



## **DRAFT TANZANIA STANDARD**

---

### **Draught beer – Specification**

DRAFT FOR STAKEHOLDERS COMMENTS

---

**TANZANIA BUREAU OF STANDARDS**



## **DRAUGHT BEER – SPECIFICATION**

### **0 FOREWORD**

Beer is a common commercial alcoholic beverage in the country. The beer industry and trade is expanding very fast to cater for the increasing demand of the commodity under different kinds/types.

Variations in beer quality do arise mainly due to traditions used or applied in the brewing process; which could also influence the safety parameters of the beer. It is in recognition of that this Tanzania Standard was prepared with a view to guide all those concerned in ensuring the production and marketing of safe and good quality draught beer.

In the preparation of this Tanzania Standard considerable amount of information was sourced from manufacturers of draught beer.

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 *Rounding off numerical values*

### **1 SCOPE**

This Tanzania Standard specifies requirements and methods of sampling and test for draught beer.

### **2 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 documents (including any amendments) applies;

TZS 4 *Rounding off numerical values*

TZS 56 *Beer specification*

TZS 59 *Water – Distilled quality – Specification*

TZS 268 *General atomic absorption — Spectrophotometric method for determination of lead in food stuffs*

TZS 109 *Code of hygiene for food processing units – General*

TZS 115 *Food – Permitted food additives – Schedule*

TZS 117 *Food stuffs – Handling of samples for microbiological analysis – Code of Practice*

TZS 119 *General guidance for enumeration of Coliform – Most Probable Number Technique*

TZS 163 *Processed fruits and vegetable products – Methods of sampling and tests*

TZS 268 *General atomic absorption spectrophotometric method for determination of lead in foodstuffs*

TZS 574(Part 1) *Potable water – Specification*

TZS 471 *Methods of sampling and test for alcoholic beverages*

TZS 665 *Ready to drink unfermented fruit flavour based alcoholic beverage – Specification*

TZS 122 *Microbiology – General guidance on methods for the detection of Salmonella*

TZS 538 *Packaging and labeling of foods*

### **3 TERMS AND DEFINITIONS**

For the purpose of this Tanzania Standard the following definitions shall apply.

#### **3.1 beer**

beverage, containing ethyl alcohol prepared by fermentation of sugars derived mainly from malted and/or unmalted cereal grains and/or approved adjuncts

#### **3.2 draught beer**

beer served from stainless steel cylinders (kegs), casks or other suitable containers pressurized with food grade carbon dioxide or nitrogen gas for dispensing the beer for retail through a tap or faucet; and containing not less than 0.5 % ethyl alcohol volume by volume (See table 1).

#### **3.3 malt**

barley or other cereal grains that have been soaked in water and allowed to sprout and kilned used for brewing.

### **4 REQUIREMENTS**

#### **4.1 General Requirement**

##### **4.1.1 Description**

Draught beer is alcoholic beverage prepared by alcoholic fermentation of wort of cereal malt and hops by yeast, with or without the addition of sugar or syrup in potable water conforming to TZS 574 (see clause 2). Such beer shall be served from suitable stainless steel cylinders (kegs), casks or other suitable containers which are pressurized with food grade carbon dioxide or nitrogen gas or a combination of such gases; which drives the beer for retail through a dispensing tap or faucet. Such beer may either be pasteurized or remain unpasteurized.

##### **4.1.2 Organoleptic requirements**

Draught beer shall have the characteristic colour, smell, taste, bouquet and foam of its type according to brand characteristic

#### 4.1.3 Types of draught beer

Draught beer shall include beer types such as lager, ale and stout; and those beers that may be flavoured in accordance to the permitted food additives prescribed in TZS 115 (See clause 2)

#### 4.1.6 Carbonation

Draught beer shall be carbonated either in the fermentation tank or during filtration prior to packing,

#### 4.1.7 Ingredients

4.1.7.1 The following ingredients shall be used in making draught beer;

- (a) malt or un malted grains
- (b) Hops (or hop concentrates) and/or their derivatives
- (c) Potable water conforming to TZS 574 (see clause 2)
- (d) Brewer's yeast (*Saccharomyces spp*)
- (e) Carbon dioxide or nitrogen gas of food grade
- (f) Fermentable adjuncts may be used

4.1.7.2 Draught beer shall be free from non nutritive sweeteners

4.1.7.3 Draught beer shall be free from artificial colours except caramel produced from sugar

4.1.7.4 Draught beer shall be free from foreign matter, suspended matter or any substance injurious to health

#### 4.1.8 Shelf life

##### 4.1.8.1 *Unpasteurized draught beer*

The storage condition of unpasteurized draught beer after packaging (in kegs or casks) shall be 20 to 30 days on maintaining it at 6 °C when closed ; and shall be consumed within 24 hours after opening if kept or maintained at a temperature of less or equal to 6 °C.

