

# codex alimentarius commission



FOOD AND AGRICULTURE  
ORGANIZATION  
OF THE UNITED NATIONS

WORLD  
HEALTH  
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**AGENDA ITEM NO. 5**

**CX/FL 04/5-ADD.2**

**E**

**JOINT FAO/WHO FOOD STANDARDS PROGRAMME**

**CODEX COMMITTEE ON FOOD LABELLING  
THIRTY-SECOND SESSION  
MONTREAL, CANADA, MAY 10 – 14, 2004**

***GUIDELINES FOR THE PRODUCTION, PROCESSING, LABELLING AND  
MARKETING OF ORGANICALLY PRODUCED FOODS:  
DRAFT REVISED ANNEX 2 – PERMITTED SUBSTANCES  
(ALINORM 03/22A, APPENDIX VI & CL 2003/28-FL)***

**GOVERNMENT COMMENTS AT STEP 6**

**COMMENTS FROM:**

**BRAZIL  
CANADA  
FRANCE  
UNITED STATES  
INTERNATIONAL DAIRY FEDERATION (IDF)**

**GUIDELINES FOR THE PRODUCTION, PROCESSING, LABELLING AND MARKETING OF ORGANICALLY PRODUCED FOODS:  
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**GOVERNMENT COMMENTS AT STEP 6**

**BRAZIL:**

We are pleased to forward the Brazilian comments on CL 2003/28.

**1. Table 1 – Substances for the use in soil fertilizing and conditioning**

Substances	Comments
“Compost from plant residues”	<p>Brazil suggests to include the term “ need recognized by the certification body or authority”.</p> <p><b><u>Justification:</u></b> In this substance “<i>manure and composted farmyard manure</i>” it described that factory-farming sources is not allowed, but the substances from industrial system frequently used are not permitted stuffs in the organic production. With this observation we understand that the composted is not sufficient to eliminate the residues present in this source. Therefore, we do not understand the difference treatment among substances independent form their origin. We understand that there are differences of treatment when it is about vegetal residues independent of its origin. We also understand that there are differences among the materials (vegetal and animal excrements) the same as among substances that can remain before both composted.</p>
“Processed animal products from slaughterhouses & fish industries”	<p>Brazil suggests to include the term: “it’s not permitted stuffs from non organic industry”</p> <p><b><u>Justification:</u></b> We suggest the same treatment gave to animals’ products from butchery and fish industry for the animal and poultry excrements.</p>
“Sawdust, bark and wood waste”	Brazil suggests the exclusion of the square-brackets of the words and to keep the text.
“Wood ash”	Brazil suggests the exclusion of the square-brackets of the words and to keep the text.
“Calcium carbonate of natural origin (e.g. chalk, marl, maerl, limestone, phosphate chalk)” “Magnesium rock” “Calcareous magnesium rock” e “Clay (e.g. nentonite, perlite, zeolite)”	<p>Brazil requests information why there’s no limit for these substances and suggests to include the term “recognized by the certification body or authority”.</p> <p><b><u>Justification:</u></b> These substances need restriction according to the established for others substances.</p>
“Vermiculite”	Brazil suggests to include the term “need recognized by the certification body or authority”.

	<b><u>Justification:</u></b> This substance needs restriction according to the established for others substances.
“Zeolites”	Brazil suggests to include the term “need recognized by the certification body or authority”. <b><u>Justification:</u></b> This substance need restriction according to the established for others substances.
“Wood charcoal”	Brazil suggests the exclusion of the square brackets of the words and to keep the text.
“Chloride of lime”	Brazil requests information why there is no restriction in this substance according to the established for “ <i>Aluminum calcium phosphate</i> ”
“Calcium chloride solution”	Brazil suggests to include the term “need recognized by the certification body or authority”. <b><u>Justification:</u></b> This substance needs restriction, regarding the same to sodium and lime.

