codex alimentarius commission

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

WORLD HEALTH ORGANIZATION

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Agenda Item 4 (b) **CX/MMP 04/6/5**
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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 REVISED STANDARDS FOR INDIVIDUAL CHEESES

(at Step 3)

(Prepared by International Dairy Federation)

Governments and international organizations wishing to submit comments at Step 3on the Revised Proposed Draft Standards for Individual Cheeses are invited to do so **no later than 15 March 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).

INTRODUCTION

At the 5th Session of the CCMMP (April 2002) the Committee agreed that the IDF would revise the proposed standards for individual cheese varieties on the basis of the discussions that took place during the Session, written comments submitted and the "Guidance for Inclusion of Details in Codex Standards for Individual Cheese Varieties" for circulation at Step 3 and further consideration at the 6th Session of the CCMMP (ALINORM 03/11, para. 96). The "Guidance" was attached the ALINORM report as Appendix VII.

IDF's analysis of the discussions that took place during the 5th Session and the written comments submitted to the Session has been included as an attachment to this paper. The following principles have been applied:

1. The primary basis for the redrafting is the Proposed Draft Standards as tabled at the 5th Session of the Committee (CX/MMP 02/7 part 2)

2. All written comments submitted[1] and the outcome of the discussions that took place at the 5th Session[2], have been reviewed and discussed. Each written comment submitted has been examined individually. However:

[1] CX/MMP 02/7 add 1 and CRDs 3, 4, 5, 6, 7, 8, 9, 10, 14, 17 tabled at the 4th Session of the CCMMP.
[2] ALINORM 03/11, para´s 85-96.

- With regard to absolute minimum fat contents, only comments related to cream cheese have been reviewed, as the CCMMP has agreed on the values for the other varieties.

- Comments in support of the current draft wordings have not been repeated unless opposite views have been expressed in comments of others.

The conclusions have been incorporated into the revised drafts standards together with any consequential amendments necessary due to the conclusions drawn by the CCMMP on other matters. The recommendations from IDF that led to the amendments are included in attached report.

3. The general approach used has been that a Government comment has been accepted unless proper technological, scientific, editorial or similar arguments make it advisable not to follow it or to amend it, using the Guidance for Inclusion of Details in Codex Standards for Individual Cheese Varieties as attached to the ALINORM report as Appendix VII. However, if the CCMMP or another Codex body has already decided on the matter, these decisions have been followed. Also, where Governments have expressed different views, possible solutions are provided with the aim of facilitating a decision. They take into account technical justification and/or existing commercial trading practices.

Abbreviations used in this document:

GSUDT: General Standard for the Use of Dairy Terms (CODEX STAN 206-1999).

GSLPF: General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985, Rev. 1-1991).

GSFA: Draft General Standard for Food Additives (currently being developed by the CCFAC)

GSUC: Group General Standard for Unripened Cheese Including Fresh Cheese (CODEX STAN 221-2001)

PROPOSED DRAFT REVISED STANDARDS FOR INDIVIDUAL CHEESES

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PROPOSED DRAFT REVISED STANDARD FOR CHEDDAR (C-1)

(at Step 3)

The Appendix 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 Cheddar intended for direct consumption or for further processing in conformity with the description in Section 2 of this Standard.

2. DESCRIPTION

Cheddar is a ripened hard cheese in conformity with the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001). The body has a near white or ivory through to light yellow or orange colour and a firm-textured (when pressed by thumb), smooth and waxy texture. Gas holes are generally absent, but few openings and splits are acceptable. The cheese is sold with or without1* rind and may be coated.

For Cheddar ready for consumption, the ripening procedure to develop flavour and body characteristics is normally from 5 weeks at 7-15 °C depending on the degree of maturity required. Alternative ripening conditions (including the addition of ripening enhancing enzymes) may be used, provided the cheese exhibits similar physical, biochemical and sensory properties as those achieved by the previously stated ripening procedure. Cheddar intended for further processing need not exhibit the same degree of ripening.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 RAW MATERIALS

Cows´ milk or buffaloes´ milk, or their mixtures, and products obtained from these milks.

3.2 PERMITTED INGREDIENTS

- Starter cultures of harmless lactic acid and/ or flavour producing bacteria and cultures of other harmless microorganisms;
- Rennet or other safe and suitable coagulating enzymes;
- Sodium chloride;
- Potable water;
- Safe and suitable enzymes to enhance the ripening process;
- Rice, corn and potato flours and starches: Notwithstanding the provisions in the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001), 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.

1 The cheese has been ripened and/or kept in such a way that no rind is developed (a “rindless” cheese). Ripening film is used in the manufacture of rindless cheese. Ripening film may also constitute the coating that protects the cheese.

3.3 COMPOSITION

Milk constituent:	Minimum content (m/m):	Maximum content (m/m):	Reference level (m/m):
Milkfat in dry matter:	22%	Not restricted	48% to 55%
Dry matter:	Depending on the fat in dry matter content, according to the table below.		

Fat in dry matter content (m/m):	Corresponding minimum dry matter content (m/m):
Equal to or above 22% but less than 30%:	49%
Equal to or above 30% but less than 40%:	53%
Equal to or above 40% but less than 48%:	57%
Equal to or above 48% but less than 60%:	61%
Equal to or above 60%:	66%

Compositional modifications beyond the minima and maxima specified above for milkfat and dry matter are not considered to be in compliance with section 4.3.3 of the Codex General Standard for the Use of Dairy Terms (CODEX STAN 206-1999).

4. FOOD ADDITIVES

Only those additives classes indicated in the table below may be used for the product categories specified. Within each additive class, and where permitted according to the table, only those food additives listed below may be used and only within the functions and limits specified.

	Justified use:	
Additive functional class:	**Cheese mass**	**Surface/rind treatment**
Colours:	X[1]	-
Bleaching agents:	-	-
Acids:	-	-
Acidity regulators:	X	-
Stabilizers:	-	-
Thickeners:	-	-
Emulsifiers:	-	-
Antioxidants:	-	-
Preservatives:	X	X
Salt substitutes:	X	X
Foaming agents:	-	-
Anti-caking agents:	-	X[2]

[1]) Only to obtain the colour characteristics, as described in Section 2
[2]) For the surface of sliced, cut, shredded or grated cheese, only
X = The use of additives belonging to the class is technologically justified
- = The use of additives belonging to the class is not technologically justified

No.	*Name of food additive*		*Maximum level*
	Colours		
160a(i)	Carotenes (synthetic)		25 mg/kg
160a(ii)	Carotenes (vegetable)		600 mg/kg
160b	Annatto extracts		25 mg/kg of cheese on bixin/norbixin basis
160c	Paprika oleoresins		Limited by GMP
160e	β-apo-8`-carotenal		35 mg/kg
160f	β-apo-8`-carotenic acid, methyl and ethyl ester		35 mg/kg
	Acidity regulators		
170	Calcium carbonates	)	
504	Magnesium carbonates	)	Limited by GMP
575	Glucono-delta-lactone (GDL)	)	
	Preservatives		
234	Nisin		12.5 mg/kg
251	Sodium nitrate	)	50 mg/kg of cheese, expressed
252	Potassium nitrate	)	as Na NO_3
1105	Lysozyme		Limited by GMP
	Salt substitutes		
508	Potassium chloride		Limited by GMP
	For surface/rind treatment only:		
200	Sorbic acid	)	1000 mg/kg of cheese, singly
202	Potassium sorbate	)	or in combination,
203	Calcium sorbate	)	calculated as sorbic acid
235	Pimaricin (natamycin)		2 mg/dm^2 surface of whole cheese. Not present at a depth of 5 mm. For rind treatment or added to coatings only.
280	Propionic acid	)	
281	Sodium propionate	)	3000 mg/kg, calculated
282	Calcium propionate	)	as propionic acid
	Anti-caking agents		
460	Cellulose		Limited by GMP
551	Silicon dioxide, amorphous	)	
552	Calcium silicate	)	
553	Magnesium silicates	)	10 g/kg singly or in combination
554	Sodium aluminosilicate	)	Silicates calculated as silicon dioxide
555	Potassium aluminosilicate	)	
556	Calcium aluminium silicate	)	
559	Aluminium silicate	)	
560	Potassium silicate	)	

5. CONTAMINANTS

The milk used in the manufacture of 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 product 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, *Codex Alimentarius*, Volume 1B), 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, *Codex Alimentarius*, Volume 1B).

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 Cheddar may be applied in accordance with section 4.1 of the Codex General Standard for the Labelling of Prepackaged Foods, provided that the product is in conformity with this Standard. Where customary in the country of retail sale, alternative spelling may be used.

The use of the name is an option that may be chosen only if the cheese complies with this standard. Where the name is not used for a cheese that complies with this standard, the naming provisions of the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001) apply.

The designation of products in which the fat content is below or above the reference range but above the absolute minimum specified in section 3.3 of this Standard shall be accompanied by an appropriate qualification describing the modification made or the fat content (expressed as fat in dry matter or as percentage by mass), either as part of the name or in a prominent position in the same field of vision. Suitable qualifiers are the appropriate characterizing terms specified in Section 7.3 of the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001) or a nutritional claim in accordance with the Guidelines for the Use of Nutritional Claims (CAC/GL 023 – 1997, *Codex Alimentarius* Volume 1A)[2].

The designation may also be used for cut, sliced, shredded or grated products made from cheese which cheese is in conformity with this Standard.

7.2 COUNTRY OF ORIGIN

The country of origin (which means the country of manufacture, not the country in which the name originated) shall be declared. When the product undergoes substantial transformation3* in a second country, the country in which the transformation is performed shall be considered to be the country of origin for the purpose of labelling.

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2 For the purpose of comparative nutritional claims, the minimum fat content of 48% fat in dry matter constitutes the reference.

3 For instance, [repackaging, cutting, slicing, shredding and grating – formulation under review] is not regarded as substantial transformation

7.3 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.

7.4 DATE MARKING

Notwithstanding the provisions of Section 4.7.1 of the General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985, Rev.1-1991; Codex Alimentarius, Volume 1A), the date of manufacture may be declared instead of the minimum durability information, provided that the product is not intended to be purchased as such by the final consumer

7.5 LABELLING OF NON-RETAIL CONTAINERS

Information specified 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 of the manufacturer or packer shall appear on the container, and in the absence of such a container, on the product itself. However, lot identification and the name and address 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*, Volume 13.

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APPENDIX.

INFORMATION ON USUAL PATTERNS OF MANUFACTURING CHEDDAR

The information below is intended for voluntary application by commercial partners and not for application by governments.

Should a Member Country identify legitimate objective(s) for retaining or introducing national regulation(s) that address(es) matters considered in this Annex, the provisions below should be taken into account.

1. METHOD OF MANUFACTURE

1.1 Starter cultures consist of non-gas forming lactic acid producing bacteria.

1.2 After coagulation, the curd is cut and heated in its whey to a temperature above the coagulation temperature. The curd is separated from the whey and stirred or cheddared. After cheddaring the curd is milled. When the desired acidity is reached the curd is salted. The curd and salt are then mixed and moulded. Other processing techniques, which give end products with the same physical, chemical and organoleptic characteristics may be applied.

PROPOSED DRAFT REVISED STANDARD FOR DANBO (C-3)

(at Step 3)

1. SCOPE

This Standard applies to Danbo intended for direct consumption or for further processing in conformity with the description in Section 2 of this Standard.

2. DESCRIPTION

Danbo is a ripened firm/semi-hard cheese in conformity with the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001). The body has a near white or ivory through to light yellow or yellow colour and a firm-textured (when pressed by thumb) texture, suitable for cutting, with few to plentiful, evenly distributed, smooth and round pea sized (or mostly up to 10 mm in diameter) gas holes, but few openings and splits are acceptable. The shape is flat squared or parallelepiped. The cheese is sold with or without[1] hard or slightly moist smear-ripened rind, which may be coated.

For Danbo ready for consumption, the ripening procedure to develop flavour and body characteristics is normally from 3 weeks at 12-20 °C depending on the degree of maturity required. Alternative ripening conditions (including the addition of ripening enhancing enzymes) may be used, provided the cheese exhibits similar physical, biochemical and sensory properties as those achieved by the previously stated ripening procedure. Danbo intended for further processing need not exhibit the same degree of ripening.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 RAW MATERIALS

Cows´ milk or buffaloes´ milk, or their mixtures, and products obtained from these milks.

3.2 PERMITTED INGREDIENTS

- Starter cultures of harmless lactic acid and/ or flavour producing bacteria and cultures of other harmless microorganisms;
- Rennet or other safe and suitable coagulating enzymes;
- Sodium chloride;
- Potable water;
- Safe and suitable enzymes to enhance the ripening process;
- Rice, corn and potato flours and starches: Notwithstanding the provisions in the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001), 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.

1 The cheese has been ripened and/or kept in such a way that no rind is developed (a “rindless” cheese). Ripening film is used in the manufacture of rindless cheese. Ripening film may also constitute the coating that protects the cheese.

3.3 COMPOSITION

Milk constituent:	Minimum content (m/m):	Maximum content (m/m):	Reference level (m/m):
Milkfat in dry matter:	20%	Not restricted	45% to 55%

Dry matter: Depending on the fat in dry matter content, according to the table below.

Fat in dry matter content (m/m):	Corresponding minimum dry matter content (m/m):
Equal to or above 20% but less than 30%:	41%
Equal to or above 30% but less than 40%:	44%
Equal to or above 40% but less than 45%:	50%
Equal to or above 45 but less than 55%	52%
Equal to or above 55%:	57%

Compositional modifications beyond the minima and maxima specified above for milkfat and dry matter are not considered to be in compliance with section 4.3.3 of the Codex General Standard for the Use of Dairy Terms (CODEX STAN 206-1999).

4. FOOD ADDITIVES

Only those additives classes indicated in the table below may be used for the product categories specified. Within each additive class, and where permitted according to the table, only those food additives listed below may be used and only within the functions and limits specified.

	Justified use:	
Additive functional class:	**Cheese mass**	**Surface/rind treatment**
Colours:	X[1]	-
Bleaching agents:	-	-
Acids:	-	-
Acidity regulators:	X	-
Stabilizers:	-	-
Thickeners:	-	-
Emulsifiers:	-	-
Antioxidants:	-	-
Preservatives:	X	X
Salt substitutes:	X	X
Foaming agents:	-	-
Anti-caking agents:	-	X[2]

[1]) Only to obtain the colour characteristics, as described in Section 2
[2]) For the surface of sliced, cut, shredded or grated cheese, only
X = The use of additives belonging to the class is technologically justified
- = The use of additives belonging to the class is not technologically justified

No.	*Name of food additive*		*Maximum level*
	Colours		
160a(i)	Carotenes (synthetic)		25 mg/kg
160a(ii)	Carotenes (vegetable)		600 mg/kg
160b	Annatto extracts		10 mg/kg of cheese on bixin/norbixin basis
160c	Paprika oleoresins		Limited by GMP
160e	β-apo-8`-carotenal		35 mg/kg
160f	β-apo-8`-carotenic acid, methyl and ethyl ester		35 mg/kg
	Acidity regulators		
170	Calcium carbonates	)	
504	Magnesium carbonates	)	Limited by GMP
575	Glucono-delta-lactone (GDL)	)	
	Preservatives		
234	Nisin		12.5 mg/kg
251	Sodium nitrate	)	50 mg/kg of cheese, expressed
252	Potassium nitrate	)	as Na NO_3
1105	Lysozyme		Limited by GMP
	For surface/rind treatment only:		
200	Sorbic acid	)	1000 mg/kg of cheese, singly
202	Potassium sorbate	)	or in combination,
203	Calcium sorbate	)	calculated as sorbic acid
235	Pimaricin (natamycin)		2 mg/dm^2 surface of whole cheese. Not present at a depth of 5 mm. For rind treatment or added to coatings only.
280	Propionic acid	)	
281	Sodium propionate	)	3000 mg/kg, calculated
282	Calcium propionate	)	as propionic acid
	Salt substitutes		
508	Potassium chloride		Limited by GMP
	Anti-caking agents		
460	Cellulose		Limited by GMP
551	Silicon dioxide, amorphous	)	
552	Calcium silicate	)	
553	Magnesium silicates	)	10 g/kg singly or in combination
554	Sodium aluminosilicate	)	Silicates calculated as silicon dioxide
555	Potassium aluminosilicate	)	
556	Calcium aluminium silicate	)	
559	Aluminium silicate	)	
560	Potassium silicate	)	

5. CONTAMINANTS

The milk used in the manufacture of 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 product 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, *Codex Alimentarius*, Volume 1B), 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, *Codex Alimentarius*, Volume 1B).

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 Danbo may be applied in accordance with section 4.1 of the Codex General Standard for the Labelling of Prepackaged Foods, provided that the product is in conformity with this Standard. Where customary in the country of retail sale, alternative spelling may be used.

The use of the name is an option that may be chosen only if the cheese complies with this standard. Where the name is not used for a cheese that complies with this standard, the naming provisions of the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001) apply.

The designation of products in which the fat content is below or above the reference range but above the absolute minimum specified in section 3.3 of this Standard shall be accompanied by an appropriate qualification describing the modification made or the fat content (expressed as fat in dry matter or as percentage by mass), either as part of the name or in a prominent position in the same field of vision. Suitable qualifiers are the appropriate characterizing terms specified in Section 7.3 of the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001) or a nutritional claim in accordance with the Guidelines for the Use of Nutritional Claims (CAC/GL 023 – 1997, *Codex Alimentarius* Volume 1A)[2]

The designation may also be used for cut, sliced, shredded or grated products made from cheese which cheese is in conformity with this Standard.

7.2 COUNTRY OF ORIGIN

The country of origin (which means the country of manufacture, not the country in which the name originated) shall be declared. When the product undergoes substantial transformation[3] in a second country, the country in which the transformation is performed shall be considered to be the country of origin for the purpose of labelling.

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[2] For the purpose of comparative nutritional claims, the minimum fat content of 45% fat in dry matter constitutes the reference.

[3] For instance, [repackaging, cutting, slicing, shredding and grating – formulation under review] is not regarded as substantial transformation.

7.3 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.

7.4 DATE MARKING

Notwithstanding the provisions of Section 4.7.1 of the General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985, Rev.1-1991; Codex Alimentarius, Volume 1A), the date of manufacture may be declared instead of the minimum durability information, provided that the product is not intended to be purchased as such by the final consumer.

7.5 LABELLING OF NON-RETAIL CONTAINERS

Information specified 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 of the manufacturer or packer shall appear on the container, and in the absence of such a container, on the product itself. However, lot identification and the name and address 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*, Volume 13.

PROPOSED DRAFT REVISED STANDARD FOR EDAM (C-4)

(at Step 3)

The Appendix 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 Edam intended for direct consumption or for further processing in conformity with the description in para.2 of this Standard.

2. DESCRIPTION

Edam is a ripened firm/semi-hard cheese in conformity with the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001). The body has a near white or ivory through to light yellow or yellow colour and a firm-textured (when pressed by thumb) texture, suitable for cutting, with few more or less round rice to pea sized (or mostly up to 10 mm in diameter) gas holes, distributed in a reasonable regular manner throughout the interior of the cheese, but few openings and splits are acceptable. The shape is spherical, of a flat block or of a loaf. The cheese is sold with dry rind, which may be coated. Edam of flat block or loaf shape is also sold without [1] rind.

For Edam ready for consumption, the ripening procedure to develop flavour and body characteristics is normally from 3 weeks at 10-18 °C depending on the degree of maturity required. Alternative ripening conditions (including the addition of ripening enhancing enzymes) may be used, provided the cheese exhibits similar physical, biochemical and sensory properties as those achieved by the previously stated ripening procedure. Edam intended for further processing need not exhibit the same degree of ripening.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 RAW MATERIALS

Cows´ milk or buffaloes´ milk, or their mixtures, and products obtained from these milks.

3.2 PERMITTED INGREDIENTS

- Starter cultures of harmless lactic acid and/ or flavour producing bacteria and cultures of other harmless microorganisms;
- Rennet or other safe and suitable coagulating enzymes;
- Sodium chloride;
- Potable water;
- Safe and suitable enzymes to enhance the ripening process;
- Rice, corn and potato flours and starches: Notwithstanding the provisions in the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001), 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.

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1 The cheese has been ripened and/or kept in such a way that no rind is developed (a “rindless” cheese). Ripening film is used in the manufacture of rindless cheese. Ripening film may also constitute the coating that protects the cheese.

3.3 COMPOSITION

Milk constituent:	Minimum content (m/m):	Maximum content (m/m):	Reference level (m/m):
Milkfat in dry matter:	30%	Not restricted	40% to 50%

Dry matter: Depending on the fat in dry matter content, according to the table below.

Fat in dry matter content (m/m):	Corresponding minimum dry matter content (m/m):
Equal to or above 30% but less than 40%:	47%
Equal to or above 40% but less than 45%:	51%
Equal to or above 45% but less than 50%:	55%
Equal to or above 50% but less than 60%:	57%
Equal to or above 60%:	62%

Compositional modifications beyond the minima and maxima specified above for milkfat and dry matter are not considered to be in compliance with section 4.3.3 of the Codex General Standard for the Use of Dairy Terms (CODEX STAN 206-1999).

4. FOOD ADDITIVES

Only those additives classes indicated in the table below may be used for the product categories specified. Within each additive class, and where permitted according to the table, only those food additives listed below may be used and only within the functions and limits specified.

	Justified use:	
Additive functional class:	**Cheese mass**	**Surface/rind treatment**
Colours:	X[1]	-
Bleaching agents:	-	-
Acids:	-	-
Acidity regulators:	X	-
Stabilizers:	-	-
Thickeners:	-	-
Emulsifiers:	-	-
Antioxidants:	-	-
Preservatives:	X	X
Salt substitutes:	X	X
Foaming agents:	-	-
Anti-caking agents:	-	X[2]

[1]) Only to obtain the colour characteristics, as described in Section 2
[2]) For the surface of sliced, cut, shredded or grated cheese, only
X = The use of additives belonging to the class is technologically justified
- = The use of additives belonging to the class is not technologically justified

No.	*Name of food additive*		*Maximum level*
	Colours		
160a(i)	Carotenes (synthetic)		25 mg/kg
160a(ii)	Carotenes (vegetable)		600 mg/kg
160b	Annatto extracts		10 mg/kg of cheese on bixin/norbixin basis
160c	Paprika oleoresins		Limited by GMP
160e	β-apo-8`-carotenal		35 mg/kg
160f	β-apo-8`-carotenic acid, methyl and ethyl ester		35 mg/kg
	Acidity regulators		
170	Calcium carbonates	)	
504	Magnesium carbonates	)	Limited by GMP
575	Glucono-delta-lactone (GDL)	)	
	Preservatives		
234	Nisin		12.5 mg/kg
251	Sodium nitrate	)	50 mg/kg of cheese, expressed
252	Potassium nitrate	)	as Na NO_3
1105	Lysozyme		Limited by GMP
	For surface/rind treatment only:		
200	Sorbic acid	)	1000 mg/kg of cheese, singly
202	Potassium sorbate	)	or in combination,
203	Calcium sorbate	)	calculated as sorbic acid
235	Pimaricin (natamycin)		2 mg/dm^2 surface of whole cheese. Not present at a depth of 5 mm. For rind treatment or added to coatings only.
280	Propionic acid	)	
281	Sodium propionate	)	3000 mg/kg, calculated
282	Calcium propionate	)	as propionic acid
	Salt substitutes		
508	Potassium chloride		Limited by GMP
	Anti-caking agents		
460	Cellulose		Limited by GMP
551	Silicon dioxide, amorphous	)	
552	Calcium silicate	)	
553	Magnesium silicates	)	10 g/kg singly or in combination
554	Sodium aluminosilicate	)	Silicates calculated as silicon dioxide
555	Potassium aluminosilicate	)	
556	Calcium aluminium silicate	)	
559	Aluminium silicate	)	
560	Potassium silicate	)	

5. CONTAMINANTS

The milk used in the manufacture of 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 product 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, *Codex Alimentarius*, Volume 1B), 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, *Codex Alimentarius*, Volume 1B).

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 names Edam, Edamer or Edammer may be applied in accordance with section 4.1 of the Codex General Standard for the Labelling of Prepackaged Foods, provided that the product is in conformity with this Standard. Where customary in the country of retail sale, alternative spelling may be used.

The use of the name is an option that may be chosen only if the cheese complies with this standard. Where the name is not used for a cheese that complies with this standard, the naming provisions of the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001) apply.

The designation of products in which the fat content is below or above the reference range but above the absolute minimumspecified in section 3.3 of this Standard shall be accompanied by an appropriate qualification describing the modification made or the fat content (expressed as fat in dry matter or as percentage by mass), either as part of the name or in a prominent position in the same field of vision. Suitable qualifiers are the appropriate characterizing terms specified in Section 7.3 of the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001) or a nutritional claim in accordance with the Guidelines for the Use of Nutritional Claims (CAC/GL 023 – 1997, *Codex Alimentarius* Volume 1A) [2].

The designation may also be used for cut, sliced, shredded or grated products made from cheese which cheese is in conformity with this Standard.

7.2 COUNTRY OF ORIGIN

The country of origin (which means the country of manufacture, not the country in which the name originated) shall be declared. When the product undergoes substantial transformation [3] in a second country, the country in which the transformation is performed shall be considered to be the country of origin for the purpose of labelling.

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[2] For the purpose of comparative nutritional claims, the minimum fat content of 40% fat in dry matter constitutes the reference.

[3] For instance, [repackaging, cutting, slicing, shredding and grating – formulation under review] is not regarded as substantial transformation

7.3 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.

7.4 DATE MARKING

Notwithstanding the provisions of Section 4.7.1 of the General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985, Rev.1-1991; Codex Alimentarius, Volume 1A), the date of manufacture may be declared instead of the minimum durability information, provided that the product is not intended to be purchased as such by the final consumer.

7.5 LABELLING OF NON-RETAIL CONTAINERS

Information specified 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 of the manufacturer or packer shall appear on the container, and in the absence of such a container, on the product itself. However, lot identification and the name and address 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*, Volume 13.

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APPENDIX.

INFORMATION ON USUAL PATTERNS OF MANUFACTURING EDAM

The information below is intended for voluntary application by commercial partners and not for application by governments.

Should a Member Country identify legitimate objective(s) for retaining or introducing national regulation(s) that address(es) matters considered in this Annex, the provisions below should be taken into account.

1. APPEARANCE CHARACTERISTICS

Edam is normally manufactured with a weights ranging from 1.5 to 2.5 kg.

2. METHOD OF MANUFACTURE

Salting method: Salted in brine.

PROPOSED DRAFT REVISED STANDARD FOR GOUDA (C-5)

(at Step 3)

The Appendix 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 Gouda intended for direct consumption or for further processing in conformity with the description in Section 2 of this Standard.

2. DESCRIPTION

Gouda is a ripened firm/semi-hard cheese in conformity with the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001). The body has a near white or ivory through to light yellow or yellow colour and a firm-textured (when pressed by thumb) texture, suitable for cutting, with few to plentiful, more or less round pin´s head to pea sized (or mostly up to 10 mm in diameter) gas holes, distributed in a reasonable regular manner throughout the interior of the cheese, but few openings and splits are acceptable. The shape is of a flattened cylinder with convex sides, a flat block, or a loaf. The cheese is sold with a dry rind, which may be coated. Gouda of flat block or loaf shape is also sold without [1] rind.

For Gouda ready for consumption, the ripening procedure to develop flavour and body characteristics is normally from 3 weeks at 10-17 °C depending on the degree of maturity required. Alternative ripening conditions (including the addition of ripening enhancing enzymes) may be used, provided the cheese exhibits similar physical, biochemical and sensory properties as those achieved by the previously stated ripening procedure. Gouda intended for further processing and Gouda of low weights (< 2.5 kg) need not exhibit the same degree of ripening.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 RAW MATERIALS

Cows´ milk or buffaloes´ milk, or their mixtures, and products obtained from these milks.

3.2 PERMITTED INGREDIENTS

- Starter cultures of harmless lactic acid and/ or flavour producing bacteria and cultures of other harmless microorganisms;
- Rennet or other safe and suitable coagulating enzymes;
- Sodium chloride;
- Potable water;
- Safe and suitable enzymes to enhance the ripening process;
- Rice, corn and potato flours and starches: Notwithstanding the provisions in the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001), 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.

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[1] The cheese has been ripened and/or kept in such a way that no rind is developed (a “rindless” cheese). Ripening film is used in the manufacture of rindless cheese. Ripening film may also constitute the coating that protects the cheese

3.3 COMPOSITION

Milk constituent:	Minimum content (m/m):	Maximum content (m/m):	Reference level (m/m):
Milkfat in dry matter:	30%	Not restricted	48% to 55%

Dry matter: Depending on the fat in dry matter content, according to the table below.

Fat in dry matter content (m/m):	Corresponding minimum dry matter content (m/m):
Equal to or above 30% but less than 40%:	48%
Equal to or above 40% but less than 48%:	52%
Equal to or above 48% but less than 60%:	55%
Equal to or above 60%:	62%

Gouda with between 40 and 48% FDM can be sold with a DM content of min. 50%, provided that the name is qualified by the term “baby”.

Compositional modifications beyond the minima and maxima specified above for milkfat and dry matter are not considered to be in compliance with section 4.3.3 of the Codex General Standard for the Use of Dairy Terms (CODEX STAN 206-1999).

4. FOOD ADDITIVES

Only those additives classes indicated in the table below may be used for the product categories specified. Within each additive class, and where permitted according to the table, only those food additives listed below may be used and only within the functions and limits specified.

	Justified use:	
Additive functional class:	**Cheese mass**	**Surface/rind treatment**
Colours:	X[1]	-
Bleaching agents:	-	-
Acids:	-	-
Acidity regulators:	X	-
Stabilizers:	-	-
Thickeners:	-	-
Emulsifiers:	-	-
Antioxidants:	-	-
Preservatives:	X	X
Salt substitutes:	X	X
Foaming agents:	-	-
Anti-caking agents:	-	X[2]

[1]) Only to obtain the colour characteristics, as described in Section 2
[2]) For the surface of sliced, cut, shredded or grated cheese, only
X = The use of additives belonging to the class is technologically justified
- = The use of additives belonging to the class is not technologically justified

No.	*Name of food additive*		*Maximum level*
	Colours		
160a(i)	Carotenes (synthetic)		25 mg/kg
160a(ii)	Carotenes (vegetable)		600 mg/kg
160b	Annatto extracts		10 mg/kg of cheese on bixin/norbixin basis
160c	Paprika oleoresins		Limited by GMP
160e	β-apo-8`-carotenal		35 mg/kg
160f	β-apo-8`-carotenic acid, methyl and ethyl ester		35 mg/kg
	Acidity regulators		
170	Calcium carbonates	)	
504	Magnesium carbonates	)	Limited by GMP
575	Glucono-delta-lactone (GDL)	)	
	Preservatives		
234	Nisin		12.5 mg/kg
251	Sodium nitrate	)	50 mg/kg of cheese, expressed
252	Potassium nitrate	)	as Na NO_3
1105	Lysozyme		Limited by GMP
	For surface/rind treatment only:		
200	Sorbic acid	)	1000 mg/kg of cheese, singly
202	Potassium sorbate	)	or in combination,
203	Calcium sorbate	)	calculated as sorbic acid
235	Pimaricin (natamycin)		2 mg/dm^2 surface of whole cheese. Not present at a depth of 5 mm. For rind treatment or added to coatings only.
280	Propionic acid	)	
281	Sodium propionate	)	3000 mg/kg, calculated
282	Calcium propionate	)	as propionic acid
	Salt substitutes		
508	Potassium chloride		Limited by GMP
	Anti-caking agents		
460	Cellulose		Limited by GMP
551	Silicon dioxide, amorphous	)	
552	Calcium silicate	)	
553	Magnesium silicates	)	10 g/kg singly or in combination
554	Sodium aluminosilicate	)	Silicates calculated as silicon dioxide
555	Potassium aluminosilicate	)	
556	Calcium aluminium silicate	)	
559	Aluminium silicate	)	
560	Potassium silicate	)	

5. CONTAMINANTS

The milk used in the manufacture of 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 product 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, *Codex Alimentarius*, Volume 1B), 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, *Codex Alimentarius*, Volume 1B).

