

codex alimentarius commission



FOOD AND AGRICULTURE
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Agenda Item 10 (a)

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DRAFT REVISION OF THE CODEX CLASS NAMES AND INTERNATIONAL NUMBERING SYSTEM - CAC/GL 36-1989 (N07-2005)

Comments at Step 6 (in response to CL 2006/37-FA) submitted by Brazil, Canada, European Community, Japan, United States, EFEMA, ICBA and IDF

BRAZIL

Brazil has the following comments on CL 2006/37-FA:

- 1) The description of the functional class “**carrier**” includes carry over, so it’s necessary to exclude it to become the definition more properly. For example, in a formulated additive, containing two or more substances, are all of them carriers or are they considered carry over in the product? There are waxes to cover some fruits containing other additives to stabilize the solution. In this case, the additives have different functions, as emulsifier, thickener and stabilizer in the solution, but not in the food ready to eat. How these additives are classified?
- 2) According to the description of “**packaging gas**”, Brazil would like to know some examples of substances that remain in the foodstuff ready to eat. Packaging gas has been classified as aid until now in several countries. To analyze the description of this functional class as additive, it is necessary to identify examples.

CANADA

Canada supports this draft revision of the Codex Class Names and the International Numbering System and is pleased to provide additional comments. Canada considers that terms used by JECFA to describe food additive functions (Combined Compendia of Food Additive Specifications) should be accommodated in the Codex Class names and the International Numbering System. Canada also proposes inclusion of other descriptors, as follows:

- “Neutralizing agent” can be added to descriptors of the functional class 1, Acidity regulator. This term is used in JECFA specifications, e.g. for calcium hydroxide;
- “Release agent” is the term used by JECFA for a number of food additives. This term could perhaps be added as a new unique class or it could be placed in a proposed new “Miscellaneous” or “Adjuvant” class (as described in the final bullet);
- The term “culture nutrient” could be placed in the class of Yeast nutrient and the class expanded to “Yeast and other culture nutrients”;
- The term “leavening agent” is used by JECFA to describe sodium bicarbonate. This term can be added to descriptor terms for Class 23, Raising Agent;

- The term “Conditioning agent” is used in the fifth edition of the Food Chemicals Codex, to describe the function of silicon dioxide. This term could be added to descriptors for Class 2, Anticaking agent.
- A new “Miscellaneous” or “Adjuvant” class could be added in order to accommodate food additive functions which cannot be classified in existing classes; for example, liquid nitrogen which has the function of a direct freezing agent and release agent, which could be placed in this class if its own unique class is not created (as described in the second bullet above).

EUROPEAN COMMUNITY

The European Community considers that carriers and packaging gases fully meet the Codex definition of a food additive and therefore should be included as a recognised functional class in the Codex *Class Names and International Numbering System*. Such an inclusion for the purposes of defining and recognising the justified use of a class of food additives should not necessarily imply that such uses should be labelled on the final product.

The issue of whether such additives should be labelled on the foodstuff should be considered by the appropriate Codex Committee in this case the Codex Committee on Food Labelling (CCFL).

It is therefore appropriate that CCFA considers only the technological use of food additives when assessing their functional class rather than any consideration of their labelling status.

Packaging gases

Packaging gases are gases other than air which are introduced into a container before, during or after the placing of a foodstuff in that container. They are usually inert substances and are added for the intention of ‘preserving’ the foodstuff. The preservation effect can be to reduce microbial growth, retard spoilage and slow enzymatic and biochemical degradation and thereby is a replacement to the use of other food additive preservatives. This is a different effect to the physical preservation of canning or bottling where the preservation effect is achieved by a physical barrier (the glass) and/or by sterilisation (heat).

Within the EU the labelling of packaging gases is controlled by Commission Directive 94/54/EC, this legislation exempts packaging gases from the general requirement to list the substances in the ingredients listing. However the EC considers that consumers should be informed of the use of such gases and to understand why the foodstuff has a longer shelf life than similar products packaged differently. Therefore Directive 94/54/EC requires that foodstuffs whose durability has been extended by means of packaging gases is labelled as ‘packaged in a protective atmosphere’.

Carriers

Carriers are substances used to dissolve, dilute, disperse or otherwise physically modify a food additive or nutrient without altering its technological function in order to facilitate its handling, application or use. Their functions differ from simply supporting the additive or nutrient during its incorporation into the food (e.g. fat soluble colours supported on fat based emulsifiers) to more complex carriers which can protect the substances (additives, flavourings, vitamins, essential oils etc.) from oxidation or other forms of degradation. An example of the latter case is the use of microencapsulation where substances are encapsulated into food additives such as beta-cyclodextrin. Such encapsulation enables the substance to be protected from degradation during storage and also enables the substance to be released when required (e.g. flavourings remain stable until liquid is added to a dehydrated foodstuff which breaks down the cyclodextrin thus releasing the flavour).

JAPAN

General Comments

We have checked the condition of usage for proposed functional classes and sub-classes and for those not currently proposed but used in the latest GSFA and/or Commodity Standards. The results summarized in Tables 1 and 2 indicate that the functional names used in the proposed revision and those included in the GSFA and Commodity Standards are not consistent.

At the 36th session of the CCFAC, it agreed to harmonize the functional classes listed in the adopted and not-yet-adopted provisions of the GSFA with the INS Table of Functional Classes (ALINORM 04/27/12, para 104). However, in spite of recommendations of Codex Secretariat (CX/FAC 04/36/14, para 18), the CCFAC has not clearly stated when the functional classes will be harmonized in the GSFA with the INS Table of Functional Classes. Considering that the food additive provisions of Commodity Standards will be incorporated into the GSFA in the near future, we propose that functional classes used in Commodity Standards also be harmonized with the INS Table of Functional Classes replacing them with the corresponding correct functional names at the time of incorporation into the GSFA. Therefore, we suggest that the CCFA clearly state when it will align all functional classes used in the Codex system with the INS Table of Function Classes.

Specific Comments

Emulsifying salt

We propose that Emulsifying salt be deleted from the functional classes and incorporate it together with its sub-class into the sub-class of Emulsifier.

The proposed separation of Sequestrant from Emulsifying salt which currently includes Sequestrant as a sub-class (section 2 of CAC/GL 36) will lead to Emulsifying salt not referred to in the GSFA or in the adopted and proposed / draft proposed Commodity Standards.

Carrier and Packaging gas

We propose that square brackets be removed because the Japan's regulation regarding food additives stipulates these functional classes as food additives.

[Table 1] Condition of usage for proposed functional classes and those sub-classes in the GSFA and Commodity Standards

Functional Classes	Sub-classes	GSFA	Commodity Standards*
1. Acidity Regulator	acidity regulator, acid, acidifier alkali, base, buffer, buffering agent, pH adjusting agent	used in many food categories	CS A-8(a)-1978, CS A-8(b)-1978, CS A-8(c)-1978, CS A-1-1971, CS A-3-1971, CS A-4-1971, CS A-6-1978, CS A-9-1976, CS A-15-1995, CS A-18-1995, CS 13-1981, CS 15-1981, CS 17-1981, CS 32-1981, CS 37-1981, CS 42-1981, CS 56-1981, CS 57-1981, CS 61-1981, CS 62-1981, CS 66-1981, CS 68-1981, CS 70-1981, CS 72-1981, CS 73-1981, CS 74-1981, CS 79-1981, CS 80-1981, CS 87-1981, CS 89-1981, CS 90-1981, CS 92-1981, CS 94-1981, CS 96-1981, CS 97-1981, CS 98-1981, CS 99-1981, CS 105-1981, CS 115-1981, CS 117-1981, CS 119-1981, CS 135-1981, CS 141-1983, CS 144-1985, CS 145-1985, CS 156-1987, CS 159-1987, CS 160-1987, CS 165-1989, CS 166-1989, CS 207-1999, CS 208-1999, CS 221-2001, CS 243-2003 CS 223-2001, CS 241-2003, CS 242-2003, CS 243-2003, CS 244-2004

