

codex alimentarius commission



FOOD AND AGRICULTURE
ORGANIZATION
OF THE UNITED NATIONS

WORLD
HEALTH
ORGANIZATION



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**CODEX COMMITTEE ON FOOD LABELLING
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**GUIDELINES FOR THE PRODUCTION, PROCESSING, LABELLING AND
MARKETING OF ORGANICALLY PRODUCED FOODS:
PROPOSED DRAFT REVISED SECTIONS: SECTION 5 - CRITERIA
AND ANNEX 2 - PERMITTED SUBSTANCES
(CL 2001/48-FL)**

GOVERNMENT COMMENTS AT STEP 3

COMMENTS FROM:

**DENMARK
FRANCE
JAPAN
NEW ZEALAND
POLAND
SWITZERLAND
UNITED STATES OF AMERICA
INTERNATIONAL DAIRY FEDERATION (IDF)
INTERNATIONAL FEDERATION OF ORGANIC AGRICULTURE MOVEMENTS (IFOAM)**

GUIDELINES FOR THE PRODUCTION, PROCESSING, LABELLING AND MARKETING OF ORGANICALLY PRODUCED FOODS: PROPOSED DRAFT REVISED SECTIONS: SECTION 5 - CRITERIA AND ANNEX 2 - PERMITTED SUBSTANCES (CL 2001/48-FL)

GOVERNMENT COMMENTS AT STEP 3

DENMARK:

Denmark has the following comments to the lists of additives and processing aids for livestock and bee products.

Denmark finds that the lists should be as short and restrictive as possible and we are in favour of separate lists or boxes for animal products. If choosing separate lists, the list for animal products should be placed under the corresponding list for plant products to make it clear that the other products e.g. water and salts and preparations of Micro-organisms and Enzymes can be used in animal products, too.

Table 3 (for livestock and bee products)

We very much appreciate the fact that nitrite and nitrate are not on the list.

We are not in favour of wood ash as a colouring agent but if included the specific cheeses for which it may be used should be mentioned.

We suggest the addition of E 325 sodium lactate to meat products in order to prevent the growth of *Listeria monocytogenes*.

Several stabilizers are mentioned not all of them seem necessary. We suggest the deletion of e.g. 413 Tragacanth gum and E 414 Arabic gum or at least more specified uses as well as deletion of confectionary in this list unless confectionary of animal origin actually does exist.

Flavourings should not be allowed for animal products.

Table 4 (For livestock and bee products)

Calcium chloride is also in table 3. Firming agents are considered food additives and should not be regulated in this table. In terms of cheese production the substance is considered an additive in EU. Accordingly, we propose a deletion in table 4.

Lactic acid and sodium carbonate with the mentioned uses are additives and should only be in table 4.

For which purpose are calcium carbonates needed?

FRANCE:

The comments follow – The proposed amendments are in bold.

Section 5 (Requirements)

In item 5.1a) “substances used for fertilization, soil conditioning purposes”, it is proposed to add the following precisions :

At the second dash

- *the ingredients will be of plant, animal, microbial, or mineral origin and may undergo the following processes: physical (e.g., mechanical, thermal), enzymatic, microbial (for example composting, fermentation);*

At the third dash

- *their use does not have harmful impact on soil organisms and/or the physical characteristics of the soil:*
 - **substances of low solubility to limit leaching and the risks of water pollution;**
 - **substances with low concentrations of fertilizing matter to avoid creating an imbalance in the soil or the microbial life.**

In item 5.1.c) “substances used as additives or processing aids in the preparation or preservation of the food” – first dash, in the French version, the second parenthesis should be moved after the word “microbiens” (Cf. English version) :

- *« ces substances sont telles qu'on les trouve dans la nature et peuvent avoir été soumises à des procédés mécaniques/physiques (par ex. extraction, précipitation), biologiques/enzymatiques [] ou microbiens (par ex. fermentations); »*

At the second dash: after “*they are essential to prepare such product because there are no other available technologies;*” it would be advisable to add, “**to insure its conservation and safety**”.

Annex 2 (Lists)

Table 1: substances for use in soil fertilizing and conditioning

In the English version, for “*Compost and spent mushroom and Vermiculite substrate*” (also called earthworm compost), “vermiculite” does not seem to be the proper term. It should be replaced by “dejecta of worms (vermicompost) and insects”, as is used for example in annex II A of the European Regulation (CEE) no 2092/91.

For Aluminium calcium phosphate, part of a sentence seems to be missing in the description : it is the cadmium content which is limited. The text should thus read : “**cadmium content** : *maximum 90 mg/kg P₂O₅*”.

For “*By-products of the sugar industry*”, the example of “*vinasse*” is inappropriate because still washes are by-products of distillation not of the sugar industry. The by-products of the sugar industry are *écumes* (“**sugar factory lime**” in English).

Table 3: ingredients of non agricultural origin referred to in section 3 of these guidelines

In the first part of the Table 3.1 Food additives, including carriers, **For plant products** should not be given as a title since, for several additives (gum Arabic, calcium chloride, ...), it is indicated in the Specific conditions that they can be used for “*milk, fat, milk products*”.

Some additives for which no specific conditions are given can be used in the preparation of foods of plant origin as well as of foods of animal origin. It is the case for example of the alginic acid and of the alginates.

For livestock and bee products

It would be appropriate to add the following additives:

INS	Name of the additive	Specific conditions
160 a (i)	Natural carotenes	Traditional cheeses
160 b	Rocou, annatto, bixin, norbixin	Traditional cheeses
250 and 252	Sodium nitrite Potassium nitrate	Pork products and cured meat products, at a maximum content of 80 mg/kg of Na NO ₂
270	Lactic acid	Milk and meat products, sausage casings
300 and 301	Ascorbic acid Sodium ascorbate	Meat products in association with nitrites and nitrates
325	Sodium lactate	Pork products
330	Citric acid	Egg products
331	Sodium citrate	Egg products, meat products, processed cheeses
415	Xantan gum	Milk products
500	Sodium carbonates	Milk products
939	Helium	

Table 4: Processing aids

For livestock and bee products:

It would be appropriate to add the following substances

Name of the additive	Specific conditions
Carbon dioxide	-
Nitrogen	-
Ethanol	solvant

JAPAN:

The following substances should be added to the Table 3 in Annex 2 of the Guidelines for the Production, Processing, Labelling and Marketing of Organically Produced Foods.

For livestock and bee products

INS	Name	Function	Necessity in manufacturing of processed livestock products
415 416	Xanthan gum Karaya gum	Gelling agent Thickener	<p>These are used for conditioning the texture of foods according to their characteristic.</p> <p>They contribute to maintenance of the quality of products such as pudding by improving their resistance to the temperature change. They are used for giving viscosity to liquid products such as cocoa in order to prevent sedimentation of insoluble particles.</p> <p>❖ Japan believes that both xanthan gum and karaya gum should be permitted for livestock products as well as plant products according to their characteristic in order to maintain the quality.</p>
450i 450iii 452i - 331iii 340iii	Disodium dihydrogen pyrophosphate Tetrasodium pyrophosphate Sodium polyphosphates Sodium metaphosphate Sodium citrate Potassium phosphate	Emulsifier	<p>These are used for conditioning the texture of foods according to their characteristic. Emulsifiers are required in manufacturing processed cheese (both use of one kind of emulsifier or a mixture of some kinds of emulsifier).</p> <p>❖ Emulsification is the most important process in manufacturing processed cheese and its aims are to change insoluble sodium paracaseinate of the cheese into soluble sodium paracaseinate for dispersion and to disperse and emulsify the milk fat of cheese simultaneously. This makes gluey and smooth conformation which is specific to the processed cheese.</p>
301 -	L-Sodium ascorbate Tocophenol	Antioxidant	<p>These are used to prevent the generation of peroxide in the meat products and oxidation with the aim of keeping the flavor. Taking into account their interaction, use of antioxidant is necessary for meat pigment and lipid respectively.</p> <p>❖ L-Sodium ascorbate is an antioxidant for water soluble substances (e.g. meat pigment) and tocophenol is an antioxidant for fat-soluble substances (e.g. lipid).</p>
-	Iodine	Disinfectants	Prevention of mastitis

NEW ZEALAND:

The New Zealand Government would like to make the following comments:

General

New Zealand is concerned that the tone of Section 5.1 is highly directive with the use of terms such as:

- ‘must’ (Section 5.1, last sentence),
- ‘will be’ (Section 5.1(a), second bullet),
- ‘may’... ‘only if’ (Section 5.2, first paragraph).