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 Gouda may be applied in accordance with section 4.1 of the Codex General Standard for the Labelling of Prepackaged Foods, provided that the product is in conformity with this Standard. Where customary in the country of retail sale, alternative spelling may be used.

The use of the name is an option that may be chosen only if the cheese complies with this standard. Where the name is not used for a cheese that complies with this standard, the naming provisions of the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001) apply.

The designation of products in which the fat content is below or above the reference range but above the absolute minimum specified in section 3.3 of this Standard shall be accompanied by an appropriate qualification describing the modification made or the fat content (expressed as fat in dry matter or as percentage by mass), either as part of the name or in a prominent position in the same field of vision. Suitable qualifiers are the appropriate characterizing terms specified in Section 7.3 of the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001) or a nutritional claim in accordance with the Guidelines for the Use of Nutritional Claims (CAC/GL 023 – 1997, *Codex Alimentarius* Volume 1A) [2.]

The designation may also be used for cut, sliced, shredded or grated products made from cheese which cheese is in conformity with this Standard.

7.2 COUNTRY OF ORIGIN

The country of origin (which means the country of manufacture, not the country in which the name originated) shall be declared. When the product undergoes substantial transformation [3] in a second country, the country in which the transformation is performed shall be considered to be the country of origin for the purpose of labelling.

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[2] For the purpose of comparative nutritional claims, the minimum fat content of 48% fat in dry matter constitutes the reference

[3] For instance, [repackaging, cutting, slicing, shredding and grating – formulation under review] is not regarded as substantial transformation

7.3 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.

7.4 DATE MARKING

Notwithstanding the provisions of Section 4.7.1 of the General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985, Rev.1-1991; Codex Alimentarius, Volume 1A), the date of manufacture may be declared instead of the minimum durability information, provided that the product is not intended to be purchased as such by the final consumer.

7.5 LABELLING OF NON-RETAIL CONTAINERS

Information specified 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 of the manufacturer or packer shall appear on the container, and in the absence of such a container, on the product itself. However, lot identification and the name and address 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*, Volume 13.

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APPENDIX.

INFORMATION ON USUAL PATTERNS OF MANUFACTURING GOUDA

The information below is intended for voluntary application by commercial partners and not for application by governments.

Should a Member Country identify legitimate objective(s) for retaining or introducing national regulation(s) that address(es) matters considered in this Annex, the provisions below should be taken into account.

1. APPEARANCE CHARACTERISTICS

Gouda is normally manufactured with weights ranging from 2.5 to 30 kg. Lower weights are normally qualified by the term “Baby”.

2. METHOD OF MANUFACTURE

Salting method: Salted in brine.

PROPOSED DRAFT REVISED STANDARD FOR HAVARTI (C-6)

(at Step 3)

1. SCOPE

This Standard applies to Havarti intended for direct consumption or for further processing in conformity with the description in Section 2 of this Standard.

2. DESCRIPTION

Havarti is a ripened firm/semi-hard cheese in conformity with the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001). The body has a near white or ivory through to light yellow or yellow colour and a texture suitable for cutting, with plentiful, irregular and coarse large rice seed sized (or mostly 1-2 mm in width and up to 10 mm in length) gas holes. The shape is flat cylindrical, rectangular or of a loaf shape. The cheese is sold with or without [1] a slightly greasy smear-ripened rind, which may be coated.

For Havarti ready for consumption, the ripening procedure to develop flavour and body characteristics is normally, depending on weight, 1-2 weeks at 14-18 °C (for smear development) followed by from 1-3 weeks at 8-12 °C depending on the degree of maturity required. Alternative ripening conditions (including the addition of ripening enhancing enzymes) may be used, provided the cheese exhibits similar physical, biochemical and sensory properties as those achieved by the previously stated ripening procedure. Havarti intended for further processing need not exhibit the same degree of ripening.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 RAW MATERIALS

Cows´ milk or buffaloes´ milk, or their mixtures, and products obtained from these milks.

3.2 PERMITTED INGREDIENTS

- Starter cultures of harmless lactic acid and/ or flavour producing bacteria and cultures of other harmless microorganisms;
- Rennet or other safe and suitable coagulating enzymes;
- Sodium chloride;
- Potable water;
- Safe and suitable enzymes to enhance the ripening process;
- Rice, corn and potato flours and starches: Notwithstanding the provisions in the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001), 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.

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[1] The cheese has been ripened and/or kept in such a way that no rind is developed (a “rindless” cheese). Ripening film is used in the manufacture of rindless cheese. Ripening film may also constitute the coating that protects the cheese.

3.3 COMPOSITION

Milk constituent:	Minimum content (m/m):	Maximum content (m/m):	Reference level (m/m):
Milkfat in dry matter:	30%	Not restricted	45% to 55%

Dry matter: Depending on the fat in dry matter content, according to the table below.

Fat in dry matter content (m/m):	Corresponding minimum dry matter content (m/m):
Equal to or above 30% but less than 40%:	46%
Equal to or above 40% but less than 45%:	48%
Equal to or above 45% but less than 55%:	50%
Equal to or above 55% but less than 60%:	54%
Equal to or above 60%:	58%

Compositional modifications beyond the minima and maxima specified above for milkfat and dry matter are not considered to be in compliance with section 4.3.3 of the Codex General Standard for the Use of Dairy Terms (CODEX STAN 206-1999).

4. FOOD ADDITIVES

Only those additives classes indicated in the table below may be used for the product categories specified. Within each additive class, and where permitted according to the table, only those food additives listed below may be used and only within the functions and limits specified.

	Justified use:	
Additive functional class:	**Cheese mass**	**Surface/rind treatment**
Colours:	X[1]	-
Bleaching agents:	-	-
Acids:	-	-
Acidity regulators:	X	-
Stabilizers:	-	-
Thickeners:	-	-
Emulsifiers:	-	-
Antioxidants:	-	-
Preservatives:	X	X
Salt substitutes:	X	X
Foaming agents:	-	-
Anti-caking agents:	-	X[2]

[1]) Only to obtain the colour characteristics, as described in Section 2
[2]) For the surface of sliced, cut, shredded or grated cheese, only
X = The use of additives belonging to the class is technologically justified
- = The use of additives belonging to the class is not technologically justified

No.	*Name of food additive*		*Maximum level*
	Colours		
160a(i)	Carotenes (synthetic)		25 mg/kg
160a(ii)	Carotenes (vegetable)		600 mg/kg
160b	Annatto extracts		10 mg/kg of cheese on bixin/norbixin basis
160c	Paprika oleoresins		Limited by GMP
160e	β-apo-8`-carotenal		35 mg/kg
160f	β-apo-8`-carotenic acid, methyl and ethyl ester		35 mg/kg
	Acidity regulators		
170	Calcium carbonates	)	
504	Magnesium carbonates	)	Limited by GMP
575	Glucono-delta-lactone (GDL)	)	
	Preservatives		
234	Nisin		12.5 mg/kg
251	Sodium nitrate	)	50 mg/kg of cheese, expressed
252	Potassium nitrate	)	as Na NO_3
1105	Lysozyme		Limited by GMP
	For surface/rind treatment only:		
200	Sorbic acid	)	1000 mg/kg of cheese, singly
202	Potassium sorbate	)	or in combination,
203	Calcium sorbate	)	calculated as sorbic acid
235	Pimaricin (natamycin)		2 mg/dm^2 surface of whole cheese. Not present at a depth of 5 mm. For rind treatment or added to coatings only.
280	Propionic acid	)	
281	Sodium propionate	)	3000 mg/kg, calculated
282	Calcium propionate	)	as propionic acid
	Salt substitutes		
508	Potassium chloride		Limited by GMP
	Anti-caking agents		
460	Cellulose		Limited by GMP
551	Silicon dioxide, amorphous	)	
552	Calcium silicate	)	
553	Magnesium silicates	)	10 g/kg singly or in combination
554	Sodium aluminosilicate	)	Silicates calculated as silicon dioxide
555	Potassium aluminosilicate	)	
556	Calcium aluminium silicate	)	
559	Aluminium silicate	)	
560	Potassium silicate	)	

5. CONTAMINANTS

The milk used in the manufacture of 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 product 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, *Codex Alimentarius*, Volume 1B), 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, *Codex Alimentarius*, Volume 1B).

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 Havarti may be applied in accordance with section 4.1 of the Codex General Standard for the Labelling of Prepackaged Foods, provided that the product is in conformity with this Standard. Where customary in the country of retail sale, alternative spelling may be used.

The use of the name is an option that may be chosen only if the cheese complies with this standard. Where the name is not used for a cheese that complies with this standard, the naming provisions of the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001) apply.

The designation of products in which the fat content is below or above the reference range but above the absolute minimum specified in section 3.3 of this Standard shall be accompanied by an appropriate qualification describing the modification made or the fat content (expressed as fat in dry matter or as percentage by mass), either as part of the name or in a prominent position in the same field of vision. Suitable qualifiers are the appropriate characterizing terms specified in Section 7.3 of the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001) or a nutritional claim in accordance with the Guidelines for the Use of Nutritional Claims (CAC/GL 023 – 1997, *Codex Alimentarius* Volume 1A) [2].

Havarti with a fat in dry matter content of minimum 60% may alternatively be designated Cream Havarti.

The designation may also be used for cut, sliced, shredded or grated products made from cheese which cheese is in conformity with this Standard.

7.2 COUNTRY OF ORIGIN

The country of origin (which means the country of manufacture, not the country in which the name originated) shall be declared. When the product undergoes substantial transformation [3] in a second country, the country in which the transformation is performed shall be considered to be the country of origin for the purpose of labelling.

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[2] For the purpose of comparative nutritional claims, the minimum fat content of 45% fat in dry matter constitutes the reference.

[3] For instance, [repackaging, cutting, slicing, shredding and grating – formulation under review] is not regarded as substantial transformation.

7.3 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.

7.4 DATE MARKING

Notwithstanding the provisions of Section 4.7.1 of the General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985, Rev.1-1991; Codex Alimentarius, Volume 1A), the date of manufacture may be declared instead of the minimum durability information, provided that the product is not intended to be purchased as such by the final consumer.

7.5 LABELLING OF NON-RETAIL CONTAINERS

Information specified 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 of the manufacturer or packer shall appear on the container, and in the absence of such a container, on the product itself. However, lot identification and the name and address 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*, Volume 13.

PROPOSED DRAFT REVISED STANDARD FOR SAMSØ (C-7)

(at Step 3)

1. SCOPE

This Standard applies to Samsø intended for direct consumption or for further processing in conformity with the description in Section 2 of this Standard.

2. DESCRIPTION

Samsø is a ripened hard cheese in conformity with the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001). The body has a near white or ivory through to light yellow or yellow colour and a firm-textured (when pressed by thumb) texture suitable for cutting, with few to plentiful, evenly distributed, smooth and round pea to cherry sized (or mostly up to 20 mm in diameter) gas holes, but few openings and splits are acceptable. The shape is a flat cylindrical, flat square or rectangular. The cheese is sold with or without [1] a hard, dry rind, which may be coated.

For Samsø ready for consumption, the ripening procedure to develop flavour and body characteristics is normally from 3 weeks at 8-17 °C depending on the degree of maturity required. Alternative ripening conditions (including the addition of ripening enhancing enzymes) may be used, provided the cheese exhibits similar physical, biochemical and sensory properties as those achieved by the previously stated ripening procedure. Samsø intended for further processing need not exhibit the same degree of ripening.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 RAW MATERIALS

Cows´ milk or buffaloes´ milk, or their mixtures, and products obtained from these milks.

3.2 PERMITTED INGREDIENTS

- Starter cultures of harmless lactic acid and/ or flavour producing bacteria and cultures of other harmless microorganisms;
- Rennet or other safe and suitable coagulating enzymes;
- Sodium chloride;
- Potable water;
- Safe and suitable enzymes to enhance the ripening process;
- Rice, corn and potato flours and starches: Notwithstanding the provisions in the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001), 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.

[1] The cheese has been ripened and/or kept in such a way that no rind is developed (a “rindless” cheese). Ripening film is used in the manufacture of rindless cheese. Ripening film may also constitute the coating that protects the cheese.

3.3 COMPOSITION

Milk constituent:	Minimum content (m/m):	Maximum content (m/m):	Reference level (m/m):
Milkfat in dry matter:	30%	Not restricted	45% to 55%

Dry matter: Depending on the fat in dry matter content, according to the table below.

Fat in dry matter content (m/m):	Corresponding minimum dry matter content (m/m):
Equal to or above 30% but less than 40%:	46%
Equal to or above 40% but less than 45%:	52%
Equal to or above 45% but less than 55%:	54%
Equal to or above 55%:	59%

Compositional modifications beyond the minima and maxima specified above for milkfat and dry matter are not considered to be in compliance with section 4.3.3 of the Codex General Standard for the Use of Dairy Terms (CODEX STAN 206-1999).

4. FOOD ADDITIVES

Only those additives classes indicated in the table below may be used for the product categories specified. Within each additive class, and where permitted according to the table, only those food additives listed below may be used and only within the functions and limits specified.

	Justified use:	
Additive functional class:	**Cheese mass**	**Surface/rind treatment**
Colours:	X[1]	-
Bleaching agents:	-	-
Acids:	-	-
Acidity regulators:	X	-
Stabilizers:	-	-
Thickeners:	-	-
Emulsifiers:	-	-
Antioxidants:	-	-
Preservatives:	X	X
Salt substitutes:	X	X
Foaming agents:	-	-
Anti-caking agents:	-	X[2]

[1]) Only to obtain the colour characteristics, as described in Section 2
[2]) For the surface of sliced, cut, shredded or grated cheese, only
X = The use of additives belonging to the class is technologically justified
- = The use of additives belonging to the class is not technologically justified

No.	*Name of food additive*		*Maximum level*
	Colours		
160a(i)	Carotenes (synthetic)		25 mg/kg
160a(ii)	Carotenes (vegetable)		600 mg/kg
160b	Annatto extracts		10 mg/kg of cheese on bixin/norbixin basis
160c	Paprika oleoresins		Limited by GMP
160e	β-apo-8`-carotenal		35 mg/kg
160f	β-apo-8`-carotenic acid, methyl and ethyl ester		35 mg/kg
	Acidity regulators		
170	Calcium carbonates	)	
504	Magnesium carbonates	)	Limited by GMP
575	Glucono-delta-lactone (GDL)	)	
	Preservatives		
234	Nisin		12.5 mg/kg
251	Sodium nitrate	)	50 mg/kg of cheese, expressed
252	Potassium nitrate	)	as Na NO_3
1105	Lysozyme		Limited by GMP
	For surface/rind treatment only:		
200	Sorbic acid	)	1000 mg/kg of cheese, singly
202	Potassium sorbate	)	or in combination,
203	Calcium sorbate	)	calculated as sorbic acid
235	Pimaricin (natamycin)		2 mg/dm^2 surface of whole cheese. Not present at a depth of 5 mm. For rind treatment or added to coatings only.
280	Propionic acid	)	
281	Sodium propionate	)	3000 mg/kg, calculated
282	Calcium propionate	)	as propionic acid
	Salt substitutes		
508	Potassium chloride		Limited by GMP
	Anti-caking agents		
460	Cellulose		Limited by GMP
551	Silicon dioxide, amorphous	)	
552	Calcium silicate	)	
553	Magnesium silicates	)	10 g/kg singly or in combination
554	Sodium aluminosilicate	)	Silicates calculated as silicon dioxide
555	Potassium aluminosilicate	)	
556	Calcium aluminium silicate	)	
559	Aluminium silicate	)	
560	Potassium silicate	)	

5. CONTAMINANTS

The milk used in the manufacture of 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 product 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, *Codex Alimentarius*, Volume 1B), 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, *Codex Alimentarius*, Volume 1B).

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 Samsø may be applied in accordance with section 4.1 of the Codex General Standard for the Labelling of Prepackaged Foods, provided that the product is in conformity with this Standard. Where customary in the country of retail sale, alternative spelling may be used.

The use of the name is an option that may be chosen only if the cheese complies with this standard. Where the name is not used for a cheese that complies with this standard, the naming provisions of the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001) apply.

The designation of products in which the fat content is below or above the reference range but above the absolute minimum specified in section 3.3 of this Standard shall be accompanied by an appropriate qualification describing the modification made or the fat content (expressed as fat in dry matter or as percentage by mass), either as part of the name or in a prominent position in the same field of vision. Suitable qualifiers are the appropriate characterizing terms specified in Section 7.3 of the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001) or a nutritional claim in accordance with the Guidelines for the Use of Nutritional Claims (CAC/GL 023 – 1997, *Codex Alimentarius* Volume 1A) [2].

The designation may also be used for cut, sliced, shredded or grated products made from cheese which cheese is in conformity with this Standard.

7.2 COUNTRY OF ORIGIN

The country of origin (which means the country of manufacture, not the country in which the name originated) shall be declared. When the product undergoes substantial transformation [3] in a second country, the country in which the transformation is performed shall be considered to be the country of origin for the purpose of labelling.

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[2] For the purpose of comparative nutritional claims, the minimum fat content of 45% fat in dry matter constitutes the reference.

[3] For instance, [repackaging, cutting, slicing, shredding and grating – formulation under review] is not regarded as substantial transformation.

7.3 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.

7.4 DATE MARKING

Notwithstanding the provisions of Section 4.7.1 of the General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985, Rev.1-1991; Codex Alimentarius, Volume 1A), the date of manufacture may be declared instead of the minimum durability information, provided that the product is not intended to be purchased as such by the final consumer.

7.5 LABELLING OF NON-RETAIL CONTAINERS

Information specified 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 of the manufacturer or packer shall appear on the container, and in the absence of such a container, on the product itself. However, lot identification and the name and address 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*, Volume 13.

PROPOSED DRAFT REVISED STANDARD FOR EMMENTAL (C-9)

(at Step 3)

The Appendix 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 Emmental intended for direct consumption or for further processing in conformity with the description in Section 2 of this Standard.

2. DESCRIPTION

Emmental is a ripened hard cheese in conformity with the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001). The body has a ivory through to light yellow or yellow colour and an elastic, sliceable but not sticky texture, with regular, scarce to plentiful distributed, mat to brilliant, cherry to walnut sized (or mostly from 1 to 5 cm in diameter) gas holes, but few openings and splits are acceptable. Emmental is typically manufactured as wheels and blocks of weights from 40 kg or more, but individual countries may on their territory permit weights from 9 kg and above if the consumer would not be misled with respect to the identity of Emmental. The cheese is manufactured and sold with or without [1] a hard, dry rind. The typical flavour is mild, nut-like and sweet, more or less pronounced.

For Emmental ready for consumption, the ripening procedure to develop flavour and body characteristics is normally from 2 months at 10-25°C depending on the degree of maturity required. Alternative ripening conditions (including the addition of ripening enhancing enzymes) may be used, provided a minimum period of 6 weeks is observed and provided the cheese exhibits similar physical, biochemical and sensory properties as those achieved by the previously stated ripening procedure. Emmental intended for further processing need not exhibit the same degree of ripening.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 RAW MATERIALS

Cows´ milk or buffaloes´ milk, or their mixtures, and products obtained from these milks.

3.2 PERMITTED INGREDIENTS

- Starter cultures of harmless lactic acid and/ or flavour producing bacteria and cultures of other harmless microorganisms;
- Rennet or other safe and suitable coagulating enzymes;
- Sodium chloride;
- Potable water;
- Safe and suitable enzymes to enhance the ripening process;
- Rice, corn and potato flours and starches: Notwithstanding the provisions in the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001), 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.

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[1] The cheese has been ripened and/or kept in such a way that no rind is developed (a “rindless” cheese). Ripening film is used in the manufacture of rindless cheese. Ripening film may also constitute the coating that protects the cheese.

3.3 COMPOSITION

Milk constituent:	Minimum content (m/m):	Maximum content (m/m):	Reference level (m/m):
Milkfat in dry matter:	45%	Not restricted	45% to 55%
Dry matter:	Depending on the fat in dry matter content, according to the table below.		

Fat in dry matter content (m/m):	Corresponding minimum dry matter content (m/m):
Equal to or above 45% but less than 50%:	60%
Equal to or above 50% but less than 60%	62%
Equal to or above 60%:	67%

Propionic acid in ready for sale cheese*:	150 mg/100g
Calcium content*:	800 mg/100g

Compositional modifications beyond the minima and maxima specified above for milkfat and dry matter are not considered to be in compliance with section 4.3.3 of the Codex General Standard for the Use of Dairy Terms (CODEX STAN 206-1999).

*) The purpose of these criteria are to provide targets for the validation (initial assessment prior to the design of the manufacturing process), respectively, of (i) whether the intended fermentation and ripening conditions are capable of achieving the activity of propionic acid producing bacteria, and of (ii) whether the curd management and pH development are capable of obtaining the characteristic texture.

3.4 ESSENTIAL MANUFACTURING CHARACTERISTICS

Emmental is obtained by microbiological fermentation, using thermophilic lactic acid producing bacteria for the primary (lactose) fermentation; the secondary (lactate) fermentation is characterized by the activity of propionic acid producing bacteria. The curd is heated after cutting to a temperature significantly above[2] the coagulation temperature.

4. FOOD ADDITIVES

Only those additives classes indicated in the table below may be used for the product categories specified. Within each additive class, and where permitted according to the table, only those food additives listed below may be used and only within the functions and limits specified.

[2] The temperature required to obtain the compositional and sensory characteristics specified by this Standard depends on a number of other technology factors, including the suitability of the milk for Emmental manufacture, the choice and activity of coagulating enzymes and of primary and secondary starter cultures, the pH at whey drainage and at the point of whey removal, and the ripening/storage conditions. These other factors differ according to local circumstances: In many cases, in particular where traditional technology is applied, a cooking temperatures of approx. 50 °C is typically applied; In other cases, temperatures above and below are applied.

	Justified use:	
Additive functional class:	**Cheese mass**	**Surface/rind treatment**
Colours:	X[1]	-
Bleaching agents:	-	-
Acids:	-	-
Acidity regulators:	X	-
Stabilizers:	-	-
Thickeners:	-	-
Emulsifiers:	-	-
Antioxidants:	-	-
Preservatives:	X	X
Salt substitutes:	X	X
Foaming agents:	-	-
Anti-caking agents:	-	X[2]

[1]) Only to obtain the colour characteristics, as described in Section 2
[2]) For the surface of sliced, cut, shredded or grated cheese, only
X = The use of additives belonging to the class is technologically justified
- = The use of additives belonging to the class is not technologically justified

No.	***Name of food additive***	***Maximum level***
	Colours	
160a(i)	Carotenes (synthetic)	25 mg/kg
160a(ii)	Carotenes (vegetable)	600 mg/kg
160b	Annatto extracts	10 mg/kg of cheese on bixin/norbixin basis
160c	Paprika oleoresins	Limited by GMP
160e	β-apo-8`-carotenal	35 mg/kg
160f	β-apo-8`-carotenic acid, methyl and ethyl ester	35 mg/kg
	Acidity regulators	
170	Calcium carbonates)	
504	Magnesium carbonates)	Limited by GMP
575	Glucono-delta-lactone (GDL))	
	Preservatives	
234	Nisin	12.5 mg/kg
1105	Lysozyme	Limited by GMP
	For surface/rind treatment only:	
200	Sorbic acid)	1000 mg/kg of cheese, singly
202	Potassium sorbate)	or in combination,
203	Calcium sorbate)	calculated as sorbic acid
235	Pimaricin (natamycin)	2 mg/dm^2 surface of whole cheese. Not present at a depth of 5 mm. For rind treatment or added to coatings only.
	Salt substitutes	
508	Potassium chloride	Limited by GMP
	Anti-caking agents	

No.	*Name of food additive*		*Maximum level*
460	Cellulose		Limited by GMP
551	Silicon dioxide, amorphous	)	
552	Calcium silicate	)	
553	Magnesium silicates	)	10 g/kg singly or in combination
554	Sodium aluminosilicate	)	Silicates calculated as silicon dioxide
555	Potassium aluminosilicate	)	
556	Calcium aluminium silicate	)	
559	Aluminium silicate	)	
560	Potassium silicate	)	

5. CONTAMINANTS

The milk used in the manufacture of 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 product 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, *Codex Alimentarius*, Volume 1B), 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, *Codex Alimentarius*, Volume 1B).

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 names Emmental or Emmentaler may be applied in accordance with section 4.1 of the Codex General Standard for the Labelling of Prepackaged Foods, provided that the product is in conformity with this Standard. Where customary in the country of retail sale, alternative spelling may be used.

The use of the name is an option that may be chosen only if the cheese complies with this standard. Where the name is not used for a cheese that complies with this standard, the naming provisions of the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001) apply.

The designation of products in which the fat content is above the reference range specified in section 3.3 of this Standard shall be accompanied by an appropriate qualification describing the modification made or the fat content (expressed as fat in dry matter or as percentage by mass), either as part of the name or in a prominent position in the same field of vision. Suitable qualifiers are the appropriate characterizing terms specified in Section 7.3 of the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001) or a nutritional claim in accordance with the Guidelines for the Use of Nutritional Claims (CAC/GL 023 – 1997, *Codex Alimentarius* Volume 1A) [3].

The designation may also be used for cut, sliced, shredded or grated products made from cheese which cheese is in conformity with this Standard.

7.2 COUNTRY OF ORIGIN

The country of origin (which means the country of manufacture, not the country in which the name originated) shall be declared. When the product undergoes substantial transformation [4] in a second country, the country in which the transformation is performed shall be considered to be the country of origin for the purpose of labelling.

7.3 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.

7.4 DATE MARKING

Notwithstanding the provisions of Section 4.7.1 of the General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985, Rev.1-1991; Codex Alimentarius, Volume 1A), the date of manufacture may be declared instead of the minimum durability information, provided that the product is not intended to be purchased as such by the final consumer.

7.5 LABELLING OF NON-RETAIL CONTAINERS

Information specified 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 of the manufacturer or packer shall appear on the container, and in the absence of such a container, on the product itself. However, lot identification and the name and address 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,* Volume 13.

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[3] For the purpose of comparative nutritional claims, the minimum fat content of 45% fat in dry matter constitutes the reference.

[4] For instance, [repackaging, cutting, slicing, shredding and grating – formulation under review] is not regarded as substantial transformation

APPENDIX.

INFORMATION ON USUAL PATTERNS OF MANUFACTURING EMMENTAL

The information below is intended for voluntary application by commercial partners and not for application by governments.

Should a Member Country identify legitimate objective(s) for retaining or introducing national regulation(s) that address(es) matters considered in this Annex, the provisions below should be taken into account.

1. APPEARANCE CHARACTERISTICS

Usual dimensions:

Shape:	Wheel	Block
Height:	12-30 cm	12-30 cm
Diameter:	70-100 cm	-
Weight:	60 kg	40 kg

2. METHOD OF MANUFACTURE

2.1 Fermentation procedure: Microbiologically derived acid development.

PROPOSED DRAFT REVISED STANDARD FOR TILSITER (C-11)

(at Step 3)

1. SCOPE

This Standard applies to Tilsiter intended for direct consumption or for further processing in conformity with the description in Section 2 of this Standard.

2. DESCRIPTION

Tilsiter is a ripened firm/semi-hard cheese in conformity with the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001). The body has a near white or ivory through to light yellow or yellow colour and a firm-textured (when pressed by thumb) texture suitable for cutting, with irregularly shaped, shiny and evenly distributed gas holes. The cheese is sold with or without 1* a well-dried smear-developed rind, which may be coated.

For Tilsiter ready for consumption, the ripening procedure to develop flavour and body characteristics is normally from 3 weeks at 10-16 °C depending on the degree of maturity required. Alternative ripening conditions (including the addition of ripening enhancing enzymes) may be used, provided the cheese exhibits similar physical, biochemical and sensory properties as those achieved by the previously stated ripening procedure. Tilsiter intended for further processing need not exhibit the same degree of ripening.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 RAW MATERIALS

Cows´ milk or buffaloes´ milk, or their mixtures, and products obtained from these milks.

3.2 PERMITTED INGREDIENTS

- Starter cultures of harmless lactic acid and/ or flavour producing bacteria and cultures of other harmless microorganisms;
- Rennet or other safe and suitable coagulating enzymes;
- Sodium chloride;
- Potable water;
- Safe and suitable enzymes to enhance the ripening process;
- Rice, corn and potato flours and starches: Notwithstanding the provisions in the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001), 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.

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[1] The cheese has been ripened and/or kept in such a way that no rind is developed (a “rindless” cheese). Ripening film is used in the manufacture of rindless cheese. Ripening film may also constitute the coating that protects the cheese.

3.3 COMPOSITION

Milk constituent:	Minimum content (m/m):	Maximum content (m/m):	Reference level (m/m):
Milkfat in dry matter:	30%	Not restricted	45% to 55%
Dry matter:	Depending on the fat in dry matter content, according to the table below.		

Fat in dry matter content (m/m):	Corresponding minimum dry matter content (m/m):
Equal to or above 30% but less than 40%:	49%
Equal to or above 40% but less than 45%:	53%
Equal to or above 45% but less than 50%:	55%
Equal to or above 50% but less than 60%:	57%
Equal to or above 60% but less than 85%:	61%

Compositional modifications beyond the minima and maxima specified above for milkfat and dry matter are not considered to be in compliance with section 4.3.3 of the Codex General Standard for the Use of Dairy Terms (CODEX STAN 206-1999).

4. FOOD ADDITIVES

Only those additives classes indicated in the table below may be used for the product categories specified. Within each additive class, and where permitted according to the table, only those food additives listed below may be used and only within the functions and limits specified.

