CODEX ALIMENTARIUS
INTERNATIONAL FOOD STANDARDS

Food and Agriculture Organization of the United Nations
World Health Organization

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STANDARD FOR MILK POWDERS AND CREAM POWDER

CXS 207-1999

This Standard replaced the *Standard for Whole Milk Powder, Partly Skimmed Milk Powder and Skimmed Milk Powder* (A-5-1971) andthe *Standard for Cream Powder, Half Cream Powder and High Fat Milk Powder* (A-10-1971).

Adopted in 1999. Amended in 2010, 2013, 2014, 2016, 2018.

1. SCOPE

This Standard applies to milk powders and cream powder, intended for direct consumption or further processing, in conformity with the description in Section 2 of this Standard.

2. DESCRIPTION

Milk powders and cream powder are milk products which can be obtained by the partial removal of water from milk or cream. The fat and/or protein content of the milk or cream may have been adjusted, only to comply with the compositional requirements in Section 3 of this Standard, by the addition and/or withdrawal of milk constituents in such a way as not to alter the whey protein to casein ratio of the milk being adjusted.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Raw materials

Milk and cream

The following milk products are allowed for protein adjustment purposes:

- Milk retentate: Milk retentate is the product obtained by concentrating milk protein by ultrafiltration of milk, partly skimmed milk, or skimmed milk;
- Milk permeate: Milk permeate is the product obtained by removing milk proteins and milkfat from milk, partly skimmed milk, or skimmed milkby ultrafiltration; and
- Lactose[1].

3.2 Composition

Cream powder	
Minimum milkfat	42% m/m
Maximum water[(a)]	5% m/m
Minimum milk protein in milk solids-not-fat[(a)]	34% m/m

Whole milk powder	
Milkfat	Minimum 26% and less than 42% m/m
Maximum water[(a)]	5% m/m
Minimum milk protein in milk solids-not-fat[(a)]	34% m/m

Partly skimmed milk powder	
Milkfat	More than 1.5% and less than 26% m/m
Maximum water[(a)]	5% m/m
Minimum milk protein in milk solids-not-fat[(a)]	34% m/m

Skimmed milk powder	
Maximum milkfat	1.5% m/m
Maximum water[(a)]	5% m/m
Minimum milk protein in milk solids-not-fat[(a)]	34% m/m

(a) The water content does not include water of crystallization of the lactose; the milk solids-not-fat content includes water of crystallization of the lactose.

4. FOOD ADDITIVES

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1 See *Standard for Sugars* (CXS 212-1999).

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

INS no.	Nameof additive	Maximum level
Stabilizers		
331	Sodium citrates	5000mg/kg singly or in combination, expressed as anhydrous substances
332	Potassium citrates	
Firming agents		
508	Potassium chloride	Limited by GMP
509	Calcium chloride	Limited by GMP
Acidity regulators		
339	Sodium phosphates	5000mg/kg singly or in combination, expressed as anhydrous substances
340	Potassium phosphates	
450	Diphosphates	
451	Triphosphates	
452	Polyphosphates	
500	Sodium carbonates	
501	Potassium carbonates	
Emulsifiers		
322	Lecithins	Limited by GMP
471	Mono- and diglycerides of fatty acids	2500mg/kg
Anticaking agents		
170(i)	Calcium carbonate	10 000 mg/kg singly or in combination
341(iii)	Tricalcium phosphate	
343(iii)	Trimagnesium phosphate	
504(i)	Magnesium carbonate	
530	Magnesium oxide	
551	Silicon dioxide, amorphous	
552	Calcium silicate	
553	Magnesium silicates	
554	Sodium aluminium silicate	265 mg/kg, expressed as aluminium
Antioxidants		
300	Ascorbic acid,L-	500 g/kg expressed as ascorbic acid
301	Sodium ascorbate	
304	Ascorbyl palmitate	
320	Butylated hydroxyanisole	100 mg/kg

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).

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 *GeneralStandard for Contaminants* and *Toxins in Food and Feed* (CXS 193-1995) and with the maximum residue limits for veterinary drug residues and pesticides established for milk by the 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), the *Code of* Hygienic Practice for Milk and Milk Products (CXC 57-2004) 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. LABELLING

In addition to the provisions of the *General Standard for the Labelling of Prepackaged Foods* (CXS 1-1985) and the *General Standard for the Use of Dairy Terms* (CXS 206-1999), the following specific provisions apply:

7.1 Name of the food

The name of the food shall be:

- Cream powder - Whole milk powder - Partly skimmed milk powder - Skimmed milk powder	according to the composition in Section 3.2

Partly skimmed milk powder may be designated “Semi-skimmed milk powder” provided that the content of milkfat does not exceed 16% m/m and is not less than 14% m/m.

If allowed by national legislation or otherwise identified to the consumer in the country where the product is sold, “whole milk powder” may be designated “full cream milk powder” and “skimmed milk powder” may be designated “low fat milk powder”.

7.2 Declaration of milkfat content

If the consumer would be misled by the omission, the milkfat content shall be declared in a manner found acceptable in the country of sale to the final consumer, either (i) as a percentage by mass, or (ii) in grams per serving as quantified in the label provided that the number of servings is stated.

7.3 Declaration of milk protein

If the consumer would be misled by the omission, the milk protein content shall be declared in a manner acceptable in the country of sale to the final consumer, either as (i) a percentage by mass, or (ii) grams per serving as quantified in the label provided the number of servings is stated.

7.4 List of ingredients

Notwithstanding the provision of Section 4.2.1 of the *General Standard for the Labelling of Prepackaged Foods* (CXS 1-1985), milk products used only for protein adjustment need not be declared.

7.5 Labelling of non-retail containers

Information required in Section 7 of this Standard and Sections 4.1 to 4.8 of the *General Standard for the* Labelling *of Prepackaged Foods* (CXS 1-1985), and, if necessary, storage instructions, shall be given either on the container or in accompanying documents, except that the name of the product, lot identification, and the name and address of the manufacturer or packer shall appear on the container. However, lot identification, and the name and address of the manufacturer or packer may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

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) relevant to the provisions in this standard, shall be used.

APPENDIX

ADDITIONAL INFORMATION

The additional information below does not affect the provisions in the preceding sections which are those that are essential to the product identity, the use of the name of the food and the safety of the food.

Additional quality factors

	Whole milk powder	**Partially skimmed milk powder**	**Skimmed milk powder**	**Method**
Titratable acidity	max 18.0	max 18.0	max 18.0	See CXS 234-1999
(ml-0.1 N NaOH/ 10 g-solids-not-fat)				See CXS 234-1999
Scorched particles	max Disc B	max Disc B	max Disc B	See CXS 234-1999
Solubility index (ml)	max 1.0	max 1.0	max 1.0	See CXS 234-1999