

codex alimentarius commission



FOOD AND AGRICULTURE
ORGANIZATION
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Agenda Item 4 (d)

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JOINT FAO/WHO FOOD STANDARDS PROGRAMME CODEX COMMITTEE ON MILK AND MILK PRODUCTS

Sixth Session
Auckland, New Zealand, 26 – 30 April 2004

PROPOSED DRAFT STANDARD FOR PROCESSED CHEESE AT STEP 3

Prepared by the International Dairy Federation (IDF) with assistance of Argentina, Australia, Austria, Canada, France, Germany, India, Iran, Ireland, New Zealand, Switzerland, United Kingdom and United States.

Governments and international organizations wishing to submit comments on the “Proposed draft Standard for Processed Cheese” (see Annexe) are invited to do so **no later than 27 February 2004** to: Codex Committee on Milk and Milk Products, New Zealand Food Safety Authority, 68 - 86 Jervois Quay, P.O. Box 2835, Wellington, New Zealand (Facsimile: +64 4 463 2583 or E-mail: daniel.herd@nzfsa.govt.nz), with a copy to the Secretary, Codex Alimentarius Commission, Joint FAO/WHO Food Standards Programme, Via delle Terme di Caracalla, 00100 Rome, Italy (Fax No + 39.06.5705.4593; E-mail: codex@fao.org).

BACKGROUND

At its 5th Session (2002), the Codex Committee on Milk and Milk Products agreed on the need to establish a standard for Processed Cheese only (excluding Processed Cheese Products and Preparations). It agreed that a *Drafting Group* led by the IDF with the assistance of Argentina, Australia, Austria, Canada, France, Germany, India, Iran, Ireland, New Zealand, Switzerland, United Kingdom and United States would prepare a proposed draft Standard for Processed Cheese by using definitions that will specify ingredients and processing techniques, with consideration given to the inclusion of some supplementary compositional criteria and with labelling provisions for cheese content for consumer information. The Committee agreed that a minimum cheese content should not be specified in the standard.

The Committee agreed to circulate the proposed draft Standard for Processed Cheese for comments at Step 3 and further discussion at its 6th Session, pending the approval by the 50th Executive Committee as new work.¹

The 50th Session of the Executive Committee of the Codex Alimentarius Commission approved the elaboration of a Standard for Processed Cheese as a new work for the Committee.²

¹ ALINORM 03/11, paras. 102-103

² ALINORM 03/3A, para. 64 and Appendix III

REPORT OF THE DRAFTING GROUP

Proposed Draft Standard

The Drafting Group initiated its work by correspondence, focusing on the key elements of the standard, i.e. compositional criteria, functional classes of additives and certain labelling provisions, including the declaration of the cheese content for consumer information. The Drafting Group met in Brussels on the 15 September 2003 to consider the results of the written procedure and, in particular to consider the general approach to the standard. The meeting resulted in the proposed draft standard, as attached to this document.

- a. The Drafting Group discussed the difficulty in standardizing processed cheese in light of the differences internationally as well as the time it has taken to date and recognized that compromises will be necessary to enable progress. Considering the agreement at the 5th Session of CCMMP, the drafting group agreed to prepare a proposed draft standard for processed cheese following the direction given to the drafting group at the 5th Session.
- b. Discussed extensively the general approach to the standard recognizing that, although the standard should cover Processed Cheese only, the perception of the nature of such product differed among countries.
- c. Agreed to bring forward for further consideration a possible approach to the standard, mirrored in particular in sections 2 (description) and 3.1 (raw materials) of the attached standard.
- d. Agreed that the standard should not address composite processed cheeses (i.e. processed cheese with spices, herbs, and other flavouring substances) with reference to an earlier decision of the CCMMP only to do so in commodity standards in very special cases and with the understanding that the Codex Standard for the Use of Dairy Terms (Codex Stan 201) already addressed these products in an adequate manner.
- e. Agreed that supplementary compositional criteria should be restricted to the specification of minimum dry matter, recognizing that additional supplementary criteria for the ratio of fat in dry matter applicable to certain processed cheeses may be needed and therefore should be subject to further consideration.
- f. Agreed on the technological justification of the use of a number of functional additives classes, recognizing that additional classes and/or restrictions in the use of certain classes applicable to certain subcategories may be needed and therefore should be subject to further consideration.
- g. Considered that a list of individual additives belonging to the justified functional additives classes should be included at a later stage.
- h. Discussed and recommended that the standard should include provisions regulating the use of cheese variety names in the designation of Processed Cheese.
- i. Discussed and recommended that the name of the product should be Process(ed) Cheese, however allowing alternative designations, either as specified in the national legislation of the country of manufacture and/or sale, or as non-misleading designations existing by common usage.
- j. Agreed that the standard should include labelling provisions for the declaration of fat, protein and cheese content.
- k. Agreed that, where members of the Drafting Group did not agree, in full or in part, to the wording of the draft standard, and where time constraints did not allow in-depth examination, such wording would be presented in the attached proposed draft Standard within square brackets to emphasize that these issues need the special attention of the 6th Session of the CCMMP.
- l. Agreed that square bracketed text will be addressed within the report of the Drafting Group.