	Justified use:	
Additive functional class:	**Cheese mass**	**Surface/rind treatment**
Colours:	X[1]	-
Bleaching agents:	-	-
Acids:	-	-
Acidity regulators:	X	-
Stabilizers:	-	-
Thickeners:	-	-
Emulsifiers:	-	-
Antioxidants:	-	-
Preservatives:	X	X
Salt substitutes:	X	X
Foaming agents:	-	-
Anti-caking agents:	-	X[2]

[1]) Only to obtain the colour characteristics, as described in Section 2
[2]) For the surface of sliced, cut, shredded or grated cheese, only
X = The use of additives belonging to the class is technologically justified
- = The use of additives belonging to the class is not technologically justified

No.	*Name of food additive*		*Maximum level*
	Colours		
160a(i)	Carotenes (synthetic)		25 mg/kg
160a(ii)	Carotenes (vegetable)		600 mg/kg
160b	Annatto extracts		10 mg/kg of cheese on bixin/norbixin basis
160c	Paprika oleoresins		Limited by GMP
160e	β-apo-8`-carotenal		35 mg/kg
160f	β-apo-8`-carotenic acid, methyl and ethyl ester		35 mg/kg
	Acidity regulators		
170	Calcium carbonates	)	
504	Magnesium carbonates	)	Limited by GMP
575	Glucono-delta-lactone (GDL)	)	
	Preservatives		
234	Nisin		12.5 mg/kg
251	Sodium nitrate	)	50 mg/kg of cheese, expressed
252	Potassium nitrate	)	as Na NO_3
1105	Lysozyme		Limited by GMP
	For surface/rind treatment only:		
200	Sorbic acid	)	1000 mg/kg of cheese, singly
202	Potassium sorbate	)	or in combination,
203	Calcium sorbate	)	calculated as sorbic acid
235	Pimaricin (natamycin)		2 mg/dm^2 surface of whole cheese. Not present at a depth of 5 mm. For rind treatment or added to coatings only.
280	Propionic acid	)	
281	Sodium propionate	)	3000 mg/kg, calculated
282	Calcium propionate	)	as propionic acid
	Salt substitutes		
508	Potassium chloride		Limited by GMP
	Anti-caking agents		
460	Cellulose		Limited by GMP
551	Silicon dioxide, amorphous	)	
552	Calcium silicate	)	
553	Magnesium silicates	)	10 g/kg singly or in combination
554	Sodium aluminosilicate	)	Silicates calculated as silicon dioxide
555	Potassium aluminosilicate	)	
556	Calcium aluminium silicate	)	
559	Aluminium silicate	)	
560	Potassium silicate	)	

5. CONTAMINANTS

The milk used in the manufacture of 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 product 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, *Codex Alimentarius*, Volume 1B), 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, *Codex Alimentarius*, Volume 1B).

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 Tilsiter may be applied in accordance with section 4.1 of the Codex General Standard for the Labelling of Prepackaged Foods, provided that the product is in conformity with this Standard. Where customary in the country of retail sale, alternative spelling may be used.

The use of the name is an option that may be chosen only if the cheese complies with this standard. Where the name is not used for a cheese that complies with this standard, the naming provisions of the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001) apply.

The designation of products in which the fat content is below or above the reference range but above the absolute minimumspecified in section 3.3 of this Standard shall be accompanied by an appropriate qualification describing the modification made or the fat content (expressed as fat in dry matter or as percentage by mass), either as part of the name or in a prominent position in the same field of vision. Suitable qualifiers are the appropriate characterizing terms specified in Section 7.3 of the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001) or a nutritional claim in accordance with the Guidelines for the Use of Nutritional Claims (CAC/GL 023 – 1997, *Codex Alimentarius* Volume 1A) [2].

The designation may also be used for cut, sliced, shredded or grated products made from cheese which cheese is in conformity with this Standard.

7.2 COUNTRY OF ORIGIN

The country of origin (which means the country of manufacture, not the country in which the name originated) shall be declared. When the product undergoes substantial transformation [3] in a second country, the country in which the transformation is performed shall be considered to be the country of origin for the purpose of labelling.

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[2] For the purpose of comparative nutritional claims, the minimum fat content of 45% fat in dry matter constitutes the reference.

[3] For instance, [repackaging, cutting, slicing, shredding and grating – formulation under review] is not regarded as substantial transformation

7.3 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.

7.4 DATE MARKING

Notwithstanding the provisions of Section 4.7.1 of the General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985, Rev.1-1991; Codex Alimentarius, Volume 1A), the date of manufacture may be declared instead of the minimum durability information, provided that the product is not intended to be purchased as such by the final consumer.

7.5 LABELLING OF NON-RETAIL CONTAINERS

Information specified 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 of the manufacturer or packer shall appear on the container, and in the absence of such a container, on the product itself. However, lot identification and the name and address 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*, Volume 13.

PROPOSED DRAFT REVISED STANDARD FOR SAINT-PAULIN (C-13)

(at Step 3)

The Appendix 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 Saint-Paulin intended for direct consumption or for further processing in conformity with the description in Section 2 of this Standard.

2. DESCRIPTION

Saint-Paulin is a ripened firm/semi-hard cheese in conformity with the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001). The body has a near white or ivory through to light yellow or yellow colour and a firm-textured (when pressed by thumb) but flexible texture. Gas holes are generally absent, but few openings and splits are acceptable. The cheese is sold with or without 1 a dry or slightly moist rind, which is hard, but elastic under thumb pressure, and which may be coated.

For Saint-Paulin ready for consumption, the ripening procedure to develop flavour and body characteristics is normally from 1 week at 10-17 °C depending on the degree of maturity required. Alternative ripening conditions (including the addition of ripening enhancing enzymes) may be used, provided the cheese exhibits similar physical, biochemical and sensory properties as those achieved by the previously stated ripening procedure. Saint-Paulin intended for further processing need not exhibit the same degree of ripening.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 RAW MATERIALS

Cows´ milk or buffaloes´ milk, or their mixtures, and products obtained from these milks.

3.2 PERMITTED INGREDIENTS

- Starter cultures of harmless lactic acid and/ or flavour producing bacteria and cultures of other harmless microorganisms;
- Rennet or other safe and suitable coagulating enzymes;
- Sodium chloride;
- Potable water;
- Safe and suitable enzymes to enhance the ripening process;
- Rice, corn and potato flours and starches: Notwithstanding the provisions in the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001), 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.

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[1] The cheese has been ripened and/or kept in such a way that no rind is developed (a “rindless” cheese). Ripening film is used in the manufacture of rindless cheese. Ripening film may also constitute the coating that protects the cheese.

3.3 COMPOSITION

Milk constituent:	Minimum content (m/m):	Maximum content (m/m):	Reference level (m/m):
Milkfat in dry matter:	40%	Not restricted	40% to 50%

Dry matter: Depending on the fat in dry matter content, according to the table below.

Fat in dry matter content (m/m):	Corresponding minimum dry matter content (m/m):
Equal to or above 40% but less than 60%:	44%
Equal to or above 60%:	54%

Compositional modifications beyond the minima and maxima specified above for milkfat and dry matter are not considered to be in compliance with section 4.3.3 of the Codex General Standard for the Use of Dairy Terms (CODEX STAN 206-1999).

4. FOOD ADDITIVES

Only those additives classes indicated in the table below may be used for the product categories specified. Within each additive class, and where permitted according to the table, only those food additives listed below may be used and only within the functions and limits specified.

	Justified use:	
Additive functional class:	**Cheese mass**	**Surface/rind treatment**
Colours:	X[1]	-
Bleaching agents:	-	-
Acids:	-	-
Acidity regulators:	X	-
Stabilizers:	-	-
Thickeners:	-	-
Emulsifiers:	-	-
Antioxidants:	-	-
Preservatives:	X	X
Salt substitutes:	X	X
Foaming agents:	-	-
Anti-caking agents:	-	X[2]

[1]) Only to obtain the colour characteristics, as described in Section 2
[2]) For the surface of sliced, cut, shredded or grated cheese, only
X = The use of additives belonging to the class is technologically justified
- = The use of additives belonging to the class is not technologically justified

No.	*Name of food additive*		*Maximum level*
	Colours (for edible cheese rind)		
160a(i)	Carotenes (synthetic)		25 mg/kg
160a(ii)	Carotenes (vegetable)		600 mg/kg
160b	Annatto extracts		10 mg/kg of cheese on bixin/norbixin basis
160c	Paprika oleoresins		Limited by GMP
160e	β-apo-8`-carotenal		35 mg/kg
160f	β-apo-8`-carotenic acid, methyl and ethyl ester		35 mg/kg
	Acidity regulators		
170	Calcium carbonates	)	
504	Magnesium carbonates	)	Limited by GMP
575	Glucono-delta-lactone (GDL)	)	
	Preservatives		
234	Nisin		12.5 mg/kg
251	Sodium nitrate	)	50 mg/kg of cheese, expressed
252	Potassium nitrate	)	as Na NO_3
1105	Lysozyme		Limited by GMP
	For surface/rind treatment only:		
200	Sorbic acid	)	1000 mg/kg of cheese, singly
202	Potassium sorbate	)	or in combination,
203	Calcium sorbate	)	calculated as sorbic acid
235	Pimaricin (natamycin)		2 mg/dm^2 surface of whole cheese. Not present at a depth of 5 mm. For rind treatment or added to coatings only.
280	Propionic acid	)	
281	Sodium propionate	)	3000 mg/kg, calculated
282	Calcium propionate	)	as propionic acid
	Salt substitutes		
508	Potassium chloride		Limited by GMP
	Anti-caking agents		
460	Cellulose		Limited by GMP
551	Silicon dioxide, amorphous	)	
552	Calcium silicate	)	
553	Magnesium silicates	)	10 g/kg singly or in combination
554	Sodium aluminosilicate	)	Silicates calculated as silicon dioxide
555	Potassium aluminosilicate	)	
556	Calcium aluminium silicate	)	
559	Aluminium silicate	)	
560	Potassium silicate	)	

5. CONTAMINANTS

The milk used in the manufacture of 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 product 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, Codex Alimentarius, Volume 1B), 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, *Codex Alimentarius*, Volume 1B).

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 Saint-Paulin may be applied in accordance with section 4.1 of the Codex General Standard for the Labelling of Prepackaged Foods, provided that the product is in conformity with this Standard. Where customary in the country of retail sale, alternative spelling may be used.

The use of the name is an option that may be chosen only if the cheese complies with this standard. Where the name is not used for a cheese that complies with this standard, the naming provisions of the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001) apply.

The designation of products in which the fat content is above the reference range specified in section 3.3 of this Standard shall be accompanied by an appropriate qualification describing the modification made or the fat content (expressed as fat in dry matter or as percentage by mass), either as part of the name or in a prominent position in the same field of vision. Suitable qualifiers are the appropriate characterizing terms specified in Section 7.3 of the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001) or a nutritional claim in accordance with the Guidelines for the Use of Nutritional Claims (CAC/GL 023 – 1997, *Codex Alimentarius* Volume 1A)[2].

The designation may also be used for cut, sliced, shredded or grated products made from cheese which cheese is in conformity with this Standard.

7.2 COUNTRY OF ORIGIN

The country of origin (which means the country of manufacture, not the country in which the name originated) shall be declared. When the product undergoes substantial transformation [3] in a second country, the country in which the transformation is performed shall be considered to be the country of origin for the purpose of labelling.

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[2] For the purpose of comparative nutritional claims, the minimum fat content of 40% fat in dry matter constitutes the reference.

[3] For instance, [repackaging, cutting, slicing, shredding and grating – *formulation under review*] is not regarded as substantial transformation

7.3 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.

7.4 DATE MARKING

Notwithstanding the provisions of Section 4.7.1 of the General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985, Rev.1-1991; Codex Alimentarius, Volume 1A), the date of manufacture may be declared instead of the minimum durability information, provided that the product is not intended to be purchased as such by the final consumer.

7.5 LABELLING OF NON-RETAIL CONTAINERS

Information specified 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 of the manufacturer or packer shall appear on the container, and in the absence of such a container, on the product itself. However, lot identification and the name and address 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*, Volume 13.

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APPENDIX.

INFORMATION ON USUAL PATTERNS OF MANUFACTURING SAINT-PAULIN

The information below is intended for voluntary application by commercial partners and not for application by governments.

Should a Member Country identify legitimate objective(s) for retaining or introducing national regulation(s) that address(es) matters considered in this Annex, the provisions below should be taken into account.

1. APPEARANCE CHARACTERISTICS

1.1 Shape: Small flat cylinder with slightly convex sides. Other shapes are possible.

1.2 Dimensions and weights:

a) Usual variant: Diameter approx. 20 cm; min. weight 1.3 kg
b) "Petit Saint-Paulin": Diameter 8-13 cm; min. weight 150 g.
c) "Mini Saint-Paulin": Min. weight 20 g.

2. METHOD OF MANUFACTURE

2.1 Fermentation procedure: Microbiologically derived acid development.

2.2 Other characteristics: The cheese is salted in brine.

3. QUALIFIERS

The designations "Petit Saint-Paulin" and "Mini Saint-Paulin" should be used when the cheese complies with the provisions for dimensions and weights (1.2).

PROPOSED DRAFT REVISED STANDARD FOR PROVOLONE (C-15)

(at Step 3)

The Appendix 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 Provolone intended for direct consumption or for further processing in conformity with the description in Section 2 of this Standard.

2. DESCRIPTION

Provolone is a ripened firm/semi-hard cheese in conformity with the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001). The body has a near white or ivory through to light yellow or yellow colour and a fibrous texture with long stranded parallel-orientated protein fibers. It is suitable for cutting and, when aged, for grating as well. Gas holes are generally absent, but few openings and splits are acceptable. The shape is mainly cylindrical or pear-shaped, but other shapes are possible. The cheese is sold with or without [1] a rind, which may be coated.

For Provolone ready for consumption, the ripening procedure to develop flavour and body characteristics is normally from 1 month at 12-20 °C depending on the degree of maturity required. Alternative ripening conditions (including the addition of ripening enhancing enzymes) may be used, provided the cheese exhibits similar physical, biochemical and sensory properties as those achieved by the previously stated ripening procedure. Provolone intended for further processing and Provolone of low weights (< 2 kg) need not exhibit the same degree of ripening.

Provolone is made by “pasta filata” processing which consists of heating curd of a pH value suitable for further processing by kneading and stretching until the curd is smooth and free from lumps. Still warm, the curd is cut and moulded, then firmed by cooling in chilled water or brine. Other processing techniques, which give end products with the same physical, chemical and organoleptic characteristics are allowed.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 RAW MATERIALS

Cows´ milk or buffaloes´ milk, or their mixtures, and products obtained from these milks.

3.2 PERMITTED INGREDIENTS

- Starter cultures of harmless lactic acid and/ or flavour producing bacteria and cultures of other harmless microorganisms;
- Rennet or other safe and suitable coagulating enzymes;
- Sodium chloride;
- Safe and suitable enzymes to enhance the ripening process;
- Potable water;

[1] The cheese has been ripened and/or kept in such a way that no rind is developed (a “rindless” cheese). Ripening film is used in the manufacture of rindless cheese. Ripening film may also constitute the coating that protects the cheese.

- Rice, corn and potato flours and starches: Notwithstanding the provisions in the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001), 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.

3.3 COMPOSITION

Milk constituent:	Minimum content (m/m):	Maximum content (m/m):	Reference level (m/m):
Milkfat in dry matter:	45%	Not restricted	45% to 50%

Dry matter: Depending on the fat in dry matter content, according to the table below.

Fat in dry matter content (m/m):	Corresponding minimum dry matter content (m/m):
Equal to or above 45% but less than 50%:	51%
Equal to or above 50% but less than 60%:	53%
Equal to or above 60%:	60%

Compositional modifications beyond the minima and maxima specified above for milkfat and dry matter are not considered to be in compliance with section 4.3.3 of the Codex General Standard for the Use of Dairy Terms (CODEX STAN 206-1999).

3.4 ESSENTIAL MANUFACTURING CHARACTERISTICS

The principal starter culture microorganisms shall be *Lactobacillus helveticus, Streptococcus salivarius subsp. thermophilus, Lactobacillus delbrueckii subsp. bulgaricus* and *Lactobacillus casei.*

4. FOOD ADDITIVES

Only those additives classes indicated in the table below may be used for the product categories specified. Within each additive class, and where permitted according to the table, only those food additives listed below may be used and only within the functions and limits specified.

	Justified use:	
Additive functional class:	**Cheese mass**	**Surface/rind treatment**
Colours:	X[1]	-
Bleaching agents:	-	-
Acids:	-	-
Acidity regulators:	X	-
Stabilizers:	-	-
Thickeners:	-	-
Emulsifiers:	-	-
Antioxidants:	-	-
Preservatives:	X	X
Salt substitutes:	X	X
Foaming agents:	-	-
Anti-caking agents:	-	X[2]

[1]) Only to obtain the colour characteristics, as described in Section 2
[2]) For the surface of sliced, cut, shredded or grated cheese, only
X = The use of additives belonging to the class is technologically justified
- = The use of additives belonging to the class is not technologically justified

No.	***Name of food additive***	***Maximum level***

No.	*Name of food additive*		*Maximum level*
	Bleaching agents		
171	Titanium dioxide		Limited by GMP
	Colours		
160a(i)	Carotenes (synthetic)		25 mg/kg
160a(ii)	Carotenes (vegetable)		600 mg/kg
160b	Annatto extracts		10 mg/kg of cheese on bixin/norbixin basis
160c	Paprika oleoresins		Limited by GMP
160e	β-apo-8`-carotenal		35 mg/kg
160f	β-apo-8`-carotenic acid, methyl and ethyl ester		35 mg/kg
	Acidity regulators		
170	Calcium carbonates	)	
504	Magnesium carbonates	)	Limited by GMP
575	Glucono-delta-lactone (GDL)	)	
	Preservatives		
234	Nisin		12.5 mg/kg
239	Hexamethylene tetramine		25 mg/kg of cheese, expressed as formaldehyde
251	Sodium nitrate	)	50 mg/kg of cheese, expressed
252	Potassium nitrate	)	as $Na NO_3$
1105	Lysozyme		Limited by GMP
	For surface/rind treatment only:		
200	Sorbic acid	)	1000 mg/kg of cheese, singly
202	Potassium sorbate	)	or in combination,
203	Calcium sorbate	)	calculated as sorbic acid
235	Pimaricin (natamycin)		2 mg/dm^2 surface of whole cheese. Not present at a depth of 5 mm. For rind treatment or added to coatings only.
280	Propionic acid	)	
281	Sodium propionate	)	3000 mg/kg, calculated
282	Calcium propionate	)	as propionic acid
	Salt substitutes		
508	Potassium chloride		Limited by GMP
	Anti-caking agents		
460	Cellulose		Limited by GMP
551	Silicon dioxide, amorphous	)	
552	Calcium silicate	)	
553	Magnesium silicates	)	10 g/kg singly or in combination
554	Sodium aluminosilicate	)	Silicates calculated as silicon dioxide
555	Potassium aluminosilicate	)	
556	Calcium aluminium silicate	)	
559	Aluminium silicate	)	
560	Potassium silicate	)	

5. CONTAMINANTS

The milk used in the manufacture of 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 product 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, *Codex Alimentarius*, Volume 1B), 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, *Codex Alimentarius*, Volume 1B).

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 Provolone may be applied in accordance with section 4.1 of the Codex General Standard for the Labelling of Prepackaged Foods, provided that the product is in conformity with this Standard. Where customary in the country of retail sale, alternative spelling may be used.

The use of the name is an option that may be chosen only if the cheese complies with this standard. Where the name is not used for a cheese that complies with this standard, the naming provisions of the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001) apply.

The designation of products in which the fat content is above the reference range specified in section 3.3 of this Standard shall be accompanied by an appropriate qualification describing the modification made or the fat content (expressed as fat in dry matter or as percentage by mass), either as part of the name or in a prominent position in the same field of vision. Suitable qualifiers are the appropriate characterizing terms specified in Section 7.3 of the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001) or a nutritional claim in accordance with the Guidelines for the Use of Nutritional Claims (CAC/GL 023 – 1997, *Codex Alimentarius* Volume 1A) [2].

The designation may also be used for cut, sliced, shredded or grated products made from cheese which cheese is in conformity with this Standard.

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[2] For the purpose of comparative nutritional claims, the average minimum fat content of 45% fat in dry matter constitutes the reference.

7.2 COUNTRY OF ORIGIN

The country of origin (which means the country of manufacture, not the country in which the name originated) shall be declared. When the product undergoes substantial transformation [3] in a second country, the country in which the transformation is performed shall be considered to be the country of origin for the purpose of labelling.

7.3 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.

7.4 DATE MARKING

Notwithstanding the provisions of Section 4.7.1 of the General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985, Rev.1-1991; Codex Alimentarius, Volume 1A), the date of manufacture may be declared instead of the minimum durability information, provided that the product is not intended to be purchased as such by the final consumer.

7.5 LABELLING OF NON-RETAIL CONTAINERS

Information specified 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 of the manufacturer or packer shall appear on the container, and in the absence of such a container, on the product itself. However, lot identification and the name and address 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*, Volume 13.

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APPENDIX.

INFORMATION ON USUAL PATTERNS OF MANUFACTURING PROVOLONE

The information below is intended for voluntary application by commercial partners and not for application by governments.

Should a Member Country identify legitimate objective(s) for retaining or introducing national regulation(s) that address(es) matters considered in this Annex, the provisions below should be taken into account.

1. APPEARANCE CHARACTERISTICS

1.1 Typical shapes: Cylindrical (Salame), pear-shaped (Mandarino), pear-shaped cylinder (Gigantino) and flask (Fiaschetta).

1.2 Typical packing: The cheese is typically encased in ropes.

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[3] For instance, [repackaging, cutting, slicing, shredding and grating – *formulation under review*] is not regarded as substantial transformation

PROPOSED DRAFT REVISED STANDARD FOR COTTAGE CHEESE (C-16)

(at Step 3)

1. SCOPE

This Standard applies to Cottage Cheese intended for direct consumption or for further processing in conformity with the description in Section 2 of this Standard.

2. DESCRIPTION

Cottage Cheese is a soft, rindless [1], unripened cheese in conformity with the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001) and the Standard for Unripened Cheese Including Fresh Cheese (CODEX STAN XXX-2001). The body has a near white colour and a granular texture consisting of discrete individual soft curd granules of relatively uniform size, from approximately 3-12 mm depending on whether small or large type of curd is desired, and possibly covered with a creamy mixture.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 RAW MATERIALS

Cows´ milk or buffaloes´ milk, or their mixtures, and products obtained from these milks.

3.2 PERMITTED INGREDIENTS

- Starter cultures of harmless lactic acid and/ or flavour producing bacteria and cultures of other harmless microorganisms;
- Rennet or other safe and suitable coagulating enzymes;
- Gelatin 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.
- Sodium chloride;
- Potable water.

3.3 COMPOSITION

Milk constituent:	Minimum content (m/m):	Maximum content (m/m):	Reference level (m/m):
Milkfat:	0%	Not restricted	4-5%
Fat free dry matter:	18%	Restricted by the MFFB	

Compositional modifications beyond the minimum and maximum specified above for fat free dry matter are not considered to be in compliance with section 4.3.3 of the Codex General Standard for the Use of Dairy Terms (CODEX STAN 206-1999).

4. FOOD ADDITIVES

Only those additives classes indicated in the table below may be used for the product categories specified. Within each additive class, and where permitted according to the table, only those food additives listed below may be used and only within the functions and limits specified.

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[1] The cheese has been kept in such a way that no rind is developed (a “rindless” cheese).

	Justified use:	
Additive functional class:	**Cheese mass**	**Surface/rind treatment**
Colours:	-	-
Bleaching agents:	-	-
Acids:	X	-
Acidity regulators:	X	-
Stabilizers:	X[1]	-
Thickeners:	-	-
Emulsifiers:	-	-
Antioxidants:	-	-
Preservatives:	-	-
Salt substitutes:	X	-
Foaming agents:	-	-
Anti-caking agents:	-	-

[1]) Stabilizers including modified starches may be used in compliance with the definition of milk products and only to the extent they are functionally necessary, taking into account any use of gelatine and starches as provided for in section 3.2.

X = The use of additives belonging to the class is technologically justified

- = The use of additives belonging to the class is not technologically justified

No.	*Name of food additive*		*Maximum level*
	Acids		
260	Acetic acid glacial	)	
270	Lactic acid	)	Limited by GMP
330	Citric acid	)	
338	Orthophosphoric acid		2 g/kg, expressed as P_2O_5*
507	Hydrochloric acid		Limited by GMP
	Acidity regulators		
170	Calcium carbonates	)	
325	Sodium lactate	)	Limited by GMP
326	Potassium lactate	)	
327	Calcium lactate	)	
339	Sodium phosphates	)	
340ii	Dipotassium orthophosphates	)	3 g/kg, singly or in combination,
341	Calcium phosphates	)	expressed as P_2O_5*
500	Sodium carbonates	)	
501	Potassium carbonates	)	Limited by GMP
504	Magnesium carbonates	)	
575	Glucono-delta-lactone (GDL)	)	
	Stabilizers		
400	Alginic acid	)	
401	Sodium alginate	)	
402	Potassium alginate	)	Limited by GMP
403	Ammonium alginate	)	
404	Calcium alginate	)	
405	Propylene glycol alginate		5 g/kg, singly or in combination
406	Agar	)	
407	Carrageenan or its Na, K, NH_4 salts	)	
	(includes furcelleran)	)	
410	Carob bean gum	)	
412	Guar gum	)	
413	Tragacanth gum	)	Limited by GMP
415	Xanthan gum	)	
416	Karaya gum	)	
440	Pectins	)	
466	Sodium carboxymethyl cellulose	)	
	Modified starches as follows:		
1400	Dextrins, roasted starch white and yellow	)	
1401	Acid-treated starch	)	
1402	Alkaline treated starch	)	
1403	Bleached starched	)	
1404	Oxidized starch	)	
1405	Starches, enzyme-treated	)	
1410	Monostarch phosphate	)	
1412	Distarch phosphate esterified with	)	Limited by GMP
	sodium trimetasphosphate; esterified with	)	
	phosphorus-oxychloride	)	
1413	Phosphated distarch phosphate	)	
1414	Acetylated distarch phosphate	)	

No.	*Name of food additive*		*Maximum level*
1420	Starch acetate esterified with acetic anhydride	)	
1421	Starch acetate esterified with vinyl acetate	)	
1422	Acetylated distarch adipate	)	
1440	Hydroxypropyl starch	)	
1442	Hydroxypropyl distarch phosphate	)	
	Preservatives:		
200	Sorbic acid	)	1000 mg/kg of cheese, singly
202	Potassium sorbate	)	or in combination,
203	Calcium sorbate	)	calculated as sorbic acid
280	Propionic acid	)	
281	Sodium propionate	)	3000 mg/kg, calculated as
282	Calcium propionate	)	propionic acid
283	Potassium propionate	)	
	Salt substitutes		
508	Potassium chloride		Limited by GMP

*) Total amount of P_2O_5 not to exceed 3 g/kg.

5. CONTAMINANTS

The milk used in the manufacture of 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 product 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, *Codex Alimentarius*, Volume 1B), 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, *Codex Alimentarius*, Volume 1B).

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 names Cottage Cheese and Dry Curd Cottage Cheese may be applied in accordance with section 4.1 of the Codex General Standard for the Labelling of Prepackaged Foods, provided that the product is in conformity with this Standard. Where customary in the country of retail sale, alternative spelling may be used. The name may be translated into other languages in a non-misleading way.

The use of the name is an option that may be chosen only if the cheese complies with this standard. Where the name is not used for a cheese that complies with this standard, the naming provisions of the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001) apply.

The designation of products in which the fat content is below or above the reference range specified in section 3.3 of this Standard shall be accompanied by an appropriate qualification describing the modification made or the fat content (expressed as fat in dry matter or as percentage by mass), either as part of the name or in a prominent position in the same field of vision. Suitable qualifiers are the appropriate characterizing terms “dry curd” (for fat reduced products), “creamed” and “full fat” (for fat enriched products), or a nutritional claim in accordance with the Guidelines for the Use of Nutritional Claims (CAC/GL 023 – 1997, Codex Alimentarius Volume 1A) [2.]

7.2 COUNTRY OF ORIGIN

The country of origin (which means the country of manufacture, not the country in which the name originated) shall be declared. When the product undergoes substantial transformation [3] in a second country, the country in which the transformation is performed shall be considered to be the country of origin for the purpose of labelling.

7.3 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.

7.4 LABELLING OF NON-RETAIL CONTAINERS

Information specified 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 of the manufacturer or packer shall appear on the container, and in the absence of such a container, on the product itself. However, lot identification and the name and address 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, Volume 13.

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2 For the purpose of comparative nutritional claims, the fat content of 4% constitutes the reference.”

3 For instance, [repackaging, cutting, slicing, shredding and grating – *formulation under review*] is not regarded as substantial transformation.

PROPOSED DRAFT REVISED STANDARD FOR COULOMMIERS (C-18)

(at Step 3)

The Appendix 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 Coulommiers intended for direct consumption or for further processing in conformity with the description in Section 2 of this Standard.

2. DESCRIPTION

Coulommiers is a soft, surface ripened, primarily mould ripened cheese in conformity with the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001) which has a shape of a flat cylinder or sectors thereof. The body has a near white through to light yellow colour and a soft-textured (when pressed by thumb), but not crumbly texture, ripened from the surface to the center of the cheese. Gas holes are generally absent, but few openings and splits are acceptable. A rind is to be developed that is soft and entirely covered with white mould but may have red, brownish or orange coloured spots. Whole cheese may be cut or formed into sectors prior to or after the mould development.

For Coulommiers ready for consumption, the ripening procedure to develop flavour and body characteristics is normally from 10 days at 10-16 °C depending on the degree of maturity required. Alternative ripening conditions (including the addition of ripening enhancing enzymes) may be used, provided the cheese exhibits similar physical, biochemical and sensory properties as those achieved by the previously stated ripening procedure. Coulommiers intended for further processing need not exhibit the same degree of ripening.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 RAW MATERIALS

Cows´ milk or buffaloes´ milk, or their mixtures, and products obtained from these milks.

3.2 PERMITTED INGREDIENTS

- Starter cultures of harmless lactic acid and/ or flavour producing bacteria and cultures of other harmless microorganisms, including Geotrichum candidum, Brevibacterium linens, and yeast;
- Rennet or other safe and suitable coagulating enzymes;
- Sodium chloride;
- Potable water;
- Safe and suitable enzymes to enhance the ripening process;
- Rice, corn and potato flours and starches: Notwithstanding the provisions in the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001), 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.

3.3 COMPOSITION

Milk constituent:	Minimum content (m/m):	Maximum content (m/m):	Reference level (m/m):
Milkfat in dry matter:	40%	Not restricted	40% to 50%

Dry matter: Depending on the fat in dry matter content, according to the table below.

Fat in dry matter content (m/m):	Corresponding minimum dry matter content (m/m):
Equal to or above 40% but less than 50%:	42%
Equal to or above 50% but less than 60%:	46%
Equal to or above 60%:	52%

Compositional modifications beyond the minima and maxima specified above for milkfat and dry matter are not considered to be in compliance with section 4.3.3 of the Codex General Standard for the Use of Dairy Terms (CODEX STAN 206-1999).