These imply that Codex could arbitrate on national decisions. This is an inappropriate role for Codex and is overly restrictive for countries that have or are developing a national standard in this area.

New Zealand recommends that the use of ‘must’ should be replaced with ‘should’.
e.g., Section 5.1, last sentence, rewrite as follows;

“Any new substances ~~must~~ should meet the following general criteria...”

New Zealand also considers that notification to Codex on amendments to the list should be made voluntary as national organic standards, like other food standards, are subject to the disciplines of the WTO agreements. However we agree that notification to Codex would assist in continuing development of the Guidelines.

POLAND:

Polish Codex Contact Point forwards the following comments on Annex 2 of Guidelines for the Production, Processing, Labelling and Marketing of Organically Produced Food.

Table 1: Substances for use in soil fertilising and conditioning

Poland is of the opinion that human excrement should not be permitted to use in soil fertilising and conditioning as it causes danger of carrying pathological microorganisms and parasites.

Table 3: Ingredients of non agricultural origin referred to in Section 3 of these Guidelines

3.1. Food additives, including carriers

In accordance with Polish national regulations the following substances are not permitted to production of organically produced food:

- sulphur dioxide – E 220,
- calcium chloride – E 509.

Table of substances for processing livestock and bee products

Polish national legislation does not permit to use locust bean gum (E 410) and guar gum (E 412) for processing of meat products.

Table 4: Processing aids, which may be used for the preparation of products of agricultural origin, referred to in Section 3 of these Guidelines

In our opinion:

- tartaric acid,
- preparations of bark components,
- potassium hydroxide

should not be used for the purpose of preparation of agricultural origin products.

SWITZERLAND:

Swiss comments are written in bold types. Propositions of addition to the guidelines are underlined and propositions of rejection are crossed out.

5.1 At least the following criteria should be used for the purposes of amending the permitted substance lists referred to in Section 4. In using this criteria to evaluate new substances for use in organic production, countries should take into account all applicable statutory and regulatory provisions. Any new substances must meet the following general criteria:

- i) they are consistent with principles of organic production (see Forward, paragraph 7);
- ii) use of the substance is necessary/essential for its intended use;
- iii) use of the substance does not result in, or contribute to, harmful effects on the environment;
- iv) they have the lowest negative impact on human or animal health and quality of life; and
- v) approved alternatives are not available in sufficient quantity and/or quality.

The above criteria are intended to be evaluated as a whole in order to protect the integrity of organic production. In addition, the following criteria should be applied in the evaluation process:

- (a) if they are used for fertilization, soil conditioning purposes --
 - they are essential for obtaining or maintaining the fertility of the soil or to fulfil specific nutrition requirements of crops, or specific soil-conditioning and rotation purposes which cannot be satisfied by the practices included in Annex 1, or other products included in Table 2 of Annex 2; and
 - the ingredients will be of plant, animal, microbial, or mineral origin and may undergo the following processes: physical (e.g., mechanical, thermal), enzymatic, microbial; and
 - their use does not have harmful impact on soil organisms and/or the physical characteristics of the soil;
- (b) if they are used for the purpose of plant disease or pest and weed control

- they should be essential for the control of a harmful organism or a particular disease for which other biological, physical, or plant breeding alternatives and/or effective management practices are not available, and
 - substances should be plant, animal, microbial, or mineral origin and may undergo the following processes: physical (e.g. mechanical, thermal), enzymatic, microbial (e.g. composting, digestion);
 - however, if they are products used, in exceptional circumstances, in traps and dispensers such as pheromones, which are chemically synthesized they will be considered for addition to lists if the products are not available in sufficient quantities in their natural form, provided that the conditions for their use do not directly or indirectly result in the presence of residues of the product in the edible parts;
- (c) if they are used as additives or processing aids in the preparation or preservation of the food :
- these substances are found in nature and may have undergone mechanical/physical processes (e.g. extraction, precipitation), biological/enzymatic processes and microbial processes (e.g. fermentation),
 - or, if these substances mentioned above are not available from such methods and technologies in sufficient quantities, then those substances that have been chemically synthesized may be considered for inclusion in exceptional circumstances;
 - they are essential to prepare such product because there are no other available technologies;
 - the consumer will not be deceived concerning the nature, substance and quality of the food.

In the evaluation process of substances for inclusion on lists all stakeholders should have the opportunity to be involved.

5.2 Countries should develop a list of substances which satisfy the requirements of these guidelines. Substances included in the list developed by a country but not included in Annex 2 of these guidelines may be a part of the equivalence judgement and decision referred to in section

5.3 7.4 of these guidelines. In developing national lists, countries may reduce the list of substances indicated in the lists included in Annex 2. Countries may include in their own lists substances other than those listed in Annex 2 only if:

- the criteria in 5.1 are used as a basis for these additions;
- they are notified in accordance with 5.3 and 5.4 below.

5.3 When a country proposes inclusion of a substance in Annex 2 it should submit the following information:

- (a) a detailed description of the product and the conditions of its envisaged use;
- (b) any information to demonstrate that the requirements under Section 5.1 are satisfied.

The open nature of the lists

5.4 Because of the primary purpose of providing a list of substances, the lists in Annex 2 are open and subject to the inclusion of additional substances or the removal of existing ones on an

ongoing basis. The procedure for requesting amendments to the lists is set out under Section 8 of these Guidelines.

ANNEX 2

PERMITTED SUBSTANCES FOR THE PRODUCTION OF ORGANIC FOODS**Precautions**

1. Any substances used in an organic system for soil fertilization and conditioning, pest and disease control, for the health of livestock and quality of the animal products, or for preparation, preservation and storage of the food product should comply with the relevant national regulations.
2. Conditions for use of certain substances contained in the following lists may be specified by the certification body or authority, e.g. volume, frequency of application, specific purpose, etc.
3. Where substances are required for primary production they should be used with care and with the knowledge that even permitted substances may be subject to misuse and may alter the ecosystem of the soil or farm.
4. The following lists do not attempt to be all inclusive or exclusive, or a finite regulatory tool but rather provide advice to governments on internationally agreed inputs. A system of review criteria as detailed in Section 5 of these Guidelines for products to be considered by national governments should be the primary determinant for acceptability or rejection of substances.

