codex alimentarius commission

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

WORLD HEALTH ORGANIZATION

JOINT OFFICE: Viale delle Terme di Caracalla 00100 ROME Tel: 39 06 57051 www.codexalimentarius.net Email: codex@fao.org Facsimile: 39 06 5705 4593

Agenda Item 4 (b) **CX/MMP 02/7-Add 1**

March 2002

JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON MILK AND MILK PRODUCTS
Fifth Session
Wellington, New Zealand, 8-12 April 2002

PROPOSED DRAFT REVISED STANDARDS FOR INDIVIDUAL CHEESES
COMMENTS

The following comments were received from: Canada, Czech Republic, Denmark, New Zealand, Poland, United Kingdom, United States of America and International Dairy Federation.

02/7-PART 1, FULL REPORT AND RECOMMENDATION

REPORT NO. 1

CANADA

While Canada understands the difficulty in using a technological approach to establish the absolute minimum content of fat in the dry matter for individual cheese varieties, we do not agree that the market approach can be used alone. The market or pragmatic approach can be used as a tool, but we feel that this information must then be reviewed considering a technological approach to maintain the integrity of the individual cheese standards. Maintaining essential product characteristics and the product's identity was a principle accepted at the 4th Session of the Committee (CRD 2).

For the above reasons, Canada cannot support the resulting absolute minima for Cheddar and Mozzarella cheese varieties. Cheeses with absolute minima for fat in the dry matter at 1% and 2% do not retain the essential characteristics and product identity for that variety. Canada recommends that the absolute minima for Cheddar not go below 25% FDM and for Mozzarella, not below 20% FDM.

Canada also recommends that the absolute minimum fat in the dry matter for Brie be 30% which is consistent with the proposal for Camembert. We would like to point out that the fat in the dry matter reference level for these two varieties is the same. For cream cheese, Canada prefers a minimum FDM of 40% and for Cottage Cheese a minimum FDM of 0%.

DENMARK

We recognize the attempt to resolve the differences of opinions with regard to absolute minimum fat levels.

Although we can support using the approach as a tool to resolving this current disagreement, we would like to emphasize that we cannot accept that the so-called "market approach" makes precedence for the future nor is developed into non-written rules for dealing with compositional issues.

In other words, we believe that the approach is appropriately used in this particular situation, but only as a one-time instrument to achieve agreement with regard to the standards currently under review. Where agreement cannot be reached by using this pragmatic approach, we see no other way than to investigate the use of the so-called "technological approach".

Within this understanding, Denmark expresses its support for using the market approach to resolve the fat issue with regard to all the current standards, except in the cases of Cheddar and Cream Cheese.

For Cheddar, we believe that a product with 1% FDM deviates from the reference product to an extent that the product would hardly be recognizable to the consumer as a Cheddar. Instead, we suggest an absolute minimum fat level of 20% FDM.

For Cream Cheese, we can support the use of the so-called technological approach as explained in report no. 3 - discussion leading to recommendation no. 51 – i.e. an absolute minimum fat content of 40% FDM.

UNITED STATES OF AMERICA

a) The U.S. supports the pragmatic approach based upon market data as a tool to identify absolute minimum contents of fat in dry matter for the individual cheese varieties currently under consideration.

b) The U.S. supports the decision tree approach provided in establishing an absolute minimum contents of fat in dry matter for the individual cheese varieties currently under consideration.

Annex: Analysis of data from 22 countries using the Market (decision tree) Approach
The U.S. recommends a minimum fat in dry matter of 0% for cottage cheese.

The U.S. feels that the market approach should be used to establish the absolute minimum contents of fat in dry matter for cream cheese consistent with the approach to determine the absolute minimum contents of fat in dry matter for all the other individual cheese standards. Therefore, the U.S. recommends applying the market data approach, removing the brackets and that the absolute minimum fat content of cream cheese is established of 25 % w/w.

Because of the significant interest in the international trade of Parmesan cheese. The U.S. supports the removal of the brackets and the establishment of a standard for Parmesan cheese.

REPORT NO. 2

CANADA

Canada agrees with the approach and guidance provided by Annexes I and II and agrees that further elaboration and discussion on individual details will continue.

DENMARK

Re Rec. no. (a)
Denmark appreciates the work put into resolving this complex issue.

