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Organization

CODEX
ALIMENTARIUS
INTERNATIONAL FOOD STANDARDS

CODEX ALIMENTARIUS
STANDARD

**STANDARD FOR
CREAM AND
PREPARED CREAMS**
CXS 288-1976



ADOPTED 1976
AMENDED 2024

CXS 288-1976

History of the standard

This publication was redesigned and published in 2026.

2024 Amendments

Following decisions taken at the Forty-seventh Session of the Codex Alimentarius Commission in 2024, amendments were made in Section 4: “Food additives”.

2022 Amendments

Following decisions taken at the Forty-fifth Session of the Codex Alimentarius Commission in 2022, amendments were made in Section 7.3: “Labelling of non-retail containers”.

Amended in 2010, 2018, 2022 and 2024.

Revised in 2003 and 2008.

Adopted in 1976 (formerly Codex STAN A-9-1976).

1 Scope

This standard (formerly Codex STAN A-9-1976), applies to cream and prepared creams for direct consumption or further processing as defined in Section 2: "Description" of this standard.

2 Description

2.1 Cream is the fluidⁱ milk product comparatively rich in fat, in the form of an emulsion of fat-in-skimmed milk, obtained by physical separation from milk.

2.2 Reconstituted cream is cream obtained by reconstituting milk products with or without the addition of potable water and with the same end product characteristics as the product described in Section 2.1: "Cream".

2.3 Recombined cream is cream obtained by recombining milk products with or without the addition of potable water and with the same end product characteristics as the product described in Section 2.1: "Cream".

2.4 Prepared creams are the milk products obtained by subjecting cream, reconstituted cream and/or recombined cream to suitable treatments and processes to obtain the characteristic properties as specified below.

2.4.1 Pre-packaged liquid cream is the fluid milk product obtained by preparing and packaging cream, reconstituted cream and/or recombined cream for direct consumption and/or for direct use as such.

2.4.2 Whipping cream is the fluid cream, reconstituted cream and/or recombined cream that is intended for whipping. When cream is intended for use by the final consumer the cream should have been prepared in a way that facilitates the whipping process.

2.4.3 Cream packed under pressure is the fluid cream, reconstituted cream and/or recombined cream that is packed with a propellant gas in a pressure-propulsion container, and which becomes whipped cream when removed from that container.

2.4.4 Whipped cream is the fluid cream, reconstituted cream and/or recombined cream into which air or inert gas has been incorporated without reversing the fat-in-skimmed milk emulsion.

2.4.5 Fermented cream is the milk product obtained by fermentation of cream, reconstituted cream or recombined cream, by the action of suitable microorganisms, that results in reduction of pH with or without coagulation. Where the content of (a) specific microorganism(s) is(are) indicated, directly or indirectly, in the labelling or otherwise indicated by content claims in connection with sale, these shall be present, viable, active and abundant in the product to the date of minimum durability. If the product is heat treated after fermentation the requirement for viable microorganisms does not apply.

2.4.6 Acidified cream is the milk product obtained by acidifying cream, reconstituted cream and/or recombined cream by the action of acids and/or acidity regulators to achieve a reduction of pH with or without coagulation.

ⁱ Each mention of the term "fluid" on this page means capable of pouring at temperatures above freezing.

3 Essential composition and quality factors

3.1 Raw materials

All creams and prepared creams:

Milk, which may have been subjected to mechanical and physical treatments prior to cream processing.

Additionally, for creams made by reconstitution or recombination:

Butter,ⁱⁱ milkfat products, milk powders, cream powders, and potable water.

Additionally, for prepared creams described in Section 2.4.2 through to Section 2.4.6:

The product that remains after the removal of milkfat by churning milk and cream to manufacture butter and milkfat products (often referred to as buttermilk) and that may have been concentrated and/or dried.

3.2 Permitted ingredients

Only those ingredients listed below may be used for the purposes and product categories specified, and only within the limitations specified.