TABLE 1: SUBSTANCES FOR USE IN SOIL FERTILIZING AND CONDITIONING

Substances	Description; compositional requirements; conditions of use
Farmyard and poultry manure	Need recognized by certification body or authority if not sourced from organic production systems. "Factory" farming ¹⁸ sources not permitted.
Slurry or urine	If not from organic sources, need recognized by inspection body. Preferably after controlled fermentation and/or appropriate dilution. "Factory" farming sources not permitted"
Composted animal excrements, including poultry manure and composted farmyard manure	Need recognized by the certification body or authority "Factory" farming sources not permitted.
Dried farmyard manure and dehydrated poultry manure	Need recognized by the certification body or authority. "Factory" farming sources not permitted.
Guano	Need recognized by the certification body or authority.
Straw	Need recognized by the certification body or authority.
Compost and spent mushroom and Vermiculite substrate	Need recognized by the certification body or authority. The initial composition of the substrate must be limited to the products on this list.
Compost from organic household refuse	Need recognized by the certification body or authority.
Compost from plant residues	----
Processed animal products from slaughterhouses & fish industries	Need recognized by the certification body or authority.
By-products of food & textile industries	Not treated with synthetic additives. Need recognized by the certification body or authority. <u>Meat and bone meal not permitted</u>
Seaweeds and seaweed products	Need recognized by the certification body or authority.
Sawdust, bark and wood waste	Need recognized by the certification body or authority. <u>Of wood not treated chemically</u>
Wood ash	Need recognized by the certification body or authority.
Natural phosphate rock.	Need recognized by the certification body or authority. Cadmium should not exceed 90mg/kg P ₂ O ₅
Basic slag	Need recognized by the certification body or authority.
Rock potash, mined potassium salts (e.g. kainite, sylvinite)	Less than 60% chlorine
Sulphate of potash (e.g. patenkali)	Obtained by physical procedures but not enriched by chemical processes to increase its solubility. Need recognized by the certification body or authority.
Calcium carbonate of natural origin (e.g. chalk, marl, maerl, limestone, phosphate chalk)	----
Magnesium rock	----
Calcareous magnesium rock	----
Epsom salt (magnesium-sulphate)	----
Gypsum (calcium sulphate)	<u>Only of natural origin</u>

¹⁸ "Factory" farming refers to industrial management systems that are heavily reliant on veterinary and feed inputs not permitted in organic agriculture.

Stillage and stillage extract	Ammonium stillage excluded
Sodium chloride	Only mined salt
Aluminium calcium phosphate	Maximum 90 mg/kg P ₂ O ₅
Trace elements (e.g. boron, copper, iron, manganese, molybdenum, zinc)	Need recognized by the certification body or authority.
Sulphur	Need recognized by the certification body or authority.
Stone meal	----
Clay (e.g. bentonite, perlite, zeolite)	----
Naturally occurring biological organisms (e.g. worms)	----
Vermiculite	----
Peat	Excluding synthetic additives; permitted for seed, potting module composts. Other use as recognized by certification body or authority
Humus from earthworms and insects	----
Zeolites	----
Wood charcoal	<u>Only charcoal from wood not treated chemically</u>
Chloride of lime	Need recognized by the certification body or authority
Human excrements	Need recognized by the certification body or authority. If possible aerated or composted. Not applied to crops intended for human consumption.
By-products of the sugar industry (e.g. Vinasse)	Need recognized by the certification body or authority
By-products from oil palm, coconut and cocoa (including empty fruit bunch, palm oil mill effluent (pome), cocoa peat and empty cocoa pods)	Need recognized by the certification body or authority
By products of industries processing ingredients from organic agriculture	Need recognized by the certification body or authority
<u>Calcium chloride solution</u>	<u>Leaf treatment in case of proven calcium deficiency</u>
<u>Plant extracts and preparations such as infusions and tea</u>	----
<u>Biodynamic preparations</u>	----
<u>Substrata</u>	<u>Peat percentage max. 70% vol.</u>

TABLE 2: SUBSTANCES FOR PLANT PEST AND DISEASE CONTROL

Substance	Description; compositional requirements; conditions for use
<i>I. Plant and Animal</i>	
Preparations on basis of pyrethrins extracted from <i>Chrysanthemum cinerariaefolium</i> , containing possibly a synergist	Need recognized by the certification body or authority.
Preparations of Rotenone from <i>Derris elliptica</i> , <i>Lonchocarpus</i> , <i>Thephrosia spp.</i>	Need recognized by the certification body or authority.
Preparations from <i>Quassia amara</i>	Need recognized by the certification body or authority.
Preparations from <i>Ryania speciosa</i>	Need recognized by the certification body or authority.
Preparations of Neem (Azadirachtin) from <i>Azadirachta indica</i>	Need recognized by the certification body or authority.
Propolis	Need recognized by the certification body or authority.
Plant and animals oils	---
Seaweed, seaweed meal, seaweed extracts, sea salts and salty water	Not chemically treated. <u>Conditions for use must be specified</u>
Gelatine	---
Lecithin	Need recognized by the certification body or authority. <u>Not from genetically modified organisms</u>
Casein	---
Natural acids (e.g. vinegar)	Need recognized by the certification body or authority.
<u>Fermented product from Aspergillus</u>	---
Extract from mushroom (Shiitake fungus)	---
Extract from Chlorella	---
Natural plants preparations, excluding tobacco	Need recognized by certification body or authority..
Tobacco tea (except pure nicotine)	Need recognized by certification body or authority.
<u>Repellents of plant and animal origin</u>	---
<u>Natural enemies such as e.g. parasitical hymenoptera, predatory mites, redviids, gall midges, lady-birds, nematoda</u>	---
<u>Plant waxes and oils</u>	---
<u>Beeswax</u>	---
<i>II. Mineral</i>	
<u>Inorganic compounds (Bordeaux mixture, copper hydroxide, copper oxychloride) Inorganic copper preparations</u>	Need recognized by certification body or authority.

Burgundy mixture	Need recognized by certification body or authority.
Copper salts	Need recognized by certification body or authority.
Sulphur	Need recognized by certification body or authority.
Mineral powders (stone meal, silicates)	---
Diatomaceous earth	Need recognized by certification body or authority.
Silicates, clay (Bentonite)	---
Sodium silicate	---
Sodium bicarbonate	---
Potassium permanganate	Need recognized by the certification body or authority
<u>Mineral oils</u>	<u>Only in exceptional cases such as e.g. an attack of San-Jose louse</u>
Paraffin oil	Need recognized by certification body or authority.
<i>III. Micro organisms used for biological pest controls</i>	
Micro-organisms (bacteria, viruses, fungi) e.g. Bacillus thuringiensis, Granulosis virus, etc.	Need recognized by certification body or authority.
<i>IV. Other</i>	
Carbon dioxide and nitrogen gas	Need recognized by the certification body or authority
Potassium soap (soft soap)	---
Ethyl alcohol	Need recognized by certification body or authority.
Homeopathic and Ayurvedic preparations	--
Herbal and biodynamic preparations	---
Sterilized insect males	Need recognized by the certification body or authority
<u>Rodenticides</u>	<u>Products for pest or disease control in livestock buildings and installations</u>
<i>V. Traps</i>	
Pheromone preparations	---
Preparations on the basis of metaldehyde containing a repellent to higher animal species and as far as applied in traps.	Need recognized by the certification body or authority
<u>Mechanical control devices such as e.g. crop protection nets, spiral barriers, glue-coated plastic traps, sticky bands</u>	<u>---</u>

**TABLE 3: INGREDIENTS OF NON AGRICULTURAL ORIGIN REFERRED TO
IN SECTION 3 OF THESE GUIDELINES**

3.1 Food additives, including carriers

Switzerland proposes to change the structure of this chapter, by establishing one positive list applicable for all foodstuffs, whether of plant or of animal origin, and by one additional positive list containing only specific additives for animal products. Explanation: In general, additives used for plant products can be used for animal products as well. Moreover, the original positive list was designed to fit to the former scope of the Codex Guideline, which was not "plant products", but "products essentially derived from plant products". It is not always possible to distinguish clearly between plant and animal products. For example in the case of canned foodstuffs combining meat with vegetables, which list will be used? In addition, the character of the list for meat products is rather indicative compared to the list for plant products.