Functional Classes	Sub-classes	GSFA	Commodity Standards*
2.Anticaking agent	anticaking agent, anti-stick agent, drying agent, dusting agent	used in many food categories	CS A-6-1978, CS A-15-1995, CS A-18-1995, CS 105-1981, CS 117-1981, CS 150-1985, CS 207-1999, CS 212-1999, CS 221-2001
3. Antifoaming agent	antifoaming agent, defoaming agent	used in many food categories	CS 19-1981, CS 32-1981, CS 42-1981, CS 79-1981, CS 80-1981, CS 117-1981, CS 210-1999
4.Antioxidant	antioxidant, antioxidant synergist, antibrowning agent	used in many food categories	CS A-2-1973, CS 17-1981, CS 19-1981, CS 32-1981, CS 36-1981, CS 66-1981, CS 72-1981, CS 73-1981, CS 74-1981, CS 78-1981, CS 79-1981, CS 80-1981, CS 87-1981, CS 88-1981, CS 89-1981, CS 92-1981, CS 95-1981, CS 96-1981, CS 97-1981, CS 98-1981, CS 99-1981, CS 117-1981, CS 135-1981, CS 145-1985, CS 156-1987, CS 159-1987, CS 165-1989, CS 166-1989, CS 190-1995, CS 207-1999, CS 210-1999, CS 211-1999, CS 242-2003, CS 244-2004
5.Bleaching agent (non-flour use)	bleaching agent	used in many food categories	CS 145-1985
6.Bulking agent	bulking agent, filler	used in many food categories	CS A-18-1995, CS 87-1981, CS 105-1981
7.Carbonating agent	carbonating agent	used in food categories 14.1.2.1, 14.1.2.3, 14.1.3.1, 14.1.3.3 as the function of Carbon Dioxide (INS 290)	used in no Commodity Standards
8.[Carrier]	carrier, carrier solvent, nutrient carrier diluent for other food additives, encapsulating agent	used in many food categories	used in no Commodity Standards
9.Colour	colour, decorative pigment, surface colourant	used in many food categories	CS A-1-1971, CS A-6-1978, CS A-8(a)-1978, CS A-8(b)-1978, CS A-8(c)-1978, CS 16-1981, CS 19-1981, CS 32-1981, CS 37-1981, CS 58-1981, CS 60-1981, CS 61-1981, CS 62-1981, CS 78-1981, CS 79-1981, CS 80-1981, CS 81-1981, CS 87-1981, CS 89-1981, CS 92-1981, CS 98-1981, CS 99-1981, CS 115-1981, CS 117-1981, CS 135-1981, CS 145-1985, CS 159-1987, CS 166-1989, CS 211-1999, CS 221-2001, CS 242-2003, CS 243-2003
10.Colour retention agent	colour retention agent, colour fixative, colour stabilizer, colour adjunct	used in many food categories	used in no Commodity Standards

Functional Classes	Sub-classes	GSFA	Commodity Standards*
11.Emulsifier	emulsifier, plasticizer, dispersing agent, surface active agent, crystallization inhibitor, density adjustment (flavouring oils in beverages), suspension agent, clouding agent	used in many food categories	CS A-3-1971, CS A-4-1971, CS A-9-1976, CS A-18-1995, CS A-8(a)-1978, CS A-8(b)-1978, CS A-8(c)-1978, CS 32-1981, CS 72-1981, CS 73-1981, CS 74-1981, CS 87-1981, CS 105-1981, CS 117-1981, CS 135-1981, CS 141-1983, CS 150-1985, CS 156-1987, CS 166-1989, CS 207-1999, CS 240-2003, CS 243-2003
12.Emulsifying salt	emulsifying salt, melding salt	used in no food categories	used in no Commodity Standards
13.Firming agent	firming agent	used in many food categories	CS A-3-1971, CS A-4-1971, CS A-15-1995, CS 13-1981, CS 15-1981, CS 58-1981, CS 62-1981, CS 66-1981, CS 79-1981, CS 81-1981, CS 99-1981, CS 115-1981, CS 145-1985, CS 159-1987, CS 207-1999
14.Flavour enhancer	flavour enhancer, flavour synergist	used in many food categories	CS 66-1981, CS 89-1981, CS 90-1981, CS 96-1981, CS 97-1981, CS 98-1981, CS 117-1981, CS 166-1989, CS 222-2001, CS 223-2001, CS 243-2003
15.Flour treatment agent	flour treatment agent, flour bleaching agent, flour improver, dough conditioner, dough strengthening agent	used in many food categories	CS 152-1985
16.Foaming agent	foaming agent, whipping agent, aerating agent	used in several food categories	CS 221-2001
17.Gelling agent	gelling agent	used in the only food category 01.8.2 as the function of Potassium Chloride (INS 508)	CS 70-1981, CS 94-1981, CS 119-1981
18.Glazing agent	glazing agent, sealing agent, coating agent, surface-finishing agent, polishing agent, film-forming agent	used in many food categories	CS 87-1981
19.Humectant	humectant, moisture-retention agent, wetting agent	used in several food categories	CS 89-1981, CS 95-1981, CS 96-1981, CS 97-1981, CS 98-1981, CS 117-1981, CS 165-1989, CS 166-1989, CS 190-1995
20.[Packaging gas]	packaging gas	used in food categories 14.1.2.1, 14.1.2.3, 14.1.3.1, 14.1.3.3 as the function of Carbon Dioxide (INS 290)	CS A-9-1976, CS 117-1981, CS 243-2003
21.Preservative	preservative, antimicrobial preservative, antimycotic agent, bacteriophage control agent, antibrowning agent, fungistatic agent, antimould and antirope	used in many food categories	CS A-6-1978, CS A-8(a)-1978, CS A-8(b)-1978, CS A-8(c)-1978, CS 32-1981, CS 66-1981, CS 79-1981, CS 80-1981, CS 88-1981, CS 89-1981, CS 92-1981, CS 95-1981,

Functional Classes	Sub-classes	GSFA	Commodity Standards*
	agent, antimicrobial synergist		CS 96-1981, CS 97-1981, CS 98-1981, CS 115-1981, CS 117-1981, CS 135-1981, CS 160-1987, CS 167-1989, CS 221-2001, CS 240-2003, CS 243-2003, CS 244-2004
22.Propellant	propellant	used in no food categories	CS A-9-1976
23.Raising agent	raising agent	used in many food categories	used in no Commodity Standards
24.Sequestrant	sequestrant	used in many food categories	CS 37-1981, CS 90-1981, CS114-1981, CS 222-2001
25.Stabilizer	stabilizer, foam stabilizer, colloidal stabilizer, emulsion stabilizer	used in many food categories	CS A-3-1971, CS A-4-1971, CS A-9-1976, CS A-15-1995, CS 66-1981, CS 105-1981, CS 117-1981, CS 135-1981, CS 207-1999, CS 221-2001, CS 223-2001, CS 240-2003, CS 243-2003
26.Sweetner	sweetener, intense sweetener, bulk sweetner	used in only two food categories 14.1.3.1, 14.1.3.3	CS 87-1981, CS 105-1981, CS 117-1981, CS 243-2003
27.Thickener	thickener, bodying agent, binder, texturizing agent	used in many food categories	CS A-3-1971, CS A-4-1971, CS A-9-1976, CS C-31-1973, CS 66-1981, CS 70-1981, CS 72-1981, CS 73-1981, CS 79-1981, CS 80-1981, CS 94-1981, CS 96-1981, CS 97-1981, CS 105-1981, CS 115-1981, CS116-1981, CS 117-1981, CS 119-1981, CS 135-1981, CS 145-1985, CS 156-1987, CS 165-1989, CS 166-1989, CS 221-2001, CS 223-2001, CS 240-2003, CS 243-2003

* Only those functional classes clearly identified in the food additive provisions in Commodity Standards

[Table 2] Condition of usage for functional classes not listed in the draft revision of the Codex class names in the GSFA and Commodity Standards

Functional Classes	GSFA (Names of Food Additives)	Commodity Standards
1.Adjuvant	Alpha-Amylase (<i>Aspergillus oryzae</i> var.), Aluminium Silicate, Azodicarbonamide, BHT, Carbon Dioxide, Carnauba Wax, Glycerol Esters of Wood Rosin, Phosphates, Polyethylene Glycol, Polysorbates, Polyvinylpyrrolidone, Sucrose Acetate Isobutyrate, Sulphites, Tartrates	No food additives used as this functional class
2.Enzyme	Alpha-Amylase (<i>Aspergillus oryzae</i> var.), Protease (<i>Aspergillus oryzae</i> var.)	CS 152-1985
3.Release agent	Beeswax White and Yellow, Candelilla Wax, Carnauba Wax,	No food additives used as this functional class

