



**Food and Agriculture
Organization of
the United Nations**



**World Health
Organization**

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Agenda Item 5 (c)

CX/FA 12/44/9 Add.2

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JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON FOOD ADDITIVES

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DRAFT AND PROPOSED DRAFT FOOD ADDITIVE PROVISIONS OF THE GSFA (PROVISIONS IN TABLE 1 AND 2 OF TABLE 3 FOOD ADDITIVES WITH “ACIDITY REGULATORS AND “EMULSIFIER, STABILIZER AND THICKENER” FUNCTION

The following comments have been received from the following Codex members and observers

Brazil, South Africa, United States of America, Biopolymer International, EFEMA, ICGMA, IDF, IFAC,
Marinalg International, OIV

BRAZIL

Brazil thanks the opportunity to comment on the work made by the GSFA eWG lead by the USA.

Annex 1 – Acidity Regulators

Brazil supports the use of acidity regulators for the following food categories:

Food Category n°	Food Category Title	Comments
14.1.2	Fruit and vegetable juices	Some acidity regulators are necessary to adjust sensorial characteristics, specially of acid fruits and vegetables
14.1.3	Fruit and vegetable nectars	
6.2	Flours and starches (including soybean powder)	Note 186 For use in flours with additives only
06.4.2	Dried pastas and noodles and like products	Acidity regulators and stabilizers are necessary to prevent undesired changes on the structure of dried pastas due to heat treatment

Brazil does not support the provisions of acidity regulators for food categories 8.1 Fresh meat, poultry, and game; and 9.1.1 Fresh fish. No food additives should be allowed in fresh meat or fish, except colors with note 4 (For decoration, stamping, marking or branding the product) and 16 (For use in glaze, coatings or decorations for fruit, vegetables, meat or fish).

The use of acidity regulators in food categories 11.1.2 Powdered sugar, powdered dextrose; 11.5 Honey; and 14.1.1 Waters also seems to be unjustified.

Annex 2 – Emulsifiers, Stabilizers, Thickeners

Brazil supports the use of emulsifiers, stabilizers and thickeners for the following food categories:

Food Category n°	Food Category Title	Comments
01.1.1	Milk and buttermilk (plain) (EXCLUDING HEAT-TREATED BUTTERMILK)	Stabilizers are necessary to keep a uniform product, e.g. when adding micronutrients to milk
01.2	Fermented and renneted milk products (plain) excluding food category 01.1.2 (dairy based drinks)	Stabilizers are necessary to stabilize protein
06.4.2	Dried pastas and noodles and like products	Acidity regulators and stabilizers are necessary to prevent changes on the structure of dried pastas whilst heat treatment

Food Category n°	Food Category Title	Comments
14.1.2	Fruit and vegetable juices	Stabilizers are necessary in some pulpy juices and nectars. Highly pulpy products may present decantation of insoluble solids during shelf life. The use of stabilizers is justified to keep the products uniform. The Committee could consider the inclusion of a note in this regard.
14.1.3.1	Fruit nectar	
14.1.3.2	Vegetable nectar	
14.1.3.3	Concentrates for fruit nectar	
14.1.3.4	Concentrates for vegetable nectar	

Brazil does not support the provisions of emulsifiers, stabilizers and thickeners for food categories 8.1 Fresh meat, poultry, and game; and 9.1.2 Fresh mollusks, crustaceans, and echinoderms. No food additives should be allowed in fresh flesh, except colors with note 4 (For decoration, stamping, marking or branding the product) and 16 (For use in glaze, coatings or decorations for fruit, vegetables, meat or fish).

The use of emulsifiers, stabilizers and thickeners in food categories 11.1.3 Soft white sugar, soft brown sugar, glucose syrup, dried glucose syrup, raw cane sugar; 11.5 Honey; and 14.1.1 Waters also seems to be unjustified.

