



DEAS 70: 2022

ICS 67.100.10

DRAFT EAST AFRICAN STANDARD

Dairy ice cream — 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 2018 — All rights reserved
East African Community
P.O. Box 1096,
Arusha
Tanzania
Tel: + 255 27 2162100
Fax: + 255 27 2162190
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 prosecuted.

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 fourth edition (DEAS 70: 2022) cancels and replaces the third edition (EAS 70: 2019), 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 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 39, *Hygiene in the food and drink manufacturing industry — Code of practice*

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

EAS 69, *Pasteurized milk — Specification*

EAS 803, *Nutrition labelling — Requirements*

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 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 21871, *Microbiology of food and animal feeding stuffs — Horizontal method for the determination of low numbers of presumptive Bacillus cereus — Most probable number technique and detection method*

ISO 22184, *Milk and milk products—Determination of the sugar contents—High performance anion exchange chromatography with pulsed amperometric detection method (HPAEC-PAD)*

ISO 2446, *Milk — Determination of fat content*

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 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*

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

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

3 Terms and definitions

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

3.1

dairy ice cream

frozen milk 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

3.3

food grade packaging material

packaging material made of substances which are safe and suitable for their intended use and which will not alter the quality, safety or organoleptic properties of the product

3.4

foreign matter

any kind of undesirable physical material introduced to a food product at any point in its production, handling, processing or distribution

4 Requirements

4.1 Ingredients

4.1.1 Essential ingredients

Dairy ice cream shall be made from the following raw materials:

- a) milk and milk products such as:
 - (i) milk powder complying with EAS 49;
 - (ii) concentrated milk;
 - (iii) pasteurized milk complying with EAS 69;
 - (iv) butter complying EAS 22; or
 - (v) dairy cream.
- b) sugar complying with EAS 16; and
- c) water complying with EAS 12.

4.1.2 Optional ingredients

In the production of dairy ice cream, the following permitted optional ingredients may be used. These ingredients include but are not limited to:

- a) egg or egg products;
- b) fruit and fruit products which 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).

4.2 General requirements

Dairy ice cream shall:

- a) be homogeneous mixture;
- b) be free from organoleptically detectable ice crystals;
- c) have typical flavour of the ingredients used;
- d) be free from foreign matter;
- e) contain overrun not exceeding 100 %; and

- f) contain no fat other than milk fat.

4.3 Specific requirements

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

Table 1 — Specific requirements for dairy ice cream

Characteristic	Requirement	Test method
Total sugar (excluding lactose), %, mass, min.	13.0	ISO 22184
Milk solids non-fat, %, mass, min.	13.0	ISO 6731
Milk fat, %, m/m, min.	10.0	ISO 2446

5 Hygiene

5.1 Dairy ice cream shall be produced and handled in accordance with CAC/RCP 57 and EAS 39.

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

Table 2 — Microbiological limits for dairy ice cream

S/N	Microorganism	Maximum limit	Test method
i.	Total plate count, CFU/g	1x10 ⁴	ISO 4833-1
ii.	Total coliforms, MPN/g	10	ISO 4831
iii.	<i>Escherichia coli</i> , MPN per g	Absent	ISO 7251
iv.	<i>Salmonella spp.</i> , per 25 g	Absent	ISO 6579-1
v.	<i>Listeria monocytogenes</i> , per 25 g	Absent	ISO 11290-2
vi.	<i>Staphylococcus aureus</i> , per g	Absent	ISO 6888-3
vii.	<i>Bacillus cereus</i> , per g	Absent	ISO 21871
viii.	Moulds and yeasts, CFU/g	10	ISO 6611

6 Food additives

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

7 Contaminants

7.1 Pesticide residues

Dairy ice cream shall comply with maximum limits residues set by Codex Alimentarius Commission.

7.2 Veterinary drugs residues

Dairy ice cream shall comply with maximum residue limits for antibiotics and other veterinary drugs set in CX/MRL 2

7.3 Heavy metals

When tested in accordance with AOAC 999.10, the level of Lead (Pb) shall not exceed 0.02 mg/kg

7.4 Mycotoxins

When tested in accordance with ISO 14501, the level of aflatoxin M1 shall not exceed 0.5 µg/kg.

8 Packaging

Dairy ice cream shall be packed in food grade packaging material that safeguards the integrity and safety 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; packer, distributor, importer, exporter or vendor
- c) net content in SI units;
- d) batch or code number;
- e) list of ingredients;
- f) nutritional information;
- g) date of manufacture and expiry date;
- h) instruction for storage;
- i) declaration of allergens if any; and
- j) country of origin.

10 Sampling

Sampling shall be done in accordance with ISO 707.

Bibliography

EAS 70: 2019, *Dairy ice cream — Specification*

DEAS FOR PUBLIC REVIEW

DEAS FOR PUBLIC REVIEW