## 2. Table II – Substances for plant pest and disease control

Substances	Comments
<b>I. Plant and Animal</b> “Fermented product from <i>Aspergillus</i> ”	Brazil suggests to include the term “need recognized by the certification body or authority”. <b><u>Justification:</u></b> The expression avoids the understanding that the fermentation process is from different kinds of <i>Aspergillus</i>
“Extract from mushroom (Shiitake fungus)”	It is not clear if the expression “shiitake fungus” is mention like an example or the only extract that can be used.
“Tobacco tea (except pure nicotine)”	Brazil suggests to exclude this item. <b><u>Justification:</u></b> This item is not clear due to the fact that it was excluded from the above substance: “natural plant preparations, excluding tobacco”.
<b>IV. Other</b> “Herbal and biodynamic preparations”	Brazil suggests to include the term “ need recognized by the certification body or authority”. <b><u>Justification:</u></b> This item needs restriction according to the established for others substances.
Rodenticides	Brazil agreed on the exclusion of the square brackets as though as the following sentence is included: “need recognized by the certification body or authority”.
<b>V. Traps</b> “Preparations on the basis of metaldehyde	Brazil suggests that when it is used in traps it must contain a repellent to the species of higher animal species. <b><u>Justification:</u></b> To change the proposed draft because the sentence above is related to a use condition.
“Mineral oils”	Brazil suggests the inclusion of this substance in the item <i>II. Mineral</i> .

**3. Table III – Ingredients of non-agricultural origin referred in section 3 of these guidelines and Table IV – Processing aids which may be used for the products preparation from agricultural origin referred in section 3 of these guidelines**

The Brazilian Government suggests that these tables should be elaborated in the format of the General Standard of Food Additives, as orientated by CCFAC, with INS number, additive function, limit of use and which categories food it can be used.

## **CANADA:**

Canada believes that the decision to amend text, delete or add entries to the substance lists needs to be supported by a justification against the criteria, as was agreed to at last years workshop. Where no supporting information has been provided, these amendments should not be further considered and the text should revert to its original version.

Canada would recommend an amendment to Table 1 in order to minimize the transmission of bovine spongiform encephalopathy (BSE). For the entries “processed animal products from slaughterhouses and fish industries” and “by-products of food and textile industries” we suggest the following text be added under the conditions of use qualifications:

“Substances must not contain specified risk material\*. Substances must be heated to a core temperature of more than 133°C for at least 20 minutes at a pressure of at least 3 bar.”

\*specified risk materials are the tissues that may contain the agent responsible for the transmission of BSE i.e brain, spinal cord, skull, trigeminal ganglia, eyes, tonsils and dorsal root ganglia of cattle more than 30 months and the distal ileum of cattle of all ages.

The rationale for this proposal is bovine spongiform encephalopathy is a fatal disease in cattle which causes degeneration of the central nervous system, resulting in the formation of called vacuoles, in the brain. It is part of a group of diseases known as transmissible spongiform encephalopathies (TSEs), such as scrapie in sheep and chronic wasting disease in deer and elk. Research on BSE is incomplete, but this disease has been associated with the presence of an abnormal prion protein and, to date, there is no effective treatment or vaccine.

While BSE is a cattle disease, and hence an animal health issue, epidemiological studies have indicated an association between the consumption of products containing tissues from BSE-infected cattle, named specific risk material (SRM), and the human disease variant Creutzfeldt-Jakob Disease (vCJD). vCJD is a rapid, neuro-degenerative disease, that is untreatable, and always fatal. Despite the fact that a great deal of research reflected in the scientific literature has been conducted on the subject, there is no confirmed direct link between BSE and vCJD, and the relationship between BSE and vCJD is not fully understood.

Nevertheless to minimizing the possibility of exposure to the BSE agent through the consumption of food containing tissues from infected animals. Canada has established a strong program to prevent the introduction of BSE into the food chain.

In view of the recent change in Canada's BSE status, the Government has conducted a risk assessment specific to the public health impact associated with the removal of SRM from cattle.

During the scientific assessment, the following parameters were examined for their impact on public health:

- \$ potential prevalence of BSE in cattle;
- \$ relative prevalence of BSE in at risk (suspicious and fallen) cattle;
- \$ age distribution and number of animals at healthy slaughter;
- \$ distribution of age of infection;
- \$ progress and distribution of infectivity by age;
- \$ distribution of incubation period;
- \$ distribution of age at onset;
- \$ sensitivity and specificity of rapid tests.