SOUTH AFRICA

South Africa appreciates the opportunity to review and comment on **CX/FA 12/44/9 DRAFT AND PROPOSED DRAFT FOOD ADDITIVE PROVISIONS (Provisions in Table 1 and 2 of Table 3 food additives with “acidity regulators and “emulsifier, stabilizer and thickener function. South Africa wishes to thank United States and the other members of the electronic working group (eWG) for the work that has been completed to date on this paper. South Africa wishes to contribute the following to the discussion:**

Food Cat No. 08.1.2			
Additive	Codex level	Current levels or use in products	Justification
Lactic acid	6000mg/kg	Not currently used in this category of product	n/a

Food Cat No. 9.2			
Additive	Codex level	Current levels or use in products	Justification
Sodium,carbonate	GMP	GMP	Used in frozen cephalopods (squid) for softening and in various fishery products covered in breading or batter coatings, as leavening agents (as in frozen fish sticks where already covered)

Food Cat No. 9.2.1			
Additive	Codex level	Current levels or use in products	Justification
Ascorbic acid	400 mg/kg	GMP	Used as antioxidant to prevent fat oxidation or to prevent discoloration (e.g blueing, blackening) in frozen and canned crustaceans.To lower pH and increase shelf life.
Citric acid	GMP	GMP	Used as antioxidant to prevent fat oxidation or to prevent discoloration (e.g blueing, blackening) in frozen and canned crustaceans.To lower pH and increase shelf life.

Food Cat No. 9.2.2			
Additive	Codex level	Current levels or use in products	Justification

Citric acid	GMP	GMP	Used as antioxidant to prevent fat oxidation or to prevent discolouration (e.g blueing, blackening) in frozen and canned crustaceans. To lower pH and increase shelf life.
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UNITED STATES OF AMERICA

The United States appreciates the opportunity to provide the following comments on the draft and proposed draft provisions for Table 1 and 2 of Table 3 food additives with “acidity regulators” (Annex 1) and “emulsifier, stabilizer and thickener” function (Annex 2) for consideration at the forthcoming 44th Session of the Codex Committee on Food Additives (CCFA).

The United States would like to propose the addition of the following food additives to the food category 14.2.3 (Grape wines), based on purposes described below:

Annex 1: Acidity Regulators

Additive	INS No.	Max level	Purpose
Carbon dioxide	290	GMP	To raise or lower pH for fermentation to start
Calcium sulfate	516	2000 mg/kg	To raise or lower pH for fermentation to start

BIOPOLYMER INTERNATIONAL

Emulsifiers, Stabilizers and Thickeners Worksheet							
		Codex Draft Annex 2				EU Legislation and justification for alignment	
GSFA Food Category No.	Food Category Title	INS	Additive name	Codex Max level	Comments on proposed Codex max level	EU Legislation Regulation 1333/2008 Annex II Category No and Max level	Comments
1.2.1.2	Fermented milks (plain), heat-treated after fermentation	415	Xanthan Gum	5000mg/kg	For EU alignment, GMP is proposed	Category No 01.3 Unflavoured fermented milk products, heat-treated after fermentation: INS 415 is approved quantum satis	Thickeners and stabilizers are advantageous in fermented dairy products for stabilization of the protein prior to heat treatment and optimization of viscosity, preventing physical spoilage during transport and storage, all while improving mouthfeel, cooking and baking stability.
1.4.2	Sterilized and UHT creams, whipping or whipped creams, and reduced fat creams (plain)	415	Xanthan Gum	5000 mg/kg	For EU alignment, GMP is proposed	Category No 01.6.3 Other creams: INS 415 is approved quantum satis	Thickeners and stabilizers are commonly used in pasteurized and UHT creams for optimized texture and stabilized structure, for freeze-thaw stability and for controlled air incorporation.
6.4.1	Fresh pastas and noodles and like products	415	Xanthan Gum	10000 mg/kg	For EU alignment, GMP in noodles is proposed	Category No 6.5 Noodles: INS 415 is approved quantum satis	
9.2.1	Frozen fish, fish fillets, and fish products, including mollusks, crustaceans, and echinoderms	415	Xanthan Gum	160 mg/kg	For an adequate technological effect levels up to 5000 mg/kg is needed. For EU alignment, GMP is proposed	Category No 9.2 Processed fish and fishery products including mollusks and crustaceans: INS 415 is approved quantum satis	Thickeners and stabilizers are used to protect the product from structure changes during the freeze-thaw cycles during handling and storage, by decreasing the freezing point depression.