Functional Classes	GSFA (Names of Food Additives)	Commodity Standards
	Mineral Oil (High Viscosity), Mineral Oil (Medium & Low Viscosity, Class I), Polyethylene Glycol, Shellac	
4.Filter Aid	Silicon Dioxide (Amorphous)	No food additives used as this functional class
5.Vegetable Gum	No food additives used as this functional class	CS C-31-1973, CS 55-1981, CS 56-1981, CS 58-1981, CS 116-1981, CS 144-1985
6.Agglutinant	No food additives used as this functional class	CS 66-1981
7.Anticlouding agent	No food additives used as this functional class	CS 68-1981
8.Leavening agent	No food additives used as this functional class	CS 74-1981, CS 166-1989
9.Softening agent	No food additives used as this functional class	CS 81-1981
10.Solubilizing agent	No food additives used as this functional class	CS 115-1981
11.Dispersing agent	No food additives used as this functional class	CS 115-1981
12.Chelating agent	No food additives used as this functional class	CS 145-1985

UNITED STATES

Comments on proposed draft revision of CAC/GL 36-1989

1. The United States generally supports the revised list of functional classes, definitions, and sub-classes included in CL 2006/37-FA. However, we have suggestions on four functional classes for further consideration by CCFA:

Carrier

We support the retention of the functional class Carrier. We suggest that the definition be changed as follows: “A food additive used to dissolve, dilute, disperse or otherwise physically modify **another** food additive (**including a flavouring agent**) or nutrient without altering its function (and without exerting any technological effect itself **on the food to which it is added**) in order to facilitate ~~it’s~~ **the** handling, application, or use **of the additive or nutrient**.”

Also, we wish to note the need for a comma between “carrier” and “diluent” in the Sub-class column.

Emulsifier

We suggest that the sub-class “density adjustment (flavouring oils in beverages)” be modified to “density adjustment **agent** (flavouring oils in beverages).”

Packaging gas

It is our understanding that gases used in food manufacturing may be used for the following technical effects: 1) displacing air in a food packaged with an inert substance to prolong the shelf-life of the packaged food by preventing oxidation (Packaging Gas); 2) aeration, whipping, or foaming of the packaged food (Foaming Agent); and 3) expelling a food from its package or container (Propellant). We believe that inert gases used to displace air in a food container to prevent oxidation of the packaged food, although food additives, function as processing aids in that the inert gas itself has no active functional effect on the food.

Therefore, we conclude that the functional class for “Packaging gas” is not necessary, and should be removed from the proposed table of functional classes. As a consequence, hydrogen would no longer have a listed functional effect and could be considered for deletion from the INS list.

Propellant

We propose that the definition be changed as follows: “A food additive ~~gas~~, which **is introduced as a gas into a container under pressure in order to expels food from ~~a~~ **the** container.**

2. As an aid to CCFA in implementing the revision of the INS, the United States has prepared a draft update of Section 3 of CAC/GL 36-1989 (see Annex) based on the revised list of INS functional classes presented in Appendix XV of ALINORM 06/29/41, and including modifications noted below:

- Amendments to the INS identified at the 38th CCFAC (ALINORM 06/29/12, Appendix XVI) are included.
- Functional effects attributed to an additive by JECFA have been added in cases where the JECFA functional effect matches a functional class or sub-class from the revised INS list of Functional Classes.

Annex to US Comment

Bold text indicates a proposed addition, ~~struckthrough~~ text indicates a proposed deletion, **bold double underlined** text indicates a technical function taken from JECFA.

Section 3

INS Number	Food Additive Name	Technical functions
100	Curcumins	colour
100(i)	Curcumin	colour
100(ii)	Turmeric	colour
101	Riboflavins	colour
101(i)	Riboflavin	colour
101(ii)	Riboflavin 5'- phosphate, sodium	colour
102	Tartrazine	colour
103	Alkanet	colour
104	Quinoline yellow	colour
107	Yellow 2G	colour
110	Sunset yellow FCF	colour
120	Carmines	colour
121	Citrus red 2	colour
122	Azorubine	colour
123	Amaranth	colour
124	Ponceau 4R	colour
125	Ponceau SX	colour
127	Erythrosine	colour
128	Red 2G	colour
129	Allura red AC	colour
130	Manascorubin	colour
131	Patent blue V	colour
132	Indigotine	colour
133	Brilliant blue FCF	colour
140	Chlorophyll	colour
141	Copper chlorophylls	colour
141(i)	Chlorophyll copper complex	colour
141(ii)	Chlorophyll copper complex, sodium and potassium Salts	colour
142	Green S	colour
143	Fast green FCF	colour
150a	Caramel I - plain	colour
150b	Caramel II - caustic sulphite process	colour
150c	Caramel III - ammonia process	colour
150d	Caramel IV - ammonia sulphite process	colour
151	Brilliant black PN	colour
152	Carbon black(hydrocarbon)	colour

INS Number	Food Additive Name	Technical functions
153	Vegetable carbon	colour
154	Brown FK	colour
155	Brown HT	colour
160a	Carotenes	colour
160a(i)	Beta-carotene (synthetic)	colour
160a(ii)	Carotene, beta-, Natural Extracts	colour
160a(ii)	Beta-carotene (<i>Blakeslea trispora</i>)	colour
160b	Annatto extracts	colour
160c	Paprika oleoresins	colour
160d	Lycopene	colour
160e	Beta-apo-carotenal	colour
160f	Beta-apo-8'-carotenic acid, methyl or ethyl ester	colour
161a	Flavoxanthin	colour
161b	Luteins	colour
161b(i)	Lutein from <i>Tagetes erecta</i>	colour
161b(ii)	Tagetes extract	colour
161c	Kryptoxanthin	colour
161d	Rubixanthin	colour
161e	Violoxanthin	colour
161f	Rhodoxanthin	colour
161g	Canthaxanthin	colour
161h	Zeaxanthins	colour
161h(i)	Zeaxanthin-(synthetic)	colour
161h(ii)	Zeaxanthin-rich extract from <i>Tagetes erecta</i>	colour
162	Beet red	colour
163	Anthocyanins	colour
163(i)	Anthocyanins	colour
163(ii)	Grape skin extract	colour
163(iii)	Blackcurrant extract	colour
163(iv)	Purple corn colour	colour
163 (v)	Red cabbage colour	colour
164	Gardenia yellow	colour
165	Gardenia blue	colour
166	Sandalwood	colour
170	Calcium carbonates	surface colourant, anticaking agent, stabilizer
170(i)	Calcium carbonate	anticaking agent, surface colourant, stabilizer, acidity regulator
170(ii)	Calcium hydrogen carbonate	anticaking agent, surface colourant, stabilizer, acidity regulator
171	Titanium dioxide	colour
172	Iron oxides	colour
172(i)	Iron oxide, black	colour
172(ii)	Iron oxide, red	colour
172 (iii)	Iron oxide, yellow	colour
173	Aluminium	colour
174	Silver	colour
175	Gold	colour
180	Lithol rubine BK	colour
181	Tannins, food grade	colour, emulsifier, stabilizer, thickener
182	Orchil	colour
200	Sorbic acid	preservative
201	Sodium sorbate	preservative
202	Potassium sorbate	preservative
203	Calcium sorbate	preservative
209	Heptyl p-hydroxybenzoate	preservative
210	Benzoic acid	preservative
211	Sodium benzoate	preservative
212	Potassium benzoate	preservative
213	Calcium benzoate	preservative

