

codex alimentarius commission

FOOD AND AGRICULTURE
ORGANIZATION
OF THE UNITED NATIONS

WORLD HEALTH
ORGANIZATION

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Agenda Item 4(g)

CX/MMP 00/14
December 1999

JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON MILK AND MILK PRODUCTS

Fourth Session

Wellington, New Zealand, 28 February – 3 March 2000

PROPOSED DRAFT REVISED STANDARD FOR EDIBLE CASEIN PRODUCTS

REVIEW OF THE STANDARD FOR EDIBLE CASEIN PRODUCTS (A-18-1995)

(Prepared by the International Dairy Federation)

Governments and interested international organizations are invited to comment on the attached proposed draft revised standard for Edible Casein Products at Step 3. Comments should be sent to:

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with a copy to the Secretary, Codex Alimentarius Commission, FAO, Viale delle Terme di Caracalla, 00100 Rome, Italy **not later than 25 January 2000.**

The Proposed Draft Standard will be considered at Step 4 by the Committee at its 4th Session.

INTRODUCTION

At the 3rd Session of the Codex Committee on Milk and Milk Products (CCMMP; May 1998) the Committee agreed to proceed with a revision of the Standard for Whey Powders (ALINORM 99/11, para. 98). The Codex Alimentarius Commission at its 23rd Session approved it as new work (ALINORM 99/37, Appendix VII).

The IDF has reviewed the Standard, mainly to align it with the format and general texts agreed to be used in other Codex Standards for milk products, and to update the additive provisions.

REVISION OF THE STANDARD

A Proposed Draft Revised Standard for Edible Casein Products is attached this document.

The changes made are summarized below.

Preamble: The standard text has replaced the existing wording.

Scope: The standard text has replaced the existing wording.

Description:	Insertion of the word “milk products” in the descriptions. Further, other products obtained from milk have been included to align with the approach in other milk product standards. The term “curd” has been replaced by the term “coagulum”. Reference to heat treatment has been removed. The descriptions have been subject to editorial changes and alignments as well.
Raw materials:	Other products obtained from milk have been added.
Permitted ingredients:	Lactic fermented whey is covered by the amended section 3.1. Potable water has been added (e.g. used for the washing of the coagulum).
Composition:	Besides editorial changes, a statement referring to the application of section 4.3.3 of the General Standard for the Use of Dairy Terms has been inserted. Also, footnotes to the maximum water and lactose contents have been inserted to align the Standard with the Standards for Whey Powders and CODEX STAN 207-1999. Criteria for maximum sediment have been relocated in the Appendix to align the format with CODEX STAN 207-1999. Further, the notation in section 8 concerning protein has been relocated as a footnote to the criteria in section 3.3
Food Additives:	The additive list has been reviewed and the provisions have been included in the body of the Standard. Consequently, Appendix 1 (Food additives) has been deleted. The list is subject to a further review by IDF.
Contaminants:	Only the maximum level for lead is relevant for food safety purposes. The other specifications (copper and iron) have been relocated in the Appendix.
Hygiene:	The standard text has replaced the existing wording.
Labelling	
preamble:	The standard text has replaced the existing wording.
Name of the food:	The provision concerning the origin of milk has been removed (now covered by CODEX STAN 206-1999). The labelling provision concerning “spray” and “roller” has been removed. The rest has been rearranged.
Labelling of non-retail containers:	The standard text has replaced the existing wording.
Methods:	List of methods has been replaced by a reference Vol. 13.
Appendix:	Contains the information provided in the former Appendix 2 (other quality factors), identified processing aids, and relocated elements from sections 3.3 (sediments) and 5 (contaminants). Also, cross-reference to Vol. 13 has been inserted.

Note: Provisions for declaring the milkfat content are not relevant for this product.

ADDITIONAL ISSUES

During the review, the IDF has identified the following issues that the CCMMP may consider relevant to consider in addition to the above:

1. The necessity to apply the term “edible”
2. The criteria for ash content (the existence of a “dead zone”)
3. The need for the information presented in the Appendix to the revised draft standard.

The IDF intends to provide recommendations on the above issues at a later stage.

PROPOSED DRAFT REVISED STANDARD FOR EDIBLE CASEIN PRODUCTS (A-18)¹

The Annex to this Standard contains provisions which are not intended to be applied within the meaning of the acceptance provisions of Section 4.A.(I)(b) of the General Principles of the Codex Alimentarius.

1. SCOPE

This Standard applies to edible acid casein, edible rennet casein and edible caseinate, intended for direct consumption or further processing, in conformity with the description in Section 2 of this Standard.

2. DESCRIPTION

Edible acid casein is the milk product obtained by separating, washing and drying the acid-precipitated coagulum of skimmed milk and/or of other products obtained from milk.

Edible rennet casein is the milk product obtained by separating, washing and drying the coagulum of skimmed milk and/or of other products obtained from milk. The coagulum is obtained through the reaction of rennet or other coagulating enzymes.

Edible caseinate is the milk product obtained by reaction of edible casein coagulum with neutralizing agents followed by drying.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 RAW MATERIALS

Skimmed milk and/or other products obtained from milk.

3.2 PERMITTED INGREDIENTS

- Starter cultures of harmless lactic acid producing bacteria
- Rennet or other safe and suitable coagulating enzymes
- Potable water

3.3 COMPOSITION

	Rennet casein	Acid casein	Caseinates
Minimum milk protein in dry matter ^(a)	84.0% m/m	90.0% m/m	88.0% m/m
Minimum content of casein in milk protein	95.0% m/m	95.0% m/m	95.0% m/m
Maximum water ^(b)	12.0% m/m	12.0% m/m	8.0% m/m
Maximum milkfat	2.0% m/m	2.0% m/m	2.0% m/m
Ash (including P ₂ O ₅)	7.5% m/m (min.)	2.5% m/m (max.)	-
Maximum lactose ^(c)	1.0% m/m	1.0% m/m	1.0% m/m
Maximum free acid	-	0.27 ml 0.1 N NaOH/g	-
Maximum pH value	-	-	7.5

(a) Protein content is 6.38 multiplied by the total Kjeldahl nitrogen determined.