Re Rec. no. (b)
In general, we support the annexed "Guidance for inclusion of details in Codex standards for individual cheese varieties", in particular sections 1 and 2.

We would also welcome development of additional principles which will result in differentiation between products intended for direct consumption only and products intended for further processing (e.g. after substantial transformation).

Re Rec. no. (c)
We can agree to the recommendations made so far.

NEW ZEALAND

Report no 2, section 2 (page 7)
New Zealand recommends that the note to the 4th bullet point, concerning the possibility of further guidance to distinguish between products for direct consumption and for further processing, should be added as a footnote to Annex 1. We believe that it is important that the Committee reviews the requirements relating to cheese intended for further processing, and also that it is important to note that the current text is restricted in scope to cheeses for direct consumption.

Report No. 2, Annex 1, 3a. (page 10)
New Zealand would like to draw the Committee's attention to the fact that the CCMMP has never decided that it is "appropriate to regard the type/concept of details currently included in the proposed draft standards for individual standards (CX/MMP 00/12) as justified for inclusion as concepts", and that we disagree with this judgment. We also note that it is inappropriate to impose restrictions additional to those in the Procedural Manual. The draft standards are at Step 3, and governments are free to comment, with or without justification.

UNITED STATES OF AMERICA

The U.S. does not support that the guidance provided in Annex 1 be used to determine the details for inclusion in Codex cheese varietal standards. The primary purpose of Codex standards is to protect consumer health and ensure fair trading practices. We feel that varietal cheese standards should accurately describe unique or essential aspects, if any occur, of specific cheeses in order to facilitate trade and provide clear and accurate information to consumers. With so many different types of cheese with similar characteristics, it is impossible to develop a standard that describes the identity of a cheese so thoroughly that it can be differentiated from other cheese varieties on the market. The U.S. feels that any information not necessary to protect the consumer and ensure fair trading practices should not be included. Unnecessary information includes the shape, dimension, weight, color and rind of the cheese. Aging requirements should only be included when necessary to protect consumer health or when necessary to develop essential product characteristics (e.g., holes, mold development, etc.).

INTERNATIONAL DAIRY FEDERATION

Texture of cheese mass
In addition to the recommended amendments of the terms used, further work is needed to develop sufficiently precise and meaningful descriptions of the characteristic texture of the individual varieties. Such work should be undertaken as part of the further revision of the standards.

REPORT NO. 3

CANADA

Recommendation no. 9
Canada recognizes that there are many issues which require resolution prior to addressing the concern related to permitting additional additives for products with nutrition claims. Canada supports the concept of permitting additional additives for these products but only below a FDM level to be determined.

Recommendation no. 15

As stated in Canada's comments for Report No. 1, Canada does not support a FDM minimum content of 1% for Cheddar. Canada recommends that the absolute minima for Cheddar not go below 25% FDM.

Recommendation no. 31
Canada would like to point out that the English and French versions of this draft standard for Saint Paulin are not the same with respect to the reference and minimum FDM content. Canada supports the FDM reference level of 45-55% and the minimum FDM level of 30%.

Recommendation no. 38
Canada does not support the minimum FDM level of 4% in cottage cheese because it does not allow for fat reduced versions. Canada prefers a minimum FDM level of 0%.

Recommendation no. 51
Canada prefers a minimum FDM of 40% for Cream Cheese.

Recommendation no. 65
Canada supports the minimum FDM of 30% for Brie Cheese to be in line with that for Camembert.

Recommendation no. 68
Canada does not support the minimum FDM level of 2% for Mozzarella with low moisture. Canada recommends that the minimum FDM not go below 20%.

UNITED STATES OF AMERICA

The U.S. comments to report 3 are included in our responses to CX/MMP 02/07-part 2.

02/7-PART 2, PROPOSED DRAFT STANDARDS FOR INDIVIDUAL CHEESE VARIETIES

GENERAL

CZECH REPUBLIC

Nowadays the following cheese types are produced in the Czech Republic:
- Cheddar - designated „čedar“
- Edam - designated „eidam“
- Gouda - designated „gouda“
- Emmental - designated „ementál“
- Cottage - designated „cottage“
- Cream cheese - designated two types: „smetanový sýr“ and „krémový sýr“
- Camembert - designated „camembert“ or „type cammembert“
- Brie - designated „type camembert“ or special name
- Mozzarella - designated „mozzarella“

The Cheeses are designated according draft of this standard or Czech transcription.