INS Number	Food Additive Name	Technical functions
214	Ethyl p-hydroxybenzoate	preservative
215	Sodium ethyl p-hydroxybenzoate	preservative
216	Propyl p-hydroxybenzoate	preservative
217	Sodium propyl p-hydroxybenzoate	preservative
218	Methyl p-hydroxybenzoate	preservative
219	Sodium methyl p-hydroxybenzoate	preservative
220	Sulphur dioxide	preservative, antioxidant
221	Sodium sulphite	preservative, antioxidant
222	Sodium hydrogen sulphite	preservative, antioxidant
223	Sodium metabisulphite	preservative, bleaching agent, antioxidant
224	Potassium metabisulphite	preservative, antioxidant
225	Potassium sulphite	preservative, antioxidant
226	Calcium sulphite	preservative, antioxidant
227	Calcium hydrogen sulphite	preservative, antioxidant, firming agent
228	Potassium bisulphite	preservative, antioxidant
230	Diphenyl	preservative
231	Ortho-phenylphenol	preservative
232	Sodium o-phenylphenol	preservative
233	Thiabendazole	preservative
234	Nisin	preservative
235	Pimaricin (natamycin)	preservative
236	Formic acid	preservative
237	Sodium formate	preservative
238	Calcium formate	preservative
239	Hexamethylene tetramine	preservative
240	Formaldehyde	preservative
241	Gum guaicum	preservative
242	Dimethyl dicarbonate	preservative
249	Potassium nitrite	preservative, colour fixative
250	Sodium nitrite	preservative, colour fixative
251	Sodium nitrate	preservative, colour fixative
252	Potassium nitrate	preservative, colour fixative
260	Acetic acid, glacial	preservative, acidity regulator, acidifier
261	Potassium acetates	preservative, acidity regulator
261(i)	Potassium acetate	preservative, acidity regulator
261(ii)	Potassium diacetate	preservative, acidity regulator
262	Sodium acetates	preservative, acidity regulator, sequestrant
262(i)	Sodium acetate	preservative, acidity regulator, sequestrant
262(ii)	Sodium diacetate	preservative, acidity regulator, sequestrant
263	Calcium acetate	preservative, stabilizer, acidity regulator
264	Ammonium acetate	acidity regulator
265	Dehydroacetic acid	preservative
266	Sodium dehydroacetate	preservative
270	Lactic acid (L-, D- and DL-)	acidity regulator
280	Propionic acid	preservative
281	Sodium propionate	preservative
282	Calcium propionate	preservative
283	Potassium propionate	preservative
290	Carbon dioxide	carbonating agent, packing gas , packaging gas , propellant , preservative
296	Malic acid (D-,L-)	acidity regulator
297	Fumaric acid	acidity regulator
300	Ascorbic acid (L-)	antioxidant
301	Sodium ascorbate	antioxidant
302	Calcium ascorbate	antioxidant
303	Potassium ascorbate	antioxidant
304	Ascorbyl palmitate	antioxidant
305	Ascorbyl stearate	antioxidant
306	Mixed tocopherols concentrate	antioxidant

INS Number	Food Additive Name	Technical functions
307	Alpha-tocopherol	antioxidant
308	Synthetic gamma-tocopherols	antioxidant
309	Synthetic delta-tocopherol	antioxidant
310	Propyl gallate	antioxidant
311	Octyl gallate	antioxidant
312	Dodecyl gallate	antioxidant
313	Ethyl gallate	antioxidant
314	Guaiac resin	antioxidant
315	Isoascorbic acid	antioxidant
316	Sodium isoascorbate	antioxidant
317	Potassium isoascorbate	antioxidant
318	Calcium isoascorbate	antioxidant
319	Tertiary butylhydroxyquinone	antioxidant
320	Butylated hydroxyanisole	antioxidant
321	Butylated hydroxytoluene	antioxidant
322	Lecithins	antioxidant, emulsifier
323	Anoxomer	antioxidant
324	Ethoxyquin	antioxidant
325	Sodium lactate	antioxidant synergist, humectant, bulking agent, bodying agent, acidity regulator
326	Potassium lactate	antioxidant synergist, acidity regulator
327	Calcium lactate	acidity regulator, flour treatment agent
328	Ammonium lactate	acidity regulator, flour treatment agent
329	Magnesium lactate (DL-)	acidity regulator, flour treatment agent
330	Citric acid	acidity regulator, antioxidant, sequestrant
331	Sodium citrates	acidity regulator, sequestrant, emulsifier, stabilizer
331(i)	Sodium dihydrogen citrate	acidity regulator, sequestrant, emulsifier, stabilizer
331(ii)	Disodium monohydrogen citrate	acidity regulator, sequestrant, emulsifier, stabilizer
331(iii)	Trisodium citrate	acidity regulator, sequestrant, emulsifier, stabilizer
332	Potassium citrates	acidity regulator, sequestrant, stabilizer
332(i)	Potassium dihydrogen citrate	acidity regulator, sequestrant, stabilizer
332(ii)	Tripotassium citrate	acidity regulator, sequestrant, stabilizer
333	Calcium citrates	acidity regulators, firming agents, sequestrants, stabilizers
334	Tartaric acid (L (+))	acidity regulator, sequestrant, antioxidant synergist, acid, emulsifier
335	Sodium tartrates	stabilizer, sequestrant
335(i)	Monosodium tartrate	stabilizer, sequestrant, acidity regulator
335(ii)	Disodium tartrate	stabilizer, sequestrant, acidity regulator
336	Potassium tartrates	stabilizer, sequestrant
336(i)	Monopotassium tartrate	stabilizer, sequestrant, acidity regulator
336(ii)	Dipotassium tartrate	stabilizer, sequestrant, acidity regulator
337	Potassium sodium tartrate	stabilizer, sequestrant, acidity regulator
338	Orthophosphoric acid	acidity regulator, antioxidant synergist, sequestrant
339	Sodium phosphates	acidity regulator, sequestrant, emulsifier, texturizer , stabilizer, water moisture retention agent, texturizing agent
339(i)	Monosodium orthophosphate	acidity regulator, sequestrant, emulsifier, texturizer , stabilizer, water moisture retention agent, texturizing agent
339(ii)	Disodium orthophosphate	acidity regulator, sequestrant, emulsifier, texturizer , stabilizer, water moisture retention agent, texturizing agent
339(iii)	Trisodium orthophosphate	acidity regulator, sequestrant, emulsifier, texturizer , stabilizer, water moisture retention agent, texturizing agent
340	Potassium phosphates	acidity regulator, sequestrant, emulsifier, texturizer , stabilizer, water moisture retention agent, texturizing agent
340(i)	Monopotassium orthophosphate	acidity regulator, sequestrant, emulsifier, texturizer , stabilizer, water moisture retention agent, texturizing agent
340(ii)	Dipotassium orthophosphate	acidity regulator, sequestrant, emulsifier, texturizer , stabilizer, water moisture retention agent, texturizing agent
340(iii)	Tripotassium orthophosphate	acidity regulator, sequestrant, emulsifier, texturizer , stabilizer, water moisture retention agent, texturizing agent
341	Calcium phosphates	acidity regulator, flour treatment agent, firming agent, texturizer , raising agent, anticaking agent, water moisture retention agent ,