3.4 ESSENTIAL SIZES AND SHAPES

Maximum height: approx. 5 cm;

Weight: Whole cheese of flat cylinder: min. 300 g.

3.5 ESSENTIAL RIPENING PROCEDURE

Rind formation and maturation (proteolysis) from the surface to the center is predominantly caused by *Penicillium camembertii* and *Penicillium caseicolum.*

4. FOOD ADDITIVES

Only those additives classes indicated in the table below may be used for the product categories specified. Within each additive class, and where permitted according to the table, only those food additives listed below may be used and only within the functions and limits specified.

	Justified use:	
Additive functional class:	**Cheese mass**	**Surface/rind treatment**
Colours:	X[1]	-
Bleaching agents:	-	-
Acids:	-	-
Acidity regulators:	X	-
Stabilizers:	-	-
Thickeners:	-	-
Emulsifiers:	-	-
Antioxidants:	-	-
Preservatives:	X	-
Salt substitutes:	X	X
Foaming agents:	-	-
Anti-caking agents:	-	-

[1]) Only to obtain the colour characteristics, as described in Section 2

X = The use of additives belonging to the class is technologically justified

- = The use of additives belonging to the class is not technologically justified

No.	*Name of food additive*	*Maximum level*
	Colours	
160a(i)	Carotenes (synthetic)	25 mg/kg
160a(ii)	Carotenes (vegetable)	600 mg/kg
160b	Annatto extracts	10 mg/kg of cheese on bixin/norbixin basis
160c	Paprika oleoresins	Limited by GMP
160e	β-apo-8`-carotenal	35 mg/kg
160f	β-apo-8`-carotenic acid, methyl and ethyl ester	35 mg/kg
	Acidity regulators	
575	Glucono-delta-lactone (GDL)	Limited by GMP
	Preservatives	
1105	Lysozyme	Limited by GMP
	Salt substitutes	
508	Potassium chloride	Limited by GMP

5. CONTAMINANTS

The milk used in the manufacture of 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 product 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, *Codex Alimentarius*, Volume 1B), 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, *Codex Alimentarius*, Volume 1B).

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 Coulommiers may be applied in accordance with section 4.1 of the Codex General Standard for the Labelling of Prepackaged Foods, provided that the product is in conformity with this Standard. Where customary in the country of retail sale, alternative spelling may be used.

The use of the name is an option that may be chosen only if the cheese complies with this standard. Where the name is not used for a cheese that complies with this standard, the naming provisions of the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001) apply.

The designation of products in which the fat content is above the reference range specified in section 3.3 of this Standard shall be accompanied by an appropriate qualification describing the modification made or the fat content (expressed as fat in dry matter or as percentage by mass), either as part of the name or in a prominent position in the same field of vision. Suitable qualifiers are the appropriate characterizing terms specified in Section 7.3 of the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001) or a nutritional claim in accordance with the Guidelines for the Use of Nutritional Claims (CAC/GL 023 – 1997, *Codex Alimentarius* Volume 1A) 1.

The designation may also be used for cut, sliced, shredded or grated products made from cheese which cheese is in conformity with this Standard.

7.2 COUNTRY OF ORIGIN

The country of origin (which means the country of manufacture, not the country in which the name originated) shall be declared. When the product undergoes substantial transformation*2 in a second country, the country in which the transformation is performed shall be considered to be the country of origin for the purpose of labelling.

7.3 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.

7.4 LABELLING OF NON-RETAIL CONTAINERS

Information specified 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 of the manufacturer or packer shall appear on the container, and in the absence of such a container, on the product itself. However, lot identification and the name and address 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*, Volume 13.

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APPENDIX.

INFORMATION ON USUAL PATTERNS OF MANUFACTURING COULOMMIERS

The information below is intended for voluntary application by commercial partners and not for application by governments.

Should a Member Country identify legitimate objective(s) for retaining or introducing national regulation(s) that address(es) matters considered in this Annex, the provisions below should be taken into account.

1. METHOD OF MANUFACTURE

1.1 Fermentation procedure: Microbiologically derived acid development.

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1 For the purpose of comparative nutritional claims, the minimum fat content of 40% fat in dry matter constitutes the reference.

2 For instance, [repackaging, cutting, slicing, shredding and grating – *formulation under review*] is not regarded as substantial transformation

1.2 Type of coagulation: Coagulation of the milk protein is typically obtained through the combined action of microbial acidification and proteases (e.g. rennet) at an appropriate coagulation temperature.

PROPOSED DRAFT REVISED STANDARD FOR CREAM CHEESE (C-31)

(at Step 3)

1. SCOPE

This Standard applies to Cream Cheese intended for direct consumption or for further processing in conformity with the description in Section 2 of this Standard.

In some countries, the term "cream cheese" is used to designate cheeses, such as high fat ripened hard cheese, that do not conform to the description I Section 2. This Standard does not apply to such cheeses.

2. DESCRIPTION

Cream Cheese is a soft, spreadable, unripened and rindless 1 cheese in conformity with the Standard for Unripened Cheeses Including Fresh Cheeses (CODEX STAN XXX-2001) and the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001). The cheese has a near white through to light yellow colour. The texture is spreadable and smooth to slightly flaky and without holes, and the cheese spreads and mixes readily with other foods.

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: 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

Milk constituent:	**Minimum content (m/m):**	**Maximum content (m/m):**	**Reference level (m/m):**
Milk fat in dry matter:	25 %	Not restricted	60-70 %
Moisture on fat free basis:	67 %	-	Not specified
Dry matter:	22%	Restricted by the MMFB	Not specified

1 The cheese has been kept in such a way that no rind is developed (a "rindless" cheese)

Compositional modifications of Cream Cheese beyond the minima and maxima specified above for milkfat, moisture and dry matter are not considered to be in compliance with section 4.3.3 of the General Standard for the Use of Dairy Terms (CODEX STAN 206-1999).

4. FOOD ADDITIVES

Only those additives classes indicated in the table below may be used for the product categories specified. Within each additive class, and where permitted according to the table, only those food additives listed below may be used and only within the functions and limits specified.

	Justified use:	
Additive functional class:	**Cheese mass**	**Surface/rind treatment**
Colours:	X[1]	-
Bleaching agents:	-	-
Acids:	X	-
Acidity regulators:	X	-
Stabilizers:	X[2]	-
Thickeners:	X[2]	-
Emulsifiers:	X	-
Antioxidants:	X	-
Preservatives:	X	-
Salt substitutes:	X	-
Foaming agents:	X[3]	-
Anti-caking agents:	-	-

[1]) Only to obtain the colour characteristics, as described in Section 2
[2]) Stabilizers and thickeners including modified starches may be used in compliance with the definition of milk products and only to heat treated products to the extent they are functionally necessary, taking into account any use of gelatine and starches as provided for in section 3.2.
[3]) For whipped products, only
X = The use of additives belonging to the class is technologically justified
- = The use of additives belonging to the class is not technologically justified

No.	*Name of food additive*		*Maximum level*
	Colours		
160a(i)	Carotenes (synthetic)		25 mg/kg
160a(ii)	Carotenes (vegetable)		600 mg/kg
160b	Annatto extracts		10 mg/kg of cheese on bixin/norbixin basis
160e	β-apo-8`-carotenal		35 mg/kg
160f	β-apo-8`-carotenic acid, methyl and ethyl ester		35 mg/kg
171	Titanium dioxide		Limited by GMP
	Acids		
260	Acetic acid glacial	)	
270	Lactic acid (L-, D- and DL-)	)	
296	Malic acid (DL-)	)	Limited by GMP
330	Citric acid	)	
507	Hydrochloric acid	)	
574	Gluconic acid	)	
	Acidity regulators		
170	Calcium carbonates	)	
261	Potassium acetates	)	
262	Sodium acetates	)	
263	Calcium acetates	)	
325	Sodium lactate	)	
326	Potassium lactate	)	
327	Calcium lactate	)	Limited by GMP
350	Sodium malates	)	
351	Potassium malates	)	
352	Calcium malates	)	
500	Sodium carbonates	)	
501	Potassium carbonates	)	
575	Glucono-delta-lactone (GDL)	)	
577	Potassium gluconate	)	
578	Calcium gluconate	)	
	Stabilizers/thickeners		
331	Sodium citrates	)	
332	Potassium citrates	)	Limited by GMP
333	Calcium citrates	)	
339	Sodium phosphates	)	
340	Potassium phosphates	)	10000 mg/kg, singly or in combination
341	Calcium phosphates	)	
450i	Disodium diphosphate	)	
452	Polyphosphates	)	
400	Alginic acid	)	
401	Sodium alginate	)	
402	Potassium alginate	)	Limited by GMP
403	Ammonium alginate	)	
404	Calcium alginate	)	
405	Propylene glycol alginate		5 g/kg, singly or in combination

No.	*Name of food additive*		*Maximum level*
406	Agar	)	
407	Carrageenan or its Na, K, NH_4 salts (includes furcelleran)	)	
410	Carob bean gum	)	
412	Guar gum	)	
413	Tragacanth gum	)	Limited by GMP
415	Xanthan gum	)	
416	Karaya gum	)	
417	Tara gum	)	
418	Gellan gum	)	
466	Sodium carboxymethyl cellulose	)	
576	Sodium gluconate	)	
	Modified starches as follows:		
1400	Dextrins, roasted starch white and yellow	)	
1401	Acid-treated starch	)	
1402	Alkaline treated starch	)	
1403	Bleached starched	)	
1404	Oxidized starch	)	
1405	Starches, enzyme-treated	)	
1410	Monostarch phosphate	)	
1412	Distarch phosphate esterified with sodium trimetasphosphate; esterified with phosphorus-oxychloride	)	Limited by GMP
1413	Phosphated distarch phosphate	)	
1414	Acetylated distarch phosphate	)	
1420	Starch acetate esterified with acetic anhydride	)	
1421	Starch acetate esterified with vinyl acetate	)	
1422	Acetylated distarch adipate	)	
1440	Hydroxypropyl starch	)	
1442	Hydroxypropyl distarch phosphate	)	
	Emulsifiers:		
322	Lecithins	)	
470	Salts of fatty acids (with base AL, Ca, Na, Mg, K and NH_4)	)	
471	Mono- and di-glycerides of fatty acids	)	
472a	Acetic and fatty acid esters of glycerol	)	Limited by GMP
472b	Lactic and fatty acid esters of glycerol	)	
472c	Citric and fatty acid esters of glycerol	)	
472f	Mixed tartaric, acetic and fatty acid esters of glycerol	)	
	Antioxidants:		
300	Ascorbic acid (L-)	)	
301	Sodium ascorbate	)	Limited by GMP
302	Calcium ascorbate	)	
304	Ascorbyl palmitate	)	0.5 g/kg
305	Ascorbyl stearate	)	
306	Mixed tocopherols concentrate		Limited by GMP
307	Alpha-tocopherol		0.2 g/kg

No.	*Name of food additive*		*Maximum level*
	Preservatives:		
200	Sorbic acid	)	1000 mg/kg of cheese, singly
202	Potassium sorbate	)	or in combination,
203	Calcium sorbate	)	calculated as sorbic acid
234	Nisin		12.5 mg/kg
280	Propionic acid	)	
281	Sodium propionate	)	3000 mg/kg, calculated as
282	Calcium propionate	)	propionic acid
283	Potassium propionate	)	
1105	Lyzozyme		Limited by GMP
	Salt substitutes		
508	Potassium chloride		Limited by GMP
	Foaming agents		
290	Carbon dioxide		Limited by GMP
941	Nitrogen		Limited by GMP

5. CONTAMINANTS

The milk used in the manufacture of 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 product 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, *Codex Alimentarius*, Volume 1B), 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, *Codex Alimentarius*, Volume 1B).

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 Cream Cheese may be applied in accordance with section 4.1 of the Codex General Standard for the Labelling of Prepackaged Foods, provided that the product is in conformity with this Standard. Where customary in the country of retail sale, alternative spelling may be used. The name may be translated into other languages in a non-misleading way.

The use of the name is an option that may be chosen only if the cheese complies with this standard. Where the name is not used for a cheese that complies with this standard, the naming provisions of the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001) apply.

The designation of products in which the fat content is below or above the reference range but equal to or above 40% fat in dry matter as specified in section 3.3 of this Standard shall be accompanied by an appropriate qualification describing the modification made or the fat content (expressed as fat in dry matter or as percentage by mass), either as part of the name or in a prominent position in the same field of vision. The designation of products in which the fat content is below 40% fat in dry matter but above the absolute minimum specified in section 3.3 of this Standard shall either be accompanied by an appropriate qualifier describing the modification made or the fat content (expressed as fat in dry matter or as percentage by mass), either as part of the name or in a prominent position in the same field of vision, or alternatively the name 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, in either case provided that the designation used does not create an erroneous impression the retail sale regarding the character and identity of the cheese.

Suitable qualifiers are the appropriate characterizing terms specified in Section 7.3 of the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001) or a nutritional claim in accordance with the Guidelines for the Use of Nutritional Claims (CAC/GL 023 – 1997, *Codex Alimentarius* Volume 1A) [2].

7.2 COUNTRY OF ORIGIN

The country of origin (which means the country of manufacture, not the country in which the name originated) shall be declared. When the product undergoes substantial transformation [3] in a second country, the country in which the transformation is performed shall be considered to be the country of origin for the purpose of labelling.

7.3 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.

7.4 LABELLING OF NON-RETAIL CONTAINERS

Information specified 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 of the manufacturer or packer shall appear on the container, and in the absence of such a container, on the product itself. However, lot identification and the name and address 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*, Volume 13.

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2 For the purpose of comparative nutritional claims, the minimum fat content of 60 % fat in dry matter constitutes the reference.

3 For instance, [repackaging, cutting, slicing, shredding and grating – *formulation under review*] is not regarded as substantial transformation

PROPOSED DRAFT REVISED STANDARD FOR CAMEMBERT (C-33)

(at Step 3)

The Appendix 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 Camembert intended for direct consumption or for further processing in conformity with the description in Section 2 of this Standard.

2. DESCRIPTION

Camembert is a soft surface ripened, primarily mould ripened cheese in conformity with the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001), which has a shape of a flat cylinder or sectors thereof. The body has a near white through to light yellow colour and a soft-textured (when pressed by thumb), but not crumbly texture, ripened from the surface to the center of the cheese. Gas holes are generally absent, but few openings and splits are acceptable. A rind is to be developed that is soft and entirely covered with white mould but may have red, brownish or orange coloured spots. Whole cheese may be cut or formed into sectors prior to or after the mould development.

For Camembert ready for consumption, the ripening procedure to develop flavour and body characteristics is normally from 10 days at 10-16 °C depending on the degree of maturity required. Alternative ripening conditions (including the addition of ripening enhancing enzymes) may be used, provided the cheese exhibits similar physical, biochemical and sensory properties as those achieved by the previously stated ripening procedure. Camembert intended for further processing need not exhibit the same degree of ripening.

Carré de Camembert is a soft surface ripened cheese with a square shape and which comply with all other criteria and requirements specified for Camembert.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 RAW MATERIALS

Cows´ milk or buffaloes´ milk, or their mixtures, and products obtained from these milks.

3.2 PERMITTED INGREDIENTS

- Starter cultures of harmless lactic acid and/ or flavour producing bacteria and cultures of other harmless microorganisms, including Geotrichum candidum, Brevibacterium linens, and yeast;
- Rennet or other safe and suitable coagulating enzymes;
- Sodium chloride;
- Potable water;
- Safe and suitable enzymes to enhance the ripening process;
- Rice, corn and potato flours and starches: Notwithstanding the provisions in the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001), 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.

3.3 COMPOSITION

Milk constituent:	Minimum content (m/m):	Maximum content (m/m):	Reference level (m/m):
Milkfat in dry matter:	30%	Not restricted	45% to 55%

Dry matter: Depending on the fat in dry matter content, according to the table below.

Fat in dry matter content (m/m):	Corresponding minimum dry matter content (m/m):
Equal to or above 30% but less than 40%:	38%
Equal to or above 40% but less than 45%:	41%
Equal to or above 45% but less than 55%:	43%
Equal to or above 55%	48%

Compositional modifications beyond the minima and maxima specified above for milkfat and dry matter are not considered to be in compliance with section 4.3.3 of the Codex General Standard for the Use of Dairy Terms (CODEX STAN 206-1999).

3.4 ESSENTIAL SIZES AND SHAPES

Maximum height: approx. 5 cm;

Weight: Whole cheese of flat cylinder (Camembert) or square (Carré de Camembert): approx. 80 g to 500 g.

3.5 ESSENTIAL RIPENING PROCEDURE

Rind formation and maturation (proteolysis) from the surface to the center is predominantly caused by *Penicillium camembertii* and *Penicillium caseicolum*

4. FOOD ADDITIVES

Only those additives classes indicated in the table below may be used for the product categories specified. Within each additive class, and where permitted according to the table, only those food additives listed below may be used and only within the functions and limits specified.

	Justified use:	
Additive functional class:	**Cheese mass**	**Surface/rind treatment**
Colours:	X[1]	-
Bleaching agents:	-	-
Acids:	-	-
Acidity regulators:	X	-
Stabilizers:	-	-
Thickeners:	-	-
Emulsifiers:	-	-
Antioxidants:	-	-
Preservatives:	X	-
Salt substitutes:	X	X
Foaming agents:	-	-
Anti-caking agents:	-	-

[1]) Only to obtain the colour characteristics, as described in Section 2
X = The use of additives belonging to the class is technologically justified
- = The use of additives belonging to the class is not technologically justified

No.	*Name of food additive*	*Maximum level*
	Colours	
160a(i)	Carotenes (synthetic)	25 mg/kg
160a(ii)	Carotenes (vegetable)	600 mg/kg
160b	Annatto extracts	10 mg/kg of cheese on bixin/norbixin basis
160c	Paprika oleoresins	Limited by GMP
160e	β-apo-8`-carotenal	35 mg/kg
160f	β-apo-8`-carotenic acid, methyl and ethyl ester	35 mg/kg
	Acidity regulators	
575	Glucone-delta-lactone (GDL)	Limited by GMP
	Preservatives	
1105	Lysozyme	Limited by GMP
	Salt substitutes	
508	Potassium chloride	Limited by GMP

5. CONTAMINANTS

The milk used in the manufacture of 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 product 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, *Codex Alimentarius*, Volume 1B), 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, *Codex Alimentarius*, Volume 1B).

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 names Camembert and Carré de Camembert may be applied in accordance with section 4.1 of the Codex General Standard for the Labelling of Prepackaged Foods, provided that the product is in conformity with this Standard. Where customary in the country of retail sale, alternative spelling may be used.

The term “Carré de” may be replaced by other appropriate term(s) related to shape that are suitable in the country of retail sale.

The use of the names is an option that may be chosen only if the cheese complies with this standard. Where the name is not used for a cheese that complies with this standard, the naming provisions of the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001) apply.

The designation of products in which the fat content is below or above the reference range but above the absolute minimum specified in section 3.3 of this Standard shall be accompanied by an appropriate qualification describing the modification made or the fat content (expressed as fat in dry matter or as percentage by mass), either as part of the name or in a prominent position in the same field of vision. Suitable qualifiers are the appropriate characterizing terms specified in Section 7.3 of the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001) or a nutritional claim in accordance with the Guidelines for the Use of Nutritional Claims (CAC/GL 023 – 1997, *Codex Alimentarius* Volume 1A) [1].

The designation may also be used for cut, sliced, shredded or grated products made from cheese which cheese is in conformity with this Standard.

7.2 COUNTRY OF ORIGIN

The country of origin (which means the country of manufacture, not the country in which the name originated) shall be declared. When the product undergoes substantial transformation [2] in a second country, the country in which the transformation is performed shall be considered to be the country of origin for the purpose of labelling.

7.3 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.

7.4 LABELLING OF NON-RETAIL CONTAINERS

Information specified 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 of the manufacturer or packer shall appear on the container, and in the absence of such a container, on the product itself. However, lot identification and the name and address 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*, Volume 13.

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APPENDIX.

INFORMATION ON USUAL PATTERNS OF MANUFACTURING CAMEMBERT

The information below is intended for voluntary application by commercial partners and not for application by governments.

Should a Member Country identify legitimate objective(s) for retaining or introducing national regulation(s) that address(es) matters considered in this Annex, the provisions below should be taken into account.

1 For the purpose of comparative nutritional claims, the minimum fat content of 45% fat in dry matter constitutes the reference.

2 For instance, [repackaging, cutting, slicing, shredding and grating –– *formulation under review*] is not regarded as substantial transformation

1. METHOD OF MANUFACTURE

1.1 Fermentation procedure: Microbiologically derived acid development.

1.2 Type of coagulation: Coagulation of the milk protein is typically obtained through the combined action of microbial acidification and proteases (e.g. rennet) at an appropriate coagulation temperature.

PROPOSED DRAFT REVISED STANDARD FOR BRIE (C-34)

(at Step 3)

The Appendix 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 Brie intended for direct consumption or for further processing in conformity with the description in Section 2 of this Standard.

2. DESCRIPTION

Brie is a soft surface ripened, primarily white mould ripened cheese in conformity with the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001), which has a shape of a flat cylinder or sectors thereof. The body has a near white through to light yellow colour and a soft-textured (when thumbs-pressed), but not crumbly texture, ripened from the surface to the center of the cheese. Gas holes are generally absent, but few openings and splits are acceptable. A rind is to be developed that is soft and entirely covered with white mould but may have red, brownish or orange coloured spots. Whole cheese may be cut or formed into sectors prior to or after the mould development.

For Brie ready for consumption, the ripening procedure to develop flavour and body characteristics is normally from 10 days at 10-16 °C depending on the degree of maturity required. Alternative ripening conditions (including the addition of ripening enhancing enzymes) may be used, provided the cheese exhibits similar physical, biochemical and sensory properties as those achieved by the previously stated ripening procedure. Brie intended for further processing need not exhibit the same degree of ripening.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 RAW MATERIALS

Cows´ milk or buffaloes´ milk, or their mixtures, and products obtained from these milks.

3.2 PERMITTED INGREDIENTS

- Starter cultures of harmless lactic acid and/ or flavour producing bacteria and cultures of other harmless microorganisms, including Geotrichum candidum, Brevibacterium linens, and yeast;
- Rennet or other safe and suitable coagulating enzymes;
- Sodium chloride;
- Potable water;
- Safe and suitable enzymes to enhance the ripening process;
- Rice, corn and potato flours and starches: Notwithstanding the provisions in the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001), 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.

3.3 COMPOSITION

Milk constituent:	Minimum content (m/m):	Maximum content (m/m):	Reference level (m/m):
Milkfat in dry matter:	40%	Not restricted	45% to 55%

Dry matter: Depending on the fat in dry matter content, according to the table below.

Fat in dry matter content (m/m):	Corresponding minimum dry matter content (m/m):
Equal to or above 40% but less than 45%:	42%
Equal to or above 45% but less than 55%:	43%
Equal to or above 55% but less than 60%:	48%
Equal to or above 60%:	51%

Compositional modifications beyond the minima and maxima specified above for milkfat and dry matter are not considered to be in compliance with section 4.3.3 of the Codex General Standard for the Use of Dairy Terms (CODEX STAN 206-1999).

3.4 ESSENTIAL SIZES AND SHAPES

Maximum height: approx. 5 cm;

Weight: Whole cheese of flat cylinder: approx. 500 g to 3500 g

3.5 ESSENTIAL RIPENING PROCEDURE

Rind formation and maturation (proteolysis) from the surface to the center is predominantly caused by *Penicillium camembertii* and *Penicillium caseicolum*

4. FOOD ADDITIVES

Only those additives classes indicated in the table below may be used for the product categories specified. Within each additive class, and where permitted according to the table, only those food additives listed below may be used and only within the functions and limits specified.

	Justified use:	
Additive functional class:	**Cheese mass**	**Surface/rind treatment**
Colours:	X[1]	-
Bleaching agents:	-	-
Acids:	-	-
Acidity regulators:	X	-
Stabilizers:	-	-
Thickeners:	-	-
Emulsifiers:	-	-
Antioxidants:	-	-
Preservatives:	X	-
Salt substitutes:	X	X
Foaming agents:	-	-
Anti-caking agents:	-	-

[1]) Only to obtain the colour characteristics, as described in Section 2
X = The use of additives belonging to the class is technologically justified
- = The use of additives belonging to the class is not technologically justified

No.	*Name of food additive*	*Maximum level*
	Colours	
160a(i)	Carotenes (synthetic)	25 mg/kg
160a(ii)	Carotenes (vegetable)	600 mg/kg
160b	Annatto extracts	10 mg/kg of cheese on bixin/norbixin basis
160c	Paprika oleoresins	Limited by GMP
160e	β-apo-8`-carotenal	35 mg/kg
160f	β-apo-8`-carotenic acid, methyl and ethyl ester	35 mg/kg
	Acidity regulators	
575	Glucone-delta-lactone (GDL)	Limited by GMP
	Preservatives	
1105	Lysozyme	Limited by GMP
	Salt substitutes	
508	Potassium chloride	Limited by GMP

5. CONTAMINANTS

The milk used in the manufacture of 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 product 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, *Codex Alimentarius*, Volume 1B), 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, *Codex Alimentarius*, Volume 1B).

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 Brie may be applied in accordance with section 4.1 of the Codex General Standard for the Labelling of Prepackaged Foods, provided that the product is in conformity with this Standard. Where customary in the country of retail sale, alternative spelling may be used.

The use of the name is an option that may be chosen only if the cheese complies with this standard. Where the name is not used for a cheese that complies with this standard, the naming provisions of the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001) apply.

The designation of products in which the fat content is below or above the reference range but above the absolute minimum specified in section 3.3 of this Standard shall be accompanied by an appropriate qualification describing the modification made or the fat content (expressed as fat in dry matter or as percentage by mass), either as part of the name or in a prominent position in the same field of vision. Suitable qualifiers are the appropriate characterizing terms specified in Section 7.3 of the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001) or a nutritional claim in accordance with the Guidelines for the Use of Nutritional Claims (CAC/GL 023 – 1997, *Codex Alimentarius* Volume 1A) [1].

The designation may also be used for cut, sliced, shredded or grated products made from cheese which cheese is in conformity with this Standard.

7.2 COUNTRY OF ORIGIN

The country of origin (which means the country of manufacture, not the country in which the name originated) shall be declared. When the product undergoes substantial transformation [2] in a second country, the country in which the transformation is performed shall be considered to be the country of origin for the purpose of labelling.

7.3 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.

7.4 LABELLING OF NON-RETAIL CONTAINERS

Information specified 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 of the manufacturer or packer shall appear on the container, and in the absence of such a container, on the product itself. However, lot identification and the name and address 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*, Volume 13.

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APPENDIX.

INFORMATION ON USUAL PATTERNS OF MANUFACTURING BRIE

The information below is intended for voluntary application by commercial partners and not for application by governments.

Should a Member Country identify legitimate objective(s) for retaining or introducing national regulation(s) that address(es) matters considered in this Annex, the provisions below should be taken into account.

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1 For the purpose of comparative nutritional claims, the minimum fat content of 45% fat in dry matter constitutes the reference.

2 For instance, [repackaging, cutting, slicing, shredding and grating – *formulation under review*] is not regarded as substantial transformation.

Brie

1. METHOD OF MANUFACTURE

1.1 Fermentation procedure: Microbiologically derived acid development.

1.2 Type of coagulation: Coagulation of the milk protein is typically obtained through the combined action of microbial acidification and proteases (e.g. rennet) at an appropriate coagulation temperature.

PROPOSED DRAFT STANDARD FOR MOZZARELLA

(at Step 3)

The Appendix 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 Mozzarella intended for direct consumption or for further processing, in conformity with the description in Section 2 of this Standard.

2. DESCRIPTION

Mozzarella is an unripened cheese in conformity with the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001) and the Standard for Unripened Cheese Including Fresh Cheese (CODEX STAN XXX-2001). It is a smooth elastic cheese with a long stranded parallel-orientated fibrous protein structure without evidence of curd granules. The cheese is rindless [1] and may be formed into various shapes.

Mozzarella with a high moisture content is a soft cheese with overlying layers that may form pockets containing liquid of milky appearance. It may be packed with or without the liquid. The cheese has a near white colour.

Mozzarella with a low moisture content is a firm/semi-hard homogeneous cheese without holes and is suitable for shredding.

Mozzarella is made by “pasta filata” processing, which consists of heating curd of a pH value suitable for further processing by kneading and stretching until the curd is smooth and free from lumps. Still warm, the curd is cut and moulded, then firmed by cooling. Other processing techniques, which give end products with the same physical, chemical and organoleptic characteristics are allowed.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 RAW MATERIALS

Cows´ milk or buffaloes´ milk, or their mixtures, and products obtained from these milks.

3.2 PERMITTED INGREDIENTS

- Starter cultures of harmless lactic acid and/ or flavour producing bacteria and cultures of other harmless microorganisms;
- Rennet or other safe and suitable coagulating enzymes;
- Sodium chloride;
- Vinegar;
- Potable water;
- Rice, corn and potato flours and starches: Notwithstanding the provisions in the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001), these substances can be used in the same function as anti-caking agents for treatment of the surface of cut, sliced, and shredded Mozzarella with a low moisture content 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.

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[1] The cheese has been kept in such a way that no rind is developed (a “rindless” cheese)

3.3 COMPOSITION

Milk constituent:	Minimum content (m/m):	Maximum content (m/m):	Reference level (m/m):
Milkfat in dry matter:			
- with high moisture:	20%	Not restricted	40% to 50%
- with low moisture:	18%	Not restricted	40% to 50%
Dry matter:	Depending on the fat in dry matter content, according to the table below.		

Fat in dry matter content (m/m):	Corresponding minimum dry matter content (m/m):	
	With low moisture:	With high moisture:
Equal to or above 18% but less than 30%:	34%	-
Equal to or above 20% but less than 30%:	-	24%
Equal to or above 30% but less than 40%:	39%	26%
Equal to or above 40% but less than 45%:	42%	29%
Equal to or above 45% but less than 50%:	45%	31%
Equal to or above 50% but less than 60%:	47%	34%
Equal to or above 60% but less than 85%:	53%	38%

Compositional modifications beyond the minima and maxima specified above for milkfat and dry matter are not considered to be in compliance with section 4.3.3 of the Codex General Standard for the Use of Dairy Terms (CODEX STAN 206-1999).

4. FOOD ADDITIVES

Only those additives classes indicated in the table below may be used for the product categories specified. Within each additive class, and where permitted according to the table, only those food additives listed below may be used and only within the functions and limits specified.