EFEMA (EUROPEAN FOOD EMULSIFIERS MANUFACTURERS ASSOCIATION)

Emulsifiers, Stabilizers and Thickeners Worksheet							
		Codex Draft Annex 2			EU Legislation and justification for alignment		
GSFA Food Category No.	Food Category Title	INS	Additive name	Codex Max level	Comments on proposed Codex max level	EU Legislation Regulation 1333/2008 Annex II	Comments
						Category No and Max level	
01.2.1.2	Fermented milks (plain), heat-treated after fermentation	471	Mono- and-di glycerides of fatty acids	5000 mg/kg in food Category 01.2	For EU alignment addition of INS 471 as GMP in Food category 01.2.1.2 is proposed	Category No 01.3 Unflavoured fermented milk products, heat-treated after fermentation: INS 471 approved quantum satis	Emulsifiers are advantageous in fermented dairy products for stabilization of the protein prior to heat treatment and optimization of viscosity, preventing physical spoilage during transport and storage, all while improving mouthfeel, cooking and baking stability.
1.4.1	Pasteurized cream (plain)	471	Mono- and-di glycerides of fatty acids	5000 mg/kg	For EU alignment, GMP is proposed	Category No 01.6.1 Unflavoured pasteurised cream (excluding reduced fat creams): INS 471 approved quantum satis	Emulsifiers are important for use in pasteurized cream to optimize texture and stabilize structure for freeze-thaw stability and for controlled air incorporation.
1.4.2	Sterilized and UHT creams, whipping or whipped creams, and reduced fat creams (plain)	471	Mono- and-di glycerides of fatty acids	5000 mg/kg	For EU alignment, GMP is proposed	Category No 01.6.3 Other creams: INS 471 approved quantum satis	Emulsifiers, thickeners, and stabilizers are commonly used in pasteurized and UHT creams for optimized texture and stabilized structure, for freeze-thaw stability and for controlled air incorporation.
1.4.2	Sterilized and UHT creams, whipping or whipped creams, and reduced fat creams (plain)	472a	Acetic and acid esters of glycerol	10000mg/kg	For EU alignment, GMP is proposed	Category No 01.6.3 Other creams: INS 472a approved quantum satis	Emulsifiers, thickeners, and stabilizers are commonly used in pasteurized and UHT creams for optimized texture and stabilized structure, for freeze-thaw stability and for controlled air incorporation.
1.4.2	Sterilized and UHT creams, whipping or whipped creams, and	472b	Lactic and acid esters of	10000mg/kg	For EU alignment, GMP is	Category No 01.6.3 Other creams: INS 472b approved	Emulsifiers, thickeners, and stabilizers are commonly used in pasteurized and UHT creams for optimized texture and stabilized structure, for freeze-thaw stability and for

	reduced fat creams (plain)		glycerol		proposed	quantum satis	controlled air incorporation.
1.4.2	Sterilized and UHT creams, whipping or whipped creams, and reduced fat creams (plain)	472c	Citric and fatty acid esters of glycerol	5000mg/kg	For alignment, GMP is proposed	EU Category No 01.6.3 Other creams: INS 472c approved quantum satis	Emulsifiers, thickeners, and stabilizers are commonly used in pasteurized and UHT creams for optimized texture and stabilized structure, for freeze-thaw stability and for controlled air incorporation.
6.4.1	Fresh pastas and noodles and like products	472a, 472b, 472c	Acetic-, Lactic-, and Citric and fatty acids of glycerol	-	For alignment, GMP in noodles is proposed	EU Category No 6.5 Noodles: INS 472a-c approved quantum satis	

