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## **EAST AFRICAN STANDARD**

Sweetened condensed 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.

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## Sweetened condensed milk — Specification

### 1 Scope

This East African Standard prescribes the requirements and the methods of sampling and test for sweetened condensed milk.

#### 2 Normative references

The following standards contain provisions, which, through reference in this text constitute provisions of this standard. All standards are subject to revision and parties to agreements based on this standard are encouraged to take steps to ensure the use of the most recent editions of the standard indicated below. Information on currently valid national and international standards may be obtained from the Partner States Bureaux of Standards Information and Documentation Centre.

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

EAS 38, Labelling of prepackaged foods

EAS 49:2000, Dried whole milk and skimmed milk powder — Specification

EAS 68, Milk and milk products — Methods of microbiological examination

EAS 69, Pasteurized liquid milk — Specification

EAS 81, Milk powders — Methods of analysis

EAS 161, Milk and milk products — Sampling — Inspection by attributes

EAS 165, Milk and milk products — Inspecting sampling — Inspection by variables

ISO 6785, Milk and milk products — Detection of Salmonella spp.

ISO 14674, Milk and milk powder — Determination of aflatoxin M1 content — Clean-up by immunoaffinity chromatography and determination by thin-layer chromatography

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

## 3 Description

Sweetened condensed milks are milk products which can be obtained by the partial removal of water from milk with the addition of sugar, or by any other process which leads to a product of the same composition and characteristics.

## 4 Requirements

#### 4.1 Raw materials

Milk and milk products complying with relevant East African Standards:

- milk powder EAS 49
- pasteurised milk EAS 69

#### 4.2 Permitted ingredients

The following milk products are allowed for protein adjustment purposes:

- milk retentate, the product obtained by concentrating milk protein by ultrafiltration of milk, partly skimmed milk, or skimmed milk;
- milk permeate, the product obtained by removing milk proteins and milkfat from milk, partly skimmed milk, or skimmed milk by ultrafiltration; and
- lactose (also for seeding purposes)
- potable water
- sugar
- sodium chloride.

In this product, sugar is generally considered to be sucrose, but a combination of sucrose with other sugars, consistent with Good Manufacturing Practice, may be used.

#### 4.3 Additives

Only those food additives listed below may be used and only within the limits specified.

INS No.	Name	Maximum Level
	Firming agents	
508	Potassium chloride	2 g/kg singly or 3 g/kg in combination, expressed as
509	Calcium chloride	anhydrous substances
	Stabilizers	
331	Sodium citrates	)
332	Potassium citrates	2 g/kg singly or 3 g/kg in combination, expressed as anhydrous substances
333	Calcium citrates	
	Acidity regulators	
170	Calcium carbonates	
339	Sodium phosphates	
340	Potassium phosphates	
341	Calcium phosphates	
450	Diphosphates	
451	Triphosphates	2 g/kg singly or 3 g/kg in combination, expressed as anhydrous substances
452	Polyphosphates	ailiyulous substalices
500	Sodium carbonates	
501	Potassium carbonates	
		,
	Thickener	
407	Carrageenan	150 mg/kg
	Emulsifier	
322	Lecithins	Limited by GMP

## 4.4 Texture

Sweetened condensed milk shall have a smooth uniform texture and when reconstituted by the addition of the appropriate amount of water shall yield a product uniform in consistency.

#### 4.5 Flavours

Condensed milk shall be free from rancidity, objectionable flavours and odours.

## 4.6 Other requirements

Sweetened condensed milk shall also comply with the requirements prescribed in Table 1.

Table 1 — Requirements for condensed milk

Sweetened condensed milk		Methods of test
Minimum milkfat	8% m/m	
Minimum milk solids**	28% m/m	
Minimum milk protein in milk solids-not-fat**	34% m/m	
Sweetened condensed skimmed milk		
Maximum milkfat	1% m/m	EAS 81
Minimum milk solids**	24% m/m	
Minimum milk protein in milk solids-not-fat**	34% m/m	
Sweetened condensed partly skimmed milk		
Milkfat Minimum milk solids-not-fat**	More than 1% and less than 8% m/m	
Minimum milk solids**	20% m/m 24% m/m	
Minimum milk protein in milk solids-not-fat**	34% m/m	
Sweetened condensed high-fat milk		
Minimum milkfat Minimum milk solids-not-fat**	16% m/m 14% m/m	
Minimum milk protein in milk solids-not-fat**	34% m/m	

The titratable acidity (as lactic acid) percent (m/m) shall not exceed 0.32 when tested in accordance with Annex F.

For all sweetened condensed milks the amount of sugar is restricted by Good Manufacturing Practice to a minimum value which safeguards the keeping quality of the product and a maximum value above which crystallization of sugar, may occur.

#### 5 Contaminants

### 5.1 Heavy metals

The products covered by this Standard shall comply with the maximum limits established by the Codex Alimentarius Commission.

### 5.2 Pesticide and veterinary residues

The products covered by this Standard shall comply with the maximum residue limits established by the Codex Alimentarius Commission.

<sup>\*\*</sup> The milk solids and milk solids-not-fat content include water of crystallization of the lactose.

## 6 Hygiene

- **6.1** It is recommended that the products covered by the provisions of this standard be prepared and handled in accordance with CAC/RCP 57, *Code of hygienic practice for milk and milk products*.
- **6.2** From raw material production to the point of consumption, the products covered by this standard should be subject to a combination of control measures, which may include, for example, pasteurization, and these should be shown to achieve the appropriate level of public health protection.
- **6.3** The products shall comply with microbiological limits in Table 2.

Characteristic	Limit	Method of test
Total plate count per ml, max.	20	
Coliform, max.	10	EAS 68
E. coli	Absent/1ml	
Staphylococci (coagulase positive)	Absent/1 ml	

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Table 2 — Microbiological limits

## 7 Packaging

The product shall be packaged in hermetically sealed, clean food-grade containers in such a way as to protect it from contamination and deterioration.

## 8 Labelling

- **8.1** The containers shall be labelling in compliance with the requirements of EAS 38. In addition the following particulars shall be labelled on the container:
  - (i) directions for reconstitution of dried milks shall be given;
  - (ii) process of manufacture (spray dried or roller dried);
  - (iii) date of manufacture; and

Yeasts and moulds, max

- (iv) not suitable for infants.
- **8.2** The name of the product shall be:
  - sweetened condensed milk
  - sweetened condensed skimmed milk

- sweetened condensed partly skimmed milk
- sweetened condensed high-fat milk

Sweetened condensed partly skimmed milk may be designated "sweetened condensed semi-skimmed milk" if the milkfat content is 4.0% - 4.5% and the minimum milk solids is 28% m/m.

- **8.3** The milk fat content shall be declared as:
  - (i) percentage by mass or volume, or
  - (ii) grams per serving, provided that the number of servings is stated.
- **8.4** Milk protein content shall be declared as:
  - (i) a percentage by mass or volume, or
  - (ii) grams per serving provided that the number of servings is stated.
- **8.5** List of Ingredients Milk products used for protein adjustment shall be declared.
- **8.6** Name and physical address of the manufacturer or packer.
- **8.7** Lot identification, batch or code number.
- 8.8 Storage conditions.
- 8.9 Expiry date.
- **8.10** Country of origin.

## 9 Methods of sampling

For the purpose of determining the compliance to this standard, sampling shall be done in accordance with EAS 161 and EAS 165.