General approach to the Standard

The Drafting Group acknowledges that the key to obtain international consensus on the standard is an agreement on the general approach to the standard, which involves primarily the definition (section 2), raw material provisions (section 3.1) and the naming provisions (section 7.1).

The Drafting Group fully recognizes that the nature of Processed Cheese is defined by the combined set of provisions of the standard (notably sections 2, 3 and 4), which apply in concert.

The Drafting Group considered it advisable to address within this report the individual suggestions for the general approach that was brought forward to the Drafting Group as well as the considerations that led to the text that is contained in sections 2 and 3.1 of the attached proposed draft Standard.

Four suggestions for the general approach were brought forward, discussed and clarified. The resulting options are provided below.

Option:	Description of approach:	Corresponding description of product:
I	<p>The standard to put emphasis on a reference product obtained by relatively restrictive technology, in particular with respect to the use of non-cheese milk products, as follows:</p> <ol style="list-style-type: none"> 1. use of cheese to which only specified milk products rich in fat can be added for the purpose of fat standardization of the end product 2. use of emulsifying salts <p>but also allowing other processing techniques and/or any other milk product that give similar end products. The parts (a) and (b) of the description to be distinguished according to both manufacturing methodology and the nature of raw materials. The nature of the product to be further restricted by compositional criteria and additives, and some categorization through qualifiers.</p>	<p>Process(ed) Cheese is the milk product obtained by:</p> <ol style="list-style-type: none"> a) mixing, melting and emulsifying cheese with or without the addition of milk fat products to standardize the milk fat content with the aid of heat and emulsifying salts and/or b) processing techniques which include melting cheese and other milk products to give an emulsified end-product which has similar physical, chemical and sensory characteristics as the product defined under a).
II	<p>The standard to provide a general description of the product “Processed Cheese”, the description of which could be supplemented with sub-categories (cf. fermented milks standard) that specify further restriction to the general product, such as Named Variety(ies) Processed Cheese.</p> <p>The parts (a) and (b) of the description of the general product to be distinguished according to manufacturing methodology only, and not according to the nature of the raw material.</p> <p>The nature of the general product to be further restricted by composition and additives.</p>	<p>Process(ed) Cheese is the milk product prepared from cheese with or without the addition of other milk products, obtained by:</p> <ol style="list-style-type: none"> a) mixing, melting and emulsifying the raw materials with the aid of heat and emulsifying salts, or b) processing techniques which include melting and give an emulsified end-product which has similar physical, chemical and sensory characteristics as the product defined under a). <p>[Named variety(ies)] Processed Cheese is Processed Cheese characterized by: [to be completed, as relevant]</p>
III	<p>The standard to put emphasis on the nature of the product as a homogeneous emulsified mass obtained by a particular processing technique and with no restrictions with regard to the nature of raw materials.</p> <p>The nature of the general product to be further restricted by composition and additives.</p>	<p>Process(ed) Cheese means a product manufactured from cheese and products obtained from milk, which is mixed, heated, melted and emulsified with or without added emulsifying salts, to form a homogenous mass</p>

Option:	Description of approach:	Corresponding description of product:
IV	<p>The standard to provide a general description of the product “Processed Cheese”, the description of which includes the principle that cheese constitutes the largest single dairy ingredient. The parts (a) and (b) of the description of the general product to be distinguished according to manufacturing methodology only, and not according to nature of raw materials.</p> <p>The nature of the general product to be further restricted by composition and additives.</p>	<p>Process(ed) Cheese is the milk product prepared from cheese with or without the addition of other milk products, where cheese constitutes the largest single dairy ingredient used as raw material on product basis, obtained by:</p> <p>a) mixing, melting and emulsifying the raw materials with the aid of heat and emulsifying salts, or</p> <p>b) processing techniques which include melting and give an emulsified end-product which has similar physical, chemical and sensory characteristics as the product defined under a).</p>