INS	Name	Specific conditions
	<u>Additives authorized for all products</u>	See explanation above
170	Calcium carbonates	----
220	Sulfur dioxide	Wine products
270	Lactic acid	Fermented vegetable products
290	Carbon dioxide	----
296	Malic acid	----
300	Ascorbic acid	If not available in natural form
306	Tocopherols, mixed natural concentrates	----
322	Lecithin	Obtained without the use of bleaches and organic solvents
<u>333</u>	<u>Calcium citrate</u>	
<u>334</u>	<u>Tartaric acid</u>	
330	Citric acid	Fruit and vegetable products
335	Sodium tartrate	cakes/confectionery
336	Potassium tartrate	cereals/cakes/confectionery
341i	Mono calcium phosphate	only for raising flour
400	Alginic acid	----
401	Sodium alginate	----
402	Potassium alginate	----
406	Agar	----
407	Carageenan	----
410	Locust bean gum	----
412	Guar gum	----
413	Tragacanth gum	----
414	Arabic gum	Milk, fat and confectionary products
415	Xanthan gum	Fat products, fruit and vegetables, cakes & biscuits, salads.

416	Karaya gum	----
422	<u>Glycerin</u>	
440	Pectins	----
500	Sodium carbonates	Cakes & biscuits, confectionery
501	Potassium carbonates	Cereals/cakes & biscuits/confectionary
503	Ammonium carbonates	----
504	Magnesium carbonates	----
508	Potassium chloride	Frozen fruit and vegetables/canned fruit and vegetables, vegetable sauces/ketchup and mustard
509	Calcium chloride	Milk products/fat products/fruits and vegetables/soybean products
511	Magnesium chloride	Soy bean products
516	Calcium sulphate	Cakes & biscuits/soy bean products/bakers yeast. Carrier
524	Sodium hydroxide	Cereal products
551	<u>Silicon dioxide</u>	<u>Anti-caking agent for herbs and spices</u>
938	Argon	----
941	Nitrogen	----
948	Oxygen	----

3.2 Flavourings

Substances and products labelled as natural flavouring substances or natural flavouring preparations as defined in Codex Alimentarius 1A - 1995, Section 5.7.

3.3 Water and salts

Drinking water.

Salts (with sodium chloride or potassium chloride as basic components generally used in food processing).

3.4 Preparations of Microorganisms and Enzymes

(a) Any preparations of microorganisms and enzymes normally used in food processing, with the exception of microorganisms genetically engineered/ modified or enzymes derived from genetic engineering.

3.5 Minerals (including trace elements), vitamins, essential fatty and amino acids, and other nitrogen compounds. Only approved in so far as their used is legally required in the food products in which they are incorporated.

For livestock and bee products (Additional) Additives authorized only for animal products

See explanations from Switzerland under point 3.1.

The following is a provisional list for the purposes of processing livestock and bee products only. Countries may develop a list of substances for national purposes that satisfy the requirements of these Guidelines as recommended in Section 5.2.

Deleted substances are transferred to the general list under 3.1.

153	Wood Ash	Traditional cheeses
<u>250</u>	<u>Sodium nitrite</u>	<u>As curing salt for meat products except sausages for frying, minced meat products, products made of fish, crustaceans and molluscs.</u> Technological reason: Retaining the colour. Certain meat products need to be cured for consumers acceptance.
<u>251</u>	<u>Sodium nitrate</u>	<u>Raw cured products and raw cured meat products.</u> Technological reason: Retaining the colour. Certain meat products need to be cured for consumers acceptance..
<u>252</u>	<u>Potassium nitrate</u>	<u>Raw cured products and raw cured meat products.</u> Technological reason: Retaining the colour. Certain meat products need to be cured for consumers acceptance.
<u>301</u>	<u>Sodium ascorbate</u>	<u>In meat products, provided insufficient natural sources are available.</u>
<u>302</u>	<u>Calcium ascorbate</u>	<u>In meat products, provided insufficient natural sources are available.</u>
<u>303.</u>	<u>Potassium ascorbate</u>	<u>In meat products, provided insufficient natural sources are available.</u>
331	Sodium citrate	Sausages/ pasteurisation of egg whites and milk products
<u>332</u>	<u>Potassium citrate</u>	

TABLE 4: PROCESSING AIDS WHICH MAY BE USED FOR THE PREPARATION OF PRODUCTS OF AGRICULTURAL ORIGIN REFERRED TO IN SECTION 3 OF THESE GUIDELINES

Switzerland proposes to change the structure of this chapter, by establishing one positive list applicable for all foodstuffs, whether of plant or of animal origin, and by one additional positive list containing only specific processing aids for animal products. Explanation: In general, processing aids used for plant products can be used for animal products as well. Moreover, the original positive list was designed to fit to the former scope of the Codex Guideline, which was not "plant products", but "products essentially derived from plant products". It is not always possible to distinguish clearly between plant and animal products. For example in the case of canned foodstuffs combining meat with vegetables, which list will be used? In addition, the character of the list for meat products is rather indicative compared to the list for plant products.

<i>Substance</i>	<i>Specific conditions</i>
<u>Technical aids authorized for all products</u>	<u>See explanation above</u>
Water	----
Calcium chloride	coagulation agent
Calcium carbonate	----
Calcium hydroxide	----
Calcium sulphate	coagulation agent
Magnesium chloride (or nigari)	coagulation agent
Potassium carbonate	drying of grape raisins
Carbon dioxide	----
Nitrogen	----
Ethanol	solvent
Tannic acid	filtration aid
Egg white albumin	----
Casein	----
Gelatine	----
Isinglass	----
Vegetable oils	greasing or releasing agent
Silicon dioxide	as gel or colloidal solution
Activated carbon	----
Talc	----
Bentonite	----
Kaolin	----
Diatomaceous earth	----
Perlite	----
Hazelnut shells	----
Beeswax	releasing agent

Carnauba wax	releasing agent
Sulphuric acid	pH adjustment of extraction water in sugar production
Sodium hydroxide	pH adjustment in sugar production
Tartaric acid and salts	----
Sodium carbonate	sugar production
Preparations of bark components	----
Potassium hydroxide	pH adjustment for sugar processing
Citric Acid	pH adjustment

Preparations of microorganisms and enzymes

Any preparations of microorganisms and enzymes normally used as processing aids in food processing, with the exception of genetically engineered/modified organisms and enzymes derived from genetically engineered/modified organisms.