The risk assessment conducted by Health Canada focussed on the risk of exposure to BSE and the impact of the SRM removal options considered. Given that the BSE prevalence in Canada's domestic cattle population is now estimated at possibly one in a million, and incorporating information regarding age distribution of animals - in the herd and going to slaughter - it is estimated that 0.5 BSE infected animal per year could go to slaughter.

In this risk assessment, the Government identified the following list of bovine tissues that are considered specified risk material (SRM): brain, skull, eyes, tonsils, vertebral column, spinal cord and all dorsal root ganglia from cattle over 30 months of age, and the small intestine for cattle of all ages. The SRM list was developed based on the review of the latest available science surrounding the experimental oral transmission of BSE to cattle using cattle bioassays and the analysis of tissues from naturally infected clinical BSE cases. The specific tissues identified for inclusion in the SRM list are those bovine tissues that have been shown to have detectable infectivity in cattle.

### **International Situation and Trade Implications**

#### *United Kingdom (UK)*

BSE first came to light in the mid-1980s in the UK. Action to control BSE peaked in 1992 with the slaughter of 37,280 cattle. Since 1992, the cases of BSE have declined to 1,189 in 2001. The experience in the UK resulted in the initiation of many scientific studies on BSE and the significance of BSE in relation to human health.

Under The Specified Risk Material Regulations 1997 (Statutory Instrument 1997 No. 2965), "specified risk material" means: (a) class I and class II specified bovine material; (b) class I and class II specified sheep or goat material; and c) specified solid waste.

For further information see the website: <http://www.hmsso.gov.uk/si/si1997/19972965.htm#4>

The classes of specified bovine material are further defined as:

"class I specified bovine material" in relation to a bovine animal means - (a) the skull, including the brain and eyes, tonsils and spinal cord, of an animal which was slaughtered or has died outside the UK at an age greater than 12 months; and (b) the brains, spinal cord, thymus, tonsils, spleen and intestines of an animal which was slaughtered or has died in the UK at an age greater than six months, and also the skull (including the eyes) of such an animal which was aged more than twelve months at the time of death;

"class II specified bovine material" in relation to a bovine animal means - (a) the head of an animal which was slaughtered or has died in the United Kingdom at an age of six months or over, except - (i) any part of the head which is class I specified bovine material; and (ii) the tongue, where it is removed from the head immediately after slaughter and before the head is stained; and (b) the thymus and intestines of an animal which - (i) died or was slaughtered in the United Kingdom at an age of two months or over but less than six months; or (ii) was slaughtered in the United Kingdom at an age of less than two months for human consumption.

Section 7 of these regulations include the following prohibitions against the use of specified risk material:

"(1) No person shall sell any specified risk material, or any food containing specified risk material, for human consumption.

(2) No person shall use any specified risk material in the preparation of food for sale for human consumption.

(3) No person shall sell any specified risk material for use in the preparation of any food for sale for human consumption.

(4) For the purposes of this regulation "specified risk material" includes anything derived from it."

To date, subsequent to the outbreak of BSE in cattle from the mid 1980s to the early 1990s, there have been 131 deaths from vCJD in the UK.

For further information see the website: <http://www.doh.gov.uk/cjd/>

#### *European Commission (EC)*

Current BSE infectivity studies, including those done by the European Commission's Scientific Steering Committee (SSC) suggest that the brain, skull, spinal cord and vertebral column including the dorsal root ganglia and trigeminal ganglia, eyes, tonsils, and small intestines represent the overwhelming majority of the BSE infectivity in cattle expressing clinical symptoms of the disease. These tissues taken together represent specified risk material (SRM) for cattle.

The EU has established:

1. a passive surveillance in animals with clinical symptoms compatible with BSE, which as introduced from 1998 at EU level and focussed primarily on clinical cases notified as suspects;
2. an active surveillance (monitoring), which was introduced in 2001 at EU level and is based on the use of rapid post mortem tests.

