



DRAFT EAST AFRICAN STANDARD

Soya milk — 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 800 was prepared by Technical Committee EASC/TC 014, *Cereals, pulses and related products*.

Introduction

Soya products are becoming a mainstream part of regional dietary items. The benefit associated with the products includes among others the richness in protein supply. This is of great benefit especially as an alternative protein source. However, it is important to note that soya has naturally high level of anti-nutritional properties related to trypsin inhibitor and tannins. The manufacturers are advised to apply appropriate processing technologies to reduce these anti-nutrient properties to acceptable safe levels for human consumption.

Soya milk (also referred to as soy milk) is a heat-treated beverage made from soya beans as a stable emulsion of oil, water, and protein produced by boiling or soaking dry soya beans and grinding them with water or adding enough water to full-fat soya flour to give the desired solids content to the final product.

This standard has been developed to ensure the safety and quality of soya milk for human consumption.

Soya milk — Specification

1 Scope

This draft East African Standard specifies requirements, sampling and test methods for soya milk intended for human consumption.

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.

AOAC 972.25, *Lead in Food, atomic absorption spectrophotometric method*

CODEXSTAN 193, *General standards for contaminants and toxins in food and feed*

EAS 38, *Labelling of pre-packaged foods — Specification*

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

EAS 762, *Dry soybeans — Specification*

EAS 799, *Edible full fat soya flour — Specification*

ISO 6731, *Milk, cream and evaporated milk — Determination of total solids content (Reference method)*

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 5538, *Milk and milk products — Sampling — Inspection by attributes*

ISO 6579-1:2017 *Microbiology of the food chain — Horizontal method for the detection, enumeration and serotyping of Salmonella — Part 1: Detection of Salmonella spp.*

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 11085, *Cereals, cereals-based products and animal feeding stuffs — Determination of crude fat and total fat content by the Randall extraction method*

ISO 20483, *Cereals and pulses — Determination of the nitrogen content and calculation of the crude protein content — Kjeldahl method*

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

ISO 16050 *Foodstuffs - Determination of aflatoxin B1, and the total content of aflatoxins B1, B2, G1 and G2 in cereals, nuts and derived products - High-performance liquid chromatographic method (ISO 16050:2003)*

ISO 16649-2 *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of beta-glucuronidase-positive Escherichia coli — Part 2: Colony-count technique at 44 degrees C using 5-bromo-4-chloro-3-indolyl beta-D-glucuronide*

3 Terms and definitions

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

3.1

soya bean

whole mature dry bean of *Glycine max* (L) Merr. varieties

3.2

soya milk

stable emulsion of oil, water, and protein produced from processed soya beans or edible full fat soya flour

3.3

food grade packaging material

packaging material, made of substances which are safe and suitable for their intended use and which will not impart any toxic substance or undesirable odour or flavour to the product

4 Requirements

4.1 Ingredients

The following essential ingredients shall be used in the soya milk making complying to relevant East African standards

4.1.1 Essential ingredients

- a) dry soya bean or
- b) edible full fat soya flour .

4.1.2 Optional ingredients

In the preparation of soya milk, the following ingredients, complying with relevant East African and CODEX standards, may be used:

- a) salt;
- b) carbohydrate, including sugars;
- c) edible oils;
- d) minerals and vitamins; or
- e) herbs and spices.

4.2 General requirements

Soya milk shall:

- a) have taste and odour characteristic of soya bean and any approved food additives used;
- b) be free from rancidity and mustiness;
- c) be free from sourness;
- d) be free from extraneous and foreign matter;

4.3 Specific quality requirements

Soya milk shall comply with the requirements specified in Table 1.

Table 1 — Specific quality requirements for soya milk

| S/N | Characteristic | Requirement | Test method |
|------|---------------------------------|-------------|-------------|
| i. | Protein (N x 6.25), % m/m, min. | 3.0 | ISO 20483 |
| ii. | Soya oil (fats), % m/m, min. | 0.5 | ISO 11085 |
| iii. | Total solids, % m/m, min. | 7.0 | ISO 6731 |

5 Food additives

If used, food additives shall comply with CXS 192

6 Hygiene

Soya milk shall be prepared 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 soya milk

| S/N | Micro-organism | limit | Test method |
|------|----------------------------------|-----------------|-------------|
| i. | Total plate count, cfu/ml, max | 10 ³ | ISO 4833-1 |
| ii. | <i>Escherichia coli</i> , cfu/ml | Absent | ISO 16649-2 |
| iii. | <i>Salmonella</i> spp in 25 mL | Absent | ISO 6579-1 |
| iv. | Yeast and moulds, cfu/ml | 10 ² | ISO 21527-1 |

7 Contaminants

7.1 Pesticide residues

Soya milk shall comply with those maximum pesticide residue limits established by Codex Alimentarius Commission for similar commodities.

7.2 Other contaminants

When tested in accordance with AOAC 972.25, the level of Lead (Pb) in soya milk shall not exceed 0.1 ppm. The product shall not contain other heavy metal contaminants in amounts which may represent a hazard to health.

7.3 Aflatoxins

The maximum content of aflatoxins in soya milk shall not exceed 5 µg/kg (ppb) for aflatoxin B₁ and 10 µg/kg for total aflatoxins when tested in accordance with ISO 16050.

8 Packaging

Soya milk shall be packaged in food grade packaging material which will safeguard the hygienic, nutritional, technological and organoleptic qualities of the products.

9 Labelling

In addition to the requirements given in EAS 38, each package of soya milk shall be legibly and indelibly labelled with the following information:

- a) name of the product shall be "Soya milk";
- b) brand name/trade name;
- c) name and physical address of the manufacturer/packers/importer
- d) lot identification/ batch number;
- e) net volume in metric units;
- f) list of ingredients in descending order;
- g) list of any additives used;
- h) date of manufacture;
- i) country of origin;
- j) storage conditions;
- k) expiry date; and

10 Method of sampling

Sampling shall be done in accordance with ISO 5538.

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