<p>For livestock and bee products The following is a provisional list for the purposes of processing livestock and bee products only. Countries may develop a list of substances for national purposes that satisfy the requirements of these Guidelines as recommended in Section 5.2.</p>	
Calcium carbonates	---
Calcium Chloride	Firming, coagulation agent in cheese making.
Kaolin	Extraction of propolis.
Lactic acid	Milk products: coagulation agent, pH regulation of salt bath for cheese.
Sodium carbonate	Milk products: neutralizing substance.
Water	---

UNITED STATES:

The United States believes the lists of permitted substances should be removed from Annex 2 of CL 2001/48-FL - Guidelines for the Production, Processing, Labeling and Marketing of Organically Produced Foods. We believe the lists of substances, rather than the review criteria, have the strong potential of becoming a dominant factor in equivalence determinations between trading partners. Such a use would be contrary to the stated purpose of the lists. Paragraph 4 of Annex 2 states that the lists do not attempt to be all-inclusive or exclusive, or a finite regulatory tool but to provide *advice (italics added)* to governments on internationally agreed inputs.

The language of CL 2001/48-FL acknowledges the limited utility of the lists in accepting or rejecting an individual substance. Outside of the restrictions set by the Guidelines' criteria on permitted substances and other general prohibitions within the document, the definition of organic cannot be expected to hinge on the absence or presence of a single substance or group of substances. Such an approach is contrary to the long-held organic principle of site-specific response.

There are other practical problems as well. Because the evaluation of substances is inherently resource intensive, we ask as a point of inquiry whether delegates to the CODEX working group on the Production, Processing, Labelling and Marketing of Organically Produced Foods believe review of substances to be a wise use of the limited time afforded by the working group meetings.

INTERNATIONAL DAIRY FEDERATION (IDF):

The International Dairy Federation (IDF) appreciates the opportunity to provide comments to the Codex Committee on Food Labelling regarding CL 2001/48-FL - Guidelines for the Production, Processing, Labelling and Marketing of Organically Produced Foods: Proposed Draft Amendments to Section 5 (Criteria) and Annex 2 (Permitted Substances.) We wish to comment in the following areas:

1. IDF endorses the criteria put forth in the Guidelines for the Production Processing Labelling and Marketing of Organically Produced Foods, Section 5 for including a substance in Annex 2. We believe that the criteria in section 5.1 to evaluate new substances for the use in organic production is appropriate.
2. IDF endorses the principle set forth in section 5.2 to develop a list of substances that satisfy the Guidelines requirement's for inclusion in the Permitted Substances for the Production of Organic Foods Annex 2. However, there is some concern that the concept of countries maintaining separate national lists of permitted substances for organic foods that vary from the Codex list of permitted substance could impact and impede international trade.
3. Additionally, IDF endorses the procedures and required information in Section 5.3, which describe how a country proposes inclusion of a substance in Annex 2.
4. With regards to Annex 2 Substances for the Production of Organic Foods, Table 3: Ingredients of Non Agricultural Origin Referred to In Section 3 of the Guidelines for the Production, Processing, Labelling, and Marketing of Organically Produced Foods, we suggest the following additions:

Section 3.1 Food Additives, including carriers: Add

INS	Name	Specific Conditions
331	Sodium Citrate	Neutralizing buffer salt used for milk and cream products subject to heat treatment (pasteurization) needed to avoid precipitation of milk proteins.
333	Calcium Citrate	Neutralizing buffer salt used for milk and cream products subject to heat treatment (pasteurization) needed to avoid precipitation of milk proteins; also a source of added Calcium mineral for fortification
160b	Annatto	Color for traditional cheese
	Iron lactate	Mineral fortification for milk powder used infant formula
	Zinc sulfate	Mineral fortification for milk powder used infant formula
	Copper Sulfate	Mineral fortification for milk powder used infant formula

	Magnesium chloride	Mineral fortification for milk powder used infant formula
	Potassium chloride	Mineral fortification for milk powder used infant formula
	Potassium iodine	Mineral fortification for milk powder used infant formula
	Potassium phosphate	Mineral fortification for milk powder used infant formula
-	Calcium phosphate	Mineral fortification for milk powder used infant formula
-	Cornstarch	Thickening agent

Section 3.4 Preparations of Microorganisms and Enzymes: Addition of yeasts are needed for food fermentation. (a) *Any preparation of microorganisms, yeasts and enzymes normally used in food processing, with the exception of microorganisms genetically engineered/modified or enzymes derived from genetic engineering.* Clarify that rennet and lysozyme are included under enzymes.

5. In Annex 2, Table 4 Processing Aids Which May be Used for the Preparation of Agricultural Origin Referred to in Section 3 of the Guideline for Production, Processing, Labelling, and Marketing of Organically Produced Food, we suggest the following addition:

INS	Name	Specific Conditions
-	Wax – wood resin	Coating for cheese and releasing agent

Also add yeasts used for food fermentation. (a) *Any preparation of microorganisms, yeasts and enzymes normally used as processing aids in food processing, with the exception of microorganisms genetically engineered/modified or enzymes derived from genetic engineering.* Clarify that rennet and lysozyme are included under enzymes.

INTERNATIONAL FEDERATION OF ORGANIC AGRICULTURE MOVEMENTS (IFOAM):

1. Introduction

IFOAM, the International Federation of Organic Agriculture Movements, welcomes the opportunity to send comments regarding Codex Guidelines for the Production, Processing, Labelling and Marketing of Organically Produced Foods: Proposed Draft Amendments to Section 5 (Criteria) and Annex 2 (Permitted Substances).

As IFOAM has written in earlier comment, it is important for Organic Food Production and Processing to reflect the Basic Principles of Organic Agriculture, which aim to depend as little as possible on external inputs/substances. A broad, inclusive list threatens to compromise the integrity of organic produced products, as well as damage the credibility of the organic food sector. On the other hand the trend to more convenience products brings up the question, to what extent more additives could be allowed.

IFOAM wants to give some general thoughts on this issue, mainly with regard to

- a. The use of additives and processing aids in Organic Food Processing;*
- b. the open or closed character of the lists in Codex Alimentarius Guidelines;*

- c. the procedure used to evaluate inputs/substances; and
- d. the development of improved criteria for input evaluation.

1.a. General remarks on the system-approach and use of additives and processing aids in Organic Food Processing.

IFOAM has compared a number of different existing lists of additives: IFOAM, the European Union, Codex Alimentarius, the Organic Materials Review Institute, the National Organic Standards Board (and soon the National Organic Program), AGOEL Processing Standards and Japanese Organic Agricultural Standards. While there is substantial agreement among these lists, they are not completely harmonised. IFOAM considers harmonisation of different organic standards in the world to be very important, and would like to establish a procedure to do so, as it was clearly expressed in the recent IFOAM Conference about Harmonisation at Biofach in Nürnberg in February 2002. IFOAM has the responsibility to take a guiding position in these discussions towards a future development of organic standards as well as lists of inputs used and is willing to support Codex Alimentarius in this process.

The analysis of different standards and concepts for the evaluation of inputs/substances has shown 2 different approaches:

- A. The system approach based on the principles of necessity and precaution*
- B. The risk assessment approach based on the weighing of risks and benefits*

The existing Codex Guidelines for Organically Produced Food as well as the IFOAM Basic Standards follow a system approach. In Table 3 in Annex 2, listing ingredients of non-agricultural origin, it is indicated for which product group a certain additive or processing aid should be allowed. Section 5 provides the criteria used to amend the lists in Annex 2. In the evaluation of the use of inputs in Organic Agriculture one of the key criteria is the necessity of a particular input/substance. With regard to processing to check the necessity requires a specific focus on product or product group in which the additive will perform a certain function or activity that no other substance (alternative) will perform. In other words, it must be demonstrated that it is not possible to make a given product without that additive. If an additive is evaluated for use in a given product group—e.g. cereal products—it does not follow that it is necessary for another group, such as meat products. This requires also that not only each additive must be considered, but also every food product group, and possibly even each food within a group (e.g. cheese processing instead of dairy group).

