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ICS 67.180.10

EAST AFRICAN STANDARD

Dark sweet and blackstrap molasses

EAST AFRICAN COMMUNITY

Third Edition 2025

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.

The Community has established an East African Standards Committee (EASC) mandated to develop and issue East African Standards (EAS). The Committee is composed of representatives of the National Standards Bodies in Partner States, together with the representatives from the public and private sector organizations in the community.

East African Standards are developed through Technical Committees that are representative of key stakeholders including government, academia, consumer groups, private sector and other interested parties. 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 principles and procedures for development of East African Standards.

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.

The committee responsible for this document is Technical Committee EASC/TC 019, Sugar and Sugar Products.

Attention is drawn to the possibility that some of the elements of this document may be subject of patent rights. EAC shall not be held responsible for identifying any or all such patent rights.

Dark sweet and black strap molasses

1 Scope

This Draft East African Standard specifies the requirements, sampling and test methods for dark sweet and black strap molasses intended for human consumption.

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.

AOAC 962.37, Density of sucrose solutions at 0 °C – 100 °C and 0 % – 70 %

ICUMSA GS1/2/3/4/7/8/9-23, the determination of pH by a direct method in raw sugar, molasses, juices and syrups

ICUMSA GS3/4/7/8-11, The determination of sulphated ash in brown sugar, juice, syrup and molasses
ICUMSA GS4/3-7, The determination of total reducing sugars in molasses and refined syrups after hydrolysis by the Lane & Eynon constant volume procedure

CAC/GL 50, General guidelines on sampling

CODEX STAN 192, *General standard for food additives*

EAS 8, raw cane sugar — Specification

EAS 38, Labelling of pre-packaged foods — Specification

EAS 39, *Food processing units — Code of hygiene*

ISO 2173, Fruit and vegetable products — Determination of soluble solids — Refractometric method

ISO 4831, Microbiology of food and animal feeding stuffs — Horizontal method for the detection and enumeration of coliforms — Most probable number technique

ICUMSA Method GS 2/1/3/9-15, the Determination of Sugar Moisture by Loss on Drying – Official

ICUMSA Method GS 2/9-6, the Determination of Reducing Sugars in White Sugar and Plantation White Sugar by the Modified Ofner Titrimetric Method – Official

ICUMSA Method GS 2/3-10, the Determination of White Sugar Solution Colour – Official

ICUMSA Method GS 2/3-17, the Determination of Conductivity Ash in Refined Sugar Products and in Plantation White Sugar – Official

ICUMSA Method GS 1-16, the Determination of Starch in Raw Sugar by a Modified BSES Method – Official

ICUMSA GS 2/3-35, the Determination of Sulphite in Refined Sugar Products excepting Brown Sugars by an Enzymatic Method – Official The Determination of Sulphite in Brown Sugars – Tentative

ICUMSA Method GS 2/3-1, the Braunschweig Method for the Polarisation of White Sugar by Polarimetry

ISO 4833-2, Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of microorganisms – Colony-count technique at 30°C

ISO 6579, Microbiology of food and animal feeding stuffs — Horizontal method for the detection of Salmonella spp.

ISO 21527-2Microbiology of food and animal feeding stuffs Horizontal method for the enumeration of yeasts and moulds Part 2: Colony count technique in products with water activity less than or equal to 0,95

ISO 7251 Microbiology of food and animal feeding stuffs Horizontal method for the detection and enumeration of presumptive Escherichia coli

ISO 6579-1 Microbiology of the food chain Horizontal method for the detection, enumeration and serotyping of Salmonella Part 1: Detection of Salmonella spp.

ISO 4833-1, Microbiology of the food chain — Horizontal method for the enumeration of microorganisms — Part 1: Colony count at 30 °C by the pour plate technique

ISO 5379, Starches and derived products — Determination of sulfur dioxide content — Acidimetric method and nephelometric method

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

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 Baird-Parker agar medium

ISO 7251, Microbiology of food and animal feeding stuffs — Horizontal method for the detection and enumeration of presumptive Escherichia coli — Most probable number technique

ISO 21527-1, Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of yeasts and moulds — Part 1: Colony count technique in products with water activity greater than 0.95

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at http://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
Brix
Concentration of sugar in juice corresponding approximately to concentration of solutes expressed in percentage as measured with a refractometer or hydrometer and expressed in degrees Brix units

3.2
Food packaging material

Product to be used for containment, protection, handling, delivery, storage, transport and presentation of food

3.3
Molasses

dark, sweet, syrupy by-product made during the extraction of sugars from sugarcane and other sources to which no other material has been added

3.4
foreign matter
organic or inorganic material other than molasses'

3.5
dark sweet molasses
a thick, dark brown syrup obtained during the second boiling of sugarcane or sugar beet juice in the sugar-making process. Commonly used in baking (gingerbread, fruitcakes, cookies), barbecue sauces, marinades, and as a flavoring agent.

