

## IFOAM Indicative List of Substances for Organic Production and Processing

### 1) FERTILIZERS AND SOIL CONDITIONERS

SUBSTANCES DESCRIPTION, COMPOSITIONAL REQUIREMENTS	CONDITIONS FOR USE
<b>I. PLANT AND ANIMAL ORIGIN</b>	
Farmyard manure, slurry and urine	
Guano	
Source separated human excrement from separated sources which are monitored for contamination	Not to be directly applied on edible parts
Vermicastings	
Blood meal, meat meal, bone, bone meal	
Hoof and horn meal, feather meal, fish and fish products, wool, fur, hair, dairy products	
Biodegradable processing by-products, plant or animal origin, e.g. by-products of food, feed, oilseed, brewery, distillery or textile processing	
Crop and vegetable residues, mulch, green manure, straw	
Wood, bark, sawdust, wood shavings, wood ash, wood charcoal	
Seaweed and seaweed products	
Peat (prohibited for soil conditioning)	Excluding synthetic additives; permitted for inclusion in potting mixes
Plant preparations and extracts	
Compost made from ingredients listed in this appendix, spent mushroom waste, humus from worms and insects, urban composts from separated sources which are monitored for contamination	
<b>II. MINERAL ORIGIN</b>	
Basic slag	
Calcareous and magnesium amendments	
Limestone, gypsum, marl, maerl, chalk, sugar beet lime, calcium chloride	
Magnesium rock, kieserite and Epsom salt (magnesium sulfate)	
Mineral potassium (e.g. sulfate of potash, muriate of potash, kainite, sylvanite, patenkali)	Shall be obtained by physical procedures but not enriched by mechanical processes
Natural phosphates	
Pulverized rock, stone meal	

SUBSTANCES DESCRIPTION, COMPOSITIONAL REQUIREMENTS	CONDITIONS FOR USE
Clay (e.g. bentonite, perlite, vermiculite, zeolite)	
Sodium chloride	
Trace elements	
Sulfur	
<b>III. MICROBIOLOGICAL</b>	
Biodegradable processing by-products of microbial origin, e.g. by-products of brewery or distillery processing	
Microbiological preparations based on naturally occurring organisms	
<b>IV. OTHERS</b>	
Biodynamic preparations	
Calcium lignosulfonate	

## II) CROP PROTECTANTS AND GROWTH REGULATIONS

SUBSTANCES DESCRIPTION, COMPOSITIONAL REQUIREMENTS	CONDITIONS FOR USE
<b>I. PLANT AND ANIMAL ORIGIN</b>	
Algal preparations	
Animal preparations and oils	
Beeswax	
Chitin nematicides (natural origin)	
Coffee grounds	
Corn gluten meal (weed control)	
Dairy products (e.g. milk, casein)	
Gelatine	
Lecithin	
Natural acids (e.g. vinegar)	
Neem ( <i>Azadirachta indica</i> )	
Plant oils	
Plant preparations	
Plant based repellents	
Propolis	
Pyrethrum ( <i>Chrysanthemum cinerariaefolium</i> )	The synergist Piperonyl butoxide is prohibited. Where certification bodies have previously permitted its use, it shall be prohibited after 2005
Quassia ( <i>Quassia amara</i> )	
Rotenone ( <i>Derris elliptica</i> , <i>Lonchocarpus</i> spp. <i>Tephrosia</i> spp.)	
Ryania ( <i>Ryania speciosa</i> )	
Sabadilla	

Tobacco tea (pure nicotine is forbidden)	
<b>II. MINERAL ORIGIN</b>	
Chloride of lime	
Clay (e.g. bentonite, perlite, vermiculite, zeolite)	
Copper salts (e.g. sulfate, hydroxide, oxychloride, octanoate)	Max 8 kg/ha per year (on a rolling average basis)
Diatomaceous earth	
Light mineral oils (paraffin)	
Lime sulfur (Calcium polysulfide)	
Potassium bicarbonate	
Potassium permanganate	
Quicklime	
Silicates (e.g. sodium silicates, quartz)	
Sodium bicarbonate	
Sulfur	
<b>III. MICROORGANISMS</b>	
Fungal preparations	
Bacterial preparations (e.g. Bacillus thuringiensis)	
Release of parasites, predators and sterilized insects	
Viral preparations (e.g. granulosis virus)	
<b>IV. OTHERS</b>	
Biodynamic preparations	
Boric Acid	For structural pest control. Not to be used in direct contact with food, soil, or plant tissue.
Calcium hydroxide	
Carbon dioxide	
Ethyl alcohol	
Homeopathic and Ayurvedic preparations	
Hydrogen peroxide	
Iron phosphates (for use as molluscicide)	
Seasalt and salty water	
Soda	
Soft soap	
Sulfur dioxide	
Vitamin D3	In traps only
<b>V. TRAPS, BARRIERS, REPELLENTS</b>	
Physical methods (e.g. chromatic traps, mechanical traps)	
Mulches, nets	
Pheromones - in traps and dispensers only	

### III) ADDITIVES<sup>1</sup> AND PROCESSING AIDS

Where the substances listed in this annex can be found in nature, natural sources are preferred. Substances of certified organic origin are preferred.