#### *United States*

The United States has in place a variety of stringent measures to prevent the occurrence of BSE in that country. In view of the case of BSE in Canada, the United States Food and Drug Administration and the United States Department of Agriculture, Food Safety Inspection Service,

are considering whether additional measures may be required in that country with respect to SRM. There are on-going discussions between Canada and the United States on this issue.

For further information see the website: <http://vm.cfsan.fda.gov/~mow/prion.html>

#### *Australia/New Zealand*

The Australia New Zealand Food Standards Code was amended in July 2001 to require all beef and beef products sold in Australia to be BSE free.

A certification system that determines the conditions under which beef and beef products may enter Australia came into effect on 16 September 2001. It applies to all countries.

For further information see: <http://www.health.gov.au/pubhlth/strateg/bse/faq.htm#bsehumans>.

The Australia New Zealand Food Authority (FSANZ) established a BSE Expert Group of domestic and international experts to systematically examine the available scientific data and information to estimate the risks to human health from consumption of beef and beef products containing the BSE agent. ANZFA conducted this risk assessment in consultation with national and international experts. The BSE Expert Group's assessment report was finalised in June 2002.

For further information, see

<http://www.foodstandards.gov.au/whatsinfo/bovinespongiformencephalopathybse/assessmentofrisktopu1625.cfm>

In addition, the Canadian organic industry does not support the use of the nitrates, nitrites, phosphates and ascorbates in organic agriculture. However, the intent of the Annex is to provide guidance on substances which might be used. Each country must evaluate, against the established criteria, whether or not it is appropriate to use that substance, given their regional circumstances. As a result, Canada is willing to consider the inclusion of these substances and suggests that restrictions on their usage be provided in the pertinent table.

Canada believes there needs to be a discussion to clarify the timetable for amendments to the Guidelines and the Substance List.

## **FRANCE:**

**The French authorities wish to submit the following comments on the use of specific additives in the preparation of livestock food products: E 250 sodium nitrite and / or E 252 potassium nitrate (saltpetre) used in association with E 300, ascorbic acid, or E 301, sodium ascorbate.**

**Use:** in meat products (raw and cooked delicatessen meats, salt meat products) and particularly in raw and dried traditional products with long curing periods (for example, dried hams of more than one year).

**Conditions of use:** The use of these substances in organic production should be permitted only if it has been demonstrated to the satisfaction of the Control authority or organization, that there exists

no other technological alternative which can provide the same sanitary guaranties and / or allow the preservation of the specific characteristics of the product.

**Levels recommended in organic agriculture:**

**E 250** ( $\text{NaNO}_2$ ): maximum residual level for raw products: 50 mg/kg; maximum residual level in cooked products: 80 mg/kg.

**E 252** ( $\text{NaNO}_3$ ): maximum residual level for raw and / or cooked products: 100 mg/kg.

(Or use the maximum levels of the general regulation: 150 mg/kg).

**IMPORTANT:** To be used in association with **antioxidants E 300, ascorbic acid, or E 301, sodium ascorbate**: these two additives prevent the transformation of nitrites and nitrates into nitrosamines and slow the rancidification of meat products.

An excess of nitrates and nitrites in the food diet can indeed be toxic because they react with the amines to form nitrosamines that are toxic and carcinogenic. A too frequent consumption is therefore not advised. Meat products are far from being the first source of food nitrates which are often brought into the diet by water or vegetables.

**Usefulness:** public health and safety of meats. Nitrited salt (sodium chloride,  $\text{NaCl}$ , with less than 1% of Sodium nitrite E 250) and potassium nitrate have as chief interest to prevent the development of the *Clostridium botulinum* spores. They act also on the growth of *Clostridium perfringens*, of the *Staphylococcus aureus*, and of salmonella. They also permit the preservation of the original colour of meat products and of their organoleptic characteristics.

