

codex alimentarius commission



FOOD AND AGRICULTURE
ORGANIZATION
OF THE UNITED NATIONS

WORLD
HEALTH
ORGANIZATION



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JOINT FAO/WHO FOOD STANDARDS PROGRAMME

**CODEX COMMITTEE ON FOOD LABELLING
THIRTY-SIXTH SESSION
OTTAWA, CANADA, APRIL 28 - MAY 2, 2008**

**GUIDELINES FOR THE PRODUCTION, PROCESSING, LABELLING AND
MARKETING OF ORGANICALLY PRODUCED FOODS:
DRAFT REVISED ANNEX 2: TABLE 3
(CL 2007/16-FL, ALINORM 07/30/22 – APPENDIX III)**

GOVERNMENT COMMENTS AT STEP 6

COMMENTS FROM:

INTERNATIONAL FEDERATION OF ORGANIC AGRICULTURE MOVEMENTS (IFOAM)

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GOVERNMENT COMMENTS AT STEP 6

INTERNATIONAL FEDERATION OF ORGANIC AGRICULTURE MOVEMENTS (IFOAM):

IFOAM has in the past at former meetings of CCFL clearly stated that the Codex Lists should be a limited list of substances, which serves as a “safe harbour list” (term used by the US delegation in the same meaning), which mirrors a world-wide agreed consensus. Such a list should not be a “shopping list”, as the large majority of consumers of organically produced products around the world want to have a short and restricted list of additives and processing aids.

Nitrates, nitrites and ascorbates for meat processing

At the last CCFL meeting it was agreed to retain the following substances in square brackets in Part 2 of the Table: sodium nitrite, potassium nitrate and ascorbate salts pending further considerations by Codex members and a Codex expert panel (JECFA) as well as the Codex Committee on Food Additives.

IFOAM does not list nitrates in their Basic Standards, due to the opposition in several countries. IFOAM does not recommend listing these substances on an international level. An evaluation against the Codex criteria has already been elaborated in 2003 both for nitrates and nitrites, which are in Annex I of this document.

The use of ascorbates is also not listed in IFOAM Basic Standards as it relates with the use of nitrates/nitrites. Only sodium ascorbate would be needed for the proposed usage and this usage makes only sense if nitrite or nitrate will be allowed. IFOAM doesn't accept nitrite and nitrate for processing until now and has therefore not listed ascorbates.

Phosphates for use in meat and milk products

The salts of orthophosphate, diphosphate and polyphosphates were also retained in square brackets at step 3 of the Codex process, as there were different views on the justification for their use in an organic system. IFOAM is opposed to the use of phosphates both as stabiliser and as emulsifier. First of all in many countries consumer are critical against the use of phosphates in organic products, as they contribute already to a relatively high level of phosphates in the diet. Even more important is that in the last years many innovative processors of organic food have successfully developed alternatives for phosphates e.g. citrates (as been has mentioned e.g. by the European Union and Norway). IFOAM has therefore updated their fact sheet on phosphates, elaborated for Codex already in 2004 with regard to the existence of good alternatives. Details can be found in Annex II of this commentary.

Annex I. Evaluation of nitrates and nitrites in food processing.

IFOAM fact sheet and evaluation of Sodium Nitrite / already submitted to Codex January 2003

Substance (E – number)
Sodium Nitrite E 250
Usage
Colour maintaining agent, Preservative,
Origin
A product out of Nitrates
Proposed usage
For the production and processing of meat products and different sausages

CRITERIA		IFOAM evaluation of Nitrites against Codex 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. The substance is in very small amounts present in nature.	-	IFOAM
	substance is necessary/essential for its intended use	Yes, see 5.1c.	0	
	manufacture, use and disposal does not result in, or contribute to, harmful effects on the environment	No special negative effects are known. The environmental problems of the nitrogen industry (e.g. energy use) are related to these products to.	+	
	lowest negative impact on human or animal health and quality of life	The substance has mutagenic effects on different micro-organisms. JECEFA 0,2 mg/kg/d SCF 0,06 mg/kg/d (not valid for children).	--	
	approved alternatives not available	no. The most products can be produced without nitrite.	-	
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]	The substance is used for the production of meat products and sausages. The most important effect is that the “red colour” of the fresh meat will be protected and nitrites will produce the typical flavour. The secondary effects are the anti microbiological effect, which is an additional food safety aspect during processing of such foods.	+	
	undergo mechanical/physical, biological/enzymatic or microbial processes	No.	0	

	undergo chemical synthesis if alternative substances/technologies not available	Produced out of nitrogen oxides/ salts of nitric acid. It's a simple chemical reaction. Nitrite is product out of Nitrates.	+	
	use maintains authenticity of the product	On one hand the Substance keeps the original meat colour. In the most countries the consumer expectation toward the outfit of these products is related to the effects caused by nitrates. That's the very delicate problem with nitrates and nitrites.	+	
	[does not detract from the overall quality]	No information is available which demonstrate a negative impact on overall quality of product.	-	