INS Number	Food Additive Name	Technical functions
		texturizing agent
341(i)	Monocalcium orthophosphate	acidity regulator, flour treatment agent, firming agent, texturizer , raising agent, anticaking agent, water moisture retention agent, texturizing agent, sequestrant
341(ii)	Dicalcium orthophosphate	acidity regulator, flour treatment agent, firming agent, texturizer , raising agent, anticaking agent, water moisture retention agent, texturizing agent
341(iii)	Tricalcium orthophosphate	acidity regulator, flour treatment agent, firming agent, texturizer , raising agent, anticaking agent, water moisture retention agent, texturizing agent
342	Ammonium phosphates	acidity regulator, flour treatment agent
342(i)	Monoammonium orthophosphate	acidity regulator, flour treatment agent
342(ii)	Diammonium orthophosphate	acidity regulator, flour treatment agent
343	Magnesium phosphates	acidity regulator, anticaking agent
343(i)	Monomagnesium orthophosphate	acidity regulator, anticaking agent
343(ii)	Dimagnesium orthophosphate	acidity regulator, anticaking agent
343(iii)	Trimagnesium orthophosphate	acidity regulator, anticaking agent
344	Lecithin citrate	preservative
345	Magnesium citrate	acidity regulator
349	Ammonium malate	acidity regulator
350	Sodium malates	acidity regulator, humectant
350(i)	Sodium hydrogen malate	acidity regulator, humectant
350(ii)	Sodium malate	acidity regulator, humectant
351	Potassium malates	acidity regulator
351(i)	Potassium hydrogen malate	acidity regulator
351(ii)	Potassium malate	acidity regulator
352	Calcium malates	acidity regulator
352(i)	Calcium hydrogen malate	acidity regulator
352(ii)	Calcium malate	acidity regulator
353	Metatartaric acid	acidity regulator
354	Calcium tartrate	acidity regulator
355	Adipic acid	acidity regulator
356	Sodium adipates	acidity regulator
357	Potassium adipates	acidity regulator
359	Ammonium adipates	acidity regulator
363	Succinic acid	acidity regulator
364(i)	Monosodium succinate	acidity regulator, flavour enhancer
364(ii)	Disodium succinate	acidity regulator, flavour enhancer
365	Sodium fumarates	acidity regulator
366	Potassium fumarates	acidity regulator
367	Calcium fumarates	acidity regulator
368	Ammonium fumarate	acidity regulator
370	1, 4 - Heptonolactone	acidity regulator, sequestrant
375	Nicotinic acid	colour retention agent
380	Ammonium citrates	acidity regulator
381	Ferric ammonium citrate	anticaking agent
383	Calcium glycerophosphate	thickener, gelling agent, stabilizer
384	Isopropyl citrates	antioxidant, preservative, sequestrant
385	Calcium disodium ethylene-diamine-tetra-acetate	antioxidant, preservative, sequestrant
386	Disodium ethylene-diamine-tetra-acetate	antioxidant, preservative
387	Oxystearin	antioxidant, sequestrant, defoaming agent
388	Thiodipropionic acid	antioxidant
389	Dilauryl thiodipropionate	antioxidant
390	Distearyl thiodipropionate	antioxidant
391	Phytic acid	preservative
399	Calcium lactobionate	stabilizer
400	Alginic acid	thickener, stabilizer, gelling agent, emulsifier

INS Number	Food Additive Name	Technical functions
401	Sodium alginate	thickener, stabilizer, gelling agent, emulsifier
402	Potassium alginate	thickener, stabilizer, gelling agent, emulsifier
403	Ammonium alginate	thickener, stabilizer, gelling agent, emulsifier
404	Calcium alginate	thickener, stabilizer, gelling agent, antifoaming agent
405	Propylene glycol alginate	thickener, emulsifier, stabilizer
406	Agar	thickener, gelling agent, stabilizer, emulsifier
407	Carrageenan and its Na, K, NH ₄ salts (includes furcellaran)	thickener, gelling agent, stabilizer, emulsifier
407a	Processed Euchema seaweed (PES)	thickener, stabilizer, gelling agent, emulsifier
408	Bakers yeast glycan	thickener, gelling agent, stabilizer
409	Arabinogalactan	thickener, gelling agent, stabilizer
410	Carob bean gum	thickener, stabilizer, emulsifier
411	Oat gum	thickener, stabilizer
412	Guar gum	thickener, stabilizer, emulsifier
413	Tragacanth gum	thickener, stabilizer
414	Gum arabic (acacia gum)	thickener, stabilizer, emulsifier
415	Xanthan gum	thickener, stabilizer, emulsifier, foaming agent
416	Karaya gum	thickener, stabilizer, emulsifier
417	Tara gum	thickener, stabilizer
418	Gellan gum	thickener, stabilizer, gelling agent
419	Gum ghatti	thickener, stabilizer, emulsifier
420	Sorbitol and sorbitol syrup	sweetener, humectant, sequestrant, emulsifier, stabilizer, bulking agent
421	Mannitol	sweetener, anticaking agent, humectant, stabilizer, bulking agent
422	Glycerol	humectant, bodying agent
424	Curdlan	thickener, stabilizer, firming agent, gelling agent
425	Konjac flour	thickener, gelling agent, emulsifier, stabilizer
426	Soybean hemicellulose	emulsifier, thickener, stabilizer, anticaking agent
429	Peptones	emulsifier
430	Polyoxyethylene (8) stearate	emulsifier
431	Polyoxyethylene (40) stearate	emulsifier
432	Polyoxyethylene (20) sorbitan monolaurate	emulsifier, dispersing agent
433	Polyoxyethylene (20) sorbitan monooleate	emulsifier, dispersing agent
434	Polyoxyethylene (20) sorbitan monopalmitate	emulsifier, dispersing agent
435	Polyoxyethylene (20) sorbitan monostearate	emulsifier, dispersing agent
436	Polyoxyethylene (20) sorbitan tristearate	emulsifier, dispersing agent
440	Pectins	thickener, stabilizer, gelling agent, emulsifier
441	Superglycerinated hydrogenated rapeseed oil	emulsifier
442	Ammonium salts of phosphatidic acid	emulsifier
443	Brominated vegetable oil	emulsifier, stabilizer
444	Sucrose acetate isobutyrate	emulsifier, stabilizer
445	Glycerol esters of wood rosin	emulsifier, stabilizer, glazing agent
446	Succistearin	emulsifier
450	Diphosphates	emulsifier, stabilizer, acidity regulator, raising agent, sequestrant, water moisture retention agent
450(i)	Disodium diphosphate	emulsifier, stabilizer, acidity regulator, raising agent, sequestrant, water moisture retention agent
450(ii)	Trisodium diphosphate	emulsifier, stabilizer, acidity regulator, raising agent, sequestrant, water moisture retention agent
450(iii)	Tetrasodium diphosphate	emulsifier, stabilizer, acidity regulator, raising agent, sequestrant, water moisture retention agent
450(iv)	Dipotassium diphosphate	emulsifier, stabilizer, acidity regulator, raising agent, sequestrant, water moisture retention agent
450(v)	Tetrapotassium diphosphate	emulsifier, stabilizer, acidity regulator, raising agent, sequestrant,

INS Number	Food Additive Name	Technical functions
		water moisture retention agent
450(vi)	Dicalcium diphosphate	emulsifier, stabilizer, acidity regulator, raising agent, sequestrant, water moisture retention agent
450(vii)	Calcium dihydrogen diphosphate	emulsifier, stabilizer, acidity regulator, raising agent, sequestrant, water moisture retention agent
450(viii)	Dimagnesium diphosphate	emulsifier, stabilizer, acidity regulator, raising agent, sequestrant, water moisture retention agent
451	Triphosphates	sequestrant, acidity regulator, texturizer , texturizing agent
451(i)	Pentasodium triphosphate	sequestrant, acidity regulator, texturizer , texturizing agent
451(ii)	Pentapotassium triphosphate	sequestrant, acidity regulator, texturizer , texturizing agent
452	Polyphosphates	emulsifier, stabilizer, acidity regulator, raising agent, sequestrant, water moisture retention agent
452(i)	Sodium polyphosphate	emulsifier, stabilizer, acidity regulator, raising agent, sequestrant, water moisture retention agent
452(ii)	Potassium polyphosphate	emulsifier, stabilizer, acidity regulator, raising agent, sequestrant, water moisture retention agent
452(iii)	Sodium calcium polyphosphate	emulsifier, stabilizer, acidity regulator, raising agent, sequestrant, water moisture retention agent
452(iv)	Calcium polyphosphates	emulsifier, stabilizer, acidity regulator, raising agent, sequestrant, water moisture retention agent
452(v)	Ammonium polyphosphates	emulsifier, stabilizer, acidity regulator, raising agent, sequestrant, water moisture retention agent
452(vi)	Sodium potassium tripolyphosphate	emulsifier, stabilizer, acidity regulator, raising agent, sequestrant, water moisture retention agent
457	alpha-Cyclodextrin	stabilizer, binder
458	gamma Cyclodextrin	stabilizer, binder
459	beta-cyclodextrin	stabilizer, binder, carrier
460	Cellulose	emulsifier, anticaking agent, texturizer , dispersing agent, texturizing agent
460(i)	Microcrystalline cellulose	emulsifier, anticaking agent, texturizer , dispersing agent, texturizing agent
460(ii)	Powdered cellulose	emulsifier, anticaking agent, texturizer , dispersing agent, texturizing agent
461	Methyl cellulose	thickener, emulsifier, stabilizer
462	Ethyl cellulose	binder, filler
463	Hydroxypropyl cellulose	thickener, emulsifier, stabilizer
464	Hydroxypropyl methyl cellulose	thickener, emulsifier, stabilizer
465	Methyl ethyl cellulose	thickener, emulsifier, stabilizer, foaming agent
466	Sodium carboxymethyl cellulose	thickener, emulsifier, stabilizer
467	Ethyl hydroxyethyl cellulose	thickener, emulsifier, stabilizer
468	Cross-linked sodium carboxymethyl cellulose (cross-linked cellulose gum)	stabilizer, binder
469	Sodium carboxymethyl cellulose, enzymatically hydrolysed	thickener, stabilizer
470	Salts of fatty acids (with base Al, Ca, Na, Mg, K and NH ₄)	emulsifier, stabilizer, anticaking agent
470(i)	Salts of myristic, palmitic and stearic acids with ammonia, calcium, potassium and sodium	Emulsifier, stabilizer, anticaking agent
470(ii)	Salts of oleic acid with calcium, potassium, and sodium	Emulsifier, stabilizer, anticaking agent
471	Mono- and di-glycerides of fatty acids	emulsifier, stabilizer
472a	Acetic and fatty acid esters of glycerol	emulsifier, stabilizer, sequestrant
472b	Lactic and fatty acid esters of glycerol	emulsifier, stabilizer, sequestrant
472c	Citric and fatty acid esters of glycerol	emulsifier, stabilizer, sequestrant, dough conditioner, antioxidant synergist
472d	Tartaric acid esters of mono- and di-glycerides of fatty acids	emulsifier, stabilizer, sequestrant