**Evaluation against the criteria of Section 5 of the Codex Guidelines:**

1 – Essential for the production or the preservation of the food:

E 250 and E 252 are antioxidants and antimicrobials essential to the sanitary quality of the products. They guarantee food safety. No viable method is available to inform consumers of the presence of the botulinum toxin in a meat product: only death due to consumption allows diagnosing the presence of the toxin! Eating the botulinum toxin causes death in 100% of the cases.

An excessive use of salt ( $\text{NaCl}$ ) could give similar results with respect to limiting bacterial contamination, but with a deleterious effect on the organoleptic quality of the products and harmful effects on health (see WHO and AFSSA on the dangers of an excess of salt in the diet).

2 – Found in nature and manufacturing processes:

Nitrates and nitrites are substances that are found in nature. They are present in water, in vegetables, in fruits. Saltpetre has been used for centuries, gathered on humid walls (caves).

3 – Use maintains the authenticity of the product:

They permit the preservation of delicatessen and salt meats over time, and in spite of a badly controlled refrigeration sequence or of their water content, without fatal risks for consumers.



#### 4 – Consumer not deceived concerning the nature, substance and quality of the food:

Consumers are used to the appearance and taste of treated delicatessen meats. Nitrates and nitrites preserve the original colour and taste of the meat products.

#### 5 – Do not detract from the overall quality of the product.

No negative effect on the overall quality of the product.

### **UNITED STATES:**

The United States continues to support the use of the criteria set forth in Section 5 as important guidance in developing individual country lists of approved substances, and for facilitating equivalency determinations between countries. Consistent with the United States' position on the criteria, the United States concludes that the Working Group should not accept any new proposed substance for consideration for inclusion in Annex 2 without supporting documentation which fully evaluates the proposed substance against the Section 5 criteria.

The United States supports the allowance of synthetic carriers and binders for products to be used as fertilizers or soil conditioners. The United States is aware that many "natural" fertilizers used in organic production contain these carriers and binders. The United States concludes that transparency on behalf of consumers requires an acknowledgement of the use of these substances in organic production systems.

The United States supports a concise list of food additives for use in organic food manufacturing. The United States does not support the use of nitrates and nitrites as food additives in the manufacture of organic products. These substances are categorically prohibited under the United States' Organic Foods Production Act of 1990 and its implementing regulations.

Finally, because of the potential expansion of permitted food additives in Annex 2 over time, the United States asks the Working Group for consideration of formal consultation with the Codex Committee on Food Additives and Contaminants to ensure each current and future food additive listed in Annex 2 is used in a manner consistent with the specifications of the Joint FAO/WHO Expert Committee on Food Additives (JECFA).

### **INTERNATIONAL DAIRY FEDERATION (IDF):**

The International Dairy Federation (IDF) is requesting the Codex Working Group on Organic Foods reconsider the specific substances for inclusion in *Table 3: Ingredients of Non Agricultural Origin - 3.1 Food Additives, Including Carriers for Livestock and Bee Products*.

IDF appreciates the Working Group's consideration to evaluate additional information supporting why these compounds are essential to the production of dairy products such as processed cheese and whipped creams. IDF understands that objections were raised at the 31st. Session of the Codex

Committee of Food Labelling to certain compound such as phosphates used in processed cheese that remain in square brackets in. The additional information IDF provides will explain that limiting emulsifying salts in organic foods such as cheese to only citrates, and not phosphates would seriously restrict the range of cheese products which could be produced.

- In the Codex Standard for Food Additives, the Food Category Processed Cheese 01.6.4 (covering Processed Cheese, Spreadable Processed Cheese, Processed Cheese Preparations, Cheese Food and Cheese Spread<sup>1</sup>) cover products linked by the use similar raw materials (including cheese and emulsifying salts) and manufacturing technology (involving heating, shearing, melting, and emulsifying).

<sup>1</sup> The above lists the products covered by Codex Standards A-8(a), A-8(b) and A-8(c) and are also referred to in the General Standard for Food Additives (GSFA).