A second key criteria is the primary goal of organic food processing to use only organically grown ingredients, and to avoid any non-organic ingredient where possible. The same principle should also apply for those additives that can be produced organically or on the basis of organically produced compounds. This would be consistent with the ideal that organic foods must be as natural as possible and support the organic production chain..

Organic standards have generally been set as a process and have followed the precautionary principle rather than risk assessment. The evaluation process is relatively cautious, with only those additives that are substantially free of risk allowed. However, no approach can guarantee zero risk, and amendment of the appendices under the current criteria is very difficult. IFOAM is still following an approach with the emphasis on the principle of necessity and the precautionary principle rather than a risk assessment approach.

1.b. the open nature of the lists

The criteria in Section 5 for the evaluation of new inputs in the Codex Guidelines are recommended to governments on a trial basis in order to achieve experience with organic production principles and rules at national level. They will be reviewed within a period of 4 years. Until such review has taken place, Member Countries may implement these criteria or the criteria which they have developed on the basis of the experience they have made at national level.

IFOAM until now was in favour of having a more open indicative list in Codex Alimentarius for the next years, but one based on strict and conclusive criteria. Although some states, which have already themselves rather elaborated lists, had proposed to take the Codex lists out, IFOAM does not believe that this will necessarily help in better harmonising the development of Organic Farming. There is a need for lists in the Codex Guidelines, but the key question for IFOAM is that the criteria and the evaluation procedures need to be further developed in such a way that both supports the development of Organic Agriculture while still maintaining high credibility with consumers. Codex Guidelines should maintain a more open character for the time being.

1. c. the procedure of the evaluation of inputs

The expanding market for organic products is expected to drive innovation and to generate a rising number of requests to take up new inputs/substances in the Codex Guidelines. Operators (farmer or processor) and their input suppliers should be able to know quickly if new inputs could be used, without waiting 2-4 years until the Codex Guidelines are adapted.

Specific expertise and a standardised evaluation procedure are required for inputs to be evaluated on a regular basis.. In case of the Codex Alimentarius such a procedure is not established yet. On the other hand, the private sector has well-established and recognised procedures. Similar procedures have been adopted by government bodies and are followed by the European Union and in USDA . However to duplicate the evaluation work on a Codex level and on private level would not be very efficient. IFOAM has established an evaluation procedure based on detailed criteria with dossiers, elaborated by specialised professional independent institutes and experts.

Such an existing system could conceivably be integrated in the Codex Procedure. IFOAM proposes that the IFOAM list is taken as a cross reference for new inputs/substances, which are not yet on the list of the Codex Alimentarius Guidelines. This would allow for the adaptation of Codex lists in longer intervals (max. every 4 years), following the usual Codex procedures. Such a cross reference system based on the IFOAM list would certainly be of help for government for equivalency decisions and arrangements. But this needs to be discussed with representatives of Codex, which are familiar with such forms of collaboration with private expert institutions in other areas.

1.d. the further development of the criteria for the evaluation

IFOAM still supports the existing wording in Section 5 of the Codex Guidelines. Below there are some proposals for a further improvement of the existing text.

With regard to processing of Organic Food and the use of, the criteria need to be reflected in the context of different product groups additives, if we are following an approach based on necessity and precautionary principles. IFOAM has given 2 examples of evaluation of additives in the Annex 4.3 of this paper. More case studies and dossiers will be prepared for the meeting of the Working group to show how such criteria could be applied in the evaluation process.

See point 4. Annex, where the Evaluation Criteria of IFOAM Basic Standards are listed for information.

2. Proposed amendments in Section 5

IFOAM proposes to add the following sentences and words.

5.1 (iii)

manufacture and use of the substance does not result in, or contribute to, harmful effects on the environment;

5.1 (c)

First bullet: change the language like this.

“- these substances are found in nature and may have undergone mechanical/physical processes (e.g. ...), biological/enzymatic processes and microbial processes (e.g. ...),
- they should be preferred non or less isolated.”

Third bullet: Change the language like this.

“- they are essential to prepare such a product because no natural food source is available of acceptable quality and quantity which can be used instead of the additives or processing aids.
- and no other technologies carried out without additives and processing aids is available.”

The old third bullet should be deleted.

The fourth bullet: Change the language to that of:

“- they don't contradict the authenticity of the product i.e., the consumer will not be deceived concerning the nature, substance and quality of the food
- and, the additives and processing aids should not detract from the overall quality of the product”

3. Proposed changes in Annex II

TABLE 1: SUBSTANCES FOR USE IN SOIL FERTILIZING AND CONDITIONING

No amendment

TABLE 2: SUBSTANCES FOR PLANT PEST AND DISEASE CONTROL

The following changes are proposed:

Substance	Description; compositional requirements; conditions for use
<i>I. Plant and Animal</i>	
Preparations on basis of pyrethrins extracted from <i>Chrysanthemum cinerariaefolium</i> , containing possibly a synergist	Need recognised by the certification body or authority. <u>Exclusion of Piperonylbutoxid after 2005 as synergist</u>
<u>Chitin nematicides (natural origin)</u>	<u>Need recognised by certification body or authority..</u>
Sabadilla	-

II. Mineral	
Inorganic compounds (Bordeaux mixture, copper hydroxide, copper oxychloride)	Need recognised by certification body or authority. <u>Max. 8 kg/ha pure copper per year (on a rolling average basis).</u>
Burgundy mixture	Need recognised by certification body or authority. <u>Max. 8 kg/ha per year (on a rolling average basis).</u>
Copper salts	Need recognised by certification body or authority. <u>Max. 8 kg/ha per year (on a rolling average basis).</u>
Paraffin oil (<u>light mineral oils</u>) <see below>	Need recognised by certification body or authority.
III. Micro organisms used for biological pest controls	
No change	
IV. Other	
Ethyl alcohol	---

Remarks

- *The General Assembly of IFOAM in 2000 has decided to limit the copper amount used in Organic Farming due to environmental concern in a step by step procedure based on progress in Research and based on the different national climatic conditions and type of crops.*
- *It is proposed to take up as well Sabadilla and Ethyl alcohol for pest and disease control. More information's will be given at the meeting of the working group.*
- *The use of Iron based molluscicides as pest control agent is in the review process, however the final decision will be taken in August 2002 at the General Assembly of IFOAM.*

TABLE 3: INGREDIENTS OF NON AGRICULTURAL ORIGIN REFERRED TO IN SECTION 3 OF THESE GUIDELINES

3.1. Food additives, including carriers

IFOAM proposes the following changes

Name	Specific conditions	Remarks
<i>For plant products</i>		
<u>INS 224 Potassium metabisulfite</u>	<u>Wine products</u>	<i>Should be added. This substance is needed as well sulphur, which is used for the preparation of wine for stopping up the microbiological activity and prevent a negative changing of taste.</i>
INS 414 Arabic gum	<u>Fat, sweets and confectionery products</u>	<i>Specific conditions are changed. It's listed for milk products too. But, milk products are belonging to animal products, therefore it has to be listed there (systematic!).</i>
INS 524 Calcium hydroxide	<u>Maize tortilla flour, sugar processing</u>	<i>In addition to sugar processing. Needed for the production of maize flour used for tortilla</i>
<i>For livestock and bee products</i>		
<u>INS 300 Ascorbic acid</u>		<i>Should be added. Ascorbic acid is used as antioxidants in</i>

