

C O D E X A L I M E N T A R I U S

INTERNATIONAL FOOD STANDARDS



**Food and Agriculture
Organization of
the United Nations**



**World Health
Organization**

E-mail: codex@fao.org - www.codexalimentarius.org

GROUP STANDARD FOR UNRIPENED CHEESE

INCLUDING FRESH CHEESE

CXS 221-2001

Adopted in 2001. Amended in 2008, 2010, 2013, 2018.

1. SCOPE

This Standard applies to unripened cheese including fresh cheese, intended for direct consumption or further processing, in conformity with the description in Section 2 of this Standard. Subject to the provisions of this Standard, Codex Standards for individual varieties of unripened cheese may contain provisions, which are more specific than those in this Standard and in these cases; those specific provisions shall apply.

2. DESCRIPTION

Unripened cheeses including fresh cheeses are products in conformity with the *General Standard for Cheese* (CXS 283-1978), which are ready for consumption shortly after manufacture.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Raw materials

Milk and/or products obtained from milk.

3.2 Permitted ingredients

- Starter cultures of harmless lactic acid and/ or flavour producing bacteria and cultures of other harmless micro-organisms;
- Rennet or other safe and suitable coagulating enzymes;
- Sodium chloride;
- Potable water;
- Gelatine and starches: Notwithstanding the provisions in the *General Standard for Cheese* (CXS 283-1978), 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 stabilisers/thickeners listed in Section 4;
- Vinegar;
- Rice, corn and potato flours and starches: Notwithstanding the provisions in the *General Standard for Cheese* (CXS 283-1978), these substances can be used in the same function as anti-caking agents for treatment of the surface of cut, sliced, and shredded products only, provided they are added only in amounts functionally necessary as governed by Good Manufacturing Practice taking into account any use of the anti-caking agents listed in Section 4.

4. FOOD ADDITIVES

Only those food additives listed below may be used and only within the limits specified. Additives not listed below but provided for in individual Codex standards for varieties of Unripened Cheeses may also be used in similar types of cheese within the limits specified within those standards.

INS no.	Name of additive	Maximum level
Acidity regulators		
170	Calcium carbonates	Limited by GMP
260	Acetic acid, glacial	Limited by GMP
270	Lactic acid, L-, D- and DL-__	Limited by GMP
296	Malic acid, DL-	Limited by GMP
330	Citric acid	Limited by GMP
338	Phosphoric acid	880 mg/kg expressed as phosphorous
500	Sodium carbonates	Limited by GMP
501	Potassium carbonates	Limited by GMP
507	Hydrochloric acid	Limited by GMP
575	Glucono delta-lactone (GDL)	Limited by GMP

INS no.	Name of additive	Maximum level
Stabilizers/thickeners		
Stabilizers and thickeners including modified starches may be used in compliance with the definition for milk products and only to the extent they are functionally necessary taking into account any use of gelatine and starch as provided for in Section 3.2.		
331	Sodium citrates	Limited by GMP
332	Potassium citrates	
333	Calcium citrates	
339	Sodium phosphates	1 540 mg/kg, singly or in combination, expressed as phosphorous
340	Potassium phosphates	
341	Calcium phosphates	
450(i)	Disodium diphosphate	
450(ii)	Trisodium diphosphate	
400	Alginic acid	Limited by GMP
401	Sodium alginate	
402	Potassium alginate	
403	Ammonium alginate	
404	Calcium alginate	
405	Propylene glycol alginate	5 g/kg
406	Agar	Limited by GMP
407	Carrageenan	
410	Carob bean gum	
412	Guar gum	
413	Tragacanth gum	
415	Xanthan gum	
416	Karaya gum	
417	Tara gum	Limited by GMP
440	Pectins	
460	Cellulose	
466	Sodium carboxymethyl cellulose (Cellulose gum)	
576	Sodium gluconate	
<i>Modified starches as follows:</i>		
1400	Dextrins, roasted starch white and yellow	Limited by GMP
1401	Acid-treated starch	
1402	Alkaline treated starch	
1403	Bleached starched	
1404	Oxidized starch	
1405	Starches, enzyme-treated	