The Drafting Group extensively discussed the above suggestions, and considered how these would work within the standard, if pursued. From the discussion, the following comments brought forward by individual members were noted:

1. Attempts to differentiate Processed Cheese from other similar products have so far not been very successful (i.e. restriction in raw materials and differentiation according to additives).
2. Reference to “cheese” is a reference to products covered by Codex Stan A-6. According to Codex Stan A-6, cheese is virtually any coagulated milk product.
3. Although the CCMMP has instructed that the standard should aim at covering all (or almost all) products currently marketed as “Processed Cheese”, while excluding those marketed as e.g. “Processed Cheese Products/Preparations”, the difficulties in drawing a clear technical line between “processed cheese” and “processed cheese product/preparation” should be recognized.
4. Reference to cheese in the name of Processed Cheese implies that cheese constitutes the most important ingredient.
5. The Option I:
 - a. The reference provided is intended for formulation of recipes for Processed Cheese manufactured using other processing techniques and/or dairy ingredients; therefore, the reference need not necessarily have to reflect specific products currently on the market.
 - b. Part (a) provides a reference, which is considered as traditional manufacturing in some countries, but not in others.
 - c. The option may result in some products currently marketed under the name Processed Cheese being excluded, in particular, because products obtained according to 2(b) of the corresponding description do not always give similar chemical characteristics.
6. The Option II:
 - a. The option takes into account the existing diversity of products and is inclusive as the general description covers all products currently on the market as Processed Cheese. The subcategory approach would provide sub-sets of Processed Cheese for which the standard can specify further restrictions (e.g. raw materials, composition, additives, labelling, etc).
 - b. The approach may imply that each of the other sections of the standard is considered with a view to specify criteria and provisions for Processed Cheese in general and sub-categories, respectively.
 - c. The Drafting Group considered tentatively that the description of [Named variety(ies)] Processed Cheese could be completed as follows: “... *by mixing, melting and emulsifying cheese with or without the addition of milk fat products to standardize milk fat content, with the aid of heat and emulsifying salts*”.

- d. Processed Cheese will typically be produced neither solely according to description (a) nor solely according to description (b), but according to a combination of these two.
 - e. The number of sub-categories can be extended with products for which specific qualifiers other than “named variety(ies)” are reserved (e.g. lower fat products, higher moisture products, etc.).
7. The Option III:
- a. The option is the most inclusive one.
 - b. The wording referring to the use of emulsifying agents would, in some jurisdictions, require that the individual manufacturer make technological justification for emulsifying salts.
8. The Option IV:
- a. The option is in accordance with the wording “processed cheese” which implies that cheese constitutes at least the largest single dairy ingredient.
 - b. For consumer information, this option will result in cheese being listed first in the ingredients list.

The Drafting Group, recognizing that the nature of Processed Cheese is defined by the combined set of provisions of the standard which apply in concert, (for the purpose of obtaining a compromise within the CCMMP) developed the following wording to be tentatively included in the attached Proposed Draft Standard in square brackets:

[Process(ed) Cheeses are the milk products obtained by:

- a) *mixing, melting and emulsifying cheese and the raw materials specified in Section 3.1(a) of this Standard, with the aid of heat and emulsifying salts, and/or*
- b) *processing techniques which include melting cheese and the raw materials specified in Section 3.1(b) of this Standard to give an emulsified end-product which has similar physical, chemical and sensory characteristics as the product defined under (a).]*

The above tentative description must be considered in close relationship with the drafted tentative lists of raw materials in Section 3.1 (see attachment). One member of the Drafting Group expressed the view that the order of parts (a) and (b) be reversed to reflect the volumes of respective products produced in their country.

Other considerations, including explanation of square bracketed texts

Raw materials other than cheese (section 3.1(a)):

Purpose of additions: Further consideration on the following is required:

- whether the purpose should be restricted to adjustment of fat content, solids content, protein content and moisture contents, respectively.
- whether both upwards and downwards adjustment should be permitted (e.g. when using low fat cheese to obtain a higher fat Processed Cheese; or to obtain a lower fat Processed Cheese using high fat cheese).

Specific products: Further consideration on the following is required:

- whether cream powder should be permitted (although relatively high in fat content, the addition would result in the adjustment of solids-not-fat as well).
- whether milk powder should be permitted (where addition will result in the adjustment of solids-not-fat mainly).
- whether milk should be permitted (where addition will result in adjustment of moisture, fat and solids-not-fat).

Dairy Spreads have been square bracketed until clarity with regard to their nature has been provided (Proposed Draft Standard still under development).