The suggested parameters of cheeses are fulfilles. Natural ripened cheese does not contain any stabilizers, modificate starches or emulsifiers, cottage and mozzarella cheese, too.

Generally, the additives are used in the functionally necessary case and with the confirmation of authority confirmed by JEFCA.

NEW ZEALAND

New Zealand suggests that the individual cheese variety standards require further simplification, following the model of the other standards under consideration. We would like to remind the Committee that the revision project was begun in 1991 with the specific aim of removing the considerable detail from them, as per the recommendation of the FAO/WHO Conference on Food Standards, Chemicals in Food and Food Trade.

POLAND

In accordance with Polish regulation
- to use of the following additives to cheeses is not allowed: 405; 416; 1421; 1423; 171; 101; 140; 141;
- 1400; 1401; 1402; 1403; 1405; turmeric – do not belong to food additives, these are classified as food ingredients;
- 200 and 203 – can be used in following doses:
  - 1 g/kg – to the not ripening cheeses and to the sliced cheeses;
  - 2 g/kg – to the processed cheeses;
- 280, 283 – are permitted to use only on the cheese surface in dose limited by GMP;
- 235 can be adding in amount of 1 mg/dm^2 of the cheese surface;
- 100, 160e, 160f – are permitted to flavoured processed cheeses and to the rinds of the edible cheeses.

UNITED KINGDOM

We are concerned by the complexity of this whole area and the degree of detail in the various standards. We would prefer a simpler approach of defining the basic individual cheese, and permitting reduced fat versions in accordance with general Codex provisions. This would avoid the complexity of the compositional table in section 3.3 in the various standards.

We are also concerned that the approaches taken to arrive at the minimum fat content lead to very different minimum fat contents for the individual cheeses. For example, cheddar cheese (standard C-1) can have a minimum milkfat in drymatter content of 1%, while for Edam and Gouda the equivalent figure is 30%. It is difficult to understand why such a large discrepancy can be justified.

There is also a particular anomaly with the minimum fat content of cream cheese. In the UK the cream in the context of "cream cheese" implies a textural property in terms of spreadability and eating properties, rather than any implication that the product is made from cream. For Cream Cheese, the UK strongly believes that the relevant standard needs to make provision for reduced fat cream cheeses with a milkfat in dry matter content of 25%, and a dry matter content of 20%, in order to reflect the products currently marketed.

Regarding country of origin labelling, consumers see that for any products the place of origin as an important contributor to its identity, but ingredient origin information is known also to be important for many consumers. It is important to ensure that consumers are not misled by origin indications, and that indications intended to convey information about place of manufacture, rather than manufacture and ingredient origin, make this clear. “Produce of” should only be used where all the main manufacturing processes and principle ingredients take place in, or come from, the place named in the declaration.

UNITED STATES OF AMERICA

The U.S. recommends that the CCMMP again refer the use of pimaricin in the “Draft Group Standard for Unripened Cheese Including Fresh Cheese” to the CCFAC for endorsement. The 24th CAC temporarily adopted a provision in the Codex General Standard for Food Additives for the use of pimaricin in Cheese analogues at 40 mg/kg for surface treatment. This level is equivalent to 2-mg/dm^2 surface application to a maximum depth of 5 mm

INS No.	Name of food additive	Maximum level
Preservatives (for cuts, sliced or shredded product)		
235	Pimaricin (natamycin)	20 mg/kg applied to the surface of the cheese

In addition, the U.S. recommends the inclusion of the following information in the Draft Codex Standard for Mozzarella Cheese.

INS No.	Name of food additive	Maximum level
Preservatives (for cuts, sliced or shredded product)		
235	Pimaricin (natamycin)	20 mg/kg applied to the surface of the cheese or added during the kneading and stretching process

Natamycin is a polyene macrolide and an antimycotic agent. The Joint FAO/WHO Expert Committee on Food Additives has assigned an ADI of 0.3 mg/kg as fungicidal preservative. However, it is equally effective against yeast and mold, but has no effect on bacteria. Several countries have approved its use on various foods. Natamycin has been used for over 30 years in providing extended shelf life to a variety of foods through the elimination of yeast and molds, and preclusion of mycotoxin development in foods.

