



DEAS 63: 2017

ICS 67.160.10

DRAFT EAST AFRICAN STANDARD

Beer — Specification

EAST AFRICAN COMMUNITY

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Foreword

Development of the East African Standards has been necessitated by the need for harmonizing requirements governing quality of products and services in the East African Community. It is envisaged that through harmonized standardization, trade barriers that are encountered when goods and services are exchanged within the Community will be removed.

In order to achieve this objective, the Community established an East African Standards Committee mandated to develop and issue East African Standards.

The Committee is composed of representatives of the National Standards Bodies in Partner States, together with the representatives from the private sectors and consumer organizations. Draft East African Standards are circulated to stakeholders through the National Standards Bodies in the Partner States. The comments received are discussed and incorporated before finalization of standards, in accordance with the procedures of the Community.

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

EAS 63 was prepared by Technical Committee EASC/TC 007, *Alcoholic and non-alcoholic beverages*.

This second edition cancels and replaces the first edition, EAS 63:2000, which has been technically revised.

Beer — Specification

1 Scope

This East African Standard specifies the requirements and methods of sampling and test for beer.

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.

CODEX STAN 192, *Codex general standard for food additives*

EAS 12, *Drinking (potable) water — Specification*

EAS 38, *Labelling of prepackaged foods — Specification*

EAS 39, *Hygiene in the food and drink industry — Code of practice*

EAS 100, *Food stuffs — Methods of determination of Lead*

ISO 1842, *Fruit and vegetable products — Determination of pH*

ISO 4832, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of coliforms — Colony-count technique*

ISO 4833-1, *Microbiology of the food chain — Horizontal method for the enumeration of micro-organisms — Part 1: Colony-count at 30 degrees C — Pour plate technique*

ISO 6634, *Fruits, vegetables and derived products — Determination of arsenic content — Silver diethyldithiocarbamate spectrophotometric method*

ISO 17240, *Fruit and vegetable products — Determination of tin content — Method using flame Atomic Absorption Spectrometry*

3 Terms and definitions

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

3.1

alcohol

as ethyl alcohol (C₂H₅OH)

3.2

beer

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

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3.3 malt
cereal grain (often barley), which has been steeped, allowed to germinate and then dried or kilned to halt further germination

3.4 unmalted cereal grains
cereal grains that have not undergone the processes in 3.3

3.5 brewing
process of converting malt and/or un malted cereal grains and adjuncts into beer

3.6 adjuncts
any other source of fermentable sugar from an agricultural origin other than malted barley

NOTE These materials are usually but not exclusively added in the brew house during the process of brewing.

3.7 potable water
water complying with the requirements of EAS 12

3.8 extraneous matter
includes inorganic matter such as sand, glass, metal, gravel, dirt, pebbles, stones, lumps of earth, clay and mud and organic matter such as chaff, straw, weed seeds and grains of crops, insects or insects fragments, rodent hairs or any other foreign matter. Extraneous matter does not include substances produced by interaction of normal beer ingredients as a result of natural ageing process such as polyphenols- protein interactions

4 Requirements

4.1 Ingredients

4.1.1 Essential ingredients

The following ingredients shall be used for the production of beer:

- a) malted and/ or unmalted grains;
- b) hops and/or products derived from hops; and
- c) potable water complying with EAS 12.

4.1.2 Optional ingredients or adjuncts

These may include unmalted cereal grains (see 3.4) and adjuncts (see 3.6).

4.2 General requirements

4.2.1 Beer shall be free from:

- a) any substances injurious to health;
- b) any extraneous matter;

- c) artificial sweetening agents;
- d) any artificial colorants except for those colouring agents prepared from sugar, barley, malt or any cereal grains; and
- e) any added alcohol.

4.2.2 Bright lager beer shall have maximum haze of 2.5 EBC units when tested in accordance with EAS 104.

4.2.3 classes

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Beer may be classified as below based on ethyl alcohol content given in Table 1

Non-alcoholic beer

Low alcohol/light beer

Mild beer

Medium beer

Strong beer

4.3 Specific quality requirements

Beer shall comply with the specific quality requirements specified in Table 1.

Table 1 — Quality requirements for beer

| S/No. | Characteristic | Requirement | Test method |
|-------|--|---|-------------|
| (i) | Ethyl alcohol content, %, v/v: <ul style="list-style-type: none"> • Non-alcoholic beer • Low alcohol/light beer • Mild beer • Medium beer • Strong beer | less than 0.5 0.5 - 2.4 2.5 - 4.0 4.1 - 5.5 more than 5.5 | EAS 104 |
| (ii) | pH | 30 - 4.75] | ISO 1842 |
| (iii) | Carbon dioxide, %, v/v <ul style="list-style-type: none"> • Bottled/ canned beer. • Kegged beer | 2.4 - 7.0 1.0 - 2.5 | EAS 104 |

5 Food additives

Food additives may be used in the preparation of beer in accordance with CODEX STAN 192.subject to provision of 4.2,1c

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6 Processing aids

Only food grade processing aids generally recognized as safe for human consumption shall be used during the manufacture of products covered by this standard.

7 Hygiene

Beer shall be manufactured and handled in a hygienic manner in accordance with EAS 39 and shall conform to the microbiological limits stipulated in Table 2.

Table 2 — Microbiological limits for beer

| S/No. | Organism | Limit | Test method |
|-------|---------------------------------|-------|-------------|
| i) | Coliforms | Nil | ISO 4832 |
| ii) | Total plate count, cfu/mL, max. | 100 | ISO 4833-1 |

8 Contaminants

8.1 Pesticide residues

All the raw materials used in the production of beer shall comply with the maximum residue limits for pesticides as established by the Codex Alimentarius Commission.

8.2 Heavy metal

Beer shall not contain heavy metals at levels exceeding the limits indicated in Table 3.

Table 3 — Limits for heavy metal contaminants in beer

| S/No. | Type of impurity | Limit | Test method |
|-------|-----------------------------|-------|-------------|
| (i) | Arsenic (as As), mg/L, max. | 0.01 | ISO 6634 |
| (ii) | Lead (as Pb), mg/L, max. | 0.01 | EAS 100 |
| (iii) | Tin, (as Sn), mg/L, max. | 150 | ISO 17240 |

8.3 Aflatoxin limits.

Total aflatoxin shall not exceed 10 µg/L and aflatoxin B₁ shall not exceed 5 µg/L when tested with ISO 16050

9 Weights and measures

The volume and fill of beer shall comply with the weights and measures regulations of Partner States or equivalent legislation.

10 Packaging

10.1 Beer shall be packaged in suitable food grade containers.

10.2 Beer shall be packaged for bulk delivery and storage in containers that shall prevent contamination of the product and preserve its safety and quality.

11 Labelling

In addition to the requirements of EAS 38, the following specific labelling requirements shall apply and shall be legibly and indelibly marked:

- a) name, physical location and address of manufacturer;
- b) ethyl alcohol content, % by volume;
- c) list of ingredients in descending order of proportion by mass;
- d) net content in millilitres or litres;
- e) a declaration by common name of any additives used;
- f) date of manufacture, batch identification number/code;
- g) best before;
- h) country of origin; and
- i) statutory warnings.

12 Sampling and test

Sampling and testing of beer shall be done in accordance with EAS 104.

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