ICGMA (INTERNATIONAL COUNCIL OF GROCERY MANUFACTURERS ASSOCIATIONS)

The International Council of Grocery Manufacturers Associations (ICGMA) is a nongovernmental organization that represents foods and consumer packaged goods manufacturers globally. ICGMA promotes the harmonization of food standards and policies based on science and is a strong supporter of Codex Alimentarius. ICGMA also works to facilitate international trade of food products by eliminating or preventing artificial barriers to trade and believes that global harmonization of food additive standards is important to achieve that goal.

ICGMA thanks the U.S. delegation for its work on the horizontal approach on the GSFA, to identify those food categories in the Annex to Table 3 in which the use of “acidity regulators” or “emulsifiers, stabilizers, thickeners” are technologically justified and should be permitted. ICGMA welcomes this opportunity to provide the following comments to CX/FA 12/44/9 Add.1. and CX/FA 12/44/9:

- (i) Annexes 1 and 2 of CX/FA 12/44/9 Add.1. –
 - a. Annex 1 - Recommendation 3: Technological justification to use Acidity Regulators (AR) in Herbs (12.2.1. Spices and Herbs – Herbs Only). *ICGMA recommends placing 12.2.1. under Recommendation 2, in which use of AR is not justified.*
 - b. Annex 2 - Recommendation 1: Technological justification to use Emulsifiers (E), Stabilizers (S), and Thickeners (T) in Herbs (12.2.1. Spices and Herbs – Herbs Only). *ICGMA recommends placing 12.2.1. under Recommendation 2, in which use of E, S, and T is not justified.*
 - c. Annex 2 - Recommendation 2: Technological justification provided to use E, T, S in Butter (2.2.1.) *ICGMA recommends placing 2.2.1. under Recommendation 1 as E, S, are justified for use in butter.*
 - d. Annex 2 – Not Included: Technological justification provided to use E, T, S in Surface-treated fresh vegetables (4.2.1.2.) *ICGMA recommends placing 4.2.1.2. under Recommendation 1 since these substances are used in these types of products.*
 - e. Annex 2 – Recommendation 3: Technological justification provided to use Emulsifiers, Thickeners, Stabilizers in Salt Substitutes (12.1.2.) for further discussion. *ICGMA recommends placing 12.1.2. under Recommendation 1.*
- (ii) NEW food additive provisions for inclusion at Step 3 in the GSFA based on existing provisions in Codex Commodity standards
- (iii) NEW food additive provisions for inclusion at Step 3 in the GSFA based on industry need;

Please see the Appendix for detailed comments. Please note that as ICGMA continues to collect information on uses (beyond those reported here), these too will be made available in a Conference Room Document (CRD) prior to the 2012 CCFA Plenary. ICGMA commends the U.S. delegation for its leadership in this effort.

APPENDIX – ICGMA Examples

(I) Comments in response to Annexes 1 and 2 of CX/FA 12/44/9 Add.1.

- a. *Annex 1 - Recommendation 3: Technological justification to use Acidity Regulators in Herbs (12.2.1. Spices and Herbs – Herbs Only). ICGMA recommends placing 12.2.1. under Recommendation 2.*

Acidity Regulators (AR) are not technologically justified for straight herbs. The only additives that may be necessary would typically be anticaking agents (e.g., for red pepper, nutmeg; for some herbs) AND antioxidants (e.g., for items with color values such as paprika, some red peppers.) ICGMA recommends that 12.2.1 be placed under Recommendation 2 in which use of AR are NOT technologically justified.

