 and G2 in cereals, nuts and derived products — High-performance liquid chromatographic method

TZS 538. Standard for Labelling of Pre-packaged Foods

TZS 3749 Determination of moisture content in cocoa products

TZS 3748 Determination of Fat in Cocoa products

TZS 3750 determination of total and acid insoluble ash content in cocoa products

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

TZS 2426-1, Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of yeasts and moulds - Part 1: Colony count technique in products with water activity greater than 0.95.

TZS 731, Microbiology of food and feeding-stuffs – Horizontal method for the detection and enumeration of presumptive *Escherichia Coli* – Most Probable Number Technique

TZS 119, Microbiology of food and animal feeding stuffs – Horizontal method for detection and enumeration of Coliforms – Most probable number technique

TZS 2051-4, Milk and milk products - Determination of nitrogen content - Part 4: Determination of protein and non-protein nitrogen content and true protein content calculation (Reference method)

3. Terms and Definitions

For the purpose of this standard, the following terms and definitions apply.

3.1. cocoa beans

whole seeds of the cocoa tree (*Theobroma cacao* L.). Which has been fermented and dried

3.2 cocoa nibs

cocoa beans, roasted or unroasted, cleaned, separated from their husk and broken into smaller pieces

3.3 cocoa butter

edible fat extracted from cocoa nib and its derivatives

3.4. cocoa liquor

pure cocoa in liquid or semi-solid form obtained from grounded cocoa nibs without losing any of its natural fat content

3.5. cocoa mass

fine paste obtained by mechanical process from grounded cocoa nibs without losing any of its natural fat content.

3.5. cocoa press cake

solid residue left after extracting cocoa butter from cocoa mass by mechanical means.

3.6. cocoa powder

cocoa powder is the pulverized end product from a pressing or extraction process that removes a significant portion of the fat or cocoa butter from the cocoa mass

3.7. drinking chocolate

product made from combination of cocoa powder and other ingredients such as milk, emulsifiers, sugars and flavouring agent.

4. Ingredients

4.1. Essential ingredients

Cocoa Powder

Cocoa powder used for the production of drinking chocolate shall comply with Standard and shall be used at a min 25 (expressed on dry basis) percent by mass.

4.2. Optional Ingredients

The following optional ingredients (in dry form) but not limited to, may be added in the production of cocoa powder mixture and shall comply with relevant Tanzania standards;

4.2.1. Sugar

4.2.2. Milk and Milk Products

4.2.2.1 Full Cream Milk

4.2.2.2 Dairy creamer

4.2.2.3 Skimmed milk

4.2.3 Non-Dairy Creamer

4.2.4 Spices

4.2.5 Salt

4.2.6 Vitamins and Minerals

4.2.7 Malt Extract

4.2.8. coffee

5. Requirements

5.1. General Requirements

5.1.1. Cocoa mixture shall be in the form of free-flowing powder.

5.1.2. The colour, taste, odour and flavour shall be characteristic of the product.

5.1.3. It shall be free from fungal infestation, foreign matter and adulterants.

5.2. Specific requirements

Drinking Chocolate shall comply with the specific requirements stated in Tables 1.

Table 1 - Specific requirements for drinking chocolate

S/N	Parameters	Requirement	Test Method
i	Moisture % m/m(max)	5.0	TZS 3749
ii	Fat content % m/m (max)	10	TZS 3748
iii	Acid Insoluble Ash (%) (max)	0.2	TZS 3750
iv	Ash content % m/m(max)	2	TZS 3750

v	Protein content % (m/m)(min)	5.0	TZS 2051-4:
vi	Total Milk Solids %(min)	10.0 ^a	ISO 6731
vii	pH in (10% solution)	5.5 – 7.00	AOAC 970.21
viii	Sugar by % (m/m) (max)	55.0	AOAC 2004

Note: “a” when milk added

6. Food Additives

The use of food additives in drinking chocolate shall comply with CODEX STAN 192

7. Hygiene

7.1. Drinking chocolate shall be manufactured processed, packaged, stored and distributed under hygienic conditions prescribed in TZS 109

7.2. Drinking chocolate shall not exceed microbiological limits in Table 2 when tested in accordance with test methods specified therein

Table 2– Microbiological limits for drinking chocolate

S/N	Parameter	limit	Reference Test method
i	Total plate Count (cfu/g), max	10 ³	TZS 119
ii	<i>E. coli</i> (cfu/g)	Absent	TZS 731
iii	<i>Salmonella typhi</i> in 25g	Absent	TZS 122:
iv	Yeast and Mould(cfu/g), max	10 ²	TZS 2426-1

8. Contaminants

8.1. Heavy Metal

The product shall comply with the maximum limits for heavy metals as stated in Table 3, when tested according to the methods listed therein:

Table 3: limits for heavy metals in drinking chocolate

S/N	Parameter	Limit	Reference test methods
i	Arsenic (mg/kg) (max)	0.5	TZS 1502
ii	Cadmium (mg/kg) (max)	0.1	AOAC 986.15
ii	Lead(mg/kg) (max)	1.0	TZS 268

8.2. Pesticides Residues

The Pesticide Residue in drinking chocolate shall conform to those maximum residue limits established by the Codex Alimentarius Commission for pesticide residue.

8.3. Mycotoxins

The maximum residue limit shall be in conformity with Table 4

Table 4: Limits for mycotoxins in drinking chocolate

S/N	Parameter	Limit	Test method
1	Total Aflatoxin (mg/kg), max	10.0	TZS 799
2	Aflatoxin B1 (mg/kg), max	5.0	TZS 799
3	Ochratoxin A (mg/kg),max	5.0	TZS 2615:

8. Packaging and Labelling

8.1. Packaging

Drinking Chocolate shall be packaged in containers made from food grade packaging material and sealed in a manner that will safeguard the hygienic, nutritional and organoleptic properties of the product throughout the shelf life of the product.

8.2. Labelling

In addition to the labelling requirements specified in TZS 538, packages of drinking chocolate product shall be labelled legibly and indelibly with the following information

8.2.1 Name of Product "Drinking Chocolate"

8.2.2 The use of vegetable fat, if used, in addition to cocoa butter shall be indicated on the product.

8.2.3 Name and location address of the manufacturer, Packer, distributor, importer,

exporter or vendor of the food shall be declared.

- 8.2.4 List of ingredients shall be declared on the label in descending order of proportion
- 8.2.5 The net weight.
- 8.2.6 Batch number
- 8.2.7 Waste disposal information
- 8.2.8 Manufacture and expiry date shall be declared
- 8.2.9 Storage instructions.
- 8.2.10 Allergen declarations, if any.

9. Sampling

Sampling shall be in accordance with CAC/GL 50

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