IFOAM fact sheet and evaluation of Sodium and Potassium nitrate (“Salts of nitric acid”) / January 2003

Substance (E – number)
Sodium- Potassium nitrate E 251 250/ Salts of nitric acid
Usage
Preservative, Colour stabilizer (Sausages/Cheese), Antioxidants
Origin
Produced out of nitrogen oxides/ salts of nitric acid

CRITERIA		IFOAM evaluation of Nitrates against Codex 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. The substance is often present in nature.	+	IFOAM
	substance is necessary/essential for its intended use	Yes, see 5.1c.	0	
	manufacture, use and disposal does not result in, or contribute to, harmful effects on the environment	No special negative effects are known. The environmental problems of the nitrogen industry (e.g. energy use) are related to these products to.		
	lowest negative impact on human or animal health and quality of life	ADI 5 mg/kg/d (JEFCA). The biggest problem related to nitrate is Nitrite which will be produced out of Nitrate during the food processing.	-	
	approved alternatives not available	no.	--	
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]	The substance is used for the production of meat products and sausages. The most important effect is that the “red colour” of the fresh meat will be protected and nitrates will produce the typical flavour. The secondary effects are is the antioxidative activity, which prevents the fat and the anti microbiological effect, which is an additional food safety aspect during processing of such foods.	0	
	undergo mechanical/physical, biological/enzymatic or microbial processes	No.	0	
	undergo chemical synthesis if alternative substances/technologies not available	Produced out of nitrogen oxides/ salts of nitric acid. It’s a simple chemical reaction. Alternatives are available.	-	

	use maintains authenticity of the product	On one hand the substance keeps the original meat colour. In the most countries the consumer expectation toward the outfit of these products is related to the effects caused by nitrates. That's the very delicate problem with nitrates and nitrites.	+	
	[does not detract from the overall quality]	No information is available which demonstrate a negative impact on overall quality of product.	0	

Source: Danish ministry of agriculture (2001): Nitrites, Nitrates and sulphites as food additives – health aspects and the EU regulation. Documentation for the EU Commission.

Arguments in favour and against nitrates/nitrites

<p>Arguments in favour</p> <ul style="list-style-type: none"> • The usage of nitrites is primarily to gain a typical colour and taste for different sausages. • Because the consumer is very much adapted to this taste and colouring, if a company wants to reach a lot of consumers it will not have the possibility to inform them about the use of nitrites, they are important for the success in selling organic products. The grey coloured sausages, produced without nitrites, can be judged as rotten or poor quality sausages. • Nitrite also works as a preservative and significantly reduces the fat oxidation and enables a longer keeping time for a lot of products. • For some products (e.g. raw sausages or raw meat products) the substance has functionality in helping to avoid the growth of dangerous micro-organisms (salmonella and clostridium botulinum). There are possibilities to process safe products without nitrites but it needs a special technological know-how which is not present everywhere, especially not in small-scale on farm processing units.
<p>Arguments against</p> <ul style="list-style-type: none"> • For many years, consumer organizations have been strongly opposed to Nitrites because the substance is a well know toxin. And they cannot understand that this substance would be actively added to foods (especially to organic foods)! • A number of companies (smaller and middle sized) have developed certain techniques to produce organic meat and sausage products without Nitrites. They strongly fight for their know-how and they push the argument that Nitrites and organic processing should not be combined where possible. • In respect to the growing awareness of the consumers toward food safety, Nitrites with clear limitations should be used.

Source: Danish ministry of agriculture (2001): Nitrites, Nitrates and sulphites as food additives – health aspects and the EU regulation. Documentation for the EU Commission.

IFOAM fact sheet and evaluation of Phosphates / February 2004 / Update in 2007

Substance (E – number)
Sodium phosphate Potassium Phosphate Diphosphates Polyphosphates
Usage
Phosphates can be used for several purposes, as: acids, acidity regulators, emulsifying salts, stabilisers, emulsifiers, firming agent, and humectants. The substance was proposed for the Codex Guidelines for organically produced food for two type of applications: <i>A. as a stabiliser for pasteurised milk and cream</i> <i>B. as an emulsifying salt for melted and processed cheese</i> These two different proposed applications will be evaluated and discussed separately in the criteria's where relevant.
Origin
Today only mineral sources are used for the production of phosphates used in foods.