- b. *Annex 2 - Recommendation 1: Technological justification to use Emulsifiers, Stabilizers, and Thickeners in Herbs (12.2.1. Spices and Herbs – Herbs Only). ICGMA recommends placing 12.2.1. under Recommendation 2.*

Emulsifiers (E), Stabilizers (S), and Thickeners (T) are not technologically justified for straight herbs. The only additives that may be necessary would typically be anticaking agents (e.g., for red pepper, nutmeg; for some herbs) AND antioxidants (e.g., for items with color values such as paprika, some red peppers.) ICGMA recommends that 12.2.1 be placed under Recommendation 2 in which use of E, S, and T are NOT technologically justified.

- c. *Annex 2 - Recommendation 2: Technological justification provided to use Emulsifiers, Thickeners, Stabilizers in Butter (2.2.1.). ICGMA recommends placing 2.2.1. under Recommendation 1.*

Mono- and Diglycerides of fatty acids (INS 471) and lecithins (INS 322) are used at GMP as emulsifiers/stabilizers in butter. These types of additives are technologically justified for use in butter. ICGMA recommends placing 2.2.1. under Recommendation 1 in which use of E and S are justified.

- d. *Annex 2 – Not Included: Technological justification provided to use Emulsifiers, Thickeners, Stabilizers in Surface-treated fresh vegetables (4.2.1.2.). ICGMA recommends placing 4.2.1.2. under Recom. 1.*

Stabilizers are technologically justified for use in surface-treated vegetables. Modified food starches are typically used with components such as organic acids (lemon juice, citric, etc) and coating agents in spray applications to thicken and stabilize the film forming mixture in order that it adhere to the surface of the fresh fruits and vegetables. These types of additives are technologically justified for use in surface-treated fresh vegetables. ICGMA recommends placing 4.2.1.2 under Recommendation 1.

- e. *Annex 2 – Recommendation 3: Technological justification provided to use Emulsifiers, Thickeners, Stabilizers in Salt Substitutes (12.1.2.) for further discussion. ICGMA recommends placing 12.1.2. under Recom. 1.*

Modified Food Starches would be used as stabilizers to cause different salt substitute ingredients to adhere to each other so that when they reach the tongue the synergistic effect of the compounds in creating a “salty” taste remains intact. Without something to hold the ingredients together they would separate and the perceived salty taste could be lost. ICGMA recommends placing 12.1.2. under Recommendation 1.

(II) NEW FOOD ADDITIVE PROVISIONS BASED ON CODEX COMMODITY STANDARDS		
Function: <u>Acidity Regulators (AR), Emulsifiers (E), Stabilizers (S), Thickeners (T)</u>		
Commodity Standards at GMP,		NEW Food Additive Provisions per Codex
FoodCatNo	Food Category	unless noted otherwise
1.2.1	Fermented milks (plain) <i>[NOTE: Codex Standard 243-2003 Fermented Milks plain has permissions for A (only for heat-treated after fermentation), T (for both non-heat treated AND heat-treated), S (for both non-heat treated AND heat-treated), – www.codexalimentarius.net/download/standards/400/CXS_243e.pdf</i>	Acetylated oxidized starch (1451) - as S/T
		Calcium Chloride (509) - as S/T
		Cross-linked sodium carboxymethyl cellulose (Cross-linked cellulose gum) (468) - as S/T
		Ethyl hydroxyethyl cellulose (467) - as S/T
		Potassium Chloride (508) - as S/T
		Sodium carboxymethyl cellulose, enzymatically hydrolyzed (Cellulose gum, enzymatically hydrolyzed) (469) - as S/T
1.2.1.1.	Fermented milks (plain), not heat-treated after fermentation <i>[NOTE: Codex Standard 243-2003 Fermented Milks plain has permissions for T and S – www.codexalimentarius.net/download/standards/400/CXS_243e.pdf</i> *Use is restricted to reconstitution and recombination and if permitted by national legislation in the country of sale to the final consumer.*	Acetic and fatty acid esters of glycerol (472a) - as S/T
		Alginate Acid (400) - as S/T
		Ammonium Alginate (403) - as S/T
		Calcium Alginate (404) - as S/T
		Calcium carbonate (170i) - as S/T
		Citric and fatty acid esters of glycerol (472c) - as S/T
		Hydroxypropyl cellulose (463) - as S/T
		Hydroxypropyl methyl cellulose (464) - as S/T
		Lactic and fatty acid esters of glycerol (472b) - as S/T
		Methyl cellulose (461) - as S/T
		Methyl ethyl cellulose (465) - as S/T
		Potassium alginate (402) - as S/T
		Salts of myristic, palmitic and stearic acids with ammonia, calcium, potassium and sodium (470i) - as S/T
Salts of oleic acid with calcium, potassium and sodium (470ii) - as S/T		
4.2.2.7	Fermented vegetable (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), and seaweed products, excluding fermented soybean products of food categories 06.8.6, 06.8.7, 12.9.1, 12.9.2.1 and 12.9.2.3	Gum arabic (acacia gum) (414) – as S per Cdx Std 249R, “GOCHUJANG”