Permitted ingredient (section 3.2):

Gelatine and starch: Square bracketed, pending clarification of whether the additives section will include stabilizers and thickeners, as the objective of adding these ingredients is to replace those additives in part or in whole.

Compositional criteria (section 3.3):

The Drafting Group has thoroughly considered a number of parameters that might be considered for inclusion as compositional criteria for Processed Cheese. The Drafting Group has agreed that criteria for minimum dry matter content should be included, mainly to distinguish Processed Cheese from other emulsified products. The value(s) for minimum dry matter has been square bracketed as the Drafting Group has not considered as yet any specific minimum value(s).

Further consideration is required with regard to the need to include supplementary criteria for the ratio of fat in dry matter for Processed Cheese described in section 2(a), such as range of fat contents and the corresponding dry matter contents (as done in C-standards).

The other criteria that have been considered are:

Maximum moisture content: Not included, as it is similar to minimum dry matter content.

Minimum milk protein content: Not included, as it is not related to cheese content and as a provision for declaration of milk protein in the labelling section is preferred (see section 7.4 of the attachment).

Maximum lactose content: Not included, as (i) the content is self-limiting for technological reasons (crystallization), (ii) a limit will not in any way restrict type of raw materials, and (iii) a limit does not affect consumption patterns of individuals with lactose intolerance.

Whey protein to casein ratio: Not included, as a ratio is not relevant for product identity, nutrition or consumer information.

Minimum cheese content: Not included, due to decision by the 5th Session of the CCMMP.

Minimum dry matter of cheese: Not included, as it would be similar to specifying a minimum amount of cheese in the standard.

Food additives (section 4):

Table approach: Further consideration is required with regard to the need of whether the use of certain additives classes should be restricted to certain sub-categories of Processed Cheese. If this is the case, the possible application of a table approach should be further considered.

Emulsifiers: Further consideration is required with regard to the justification of emulsifiers, for instance in products where emulsifying agents are not used (Rationale: Section 2(b) requires an emulsified end-product without mandating the use of emulsifying agents).

Stabilizers and

thickeners: Further consideration is required with regard to the justification of these additive classes, for instance in the case of Processed Cheese with lower fat contents and/or higher moisture contents.

Anticaking agents: Further consideration is required with regard to the justification of this additive class for sliced, shredded, grated and powdered Processed Cheese.

Name of the food (section 7.1):

Section 7.1.2: The conditions for including cheese variety name(s) in the designation of Processed Cheese require further consideration with respect to:

- Whether the minimum value of (currently) 75% specifying the ratio of the named variety(ies) cheese(s) in the cheese blend should be retained or amended; considerations within the Drafting Group include alternative values (50%, 100%) and/or adding a provision that permits a country to require a different minimum value.
- Whether to include a condition that specifies the maximum amount of dairy ingredients other than cheese.
- Whether the standard should regulate the relationship between the fat content(s) of the cheese variety(ies) used and the composition of resulting Named Variety(ies) Processed Cheese. With reference to the fact that the fat ranges of many varieties are relatively broad (e.g. Cheddar has fat contents from 20% FDM up to >60% FDM), the Drafting Group has discussed how this would affect the use of mixtures of cheeses with varying fat contents but still of the same variety. However, no final conclusion has been reached, other than if this condition is to be retained, it needs to be reviewed, simplified and further considered with regard to its application within the field of Named Variety(ies) Processed Cheese.

Section 7.1.3: Due to time constraints, the Drafting Group was not able to conclude, consequently further consideration is required with regard to whether the standard should allow for making reference (content claim) to a cheese variety when such cheese has been used to characterize the product in lower amounts than that provided for in section 7.1.2, such as “Processed [Blue] Cheese”, “Processed Cheese with [Blue Cheese]”, or “[Blue Flavoured] Processed Cheese”. The Drafting Group did not discuss this at its meeting.

Declaration of cheese content (section 7.3)

The Drafting Group has thoroughly considered whether the cheese content declaration should be addressed within the standard as quantitative declaration (e.g. ingoing percentage of cheese) or as qualitative declaration (e.g. as a reserved quality claim such as “high in cheese content”) and whether the standard should refer to legislation of the country of retail sale (the manner in which declaration is made and/or whether the declaration is required for consumer information).

After having considered section 5.1 of the Codex General Standard for the Labelling of Prepackaged Foods (Codex Stan 1), the Drafting Group has agreed that the most consistent approach is to refer to the declaration of the ingoing percentage of cheese in the formulation. This approach also puts emphasis on the means to verify compliance, i.e. through checking the recipe and not through analyzing the end product.

