



DRAFT TANZANIA STANDARD

Bamboo sticks for culinary and related purposes-Specification

TANZANIA BUREAU OF STANDARDS

This Tanzania Standard was published under the authority of the Board of Directors of Tanzania Bureau of Standards on 2022-05-13.

Tanzania Bureau of Standards (TBS) is the statutory national standards body for Tanzania established under the Standards Act No. 3 of 1975, repealed and replaced by the Standards Act No. 2 of 2009.

The General Techniques Standards Divisional Committee, under whose supervision this Tanzania Standard was prepared, consists of representatives from the following organizations:

- *College of Engineering and Technology (CoET)
- *The National Environment Management Council (NEMC)
- Weights and Measures Agency (WMA)
- *College of Natural and Applied Sciences (CoNAS)
- National Bureau of Statistics (NBS)
- Tanzania Portland Cement Company Limited (TPCC)
- Simba Plastics Co Limited

The organizations marked with an asterisk (*) in the above list, together with the following were directly represented in the Technical Committee entrusted with the preparation of this Tanzania Standard:

- Industrial Packaging Limited (IPL)
- Zanzibar Bureau of Standards (ZBS)
- Kioo Limited
- Silafrica Tanzania Limited
- Small Industries Development Organization (SIDO)

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0 National Foreword

The Tanzania Bureau of Standards is the statutory national standards body for Tanzania, established under the Act.No.3 of 1975, amended by Act.No.2 of 2009.

This Tanzania Standard has been adopted by Packaging Technical Committee, under the supervision of the General Techniques Standards Divisional Committee (GTDC) and it is in accordance with the procedures of the Bureau.

During the preparation of this standard, reference was made to the following document:

LY 1061-1992 Bamboo chopsticks, published by Bureau of Standards Jamaica.

Acknowledgement is hereby made for the assistance derived from this source

0.2 Terminology and conventions

The text of the International Standard is hereby being recommended for approval without deviation for publication as Tanzania standard.

Some terminology and certain conventions are not identical with those used as Tanzania Standard; attention is drawn to the following:

The comma has been used as decimal marker for metric dimensions. In Tanzania, its current practice is to use a full point on the baseline as decimal marker.

Whenever the words "International Standard" appear, referring to this Finalized Tanzania Standard, they should read as "Tanzania Standard".

1. Scope

The draft Tanzania standard describes the requirements, sampling and test methods for disposable bamboo sticks for culinary and related purposes, processed from bamboo species.

This draft Tanzania standard also applies to bamboo barbecue skewers, bamboo fudge or ice cream sticks, bamboo incense sticks and bamboo toothpicks.

2. Normative references

The following documents are referred to in the text in such a way that some or all of their content constitute 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.

ISO 22157:2019 Bamboo structures — Determination of physical and mechanical properties of bamboo culms — Test methods

TZS 118 /ISO 4833, Microbiology of the food chain — Horizontal method for the enumeration of microorganisms — Colony-count technique at 30 °C

TZS 125-1/ISO 6888-1 Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species) — Part 1: Technique using

TZS 730-1: 2020 / ISO 16649-1:2018 Colony count technique at 44 °C using membranes and 5-Bromo-4-Chloro-3-Indolyl b-D-glucuronide

3. Terms and definitions

For the purpose of this document, the following terms and definitions shall apply:

3.1

bamboo

tropical, semitropical or temperate fast-growing grass with lignocellulose matrix and usually having hollow culms

Note 1 to entry: Grasses classified within the family *Poaceae* in the subfamily *Bambusoideae*, including the temperate woody bamboos (*Arundinarieae*), tropical woody bamboos (*Bambuseae*), and herbaceous bamboos (*Olyreae*).

3.2

bamboo culm

single shoot of bamboo comprised of the entire unaltered bamboo cross-section, which is usually a hollow cylinder, except at bamboo nodes

3.3

bamboo stick

long, thin bamboo strip with or without sharp pointed end(s) and uniform dimension along its length

4. Dimensions

Bamboo culinary sticks shall meet the dimension requirements as outlined in the Tables 1, 2 and 3.

Table 1 — Standard dimensions for bamboo chopsticks

Dimension	Measurement (mm)	Deviation range (mm)
Length	190 to 270	±2
Width of the connective part	13.5	±0.5
Thickness of the connective part	5.5	±0.5
Diameter of the small end	3	±0.5