	Justified use:			
	Mozzarella with high moisture content		**Mozzarella with high moisture content**	
Additive functional class:	**Cheese mass**	**Surface treatment**	**Cheese mass**	**Surface treatment**
Colours:	X[1]	-	X[1]	-
Bleaching agents:	-	-	-	-
Acids:	X	-	X	-
Acidity regulators:	X	-	X	-
Stabilizers:	X[2]	-	X[2]	-
Thickeners:	X[2]	-	X[2]	-
Emulsifiers:	-	-	-	-
Antioxidants:	-	-	-	-
Preservatives:	X	-	X	X
Salt substitutes:	X	-	X	X
Foaming agents:	-	-	-	-
Anti-caking agents:	-	-	-	X[3]

[1]) Only to obtain the colour characteristics, as described in Section 2
[2]) Stabilizers and thickeners including modified starches may be used in compliance with the definition of milk products and only to heat treated products to the extent they are functionally necessary, taking into account any use of gelatine and starches as provided for in section 3.2.
[3]) For the surface of sliced, cut, shredded or grated cheese, only
X = The use of additives belonging to the class is technologically justified
- = The use of additives belonging to the class is not technologically justified

No.	*Name of food additive*		*Maximum level*
	Colours		
101(ii)	Turmeric		Limited by GMP
101	Riboflavins		Limited by GMP
140	Chlorophyll		Limited by GMP
141	Copper chlorophylls		15 mg/kg
160a(i)	Carotenes (synthetic)		35 mg/kg
160a(ii)	Carotenes (vegetable)		600 mg/kg
160b	Annatto extracts		10 mg/kg of cheese on bixin/norbixin basis
160c	Paprika oleoresins		Limited by GMP
160e	β-apo-8`-carotenal		35 mg/kg
160f	β-apo-8`-carotenic acid, methyl and ethyl ester		35 mg/kg
171	Titanium dioxide		Limited by GMP
	Acidity regulators		
170	Calcium carbonates	)	
325	Sodium lactate	)	Limited by GMP
326	Potassium lactate	)	
327	Calcium lactate	)	
339	Sodium phosphates	)	
340ii	Dipotassium orthophosphates	)	10000 mg/kg, singly or in combination*
341	Calcium phosphates	)	
500	Sodium carbonates	)	
501	Potassium carbonates	)	Limited by GMP
504	Magnesium carbonates	)	
575	Glucono-delta-lactone (GDL)	)	
	Acids		
260	Acetic acid glacial	)	
270	Lactic acid (L-, D- and DL-)	)	
296	Malic acid (DL-)	)	Limited by GMP
330	Citric acid	)	
338	Orthophosphoric acid		2 g/kg, expressed as P_2O_5*
507	Hydrochloric acid		Limited by GMP
	Stabilizers/thickeners		
407	Carrageenan and its Na, K, NH_4 salts	)	
	(includes furcelleran)	)	
410	Carob bean gum	)	
412	Guar gum	)	Limited by GMP
415	Xanthan gum	)	
416	Karaya gum	)	
417	Tara gum	)	
	Salt substitutes		
508	Potassium chloride		Limited by GMP
	Anti-caking agents		
460	Cellulose		Limited by GMP
460 (i)	Microcrystalline cellulose		Limited by GMP

No.	*Name of food additive*		*Maximum level*
551	Silicon dioxide, amorphous	)	
552	Calcium silicate	)	
553	Magnesium silicates	)	10 g/kg singly or in combination
554	Sodium aluminosilicate	)	Silicates calculated as silicon dioxide
555	Potassium aluminosilicate	)	
556	Calcium aluminium silicate	)	
559	Aluminium silicate	)	
560	Potassium silicate	)	
	Preservatives		
200	Sorbic acid	)	
202	Potassium sorbate	)	1000 mg/kg of cheese,
203	Calcium sorbate	)	expressed as sorbic acid
280	Propionic acid	)	
281	Sodium propionate	)	Limited by GMP
282	Calcium propionate	)	
283	Potassium propionate	)	
235	Pimaricin (for surface treatment only)**		Not exceeding 2 mg/dm^2 and not present in a depth of 5 mm

*) Total amount of phosphates not to exceed 10000 mg/kg.

**) Temporarily endorsed

5. CONTAMINANTS

The milk used in the manufacture of 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 product 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, *Codex Alimentarius*, Volume 1B), 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, *Codex Alimentarius*, Volume 1B).

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 Mozzarella may be applied in accordance with section 4.1 of the Codex General Standard for the Labelling of Prepackaged Foods, provided that the product is in conformity with this Standard. Where customary in the country of retail sale, alternative spelling may be used.

The use of the name is an option that may be chosen only if the cheese complies with this standard. Where the name is not used for a cheese that complies with this standard, the naming provisions of the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001) apply.

The designation of Mozzarella with a high moisture content shall be accompanied by a qualifying term describing the true nature of the product.

The designation of products in which the fat content is below or above the reference range but above the absolute minimum specified in section 3.3 of this Standard shall be accompanied by an appropriate qualification describing the modification made or the fat content (expressed as fat in dry matter or as percentage by mass), either as part of the name or in a prominent position in the same field of vision. Suitable qualifiers are the appropriate characterizing terms specified in Section 7.3 of the General Standard for Cheese (CODEX STAN A-6 – 1978, Rev. 2-2001) or a nutritional claim in accordance with the Guidelines for the Use of Nutritional Claims (CAC/GL 023 – 1997, *Codex Alimentarius* Volume 1A) [2.]

The designation may also be used for cut, sliced, shredded or grated products made from cheese which cheese is in conformity with this Standard.

7.2 COUNTRY OF ORIGIN

The country of origin (which means the country of manufacture, not the country in which the name originated) shall be declared. When the product undergoes substantial transformation [3] in a second country, the country in which the transformation is performed shall be considered to be the country of origin for the purpose of labelling.

7.3 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.

7.4 LABELLING OF NON-RETAIL CONTAINERS

Information specified 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 of the manufacturer or packer shall appear on the container, and in the absence of such a container, on the product itself. However, lot identification and the name and address 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*, Volume 13.

Determination of equivalency between “pasta filata” processing and other processing techniques: Identification of the typical structure by confogal laser scanning microscopy.

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2 For the purpose of comparative nutritional claims, the minimum fat content of 40% fat in dry matter constitutes the references.

3 For instance, [repackaging, cutting, slicing, shredding and grating – *formulation under review*] is not regarded as substantial transformation

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APPENDIX.

INFORMATION ON USUAL PATTERNS OF MANUFACTURING MOZZARELLA

The information below is intended for voluntary application by commercial partners and not for application by governments.

Should a Member Country identify legitimate objective(s) for retaining or introducing national regulation(s) that address(es) matters considered in this Annex, the provisions below should be taken into account.

MOZZARELLA WITH A HIGH MOISTURE CONTENT

1. METHOD OF MANUFACTURE

1.1 The principal starter culture microorganisms are *Streptococcus thermophilus* and/or Lactococcus spp.

1.2 Products made from buffalo’s milk shall be salted in cold brine.

IDF'S ANALYSIS

1. REVIEW OF GENERAL COMMENTS

1.1 Translation of variety names into other languages

Comments submitted:

Czech Republic pointed out that the designations in Czech were different, such as

- Cheddar is designated "Čedar"
- Edam is designated "Eidam"
- Cream Cheese is designated either as "smetanový sýr" or as "krémový sýr"
- Brie is designated "type camembert"

Discussion:

The variety standards apply only to products that are actually labelled with the designations specified. This means that products designated with other variety names or "look-alike names" are not automatically subject to the provisions of the variety standard in question. The general principles of labelling include provisions that state that foods shall not be described and/or presented in a way which refer to or are suggestive of any other product with which it may be confused or in a way that is misleading.

Although they are technically considered to meet the requirements specified in a variety standard, products do exist that are designated differently from the name(s) specified therein. Such alternative designations may or may not refer to or be suggestive of the variety name specified by the Codex standard. In some cases, different spelling or translations into local languages may be considered as suggestive of the variety name and could consequently be, with reference to general labelling provisions, regarded as misleading to the consumer.

With a view to prevent such unintentional consequences some of the standards may require a specific permission to spell the variety names differently and/or translate them into local languages.

A number of examples of this practice already exist, for instance, in the case of Edam (Edamer or Edammer), Emmental (Emmentaler) and Yoghurt (spelling may be different).

Among the cheese variety standards, such prevention may be needed in the cases of Cottage Cheese and Cream Cheese (translation) and Cheddar and Edam (spelling).

Recommendation no. 1:

In sections 7.1 of the all the standards, respectively, add the following statement:

"Where customary in the country of retail sale, alternative spelling may be used."

In sections 7.1 of the standards for Cottage Cheese and Cream Cheese, respectively, add the following statement:

"The name may be translated into other languages in a non misleading way."

1.2 Degree of detailing

Comments submitted:

Canada, Denmark & France agreed in principle with the approach and the annexed guidance provided.

Denmark & New Zealand recommended that further guidance to distinguish between products for direct consumption and for further processing be developed whereas **Germany** did not support the differentiation between cheese ready for consumption and cheese for further processing.

New Zealand suggested that the variety standards require further simplification, following the model of the other standards under consideration.

United States did not support the annexed guidance and expressed that varietal cheese standards should accurately describe unique and essential aspects, if any occur, of specific cheeses in order to facilitate trade and provide clear and accurate information to consumers and should not include information unnecessary to protect consumers health and ensure fair trading practices such as shape, dimension, weight, colour and rind. Aging requirements should only be included when necessary to protect consumers' health or when necessary to develop essential product characteristics (e.g. holes, mold development, etc.).

United Kingdom expressed concerns with the degree of detail and preferred a simpler approach of defining the basic individual cheeses.

Conclusion by the 5th CCMMP:

The CCMMP agreed that IDF would revise the standards on the basis of written comments and the principles as included in Appendix VII to the ALINORM 03/11.

Recommendation no. 2:

Each of the details currently included in the proposed draft standards presented in CX/MMP 02/7 (part 2) have been reviewed by this report, standard by standard, in light of the comments submitted. This report provides recommendations that follow the Guidance in Appendix VII to the ALINORM 03/11.

2. REVIEW OF SECTION 2 - DESCRIPTION

2.1 Classification of variety - Type of cheese

Background:

The type of detail (e.g. "hard", "soft") is currently addressed in section 2 of the draft standards for all the 16 varieties. Considering the guidance in Appendix VII to ALINORM 03/11, this type of detail is considered as necessary to classify the variety within CODEX STAN A-6 and to distinguish the varieties from each other. The current formulations are measurable (defined in A-6) and relate to the description of the end product.

Comments submitted:

Cuba expressed agreement with the proposals stated in CX/MMP 02/07; however, no view on Havarti. With regard to Mozzarella, the term "firm" is recommended.

Germany held the view that the term "semi-hard" is defined in standard A-6.

Discussion:

According to A-6, section 7.1.1, the meaning of the terms "firm" and "semi-hard" are identical. It would mean no harm to use both terms, i.e. "firm/semi-hard".

Recommendation no. 3:

Replace "firm" with "firm/semi-hard" in the descriptions of Danbo, Edam, Gouda, Havarti, Tilsiter, Saint-Paulin, Provolone, and Mozzarella (low).

2.2 Classification of variety - Type of ripening

Background:

The type of detail is currently addressed in section 2 of the draft standards for all the 16 varieties. Considering the guidance in Appendix VII to ALINORM 03/11, this type of detail is considered as necessary to classify the variety within CODEX STAN A-6 and to distinguish the varieties from each other. It also indirectly relates to taste and texture attributes. The current formulations are qualitatively measurable (the fact of protein breakdown) and relate to the description of the end product.

Comments submitted:

Cuba expressed agreement with the proposals stated in CX/MMP 02/07.

Recommendation no. 4:

No changes to current drafts are required.

2.3 Classification of variety - Technology

Background:

The type of detail (e.g. "ripened", "surface ripened") is currently addressed in section 2 of the draft standards for the varieties Provolone and Mozzarella concerns reference to "pasta filata" technology. Considering the guidance in Appendix VII to ALINORM 03/11, this type of detail is considered as necessary to classify the variety in consistency with common scientific and technology literature and to distinguish these varieties from other varieties. It is essential for obtaining the characteristic texture of these varieties. The current formulations are not measurable (methodology) and do not relate to end product description, but the resulting structure, as specified elsewhere in section 2 of these standards, does.

In CX/MMP 02/7, IDF recommended the removal of reference to "pressed" in the description of Cheddar, as it was considered that pressing is a generally practiced in the manufacture of non-soft cheeses. The fact that the term is not defined and therefore is not measurable, and that the detail does not relate to end product description, also lead the IDF to recommend deletion.

Comments submitted:

Cuba expressed agreement with the proposals in CX/MMP 02/7, except that classification of Cheddar as a "pressed" cheese is fundamental for obtaining the characteristics and which consequently should not be deleted.

Uruguay maintained the position to refer to Danbo as a cheese of washed curd.

Discussion:

While Cheddar is pressed, a number of other dry and brine-salted cheeses are also pressed and therefore pressing per se does not uniquely distinguish Cheddar from other cheese types.

In the manufacture of Danbo, "washing" of the curd is practiced. It is a term that is not defined but refers to the 2-step process of removal of whey and addition of hot water. This process results in the heating of the curd and the dilution of the lactose content of the water phase within the curd, both employed mainly to control the composition, texture and secondary ripening. However, this technology is applied to a number of firm and hard cheese and therefore "washing" per se does not uniquely distinguish Danbo from other cheese types. Further, the fact that "washing" is not measurable unless it is defined (i.e. amounts of water removed and added, or alternatively, the degree of lactose dilution). Introduction of such a detail is considered as an unnecessary additional detail. Alternative ways of removal of lactose from the curd exist; such methods can also be applied as long as the characteristics of Danbo are maintained.

Recommendation no. 5:

No changes to current drafts are recommended.

2.4 Internal appearance – Texture of cheese mass

Background:

The type of detail (e.g. "suitable for cutting", "spreadable") is currently addressed in section 2 of the draft standards for all the 16 varieties. Considering the guidance in Appendix VII to ALINORM 03/11, this type of detail is considered as necessary to provide further clarity to the reference to the classification according to moisture on fat-free basis (soft, firm, hard, extra hard). It also indirectly relates to mouth feel and physical attributes. The current formulations are, in principle, measurable (theology) and relate to the description of the end product. In CX/MMP 02/7, IDF recommended more specific formulations in certain standards, and alignments in others.

Comments submitted:

Cuba stated that, in the case of Cheddar, neither the removed term "waxy" nor the replacement "solid and compact" was supported. In the case of Emmental, the term "compact" was not supported.

France stated that "solid" and "compact" are not frequently used to characterize the texture of cheeses, and even have a pejorative connotation. Instead, the description of texture should be subjected to a general review, using in particular such instrumental techniques as rheology.

IDF suggested that further work is carried out to develop sufficiently precise and meaningful descriptions of the characteristic texture.

Discussion:

IDF has initiated work on rheology aspects of cheese, which is foreseen to enable the development of better description of cheese texture. However, these objectives may be met within reasonable time to support the current revision of the C-standard but can eventually be used in a further revision that Codex could undertake at a later stage.

With the aim to enable the finalization of the current revision of the standards, it is considered appropriate to use terminology that to the extent possible does not create confusion, is suitable and understandable. Concerns have been expressed with regard to the terms "firm", "solid" and "compact". Alternative suggestions to replace these terms are provided below. Further, for consistency reasons, replacement for the texture descriptor "soft" is provided as well. No changes regarding texture descriptors are needed for Havarti, Provolone, Cottage Cheese, Cream Cheese and Mozzarella.

IDF continues the work initiated with the aim of identifying even better texture descriptors and will report to the CCMMP when conclusions can be made.

Recommendation no. 6:

In the standards for Cheddar, Danbo, Edam, Gouda and Samsø, replace the texture descriptor "solid and compact" with "firm-textured when pressed by thumb".

In the standard for Emmental, replace the texture descriptor "solid, compact and flexible" with "elastic, sliceable but not sticky" (see also Rec. no. 35).

In the standards for Tilsiter and Saint-Paulin, replace the texture descriptor "firm" with "firm-textured when pressed by thumb".

In the standards for Coulommiers, Camembert and Brie replace the texture descriptor "soft" with "soft-textured when pressed by thumb".

2.5 Internal appearance - Colour of cheese mass

Background:

The type of detail (e.g. "straw", "yellowish", "pale") is currently addressed in section 2 of the draft standards for all the 16 varieties. Considering the guidance in Appendix VII to ALINORM 03/11, this type of detail is considered as necessary as descriptors for the visual appearance of the variety, for distinguishing the varieties from each other, and for providing technological justification for the use of colours/de-colours, as appropriate, according to the milk and other raw materials used. The current formulations are qualitatively measurable and relate to the description of the end product.

In CX/MMP 02/7, IDF recommended that colour descriptors should not be more specific than needed to emphasize that the colour should be within the range of white/whitish to yellow/orange and not, for instance blue, greed or violet.

Comments submitted:

Cuba expressed support to the terminology used in the earlier draft versions (prior to CX/MMP 02/7) except for the term "straw", which should be replaced with "light brown".

France noted that the term "whitish" is used for many cheeses (Cottage cheese, Camembert …), and suggested to replace "whitish" by "Ivory" for Emmental, whereby the description would become "yellowish ivory".

Discussion:

Colour of the cheese mass is within certain limits of little consequence to the consumer. For example, a consumer will not be mislead or indeed put off if cheeses such as Gouda, Cheddar, Edam etc. range in colour from dark to light yellow in colour, as long as these cheeses are essentially yellow in colour (rather than green or red for example). Therefore, description of cheese colour of the *expected range* is an essential detail that can be measured by visual assessment rather than some other more precise measurement.

As qualitative, descriptive terms are considered to be a feasible solution - the terms selected need be "standardized" and consistent in their application.

Further, as the term ivory is considered to be such a "standardized" colour descriptor, it can be included wherever relevant and the term "near white" is considered as a better alternative to "whitish".

Recommendation no. 7:

Change current colour descriptions as follows:

Cheddar: "uniform whitish to yellow or orange" to become "near white or ivory through to light yellow or orange"

Danbo, Edam, Gouda, Havarti, Samsø, Tilsiter, and Provolone: "whitish to yellow" to become "near white or ivory through to light yellow or yellow"

Emmental: "whitish to yellow" to become "ivory through to light yellow or yellow"

Saint-Paulin: "uniform whitish to yellow" to become "near white or ivory through to light yellow or yellow"

Cottage Cheese and Mozzarella (high): "whitish" to become "near white"

Cream Cheese: "whitish to yellow" to become "near white through to light yellow"

Coulommiers, Camembert, and Brie: "whitish to yellow" to become "near white through to light yellow"

2.6 Internal appearance - Structure of cheese

Background:

The type of detail (e.g. "ripened from the surface", "fibrous protein structure") is currently addressed in section 2 of six of the draft standards, i.e. for Provolone, Cottage Cheese, Coulommiers, Camembert, Brie, and Mozzarella. Considering the guidance in Appendix VII to ALINORM 03/11, the type of detail is considered necessary in these standards as descriptors for the visual appearance of the varieties, for distinguishing the varieties from each other and from other varieties. The detail relates to texture, mouth feel and physical attributes. In the cases of Provolone and Mozzarella, the detail is the direct result of applying "pasta filata" processing. The current formulations are measurable (visual and for the pasta filata types, confogal scanning) and relate to the description of the end product.

In CX/MMP 02/7, IDF recommended that the formulations included in the draft standards for the white moulded varieties be aligned.

Comments submitted:

Cuba expressed agreement with the proposals stated in CX/MMP 02/07.

Recommendation no. 8:

No changes to the current drafts are required.

2.7 Internal appearance – Holes

Background:

The type of detail is currently addressed in section 2 of the draft standards for all the varieties but Cottage Cheese. Considering the guidance in Appendix VII to ALINORM 03/11, the type of detail is considered necessary in these standards as descriptors for the visual appearance of the varieties, for distinguishing the varieties from each other and from other varieties. The detail may also relate to taste. The current formulations are measurable (visual) and relate to the description of the end product.

In CX/MMP 02/7, IDF recommended that the terms "holes" and "eyes" be replaced with "gas holes" to differentiate these (deliberately developed) from splits and cracks (acceptable faults). Also recommendations for some alignment between similar varieties were recommended.

Comments submitted:

Cuba expressed agreement with the proposals stated in CX/MMP 02/07.

France noted that, in the case of Danbo, Edam, Gouda, Havarti and Samsø, the description of holes refers to foodstuffs such as "grains of rice," "peas," etc. By analogy with the terms used in these standards, France proposed, for Emmental, the terms "from a cherry to a nut" to replace "1 to 3 cm" for these naturally obtained openings.

Germany does not support the current formulation in Edam and Gouda: "distributed regularly as well as irregularly" nor the description recommended in CX/MMP 02/07. In certain cheeses, hole formation is part of the typical texture and is expected by the consumer. Eliminating these characteristics would have negative effects on the identity of the product.

Uruguay proposed, for Danbo, to remove reference to "plentiful" and to qualify reference to peas as "green peas".

Uruguay expressed the view that "holes and splits" in a Provolone is a disqualifying characteristic and suggest the sentence "a few holes and splits may occur" be removed.

Discussion:

Descriptors for hole size:

Currently, those of the draft standards that address the presence of holes as part of the variety characteristics make use of the following holes size expressions:

Comparing hole sizes with sizes of other foods and/or products raises doubt with regard to their legal impact, including questions such as:

- Does “nut” refer to e.g. walnuts, pistachio nuts, peanuts, hazelnuts or coconuts?
- Does “grain” refer to oats, maize, wheat or rice?

Further, the sizes of some of the foods referred to in the cheese standards are defined by other Codex standards (e.g. peas in Codex Stan 41, pistachio nuts in Codex Stan 131, and rice grains in Codex Stan 198.

According to the guidance (App. VII of ALINORM 03/11), the descriptors should be measurable.

However, holes are produced naturally by the action of the microorganisms present in the cheese and their size is not regular or even "calibrated". Therefore, size descriptors should be used to give an idea of the actual size of the majority and/or visually dominating holes, which can be indicated by a combination of descriptive terms and measurable values.

Consequently, the current descriptive language to describe hole size should be reviewed and supplemented by a more precise measurement, where this is lacking. However what ever values are identified they need to reflect visually dominating sizes that occur within the same cheese as well as in the same variety manufactured in different countries.

It has been noted that some of the standards include language to describe opening and splits that are acceptable irrespective of the holes descriptions (e.g. Saint Paulin, Brie and Camembert). A uniform approach to this issue is recommended as well. Consequently, it may be useful to recognize within the standards a distinction between parameters related to “characteristic holes” and generally acceptable deviations in terms of (mechanical) openings and splits.

Note that “holes” are recommended to be qualified as “gas holes”.

Distribution of holes:

The formulation of the detail in the standards for Edam and Gouda (“distributed regularly as well as irregularly”) is meaningless as it does cover all situations. A better wording is therefore needed.

Recommendation no. 9:

Descriptors for hole size:

In the relevant standards, the following language is recommended to replace the current hole size descriptors:

Variety:	Current descriptors:	Recommended revised text:
Cheddar	*“none to few mechanical openings and splits and no eyes”*	*“gas holes are generally absent, but few openings and splits are acceptable”*
Danbo	*”sizes as peas”*	*“pea sized (or mostly up to 10 mm in diameter) gas holes, but few openings and splits are acceptable”*
Edam	*”sizes up to 10 mm in diameter”*	*“rice to pea sized (or mostly up to 10 mm in diameter) gas holes, but few openings and splits are acceptable”*
Gouda	*”sizes up to 10 mm in diameter”*	*“pin´s head to pea sized (or mostly up to 10 mm in diameter) gas holes, but few openings and splits are acceptable”*
Havarti	*”of the size of large rice seeds”*	*“large rice seed sized (or mostly 1-2 mm in width and up to 10 mm in length) gas holes”*
Samsø	*”of sizes varying from pea*	*”pea to cherry sized (or mostly up to 20 mm in diameter) gas holes, but*

Variety:	Current descriptors:	Recommended revised text:
	to cherry"	*few openings and splits are acceptable"*
Emmental	*"varying in size from 1 to 3 cm"*	*"cherry to walnut sized (or mostly from 1 to 5 cm in diameter) gas holes, but few openings and splits are acceptable"*
Saint-Paulin	*"generally absent, but a few spherical or stretched (slits), smooth holes of pin´s head size"*	*"gas holes are generally absent, but few openings and splits are acceptable"*
Provolone	*"a few splits and openings may occur"*	*"gas holes are generally absent, but few openings and splits are acceptable"*
Coloummiers	*"few splits and openings may occur"*	*"gas holes are generally absent, but few openings and splits are acceptable*
Camembert	*"few splits and openings may occur"*	*"gas holes are generally absent, but few openings and splits are acceptable"*
Brie	*"few splits and openings may occur"*	*"gas holes are generally absent, but few openings and splits are acceptable"*

Distribution of holes:

In the standards for Edam and Gouda, replace the phrase "*distributed regularly as well as irregularly all over the interior of the cheese*" with "*distributed in a reasonably regular manner throughout the interior of the cheese*".

2.8 External appearance - Cuttings

Background:

The type of detail is currently addressed in section 2 of the draft standards for the three mould-ripened varieties, i.e. Coloummiers, Camembert and Brie. Considering the guidance in Appendix VII to ALINORM 03/11, the type of detail is considered necessary to permit that the whole cheese it cut into sectors both prior to and after mould development. The current formulation is measurable (visual) and relates to the description of the end product.

Comments submitted:

Cuba expressed agreement with the proposals stated in CX/MMP 02/07.

Recommendation no. 10:

No changes required

2.9 External appearance - Allowance of rind/rindless

Background:

The type of detail is currently addressed in section 2 of the draft standards for all 16 varieties. Considering the guidance in Appendix VII to ALINORM 03/11, the type of detail is considered necessary as to avoid disputes in trade. The current formulations are measurable (visual) and relate to the description of the end product.

In CX/MMP 02/7, IDF recommended the insertion of an explanatory note to clarify what is meant by the reference to "rindless cheese".

Comments submitted:

Cuba expressed agreement with the proposals stated in CX/MMP 02/07.

France proposed the term changed for Emmental, so that the presence or absence of rind is possible for all cheeses (in the form of whole cheeses and of cheese block). The wording should be "with or without rind" (as is the case in Cheddar, Danbo, etc.).

Germany stated that the conclusions should depend on the final wording regarding the allowance of ripening films for the production of rindless cheese in document 01/11 Appendix X. Further, "rindless cheese" should replace "rindless" cheese.

United States recommended that specific rind information for Emmental either be deleted or moved to the Appendix.

Discussion:

Due to recent disputes in international trade, it is considered advisable to retain reference to rind/rindless for clarify reasons.

Comments not supportive to the text in the current drafts, relate only to Emmental. Consequently, no changes are specifically required in the other standards. However, in response to the comment of Germany, it is advisable to extend the explanatory note on "rindless cheese" with a statement relating to ripening film and coating.

Recommendation no. 11:

Add to the explanatory note on "rindless cheese" contained in all of the standards but Coloummiers, Cream Cheese, Camembert, Brie and Mozzarella, the following:

"Ripening film is used in the manufacture of rindless cheese. Ripening film may also constitute the coating that protects the cheese."

With regard to Emmental, replace the current two sentences ("The cheese is sold with a hard, dry rind, [possibly manufactured by the use of ripening films – *formulation under review together with review of formulations of other ripening details*]. Emmental of block shape is also manufactured and sold without* rind") with the following:

"The cheese is manufactured and sold with or without a hard, dry rind*

*) The cheese has been ripened and/or kept in such a way that no rind is developed (a "rindless" cheese). Ripening film is used in the manufacture of rindless cheese. Ripening film may also constitute the coating that protects the cheese."

2.10 External appearance - Allowance of coatings

Background:

The type of detail is currently addressed in section 2 of the draft standards for 9 of the varieties, i.e. Cheddar, Danbo, Edam, Gouda, Havarti, Samsø, Tilsiter, Saint-Paulin and Provolone. Considering the guidance in Appendix VII to ALINORM 03/11,the type of detail provides clarity that coating is an integrated part of the cheese in the case of these 9 cheese varieties (and consequently not in the case of the other 7 varieties). The current formulations are measurable (visual) and relate to the description of the end product.

Comments submitted:

Cuba expressed agreement with the proposals stated in CX/MMP 02/07, part 1.

Germany stated that the conclusions should depend on the final wording regarding the allowance of ripening films for the production of rindless cheese in document 01/11 Appendix X.

Discussion:

The Annex on cheese surface terminology was adopted by the 26th CAC.

The reference to coatings should be retained for consistency with A-6. See also Recommendation no. 11.

Recommendation no. 12:

No changes required.

2.11 External appearance - Colour of rind/surface

Background:

The type of detail is currently addressed in section 2 of the draft standards for the 3 white moulded varieties, i.e. Coulommiers, Camembert and Brie. Considering the guidance in Appendix VII to ALINORM 03/11,the type of detail is necessary for the verification that the surface has been covered with white moulds as specified elsewhere in the section. The current formulations are measurable (visual) and relate to the description of the end product.

Comments submitted:

Cuba expressed agreement with the proposals stated in CX/MMP 02/07.

Uruguay suggested the removal of the text in the standards for Camembert and Brie "but may occasionally have red, brownish or orange coloured spots", as these spots indicate unwanted contamination.

Discussion:

Camembert, Brie and Coulommiers:

The comment of Uruguay addresses to what extent the descriptors should relate to the ideal colour appearance and to what extent minor quality deviations/defects should be included. However, colour descriptors should be used to give a basic idea of the visually dominating appearance.

In the case of certain white moulded cheeses, in particular Brie and Camembert, these spots on the surface may be developed with purpose as they in some countries are considered as an indication of extra quality.

Recommendation no. 13:

Delete the word "occasionally".

(See also review of rind information currently included in the appendices (section 9.3)).

2.12 External appearance - Appearance of rind

Background:

The type of detail is currently addressed in section 2 of 11 of the draft standards, i.e. for Danbo, Edam, Gouda, Havarti, Samsø, Emmental, Tilsiter, Saint-Paulin, Coulommiers, Camembert, and Brie. Considering the guidance in Appendix VII to ALINORM 03/11, the type of detail is necessary as descriptors for the visual appearance, the distinguishing of the varieties from other varieties, and, in the case of the white moulded varieties, for verification that the surface has been covered with white moulds as specified elsewhere in the section. The current formulations are measurable (visual) and relate to the description of the end product.

In CX/MMP 02/7, IDF recommended a number of amendments and adjustment to the formulations of this detail.

Comments submitted:

Cuba expressed agreement with the proposals stated in CX/MMP 02/07.

France requested that, in the case of Camembert, Coulommiers and Brie, the term "uniformly" be replaced by "entirely"

United States recommended that specific rind information for Emmental either be deleted or moved to the Appendix.

Discussion:

The comments made that are not in support of the current formulations, relate only to Emmental, Camembert, Coulommiers and Brie.

Emmental:

The detail needs to be considered in conjunction with the fact that the current standard does not allow coating. Consequently, for Emmental that is not manufactured as rindless, the rind is the only means to protect the cheese from damage. Consequently, the inclusion of details on the functional nature of the rind may be justified.

Camembert, Coulommiers and Brie:

Rind specifications are needed for verification that the surface has actually been covered with white moulds as specified elsewhere in the section

Keep rind information in the standard. Replace" uniformly" by "entirely", because it not necessarily uniform.

Recommendation no. 14:

No changes required with regard to Danbo, Edam, Gouda, Havarti, Samsø, Emmental, Tilsiter, and Saint-Paulin.