	<p>[NOTE – Codex Stds 038-1981 Edible Fungi and Fungi Products (fermented) permission for A www.codexalimentarius.net/download/standards/231/CXS_038e.pdf</p> <p>151-1985 Gari www.codexalimentarius.net/download/standards/49/CXS_151e.pdf</p> <p>294R-2009 Gochujang (Regional Standard)permissions for A, S – www.codexalimentarius.net/download/standards/11260/CXS_294e.pdf</p> <p>223-2001 Kimchi permissions for A, T, S – www.codexalimentarius.net/download/standards/365/CXS_223e.pdf</p> <p>260-2007 Pickled Fruits and Vegetables (fermented vegetables) permissions for A – www.codexalimentarius.net/download/standards/10746/CXS_260e.pdf]</p>	
13.1.1.	<p>Infant formulae [NOTE – Codex Std 072-1981 Infant Formula and Formula for Special Dietary Purposes Intended for Infants (infant formula) - permissions for A, E, T www.codexalimentarius.net/download/standards/288/CXS_072e.pdf]</p>	<p>Carrageenan (407) - as T with Note X1: 0.03 g in regular milk-and soy-based liquid infant formula only; 0.1 g in hydrolysed protein- and/or amino acid based liquid infant formula only</p>
13.1.3.	<p>Formluae for special medical purposes for infants [NOTE – Codex Std 072-1981 Infant formula and Formula for Special Dietary Purposes Intended for Infants (formula for special dietary purposes intended for infants) - permissions for A, E, T www.codexalimentarius.net/download/standards/288/CXS_072e.pdf]</p>	<p>Carrageenan (407) - as T with Note X1: 0.03 g in regular milk-and soy-based liquid infant formula only; 0.1 g in hydrolysed protein- and/or amino acid based liquid infant formula only</p>
13.2.	<p>Complementary foods for infants and young children [NOTE – Codex Stds 073-1981 Canned Baby Foods - permissions for A, E, T www.codexalimentarius.net/download/standards/289/CXS_073e_u.pdf</p> <p>074-1981 Processed Cereal-Based Foods for Infants and Children - permissions for A, E, T www.codexalimentarius.net/download/standards/290/cxs_074e.pdf]</p>	<p>Acetylated distarch glycerol (no INS) – as T</p>

(III) NEW FOOD ADDITIVE PROVISIONS BASED ON INDUSTRY EXAMPLES

NOTE – Regarding Modified Food Starches, different formulations for a given product may require different Modified Food Starches (MFS). Many MFS are interchangeable depending on the functional requirements of the end product, processing, etc. The INS system contains 17 dextrans and modified starches, all of which have been evaluated by JECFA with an ADI of Not Specified.

However, in Annex 2 of CX/FA 12/44/9, not all of the MFS are listed. In the below table, regarding MFS, ICGMA has compiled data currently available for some additional MFS. Should there be any new information, comments will be provided in a Conference Room Document (CRD) prior to the 2012 CCFA meeting.