- The diversity among the products, listed above, reflects diverse differences in textural, compositional and functional properties of the end products. The texture can be firm, elastic, sliceable, spreadable, creamy and/or smooth. Because of the textural diversity possible, processed cheese products can be presented in many retail formats including sliceable blocks, slices, spreads, or pastes.
- Processed cheeses are used both as direct consumer products and ingredients of other foods.
- This range of properties is achieved by the raw materials used and the type and blend of emulsifying salts used – most emulsifying salts used are blends of phosphates or of phosphates and citrates. Such blends are used to combine the best effects of their individual components.
- The citrates used normally include trisodium citrate (INS 331) and the phosphates used include the monophosphates (INS 339), diphosphates (INS 450) and polyphosphates (INS 452).
- Emulsifying salts are critical in processed cheese manufacture where they are used to provide a uniform structure during the melting process and in the final products. The role and function of emulsifying salts in manufacture have been studied and are complex but are recognized to include the following:
  - calcium sequestration (binding);
  - buffering of pH;
  - hydration and dispersion of casein (milk protein);
  - promotion of emulsification.
- The following table shows the general properties of emulsifying salts in relation to processed cheese manufacture:

Property	Citrates	Monophosphates	Diphosphates	Polyphosphates
Calcium sequestration	Low	Low	Moderate	High – Very High
Buffering of Ph	High	High	Moderate	Low – Very Low
Casein	Low	Low	High	Very High

dispersion				
Promotion of emulsification	Low	Low	Very High	Very High

**References:**

1. Guinee, T.P. (1987). Processed Cheese products, physico-chemical aspects, in, *Proc. Symposium on Industrial Aspects of Milk Proteins*, Teagasc, Dublin, pp. 111-178
2. M. Caric & M. Kalab (1993): Processed Cheese Products in Cheese: Chemistry, Physics and Microbiology; Ed. P.F. Fox; 2<sup>nd</sup> Edition; Vol 2; Chapman & Hall
3. P.F. Fox, T.P. Guinee, T.M. Cogan, P.L.H. McSweeney, (2000): Processed Cheese and Substitute or Imitation Products in Fundamentals of Cheese Science; Aspen Publishers
4. P.F. Fox, T.P. O'Connor, P.L.H. McSweeney, T.P. Guinee & N.M. O'Brien (1996). Cheese: Physical Biochemical and Nutritional Aspects in Advances in Food and Nutrition Research; Vol 39; Ed. S.L. Taylor; Academic Press 1996
5. Guinee, T.P. (2002a). Pasteurized processed cheese products, in, *Encyclopedia of Dairy Sciences*, H. Roginski, J.W. Fuquay and P.F.Fox, eds., Academic Press, London. pp 411-418.
6. Guinee, T.P. (2002b). Cheese analogues, in, *Encyclopedia of Dairy Sciences*, H. Roginski, J.W. Fuquay and P.F.Fox, eds., Academic Press, London. pp 428-434.

Additionally, IDF requests that the square brackets be removed for nitrous oxide (INS 942) and that carbon dioxide (INS 290) be added to Annex 2 - Ingredients of Non Agricultural Origin. These two gases, which are found in nature, are needed as a propellant and areating gas for milk products such as whipped cream. The use of nitrous oxide and carbon dioxide as an areating gas for cream is important to avoid off flavors that result from oxidation of milk fat if only oxygen (air) was used.

Updated information on the required criteria for inclusion of these compounds are also provided below:

**Guidelines for the Production, Processing, Marketing and Labelling of Organically Produced Foods**  
**PROPOSED DRAFT AMENDMENTS TO ANNEX 2 – PERMITTED SUBSTANCES**  
**EVALUATION AGAINST CRITERIA**

<b>SCORING:</b>	++ very positive	+ positive	Oo not to evaluate	- rather negative	-- very negative
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**Table 3: Ingredients of Non Agricultural Origin Referred to in Section 3 of the Guidelines - for Livestock and Bee Products**

PROPOSED SUBSTANCE: Sodium Citrate (INS 331) and Calcium Citrate (INS 333)

