

KENYA STANDARD

KS EAS 63: 2014
ICS 67.160.10

APPROVED
2015-06-29

Beer — Specification

© KEBS 2015

Second Edition 2015

KS EAS 63: 2014

TECHNICAL COMMITTEE REPRESENTATION

The following organizations were represented on the Technical Committee:

Ministry of Health — Public Health Department
Government Chemist's Department
London Distillers Ltd.
(UDV) Kenya Ltd.
Kenya Wine Agencies Ltd.
East African Breweries Ltd.
Keroche Industries Ltd.
Africa Spirits Ltd.
Institute of Packaging, Kenya
Spectre International Ltd.
Agro-Chemical (K) Ltd.
National Campaign against Drug Abuse (NACADA)
Consumer Information Network
Weight and Measures Department
Kenya Revenue Authority
Kenya Bureau of Standards — Secretariat

REVISION OF KENYA STANDARDS

In order to keep abreast of progress in industry, Kenya Standards shall be regularly reviewed. Suggestions for improvements to published standards, addressed to the Managing Director, Kenya Bureau of Standards, are welcome.

© Kenya Bureau of Standards, 2015

Copyright. Users are reminded that by virtue of Section 25 of the Copyright Act, Cap. 12 of 2001 of the Laws of Kenya, copyright subsists in all Kenya Standards and except as provided under Section 26 of this Act, no Kenya Standard produced by Kenya Bureau of Standards may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing from the Managing Director.

Beer — Specification

Licensed by KEBS Standards Information Centre to Lucy Ikonya for official use only
Order # NUMBER/Downloaded: 2016-06-14
Single-user licence only, copying and networking prohibited.

KENYA BUREAU OF STANDARDS (KEBS)

Head Office: P.O. Box 54974, Nairobi-00200, Tel.: (+254 020) 605490, 602350, Fax: (+254 020) 604031
E-Mail: info@kebs.org, Web:<http://www.kebs.org>

Coast Region

P.O. Box 99376, Mombasa-80100
Tel.: (+254 041) 229563, 230939/40
Fax: (+254 041) 229448

LakeRegion

P.O. Box 2949, Kisumu-40100
Tel.: (+254 057) 23549, 22396
Fax: (+254 057) 21814

Rift Valley Region

P.O. Box 2138, Nakuru-20100
Tel.: (+254 051) 210553, 210555

KS EAS 63: 2014

NATIONAL FOREWORD

This Kenya Standard was prepared by the Alcoholic Beverages Technical Committee under the guidance of the Standards Projects Committee, and it is in accordance with the procedures of the Kenya Bureau of Standards.

This standard is identical with and has been reproduced from EAS 63, Beer — Specification, published by the East African Community (EAC). The National Standards Council has endorsed the adoption of the 2014 edition of this standard as a Kenya Standard.

For the purposes of this standard, the text of the East African Standard should be modified as follows:

a) Terminology

The words 'this Kenya Standard' should replace the words 'this East African Standard', wherever they appear.

b) References

The references to East African Standards should be replaced by references to the appropriate Kenya Standards, where they have been declared.



EAS 63: 2014

ICS 67.160.10

EAST AFRICAN STANDARD

Beer — Specification

EAST AFRICAN COMMUNITY

Copyright notice

This EAC document is copyright-protected by EAC. While the reproduction of this document by participants in the EAC standards development process is permitted without prior permission from EAC, neither this document nor any extract from it may be reproduced, stored or transmitted in any form for any other purpose without prior written permission from EAC.

Requests for permission to reproduce this document for the purpose of selling it should be addressed as shown below or to EAC's member body in the country of the requester:

© *East African Community 2014 — All rights reserved*
East African Community
P.O.Box 1096
Arusha
Tanzania
Tel: 255 27 2504253/8
Fax: 255 27 2504481/2504255
E-mail: eac@eachq.org
Web: www.eac-quality.net

Reproduction for sales purposes may be subject to royalty payments or a licensing agreement. Violators may be persecuted

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 alcoholic fermentation of sugars derived mainly from malted and/or unmalted cereal grains and/or approved adjuncts

EAS 63: 2014

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.

4.3 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 for cloudy beer	3.5 - 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.

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/N o.	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 opaque 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) class of beer;
- d) list of ingredients in descending order of proportion by mass;
- e) net content in millilitres or litres;

- f) a declaration by common name of any additives used;
- g) date of manufacture, batch identification number/code;
- h) best before;
- i) country of origin; and
- j) statutory warnings.

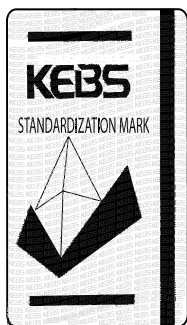
12 Sampling and test

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

KENYA BUREAU OF STANDARDS (KEBS)

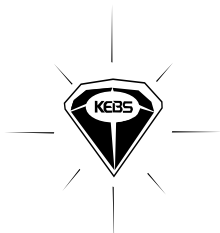
KEBS CERTIFICATION MARKS

1. Product Certification Marks



KEBS Standardization Mark (S-Mark) is issued for use on products that comply with the minimum quality requirements prescribed in Kenya standards. It uses standards as a benchmark for quality compliance and aims at giving manufacturers improved market access and also giving consumers an assurance of quality for the products bearing the mark.

Standardization Mark
SYMBOL FOR PRODUCT QUALITY



Diamond Mark of Quality
SYMBOL FOR PRODUCT QUALITY EXCELLENCE



Import Standardization Mark
SYMBOL FOR PRODUCT QUALITY

2. Systems Certification Marks



ISO 9001 REGISTERED FIRM
QUALITY MANAGEMENT SYSTEM



OCCUPATIONAL HEALTH AND SAFETY
OHSAS 18001 CERTIFIED



ISO 14001 REGISTERED FIRM
ENVIRONMENTAL MANAGEMENT SYSTEM



ISO 22000 REGISTERED FIRM
FOOD & SAFETY MANAGEMENT SYSTEM

KEBS is mandated to provide Standardization, Metrology and Conformity Assessment Services through:

- Promotion of standardization in commerce and industry
- Provision of testing and calibration facilities
- Control of the use of standardization marks
- Undertaking educational work in standardization
- Facilitation of the implementation and practical application of standards
- Maintenance and dissemination of the International System of Units (SI) of measurements

KEBS offers the following services:

- Standards development and harmonization
- Testing services
- Measurement services (Calibration)
- Enforcement of standards
- Product inspection services
- Education and Training in Standardization, Metrology and Conformity Assessment
- Product and Management Systems Certification Services

INFORMATION ON STANDARDS

Standards are documents that provide a common reference point for the assessment of the quality of goods and services. Standards facilitate transparency in the exchange of products and enhance market access of Kenyan products into local, regional and international markets.

Information on standards and related documents is available at the KEBS standards information centre.

KEBS houses the WTO-TBT National Enquiry Point (NEP) which disseminates notification likely to affect international trade to the industry.

KEBS also provides technical advice on installation and improvement of quality goods and services to the industry so as to facilitate efficient implementation of standards. Some of the advantages of standards include: enhancement of quality assurance, safety and environmental protection measures, minimization of wastage, reduction of costs and unnecessary varieties and promotion of interchangeability and increased productivity in industry.

For further information please contact

The Managing Director
Kenya Bureau of Standards
Popo Road, Off Mombasa Road
P.O. Box 54974 - 00200
NAIROBI, KENYA

Tel.: +254 (0) 20 6948000
Fax: +254 (0) 20 604031
E-Mail: info@kebs.org
E-Mail: customercare@kebs.org
Website: <http://www.kebs.org>