##### 4.1.8.2 *Pasteurized draught beer*

The shelf life of pasteurized draught beer after packing (in kegs and casks) shall be over ninety days on keeping it at ambient temperature without opening and shall be consumed within 24 hours if kept by maintaining at a temperature of less or equal to 6 °C after opening.

## 4.2 Specific Requirement

Draught beer shall comply with the physical and chemical requirements given in table 1.

S/N	Characteristic	Requirement for grade					Method of test refer to
		Non alcoholic	Light	Mild	Medium	Strong	
1.	Ethanol content, per cent v/v at 20°C	≤ 0.5	0.5 - 2.4	2.5 – 4	4.1 – 5.5	More than 5	TZS 56
2.	Carbon dioxide, percent v/v	2.4 – 3.0	2.4 – 3.0	2.4 – 3.0	2.4 – 3.0	2.4 – 3.0	TZS 56
3.	pH at 20 °C	4.2 – 4.6	4.2 – 4.6	4.2 – 4.6	4.2 – 4.6	4.2 – 4.6	TZS 56
4.	Lead as Pb, mg/l, max	0.1	0.1	0.1	0.1	0.1	TZS 268:
5.	Tin as Sn, mg/l, max	250	250	250	250	250	TZS 163
6.	Copper as Cu, mg/l, max	2.0	2.0	2.0	2.0	2.0	TZS 163

## 5 FOOD ADDITIVES

Only food additives specified in TZS 115 (see clause 2) shall be used

## 6. CONTAMINANTS

Draught beer shall be free from foreign matter, suspended matter or any substance injurious to health

## 7. Hygiene

**7.1** Draught beer shall be manufactured in premises built and maintained under hygienic conditions as prescribed in TZS 109 (see clause 2)

**7.2** Processing equipment like brewing vessels, fermenting vessels, fermentation tank, lees filters, conditioning tanks, faucet beer hose, keg coupler, beer line shall be maintained clean and sterile. Appropriate temperature and pressure shall be maintained for the keg.

### 7.3 Microbiological limit

Draught beer shall be free from Coliform or any pathogenic microorganisms and shall comply with the microbiological limit given in table 2.

## 2: Microbiological limit for beer

S/N	Organism	Maximum limit		Method of test (see clause 2)
		Unpasteurized	Pasteurized	
1.	Total plate count,cfu/ml	1 x 10 <sup>4</sup>	1 X 10 <sup>1</sup>	Annex A – 1 (TZS 665)
2	Yeast and mould, cfu/ml.	1 x 10 <sup>4</sup>	1 X 10 <sup>1</sup>	TZS 131
3.	Coliform (MPN)/ml	NIL	NIL	TZS 119
4.	Salmonella,cfu/ml	NIL	NIL	TZS 122

## 8 Sampling and test

The methods of sampling and tests shall be conducted as provided in TZS 56 see clause 2 and other relevant Tanzania Standards specified in table 1 and 2 of this Tanzania Standard

## 9 Packaging, marking and labelling

### 9.1 Packing

Draught beer shall be packed in stainless steel cylinders (kegs), casks or any other suitable food grade container that will prevent beer contamination and deterioration. Such containers shall be pressurized with food grade carbon dioxide or nitrogen gasses or a combination of such gasses at a ratio of 3:1, which drives the beer as a propellant to a dispensing tap or faucet. The net volume shall comply with the sale of goods (weights and packaging regulations)

### 9.2 Marking and labeling

9.2.1 The product shall be marked and labeled in accordance with TZS 538 (see clause 2).

9.2.2 In addition each Container/packet of product shall be marked and/or labeled legibly and indelibly on the label of the container in Swahili or English or both and any other language depending on the designated market.

- a) The common name of the product shall be "Draught beer"
- b) Grade; including a statement to indicate alcoholic content
- c) Brand or trade name
- d) Name and physical address of the brewer/distributor

- e) Batch number in code or in clear
- f) Storage condition
- g) Country of origin
- h) Date of packing and expiry date (freshness date)
- i) Net volume in SI units
- j) The alcohol content in percent volume by volume
- k) List of ingredients

**9.2.3** The glue applied to the label shall be of the quality that resists removal from the label:

### **9.3 Certification mark**

Each container may also be marked with TBS certification mark of quality.

NOTE - The TBS Mark of Quality may be used by the packers only under licence from TBS. Particulars of conditions under which the licenses are granted, may be obtained from TBS.