INS Number	Food Additive Name	Technical functions
472e	Diacetyltartaric and fatty acid esters of glycerol	emulsifier, stabilizer, sequestrant
472g	Succinylated monoglycerides	emulsifier, stabilizer, sequestrant
473	Sucrose esters of fatty acids	emulsifier
474	Sucroglycerides	emulsifier
475	Polyglycerol esters of fatty acids	emulsifier
476	Polyglycerol esters of interesterified ricinoleic acid	emulsifier
477	Propylene glycol esters of fatty acids	emulsifier
478	Lactylated fatty acid esters of glycerol and propylene glycerol	emulsifier
479	Thermally oxidized soya bean oil with mono- and di-glycerides of fatty acids	emulsifier
480	Diocetyl sodium sulphosuccinate	emulsifier, wetting agent
481	Sodium lactylates	emulsifier, stabilizer
481(i)	Sodium stearyl lactylate	emulsifier, stabilizer
481(ii)	Sodium oleyl lactylate	emulsifier, stabilizer
482	Calcium lactylates	emulsifier, stabilizer
482(i)	Calcium stearyl lactylate	emulsifier
482(ii)	Calcium oleyl lactylate	emulsifier, stabilizer
483	Stearyl tartrate	flour treatment agent
484	Stearyl citrate	emulsifier, sequestrant
485	Sodium stearyl fumarate	emulsifier
486	Calcium stearyl fumarate	emulsifier
487	Sodium laurylsulphate	emulsifier
488	Ethoxylated mono - and di - glycerides	emulsifier
489	Methyl glucoside- coconut oil ester	emulsifier
491	Sorbitan monostearate	emulsifier
492	Sorbitan tristearate	emulsifier
493	Sorbitan monolaurate	emulsifier, stabilizer
494	Sorbitan monooleate	emulsifier, stabilizer
495	Sorbitan monopalmitate	emulsifier
496	Sorbitan trioleate	stabilizer, emulsifier
500	Sodium carbonates	acidity regulator, raising agent, anticaking agent
500(i)	Sodium carbonate	acidity regulator, raising agent, anticaking agent
500(ii)	Sodium hydrogen carbonate	acidity regulator, raising agent, anticaking agent
500(iii)	Sodium sesquicarbonate	acidity regulator, raising agent, anticaking agent
501	Potassium carbonates	acidity regulator, stabilizer
501(i)	Potassium carbonate	acidity regulator, stabilizer
501(ii)	Potassium hydrogen carbonate	acidity regulator, stabilizer
503	Ammonium carbonates	acidity regulator, raising agent
503(i)	Ammonium carbonate	acidity regulator, raising agent
503(ii)	Ammonium hydrogen carbonate	acidity regulator, raising agent
504	Magnesium carbonates	acidity regulator, anticaking agent, colour retention agent,
504(i)	Magnesium carbonate	acidity regulator, anticaking agent, colour retention agent
504(ii)	Magnesium hydrogen carbonate	acidity regulator, anticaking agent, colour retention agent, carrier
505	Ferrous carbonate	acidity regulator
507	Hydrochloric acid	acidity regulator, acid
508	Potassium chloride	gelling agent, stabilizer
509	Calcium chloride	firming agent, stabilizer
510	Ammonium chloride	flour treatment agent
511	Magnesium chloride	firming agent, colour retention agent
512	Stannous chloride	antioxidant, colour retention agent
513	Sulphuric acid	acidity regulator, acid
514	Sodium sulphates	acidity regulator
515	Potassium sulphates	acidity regulator
516	Calcium sulphate	flour treatment agent, sequestrant, firming agent
517	Ammonium sulphate	flour treatment agent, stabilizer

INS Number	Food Additive Name	Technical functions
518	Magnesium sulphate	firming agent
519	Cupric sulphate	colour fixative, preservative
520	Aluminium sulphate	firming agent
521	Aluminium sodium sulphate	firming agent, buffering agent
522	Aluminium potassium sulphate	acidity regulator, stabilizer
523	Aluminium ammonium sulphate	stabilizer, firming agent
524	Sodium hydroxide	acidity regulator
525	Potassium hydroxide	acidity regulator
526	Calcium hydroxide	acidity regulator, firming agent
527	Ammonium hydroxide	acidity regulator
528	Magnesium hydroxide	acidity regulator, colour retention agent
529	Calcium oxide	acidity regulator, flour treatment agent, dough conditioner
530	Magnesium oxide	anticaking agent
535	Sodium ferrocyanide	anticaking agent
536	Potassium ferrocyanide	anticaking agent
537	Ferrous hexacyanomanganate	anticaking agent
538	Calcium ferrocyanide	anticaking agent
539	Sodium thiosulphate	antioxidant, sequestrant, antibrowning agent
541	Sodium aluminium phosphate	acidity regulator, emulsifier
541(i)	Sodium aluminium phosphate-acidic	acidity regulator, emulsifier, raising agent
541(ii)	Sodium aluminium phosphate-basic	acidity regulator, emulsifier
542	Bone phosphate (essentially calcium phosphate, tribasic)	emulsifier, anticaking agent, water moisture retention agent
550	Sodium silicates	anticaking agent
550(i)	Sodium silicate	anticaking agent
550(ii)	Sodium metasilicate	anticaking agent
551	Silicon dioxide, amorphous	anticaking agent
552	Calcium silicate	anticaking agent
553	Magnesium silicates	anticaking agent, dusting powder
553(i)	Magnesium silicate	anticaking agent, dusting powder
553(ii)	Magnesium trisilicate	anticaking agent, dusting powder
553(iii)	Talc	anticaking agent, dusting powder , texturizing agent
554	Sodium aluminosilicate	anticaking agent
555	Potassium aluminium silicate	anticaking agent
556	Calcium aluminium silicate	anticaking agent
557	Zinc silicate	anticaking agent
558	Bentonite	anticaking agent
559	Aluminium silicate	anticaking agent
560	Potassium silicate	anticaking agent
570	Fatty acids	foam stabilizer, glazing agent, antifoaming agent
574	Gluconic acid (D-)	acidity regulator, raising agent
575	Glucono delta-lactone	acidity regulator, raising agent, sequestrant
576	Sodium gluconate	sequestrant
577	Potassium gluconate	sequestrant, acidity regulator
578	Calcium gluconate	acidity regulator, firming agent, sequestrant
579	Ferrous gluconate	colour retention agent
580	Magnesium gluconate	acidity regulator, firming agent, flavour enhancer
585	Ferrous lactate	colour retention agent
586	4-Hexylresorcinol	colour retention agent, antioxidant
620	Glutamic acid (L (+)-)	flavour enhancer
621	Monosodium glutamate	flavour enhancer
622	Monopotassium glutamate	flavour enhancer
623	Calcium glutamate	flavour enhancer
624	Monoammonium glutamate	flavour enhancer
625	Magnesium glutamate	flavour enhancer
626	Guanylic acid	flavour enhancer
627	Disodium 5'-guanylate	flavour enhancer
628	Dipotassium 5'-guanylate	flavour enhancer
629	Calcium 5'-guanylate	flavour enhancer