For use in products only for which stabilizers and/or thickeners are justified (see table in Section 4: “Food additives”):

- Products derived exclusively from milk or whey and containing 35 percent (m/m) or more of milk protein of any type (including casein and whey protein products and concentrates and any combinations thereof) and milk powders: these products can be used in the same function as thickeners and stabilizers, provided they are added only in amounts functionally necessary not exceeding 20 g/kg, taking into account any use of the stabilizers and thickeners listed in Section 4: “Food additives”.
- Gelatine and starch: these substances can be used in the same function as stabilizers, provided they are added only in amounts functionally necessary as governed by good manufacturing practice taking into account any use of the stabilizers/thickeners listed in Section 4: “Food additives”.

Additionally, for use in fermented cream, only:

- Starter cultures of harmless microorganisms including those specified in Section 2 of the *Standard for fermented milks* (CXS 243-2003).¹

Additionally, for use in fermented cream and acidified cream, only:

- rennet and other safe and suitable coagulating enzymes to improve texture without achieving enzymatic coagulation; and
- sodium chloride.

3.3 Composition

Milkfat: minimum 10 percent (w/w)

Compositional modification below the minimum specified above for milkfat is not considered to be in compliance with the Section 4.3.3 of the *General standard for the use of dairy terms* (CXS 206-1999).²

ii For specification, see relevant Codex standard.

4 Food additives

Only those additive classes indicated in the table below may be used for the product categories specified.

Stabilizers and thickeners, including modified starches may be used singly or in combination, in compliance with the definitions for milk products and only to the extent that they are functionally necessary, taking into account any use of gelatine and starch as provided for in Section 3.2: "Permitted ingredients".

Acidity regulators, emulsifiers, stabilizers and thickeners in food category 01.4.1 (Pasteurized cream (plain)), acidity regulators, emulsifiers, packaging gases, propellants, stabilizers and thickeners in food category 01.4.2 (Sterilized and UHT creams, whipping and whipped creams, and reduced fat creams (plain)) and acidity regulators, emulsifiers, stabilizers and thickeners in food category 01.4.3 (Clotted cream (plain)) used in accordance with Tables 1 and 2 of the *General standard for food additives* (CXS 192-1995)³ and only certain acidity regulators, emulsifiers, stabilizers and thickeners in food category 01.4.3 (Clotted cream (plain)) in Table 3 are acceptable for use in foods conforming to this standard.

Product category	Additive functional class			
	Stabilizers ^a	Acidity regulators ^a	Thickeners ^a and emulsifiers ^a	Packing gases and propellants
Pre-packaged liquid cream (2.4.1):	X	X	X	-
Whipping cream (2.4.2):	X	X	X	-
Cream packed under pressure (2.4.3):	X	X	X	X
Whipped cream (2.4.4):	X	X	X	X
Fermented cream (2.4.5):	X	X	X	-
Acidified cream (2.4.6):	X	X	X	-

Note:

- a These additives may be used when needed to ensure product stability and integrity of the emulsion, taking into consideration the fat content and durability of the product. With regard to the durability, special consideration should be given to the level of heat treatment applied since some minimally pasteurized products do not require the use of certain additives.
- X The use of additives belonging to the class is technologically justified.
- The use of additives belonging to the class is not technologically justified.

5 Contaminants

The products covered by this standard shall comply with the maximum levels for contaminants that are specified for the product in the *General standard for contaminants and toxins in food and feed* (CXS 193-1995).⁴

The milk used in the manufacture of the products covered by this standard shall comply with the maximum levels for contaminants and toxins specified for milk by the *General standard for contaminants and toxins in food and feed* and with the maximum residue limits for veterinary drug residues and pesticides established for milk by the Codex Alimentarius Commission (CAC).

6 Hygiene

It is recommended that the products covered by the provisions of this standard be prepared and handled in accordance with the appropriate sections of the *General principles of food hygiene* (CXC 1-1969),⁵ the *Code of hygienic practice for milk and milk products* (CXC 57-2004)⁶ and other relevant Codex texts such as codes of hygienic practice and codes of practice. The products should comply with any microbiological criteria established in accordance with the *Principles and guidelines for the establishment and application of microbiological criteria related to foods* (CXG 21-1997).⁷

7 Labelling

In addition to the provisions of the General standard for the labelling of pre-packaged foods (CXS 1-1985)⁸ and the *General standard for the use of dairy terms* (CXS 206-1999),² the following specific provisions apply:

7.1 Name of the food

- a) The name of the food shall be as specified in Section 2: "Description" of this standard, as appropriate and taking into account Section 7.1(c). However, "pre-packaged liquid cream" may be designated as "cream" and "cream packed under pressure" may be designated by another descriptive term that refers to its nature or intended use or as "whipped cream". The term "prepared cream" should not apply as a designation. The products covered by this standard may alternatively be designated with other names specified in the national legislation of the country in which the product is manufactured and/or sold or with a name existing by common usage, provided that such designations do not create an erroneous impression in the country of retail sale regarding the character and identity of the food. In addition, labelling statements, such as product designation of fermented creams and content claims, may include reference to the terms "Acidophilus", "Kefir", and "Kumys", as appropriate, provided that the product has been fermented by the corresponding specific starter culture(s) specified in Section 2.1: "Fermented milk" of the *Standard for fermented milks* (CXS 243-2003),¹ and provided that the product complies with those compositional microbiological criteria that are applicable to the corresponding fermented milk as specified in Section 3.3: "Composition" of that standard.
- b) The designation shall be accompanied by an indication of the fat content that is acceptable in the country of retail sale, either as a numerical value or by a suitable qualifying term, either as part of the name or in a prominent position in the same field of vision. Nutrition claims, when used, shall be in accordance with the *Guidelines for use of nutrition and health claims* (CXG 23-1997).⁹ For this purpose only, the level of 30 percent milkfat constitutes the reference.
- c) Creams which have been manufactured by the recombination or reconstitution of dairy ingredients as specified in Section 2.2: "Reconstituted cream" and Section 2.3: "Recombined cream" shall be labelled as "Recombined cream" or "Reconstituted cream" or another truthful qualifying term if the consumer would be misled by the absence of such labelling.
- d) An appropriate description of the heat treatment should be given, either as part of the name or in a prominent position in the same field of vision, if the consumer would be misled by the absence of such labelling. When reference is made in the labelling to the type of heat treatment(s) applied, the definitions established by the CAC shall apply.

7.2 Declaration of milkfat content

The milkfat content shall be declared in a manner acceptable in the country of sale to the final consumer, either as (i) a percentage of mass or volume, (ii) in grams per serving as qualified in the label, provided that the number of servings is stated.

Where the fat content of the product is indicated by a numerical value in accordance with Section 7.1(b), such indication may constitute the fat declaration, provided that the indication includes any additional information as required above.

7.3 Labelling of non-retail containers

The labelling of non-retail containers should be in accordance with the *General standard for the labelling of non-retail containers of foods* (CXS 346-2021).¹⁰

8 Methods of sampling and analysis

For checking the compliance with this standard, the methods of analysis and sampling contained in the *Recommended methods of analysis and sampling* (CXS 234-1999)¹¹ relevant to the provisions in this standard, shall be used.

Referenced texts

- 1 *Standard for fermented milks* (CXS 243-2003).
- 2 *General standard for the use of dairy terms* (CXS 206-1999).
- 3 *General standard for food additives* (CXS 192-1995).
- 4 *General standard for contaminants and toxins in food and feed* (CXS 193-1995).
- 5 *General principles of food hygiene* (CXC 1-1969).
- 6 *Code of hygienic practice for milk and milk products* (CXC 57-2004).
- 7 *Principles and guidelines for the establishment and application of microbiological criteria related to foods* (CXG 21-1997).
- 8 *General standard for the labelling of pre-packaged foods* (CXS 1-1985).
- 9 *Guidelines for use of nutrition and health claims* (CXG 23-1997).
- 10 *General standard for the labelling of non-retail containers of foods* (CXS 346-2021).
- 11 *Recommended methods of analysis and sampling* (CXS 234-1999).

Codex Alimentarius

A collection of international food standards developed to protect consumer health and ensure fair practices in the food trade. Codex standards are adopted by the Codex Alimentarius Commission, an intergovernmental body with 189 Members, established by FAO and WHO. The standards are recognized by the World Trade Organization as the benchmark for the safety of internationally traded food.

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