Cone-shaped length in the small end	30	± 2
Length of the connective part	20	± 2

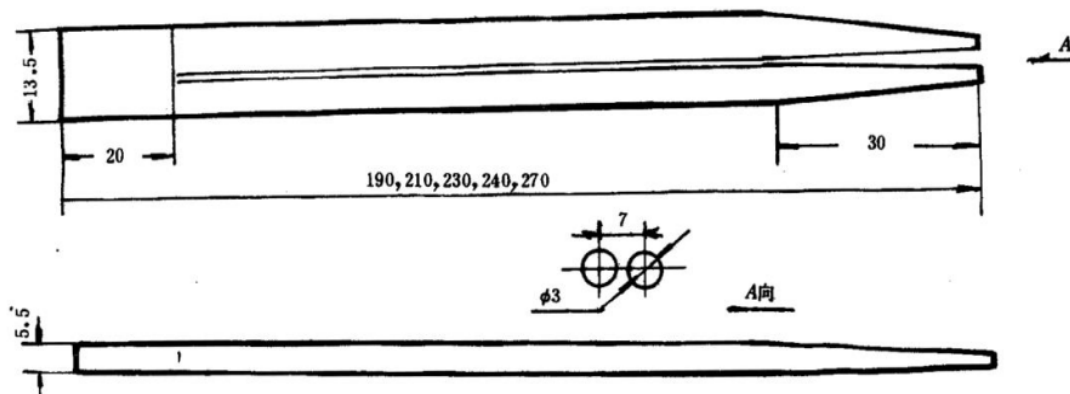


Figure 1: showing dimensions of bamboo chopsticks

Table 2 — Standard dimensions for bamboo skewers

Dimension	Measurement (mm)	Deviation range (mm)
Length	125 to 300	± 2
Width	3 to 5	± 0.5
Length of pointed end	15	± 0.2

Table 3 — Standard dimensions for bamboo fudge or ice cream sticks

Dimension	Measurement (mm)	Deviation range (mm)
Length	65 to 180	± 2
Thickness	2	± 0.5
Width	10	± 0.5

Table 4 — Standard dimensions for Toothpicks

Dimension	Flat toothpicks (mm)	Round toothpicks(mm)
Length	55-65	60-65
Width, Narrow end	0.75-1.3	-
Width, Wide end	1.8-2.5	-
Center Thickness	0.9-1.7	1.8 to 2.8
End thickness	0.25-0.8	1.02 maximum

5. Requirements

5.1 General requirements

5.1.1 Good manufacturing practices

Bamboo culinary sticks shall be manufactured in compliance with good manufacturing practices so that, under normal or foreseeable conditions of use, they do not transfer their constituents to food in quantities which could:

- endanger human health;

- b) bring about an unacceptable change in the composition of the food; or
- c) bring about a deterioration in the organoleptic characteristics thereof .

5.1.2 The material used for the manufacturing of the bamboo culinary sticks shall be from bamboo plant.

5.1.3 Bamboo culinary sticks shall be free from any chemical additives, microbial pathogens and grown free from agricultural chemical residues.

5.1.4 Bamboo culinary sticks shall have smooth surface, be free from surface holes, dirt, dust and off odours.

5.2 Defects

Bamboo node, bamboo yellow, insect damage, discoloration by mould, decay and smell shall not be allowed.

5.3 Allowable processing defects

Processing defects for bamboo culinary sticks may be allowed as outlined in Table 5.

Table 5— Allowable processing defects for bamboo culinary sticks

Processing defect	Allowable defects
Warping of frontal surface (chopsticks only)	No more than 1 mm
Warping of surface	No more than 1 mm
Surface smoothness	Smooth
Chatter marks	No more than 7 mm within the total length
Crack	Not allowable
Lengths of connective part (chopsticks)	Identical lengths
Chopsticks lengths of each batch	Identical lengths

5.2 Specific requirements

5.2.1 Moisture content

The moisture content of bamboo culinary sticks shall be no more than 10% when tested in accordance with ISO 22157-1.

5.2.2 Microbiological examination

When bamboo culinary sticks are tested in accordance with the test methods specified therein. It shall comply with microbiological limits given in Table 6.

Table 6 –microbiological limits

S/N	Characteristic	Limit	Test method
i)	Total aerobic plate count, cfu/g, max	10 ²	TZS 118 /ISO 4833

ii)	<i>Faecal coliforms Escherichia coli, cfu/g</i>	Absent	TZS 730-1: 2020 / ISO 16649-1:2018
iii)	<i>Staphylococcus aureus, cfu/g</i>	Absent	TZS 125-1/ISO 6888-1
iv)	<i>Salmonella spp, per 25 g</i>	Absent	

6. Labelling, packaging, transportation, storage

6.1 Packaging

- 6.1.1** The bamboo culinary sticks shall be packed in a suitable package that withstands normal handling and transportation and that will prevent damage to the product.
- 6.1.2** There shall be 100 pairs of bamboo culinary sticks in one food grade package or a quantity as agreed between purchaser and supplier.
- 6.1.3** The package opening shall be sealed to prevent contamination.

6.2 Transportation

- 6.2.1** Bamboo culinary sticks shall be protected from breakage and moisture during transportation.
- 6.2.2** Bamboo culinary sticks shall not be transported in the same vehicle containing poisonous goods or goods of foul odour.
- 6.2.3** Bamboo culinary sticks shall be handled lightly and not under heavy pressure.

6.3 Storage

Bamboo culinary sticks shall be stored in dry and sanitary conditions protected from moisture and contamination.

6.4 Labelling

The packaging of bamboo culinary sticks should be labelled to include the following:

- factory name and address
- products name;
- quantity;
- date of production and/or batch number
- dimensions

7. Sampling

7.1 Scale of sampling

- 7.1.1** Tests for determining the conformity of a lot to the requirements of the specification shall be done on each lot separately. The number of packages shall be selected at random and shall be in accordance with Table 7.
- 7.1.2** From each outer package (see 7.1.1) select at random the number of bamboo culinary sticks in accordance with Table 7.

Table 7 – Scale of sampling

Number of package in the lot	Number of package to be selected	Number of bamboo culinary sticks to be selected
Up to 10	1	10
11 to 50	2	15
More than 50	3	20