CRITERIA		EVALUATION AGAINST CRITERIA include: detailed description of use and consequences if use of a substance is not permitted.	SCORING	PROPOSED BY
Section 5.1 General Principles	consistent with the principles of organic production	Yes	+	International Dairy Federation (IDF)
	substance is necessary/essential for its intended use	Yes, see 5.1c	+	
	manufacture, use and disposal does not result in, or contribute to, harmful effects on the environment	No negative effects are reported.	+	
	lowest negative impact on human or animal health and quality of life	Yes, ADI not limited (not specified by JECFA)	++	
	approved alternatives not available in sufficient quantity or quality	None available	+	
Section 5.1 (c) Used as additives or processing aids in the production preservation of food	substance used only where not possible to preserve (additive) or produce (processing aid) in the absence of other available technology that satisfies these Guidelines	Stabilizer and neutralizing buffer salt used for milk and cream and processed cheese products subject to heat treatment (pasteurization) needed to avoid precipitation of milk proteins or separation of milkfat	++	
	found in nature and may have undergone mechanical/physical, biological/enzymatic or microbial processes	Origin is calcium and sodium salt.	+	
	Chemically synthesised substances considered as exceptional circumstance as substance is not available from such methods and technologies in sufficient quantity	No	+	
	use maintains authenticity of the product	Yes, needed to maintain uniform dispersion of milk fat and protein in milk during required heating of pasteurization. Does not influence the authenticity of the product.	+	
	consumer not deceived by nature, substance or quality of food	No consumer deception, substance in needed to maintain quality	+	
	does not detract from the overall quality	No information is available which demonstrate a negative impact on overall quality. The chemical structure and the reaction within the food do not suggest a negative impact.	++	

PROPOSED SUBSTANCE: Sodium Phosphate (INS 339) and Potassium Phosphate (INS 340)

CRITERIA		EVALUATION AGAINST CRITERIA include: detailed description of use and consequences if use of a substance is not permitted.	SCORING	PROPOSED BY
Section 5.1 General Principles	consistent with the principles of organic production	Yes.	+	International Dairy Federation (IDF)
	substance is necessary/essential for its intended use	Yes, see 5.1c.	+	
	manufacture, use and disposal does not result in, or contribute to, harmful effects on the environment	No negative effects are reported.	+	
	lowest negative impact on human or animal health and quality of life	Yes. Maximum level 2g/Kg singly or in combination as set by JECFA.	+	
	approved alternatives not available in sufficient quantity or quality	None available	+	
Section 5.1 (c) Used as additives or processing aids in the production/preservation of food	substance used only where not possible to preserve (additive) or produce (processing aid) in the absence of other available technology that satisfies these Guidelines	Emulsifying salt for melted and processed cheese and stabilizer for pasteurized creams	++	
	found in nature and may have undergone mechanical/physical, biological/enzymatic or microbial processes	No	-	
	chemically synthesised substances considered as exceptional circumstance as substance is not available from such methods and technologies in sufficient quantity	Prepared by reacting acids with sodium or potassium carbonate.	+	
	use maintains authenticity of the product	Yes, needed to maintain uniform dispersion of milk fat and protein in milk during required heating of pasteurization. Does not influence the authenticity of the product.	+	
	consumer not deceived by nature, substance or quality of food	No consumer deception, substance is needed to maintain quality	+	
	does not detract from the overall quality	No information is available which demonstrate a negative impact on overall quality. The chemical structure and the reaction within the food do not suggest a negative impact.	++	

PROPOSED SUBSTANCE: Diphosphates (INS 450) and Polyphosphates (INS 452)