3.6
Black strap molasses

thick, dark syrup obtained from the third and final boiling of sugarcane or sugar beet juice during the sugar-making process. Commonly used in health supplements, rum production, and as a flavoring in some traditional recipes; less used in sweet baking due to its intense taste

4 Requirements

4.1. General requirement

Dark sweet and black strap molasses shall:

a) be characteristic of the product and have a well-balanced flavour;

b) be free from off-odours and off-flavours

c) be free from foreign matter such as impurities of animal origin, including dead insects

4.2 Specific requirements

When tested in accordance with the referenced test methods, Dark sweet and black strap molasses shall comply with the specific requirements specified in Table 1.

Table 1 — Quantity requirements for dark sweet and black strap molasses

S/N	Characteristic	Requirement		Test method
		Dark sweet molasses	Black strap molasses	
i	Total soluble solids at 20 °C, ºBrix, min.	75		ICUMSA GS4/7/8 – 13 (2009)
ii	pH of 10 % solution, m/v	4.0 - 6.0		ICUMSA GS1-23 (2009)
iii	Total sugars, % m/m, min.	45	35	ICUMSAGS 4-7 (2011) ICUMSA GS 4-3 (2007)
iv	Total ash content, % m/m, max.	10		AOAC 900.02
v	Density, g/cm3, min.	1.30		AOAC 962.37
vi	Sulphated ash, % m/m, max.	16		ICUMSAGS 3-11 (2000)
vii	Sulphur dioxide as SO2, mg/L, max.	20		ISO 5379
viii	Sludge, % v/v, max.	Absent		Annex B

5 Food additives

Food additives, when used in Dark sweet and black strap molasses shall comply with CXS 192.

6 Hygiene

6.1. Dark sweet and black strap molasses shall be processed and handled in accordance with EAS 39.

6.2. Dark sweet and black strap molasses shall comply with the microbiological requirements given in Table 3 when tested in accordance with the test methods specified therein.

Table 2 — Microbiological limits for Dark sweet and black strap molasses

S/No	Microorganism	Maximum limit, cfu/g	Test method
i	Total plate count, max.	1000	ISO 4833-1
ii	Yeast and moulds, cfu/ g, *max.*	10	ISO 21527-2
iii	*Escherichia coli*, CFU/ml max.	absent	ISO 16649-2
v	*Staphylococcus aureus*, CFU/ml max	absent	ISO 6888-1
vi	Salmonella, cfu/25g	Absent	ISO 6579-1

8 Contaminants

8.1. Heavy metals

Dark sweet and black strap molasses shall not exceed maximum heavy metal limits established by the Codex Alimentarius Commission.

8.2. Pesticides residues

Dark sweet and black strap molasses shall comply with those maximum pesticide residue limits established by the Codex Alimentarius commission online database.

9 Packaging

Dark sweet and black strap molasses shall be packaged in food grade materials that ensure product safety and integrity.

10 Labelling

In addition to the labelling requirements in EAS 38, packages of product shall be labelled legibly and indelibly with the following information:

a) The name of the product ‘dark sweet or black strap molasses’’;

b) List of ingredients;

c) Net contents: The net contents shall be declared by weight in metric units ('system international');

d) Name and Address of the manufacturer, packer, distributor, importer, exporter or vendor of the product shall be declared.;

e) Country of Origin;

f) Manufacturing date;

g) Expiry date;

g) Storage conditions as “Store in a cool dry place away from contaminants”;

i) Instructions on disposal of used package.

11. Sampling

Sampling shall be done in accordance with CXG 50.

Annex A

(informative)

Determination of Brix

A.1 Spindle method

Determine the Brix by using an appropriate spindle 30 ˚C Baume – 60 ˚C Baum. Note the reading and the temperature from the thermometer attached to the base of the spindle. Apply the temperature correction and record the Brix at 20 ˚C.

A.2 Refractometer method

Using a 50 % sample solution, pipette a few millilitres through the clarity filter rubber teat pipette and pour onto the glass prism cover. Press the read function to take the reading. Multiply the reading by two to get the result

Annex B

(normative)

Determination of loose sludge

B.1 Weigh 270 g of raw molasses and add distilled water (X g). Determine X using the following formula.

$X = 6 (Brix – 45)$

where

X is the quantity, in grams, of distilled water at 20 °C.

B.2 Adjust the pH to 4.5 using 10 % H_2SO_4. Boil for 3 min and allow settling in graduated cones. Note the settled volume after 30 min and express as percent (volume-by-volume), loose sludge.