INT'L NUM- BERING SYSTEM	PRODUCT	ADDITIVE	PROC. AID	LIMITATION/NOTE
INS 170	Calcium carbonate	X	X	
INS 181	Tannin		X	Only for wine
INS 184	Tannic acid		X	Filtration aid for wine
INS 220	Sulfur dioxide	X		Only for wine
INS 224	Potassium metabisulphite	X		Only for wine
INS 270	Lactic acid	X	X	
INS 290	Carbon dioxide	X	X	
INS 296	L-malic acid	X	X	
INS 300	Ascorbic acid	X		
INS 306	Tocopherols, mixed natural concentrates	X		
INS 322	Lecithin	X	X	
INS 325	Na-lactate	X		Meat products only From natural sources only
INS 326	K-lactate	X		Used in meat products only From natural sources only
INS 327	Ca-lactate	X		Used in meat products only From natural sources only
INS 330	Citric acid	X	X	
INS 331	Sodium citrates	X		
INS 332	Potassium citrates	X		
INS 333	Calcium citrates	X		
INS 334	Tartaric acid	X	X	Only for wine
INS 335	Sodium tartrate	X	X	
INS 336	Potassium tartrate	X	X	
INS 341	Mono calcium phosphate	X		Only for "raising flour"
INS 342	Ammonium phosphate	X		Restricted to 0.3 gm/l in wine
INS 400	Alginic acid	X		
INS 401	Sodium alginate	X		
INS 402	Potassium alginate	X		
INS 406	Agar	X		
INS 407	Carrageenan	X		

<sup>1</sup> Food additives may contain carriers, which shall be evaluated.

INT'L NUM- BERING SYSTEM	PRODUCT	ADDITIVE	PROC. AID	LIMITATION/NOTE
INS 410	Locust bean gum	X		
INS 412	Guar gum	X		
INS 413	Tragacanth gum	X		
INS 414	Arabic gum	X		Only for milk products, fat products, confectionary sweets, eggs
INS 415	Xanthan gum	X		Only fat, fruit and vegetable products and cakes and biscuits
INS 440	Pectin	X		Unmodified
INS 500	Sodium carbonates	X	X	
INS 501	Potassium carbonates	X	X	
INS 503	Ammonium carbonates	X		Only for cereal products, confectionery, cakes and biscuits
INS 504	Magnesium carbonates	X		
INS 507	Hydrochloric acid, Muriatic Acid (North America)		X	Only for gelatine production
INS 508	Potassium chloride	X		
INS 509	Calcium chloride	X	X	
INS 511	Magnesium chloride	X	X	Only for soybean products
INS 513	Sulfuric acid		X	PH adjustment of water during sugar processing Gelatine production
INS 516	Calcium sulfate	X		For soybean products, confectionery and in bakers' yeast
INS 517	Ammonium sulfate	X		Only for wine, restricted to 0.3 mg/l
INS 524	Sodium hydroxide	X	X	For sugar processing and for the surface treatment of traditional bakery products
INS 526	Calcium hydroxide	X	X	Food additive for maize tortilla flour Processing aid for sugar
INS 527	Ammonium hydroxide		X	Only for gelatine production
INS 551	Silicon dioxide (amorphous)		X	For wine, fruit and vegetable processing Gelatine production
INS 553	Talc		X	
INS 901	Beeswax		X	
INS 903	Carnauba wax		X	

INT'L NUM- BERING SYSTEM	PRODUCT	ADDITIVE	PROC. AID	LIMITATION/NOTE
INS 938	Argon	X		
INS 941	Nitrogen	X	X	
INS 948	Oxygen	X	X	
	Activated carbon		X	
	Bentonite		X	Only for fruit and vegetable products
	Casein		X	Only for wine
	Diatomaceous earth		X	Only for sweeteners and wine
	Egg white albumen		X	Only for wine
	Ethanol		X	
	Ethylene gas		X	Only for ripening of fruit.
	Gelatin		X	Only for wine, fruit and vegetable
	Hydrogen peroxide (hydrogen dioxide, hydroperoxide)		X	Only for gelatine production
	Isinglass		X	Only for wine
	Kaolin		X	
	Perlite		X	
	Preparations of bark		X	Only for sugar

### Flavoring Agents

- Organic flavoring extracts (including volatile oils)
- Volatile (essential) oils produced by means of solvents such as oil, water, ethanol, carbon dioxide and mechanical and physical processes
- Natural smoke flavor
- Natural flavoring preparations are only to be approved based on the criteria in Appendix 1

Preparations of Micro-organisms and Enzymes for use in food processing (see 6.2.4.)

These may be used as ingredient or processing aids with approval based on the criteria in Appendix 1.

- Organic certified micro-organisms
- Preparations of micro-organisms
- Enzymes and enzyme preparations

### IV) EQUIPMENT CLEANSERS AND EQUIPMENT DISINFECTANTS THAT MAY COME INTO DIRECT CONTACT WITH FOOD

PRODUCT	LIMITATION/NOTE
Acetic acid	

Alcohol, ethyl (ethanol)	
Alcohol, isopropyl (isopropanol)	
Calcium hydroxide (slaked lime)	
Calcium hypochlorite	
Calcium oxide (quicklime)	
Chloride of lime (calcium oxychloride, calcium chloride, and calcium hydroxide)	
Chlorine dioxide	
Citric acid	
Formic acid	
Hydrogen peroxide	
Lactic acid	
Natural essences of plants	
Oxalic acid	
Ozone	
Peracetic acid	
Phosphoric acid	Only for dairy equipment
Plant extracts	
Potassium soap	
Sodium carbonate	
Sodium hydroxide (caustic soda)	
Sodium hypochlorite	E.g. as liquid bleach
Sodium soap	