CRITERIA		EVALUATION AGAINST CRITERIA include: detailed description of use and consequences if use of a substance is not permitted.	SCORING	PROPOSED BY
Section 5.1 General Principles	consistent with the principles of organic production	Yes	+	International Dairy Federation (IDF)
	substance is necessary/essential for its intended use	Yes, see 5.1c	+	
	manufacture, use and disposal does not result in, or contribute to, harmful effects on the environment	No negative effects are reported.	+	
	lowest negative impact on human or animal health and quality of life	Yes. Maximum level 2g/Kg singly or in combination as set by JECFA	+	
	approved alternatives not available in sufficient quantity or quality	None available	+	
Section 5.1 (c) Used as additives or processing aids in the production/preservation of food	substance used only where not possible to preserve (additive) or produce (processing aid) in the absence of other available technology that satisfies these Guidelines	Emulsifying salt for melted and processed cheese and stabilizer for pasteurized creams.	++	
	found in nature and may have undergone mechanical/physical, biological/enzymatic or microbial processes	No	-	
	chemically synthesised substances considered as exceptional circumstance as substance is not available from such methods and technologies in sufficient quantity	Prepared by reacting acids with sodium phosphate	+	
	use maintains authenticity of the product	Yes, needed to maintain uniform dispersion of milk fat and protein in milk during required heating of pasteurization. Does not influence the authenticity of the product.	++	
	consumer not deceived by nature, substance or quality of food	No consumer deception, substance is needed to maintain quality	+	
	does not detract from the overall quality	No information is available which demonstrate a negative impact on overall quality. The chemical structure and the reaction within the food do not suggest a negative impact.	++	

PROPOSED SUBSTANCE: Carbon Dioxide (INS 290)

CRITERIA		EVALUATION AGAINST CRITERIA include: detailed description of use and consequences if use of a substance is not permitted.	SCORING	PROPOSED BY
Section 5.1 General Principles	consistent with the principles of organic production	Yes	+	International Dairy Federation (IDF)
	substance is necessary/essential for its intended use	Yes, see 5.1c	++	
	manufacture, use and disposal does not result in, or contribute to, harmful effects on the environment	No negative effects are reported.	++	
	lowest negative impact on human or animal health and quality of life	Yes	++	
	approved alternatives not available in sufficient quantity or quality	None available	+	
Section 5.1 (c) Used as additives or processing aids in the production/preservation of food	substance used only where not possible to preserve (additive) or produce (processing aid) in the absence of other available technology that satisfies these Guidelines	Needed for a propellant and aerating agent for cream dispensed in whipped form.	++	
	found in nature and may have undergone mechanical/physical, biological/enzymatic or microbial processes	Naturally occurring	++	
	chemically synthesised substances considered as exceptional circumstance as substance is not available from such methods and technologies in sufficient quantity	No	++	
	use maintains authenticity of the product	Yes	+	
	consumer not deceived by nature, substance or quality of food	No consumer deception, substance is needed to maintain quality	++	
	does not detract from the overall quality	No information is available which demonstrate a negative impact on overall quality. The chemical structure and the reaction within the food do not suggest a negative impact.	++	

PROPOSED SUBSTANCE: Nitrous Oxide (INS 942)

CRITERIA		EVALUATION AGAINST CRITERIA include: detailed description of use and consequences if use of a substance is not permitted.	SCORING	PROPOSED BY
Section 5.1 General Principles	consistent with the principles of organic production	Yes	+	International Dairy Federation (IDF)
	substance is necessary/essential for its intended use	Yes, see 5.1c	++	
	manufacture, use and disposal does not result in, or contribute to, harmful effects on the environment	No negative effects are reported.	+	
	lowest negative impact on human or animal health and quality of life	Yes	+	
	approved alternatives not available in sufficient quantity or quality	None available	+	
Section 5.1 (c) Used as additives or processing aids in the production/preservation of food	substance used only where not possible to preserve (additive) or produce (processing aid) in the absence of other available technology that satisfies these Guidelines	Needed for a propellant and aerating agent for cream dispensed in whipped form.	++	
	found in nature and may have undergone mechanical/physical, biological/enzymatic or microbial processes	Naturally occurring or thermally manufactured	++	
	chemically synthesised substances considered as exceptional circumstance as substance is not available from such methods and technologies in sufficient quantity	No	++	
	use maintains authenticity of the product	Yes	+	
	consumer not deceived by nature, substance or quality of food	No consumer deception, substance is needed to maintain quality	++	
	does not detract from the overall quality	No information is available which demonstrate a negative impact on overall quality. The chemical structure and the reaction within the food do not suggest a negative impact.	++	