4 FOOD ADDITIVES

UNITED STATES OF AMERICA

The U.S. recommends deletion of sodium nitrate and potassium nitrate from the list of preservatives in standards C3, C4, C5, C6, C7, C9, C11, C13 and C15.

We believe that the public health safety concerns associated with nitrates, such as the formation of nitrosamines in these products, outweigh any technological purpose for the use of nitrates in cheesemaking.

The U.S. notes that Beta-Apo-8'-Carotenoic Acid, Methyl or Ethyl Ester (INS 160f), Chlorophyll (INS 140), Chlorophylls, Cu-Complexes (INS 141i), and Chlorophyllins, Cu-Complex, Na & K Salts (INS 141ii) are not approved for use in foods sold in the U.S. Foods containing these colors are deemed adulterated when sold in the U.S.

7.1 NAME OF THE FOOD

CANADA

Canada supports that the common name of products in which the fat content is below or above the reference range must be modified by an appropriate qualification describing the modification. The milk fat content is required to be declared as per Section 7.3 of this standard.

7.2 COUNTRY OF ORIGIN

CANADA

Canada supports retaining the examples used to clarify the term “substantial transformation”.

7.4 DATE MARKING

CANADA

Canada requests clarification as to why this section permits a deviation from the General Standard for the Labelling of Prepackaged Foods not intended to be purchased as such by the final consumer. We are concerned that without the minimum durability information, manufacturers and packers will not have this as a basis for durable life dating.

CHEDDAR (C-1)

3.3 COMPOSITION

CANADA

Canada does not support the minimum FDM of 1%. We recommend that the absolute minimum for Cheddar not go below 25% FDM.

4 FOOD ADDITIVES

CANADA

Canada requests the addition of INS no. 460 (i) - Microcrystalline cellulose, for sliced, cut, shredded or grated cheese as an anti-caking agent.

EMMENTAL (C-9)

2 DESCRIPTION

NEW ZEALAND

New Zealand notes that it is unnecessary to specify a minimum weight, as the only purpose is to ensure correct eye formation, which is already specified. In any case, in New Zealand's experience, weights above 10 kg are possible.

UNITED STATES OF AMERICA

The U.S. recommends that specific size, rind, and shape information either be deleted or moved to the Appendix.

COTTAGE CHEESE (C-16)

3.2 PERMITTED INGREDIENTS

CANADA

Canada permits the addition of gelatin to cottage cheese as a stabilizer. Therefore, Canada requests the addition of gelatine and starches to this standard to be in line with the Standard for Unripened Cheese Including Fresh Cheese.

3.3 COMPOSITION

CANADA

Canada does not support a minimum FDM for cottage cheese of 4% and we suggest a minimum FDM level of 0%.

UNITED STATES OF AMERICA

The U.S. recommends that there should be no minimum content of fat in dry matter for cottage cheese. Therefore, the U.S. recommends that section 3.3 be revised as follows:

Milkfat:	Minimum Content (m/m)
- Cottage Cheese	None

7.1 NAME OF THE FOOD

UNITED STATES OF AMERICA

The U.S. recommends that the minimum fat content that constitutes the reference level should be 4 %. The value is correct in section 3.3 of the standard. The last sentence of 7.1 should read as follows:
"For the purpose of comparative nutritional claims, the minimum fat content of 4% fat constitutes the reference."

CREAM CHEESE (C-31)

3.3 COMPOSITION

CZECH REPUBLIC

Under the name "Cream cheese" could be produced quite different cheeses. Technology and composition of cheese (fat in dry matter) shall influence the character of products.

We recommed the minimum of fat in dry matter in "Cream cheese" 40% w/w.

POLAND

In our opinion cream cheese should have the minimum content of milkfat in dry matter of 25%.

UNITED STATES OF AMEICA

The U.S. recommends applying the market data approach discussed in Report 1, removing the brackets and the absolute minimum fat content of cream cheese be established of 25 % w/w.

The U.S. recommends that the reference level for milkfat in cream cheese be established at 70%.