With regard to Camembert, Coulommiers and Brie, replace" uniformly" by "entirely".

2.13 External appearance - Typical packaging

Background:

The type of detail is currently addressed in section 2 of the draft standards for Mozzarella (high). Considering the guidance in Appendix VII to ALINORM 03/11, the type of detail is necessary to provide clarity with regard to appropriate specification of weight (not drained weight). The current formulation is measurable (visual) and relate to the description of the end product.

Comments submitted:

Cuba expressed agreement with the proposals stated in CX/MMP 02/7.

Recommendation no. 15:

No changes required.

2.14 External appearance - Shape

Background:

The type of detail is currently addressed in section 2 of the draft standards for 13 of the varieties, i.e. Danbo, Edam, Gouda, Havarti, Samsø, Emmental, Saint-Paulin, Provolone, Cottage Cheese, Coulommiers, Camembert, Brie and Mozzarella. Considering the guidance in Appendix VII to ALINORM 03/11, the type of detail a necessary descriptor the visual appearance of the varieties, and for distinguishing the varieties from each other and from other varieties. The detail relates also to the mouth feel. The current formulations are measurable (visual) and relate to the description of the end product.

In CX/MMP 02/7, IDF recommended relocation of this detail (from the appendix to section 2) in some of the standards as well as some adjustments to the formulations.

Comments submitted:

Cuba expressed agreement with the proposals stated in CX/MMP 02/07.

Germany does not support descriptions for shape because there is no technological necessity. If necessary at all these details should be transferred to the appendix of the respective standards.

United States recommended that specific shape information for Emmental either be deleted or moved to the Appendix.

United States recommended that specific shape requirements for Camembert in section 2 either be deleted or moved to the Appendix.

Discussion:

Two of the comments address the issue in general but expressed opposite views. The others comments relate to Emmental and Camembert, only.

The current draft standard for Emmental allows for two shapes: wheels and blocks. No information is available whether other shapes actually exist. It is assumed that this is not the case, wherefore the current shape descriptions is considered to be in line with the market.

The current draft standard for Camembert allows for two shapes: cylinders and squares. No information is available whether other shapes actually exist. It is assumed that this is not the case, wherefore the current shape descriptions is considered being in line with the market. For the consumer there is a particular shape and height associated with Camembert, which is still evident when the whole cheese is portioned. Therefore the priority that the consumer would usually place on the essential detail of shape and/or height for Camembert is markedly high.

Recommendation no. 16:

No changes required to the location and formulations of the current detail in the affected standards Danbo, Edam, Gouda, Havarti, Samsø, Emmental, Saint-Paulin, Provolone, Cottage Cheese, Coulommiers, Camembert, Brie and Mozzarella.

See also Rec. no. 59 concerning the appendixes to certain standards.

2.15 Appearance of whole cheese - Dimensions

Background:

The type of detail is currently addressed in section 2 of the draft standard for Cottage Cheese. Considering the guidance in Appendix VII to ALINORM 03/11, the type of detail is a necessary descriptor for the visual appearance of the variety, and for distinguishing the varieties from other varieties of fresh, soft cheeses. The detail relates also to the mouth feel. The current formulations are measurable (visual) and relate to the description of the end product.

Comments submitted:

Cuba expressed agreement with the proposals stated in CX/MMP 02/7.

Recommendation no. 17:

No changes required.

2.16 Appearance of whole cheese - Weight

Background:

The type of detail is currently addressed in section 2 of the draft standard for Emmental. However, the current formulation of the detail has been put in square brackets on the advice of IDF as further work is needed to comply with the Guidance of Appendix VII of ALINORM 03/11 to ensure that the final formulation is are measurable, technologically sound and relate to the description of the end product.

The formulation should be considered in conjunction with how the detail is addressed in Appendix 1.2 to the same standard (Rec. no. 61).

Comments submitted:

Cuba expressed agreement with the proposals stated in CX/MMP 02/7.

France stated that Emmental is recognized by the consumer in different parts of the world as a large-sized cheese with a body that has evenly distributed characteristic holes. It moreover has particular melting and topping aptitudes. In addition, the size (more than 60 kilograms for whole cheeses) combined with the heating influence the cooling of the curd and selects the active flora of the cheese during draining and ripening. Depending on the ripening conditions, it leads to physical and biochemical changes, which are characteristic of this cheese, and to obtaining its specific organoleptic qualities. To obtain the same characteristics for cheeses in block form, the minimum weight of the block should be comparable to that of the whole cheese.

France requested the retention of the phrase specifying that Emmental is traditionally made as a whole cheese of more than 60 kg and that it be placed outside brackets, because it is a widely known fact, confirmed by the scientific literature. Further, the principle of a minimum period should be maintained for the ripening, and 6 weeks was proposed. This provision could be considered as a reference value and placed outside brackets.

New Zealand noted that it is unnecessary to specify a minimum weight for Emmental, 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 recommended that specific size information for Emmental either be deleted or moved to the Appendix.

Discussion:

Some flexibility for individual countries to adapt to different consumer perception should be provided by the standard, respecting that a minimum exist. However, as a specific value for such minimum is difficult to justify it is considered appropriate to apply the "market approach", that is the lowest weight being manufactured today. The most typical weights are, according to earlier investigations, of 40 kg or more. The wording must also be phrased in a way that would not mandate the existence of a national Emmental standard.

Recommendation no. 18:

In the standard for Emmental, replace the current wording ("Emmental is traditionally manufactured as a wheel of weights of 60 kg or more, but blocks and weights above 20 kg are possible") with the following:

"*Emmental is typically manufactured as wheels and blocks of weights from 40 kg or more, but individual countries may on their territory permit weights from 9 kg and above if the consumer would not be misled with respect to the identity of Emmental*."

2.17 Flavour

Background:

The type of detail is currently addressed in section 2 of the draft standard for Emmental. The detail is considered as essential for the identity of this variety. The current formulation is measurable (sensoric) and relates to the description of the end product.

Comments submitted:

Cuba expressed agreement with the proposals stated in CX/MMP 02/7.

France preferred to use the term "fruity" instead of "sweet".

Discussion:

No government comments express disagreement with addressing the type of detail in section 2. Comment on terms used should trigger a revisit of the formulation

The term "sweet" is, compared to "fruity", more appropriate.

Recommendation no. 19:

No changes recommended (see also Rec. no. 35).

2.18 Technology - Ripening procedure

Background:

The type of detail (e.g. minimum age) is currently addressed in section 2 of the draft standards for all (14) ripened varieties, i.e. Cheddar, Danbo, Edam, Gouda, Havarti, Samsø, Emmental, Tilsiter, Saint-Paulin, Provolone, Coulommiers, Camembert, and Brie. Considering the guidance in Appendix VII to ALINORM 03/11, the type of detail is essential to obtain the essential (sensory and textural) characteristics (identity) of the varieties.

However, the current formulation of the detail has been put in square brackets on the advice of IDF as further work was needed to comply with the Guidance of Appendix VII of ALINORM 03/11, i.e. to aim at ensuring that the final formulation is measurable, technologically sound and relate to the description of the end product.

The formulation of this detail is indirectly linked to the question whether ripening enzymes should be listed in section 3.2 (see Rec. no. 24).

Comments submitted:

France recommended the fixing a minimum ripening period for cheeses that need long ripening (e.g. 6 weeks for Emmental). The implementation of alternative solutions could be studied as proposed in the document for examination at the 6th session. As the ripening period for these types of cheeses is directly related to their organoleptic characteristics, it is necessary to fix such a period, which could have the added advantage of determining a reference to allow, if necessary, for alternative solutions to obtain the same results.

Uruguay suggested that the temperature range specified for Danbo is amended into 10-15 ºC.

Uruguay expressed the view that the minimum ripening time for Provolone of 15 days seems too short taken into account the low moisture content – even for cheeses of less than 2 kg

Comments reported in ALINORM 03/11:

It was noted that there was concern with specifying this detail for cheese intended for further processing.

Discussion:

IDF has initiated investigations to identify measurable indicators that express the degree of variety specific ripening (such as extent of breakdown of alpha s1 casein and/or beta-casein, activity of various proteolytic enzymes, and minimum pH) with the objective of replacing the traditional descriptor (minimum age) with measurable descriptors that relate to the end product. The preliminary results of these studies show that huge amounts of data will be needed before sound conclusions can be made.

This means that the scientific bases for the ultimate replacement of the description of the ripening procedure (including minimum age) with analytical parameters will not be available for a number a years.

Consequently, for the time being, and for enable the finalization of the current review a more traditional approach need be followed. Sufficient scientific data may be available in the future to substantiate a second Codex review.

Therefore, the draft wording currently included in the draft standards has been reviewed and the specified numerical values contained therein have been subjected to a thoroughly review, standard by standard, based upon data collected among a number of countries.

Some varieties are slow ripened, others faster ripened, and some ripening procedures consist of 2 or 3 steps with different time/temperature/humidity conditions. All these factors add to achieving the flavour and texture characteristics of the variety. The values specified refer to a typical ripening procedure for the variety in question. However, it must be fully recognized that other ripening procedures can be used to obtain the variety.

Recommendation no. 20:

The square brackets around the paragraph addressing ripening methods should be lifted. The standard text to address detail should, with slight editorial changes, be as follows (note that the Rec. no. 24 is incorporated in the text as well):

"*For [***name of variety***] ready for consumption, the ripening procedure to develop flavour and body characteristics is normally from [***period***] at [***temperature range(s)***] depending on the degree of maturity required. Alternative ripening conditions (including the addition of ripening enhancing enzymes) may be used, provided the cheese exhibits similar physical, biochemical and sensory properties as those achieved by the previously stated ripening procedure. [***Name of variety***] intended for further processing need not exhibit the same degree of ripening*."

The additional sentence included within the above wording in the description for Emmental remains unchanged (i.e. absolute minimum of 6 weeks).

The variety specific periods and temperature ranges should be amended as follows:

Cheese variety:	**Current values:**	**Recommended reviewed values:**
Cheddar	5 weeks at 10-20 °C	5 weeks at 7-15 °C
Danbo	3 weeks at 10-20 °C	3 weeks at 12-20 °C
Edam	3 weeks at 10-20 °C	3 weeks at 10-18 °C
Gouda	3 weeks at 10-20 °C	3 weeks at 10-17 °C Further, include reference to Gouda of low weights (< 2.5 kg) in the sentence addressing cheese for further processing.
Havarti	3 weeks at 10-20 °C	depending on weight,1-2 weeks at 14-18 °C (for smear development) followed by 1-3 weeks at 8-12 °C
Samsø	3 weeks at 10-20 °C	3 weeks at 8-17 °C
Emmental	2 months at 10-25 °C	2 months at 10-25 °C
Tilsiter	5 weeks at 12-16 °C	3 weeks at 10-16 °C
Saint-Paulin	1-2 weeks at approx. 12 °C	1 week at 10-17 °C
Provolone	30 days for mild variants (15 days for weights lower than 2 kg) and 100 days for sharp variants, at 10-20 °C	1 month at 12-20 °C Further, include reference to Provolone of low weights (< 2 kg) in the sentence addressing cheese for further processing
Coulommiers	10 days at 10-14 °C	10 days at 10-16 °C
Camembert	10 days at 10-14 °C	10 days at 10-16 °C
Brie	10 days at 10-14 °C	10 days at 10-16 °C

2.19 Technology – How ripening should occur

Background:

The type of detail (e.g. use of ripening film) is currently addressed in section 2 of the draft standards for Emmental, Coulommiers, Camembert, and Brie.

Considering the guidance in Appendix VII to ALINORM 03/11, the type of detail may be needed in the case of Emmental (ripening film) depending on the outcome of ripening method (see 2.18). However, the current formulation of the detail has been put in square brackets.

With regard to Coulommiers, Camembert, and Brie, the type of detail is essential for the identity (mouthfell, flavour, physical properties and appearance). The current formulations (ripened from the surface) are measurable (visual) and do relate to the end product.

Discussion:

According to the Annex to Standard A-6 (cheese surface terminology), rindless Emmental is to be manufactured by the use of ripening film. Consequently, the reference to ripening films in the description of Emmental is redundant.

Recommendation no. 21

Delete the reference to ripening film in the description of Emmental (see also Rec. no. 11).

No changes needed in the standards for Coulommiers, Camembert, and Brie.

3.1. RAW MATERIALS

Background:

For all the standards, except Cream Cheese, the current drafts permit the use of milk and milk products of the origin of two milking species: cows and buffaloes. The rationale for including buffaloes milk can be found in the reviews presented to the 3rd Session of the CCMMP. The consequential restriction on the use of milk and milk products from other milking species is justified according to the essential characteristics of the varieties concerned, i.e. taste and texture. The formulation is measurable (various analytical methodology) and relates to the end product.

For Cream Cheese, such restriction is not considered essential.

Comments submitted:

Columbia stated that if the product is produced from cow's milk, buffaloes milks or milk of another origin, the animal origin should be declared in the labelling.

Columbia suggested that it the Cream Cheese standard specifies which type of milk origin that can be used.

Cuba expressed agreement with the proposals stated in CX/MMP 02/7.

Italy requested the deletion of the reference to buffaloes' milk as Provolone is traditionally made only with cows' milk. Italy wondered whether the reference to buffaloes' milk corresponds to a real product or whether it is an incorrect extension of the Mozzarella standard.

Discussion:

Reference is made to the GSUDT that include the following provision (section 4.1.2):

"A word or words denoting the animal or, in the case of mixtures, all animals from which the milk has been derived shall be inserted immediately before or after the designation of the product. Such declarations are not required if the consumer would not be misled by their omission."

If the CCMMP considers that consumers generally (worldwide) would be misled with regard to the milk origin if such declaration were not made, then the labelling sections of the standards for the cheese varieties of concern need to include a mandatory labelling requirement. If the CCMMP considers that this is a matter for local judgment, then the requirements of the GSUDT suffice.

Provolone made from buffaloes' milk must have the same physical, chemical and organoleptic characteristics as that made from cows milk. If this is achieved, there is no justification for not allowing buffaloes milk. Reference is made to the GSUDT that requires adequate declaration of the origin of the milk used if the consumer would be misled by the omission.

Several references report that Provolone is currently made from buffalo's milk.

Recommendation no. 22:

No changes recommended.

3.2. PERMITTED INGREDIENTS

3.2.1 Coagulants

Background:

For all the standards, the current drafts permit the use of any coagulating agents (that are not restricted by the list of food additives in section 4).

In the case of Provolone, it has been discussed whether the standard should restrict coagulants to rennet. (It should be noted that natural rennet contains a mixture of different enzymes and that the individual enzymes constituting the mixture depends on the origin of the rennet.)

It has been recognized that this issue is an integrated part of how to address ripening methods in the standards and the case of Provolone may need be reconsidered in respect of permitted coagulants.

Recommendation no. 23:

No changes required at present

3.2.2 Specific ripening agents

Background:

For most of the standards, the current drafts permit the use of ripening enzymes.

In the case of Danbo, Gouda, Havarti, Samsø, Emmental, and Tilsiter, these enzymes are not currently included.

It has been recognized that this issue is an integrated part of how to address ripening methods in the standards wherefore IDF recommended to put the current references to ripening enzymes into square brackets to indicate ongoing work on this issue.

Comments submitted:

Germany does not support ripening enzymes. The use of ripening enzymes is generally considered not necessary. To permit these substances would interfere with the traditional manufacturing procedure of cheese; negative effects on the typical properties of cheese cannot be ruled out. Germany would like to recommend that CCMMP should discuss this issue in a general manner. Reference is made to the earlier comment of the Federal Republic of Germany with regard to the CCMMP Meeting 2000.

Comments reported in ALINORM 03/11:

Details for specifying ripening agents should appear in the standards and not in the Appendix.

Discussion:

As ripening time is arguably one of the most costly phases of cheese making there will be increasing efforts in the future to minimize this time. One current possibility is to add 'ripening enhancing enzymes' to help accelerate the same, typical flavour of the cheese but at a much reduced storage time. Therefore there is definitely an argument for allowing the addition ripening agents in all ripened cheeses. Ripening enzymes are considered as ingredients and not as processing aids, as they are present in and impact the nature of the final product.

Recommendation no. 24:

Remove square brackets around safe and suitable ripening enhancing enzymes;

Insert reference to ripening enhancing enzymes in the list of permitted ingredients in the remaining standards, i.e. the standards for Danbo, Gouda, Havarti, Samsø, Emmental, and Tilsiter.

Further, to clarify that the use of these enzymes are not accommodated in the "normal" ripening procedures described in section 2 (see Rec. no. 20), the following wording should be inserted into the sentence in that section (of the standards for all ripened varieties) that addresses alternative ripening procedures. Adding, in brackets, the following notion, can do this: "*including the addition of ripening enhancing enzymes*"

3.2.3 Gelatine and starch

Background:

Currently, gelatine is listed as a permitted ingredient in the standard for Cream Cheese, where it is allowed in the same function as stabilizers.

Comments submitted:

Canada requested the addition of gelatin and starches as stabilizers to the standard for Cottage Cheese to be in line with the GSUC.

Discussion:

The functional need of stabilizers in the manufacture of Cottage Cheese is recognized due to the listing of a number of additives with stabilizers´ functionality.

Recommendation no. 25:

Add gelatin and starches to the list of permitted ingredients in the standard for Cottage Cheese, as follows:

"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."

As a consequence, replace the current statement on the use of stabilizers in section 4 of the same standard with the following (to be noted to the table):

"Stabilizers 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 gelatin and starches as provided for in section 3.2."

3.2.4 Foods added as anti-caking agents

Background:

Currently, flours are listed as a permitted ingredient in most of the standards (except Cottage Cheese, Cream Cheese and Mozzarella (high)). These substances are allowed in the same function as anti-caking agents.

Upon the advice of IDF in CX/MMP 02/7, these substances as well as anti-caking agents listed in section 4 were put in square brackets in case of the standard for Emmental, as their need was subject to further review.

Comments submitted:

France stated that the use of flour and of anti-caking agents is not considered necessary for Emmental because its of high dry matter and the applied technology which make it possible to obtain sufficiently dry surfaces.

Discussion:

The functional need of anti-caking agents in the manufacture of sliced, cut, shredded or grated cheeses is recognized in a number of standards due to the listing of a number of additives with anti-caking functionality.

Emmental does not differ from e.g. Cheddar in respect of dry matter content. There may be cases where sliced and shredded Emmental can be manufactured without the addition of anti-caking agents, however this may not always be the case.

Recommendation no. 26:

Remove the square brackets around the reference to flours and starches in the Emmental standard. Consequentially, remove also the square brackets around the anti-caking agents in section 4 of the same standard.

3.3 COMPOSITION

3.3.1 Absolute minimum fat contents

Background:

See Report no. 1 as contained in CX/MMP 02/7, part 1.

Comments submitted:

Philippines requested clarification of the scientific basis for revising the current standard for Cheddar, Cream Cheese and Mozzarella, as they are of the opinion that some of the provisions particularly in the sections for composition are not technologically doable and feasible in processing the product. We would like to reiterate the presentation of scientific basis for coming up with the proposed minimum and maximum levels.

Canada, Czech Republic & Denmark preferred a minimum FDM of 40% for Cream Cheese.

United Kingdom stated that 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. The standard needs to make provision for reduced fat cream cheeses with a FDM content of 25% and a dry matter content of 20%, in order to reflect the products currently marketed.

Poland & United States recommended a minimum FDM of 25% for Cream Cheese.

European Community explained that in many cases it is difficult to set an "absolute minimal value" for technical reasons. Therefore, the IDF proposes to establish a "marketed minimal value" instead.

Decision by the 5th Session of the CCMMP:

The Committee considered Report no. 1 of CX/MMP 02/7, part 1, and examined the values for the absolute minimum fat content that should be reflected in the individual standards. The following values were agreed upon (ALINORM 03/11, para. 89):

Cheese variety:	**Absolute minimum level:**
Cheddar	22% FDM (instead of 1% FDM)
Danbo	20% FDM
Edam	30% FDM
Gouda	30% FDM
Havarti	30% FDM
Samsø	30% FDM
Emmental	45% FDM
Tilsiter	30% FDM
Saint-Paulin	40% FDM
Provolone	45% FDM
Cottage Cheese	0% total fat (instead of 4%)
Dry curd Cottage Cheese	None
Coulommiers	40% FDM
Cream Cheese	[25%/40%] FDM
Camembert	30% FDM
Brie	40% FDM
Mozzarella (low)	18% FDM (instead of 2% FDM)
Mozzarella (high)	20% FDM

Further, the Committee agreed on an absolute minimum total fat value of 0% for "Cottage Cheese" (unqualified) and to state "none" in the case of "Dry Curd Cottage Cheese" (para. 89 of ALINORM 93/11).

With regard to Cream Cheese, two alternative values were identified, but not concluded upon. It was agreed to address the level during the discussion of the individual variety standard, especially as to the different connotations for the term "cream cheese" in English and non-English speaking countries (ALINORM 03/11, para. 90)

Discussion:

The Committee still needs to conclude on the absolute minimum fat level to be specified for Cream Cheese. Further, the decision on Cottage Cheese makes it necessary to review the construct of section 3.3 of that standard.

Cream Cheese:

From discussions on this subject over a number of years, it appears that (at least) two differing views exist regarding the minimum fat content of Cream Cheese.

- Cream Cheese is characterized by being based on Cream and consequently should have a relatively high(er) minimum fat content (min. FDM ≥40%)
- Cream Cheese is characterized more by its physical and sensory properties rather than its fat content; this type, which may have a relatively low(er) minimum fat content, has been developed in response to consumer demand for lower fat variants of products and to national nutritional advice to reduce total fat and saturated fat consumption.

In developing international standards it is necessary to identify those products on a global basis that reasonably fall within a particular category or "standard" and then to broadly define the standard in a manner that will encompass the products identified.

It is reasonable to consider the following in setting known values for FDM and fat mass:

(a) the lowest FDM identified for products on a global basis that reasonably fall within a this particular standard, respecting relevant physical and sensory criteria, that can be manufactured using practical technology – a value of 25% is the lowest value identified by government comments, and

(b) the minimum fat mass level should be higher than that of just milk itself, i.e. above 5.5%, since the Standard uses the word "cream".

The min. total solids level can be established by calculation on the basis of min. 5.5 total fat content. The corresponding level is 22%.

The implications of the above approach also need to be addressed in the Labelling Section of the Standard. Therefore in addressing the name of the food in the labelling of cream cheese it is necessary to allow for the two types of Cream Cheese outlined above. The recommended wording will allow some countries to use designations such as *Medium Fat Cream Cheese* (in line with CODEX STAN A-6) for the product with an FDM content between 25% and 40% FDM while other countries can prevent the use of the designation Cream Cheese, even with a qualifier, on the grounds that consumers there would have an erroneous impression of the character and identity of the cheese. By way of example, a designation such as "Medium Fat Soft Cheese" together with a Brand Name could be used there. Indeed, countries that wish to have a min. %FDM for Cream Cheese set at a level above 40% could also do so under these proposals.

Cottage Cheese:

The alignment of the absolute minimum fat contents of "Cottage Cheese" and "Dry Curd Cottage Cheese" makes it no longer relevant to format section 3.3 to address to different products. Instead, the term "dry curd" can be regulated as a qualifier in section 7.1 of that standard.

Recommendation no. 27:

Cream Cheese:

In section 3.3, replace the text with the following:

Milk constituent:	*Minimum content (m/m):*	*Maximum content (m/m):*	*Reference level (m/m):*

Milkfat in dry matter:	*25%*	*Not restricted*	*60-70%*
Moisture on fat free basis:	*67%*	*-*	*Not specified*
Dry matter:	*22%*	*Restricted by the MFFB*	*Not specified*

Compositional modifications beyond the minima and maxima specified above for milkfat, moisture and dry matter are not considered to be in compliance with section 4.3.3 of the Codex General Standard for the Use of Dairy Terms (CODEX STAN 206-1999).

***Note**: Recommendations no. 30 has been incorporated in the above table*

In section 7.1, replace the third para. (which addresses modifications in fat contents) with the following two paragraphs:

"The designation of products in which the fat content is below or above the reference range but equal to or above 40% fat in dry matter as specified in section 3.3 of this Standard shall be accompanied by an appropriate qualification describing the modification made or the fat content (expressed as fat in dry matter or as percentage by mass), either as part of the name or in a prominent position in the same field of vision. The designation of products in which the fat content is below 40% fat in dry matter but above the absolute minimum specified in section 3.3 of this Standrd shall <u>either</u> be accompanied by an appropriate qualifier describing the modification made or the fat content (expressed as fat in dry matter or as percentage by mass), either as part of the name or in a prominent position in the same field of vision, <u>or alternatively</u> the name 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, in either case provided that the designation used does not create an erroneous impression the retail sale regarding the character and identity of the cheese."

<u>Cottage Cheese</u>:

Replace section 3.3 with the following (changes recommended to section 7.1 – see Rec. no. 51):

<u>Milk constituent:</u>	*<u>Minimum content (m/m):</u>*	*<u>Maximum content (m/m):</u>*	*<u>Reference level (m/m)</u>:*
Milkfat:	*0%*	*Not restricted*	*4-5%*
Fat free dry matter:	*18%*	*Restricted by the MFFB*	

Compositional modifications beyond the minimum and maximum specified above for fat free dry matter are not considered to be in compliance with section 4.3.3 of the Codex General Standard for the Use of Dairy Terms (CODEX STAN 206-1999).

***Note:** Recommendations no. 29 and 30 have been incorporated in the above table*

3.3.2 System/format of composition tables

Background:

Reduction and enrichment of the fat content from a reference level has to be followed up by corresponding and different dry matter contents in order to maintain equivalent levels of MFFB. Alternatively, the MFFB range appropriate to the variety in question would need to be specified.

IDF has earlier discouraged inclusion of MFFB- ranges characteristic of each the varieties.

Instead, IDF has recommended (as used in those old un-revised cheese standards included reduced fat versions) providing sets of criteria consisting of different fat in dry matter levels, as appropriate for the variety in question, combined with minimum dry matter contents which approximately ensure the retention of the MFFB content as characteristic for the variety in question.

The presentation/format ensures that a similar texture of a particular cheese type is maintained at all those fat levels specified in the standard for the cheese variety in question. The reasoning for the current format is provided in details on pages 47-51 of CL 1997/36-MMP. Eight different options were considered in depth, which led to the recommended approach.

It should be noted that it is not appropriate to use MFFB to compare between two significantly different varieties. Instead, MFFB can be used to compare two variants within the same variety, i.e. principally independent from the cheese technology used. When the fat content is altered as the only cheese manufacturing parameter, then the retention of MFFB ensures that fat is not replaced with water and vice versa. The various sets of dry matter/fat in dry matter combinations stated in the draft standards for individual cheese varieties have been established using the principle of retaining the MFFB content of the reference cheese.

Comments submitted:

France considered that the presentation of the composition for some individual standards is still too complex and wished that the Committee would re-examine this matter to simplify it.

France proposed that the standard for Gouda be simplified as follows:

FDM	DM
30 – 40 →	48 %
40 – 48 →	50 %
48 – 55 →	55 %
> 55 %	60 %

France considered, as afore-indicated, that the composition of Saint-Paulin could be limited to 40% fat and 40% dry matter. These values also correspond to the product of reference.

Discussion:

In some cases, notably where the number of FDM/DM categorizations is extensive, mergers of some of the categories could be considered. (Note that the compositional criteria for Cottage Cheese and Cream Cheese are constructed differently from the other varieties.)

In particular, for the reference fat ranges specified in section 3.3 (for the purpose of naming – not nutritional claims), there is no need to identify more than one set of FDM-DM.

Further, sets of FDM-DM can be identified in steps of 10% FDM, where appropriate.

Recommendation no. 28:

Cheese variety:	**Recommended FDM ranges for which DM values are specified:**
Cheddar:	22-less than 30%; 30- less than 40%; 40- less than 48%; 48- less than 60%; >60%
Danbo:	20- less than 30%; 30- less than 40%; 40- less than 45%; 45- less than 55%; >55%
Edam:	30- less than 40%; 40- less than 45%; 45- less than 50%; 50- less than 60% >60%
Gouda:	30- less than 40%; 40- less than 48%; 48- less than 60%; >60%
Havarti:	30- less than 40%; 40- less than 45%; 45- less than 55%; 55- less than 60%; >60%
Samsø:	30- less than 40%; 40- less than 45%; 45- less than 55%; >55%
Emmental:	45- less than 50%; 50- less than 60%; >60%
Tilsiter:	30- less than 40%; 40- less than 45%; 45- less than 50%; 50- less than 60%; 60-85%
Saint-Paulin:	40- less than 60%; >60%
Provolone:	45- less than 50%; 50- less than 60; >60%
Coulommiers:	40- less than 50%; 50- less than 60%; >60%
Camembert:	30- less than 40%; 40- less than 45%; 45- less than 55%; >55%
Brie:	40- less than 45%; 45- less than 55%; 55- less than 60%; >60%
Mozzarella (low):	18- less than 30%; 30- less than 40%; 40- less than 45%; 45- less than 50%; 50- less than 60%; 60- less than 85%
Mozzarella (high):	20- less than 30%; 30- less than 40%; 40- less than 45%; 45- less than 50%; 50- less than 60%; 60- less than 85%

3.3.3 Content of dry matter

Comments submitted:

France proposed that the standards be simplified; for the proposals to cover Gouda as well as Baby Gouda, the F/DM and DM values should be modified as follows:

F/DM	DM
30 – 40 →	48 %
40 – 48 →	50 %
48 – 55 →	55 %
> 55 %	60 %

If these proposals cannot be adopted, then specific values should be fixed for Baby Gouda.

Germany stated that the Reference to 'Mini' in the standard for Samsø is superfluous. Both tables could be merged in one column.

Germany stated that, due to the risk of misleading the consumer, the minimum dry matter content for cottage cheese should be 18% instead of 20%.

Discussion:

As a consequence of the decision to amend minimum content of milkfat in dry matter for Cheddar into 22% (instead of 1%) and for Mozzarella with low moisture content to 18% (instead of 2%), the corresponding dry matter values for products with FDM contents below these levels should also be removed.

Gouda: Taking into consideration the consequential of Rec. no. 28, the remaining part of the proposal of France is to lower the minimum DM content from 52% to 50% in Gouda with FDM contents from 40-48%, or, alternatively, to allow such lower DM contents for "Baby-Gouda". It is suggested to insert a notion stating that Gouda with 40-48% FDM can be sold with a DM content of min. 50% provided that the name is qualified by the term "baby".

Samsø: Reference to "Mini-Samsø" can be deleted from the standard for the sake of simplicity.

Cottage Cheese:

The minimum DM specifications for both varieties of Cottage Cheese will necessarily have to be aligned due to the decision of the CCMMP to align the absolute minimum fat levels (0% and "none", respectively). To eliminate the impact of the fat content on the dry matter content, it would be more appropriate to specify the "fat-free dry matter" content.

Recommendation no. 29:

Cheddar: Remove dry matter specification for products with FDM contents below 22%.