(b) The water content does not include water of crystallization of the lactose.

(c) Although the products may contain both anhydrous lactose and lactose monohydrate, the lactose content is expressed as anhydrous lactose. 100 parts of lactose monohydrate contain 95 parts of anhydrous lactose.

In accordance with the provision of section 4.3.3 of the General Standard for the Use of Dairy Terms, edible casein products may be modified in composition to meet the desired end-product composition. However, compositional modifications beyond the minima or maxima specified above for milk protein

¹ Comments are being sought at Step 3. The Proposed Draft Revised Standard will be considered by the 4th Session of the Committee at Step 4.

in dry matter, casein, water, milkfat, lactose and free acid are not considered to be in compliance with the Section 4.3.3.

4. FOOD ADDITIVES

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

CASEINATES

INS No	Name of food additive	Maximum level
Acidity regulators		
262(i)	Sodium acetate	Limited by GMP
261	Potassium acetate	
263	Calcium acetate	
325	Sodium lactate	
326	Potassium lactate	
327	Calcium lactate	
328	Ammonium lactate	
329	Magnesium lactate, D,L-	
452	Polyphosphates	5 g/kg singly or in combination expressed as P ₂ O ₅ *
Neutralizing agents		
331	Sodium citrate	Limited by GMP
332	Potassium citrate	
333	Calcium citrate	
345	Magnesium citrate	
380	Ammonium citrate	
339	Sodium phosphates	10 g/kg singly or in combination expressed as P ₂ O ₅ *
340	Potassium phosphates	
341	Calcium phosphates	
342	Ammonium phosphates	
343	Magnesium phosphates	
500	Sodium carbonates	Limited by GMP
501	Potassium carbonates	
502	Calcium carbonates	
503	Ammonium carbonates	
504	Magnesium carbonates	
524	Sodium hydroxide	
525	Potassium hydroxide	
526	Calcium hydroxide	
527	Ammonium hydroxide	
528	Magnesium hydroxide	
Emulsifiers		
322	Lecithins	Limited by GMP
471	Mono- and di-glycerides of fatty acids	
Bulking agents		
325	Sodium lactate	Limited by GMP

Anti-caking agents

170(i)	Calcium carbonate	
341(iii)	Tricalcium orthophosphate	
343(iii)	Trimagnesium orthophosphate	
460	Cellulose	
504(i)	Magnesium carbonate	
530	Magnesium oxide	
551	Silicon dioxide, amorphous	10 g/kg singly or in combination
552	Calcium silicate	
553	Magnesium silicates	
554	Sodium aluminosilicate	
556	Calcium aluminium silicate	
559	Aluminium silicate	
1442	Hydroxypropyl Distach Phosphate	

*) Total amount of P₂O₅ shall not exceed 10g/kg.

5. CONTAMINANTS

5.1 HEAVY METALS

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

In particular, the following maximum limits apply:

Metal	Maximum Level
Lead	1 mg/kg

5.2 PESTICIDE RESIDUES

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

6. HYGIENE

6.1 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 Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1-1969, Rev.3-1997), and other relevant Codex texts such as Codes of Hygienic Practice and Codes of Practice.

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 should comply with any microbiological criteria established in accordance with the Principles for the Establishment and Application of Microbiological Criteria for Foods (CAC/GL 21-1997).

7. LABELLING

In addition to the provisions of the Codex General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1 - 1985, Rev.1-1991; *Codex Alimentarius*, Volume 1A) and the General Standard for the Use of Dairy Terms (CODEX STAN 206-1999), the following specific provisions apply:

7.1 NAME OF THE FOOD

The name of the food shall be:

Edible acid casein
Edible caseinate
Edible rennet casein

According to the descriptions in section 2 and the compositions in section 3.3.

The name of edible caseinate shall be accompanied by an indication of the cation used.

7.2 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 (CODEX STAN 1 - 1985, Rev.1-1991; *Codex Alimentarius*, Volume 1A) 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 mark is clearly identifiable with the accompanying documents.

8. METHODS OF SAMPLING AND ANALYSIS

See *Codex Alimentarius*, Vol. 13.

APPENDIX

INFORMATION ON USUAL PATTERNS OF MANUFACTURING EDIBLE CASEIN PRODUCTS

This text below is intended for voluntary application by commercial partners and not for application by governments.

1. Other Quality Factors

1.1 Physical appearance

White to pale cream; free from lumps which do not break up under slight pressure.

1.2 Flavour and odour

Not more than slight foreign flavours and odours. The product must be free from offensive flavours and odours.

2. Processing aids

Acids used for precipitation purposes:

INS No Name

- 260 Acetic acid
- 270 Lactic acid
- 330 Citric acid
- 338 Orthophosphoric acid
- 507 Hydrochloric acid
- 513 Sulphuric acid

3. Additional quality factors

	Rennet casein	Acid casein	Caseinates
Maximum sediment (scorched particles)	15 mg/25g	22.5 mg/25g	22.5 mg/25g (spray dried) 81.5 mg/25g (roller dried)

4. Other Contaminants

Heavy metals

The following limits apply:

Metal	Maximum limit
Copper	5 mg/kg
Iron	20 mg/kg (50 mg/kg in roller dried caseinates)

5. Additional methods of analysis

Appropriate methods for the determination of the content of sediment, copper and iron are provided in *Codex Alimentarius*, Vol. 13.