4 FOOD ADDITIVES

CANADA

Canada permits calcium carrageenan as a stabilizer/thickener in cream cheese. We note that for INS No. 407, this salt is not listed. We request the addition of calcium carrageenan to this listing.

INTERNATIONAL DAIRY FEDERATION

The IDF has identified the following additional additives that are in use and therefore should be added to the list in Section 4 of the revised draft standard for cream cheese (C-31):

Acids:		
INS 574	Gluconic acid (D-)	Limited by GMP
Acidity regulators:		
INS 261	Potassium acetates	
INS 262	Sodium acetates	
INS 263	Calcium acetate	
INS 325	Sodium lactate	
INS 326	Potassium lactate	
INS 327	Calcium lactate	Limited by GMP
INS 350	Sodium malates	
INS 351	Potassium malates	
INS 352	Calcium malates	
INS 577	Potassium gluconate	
INS 578	Calcium gluconate	
Stabilizers:		
INS 418	Gellan gum	Limited by GMP
Emulsifiers:		
INS 322	Lecithins	
INS 470	Salts of fatty acids (with base Al, Ca, Na, Mg, K and NH_4)	
INS 471	Mono- and diglycerides of fatty acids	Limited by GMP
INS 472a	Acetic acid and fatty acid esters of glycerol	
INS 472b	Lactic acid and fatty acid esters of glycerol	
INS 472c	Citric acid and fatty acid esters of glycerol	Limited by GMP
INS 472f	Mixed tartaric, acetic acid and fatty acid esters of glycerol	

Antioxidants:		
INS 300	Ascorbic acid (L-)	Limited by GMP
INS 301	Sodium ascorbate	
INS 302	Calcium ascorbate	
INS 304	Ascorbyl palmitate	
INS 305	Ascorbyl stearate	Maximum 0.08 g/kg
INS 306	Mixed tocopherols concentrate	
INS 307	Alpha-tocopherol	Maximum 0.2 g/kg

Technological justifications for the above additives are provided below, including justifications for the new functional classes emulsifiers and antioxidants.

Acids

Gluconic acid should be permitted to be consistent with the inclusion of glucono delta lactone (GLD), since GDL hydrolyses into gluconic acid upon addition to water.

The ADI-value for gluconic acid is not specified and therefore no maximum level should be set. Instead it should be permitted according to good manufacturing practice (GMP)

Acidity Regulators

Lactates, acetates, gluconates and malates should be added to the list because the presence of their respective acids in the additive's list.

The ADI-values for these are "not specified" or " not limited" and therefore no maximum level should be set. Instead they should be permitted according to good manufacturing practice (GMP).

Stabilizers

Gellan gum should be added as an alternative stabilizer at GMP level.

Emulsifiers

Due to the high fat content in cream cheese, emulsifiers may be required in order to achieve and maintain stable oil in water emulsion, especially when raw materials as butteroil and anhydrous milk fat are used.

Un-emulsified fat crystals could partly migrate from the protein matrix resulting in fat coalescence and also in more susceptibility for oxidation. Emulsifiers can prevent fat coalescence

In Cream cheese production, different mechanical treatments can be used in order to obtain the desired rheological properties, for example, high pressure homogenisation can be used to increase viscosity and develop a smooth product.

This homogenisation process would result in reduced fat particle size and subsequently an increase in surface area of fat in the system. The use of emulsifiers could then help stabilise this system.

The ADI-value for proposed emulsifiers for use in cream cheese production are "not specified" or " not limited" and therefore no maximum level should be set. Instead they should be permitted according to good manufacturing practices (GMP).

Antioxidants

Cream cheese has per definition much higher fat content than other unripened cheeses and does not have such a strong flavour profile as is the case with ripened cheeses with controlled lipolysis.

Milk fat have very little natural antioxidant activity, therefore the pure, subtle creamy/buttery flavour profile in cream cheese needs a better protection over the current shelf life periods in the market place, by permitted anti-oxidants.

The auto-oxidation process of the milk fat can be delayed retarding the undesired chemical reactions that take place (production of free radicals and peroxide radicals by light, oxygen, metal ions, during the initiation and propagation phases of the auto-oxidation).