Gouda: Insert the following notion after the table: "*Gouda with between 40 and 48% FDM can be sold with a DM content of min. 50%, provided that the name is qualified by the term "baby"".*

Samsø: Remove the reference to Mini-Samsø in the table and in section 7.1.

Cottage Cheese: Replace the current DM specifications with "min. 18% fat free dry matter".

Mozzarella (low): Remove dry matter specification for products with FDM contents below 18%.

3.3.4 Reference fat levels

Comments submitted:

Canada pointed out that the English and French versions of the standard for Saint-Paulin were not the same with respect to reference FDM content, and supported the FDM reference level of 45-55%.

United States recommended that the reference fat content for Cottage Cheese be established at 4%.

United States recommended that the reference level for milkfat in Cream Cheese be established at 70%.

European Community noted that the standards lay down 2 levels for FDM: a reference value and an absolute "minimal value". The cheeses the level of which is within the range of both values can be called "fat reduced".

Discussion:

Saint-Paulin: The correct version states a reference range of 40-50% in section 3.3.

Cottage Cheese: 4% is already stated in the current draft. However, similar to the other standards, a range should replace the figure to indicate the composition that does not trigger the need for qualifiers. The figure of 4% is to be retained for comparison when using nutritional claims.

Cream Cheese: The dominating version on the market is 60% FDM. However, similar to the other standards, a range should replace the figure to indicate the composition that does not trigger the need for qualifiers. The figure of 60% is to be retained for comparison when using nutritional claims.

Recommendation no. 30:

Correct the reference figures in the French version of the standard for Saint-Paulin.

For Cottage Cheese, replace the reference level of 4% fat with a reference range of 4-5% fat

For Cream Cheese, replace the reference level of 60% fat with a reference range of 60-70% fat

3.3.5 Protein content

Comments submitted:

Colombia suggested expressing the protein content as protein content in the cheese and with the following limits: 6% for unripened cheese and 10% for ripened cheese.

Discussion:

The CCMMP have for some time considered the establishing of minimum protein levels in cheese (as part of Standard A-6). At its 5th session, the Committee decided to proceed instead with the consideration of a principle that states that cheese manufacture results in a concentration of the protein of the "milk" from which it is derived.

It is assumed that the proposal of Colombia would be covered by the insertion of such a principle into the general cheese standard.

Recommendation no. 31:

No changes recommended.

3.4 OTHER ESSENTIAL IDENTITY DETAILS

3.4.1 Starter cultures

Background:

The type of detail is currently addressed in section 3.4 of the draft standards for Emmental and Provolone.

Considering the guidance in Appendix VII to ALINORM 03/11, the type of detail is considered essential in the case of these two varieties for ensuring the development of the characteristic taste and, in the case of Emmental, gas holes. However, in CX/MMP 02/7, IDF stated that the formulation currently included in the Emmental standard needs to reviewed with a view to ensure the inclusion of all starter species necessary.

The current formulation does not relate to end product but is measurable.

Comments submitted:

Cuba expressed agreement with the proposals stated in CX/MMP 02/7.

France: It is necessary to add thermophilic starters that produce lactic acid, as this is a characteristic of Emmental technology that intervenes on a major scale in the ripening of this cheese. Further, the addition of propionic acid bacteria to Emmental and their development is a specific point of Emmental that should be kept in the standard.

Uruguay suggested the inclusion of characteristic cultures used in the manufacture of Camembert and Brie, as these are essential characteristics. An alternative acceptable option would be to incorporate into the main body of the standard, the information currently located in the Appendix, in particular with respect to the information related to method of production.

Discussion:

Emmental:

Primary starters used in the manufacture of Emmental:

Emmental is characterized by the use of relatively high manufacturing temperature profiles and the use of thermophilic starter cultures. The cultures commonly used are *Str. thermophilus* in combination with one or more of the thermophilic lactobacilli. Sometimes mesophilic starter strains are also included in the starter combinations*.

*) In traditional cheese making, the milk used for the manufacture of the cheese is likely to contain some mesophilic lactic acid bacteria. These wild mesophilic strains will contribute to acid production (along with any added cultures) in the early stages of manufacture. This milk will also often contain sufficient natural propionibacteria to make separate inoculation with propionibacteria cultures unnecessary.

The thermophilic cultures may comprise specially selected strains, or may be traditional "natural" cultures derived from calf-vell/whey preparations. Selected strains of propionibacteria are needed.

The thermophilic streptococci and lactobacilli in combination enjoy a symbiotic relationship, one producing growth stimulants for the other partner. In utilizing the lactose, the thermophilic streptococci form galactose – they are unable to utilize this, and it accumulates in the curd. However, most thermophilic lactobacilli will be able to utilize this galactose. The balance of thermophilic streptococci and lactobacilli, and the extent to which the lactobacilli will utilize galactose are therefore key factors influencing the cheese pH, and the environment that will be produced in the young cheese for the later ripening steps.

Secondary microorganisms used in the manufacture of Emmental:

The primary role of secondary flora cultures is not acid production during manufacture, but growth during the later ripening stages where they utilize lactate. The propionic acid and CO2 that they form are particularly important for giving the cheese its typical flavour and eyes. The propionibacteria cultures are added together with the primary acid-producing organisms at the start of cheese making. In some cases the cheese maker does not add selected propionibacteria cultures to the milk, but instead relies on the presence of sufficient wild propionibacteria present in the cheese milk. Whatever the source of the propionibacteria it is evident that they must be robust enough to withstand the manufacturing process, particularly the cooking process, in order to be able to initiate growth at the start of cheese ripening in the environment created by the primary starter cultures.

Brie and Camembert:

Reference is made to the discussion leading to Recommendation no. 68.

Recommendation no. 32:

The following wording for the Emmental standard is recommended:

"Emmental is obtained by microbiological fermentation, using thermophilic lactic acid producing bacteria for the primary (lactose) fermentation; the secondary (lactate) fermentation is characterized by the activity of propionic acid producing bacteria."

With regard to Provolone, no changes required.

With regard to Coulommiers, Camembert and Brie, see Rec. no. 69.

3.4.2 Appearance of whole cheese - Dimensions

Background:

The type of detail is currently addressed in section 3.4 of the draft standards for Coulommiers, Camembert and Brie.

Considering the guidance in Appendix VII to ALINORM 03/11, the type of detail is considered essential in these varieties for ensuring the characteristic ripening performance (surface to center). The formulation currently included in these standard relates to end product and is measurable.

Comments submitted:

Cuba expressed agreement with the proposals stated in CX/MMP 02/7.

United States recommended that the size requirements for Camembert and Brie in section 3.4 be moved to the Appendix.

Discussion:

For the consumer there is a particular shape(s) and height associated with Camembert and Brie, which is still evident when the whole cheese is portioned. Therefore the priority that the consumer would usually place on the essential detail of shape and/or height for these cheeses is markedly high.

Further, one of the characteristics of Brie and Camembert is that the mould ripening takes place from the surface to the center of the cheese. With time, mould ripening results in the deterioration of texture and sensory qualities of the cheese. Such deterioration occurs first in the outer layers of the cheese and later in the center of the cheese. In order to maintain suitability of the food, i.e. full maturation of the center does not occur significantly later than full maturation of the surface, a maximum height is necessary. However, in order to accommodate for some variation, the maximum height could be specified as “approximately 5 cm”

Recommendation no. 33:

Replace “Height: max. 5 cm” with “Maximum height: approx. 5 cm” in the standards for Coulommiers, Camembert and Brie.

3.4.3 Appearance of whole cheese – Weight

Background:

The type of detail is currently addressed in section 3.4 of the draft standards for Coulommiers, Camembert and Brie.

Considering the guidance in Appendix VII to ALINORM 03/11, the type of detail is considered essential for distinguishing these, relatively similar varieties. The formulations currently included in these standards relate to end product and is measurable.

Comments submitted:

Cuba expressed agreement with the proposals stated in CX/MMP 02/7.

United States recommended that the weight requirements for Camembert and Brie in section 3.4 be moved to the Appendix.

Discussion:

Except for Cuba (expressing agreement), no government comments have been submitted on Coulommiers. No changes to this draft standard are needed.

With regard to Camembert and Brie, there seems to be good arguments for distinguishing according to weight. Although the US requests relocation, it is still considered advisable to retain such specifications. Together, the three standards cover all weights below 3.5 kg thus leaving no dead zones..

In order to accommodate for some flexibility with regard to the precise weight, the weight specification could be qualified with the term "approximately "

Recommendation no. 34:

Amend the weight specification for the two standards affected, as follows:

- Camembert: Replace "min. 80 g; max. 500 g" with "approx. 80 g to 500 g"
- Brie: Replace "min. 500 g; max. 3500 g" with "approx. 500 g to 3500 g"

3.4.4 Technology – Curd treatment to control end product characteristics

Background:

The type of detail is currently addressed in section 3.4 of the draft standard for Emmental.

Considering the guidance in Appendix VII to ALINORM 03/11, the type of detail is considered essential for achieve a number of essential characteristics of this variety. The formulations currently included in these standard needs further work, wherefore the IDF in CX/MMP 02/7 recommended putting the current wording into square brackets.

Comments submitted:

France stated that Emmental is considered as a cooked, pressed cheese in the international scientific literature. PF Fox (University of Cork, Ireland) has classified the major categories of cheeses according to the temperature at which the curds are heated. M Walstra (NL) confirmed these indications for Dutch cheeses. The categories established by Fox are as follows:

- Low heating temperature: e.g. Gouda (Walstra 33°C).
- Medium heating temperature: e.g. Cheddar (43°C: cf. Codex standard).
- High heating temperature: e.g. Emmental, Gruyère, Beaufort (50°C: cf. Codex standard for Emmental).

For Emmental, a heating temperature above 50°C is applied in many countries.

France requested this temperature to be a reference. Nevertheless, France would not, if it helped reach a consensus, object to a slight difference from this value be permitted, within specified limits, provided such differences made it possible to obtain the same end product characteristics on the basis of verifiable criteria.

Switzerland proposed the following wording for section 3.4 in the Emmental standard instead of the text in the square brackets: "... to a minimum temperature of 50° C for a time required to have an optimal thermophilic fermentation."

Comments reported in ALINORM 03/11:

It was suggested to delete, in the standard for Emmental, the value of 50 ºC. It was also suggested to maintain 50 ºC and specify a time/temperature relationship. There was no agreement on this issue.

Discussion:

After very careful and thorough investigation of the science and technology behind the cooking of Emmental, and investigating current practices, every thinkable route to resolve this issue has been considered and discussed at length. It will take up to much space in this document to describe these efforts, but it can be done orally at the CCMMP Session upon request.

The resulting outcome of this work is the package as recommended below, involving a number of sections of the standard. It should be noted that all recommended amendments to the standard outlined below constitute a combined solution and that any further changes of may impact the balance obtained.

The key issue has been whether or not to make reference to the temperature of 50 °C. The objective of the reviewers has been to find other ways of expressing the characteristics of Emmental in such a way that people would feel comfortable with leaving out such reference. The reviewer considers that this has almost been achieved, although it is noted that sufficient data are currently not available to include additional parameters such as the ratio of alfa-s1-/beta caseins. As a consequence, IDF recommends to insert an explanatory note to the recommended normative text of the standard ("*The curd is heated after cutting to a temperature significantly above* the coagulation temperature*"), which include a reference to the temperature of 50 °C. It is considered that inclusion of the 50 °C in it's submitted context ("...in many cases...") is the only acceptable manner it which this parameter should be used in the standard. A mandated cooking temperature without the possibility of other cheese making methods ("...in other cases...") would not reflect the technological possibilities that currently exist.

The reviewer has also considered the current reference to "raw milk Emmental", and concluded that reference to 50 °C could be particularly related to traditional technology as "raw milk cheese" has not been defined by Codex, as "raw milk Emmental" can be manufactured using cooking temperatures different from approx. 50 °C as can Emmental made from pasteurized milk, and as new technologies include combination of heat/no heat at any intensity with other techniques such as microfiltration, high pressure, etc.

Recommendation no. 35:

The following constitutes a "package" of criteria that is considered appropriate to replace the current specification of a time/temperature combination for curd treatment.

In section 2:

- Replace "solid, compact and flexible texture" with "elastic, sliceable and not sticky texture" (see also Rec. no. 6)
- Retain the description of typical flavour (see Rec. no. 19)

In section 3.3:

- Include a minimum criterion for the content of propionic acid in cheese ready for sale, with a minimum value of 150 mg/100g, and with an explanatory note that states that the purpose of this criterion is to provide a measure for the validation of whether the fermentation and ripening conditions includes the activity of propionic acid producing bacteria.
- Include a minimum criterion for the content of calcium in cheese, with a minimum value of 800 g/100g, and with an explanatory note that states that the purpose of this criterion is to provide a measure for the validation of whether the curd management and pH development is appropriate.
- Retain the minimum dry matter contents specified (see Rec. no. 27, 28 and 29).

In section 3.4:

- Apply the wording addressing essential starter cultures, as recommended in Rec. no. 32.
- Replace the last sentence with the following: "*The curd is heated after cutting to a temperature significantly above the coagulation temperature*." with and explanatory note to the notion "significantly above", as follows:

  "*The temperature required to obtain the compositional and sensory characteristics specified by this Standard depends on a number of other technology factors, including the suitability of the milk for Emmental manufacture, the choice and activity of coagulating enzymes and of primary and secondary starter cultures, the pH at whey drainage and at the point of whey removal, and the ripening/storage conditions. These other factors differ according to local circumstances: In many cases, in particular where traditional technology is applied, cooking temperatures of approx. 50 °C is typically applied; In other cases, temperatures above and below are applied."*

In section 4:

- The addition of propionic acid and its salts should not be permitted so as to avoid circumvention of the compositional requirements for propionic acid, as specified above.

4. FOOD ADDITIVES

Background:

The approach followed so far by the CCMMP is to ensure that the additives granted for use are technologically justified for the cheese variety in question. In other words, any additive is considered on a standard-by-standard basis and inclusion is based upon the specific technological justification.

4.1 General considerations

Comments submitted:

Canada supported the concept of permitting additional additives for products with nutrition claims, but only below a FDM level to be determined.

France supported the suggested approach (Rec. no. 6). The CCMMP must maintain its role of expertise in developing technological justifications for additives and must draw up a list of additives, on a standard-by-standard basis, if necessary more restrictive than the list that applies to a product category specified by the general standard. It is necessary to clarify, with the CCFAC, the connections needed between the general standard for "Additives" and the standards for products.

Germany expressed the opinion that the number and extent of additives allowed should not be increased without due technological reasons.

Discussion

The approach followed so far by the CCMMP should continue, i.e. that it is ensured that the additives granted for use are technologically justified for the cheese variety in question.

Standard A-6 includes potassium chloride as an alternative to sodium chloride. However, sodium chloride is not classified as an additive whereas potassium chloride is. In the case that the latter should be allowed as an alternative to sodium chloride, it need be listed as a permitted additive.

Note that calcium chloride is recognized as a processing aid, although it is classified as an additive as well.

When endorsing the additives provisions of the standard for creams and prepared creams and the standard for fermented milks, the CCFAC welcomed the approach to include an overview of which functional classes of additives that have been technologically justified. It is considered appropriate to pursue this approach in other standards for milk products as well.

Recommendation no. 36:

Any additive should be considered on a standard-by-standard basis and inclusion should to be based upon the specific technological justification.

Add INS 508 Potassium chloride at GMP level in all the standards under consideration.

Insert tables that provide overviews of the functional additives classes that have been technologically justified in each of the standards to supplement the list of additives.

4.2 Additives in standards for unripened cheese varieties

Background:

The parent standard relevant for additive provisions in standards for the unripened cheese varieties under consideration (i.e. Cottage Cheese, Cream Cheese and Mozzarella) is the Group Standard for Unripened Cheese Including Fresh Cheese (Codex Stan 221-2001). This standard includes a list of additives that are generally permitted in this type of cheese. An overview of how the various functional classes of additives are currently addressed in the current (draft) standards is provided below.

Functional class:	Codex Stan 221	Cottage Cheese	Cream Cheese	Mozzarella
Colours	X		X (to obtain a whitish to yellow colour)	X (to obtain a whitish colour)
Acids	X	X	X	X
Acidity regulators	X	X	X	X
Stabilizers/thickeners	X	X	X	
Modified starches	X	X	X	
Preservatives (in cheese mass)	X	X	X	
Preservatives (surface treatment)	X		X	X (for low moisture only)
Foaming agents	X		X (for whipped products only)	
Anti-caking agents	X (surface treatment of sliced, cut, shredded and grated products only)			X (surface treatment of sliced, cut, shredded and grated low moisture products only)

4.2.1 Colours

Comments submitted:

France does not approve the use of colorants and would like to see their possible use examined on a standard-by-standard basis.

India referred to the decision at the second session of the CCMMP to delete no. 140 and 141 from the list of permitted additives in Codex Stan-208-1999 for Cheeses in Brine as use of these colours can mislead the consumers about the true identity of the product and proposed deletion of these additives viz. INS 140 & 141 from the list of permitted colours for Mozzarella.

Poland pointed out that

a) some of the colours are not permitted in cheese (no. 171, 101, 140, and 141),

b) no. 100, 160e, and 160f are permitted in edible cheese rind.

c) some additives listed are classified as food ingredients (turmeric),

United States noted that the colours no. 160f, 140, 141i, and 141ii are not permitted for use in foods sold in the US, as foods containing these colours are deemed adulterated when sold in the US.

Discussion:

None of the above comments relate to the additives currently listed for Cottage Cheese. Only the information provided by Poland (INS 171) relates to Cream Cheese.

Mozzarella:

INS 101 (Riboflavin) is permitted by the GSFA: Should be retained.

INS 160 a(i) (carotenes (synthetic)) is permitted at 35 mg/kg by the GSFA: Limit should be changed

INS 140 & 141 (chlorophylls): The use of these in Mozzarella does not present a risk of misleading consumers. They are permitted by the GSFA and the GSUC.

INS 171 (titanium dioxide): The use of these in Mozzarella does not present a risk of misleading consumers. They are permitted by the GSFA and the GSUC.

Recommendation no. 37:

Cottage Cheese and Cream Cheese: No changes required

Mozzarella: Amend limit of INS 160 a(i) into 35 mg/kg

4.2.2 Preservatives

Comments submitted:

Canada requested that the listing of preservatives should be duplicated after the listing of acids in Mozzarella as it now appears that preservatives are only permitted for sliced, cut, shredded or grated cheese. Finally, the addition of no. 235 (pimaricin) for surface/rind treatment only is supported.

Colombia stated that its national legislation permits up to 12.5 ppm of pimaricin (natamycin) for all cheese except Mozzarella. Further, it permits up to 1000 ppm of salts of ascorbic acid and benzoic acid in ripened cheese, whereas the standards permit 1000 ppm for Mozzarella and 3000 ppm for all other varieties. With regard to propionic acid and its salts, national legislation permits up to 100 ppm, prohibits its use in Mozzarella, whereas the standards state 3000 ppm.

Colombia noted that the use of benzoic acid and their salts is not allowed in Mozzarella.

Germany is generally not in favour of the use of nisin and natamycin. Where the use of nisin and natamycin seems obligatory for the manufacturing of certain individual cheeses, this should be justified in the individual case.

Germany stated that the use of nisin (ISN 234) is not permitted for unripened cheese in the European Union and is therefore rejected. Likewise, Germany requests the deletion of natamycin (235). The manufacture of unripenend cheese "with rind formation" does not seem to be the rule. A general need for surface treatment with natamycin in unripened cheese is not seen.

Poland pointed out that

a) no. 200 and 203 can be used at max 1 g/kg in unripened cheeses and sliced cheeses,

b) no. 280 and 283 are permitted only to cheese surface at GMP level,

c) no. 235 can be added in amount of 1 mg/dm^2 of the cheese surface, and

United States recommended the inclusion of no. 235 (pimaricin) at a maximum level of 20 mg/kg applied to the surface of the cheese or added during the kneading and stretching process to provide for extended shelf life through the elimination of yeast and moulds and preclusion of mycotoxin development.

Discussion:

None of the above comments relate to the additives currently listed for Cottage Cheese.

Mozzarella:

The current draft standard does not include ascorbic acid, benzoic acid or their salts. Propionic acid is permitted at GMP level without prescribing a specific numerical limit.

Although Mozzarella is an unripened cheese, the low moisture version of this variety can have a long shelf life and is therefore susceptible to surface mould damage. Consequently INS no. 235 (pimaricin) should be added for Mozzarella (low moisture) in the same way as in the GSUC, that is:

- temporarily endorsed for surface treatment in amounts not exceeding 2 mg/dm^2 and not present in a depth of 5 mm and

Cream Cheese:

INS 234 (nisin) is an important preservative, especially for those products traded without the cold chain, wherefore this preservative should be retained.

INS 235 (pimaricin) can be removed as requested by Germany.

INS 1105 (lysozyme) is normally handled as an additive by Codex due to its preservative functions. As it is used to prevent growth of gas producing bacteria in packaging it should be permitted by the standard.

Recommendation no. 38:

Cottage Cheese: No changes required

Mozzarella (low moisture): Add INS 235 (pimaricin) for Mozzarella as follows:

- temporarily endorsed for surface treatment in amounts not exceeding 2 mg/dm^2 and not present in a depth of 5 mm and

Cream Cheese: Remove INS no. 235 (pimaricin) and add INS 1105 (lysozyme) at GMP.

4.2.3 Acids

Comments submitted:

Colombia noted that the use of ascorbic acid is not allowed in Mozzarella.

IDF had identified the following additional acids that is in use in Cream Cheese and therefore should be added to the standard: No. 574

Discussion:

None of the above comments relate to the additives currently listed for Cottage Cheese.

Ascorbic acid is currently not listed in the standard for Mozzarella.

In the case of Cream Cheese, 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)

Recommendation no. 39:

Cottage Cheese and Mozzarella: No changes required

Cream Cheese: Add INS no. 574 at GMP level.

4.2.4 Acidity regulators

Comments submitted:

IDF identified the following additional acidity regulars that are in use in Cream Cheese and therefore should be added to the standard: No. 261-263, 325-327, 350-352, 577, and 578.

Discussion:

Mozzarella:

INS 339,340, 341 (phosphates) are permitted by the GSFA at 10000 mg/kg. Limit should be changed.

INS 504 (magnesium carbonate) is permitted by the GSFA and is included in the current draft.

Cream Cheese:

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).

Consequently, INS No. 261-263, 325-327, 350-352, 577, and 578 should added at GMP.

Recommendation no. 40:

Cottage Cheese: No changes required

Mozzarella: Amend limit of INS 339,340, 341 (phosphates) into 10000 mg/kg.

Cream Cheese: Add INS No. 261-263, 325-327, 350-352, 577, and 578 at GMP.

4.2.5 Anti-caking agents

Comments submitted:

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

Recommendation no. 41:

Cottage Cheese and Cream Cheese: No changes required

Mozzarella: Add INS 460 (i) for sliced, cut, shredded and grated Mozzarella (low moisture) at GMP.

4.2.6 Stabilizers etc.

Comments submitted:

Czech Republic pointed out that Cottage Cheese and Mozzarella produced in the country do not contain any stabilizers and modified starches.

Poland pointed out that

a) some of the additives are not permitted in cheese (no. 405, 416, 1421, 1423),

b) some additives listed are classified as food ingredients (no. 1400, 1401, 1402, 1403, 1405),

New Zealand requested the inclusion of carrageenan (no. 407) and the following gums for Mozzarella with low moisture content: no. 410, 412, and 415-417.

Discussion:

None of the above comments relate to the additives currently listed for Cottage Cheese.

Mozzarella:

Carrageenan interacts with the κ-casein altering the way in which the casein micelle aggregates

INS 407, 410, 412, 415, 416 and 417 are permitted by the GSFA and the GSUC. Should be added (GMP)

Cream Cheese:

INS 339,340, 341 and 341(i) (phosphates) are permitted by the GSFA at 10000 mg/kg. The limit should therefore be changed. INS 452 (polyphosphates) is not currently included in the GSFA but serves the same functions in cream cheese as the other phosphates. INS 405 (propylene glycol alginate) is permitted by GSFA and the GSUC, the latter at a maximum level of 5 g/kg.

INS 418 (Gellan Gum) is permitted by the GSFA. Gellan gum should be added as an alternative stabilizer at GMP level.

Recommendation no. 42:

Cottage Cheese: No changes required

Mozzarella: Add INS 407, 410, 412, 415, 416 and 417 at GMP.

Cream Cheese: Amend the limits for INS 339,340, 341 and 341(i) (phosphates) into 10000 mg/kg and add INS 452 (polyphosphates) within the same maximum limit. Further, add INS 418 (Gellan Gum) at GMP.

4.2.7 Emulsifiers

Comments submitted:

Czech Republic pointed out that Cottage Cheese and Mozzarella produced in the country do not contain any emulsifiers.

IDF identified the following additional emulsifiers that are in use in Cream Cheese and therefore should be added to the standard: No. 322, 470, 471, 472a-c, and 472f.

Discussion:

Emulsifiers are only relevant for Cream Cheese. 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 homogenization can be used to increase viscosity and develop a smooth product. This homogenization 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 stabilize 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).

The emulsifiers requested by IDF are all permitted by the GSFA at GMP.

Recommendation no. 43:

Cottage Cheese and Mozzarella: No changes required

Cream Cheese: Add INS no. 322, 470, 471, 472a-c, and 472f at GMP.

4.2.8 Antioxidants

Comments submitted:

IDF had identified the following additional antioxidants that are in use in Cream Cheese and therefore should be added to the standard: No. 300-307. As numerical ADIs have been allocated to no. 305 and 307, these are suggested to be allowed at maximum 0.08 g/kg and 0.2 g/kg, respectively.

Discussion:

None of the above comments relate to the additives currently listed for Cottage Cheese and Mozzarella.

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 (300-302) 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 (304, 305) and tocopherols (307), numerical ADI's have been established, so maximum levels need be established. A maximum level of 500 mg/kg for 304/305 is used in the proposed draft standard for dairy spreads.

INS 300, 301, 302, 306 and 307 are all permitted by the GSFA. However, the GSFA does currently not permit INS 304 and 305.

Recommendation no. 44:

Cottage Cheese and Mozzarella: No changes required

Cream Cheese: Add INS no. 300, 301, 302 and 306 at GMP level and add 304, 305 at a maximum of 0.5 g/kg and INS 307 at a maximum of 0.2 g/kg.

4.3 Additives in standards for mould-ripened cheese varieties

Background:

The parent standard relevant for additive provisions in standards for the mould ripened cheese varieties under consideration (i.e. Coulommiers, Camembert and Brie) is the General Standard for Cheese Including (Codex Stan A-6, 1999). This standard includes a list of additives that are generally permitted in this type of cheese. An overview of how the various functional classes of additives are currently addressed in the current (draft) standards is provided below.

Functional class:	Codex Stan A-6	Coulommiers	Camembert	Brie
Colours (in edible cheese rind)	X	X	X	X
Colours (in cheese masse)	X	X (to obtain a whitish to yellow colour)	X (to obtain a whitish to yellow colour)	X (to obtain a whitish to yellow colour)
Acidity regulators	X	X	X	X
Preservatives (in cheese mass)	X			X
Preservatives (surface treatment)	X			
Potassium chloride	X			
Anti-caking agents	X (surface treatment of sliced, cut, shredded and grated products only)	X (surface treatment of sliced, cut, shredded and grated products only)		

Comments submitted:

France does not approve the use of colorants and would like to see their possible use examined on a standard-by-standard basis.

Poland pointed out that

a) some of the colours are not permitted in cheese (no. 171, 101, 140, and 141),

b) no. 100, 160e, and 160f are permitted in edible cheese rind.

c) some additives listed are classified as food ingredients (turmeric),

United States noted that the colours no. 160f, 140, 141i, and 141ii are not permitted for use in foods sold in the US, as foods containing these colours are deemed adulterated when sold in the US.

Discussion:

On the basis of a review conducted in preparation of this report, the need for a number of changes to the list of additives in the three standards have been identified, as follows:

Colours: INS 100, 100(ii), 101 are not used in the manufacture of these varieties.

Acidity regulators: INS 170 and 504 has not been used in practice for years, mainly because they increase the pH of the cheese (milk).

Preservatives: Only lysozyme (INS 1105) has been identified as technologically justified. Lysozyme does not impact the growth of moulds.

Anti-caking agents: The texture of three mould-ripened varieties is too soft to justify the use of anti-caking agents for the surface treatment of cuts and slices.

Recommendation no. 45:

Remove the colours INS 100, 100(ii) and 101 from the three standards.

Remove the acidity regulator INS 170 and 504 from the standards for Brie and Camembert.

Add INS 1105 to the standards for Coulommiers and Camembert.

Remove anti-caking agents from the three standards.

4.4 Additives in standards for ripened cheese varieties

Background:

The parent standard relevant for additive provisions in standards for the ripened cheese varieties under consideration (i.e. Cheddar, Danbo, Edam, Gouda, Havarti, Samsø, Emmental, Tilsiter, Saint-Paulin and Provolone) is the General Standard for Cheese Including (Codex Stan A-6, 1999). This standard includes a list of additives that are generally permitted in this type of cheese. An overview of how the various functional classes of additives are currently addressed in the current (draft) standards is provided below.

Functional class:	Codex Stan A-6	Cheddar	Danbo, Edam, Gouda, Samsø, Havarti, Tilsiter, Saint-Paulin	Emmental	Provolone
Colours (in edible cheese rind)	X	X	X	X	X
Colours (in cheese mass)	X	X (to obtain a whitish to yellow or orange colour)	X (to obtain a whitish to yellow colour)	X (to obtain a whitish to yellow colour)	X (to obtain a whitish to yellow colour)
Bleaching agents					X (to obtain a whitish to yellow colour)
Acidity regulators	X	X	X	X	X
Preservatives (in cheese mass)	X	X	X	X	X
Preservatives (surface treatment)	X	X	X	X	X
Potassium chloride	X				
Anti-caking agents	X (surface treatment of sliced, cut, shredded and grated products)			[X]	X (as A-6)

4.4.1 Colours:

Comments submitted:

France does not approve the use of colorants and would like to see their possible use examined on a standard-by-standard basis.

India referred to the decision at the second session of the CCMMP to delete no. 140 and 141 from the list of permitted additives in Codex Stan-208-1999 for Cheeses in Brine as use of these colours can mislead the consumers about the true identity of the product and proposed deletion of these additives viz. INS 140 & 141 from the list of permitted colours for Cheddar.

Poland pointed out that

a) some of the colours are not permitted in cheese (no. 171, 101, 140, and 141),

b) no. 100, 160e, and 160f are permitted in edible cheese rind.

c) some additives listed are classified as food ingredients (turmeric),

United States noted that the colours no. 160f, 140, 141i, and 141ii are not permitted for use in foods sold in the US, as foods containing these colours are deemed adulterated when sold in the US.

Discussion:

The general use of colours in cheese is to correct the seasonal variability of the natural colours present in the cheese milk to obtain the same colour intensity throughout the year. Another use is to give some cheeses a specific appearance (darker colour). Also to whiten some cheeses is an use of "decolouring" colours.