CRITERIA		IFOAM evaluation of phosphates against Codex 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. The substance (phosphate) is often present in nature.	+	IFOAM
	substance is necessary/essential for its intended use	<i>A. as stabiliser for pasteurised milk/cream:</i> No <i>B. as emulsifying salt for processed cheese:</i> Yes	- +	
	manufacture, use and disposal does not result in, or contribute to, harmful effects on the environment	No special negative effects are known...	0	

	<p>lowest negative impact on human or animal health and quality of life</p>	<p>For all phosphates the reference is the intake of phosphor. The ADI level is very high because phosphor is an essential nutrient for humans. An ADI level was fixed because a negative influence of a too high intake of phosphate on the restoration rate of calcium and iron is known.</p> <p>The ADI level of 70 mg means a daily intake of around 20 mg of phosphate (P2O5). It was shown in a study in the year 2000 that for children especially the ADI for phosphates is being exceeded.</p> <p>For many years, there has been a strong debate about whether a high intake of phosphates contributes to the “hyper kinetic syndrome” in children. This thesis has never yet been scientifically proven.</p> <p>By the fact that there is a tendency, that children have a too high daily intake of phosphates, the questions about an impact on the “hyper kinetic syndrome” and the information that phosphates replace calcium and iron in human admonish is a reason why many consumer organisations are critical with regard to phosphates as additive in .</p>	<p>-</p>	
	<p>approved alternatives not available</p>	<p>A. Alternatives are available (<i>as stabiliser for pasteurised milk/cream</i>)! Substance is not needed! A brought number of organic and conventional milk and cream products, including coffee cream are on the market world wide.</p> <p>B. Alternatives are available (<i>as emulsifying salt in cheese processing</i>)!</p>	<p>-- -</p>	

<p>Section 5.1 (c) Used as additives or processing aids in the production/preservation of food</p>	<p>[substance used only where not possible to preserve (additive) or produce (processing aid) in the absence of other available technology that satisfies these Guidelines]</p>	<p><i>A. Use as stabiliser in pasteurised milk/cream:</i> For many years there have been all types of drinking milk (pasteurised and UHT) in organic quality on the market. All of these products are produced without additives. In drinking milk from goats there is often the problem of casein flocculation. Three solutions are known: 1. Because this coagulation depends on the stage of lactation that the goat is at, a solution can be found by better management of the lactation periods of the herd 2. Improving heat treatment technology 3. Adding phosphate Heat-treated organic goat’s milk produced without phosphates is available on the market.</p> <p>Different types of organic and conventional cream without added phosphate are currently on the market. However, it’s a bigger problem to produce cream to be used in coffee (so called coffee cream) which does not flocculate. Nevertheless, there are also a broad number of organic and conventional coffee creams on the market, which are produced without additives. It was shown by Gayer (1987) that the flocculation of casein is strongly influenced by the homogenisation of the cream. The flocculation is a result of the homogenisation of the cream. For cream products with a longer shelf life homogenisation is required, For example, UHT coffee cream. Ways have therefore to be found to optimise the cream homogenisation process. It is proposed to use a technology, which is based on a so-called HEH concept. This means that before heat treatment a first homogenisation step takes place. Then heat treatment is applied. After heat treatment, a second gentler homogenisation is used.</p> <p><i>B. Use as emulsifying salt for processed cheese:</i> <i>If cheese has to be heat-treated and melted, there is always the problem that the texture will get lost. Fat and protein get separated. Therefore it is important to add an emulsifying agent. “Normally” therefore phosphates are used.</i> <i>In organic food processing today for processing melted cheese the substance used is sodium citrate (Trisodium citrate). This substance is currently approved by a number of standards. IFOAM Basic Standards has put this substance on its list with no restrictions.</i> Use of citrates results in a slightly different texture.</p>	<p>--</p> <p>-</p>	
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	undergo mechanical/physical, biological/enzymatic or microbial processes	No.	--	
	undergo chemical synthesis if alternative substances/technologies not available	It's a simple chemical reaction based on a substance found in nature...	-	
	use maintains authenticity of the product	No influence	0	
	[does not detract from the overall quality]	<p><i>A. Use as stabiliser in pasteurised milk/cream:</i> The usage of phosphates detracts from the overall quality, because the product can be produced with less care.</p> <p><i>B. Use as emulsifying salt for processed cheese:</i> Cheese is a product, which has a typical structure and quality. Processing technology and quality are firmly linked when making this traditional product (traditional biotechnology). To produce melted cheese means to introduce to that traditional technology (process quality) by the heat application a totally other direction. This results in a totally new quality, which has nothing to do with classical cheese. This should not be seen as negative, but it has to be stated that by using these techniques, and thus also by using additives, the process quality of cheese is fundamentally changed.</p>	- 0	

Source: IFOAM (2004): Dossier on the use of phosphates in organic food processing.