INS Number	Food Additive Name	Technical functions
630	Inosinic acid	flavour enhancer
631	Disodium 5'-inosinate	flavour enhancer
632	Potassium Inosinate	flavour enhancer
633	Calcium 5'-inosinate	flavour enhancer
634	Calcium 5'-ribonucleotides	flavour enhancer
635	Disodium 5'-ribonucleotides	flavour enhancer
636	Maltol	flavour enhancer
637	Ethyl maltol	flavour enhancer
638	Sodium L-Aspartate	flavour enhancer
639	DL-Alanine	flavour enhancer
640	Glycine	flavour enhancer
641	L-Leucine	flavour enhancer
642	Lysine hydrochloride	flavour enhancer
650	Zinc acetate	flavour enhancer
900a	Polydimethylsiloxane	antifoaming agent, anticaking agent, emulsifier
900b	Methylphenylpolysiloxane	antifoaming agent
901	Beeswax, white and yellow	glazing agent, release agent, clouding agent
902	Candelilla wax	glazing agent, clouding agent
903	Carnauba wax	glazing agent, bulking agent, acidity regulator, carrier
904	Shellac	glazing agent
905a	Mineral oil, food grade	glazing agent, release agent, sealing agent
905b	Petrolatum (petroleum jelly)	glazing agent, release agent , sealing agent, antifoaming agent
905c	Petroleum wax	glazing agent, release agent , sealing agent
905c (i)	Microcrystalline wax	glazing agent
905c (ii)	Paraffin wax	glazing agent
905d	Mineral oil, high viscosity	glazing agent, release agent , sealing agent
905e	Mineral oil, medium and low viscosity (Class I)	glazing agent, release agent , sealing agent
905f	Mineral oil, medium and low viscosity (Class II)	glazing agent, release agent , sealing agent
905g	Mineral oil, medium and low viscosity (Class III)	glazing agent, release agent , sealing agent
906	Benzoin gum	glazing agent
907	Hydrogenated poly-1-decene	glazing agent
908	Rice bran wax	glazing agent
909	Spermaceti wax	glazing agent
910	Wax esters	glazing agent
911	Methyl esters of fatty acids	glazing agent
913	Lanolin	glazing agent
915	Glycerol-, methyl-, or penta-erithrytol esters of colophane	glazing agent
916	Calcium iodate	flour treatment agent
917	Potassium iodate	flour treatment agent
918	Nitrogen oxides	flour treatment agent
919	Nitrosyl chloride	flour treatment agent
920	L-Cysteine and its hydrochlorides-sodium and potassium salts	flour treatment agent
921	L-Cystine and its hydrochlorides-sodium and potassium salts	flour treatment agent
922	Potassium persulphate	flour treatment agent
923	Ammonium persulphate	flour treatment agent
924a	Potassium bromate	flour treatment agent
924b	Calcium bromate	flour treatment agent
925	Chlorine	flour treatment agent, bleaching agent
926	Chlorine dioxide	flour treatment agent
927a	Azodicarbonamide	flour treatment agent
927b	Carbamide (urea)	flour treatment agent
928	Benzoyl peroxide	flour treatment agent, preservative
929	Acetone peroxide	flour treatment agent

INS Number	Food Additive Name	Technical functions
930	Calcium peroxide	flour treatment agent
938	Argon	packing gas , packaging gas
939	Helium	packing gas , packaging gas
940	Dichlorodifluoromethane	propellant, liquid-freezant
941	Nitrogen	packing gas , freezant, propellant , packaging gas
942	Nitrous oxide	propellant, antioxidant , foaming agent
943a	Butane	propellant
943b	Isobutane	propellant
944	Propane	propellant
945	Chloropentafluoroethane	propellant
946	Octafluorocyclobutane	propellant
948	Oxygen	packing gas , packaging gas
949	Hydrogen	Packing gas , packaging gas
950	Acesulfame potassium	sweetener, flavour enhancer
951	Aspartame	sweetener, flavour enhancer
952	Cyclamic acid (and Na, K, Ca Salts)	sweetener
953	Isomalt (isomaltitol)	sweetener, anticaking agent, bulking agent, glazing agent
954	Saccharin (and Na, K, Ca salts)	sweetener
955	Sucralose (trichlorogalactosucrose)	sweetener
956	Alitame	sweetener
957	Thaumatococin	sweetener, flavour enhancer
958	Glycyrrhizin	sweetener, flavour enhancer
959	Neohesperidine dihydrochalcone	sweetener
960	Steviol glycosides	sweetener
961	Neotame	sweetener, flavour enhancer
962	Aspartame-acesulfame-salt	sweetener
963	D-Tagatose	sweetener
964	Polyglycitol syrup	sweetener
965	Maltitol and maltitol Syrup	sweetener, stabilizer, emulsifier, humectant , bulking agent
966	Lactitol	sweetener, texturizer , texturizing agent , emulsifier
967	Xylitol	sweetener, humectant, stabilizer, emulsifier, thickener
968	Erythritol	sweetener, flavour enhancer, humectant
999	Quillaia extracts	foaming agent, emulsifier
999(i)	Quillaia extract Type 1	Foaming agent
999(ii)	Quillaia extract Type 2	Foaming agent
1000	Cholic acid	emulsifier
1001	Choline salts and esters	emulsifier
1001(i)	Choline acetate	emulsifier
1001(ii)	Choline carbonate	emulsifier
1001(iii)	Choline chloride	emulsifier
1001(iv)	Choline citrate	emulsifier
1001(v)	Choline tartrate	emulsifier
1001(vi)	Choline lactate	emulsifier
1100	Amylases	flour treatment agent
1101	Proteases	flour treatment agent, stabilizer, tenderizer , flavour enhancer
1101(i)	Protease	flour treatment agent, stabilizer, tenderizer , flavour enhancer
1101(ii)	Papain	flour treatment agent, stabilizer, tenderizer , flavour enhancer
1101(iii)	Bromelain	flour treatment agent, stabilizer, tenderizer , flavour enhancer
1101(iv)	Ficin	flour treatment agent, stabilizer, tenderizer , flavour enhancer
1102	Glucose oxidase	antioxidant
1103	Invertases	stabilizer
1104	Lipases	flavour enhancer
1105	Lysozyme	preservative
1200	Polydextroses A and N	bulking agent, stabilizer, thickener, humectant, texturizer , texturizing agent
1201	Polyvinylpyrrolidone	bodying agent, stabilizer, clarifying agent , dispersing agent
1202	Polyvinylpolypyrrolidone	colour stabilizer, colloidal stabilizer
1203	Polyvinyl alcohol	coating , coating agent , binder, sealing agent, surface-finishing agent

INS Number	Food Additive Name	Technical functions
1204	Pullulan	glazing agent, film forming agent
1503	Castor oil	release agent, carrier solvent
1505	Triethyl citrate	foam stabilizer, carrier solvent, sequestrant
1518	Triacetin	humectant
1520	Propylene glycol	humectant, wetting agent, dispersing agent, glazing agent
1521	Polyethylene glycol	antifoaming agent

