# DRAFT EAST AFRICAN STANDARD

**Dairy ice cream — Specification**

# EAST AFRICAN COMMUNITY

Third Edition 2018

# 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 017, *Milk and milk 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.

This third edition cancels and replaces the second edition (EAS 70: 2007), which has been technically revised.

# Dairy ice cream — Specification

## 1   Scope

This Draft East African Standard specifies requirements, sampling and test methods for dairy ice cream 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 999.10, *Official method for lead, cadmium, zinc, copper, and iron in foods Atomic absorption Spectrophotometry after microwave Digestion*

CAC/RCP 1, *General principles for food hygiene*

CAC/RCP 57, *Code of hygienic practice for milk and milk products*

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

EAS 12, *Potable water — Specification*

EAS 16, *Plantation (mill) white sugar — Specification*

EAS 22, *Butter — Specification*

EAS 36; *Honey — Specification*

EAS 38, *Labelling of pre-packaged foods — General requirements*

EAS 49, *Milk powders and cream powder — Specification*

EAS 69, *Pasteurized milk — Specification*

EAS 87, *Sweetened condensed milk — Specification*

EAS 803, *Nutrition labelling — Requirements*

ISO 707, *Milk and milk products — Guidance on sampling*

ISO 2446, *Milk — Determination of fat content*

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 microorganisms — Part 1: Colony count at 30 degrees C by the pour plate technique*

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 6611, *Milk and milk products — Enumeration of colony-forming units of yeasts and/or moulds — Colony-count technique at 25 degrees C*

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

ISO 7932, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of presumptive Bacillus cereus — Colony-count technique at 30 degrees C*

ISO 11290-2, *Microbiology of the food chain — Horizontal method for the detection and enumeration of Listeria monocytogenes and of Listeria spp. — Part 2: Enumeration method*

ISO 11866-1, *Milk and milk products — Enumeration of presumptive Escherichia coli — Part 1: Most probable number technique using 4-methylumbelliferyl-beta-D-glucuronide (MUG)*

ISO 14501, *Milk and milk powder — Determination of aflatoxin M1 content — Clean-up by immunoaffinity chromatography and determination by high-performance liquid chromatography*

ISO 18068*, Cotton fibres — Test method for sugar content — Spectrophotometry*

ISO 6888-3, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species) — Part 3: Detection and MPN technique for low numbers*

# 3 Terms and definitions

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

**3.1**
**dairy ice cream**
frozen food product made from pasteurized dairy ice cream mix by a process of freezing with incorporation of air, followed by the optional addition of dairy chocolate, fruits, nuts or confections

**3.2**
**milk**
normal, clean and fresh secretion extracted from the udder of a healthy cow but excluding that obtained during the first seven days after calving

# 4 Raw materials

## 4.1 Raw materials

The following raw materials shall be used:

a)  milk and milk products such as:

i.   milk powder complying with EAS 49;

ii.  concentrated complying with EAS 87;

iii. pasteurized complying with EAS 69;

iv.  butter complying EAS 22; or

v.   cream.

b)   sugar complying with EAS 16; and

c)   water complying with EAS 12.

## 4.2   Permitted ingredients

In the production of dairy ice cream, the following ingredients may be used and once used they shall be fit for human consumption. Those ingredients include but are not limited to:

a)   egg or egg products;

b)   fruit and fruit products (The products may be fresh, frozen, dried, canned or in syrup form);

c)   cocoa and cocoa products;

d)   honey complying with EAS 36;

e)   coffee;

f)   confectionery products; or

g)   nuts (all kinds).

## 4.3   General requirements

Dairy ice cream shall:

a)   be homogeneous mixture;

b)   be free from organoleptically detectable ice crystals;

c)   have typical flavor of the ingredients used;

d)   be free from extraneous material;

e)   contain overrun not exceeding 100 %; and

f)   contain no fat other than milk fat.

## 4.4   Specific requirements

Dairy ice cream shall comply with the requirements specified in Table 1 when tested in accordance with test methods specified therein.

**Table 1 — Specific requirements for dairy ice cream**

| Characteristic | Dairy ice cream | Test method |
|---|---|---|
| Total sugar (excluding Lactose), %, mass, min. | 13.0 | ISO 18068 |
| Milk Solids Non-Fat, %, mass, min. | 13.0 | ISO 6731 |
| Milk fat, %, mass, min. | 10.0 | ISO 2446 |

## 4.5 Microbiological limits

Dairy ice cream shall comply with the following microbiological limits in Table 2 when tested in accordance with test methods specified therein.

**Table 2 — Microbiological limits for dairy ice cream**

| Micro organisms | Maximum limits | Test method |
|---|---|---|
| Total plate count, CFU/g | 40 000 | ISO 4833-1 |
| Total Coliforms | 10 | ISO 4832 |
| *E. Coli*, CFU/g | Absent | ISO 11866-1 |
| *Salmonella spp*, per 25 g | Absent | ISO 6579-1 |
| *L. monocytogenes*, CFU /g | Absent | ISO 11290-2 |
| *Staphylococcus aureus*/g | Absent | ISO 6888-3 |
| *Bacillus cereus* CFU/g | Absent | ISO 7932 |
| Moulds and yeasts, CFU/g | 10 | ISO 6611 |

## 5 Food additives

Food additives which may be used shall comply with CODEX STAN 192.

## 6 Contaminants

### 6.1 Pesticide residues

Dairy ice cream shall conform to maximum limits residues set by Codex Alimentarius Commission.

### 6.2 Veterinary drugs residues

Dairy ice cream shall conform to maximum tolerable residue limits for antibiotics and other veterinary drugs set by Codex Alimentarius Commission.

### 6.3 Heavy metals

The level of Lead (Pb) shall not exceed 0.02 mg/kg when tested in accordance with AOAC 999.10.

### 6.4 Mycotoxin

When tested in accordance with ISO 14501 the level of Aflatoxin M1 shall not exceed 0.50 µg/kg.

## 7 Hygiene

Dairy ice cream shall be produced and handled in accordance with CAC/RCP 57 and CAC/RCP 1.

## 8 Packaging

Dairy ice cream shall be packaged in food grade containers which safeguards the quality of the product.

## 9   Labelling

The container shall be labelled in compliance with the requirements of EAS 38 and EAS 803. In addition, the following particulars shall be legibly and indelibly labelled on the container:

a)   name of the product as "Dairy ice cream"; In case of products containing fruits, "name of the fruit" followed by the name of the product. The words "name of fruit or flavoured" may be added to dairy ice cream, (for example - "strawberry flavoured dairy ice cream").

b)   name and physical address of manufacturer;

c)   net content in SI units;

d)   batch or code number;

e)   list of ingredients;

f)   nutritional information;

g)   the date of manufacture and expiry date;

h)   instruction for storage and use;

i)   declaration of allergens if any; and

j)   country of origin.

## 10   Sampling

Dairy ice cream shall be done in accordance with ISO 707.