Function: Acidity Regulators (AR), Emulsifiers (E), Stabilizers (S), Thickeners (T)

Commodity Standards at GMP, FoodCatNo Food Category		NEW Food Additive Provisions per Codex unless noted otherwise
1.6.6	Whey protein cheese	Sodium hydroxide (524) - as AR in ricotta cheese preparation per industry example
2.2.1.	Butter	Lecithins (322) - as E/S
		Mono-/Di-Glycerides of Fatty Acids (471) – as E/S
4.1.1.3	Peeled or cut fresh fruit	Citric acid (330) (e.g., for apples and pineapples) - as AR.
		Ascorbic Acid (300) (e.g., for pineapples)
		Calcium Ascorbate (302) (e.g., for apples)
6.4.1.	Fresh pastas and noodles and like products	Acetylated Distarch Adipate (1422) – as T
		Acetylated Distarch Phosphate (1414) – as T
		Starch acetate (1420) – as T
6.4.2.	Dried pastas and noodles and like products	Acetylated Distarch Adipate (1422) – as T
		Acetylated Distarch Phosphate (1414) – as T
		Dextrins, Roasted Starch (1400) – as E/S
		Starch acetate (1420) – as E/S
8.1.	Fresh meat, poultry, and game (whole pieces or cuts, comminuted)	Lactic acid, L-, D- and DL- (270) – as AR (applicable to 8.1.1, not only 8.1.2.) - Lactic acid does serve to adjust pH on the surface of carcasses, primal/subs and on trim- all for the purpose of killing <i>E. coli</i> .
		Sodium acetates (262) – as AR (applicable to 8.1.2., not only 8.1.1.) - Sodium acetate as a pH control agent at up to 0.25%.
		Alginic acid (400) – as T/S - alginates have been used with fresh meats to manage texture (thickener)
		Ammonium alginate (403) – as T/S - alginates have been used with fresh meats to manage texture (thickener)
		Calcium alginate (404) – as T/S - alginates have been used with fresh meats to manage texture (thickener)
		Potassium alginate (402) – as T/S - alginates have been used with fresh meats to manage texture (thickener)
		Acetylated Distarch Adipate (1422) – as T - MFS as thickener used with fresh meats to manage texture (thickener), in injected and tumbled poultry, and in sausage-type products.

		<p><i>Distarch Phosphate (1412) – as T</i> - MFS as thickener used with fresh meats to manage texture (thickener), in injected and tumbled poultry, and in sausage-type products.</p> <p><i>Hydroxypropyl Distarch Phosphate (1442)</i> - MFS as thickener used with fresh meats to manage texture (thickener), in injected and tumbled poultry, and in sausage-type products.</p> <p><i>Monostarch Phosphate (1410) – as T</i> - MFS as thickener used with fresh meats to manage texture (thickener), in injected and tumbled poultry, and in sausage-type products.</p> <p><i>Phosphated Distarch Phosphate (1413) – as T</i> - MFS as thickener used with fresh meats to manage texture (thickener), in injected and tumbled poultry, and in sausage-type products.</p> <p><i>Starch acetate (1420) – as T</i> - MFS as thickener used with fresh meats to manage texture (thickener), in injected and tumbled poultry, and in sausage-type products.</p> <p><i>Starches, Enzyme Treated (1405) – as T</i> - MFS as thickener used with fresh meats to manage texture (thickener), in injected and tumbled poultry, and in sausage-type products.</p>
10.2.1.	<p>Liquid Egg Products [Justification: <u>Emulsifiers:</u> Protein Coagulation Suppressant (Crystallization inhibitor.) Binding with egg proteins to help maintain protein solubility during the pasteurization/heating process. <u>Thickeners:</u> Thickeners are to control viscosity.]</p>	<p>Sodium hydroxide (524) - as AR</p> <p>Mono- and di- glycerides of fatty acids (471) – as T</p> <p>Calcium sulfate (516) – as T</p> <p>Dextrins, Roasted Starch (1400) – as T</p> <p>Starch Sodium Octenyl Succinate (1450) – as T</p>
10.2.2.	<p>Frozen Egg Products [Justification: <u>Emulsifiers:</u> Protein Coagulation Suppressant (Crystallization inhibitor.) Binding with egg proteins to help maintain protein solubility during the pasteurization/heating process. <u>Thickeners:</u> Thickeners are to control viscosity.]</p>	<p>Sodium hydroxide (524) - as AR</p> <p>Dextrins, Roasted Starch (1400) – as T</p> <p>Starch Sodium Octenyl Succinate (1450) – as T</p>
13.1.1.	<p>Infant formulae [Justification - Thickeners help suspend nutrients, particularly insoluble minerals, preserving the nutritional quality of the food (specifically nutrient delivery to the infant).]</p>	<p>Acetylated distarch adipate (1422) - as T</p>
13.1.2.	<p>Follow-up formulae [Justification - Thickeners help suspend nutrients, particularly insoluble minerals, preserving the nutritional quality of the food (specifically nutrient delivery to the</p>	<p>Hydroxypropyl starch (1440) – as T</p>

