



DRAFT TANZANIA STANDARD

Non - cereal based alcoholic beverages — Specification

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TANZANIA BUREAU OF STANDARDS

Non - cereal based alcoholic beverages — Specification

0 Foreword

Most alcoholic beverages have traditionally been known to be products of direct fermentation process, either from grains or sugar. Research and development has however enabled production of other alcoholic beverages that are based on fermentation of other ingredients; including those of non-cereal origin, such as fruits, honey, juice, berries, roots and tubers.

Alcoholic beverages are normally judged in terms of flavour and stimulating effects they produce. Bearing this in mind the alcoholic beverage industry has therefore, continuously been in search of new products that would fulfill the aforementioned qualities.

In light of the need to safeguard the consumer and in order to ensure the safety and quality of alcoholic beverages derived from non-cereal ingredients this Tanzania Standard was thus developed.

In the preparation of this Tanzania Standard, assistance was derived from local producers of non-cereal based alcoholic beverages.

In reporting the result 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 specifies requirements and methods of sampling and test for non-cereal based alcoholic beverages produced by fermentation of soluble extracts of non-cereal ingredients.

This Tanzania Standard does not include requirements for wines, *ulanzi*, *kombucha* and roselle alcoholic drinks which are covered in specific Tanzania standards.

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*

TZS 4, *Rounding off numerical values*

TZS 59, *Water for analytical laboratory use — Specification and test method*

TZS 76, *General method for determination of arsenic silver diethyldithiocarmate photometric method*

TZS 101, *Refined white sugar— Specification*

TZS 109, *General principles of food hygiene — Code of practice*

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

TZS 119, *General guidance for the enumeration of Coliforms — Most Probable Number Technique (MPN)*

TZS 131, *Microbiology of food and animal feeding stuff - General guidance for enumeration of yeasts*

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and moulds — Colony count technique at 25°C

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

TZS 471, Methods of sampling and tests for alcoholic beverages

TZS 538, Pre -packaged food labeling — General requirements

TZS 789, Potable water— Specification

TZS 831, Brown sugar— Specification

TZS 1491, Fruits and vegetables products —Determination of pH

3 Terms and definitions

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

3.1 alcohol

as ethyl alcohol (C₂H₅OH)

3.2 non-cereal based alcoholic beverage

alcoholic beverage derived from fermentation of a sugary substrate originating from non-cereal ingredients; using yeasts (*Saccharomyces spp.*) as fermenting organisms with subsequent maturation process to achieve an intended alcoholic content

3.3 non-cereal ingredient

edible plant materials that provide fermentable sugars or starch as alternative to cereals for alcoholic beverage production

4 Requirements

4.1 General requirements

4.1.1 The product shall;

- a) be free from foreign matter;
- b) have characteristic colour and odour; and
- c) have characteristic taste.

4.1.2 Ingredients

The following raw materials shall be used for the production of non-cereal based alcoholic beverages;

4.1.2.1 Potable water complying with TZS 789

4.1.2.2 Non-cereal ingredients

Raw materials such as saps, sugar, molasses, honey, roots, and tubers, fruits and juices complying with the appropriate Tanzania Standard or Codex Alimentarius Commission Standard may be used.

4.1.2.3 Yeasts (*Saccharomyces* spp.)

4.1.2.4 Sugar

Refined sugar complying with TZS 101 or brown sugar complying with TZS 831

4.1.3 Prohibited ingredients

Non-cereal based alcoholic beverages shall be free from *Mondia whitei* (mkongo) and other aphrodisiac ingredients, artificially added ethyl alcohol (ethanol), natural and rectified spirits and distilled alcohols.

4.2 Specific requirements

The product 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 non-cereal based alcoholic beverages

S/N	Characteristic	Requirements				Test method
		Low	mild	Medium	strong	
i.	Ethyl alcohol, percent, v/v	0.5 - 2.4	2.5 - 4	4.1 - 5.5	> 5.5	TZS 471
ii.	Volatile acidity, as acetic acid, g/l, max.			1.3		TZS 471
iii.	Methanol, mg/ L Max.			300		TZS 471
iv.	pH			2.5 - 4.0		TZS 1491
v.	Soluble solids, g/100 mL			4 – 12		TZS 1496

5 Food additives

Non-cereal based alcoholic beverages may contain food additive. When food additives are used in the product, they shall be in accordance with CXC 192.

6 Hygiene

6.1 Non-cereal based alcoholic beverages shall be manufactured in premises maintained and handled in accordance with the requirements provided in TZS 109.

6.2 Microbiological requirements

The product shall not exceed microbiological limits specified in Table 2 when tested in accordance with the test methods specified therein;

Table 2 — Microbiological requirements for non-cereal based alcoholic beverages

S/N	Microorganism	Maximum limit		Test method
		Unpasteurized	Pasteurized	
i	Total plate count, cfu/ml	10 ⁴	10 ¹	TZS 118
ii.	Coliforms MPN/ml	absent	absent	TZS 119
iii	Yeasts and moulds, cfu/ml	10 ⁴	10 ¹	TZS 131

7 Contaminants

7.1 Pesticide residues

The product shall not exceed the maximum residue limits established by the Codex Alimentarius Commission for this product.

7.2 Heavy Metals

The product shall not contain heavy metals in excess of the limits stipulated in Table 3 when tested in accordance with the test methods specified therein.

Table 3 — Maximum Limits for heavy metal in non-cereal based alcoholic beverage

S/No.	Heavy metal	Maximum Limits	Test method
i.	Lead (Pb) mg/kg	0.1	TZS 268
ii.	Arsenic (As) mg/kg	0.1	TZS 76
iii	Tin (Tn)* mg/L	150	TZS 1492

* Applicable to the product packed in cans

8 Packaging, marking and labelling

8.1 Packing

Non-cereal based alcoholic beverages shall be packed in food grade containers and sealed in a manner to ensure safety and quality requirements of the product are maintained throughout the shelf life.

8.2 Marking and labelling

8.2.1 Marking and labelling of the product shall be as prescribed in TZS 538. In addition each container of non cereal based alcoholic beverage shall be legibly and indelibly marked with the following information:

- common name of the product shall be designated by the main ingredient e.g. "Banana alcoholic beverage";
- ethyl alcohol content (v/v);

- c) batch or code number;
- d) name, postal and physical address of the manufacturer/producer/bottler;
- e) name, postal and physical address of importer, if any;
- f) net volume;
- g) manufacturer or registered product brand name and/or trade mark, if any;
- h) country of origin;
- i) list of ingredients in descending order;
- j) declaration of statutory warnings;
- k) date of manufacture and expiry date
- l) Statements to denote "pasteurized or unpasteurized"; and
- m) storage condition

8.2.2 The containers may also be marked with the TBS standards mark of quality.

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

9 Sampling

Non-cereal based alcoholic beverage shall be sampled in accordance with TZS 471.

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