Section 3

SUPPLEMENTARY LIST - MODIFIED STARCHES

INS	Food Additive Name	Technical Functions
1400	Dextrins, roasted starch white and yellow	stabilizer, thickener, binder
1401	Acid-treated starch	stabilizer, thickener, binder
1402	Alkaline treated starch	stabilizer, thickener, binder
1403	Bleached starch	stabilizer, thickener, binder
1404	Oxidized starch	stabilizer, thickener, binder, emulsifier
1405	Starches, enzyme-treated	thickener
1410	Monostarch phosphate	stabilizer, thickener, binder
1411	Distarch glycerol	stabilizer, thickener, binder, emulsifier
1412	Distarch phosphate esterified with sodium trimetaphosphate; esterified	stabilizer, thickener, binder
1413	Phosphated distarch phosphate	stabilizer, thickener, binder
1414	Acetylated distarch phosphate	emulsifier, thickener
1420	Starch acetate esterified with acetic anhydride	stabilizer, thickener
1421	Starch acetate esterified with vinyl acetate	stabilizer, thickener
1420	Starch acetate	Stabilizer, thickener, binder, emulsifier
1422	Acetylated distarch adipate	stabilizer, thickener, binder
1423	Acetylated distarch glycerol	stabilizer, thickener, emulsifier
1440	Hydroxypropyl starch	emulsifier, thickener, binder
1442	Hydroxypropyl distarch phosphate	stabilizer, thickener
1443	Hydroxypropyl distarch glycerol	stabilizer, thickener
1450	Starch sodium octenyl succinate	stabilizer, thickener, binder, emulsifier
1451	Acetylated oxidised starch	Stabilizer, thickener, binder, emulsifier
1452	Starch aluminum octenyl succinate	Anticaking agent, Carrier, Stabilizer

EUROPEAN FOOD EMULSIFIERS MANUFACTURERS ASSOCIATION (EFEMA)

I am writing to you on behalf of EFEMA, the European Food Emulsifiers Manufacturers Association, in relation to the above mentioned document. EFEMA has Non-Governmental Observer Status with Codex Alimentarius and would like to submit the following comments to document CAC/GL 36-2003 on the Proposed Draft Revision of the Codex Class Names and International Numbering System; more particularly, functional class 12 “Emulsifier”:

Definition of Emulsifier, functional class 12

The current proposed definition of “Emulsifier”, as outlined in Appendix XV of ALINORM 06/29/12 “Proposed Draft Revision of the Codex Class Names and the International Numbering System,” is: “A food additive, which forms or maintains a uniform emulsion of two or more phases in a food.”

EFEMA would suggest adding the following text (in bold) to further clarify the current proposed definition:

“A food additive, which forms or maintains a uniform emulsion of two or more phases in a food **and shows a range of specific functional interactions with food components.**”

Sub-classes:

EFEMA welcomes the list of sub-classes proposed in the draft revision but would suggest the following modifications and additions (in bold) to extend the scope of the sub-classes and further clarify the proposed sub-classes:

“Emulsifier, fat plasticizer, dispersing agent, surface active agent, crystallization inhibitor/modifier, density adjustment (flavouring oils in beverages), suspension agent, clouding agent, aerating agent, antistaling agent, starch complexing agent, dough strengthener, foaming agent, wetting agent, solubilizer, viscosity modifier, stabilizer”

INTERNATIONAL COUNCIL OF BEVERAGES ASSOCIATIONS (ICBA)

The International Council of Beverages Associations (ICBA) is a nongovernmental organization that represents the interests of the worldwide nonalcoholic beverage industry. The members of ICBA operate in more than 200 countries and produce, distribute, and sell a variety of water-based beverages, including carbonated soft drinks and noncarbonated beverages such as juice-drinks, bottled waters, and ready-to-drink coffees and teas. ICBA is pleased to provide the following comments in response to the request for comments at Step 6 on draft Revision of the *Codex Class Names and International Numbering System for Food Additives* – CAC/GL 36-2003.

Acidity regulator

ICBA has expressed its concern about the proposed deletion of the Functional Class “Acid” and including it as a subclass of “Acidity regulator.” ICBA notes that not all acids used in beverages are added as acidity regulators; they may be added for taste or other purposes, e.g., phosphoric acid and citric acid that are commonly used in beverages. Since the functional classes are used for labeling purposes, the proposed change would make labeling of acids more complex, take away valuable label space, and not provide consumers with any useful information to assist them in making informed beverage choices. We suggest maintaining “acid” as a separate functional class.

Carrier

While we understand that some carriers (such as some nutrient and flavor carriers) may sometimes be considered food additives while others may be processing aids, we have concerns that the current definition seems clearly to be one of a processing aid and could confuse manufacturers and government agencies. Processing aids are substances that are added to foods at insignificant levels and do not perform a technological or functional effect in the final food. Processing aids are generally not identified in the ingredient statements.

Flavour enhancer

ICBA previously has expressed its concern about deleting a sub-class “flavour modifier” from the definition. The e-working group on the draft Codex Guideline for the use of Flavourings is considering including flavour modifiers in the definition of flavourings. Therefore, our concern likely will be resolved and we no longer request reconsidering the matter here. We suggest moving the definition of “Flavour enhancer” to the Proposed Draft Codex Guidelines on the Use of Flavourings since they can be considered as a subcategory of flavour or taste modifiers.

Packaging gases

ICBA suggest deleting the class since we believe that inert gases used inside the package for quality reasons should not be considered as food additives. For example, nitrogen is used to maintain the shape of certain beverage packages but it does not exist in the beverage when consumed.

IDF

Two new classes, “carriers” and “packaging gases,” were left in square brackets, based on objections by IDF, the U.S., Switzerland and a few other countries at the 2006 CCFAC meeting. In many IDF member countries, food additives in these categories have been viewed as processing aids and have generally not been labelled in the ingredient statement, which would be required if they were added to the GSFA.

IDF Recommendations:

IDF believes that clarifying the purpose of the "sub-classes" column and dropping the two new proposed food additive functional classes for "carriers" and "packaging gas" are supported by the discussion and specific recommendations below.

1. The column titled, "Sub-classes" is not defined and this appears to result in some uncertainty as to what the purpose of the "subclass" category. An example is the name for the functional class is duplicated in every entry for subclasses. This means a functional class is also a subclass, which can be confusion. It may be clearer to change the heading to "Explanation of the Technological Use" or "Example of the Technological Use. Then the general function of the food additive could be listed in this third column, i.e. for "Preservatives" the listing could be "preservative, antimicrobial preservative, antimycotic agent, bacteriophage control agent, fungistatic agent, antimould and antirope agent, antimicrobial synergist"
2. Justifying the need for a new functional class, "#8 Carrier" is difficult. It is clear the issue is a complicated one. CCFAC has recommended that carriers be identified in foods for infants and children. It would appear that this Codex Committee is interested specifically in "nutritive carriers," not carriers in general. The purpose of using a carrier with a food ingredient or food additive is to improve or enhance the characteristics of the ingredient or additive its function is enhanced in the final food. This also reduces the amount of ingredient or additive needed to deliver the same function affect. Carriers are generally not intended to have any affect in the final food other than to deliver the ingredient or additive's functional affect. As an example, lactose and vegetable oils are widely used as carriers, but are not considered food additives, but foods.

The true classification of most "carriers" is as a processing aid. Processing aids are not included in the GSFA, but in the CCFAC Inventory of Processing Aids (IPA). It may be appropriate for CCFAC to recommend that the IPA be expanded to contain a section on "carriers."

On the other hand, there are some carriers that do have a functional effect in the final food and do not therefore meet the definition of being a food or processing aid. It is the view of IDF that if a carrier has an effect in the final food, then its functional class should be designated using the existing list, without adding another functional class just for "carriers," i.e. color, antioxidant, anticaking agent, etc.

3. The new functional class "#20 Packaging Gas" is unnecessary and should be deleted since these gases are added to modify the atmosphere of the headspace in the container, do not affect the characterizing aspects of the food product (composition, texture, colour, taste, etc.), are not consumed with the rest of the food, and therefore are not food additives. As a result, there is no need for an added functional class on "Packaging Gas."

Most packaging gases used in the food industry are inert and have no chemical affect on the product, even at the food surface interface with the headspace. If these inert gases are infused into the product, they migrate to the head space and have no effect on product characteristics. Conversely, if a gas such as carbon dioxide is infused into the product and changes a product characteristic such as pH, then the use of this gas should be classified according to the existing functional class system within the GSFA, i.e. acidity regulator, flavor enhancer, preservative, etc. The existing list of functional classes of food additives is adequate to serve this purpose.