		<i>several products. From natural sources, when available.</i>
<u>INS 306 Tocopherols, mixed natural concentrates</u>		<i>Should be added. Tocopherols are used as antioxidants in a lot of mixed products and help to prevent fat oxidation.</i>
<u>INS 330 Citric acid</u>		<i>Should be added. Is needed as coagulation agents for specific cheese products and for cocked eggs.</i>
<u>INS 331 Sodium citrate</u>	<u>Meat products</u>	<i>Should be added. It's needed for emulsified sausage and melted cheese</i>
<u>INS 332 Potassium citrate</u>	<u>Meat products</u>	<i>Should be added. It's needed for emulsified sausage</i>
<u>INS 333 Calcium citrate</u>	<u>Meat products</u>	<i>Should be added. It's needed for emulsified sausage.</i>
<u>INS 400 Alginic acid</u>	<u>Milk products</u>	<i>Should be added. It's needed as thickener and for several milk based especially mixed products</i>
<u>INS 401 Sodium alginate</u>	<u>Milk products</u>	<i>Should be added. It's needed as thickener and for several milk based especially mixed products</i>
<u>INS 402 Potassium alginate</u>	<u>Milk products</u>	<i>Should be added. It's needed as thickener and for several milk based especially mixed products</i>
<u>INS 414 Arabic gum</u>	<u>Milk products/eggs</u>	<i>Changed specific conditions. For eggs products it's needed as glazing agent</i>
<u>INS 500 Sodium carbonates</u>	<u>Milk products</u>	<i>Should be added. It's needed for pH regulation in traditional cheese varieties prepared out of sour milk.</i>
<u>INS 509 Calcium Chloride</u>	<u>Milk Products</u>	<i>Proposed to limit to cheese processing</i>

TABLE 4: PROCESSING AIDS WHICH MAY BE USED FOR THE PREPARATION OF PRODUCTS OF AGRICULTURAL ORIGIN REFERRED TO IN SECTION 3 OF THESE GUIDELINES

Proposed changes:

Name	Specific conditions	Remark
Calcium hydroxide	for sugar processing	<i>Changed specific conditions. This substance is only needed for sugar processing as a processing aid.</i>
For livestock and bee products		
<u>Argon</u>	-	<i>Should be added. It's a substance, which is needed used as a protecting gas, which is used in packages of organic foods.</i>
<u>Citric acid</u>	-	<i>Should be added. This substance is needed for several purposes as processing aid. Especially it's used for pH regulation purposes.</i>
<u>Oxygen</u>	-	<i>Should be added. It's needed as a propellants and as a oxidation agents</i>

Remarks:

Instead of Potassium hydroxide IFOAM proposes Calcium hydroxide for sugar processing.

4. Annex: IFOAM Procedures and Criteria

IFOAM has elaborated revision procedures and evaluation criteria for the evaluation process of substances for the lists in the Appendices in the IFOAM Basic Standards 2000. IFOAM seeks to continuously improve the criteria and all of the Basic Standards to take into account new developments in organic food production and processing, improved understanding of agro-ecology, and changing consumer views. The IFOAM General Assembly will vote on the new proposed procedures in August 2002.

Annex 4.1. IFOAM Appendix 3 Criteria to Evaluate Additional Inputs to Organic Agriculture

Introduction

Inputs should be evaluated regularly and weighed against alternatives. This process of regular evaluation should result in organic production becoming ever more friendly to humans, animals, the environment and the ecosystem.

The following criteria should be used for evaluation of additional inputs to organic agriculture.

1. Necessity

Each input must be necessary. This will be investigated in the context in which the product will be used.

Arguments to prove the necessity of an input may be drawn from such criteria as yield, product quality, environmental safety, ecological protection, landscape, human and animal welfare.

The use of an input may be restricted to:

- Specific crops (especially perennial crops)
- Specific regions
- Specific conditions under which the input may be used

2. Nature and Way of Production

Nature

The origin of the input should usually be (in order of preference):

- Organic - vegetative, animal, microbial
- Mineral

Non-natural products which are chemically synthesised and identical to natural products may be used.

When there is any choice, renewable inputs are preferred. The next best choice is inputs of mineral origin and the third choice is inputs which are chemically identical to natural products. There may be ecological, technical or economic arguments to take into consideration in the allowance of chemically identical inputs.

Way of Production

The ingredients of the inputs may undergo the following processes:

- Mechanical
- Physical
- Enzymatic
- Action of micro-organisms
- Chemical (as an exception and restricted)

Collection

The collection of the raw materials comprising the input must not affect the stability of the natural habitat nor affect the maintenance of any species within the collection area.

3. Environment

Environmental Safety

The input must not be harmful or have a lasting negative impact on the environment. Nor should the input give rise to unacceptable pollution of surface or ground water, air or soil. All stages during processing, use and breakdown must be evaluated.

The following characteristics of the input must be taken into account:

Degradability

All inputs must be degradable to CO₂, H₂O, and/or to their mineral form.

Inputs with a high acute toxicity to non-target organisms should have a maximum half-life of five days.

Natural substances used as inputs which are not considered toxic do not need to be degradable within a limited time.

Acute toxicity to non-target organisms

When inputs have a relatively high acute toxicity for non-target organisms, restrictions for their use is needed. Measures have to be taken to guarantee the survival of these non-target organisms. Maximum amounts allowed for application may be set. When it is not possible to take adequate measures, the use of the input must not be allowed.

Long-term chronic toxicity

Inputs which accumulate in organisms or systems of organisms and inputs which have, or are suspected of having, mutagenic or carcinogenic properties must not be used. If there are any risks, sufficient measures have to be taken to reduce any risk to an acceptable level and to prevent long lasting negative environmental effects.

Chemically synthesised products and heavy metals

Inputs should not contain harmful amounts of man made chemicals (xenobiotic products). Chemically synthesised products may be accepted only if nature identical.

Mineral inputs should contain as few heavy metals as possible. Due to the lack of any alternative, and long-standing, traditional use in organic agriculture, copper and copper salts are an exception for the time being. The use of copper in any form in organic agriculture must be seen, however, as temporary and use must be restricted with regard to environmental impact.

4. Human Health and Quality

Human Health

Inputs must not be harmful to human health. All stages during processing, use and degradation must be taken into account. Measures must be taken to reduce any risks and standards set for inputs used in organic production.

Product quality

Inputs must not have negative effects on the quality of the product - e.g. taste, keeping quality, visual quality.

5. Ethical Aspects - Animal Welfare

Inputs must not have a negative influence on the natural behaviour or physical functioning of animals kept at the farm.

6. Socio-economic Aspects

Consumers' perception: Inputs should not meet resistance or opposition of consumers of organic products. An input might be considered by consumers to be unsafe to the environment or human health, although this has not been scientifically proven. Inputs should not interfere with a general feeling or opinion about what is natural or organic - e.g. genetic engineering

Annex 4.2. Criteria for the Evaluation of Additives and Processing Aids for Organic Food Products, Appendix 5 of IFOAM BASIC STANDARDS

Introduction

Additives, processing aids flavouring agents and colours should be evaluated according to Appendix 5. The following aspects and criteria should be used for evaluation of additives and processing aids in organic food products.

1. Necessity

Additives and processing aids can only be allowed in organic food products if each additive or processing aid is essential to the production and:

- the authenticity of the product is respected
- the product cannot be produced or preserved without them

2. Criteria for the Approval of Additives and Processing Aids

- There are no other acceptable technologies available to process or preserve the organic product.
- The use of additives or processing aids which minimise physical or mechanical damage to the foodstuff which might result from the use of other technologies.
- The hygiene of the product cannot be guaranteed as effectively by other methods such as a reduction in distribution time or improvement of storage facilities.
- There are no natural food sources available of acceptable quality and quantity which can replace the use of additives or processing aids.
- Additives or processing aids do not compromise the authenticity of the product.