Views differ with regard to a possible reference to national legislation. Therefore, further discussion and consideration is required with regard to whether the standard should refer to requirements in the country of retail sale with respect to the need for such declaration.

Recommendation

The Committee is invited to review the attached Draft Proposed Standard for Process(ed) Cheese and to consider its further development.

PROPOSED DRAFT STANDARD FOR PROCESS(ED) CHEESE

(At Step 3 of the Codex Procedure)

1. SCOPE

This Standard applies to Process(ed) Cheese, intended for direct consumption or further processing, in conformity with the description in Section 2 of this Standard.

2. DESCRIPTION

[**Process(ed) Cheeses** are the milk products obtained by:

- a) mixing, melting and emulsifying cheese and the raw materials specified in Section 3.1(a) of this Standard, with the aid of heat and emulsifying salts,

and/or

- b) processing techniques which include melting cheese and the raw materials specified in Section 3.1(b) of this Standard to give an emulsified end-product which has similar physical, chemical and sensory characteristics as the product defined under (a).]

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Raw Materials

Cheese* with or without the addition of the following:

- a) For Process(ed) Cheese described in Section 2(a):

[For adjustment [both] upwards [and downwards] of the fat content of the final product]: Milk Fat Products*, Butter*, Cream*, [Dairy Spreads*], [Cream Powder*], [milk] and [Milk Powder*]

- b) For Process(ed) Cheese described in Section 2(b):

Milk and/or other products obtained from milk

*) For specification, see relevant Codex Standard

3.2 Permitted Ingredients

- Starter cultures of harmless lactic acid and/or flavour producing bacteria and cultures of other harmless micro-organisms;
- Harmless and suitable enzymes;
- Sodium chloride;
- Potable Water;
- [Gelatine and starches: 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];
- Vinegar.

3.3. Composition

Minimum dry matter content (m/m): [x] %

[Note: *Supplementary criteria for the ratio of fat in dry matter for Processed Cheese described in Section 2(a) to be further considered*]

4. FOOD ADDITIVES

Only those additives classes indicated below may be used [table approach may be desired to accommodate for different sub-sets of processed cheeses].

Emulsifying salts

Acidity regulators

Colours

Preservatives

[Emulsifiers]

[Stabilizers and thickeners (for higher moisture and/or low fat Processed Cheese)]

[Anticaking agents (for sliced, shredded, grated and powdered products, only)]

5. CONTAMINANTS

The products covered by this Standard shall comply with the maximum limits for contaminants and the maximum residue limits for pesticides and veterinary drugs established by the Codex Alimentarius Commission.

6. HYGIENE

- 6.1** It is recommended that the products covered by the provisions of the 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 pasteurisation, 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

7.1.1 The name of the food shall be Process(ed) Cheese.

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.

7.1.2 Process(ed) Cheese may be designated “Process(ed) _____”, or “_____ Process(ed) Cheese”, or “Process(ed) _____ Cheese”, the blank being filled with the name(s) of a cheese variety(ies) provided that:

- the product is manufactured in accordance with Section 2(a) of this Standard;
- the cheese variety(ies) is/are recognized internationally or nationally;
- the cheese blend from which the product is made contains at least [75]% of the cheese variety(ies) claimed; and
- [other dairy ingredients do not exceed x%]

[The content of fat in dry matter of the product is not less than the minimum fat in dry matter required for the named cheese (or the arithmetic average, if two or more varieties are named) and the dry matter content is no less than 1% less than the minimum required for the named cheese (or not less than 1% less than the arithmetic average, if two or more varieties are named)]*.

[*] *Note: If retained, the text is to be reviewed with a view to simplification and for further consideration with regard to application within the field of Named Variety(ies) PCs]*

7.1.3 [The cheese variety name(s) may also be claimed by designating the product “Process(ed) Cheese with _____”, the blank being filled with the name(s) of the variety(ies) provided that min. 5 % of the dry matter content of the final product is derived from the cheese variety(ies) claimed].

7.2 Declaration of milk fat content

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, (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.

7.3 Declaration of cheese content

The ingoing percentage of cheese in the formulation (m/m) shall be declared [if so required in the country of retail sale].

7.4 Declaration of milk protein content

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.

7.5 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 (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 the 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 a mark is clearly identifiable with the accompanying documents.

8. METHODS OF SAMPLING AND ANALYSIS

See *Codex Alimentarius*, Volume 13.