Combining them with radical scavengers as tocopherols can inactivate those radicals. In a first phase radical scavengers donate hydrogen atoms to free radicals. Additionally they can be combined directly with radicals to form inert products. Elimination of radicals interrupts the chain reaction.

Contact of milkfat with oxygen also has to be avoided. Ascorbic acid and its fatty acid esters such as ascorbyl palmitate and stearate can remove the oxygen by the oxidation of the double bond of their own molecule converting oxygen into a harmless form.

Ascorbic acid and its salts have limited solubility in fat , while in ascorbyl palmitate and stearate the solubility in fat and oil is higher. Due to their chemical structure they develop antioxidant activity mainly on the surface of the fat droplets.

Ascorbyl palmitates and tocopherols have synergistic antioxidant effect, and because of this they have been used in blends for fat rich products.

The ADI-values for ascorbic acid and calcium and sodium ascorbates are “not specified” and therefore no maximum level should be set. Instead they should be permitted according to good manufacturing practice (GMP).

For Ascorbyl palmitates/stearates and tocopherols numerical ADI’s have been settled down, so maximum levels of 0.08 and 0.2 g/kg respectively can be established.

CAMEMBERT (C-33)

2 DESCRIPTION

UNITED STATES OF AMERICA

The U.S. recommends that specific shape requirements in this section either be deleted or moved to the Appendix.

3.4 ESSENTIAL MANUFACTURING CHARACTERISTICS

UNITED STATES OF AMERICA

The U.S. recommends that the size and weight requirements contained in this section be moved to the Appendix.

7.1 NAME OF THE FOOD

UNITED STATES OF AMERICA

The U.S. recommends that labeling requirements for “in a container” heat treatment as well as references to “Carre de Camembert” either be deleted or relocated in the Appendix.

BRIE (C-34)

2 DESCRIPTION

UNITED STATES OF AMERICA

The U.S. recommends that the specific size and shape requirements contained in this section either be deleted or moved to the Appendix.

3.4 ESSENTIAL MANUFACTURING CHARACTERISTICS

UNITED STATES OF AMERICA

The U.S. recommends that the size and weight requirements contained in this section either be deleted or moved to the Appendix.

7.1 NAME OF THE FOOD

UNITED STATES OF AMERICA

The U.S. recommends that labeling requirements for "in containers" heat treatment either be deleted or moved to the Appendix.

MOZZARELLA

3.3 COMPOSITION

CANADA

Canada does not support the minimum FDM of 2%. We recommend that the absolute minima for Mozzarella with low moisture not go below 20% FDM.

4 FOOD ADDITIVES

CANADA

Canada requests the addition of INS no. 460 (i) - Microcrystalline cellulose, for sliced, cut, shredded or grated cheese as an anti-caking agent.

Canada believes that the listing of preservatives in this standard should be duplicated after the listing for acids as it now appears that preservatives are only permitted for sliced, cut, shredded or grated cheese.

Canada supports the addition of pimaricin (natamycin) to the list of preservatives for surface/rind treatment only. This is in line with the Standard for Unripened Cheese including Fresh Cheese.

NEW ZEALAND

New Zealand wishes to include the following additives for use in Mozzarella with a low moisture content:

INS No.	Name of food additive	ADI status	Endorsement status in the Group Standard for Unripened Cheese including Fresh Cheese	Maximum level

407	Carrageenan and its Na, K, and NH_4 salts (includes Furcellaran)	Not specified	+	Limited by GMP
410	Carob bean gum	Not specified	+	Limited by GMP
412	Guar gum	Not specified	+	Limited by GMP
415	Xanthan gum	Not specified	+	Limited by GMP
416	Karaya gum	Not specified	+	Limited by GMP
417	Tara gum	Not specified	+	Limited by GMP

Carrageenan interacts with the κ-casein fragment of the casein micelle, altering the way in which the micelle aggregates during the formation of the coagulum. This has the effect of improving the organoleptic and functional properties of Mozzarella, and enhancing its keeping quality and stability. The essential compositional and quality characteristics are maintained.

These gums are listed in Table Three of the General Standard for Food Additives (Additives Permitted for Use in Food in General, Unless Otherwise Specified, in Accordance with GMP), and their use is not excluded by the Annex to Table Three. They are permitted in New Zealand and Australia in any type of cheese.