- The additives or processing aids do not confuse the customer by giving the impression that the final product is of higher quality than is justified by the quality of the raw material. This refers primarily, but not exclusively, to colouring and flavouring agents.
- Additives and processing aids should not detract from the overall quality of the product.

3. Step by Step Procedure for the use of Additives and Processing Aids

1. Instead of using additives or processing aids, the preferred choice is:

- Foods grown under organic conditions which are used as a whole product or are processed in accordance with the IFOAM Basic Standards - e.g. flour used as a thickening agent or vegetable oil as a releasing agent.
- Foods or raw materials of plant and animal origin which are produced only by mechanical or simple physical procedures - e.g. salt.

2. The second choice is:

- Isolated food substance produced physically or by enzymes - e.g. starch, tartars, pectin.
- Purified products of raw materials of non agricultural origin and micro-organisms - e.g. acerola fruit extract, enzymes and micro-organism preparations such as starter cultures.

3. In organic food products the following categories of additives and processing aids are not allowed:

- "Nature identical" substances.
- Synthetic substances primarily judged as being unnatural or as a "new construction" of food compounds such as acetylated cross-linked starches.
- Additives or processing aids produced by means of genetic engineering.
- Synthetic colouring and synthetic preservatives

Annex 4.3. IFOAM Evaluation system for additives and processing aids.

1. Introduction.

The IFOAM evaluation procedure for additives and processing aids proposed to be used for organic food is based on a dossier evaluations based on the evaluation criteria given in Appendix V of the IFOAM Basic Standards. Each substance has to be approved in accordance to the given criteria's. The IFOAM Standard Committee will take the decision.

We like to give some examples how the IFOAM procedure for substance evaluation is used.

The organisation (label organisation, certifier or firm), which would like to have a new substance included or an old substance removed from Appendix IV of the IFOAM Basic Standards, has to supply to the Standard Committee sufficient information with a dossier. This dossier has to be presented in a way, which covers all relevant aspects, which are given by the criteria list in Appendix V of the IFOAM Basic Standards.

The standard committee reviews the dossier and makes one of five decisions.

1. Insufficient information's. The dossier returns to the organisation
2. Clarification of existing standards. In the case if the IFOAM Basic standards already covers the substance.
3. Reference to experts. The IFOAM standards committee requires the opinion of recognized expert institutions/experts before it can make a decision.
4. Recommendation for the change of the Appendix IV to the IFOAM membership

5. Reject the proposed change. Inform the members about the decision.

2. Comprehensive decision making process based on IFOAM evaluation criteria for additives and processing aids

To enable a quick overview about different substances, which have to be evaluated, the IFOAM standards committee uses as a tool a comprehensive decision table, which allows making classification in accordance to the evaluation criteria's transparent and understandable.

This comprehensive decision making process is based on a classification of each substance toward their ability to fulfil the given criteria's (Appendix V).

This system enables to focus the decision taking process on several questions, which have to be answered. It allows concluding with a ranking of the several substances, which is a developed basis for a final decision.

Scoring System:

1. Result category evaluation/ Question 1 to 6.: \

++ very positive	+ positive	oo not to evaluate	- negative	-- very negative
1	0,5	0	0,5	1

2. Substance category evaluation/ Question 7.

Yes (++)	Acceptable (+)	No (--)
1	0,5	1

((--)) and (++) will be counted as 1 and (--) and (+) will be counted as 0.5 and (oo) will be counted as 0)

The conclusion can be demonstrated by the number of positive (Yes) or negative (No) findings

3. Examples of the evaluation of 2 additives :

Example 1: Beta-carotene

Substance (E – number)
Beta-carotene E 160 a
Usage
Colour
Origin
It's a product out of the oil chemistry. The C40 structure of will be erected by olefins groups.
Toxicology
ADI: JECFA 5 mg/kg/d SCF 5 mg/kg/d
Proposed usage
Colour for traditional cheese
Possible restrictions
To restrict the types of cheese / to allow only natural carotene
Arguments in favour
<ul style="list-style-type: none"> • Several traditional cheeses are made with Beta carotene as colour • The substance is natural identical
Arguments against
<ul style="list-style-type: none"> • The substance misleads the consumers by simulating a high milk quality. • Organic foods (e.g. carrots) can be used too improve the outfit too. There are different natural forms of alternatives available. • A substance which is only commercially available for 40 years cannot be a part of a traditional product (how should we understand the term "traditional"?). • The substance is a synthetic one.

<i>IFOAM Evaluation criteria</i>	<i>Evaluation</i>	<i>Remarks</i>
1. No other technology available to process/ preserve the product	-	
2. Use helps to minimise physical/mechanical impact on food	--	
3. Needed to guarantee hygiene, no other method applicable	--	
4. No other ingredients available (BS) with similar functional properties	--	
5. Authenticity, freshness is maintained	-	
6. End-product is not misleading the consumer	--	
7. Substance category (step by step procedure)	--	
Scoring	NO (6) Yes: (0)	
Conclusion: As a result the substance doesn't fulfil any given criteria. Difficult to be accepted for organic food processing.		

Example 2: Alginates

Substance (E – number)
Alginic acid, sodium alginate, potassium alginate, E 400, E 401, E 402
Usage
Thickeners, stabilisers, gelling agent
Origin
It's a part of the cell walls of specific alga (Phaeophyceae). The alginates will be extracted by alcalic agents and then taken out by Calcium . Products out of GMO alga are available on the market
Toxicology
ADI: 0-25 mg/kg/d (1974) Alginates tends to reduce the resorbtion rate of Zn, Fe, Co, Mn.
Proposed usage
Milk products (Desserts, ice cream)
Possible restrictions
To restrict it to milk product or to make this restriction more specifically e.g. only for ice cream.
Arguments in favour
<ul style="list-style-type: none"> Especially for certain types of ice creams there seem to be a specific use in order to create a specific texture. To create this particular texture seem to be difficult to achieve without thickeners. The substance leads to a longer keeping/storage time of deep frozen ice cream products by maintaining the texture. Alginates are out of natural algae and could therefore be acceptable for organic food processing.
Arguments against
<ul style="list-style-type: none"> There are attractive organic ice cream products (and other desserts based on milk compounds) on the market which are produced without alginates There are a lot of more “natural” less extracted thickeners proposed which will be more acceptable There are toxicological questions especially in context to the probable reduction of the resorbtion rate of important elements. There are concerns of some consumer organisations because of allergenic effects.

Code:**Product Name:****Proposed Usage**

<i>IFOAM Evaluation criteria</i>	<i>Evaluation</i>	<i>Remarks</i>
1. No other technology available to process/ preserve the product	-	
2. Use helps to minimise physical/mechanical impact on food	+	
3. Needed to guarantee hygiene, no other method applicable	--	
4. No other ingredients available (BS) with similar functional properties	-	
5. Authenticity, freshness is maintained	oo	
6. End-product is not misleading the consumer	+	
7. Substance category (step by step procedure)	+	
Scoring	Yes: 1.5 No: 2	
Conclusion: The scoring is balanced, which means that in a second round a validation of the different criteria with a more detailed analysis must be made in relation to the specific proposed use (e.g. for ice cream).		