EAST AFRICAN STANDARD

Soya milk — Specification
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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.

CD/T/96/2012 was prepared by Technical Committee EAS/TC 014, Cereals and pulses.
Introduction

Soya products are becoming a main stream part of regional dietary items. The benefit associated with the products includes among others the richness in protein supply. This is 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 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 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 East African standard is prepared to ensure safety and quality of soya milk for human consumption.
Soya milk – Specification

1 Scope

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

2 Normative references

The following referenced documents are indispensable for the application of this document. The latest edition of the referenced document (including any amendments) applies.

EAS 38, Labelling of pre-packaged foods — Specification

CAC/GL 1, General guidelines on claims

ISO 2446 ISO 3728CAC/GL 23, Guidelines for use of nutrition and health claims

CODEXSTAN 193, Codex general standards for contaminants and toxins in food and feed

EAS 161: Milk and milk products Sampling – Inspection by attributes - Specification

ISO 4833: 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 7251, Microbiology of food and animal feeding stuffs — Horizontal method for the detection and enumeration of presumptive Escherichia coli — Most probable number technique

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

FDEAS 762, Dry soy beans – Specification

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

3 Terms and definitions

For the purposes of this East African 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
A stable emulsion of oil, water, and protein produced from 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 odor or flavor to the product.

4. Quality requirements

4.1. General requirements

4.1.1. Raw Material
   a) Dry soya bean complying with FDEAS 762 or
   b) Edible full fat soya flour complying with EAS CD/T/95,

4.1.2. Optional ingredients
The product soya milk may contain among others the following ingredients complying with relevant East African standards and CODEX Standard.
   a) Salt
   b) Carbohydrate, including Sugars,
   c) Edible oils
   d) Minerals and vitamins
   e) Herbs and spices

4.1.3. Soya milk shall be prepared from dry soya beans or edible full fat soya flour.

4.1.4. 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) free from foreign matter.

4.2. Compositional requirements
Soya milk shall conform to the requirements in Table 1.
Table 1 – Requirement for soya milk

<table>
<thead>
<tr>
<th>S/n</th>
<th>Characteristic</th>
<th>Requirements/limits</th>
<th>Methods of Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>I.</td>
<td>Protein% m/m, min</td>
<td>3.0</td>
<td>ISO 20483ISO 2446</td>
</tr>
<tr>
<td>II.</td>
<td>Soya oil (fats) % m/m, min</td>
<td>1.0</td>
<td>ISO 3728</td>
</tr>
<tr>
<td>III.</td>
<td>Total solids% m/m, min</td>
<td>7.0</td>
<td></td>
</tr>
</tbody>
</table>

5 Food additives

Only the food additives permitted in CODEX STAN 192 standards for food additives may be used.

6 Hygiene

6.1 The soya milk shall be prepared under good hygienic practices as stipulated in EAS 39

6.2 Soya milk shall be free from objectionable matter and shall be free from pathogenic micro-organisms, substances originating from micro-organisms or any other deleterious substances in amounts which may constitute a health hazard.

6.3 Soya milk shall comply with microbiological requirements in Table 2

Table 2 – Microbiological limits for soya milk

<table>
<thead>
<tr>
<th>S/n</th>
<th>Microorganism</th>
<th>Maximum Limit</th>
<th>Method of Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>I.</td>
<td>Total plate count, cfu/ml</td>
<td>$10^3$</td>
<td>ISO 4833</td>
</tr>
<tr>
<td>II.</td>
<td>E.coli, MPN/ml</td>
<td>absent</td>
<td>ISO 7251</td>
</tr>
<tr>
<td>III.</td>
<td>Salmonella per 25ml</td>
<td>absent</td>
<td>ISO 6579</td>
</tr>
<tr>
<td>IV.</td>
<td>Yeast and moulds, cfu/ml</td>
<td>$10^5$</td>
<td>ISO 21527-1</td>
</tr>
</tbody>
</table>

7 Contaminants

7.1 Pesticide residues

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

Note: Where the use of certain pesticide is prohibited by some partner states, it should be notified to all other partner states accordingly

7.2 Other contaminants

The maximum content of lead (Pb) in soya milk when determined in accordance with the method described in AOAC 972.25 shall not exceed 0.2 mg/kg. 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 when determined in accordance with the method described in ISO 16050 shall not exceed 5 µg/kg (ppb) for aflatoxin B₁ and 10 µg/kg for total aflatoxins.

8 Packaging

8.1 Soya milk shall be packaged in food grade material which guarantees the safety and integrity of the product.

8.2 The fill of each package shall comply with weights and measures legislation and legal metrology of the Partner State.

10 Labelling

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

a) The name of the product shall be “soya milk”

b) Brand name/trade name;

c) The name and physical address of the manufacturer;

d) Lot identification/ batch/code number

e) Net volume in metric units;

f) List of ingredients in descending order

g) A list of any additives used;

h) Date of manufacture;

i) Country of origin;

j) Storage conditions;

k) Expiry date

l) m) Language shall be English. Additional official language may be used.

11 Methods of sampling

Methods of sampling of soya milk shall be in accordance with EAS 161