The natural colour of the ripened semi-hard and hard individual cheeses tends to be near white through to yellow (see Rec. no. 7). To enable to standardize these colour some colour additives need to be allowed in all these individual standards. However, there is no commercial need to whiten some of the ripened individual cheeses.

Recommendation no. 46:

In general for all ripened semi-hard and hard individual cheeses, it is recommended that INS 160a (i and ii), 160c, 160e and 160f are allowed under the conditions given in STAN A-6, and that INS 160b is allowed up to 10 mg/kg on bixin/norbixin basis in the same cheeses but up to 25 mg/kg in the case of Cheddar.

With regard to the review of the current draft standards, the above general recommendation imply the following changes:

Cheddar, Danbo, Edam, Gouda, Havarti, Samsø and Tilsiter: Remove INS 100, 101(ii), 101, 140 and 141

Emmental and Saint Paulin: Remove INS 100, 101(ii) and 101

Provolone: Add INS 160a (i and ii), 160c, 160e, 160f within the maximum levels specified for other similar cheese varieties and add 160b at a maximum level of 10 mg/kg (on bixin/norbixin basis)

4.4.2 Preservatives

Comments submitted:

Colombia stated that its national legislation permits up to 12.5 ppm of pimaricin (natamycin) for all ripened cheese. Further, it permits up to 1000 ppm of salts of ascorbic acid and benzoic acid in ripened cheese, whereas the standards permit 3000 ppm. With regard to propionic acid and its salts, national legislation permits up to 100 ppm, whereas the standards state 3000 ppm. With regard to nitrates, national legislation permits 200 ppm, whereas the standards permit 50 ppm only.

Colombia noted that the use of benzoic acid and their salts is limited to 1000 ppm in ripened cheeses.

Germany is generally not in favour of the use of nisin and natamycin. Where the use of nisin and natamycin seems obligatory for the manufacturing of certain individual cheeses, this should be justified in the individual case.

Poland pointed out that

a) no. 200 and 203 can be used at max 1 g/kg in sliced cheeses,

b) no. 280 and 283 are permitted only to cheese surface at GMP level,

c) no. 235 can be added in amount of 1 mg/dm^2 of the cheese surface

United States recommended the deletion of sodium nitrate and potassium nitrate from the list of preservatives in standards C3, C4, C5, C6, C7, C9, C11, C13, and C15.

United States recommended the inclusion of no. 235 (pimaricin) at a maximum level of 20 mg/kg applied to the surface of the cheese or added during the kneading and stretching process to provide for extended shelf life through the elimination of yeast and moulds and preclusion of mycotoxin development.

Discussion:

Cheese can be attacked by microorganisms originating from the milk (mostly the late blowing effect) and from outside during ripening and storage.

The outgrowth of butyric acid bacteria (resulting in the late blowing effect) can be effectively prevented by the use of nitrates. Other agents to prevent the outgrowth of microorganisms inside the cheese mass are nisin and lysozyme. Provolone is a special case that traditionally has been using a specific agent: hexamethylene tetramine. Other preservatives such as sorbates and propionates have good microstatic properties.

During ripening and storage, a wide range of microorganisms can affect the outer surface of cheese. Also when the cheese is sliced, cut, shredded or grated, preservation of the opened surfaces is often needed. Depending on the status of the cheese, effective preservatives used are natamycin (pimaricin), sorbic acid and it salts and propionic acid and it salts. However, according to STAN A-6, natamycin is only allowed for surface treatment of whole cheese.

Some preservatives (nisin, nitrates, lysozyme and hexamethylene tetramine) do not adversely affect the sensory quality of cheese and can therefore be added to the cheese mass itself, whereas others may have such effect and are consequently preferred only for surface/rind treatment.

Recommendation no. 47:

In general for all ripened semi-hard and hard individual cheeses, the following permissions for preservatives are recommended:

To be added to the cheese mass:

- Nisin (INS 234) up till 12.5 mg/kg
- Nitrates (INS 251 and 252) up till 50 mg/kg expressed as NaNO3, except in the case of Emmental where their use is not required
- For Provolone only, hexamethylene tetramine (INS 239) up till 25 mg/kg expressed as formaldehyde
- Lysozyme (INS 1105) under GMP

For surface/rind treatment only

- Sorbic acid and it salts (INS 200-203) up to 1000 mg/kg for surface treatment of both whole cheeses and of sliced, cut, shredded or grated cheeses
- Pimaricin (natamycin) (INS 235) for surface treatment of whole cheeses only, up to 2 mg/dm² of surface and not present in a depth of 5 mm.
- Propionic acid and it salts (INS 280-282) up to 3000 mg/kg for surface treatment of both whole cheeses and of sliced, cut, shredded or grated cheeses; However, for Emmental, content of microbiologically developed propionic acid is an essential characteristic of the variety, wherefore addition is neither justified nor desired (see Rec. no. 35)

With regard to the review of the current draft standards, the above general recommendation imply the following changes:

In all standards concerned:

- Insert “of whole cheese” after “surface” in the max. level specified for pimaricin.
- Remove sorbates (INS 200, 202 and 203) from the list of preservatives that can be added to the cheese mass (to be retained for surface/rind treatment, however).
- Remove propionates (INS 280-282) from the list of preservatives that can be added to the cheese mass and insert them in the list for surface/rind treatments only. (Note that propionates are not justified for Emmental – see Rec. no. 35).

Cheddar: Add INS 1105, 251 and 252

Emmental: Remove nitrates (INS 251 and 252) and add INS 200, 202 and 203 for surface/rind treatments only.

4.4.3 Acidity regulators (and acids)

Comments submitted:

Colombia noted that the use of ascorbic acid and their salts is limited to 1000 ppm in ripened cheeses.

Discussion:

Acidity regulators are occasionally used to regulate the pH of the cheese milk and the curd. It can also be argued that the manner in which these agents are used justifies that they falls under the category of processing aids.

Ascorbic acid are never be used as an acidity regulator in cheese, so there is no need to allow this additive for this function.

The current draft standard for Cheddar includes a specific list of additives (acids and acidity regulators) designated for the manufacture of Cheddar with less than 20% FDM. As a consequence of the decision of the 5th Session of the CCMMP to specify an absolute minimum of FDM content in Cheddar as 22% (see ALINORM 03/11, para. 89), these lists should be removed

Recommendation no. 48:

In general for all ripened semi-hard and hard individual cheeses, it is recommended that the following acidity regulators are permitted at GMP level: calcium carbonates (INS 170), magnesium carbonates (INS 504) and glucono-delta-lactone (INS 575).

With regard to the review of the current draft standards, the above general recommendation imply the following changes:

Cheddar: Remove the lists of acids and acidity regulators, respectively (for products with less than 20% FDM) and insert INS 170, 504 and 575 as acidity regulators for Cheddar in general.

Emmental: Add INS 170 and 504

Provolone: Add INS 504 and 575

4.4.4 Anti-caking agents

Comments submitted:

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

Discussion:

This functional class of additives belonging is very useful when a cheese is sliced, cut, shredded, powdered or grated and after repacking. There is no reason to restrict the list or to limit the maximum levels as permitted by STAN A-6.

Reference is also made to Rec. no. 26, recommending the removal of the square brackets surrounding fours and starches in section 3.2 of the standard for Emmental.

Recommendation no. 49:

In general for all ripened semi-hard and hard individual cheeses, it is recommended that the following anti-caking agents be permitted: cellulose (INS 460) according to GMP and silicon dioxide (INS 551) and silicates (INS 552, 553, 554, 555, 556, 559, 560) single or in combination to a maximum of 10 g/kg.

The recommendation implies no changes to the current draft standards, except for the removal of the square brackets around anti-caking agents, as recommended in Rec. no. 26.

5 CONTAMINANTS

Background:

At its 5th Session, the CCMMP decided, when finalizing three dairy product standards (cream & prepared creams, fermented milks and whey powders), to simplify, extend and combine previously used texts relating to contaminants into one text that reads as follows:

"*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*."

The texts used in earlier adopted Codex standards for milk products were similar however, did only address heavy metals and pesticide residues.

Discussion:

Contaminants are defined as any substance not intentionally added to food, which is present in such food as a result of the production, manufacture, preparation, treatment, packing, transport, or holding of such food or as a result of environmental contamination.

In general, Codex limits for contaminants, pesticides and drugs are established for raw agricultural commodities only (e.g. "milk"). Only, in specific cases (e.g. infant foods), limits are expressed for end products as well. No such specific limits have been established for cheese.

In very few cases (fat-soluble pesticide residues and lead), guidance is provided for converting the maximum limit established for "milk" into tolerable limits for processed milk products[4].

In the establishment of maximum levels for contaminants, the ALARA (As Low As Reasonably Achievable) principle is followed (CODEX STAN 193). Consequently, a maximum level established for a raw agricultural food must be regarded as a "marker" for the measures taken up to that point in the food chain. The subsequent processing of such raw foods (provided that they comply with the levels and that the probability of further contamination during and after processing is insignificant) will result in the final processed food automatically being in compliance with the ALARA approach.

In such cases, it will make little sense to establish, monitor or verify any maximum levels in the end product.

Recommendation no. 50:

The text recently used by the CCMMP should replace the existing standard formulations, however, it should be aligned with the current approach followed in CCFAC by referring to maximum levels established for the milk. The recommended wording reads:

"*The milk used in the manufacture of 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

No comments were submitted.

7.1 NAME OF THE FOOD

Comments submitted:

Germany stated that the reference to 'Mini' in the standard for Samsø is superfluous and should be deleted.

Germany does not support the qualifiers "creamed" or "full fat" for Cottage Cheese with fat contents of 4% or above (misleading of consumer). Also the sentence with regard to "comparative nutritional claims" shall be deleted.

United States recommended that the reference fat content for Cottage Cheese be established at 4%.

Colombia requested that it be made clear that the 60% indicated as reference fat content for Cream Cheese refer to 60% FDM.

United States recommended that the labelling requirements in the standard for Camembert and Brie for "in a container" heat treatment as well as reference to "Carré de Camembert" either be deleted or moved to the Appendix.

Discussion:

Samsø: See Rec. no. 29.

Cottage Cheese:

The CCMMP decided to specify an absolute minimum fat content for "Cottage Cheese" at the level of 0% (total fat) which has triggered a review of section 3.3 and reference to the term "dry curd" as a qualifier (see Rec. no. 27).

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4) Conversion factors for fat-soluble pesticides:
<2% milk fat: the MRL is half the one established for "milk"
2% milk fat or more: the MRL is 25 times the one specified for "milk", expressed on milk fat basis
Conversion factor for lead: Appropriate

Comparative nutritional claims include, as per definition, both claims related to both fat reductions and to fat increases compared to the reference.

The changes made to section 3.3 in this respect have not been captured in the last three paragraphs of section 7.1. These sentences need to relate to the following facts:

- that once the fat content is at 4% or above, the qualifier "Dry Curd" cannot apply
- that the current wording actually make the qualifier "dry curd" a sort of a nutritional claim as it relates to fat reductions below 4%
- that a nutritional claim indicating an increase from the reference range of 4-5% (see Rec. no. 30) cannot apply at the same level as the reference.

Camembert and Brie:

The labelling provision addressing the qualifier to be used for products heat treated in the container may be considered as adequately covered by the section 4.1.2 of the GSLPF, which states that "*there shall appear on the label either in conjunction with, or in close proximity to, the name of the food, such additional words and phrases as necessary to avoid misleading or confusing the consumer in regard to the true nature and the physical condition of the food including but not limited to the type of packing, style, and the condition or type of treatment it has undergone....*". As the nature of the mould-ripened cheese that has undergone heat treatment in the container is significantly different from the untreated cheese, this provision will apply.

With regard to the provision on "Carré de Camembert", the current wording adequately allows a country to apply another qualifiers that is better recognized among its consumers.

Recommendation no. 51:

Cottage Cheese:

Replace the last three paragraphs with the following:

"The designation of products in which the fat content is below or above the reference range specified in section 3.3 of this Standard shall be accompanied by an appropriate qualification describing the modification made or the fat content (expressed as fat in dry matter or as percentage by mass), either as part of the name or in a prominent position in the same field of vision. Suitable qualifiers are the appropriate characterizing terms "dry curd" (for fat reduced products), "creamed" and "full fat" (for fat enriched products), or a nutritional claim in accordance with the Guidelines for the Use of Nutritional Claims (CAC/GL 023 – 1997, Codex Alimentarius Volume 1A).*

**) For the purpose of comparative nutritional claims, the fat content of 4% constitutes the reference."*

Cream Cheese:

In the foot note, replace "60% fat" with "60% fat in dry matter".

Camembert:

Delete the last para. of section 7.1 relating to the labelling of the heat-treated products.

Brie:

Delete the last para. of section 7.1 relating to the labelling of the heat-treated products.

Coulommiers:

For consistency reasons, delete the last para. of section 7.1 relating to the labelling of the heat-treated products.

7.2 COUNTRY OF ORIGIN

Comments submitted:

Canada supported retaining the examples used to clarify the term "substantial transformation".

France considered that the mention of the country of manufacture contributes to keeping the consumer properly informed and prevents confusion as to the origin of the product. For this reason, paragraph 7-2 in the versions of the individual standard drafts should be retained as drafted.

Germany does not believe that a provision for declaring the country of origin is necessary in all standards for individual cheeses. There is no sufficient justification to deviate from the principle laid down in 4.5.1 of the GSLPF because the cheese varieties covered by the individual standards have become of significant importance in international trade and their names must be considered as generic names.

United Kingdom stated that for any product, consumers see the place of origin as an important contributor to its identity, but ingredient information if 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 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.

European Community agreed with the proposal to examine on a case-by-case basis the application of "the country of origin" to ensure that the consumer would not be misled.

Discussion:

The principle of labelling the country of origin.

The 3rd CCMMP decided to remove the provision from the Draft Standard A-6. However, "*the Committee agreed that for labelling purposes, the declaration of the Country of Origin referred to the country of production or last transformation of the product and not to the country in which the variety was first developed. The Committee decided that the individual cheese standards would be examined on a case-by-case basis regarding the application of the "country of origin" to ensure that the consumer would not be misled*" (quotation from ALINORM 99/11, par. 27).

The current draft standards include an draft wording in all the proposed draft C-standards that were introduced in CX/MMP 00/12 and retained unchanged in CX/MMP 02/7 (see Recommendation no. 18 of CX/MMP 00/12 for the discussion leading to it).

The CCMMP is invited to, in light of the above decision in Montevideo, to examine which of the individual cheese varieties covered by the current draft standards should be declared with regard to country of origin.

Substantial transformation.

The GSLPF uses the term "changed nature" while customs texts use "substantial transformation". The broader of these two terms is without doubt the one specified in the GSLPF. Use of the term "substantial transformation" seems to enable a more practical interpretation if supplemented by a clarifying footnote.

Recommendation no. 52:

The CCMMP should in accordance with its decision in Montevideo examine which of the cheese varieties should be declared with the country of origin, and where applicable, whether the current draft wording is adequate.

Until such clarification has been provided by the CCMMP, the draft wording as appearing in the drafts presented since CX/MMP 02/7 has been retained in all draft standards.

7.5 Date marking

Comments submitted:

Canada requested clarification as to why this section permits a deviation from the GSLPF 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 durability life dating.

Discussion:

The provision in the relevant draft C-standards is a direct consequence of the provision stated in section 7.3 of Codex STAN A-6. The deviation in A-6 has been endorsed by the CCFL and been adopted by the CAC.

Recommendation no. 53:

No changes required.

8 Methods of sampling and analysis

Comments submitted:

Germany recommended that the reference in the standard for Mozzarella with regard to determination of equivalency between "pasta filata" processing and other processing techniques should be further explored since the mentioned confocal laser scanning microscopy is not internationally standardized.

Recommendation no. 54:

Note that guidelines for the application of confocal laser scanning microscopy are being considered for possible publication by the IDF.

9 REVIEW OF CONTENTS IN THE APPENDICES

9.1 Classification of variety - Technology

Background:

Additional information on classifying technology is currently addressed in Appendix 1.2 to the standard for Cheddar and constitutes the main elements in the “cheddaring process”. In CX/MMP 02/7, IDF recommended to replace “scalded” with “cooked” and a definition of this term. Further, in order to follow the Guidance in Appendix VII to the ALINORM 03/11, IDF recommended the addition of a sentence referring to the objectives of using other processing techniques.

Comments submitted:

Cuba expressed agreement with the proposals in CX/MMP 02/7

France stated that the technology and the ripening conditions, which differ between the various varieties subject to standardization, have an important impact on the organoleptic characteristics of the products. In this regard, the proposal made with respect to Cheddar raises more general questions that can be applied to other individual varieties and which therefore need more in depth study:

- The definition of the term “cooked,’ which is not acceptable because it is not connected to the coagulation temperature. The coagulation temperature can vary widely, from 20°C for some fromages frais, for instance, to 42°C cited in the Cheddar standard, which is not comparable. This definition would have other implications on other standards for cheeses. While awaiting technical details, we suggest that we retain the temperature of 42°C as provided at this time.
- Alternative processes could be accepted only if they made it possible to obtain the same physical, biochemical and organoleptic characteristics for the product, without specifying the terms and conditions of application.

  Comments reported in ALINORM 03/11:

  Specific technological details for temperature should be maintained. However, it was observed that this detail was not measurable in the final product.

Discussion:

The definition of 'cooked' as stated by IDF in CX/MMP 02/7 does connect coagulation with cooking conditions in that the definition does clearly state that 'cooked' means heating the curd in its whey **at temperatures above the coagulation temperature**. The 42 ºC temperature stated in the standard is not the coagulation temperature but the cooking temperature.

As the cooking temperature for Cheddar relates more to compositional aspects of the product rather than textural or flavour aspects*, it should be considered to delete reference to the specific temperature.

*) Note that the original text states as follows: "The curd is scalded to 100 -106 ºF (37.5 – 40 ºC) depending on season". The reference to season indicates that the rationale for the temperature is related to composition.

Recommendation no. 55:

In the appendix for the standard for Cheddar:

- Replace "*....and cooked at up to 42 ºC*" with "*....and heated in its whey to a temperature above the coagulation temperature*."
- Delete the footnote to Appendix 1.2.

9.2 External appearance - Allowance of coatings

Background:

The type of detail is currently addressed in the Appendix 2.2 of the draft standard for Saint-Paulin.

In CX/MMP 02/7, IDF stated that retention of the wording in the Appendix 1.3 to the Saint Paulin standard is considered advisable until final adoption of the annex to A-6 on cheese surface terminology. Reconsideration of the retention of this type of detail is required after the 26th CAC.

Comments submitted:

Cuba expressed agreement with the proposals stated in CX/MMP 02/07, part 1.

Discussion:

The content of the Annex to A-6 on surface technology makes the detail superfluous.

Recommendation no. 56:

Due to the adoption of the Annex to the A6 standard by the 26th CAC, the description of coating in the Annex to the Saint Paulin standard should be deleted.

9.3 External appearance - Colour of rind/surface

Background:

In CX/MMP 02/7, the IDF recommended the deletion of these details from the Appendices to the standards for Emmental, Saint-Paulin and Provolone.

Comments submitted:

Cuba expressed agreement with the proposals stated in CX/MMP 02/07, part 1.

France suggested that that the rind of Emmental be indicated as darker than the body

United States recommended that specific rind information for Emmental either be deleted or moved to the Appendix.

Discussion:

Comments contrary to the recommendation in CX/MMP 02/07, part 1, relate only to Emmental.

It should be noted that the current description of Emmental includes the criterion that the rind shall be hard and dry. Consequently, the rind contains less moisture than the cheese mass itself, which also implies a concentration in colour (darker). It follows from this that a specification in the Appendix of this fact is redundant.

Recommendation no. 57:

No changes required.

9.4 External appearance - Typical packaging

Background:

The type of detail is currently addressed in the Appendix 1.2 to the draft standard for Provolone.

Comments submitted:

Cuba expressed agreement with the proposals stated in CX/MMP 02/7.

Recommendation no. 58:

No changes required.

9.5 External appearance - Shape

Background:

The type of detail is currently addressed in the Appendixes 1.1 or 1.2 of the draft standards for Emmental, Saint-Paulin and Provolone.

Comments submitted:

Cuba expressed agreement with the proposals stated in CX/MMP 02/07, part 1.

Recommendation no. 59:

No changes required

9.6 Appearance of whole cheese - Dimensions

Background:

The type of detail is currently addressed in the Appendices1.2 of the draft standards for Emmental and Saint-Paulin. In CX/MMP 02/7, IDF stated that further work was required with regard to the formulation of App. 1.2 to the Emmental standard.

Comments submitted:

Cuba expressed agreement with the proposals stated in CX/MMP 02/7.

France expressed the wish to remove the brackets and retain the draft dimensions for Emmental, because in addition to the advantage of describing precisely the form and dimensions of this cheese, in particular those of the traditional format, these dimensions, irrespective of the block or whole cheese format, are closely related to the ripening process and consequently to the organoleptic characteristics of the product.

Discussion:

Specific comments to the recommendation in CX/MMP 02/07, part 1, relate only to Emmental.

Since the appendix relates to usual patterns of manufacture and that the dimensions specified are qualified as “common” (should be “usual”), this information provided does not restrict the use of other dimensions.

Recommendation no. 60:

No changes required to the Appendix 1 to the standard for Emmental (except for the replacement of "common" with "usual") and Appendix 1.2 to the standard for Saint-Paulin, respectively.

9.7 Appearance of whole cheese - Weight

Background:

The type of detail is currently addressed in the Appendices of the draft standards for Edam, Gouda, Emmental and Saint-Paulin. In CX/MMP 02/7, IDF stated that further work was required with regard to the formulation of App. 1.2 to the Emmental standard.

Comments submitted:

Cuba expressed agreement with the proposals stated in CX/MMP 02/7.

France stated that Emmental is recognized by the consumer in different parts of the world as a large-sized cheese with a body that has evenly distributed characteristic holes. It moreover has particular melting and topping aptitudes. In addition, the size (more than 60 kilograms for whole cheeses) combined with the heating influence the cooling of the curd and selects the active flora of the cheese during draining and ripening. Depending on the ripening conditions, it leads to physical and biochemical changes, which are characteristic of this cheese, and to obtaining its specific organoleptic qualities. To obtain the same characteristics for cheeses in block form, the minimum weight of the block should be comparable to that of the whole cheese.

Germany stated that the sentence in the Appendix to Edam "Lower weights are normally qualified by the term 'Baby'." should be deleted without replacement.

New Zealand noted that it is unnecessary to specify a minimum weight for Emmental, 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 recommended that specific size information for Emmental either be deleted or moved to the Appendix.

Discussion:

Except for Cuba (expressing agreement), no government comments have been submitted on Gouda and Saint Paulin.

Edam:

Deletion of reference to "baby" from the appendix does not prohibit the use of the qualifier by the trade. Further, a review of the last sentence where some wording currently in square brackets has resulted in a conclusion that there is no need to distinguish according to further processing.

Emmental:

Need be considered in conjunction with section 2 (See Rec. no. 18). Since the appendix relates to usual patterns of manufacture and that the weights specified are qualified as "usual", this information provided does not restrict the use of other dimensions.

Recommendation no. 61:

No changes required to these current draft standards for Saint Paulin.

With regard to Edam, delete the last two sentences relating to alternative weights.

With regard to Emmental, retain the information, i.e. remove the square brackets.

9.8 Flavour

Background:

The type of detail is currently addressed in the Appendices of the draft standards for Provolone and Brie. In CX/MMP 02/7, IDF stated that further work was required with regard to the formulation of App. 1.2 to the Brie standard.

Comments submitted:

Cuba expressed agreement with the proposals stated in CX/MMP 02/7.

Discussion:

No government comments express disagreement with the current appendices.

Recommendation no. 62:

Unless a suggestion for informative text is brought forward by CCMMP delegations, this type of detail should be deleted from both appendices (Provolone and Brie)

9.9 Technology - Ripening procedure

Background:

The type of detail (e.g. reference to ripening temperatures and period) is currently addressed in the Appendices of the draft standards for Cheddar and Emmental.

However, the current formulation of the detail has been put in square brackets on the advice of IDF, as further work is needed.

Comments reported in ALINORM 03/11:

It was noted that there was concern with specifying this detail for cheese intended for further processing.

Discussion:

The paragraph on ripening, as recommended in section 2 (Rec. no. 20) makes redundant the information provided in part 1.3 of the Appendix to the Cheddar standard. The combination of the paragraph on ripening in section 2 (Rec. no. 20), and the paragraph on starter cultures in section 3.4 (Rec. no. 32) make redundant the information provided in part 2.2 of the Appendix to the Emmental standard.

Recommendation no. 63:

Delete part 1.3 of the appendix to the standard for Cheddar.

Delete part 2.2 of the appendix to the standard for Emmental

9.10 Technology – How ripening should occur

Background:

The type of detail is currently addressed in the Appendices of the draft standards for Emmental (reference to proteolysis).

However, the current formulation of the detail has been put in square brackets on the advice of IDF, as further work is needed.

Discussion:

See section 9.9 above

Recommendation no. 64:

Delete part 2.2 of the appendix to the standard for Emmental

9.11 Ingredients - Starter cultures

Background:

The type of detail is currently addressed in the Appendix of the draft standard for Cheddar. The formulation emphasizes the use of non-gas forming starters.

Comments submitted:

Cuba expressed agreement with the proposals stated in CX/MMP 02/7.

Recommendation no. 65:

No changes required.

9.12 Technology – Type of coagulation

Background:

In CX/MMP 02/7, this type of detail was deleted from the Appendices of the standards in which it appeared, i.e. Cheddar, Saint-Paulin, Coulommiers, Camembert and Brie. The fact that the formulations stated in earlier drafts were already stated under permitted ingredients in section 3.2 of these standards led to this advice.

Comments submitted:

France requested that the provisions for Coulommiers, Camembert and Brie are retained, as these are soft cheeses, where the combined action of lactic starters and the rennet obtain coagulation. To obtain the characteristics of these cheeses, the milk must be acidified first by adding lactic ferments.

Discussion:

Cheese milk is currently coagulated in various ways, as follows

1. Coagulation essentially done through microbial acidification (lactic acid bacteria)

2. Coagulation essentially done through added acidifiers (e.g. lactic acid)

3. Coagulation essentially done by enzymatic action (proteases and rennet)

4. Coagulation triggered by heat (denaturation)

5. Coagulation achieved through various combinations of the above

In the case of Camembert, Brie and Coulommiers, the coagulation of the cheese milk is typically obtained through a combined action of lactic starters and proteases (e.g. rennet) This means of coagulation may be considered characteristic of these soft cheeses, for which acidification is essential (pHs of 4.6-4.8 are reached at the end of draining).

Such information could be specified in the Appendices to these standards as "usual patterns of manufacturing.

Recommendation no. 66:

The following statement, which is considered technologically appropriate, should be included in the Appendices to the standards for Coulommiers, Camembert and Brie:

"Coagulation of the milk protein is typically obtained through the combined action of microbial acidification and proteases (e.g. rennet) at an appropriate coagulation temperature."

9.13 Technology – Type of acid formation

Background:

The type of detail is currently addressed in the Appendices of the draft standards for Emmental, Saint-Paulin, Coulommiers, Camembert and Brie.

Comments submitted:

Cuba and France expressed agreement with the proposals stated in CX/MMP 02/7.

Recommendation no. 67:

No changes required

9.14 Technology – Specific ripening agents

Background:

The type of detail is currently addressed in the Appendices of the draft standards for Coulommiers, Camembert and Brie.

However, the current formulation of the detail has been put in square brackets on the advice of IDF, as further work is needed, taking into consideration the work initiated on ripening methods and ripening enzymes. In CX/MMP 02/7, IDF recommended that, if specific mould cultures are included in the standards or their appendices, cultures of *P. caseicolum* need be added to the list.

Comments submitted:

Cuba expressed agreement with the proposals stated in CX/MMP 02/7.

France considers that the cultures cited in the annexes for Coulommiers, Camembert and Brie should be introduced in the body of the standard as essential production characteristics. The wording could be as follows: "cultures of *Penicillium caseicolum, Penicillium camembertii* and other harmless organisms such as *Geotrichum Candidum* and *Brevibacterium linens*".

Uruguay suggested the inclusion of characteristic cultures used in the manufacture of Camembert and Brie, as these are essential characteristics. An alternative acceptable option would be to incorporate into the main body of the standard, the information currently located in the Appendix, in particular with respect to the information related to method of production.

Discussion:

Two delegations request that characteristics mould ripening cultures be addressed in the body of the standards of mould ripened cheese varieties.

Section 2 of the standards for Coulommiers, Camembert and Brie already includes essential details related to mould development, such as:

- surface ripening

- primarily mould ripened

- ripened from the surface to the center

- rind development, which is soft and uniformly covered with white moulds

In addition, section 3.2 of these standards permits (but do not mandate) the use of "cultures of other harmless microorganisms" (other than bacteria).

Recommendation no. 68:

In order to support the characteristics specified in section 2, an inclusion of a list of essential mould species in the main body of these standards is recommended. The following actions would be required:

- Deletion of maturation procedures in the Appendices to these standards; and

- Insertion of the following text in a new Section 3.5 of these standards:

"Rind formation and maturation (proteolysis) from the surface to the center is predominantly caused by Penicillium camembertii and Penicillium caseicolum.

Specific reference should be made in section 3.2 to the remaining organisms specified in this part of the Appendices, i.e. *Geotrichum candidum*, *Brevibacterium linens*, and yeast."

9.15 Technology – Type of acid formation

Background:

The type of detail is currently addressed in the Appendices of the draft standards for Emmental, Saint-Paulin, Coulommiers, Camembert and Brie.

Comments submitted:

Cuba and France expressed agreement with the proposals stated in CX/MMP 02/7.

France stated that the addition of propionic bacteria to Emmental and their development is a specific point of Emmental that should be kept in the standard and included in the annex in an individual manner; the wording could be as follows: "Microbiological development of acids, including propionic acid."

Discussion:

Comments not in support of the current text relate only to Emmental. Consequently, no changes needed in the appendices to Saint-Paulin, Coulommiers, Camembert and Brie.

With regard to Emmental, the request of France will be covered by the recommended revision of section 3.4 (see Rec. no. 32).

Recommendation no. 69:

No changes required.

9.16 Technology – Salting Procedure

Background:

The type of detail is currently addressed in the Appendices of the draft standards for Cheddar, Saint-Paulin and Mozzarella (high).

In CX/MMP 02/7, IDF recommended that it be considered whether brine salting should be addressed in other standards, as the way of salting is an important measure in developing variety specific ripening.

Comments reported in ALINORM 03/11:

Add salting in brine to Standards for Edam (C-4) and Gouda (C-5).

Discussion:

The method of salting has little effect on ripening in terms of flavour *per se* but the choice of method of salting does have an influence on the final texture of the cheese (and as a result on the flavour release)

Recommendation no. 70:

CCMMP delegates are invited to consider in which standards brine salting vs. dry salting should be addressed, i.e. varieties for which the way of salting is an important measure in developing variety specific ripening