INS no.	Name of additive	Maximum level
1410	Monostarch phosphate	
1412	Distarch phosphate esterified with sodium trimetaphosphate; esterified with phosphorus oxychloride	
1413	Phosphated distarch phosphate	
1414	Acetylated distarch phosphate	
1420	Starch acetate	
1422	Acetylated distarch adipate	
1440	Hydroxypropyl starch	
1442	Hydroxypropyl distarch phosphate	
Colours		
100	Curcumins (<i>for edible cheese rind</i>)	Limited by GMP
101	Riboflavins	Limited by GMP
140	Chlorophyll	Limited by GMP
141	Copper chlorophylls	15 mg/kg, singly or combined
160a(i)	Carotene, <i>beta</i> -, synthetic	25 mg/kg
160a(ii)	Carotenes, <i>beta</i> -, vegetable	600 mg/kg
160b(ii)	Annatto extracts – norbixin based	25 mg/kg
160c	Paprika oleoresins	Limited by GMP
160e	Carotenal, <i>beta</i> -apo-8'-	35 mg/kg
160f	Carotenoic acid, ethyl ester, <i>beta</i> -apo-8'-	35 mg/kg
162	Beet red	Limited by GMP
171	Titanium dioxide	Limited by GMP
Preservatives		
200	Sorbic acid	1000mg/kg of cheese, singly or in combination, expressed as sorbic acid
202	Potassium sorbate	
203	Calcium sorbate	
234	Nisin	12.5 mg/kg
280	Propionic acid	Limited by GMP
281	Sodium propionate	
282	Calcium propionate	
283	Potassium propionate	
<i>For surface/rind treatment only:</i>		
235	Natamycin (pimaricin)	2 mg/dm ² of surface. Not present in a depth of 5 mm.
Foaming agents (for whipped products only)		
290	Carbon dioxide	Limited by GMP

INS no.	Name of additive	Maximum level
941	Nitrogen	Limited by GMP
Anticaking agents (Sliced, cut, shredded and grated products only (surface treatment))		
460	Cellulose	Limited by GMP
551	Silicon dioxide, amorphous	10 000mg/kg singly or in combination. Silicates calculated as silicon dioxide
552	Calcium silicate	
553	Magnesium silicates	
560	Potassium silicate	
Preservatives (Sliced, cut, shredded and grated products only (surface treatment))		
200	Sorbic acid	1 000mg/kg of cheese, singly or in combination, expressed as sorbic acid
202	Potassium sorbate	
203	Calcium sorbate	
280	Propionic acid	Limited by GMP
281	Sodium propionate	
282	Calcium propionate	
283	Potassium propionate	
235	(Natamycin (pimaricin))	20 mg/kg applied to the surface added during kneading and stretching process

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 *General Standard 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 unripened cheese. However, the words “unripened cheese” may be omitted in the designation of an individual unripened cheese variety reserved by a Codex standard for individual cheeses, and, in the absence thereof, a variety name specified in the national legislation of the country in which the product is sold, provided that the omission does not create an erroneous impression regarding the character of the food.

In case the product is not designated by an alternative or a variety name, but with the designation “unripened cheese”, the designation may be accompanied by a descriptive term such as provided for in Section 7.1.1 of the *General Standard for Cheese* (CXS 283-1978).

Unripened cheese may alternatively be designated “fresh cheese” provided it is not misleading to the consumer in the country in which the product is sold.

7.2 Declaration of milkfat content

The milk fat 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, (ii) as a percentage of fat in dry matter, or (iii) in grams per serving as quantified in the label, provided that the number of servings is stated.

Additionally, the following terms may be used:

High fat	(if the content of FDM is above or equal to 60%)
Full fat	(if the content of FDM is above or equal to 45% and less than 60%)
Medium fat	(if the content of FDM is above or equal to 25% and less than 45%)
Partially skimmed	(if the content of FDM is above or equal to 10% and less than 25%)
Skim	(if the content of FDM is less than 10%)

7.3 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, and, in the absence of such a container on the cheese itself. However, lot identification and the name and address of the manufacturer or packer may be replaced by an identification mark, provided that such 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.