	infant). Modified starches also provide a necessary ingredient for foods manufactured for groups of consumers having special dietary needs (i.e. infants requiring formulas with hydrolyzed protein).]	
13.1.3.	Formulae for special medical purposes for infants [Justification - Thickeners help suspend nutrients, particularly insoluble minerals, preserving the nutritional quality of the food (specifically nutrient delivery to the infant). Modified starches and xanthan gum also provide a necessary ingredient for foods manufactured for groups of consumers having special dietary needs (i.e. infants requiring formulas with hydrolyzed protein).]	Xanthan gum (415) - as T
		Acetylated distarch adipate (1422)- as T
13.2.	Complementary foods for infants and young children	Distarch glycerol (1411) – as T
14.1.1.2	Table waters and soda waters	Citric Acid (330) – as AR
		Gum arabic (Acacia gum) (414) - as E/S/T
		Pectin (440) - as T
14.1.2	Fruit and Vegetable Juices [Justification – various gums and thickeners including pectins, xanthan gum, etc., used to thicken and adjust mouth feel, and stabilizer]	Carob Bean Gum (410) – as T - used to thicken and adjust mouth feel in reduced calorie, reduced sugar type products
		Carrageenan (407) – as T - used to thicken and adjust mouth feel in reduced calorie, reduced sugar type products
		Gellan Gum (418) – as T - used to thicken and adjust mouth feel in reduced calorie, reduced sugar type products
		Potassium citrates (332) – as AR
		Sodium citrates (331) – as AR
		Xanthan gum (415) - as T - used to thicken and adjust mouth feel in reduced calorie, reduced sugar type products
14.1.3	Fruit and Vegetable Nectars [Justification – various gums and thickeners including pectins, xanthan gum, etc., used to thicken and adjust mouth feel, and stabilizer]	Carob Bean Gum (410) – as T - used to thicken and adjust mouth feel in reduced calorie, reduced sugar, nectar-type products
		Carrageenan (407) – as T - used to thicken and adjust mouth feel in reduced calorie, reduced sugar, nectar-type products
		Gellan Gum (418) – as T - used to thicken and adjust mouth feel in reduced calorie, reduced sugar, nectar-type products
		Potassium citrates (332) – as AR
		Sodium citrates (331) – as AR
		Xanthan gum (415) - as T - used to thicken and adjust mouth feel in reduced calorie, reduced sugar, nectar-type products
14.1.5	Coffee, coffee substitutes, tea, herbal infusions, and other hot cereal beverages, excluding cocoa	Starch Sodium Octenyl Succinate (1450) – as T

IDF (INTERNATIONAL DAIRY FEDERATION)

The IDF thanks the delegation of the USA for leading this electronic working group.

General comments

IDF notes that when the food additives provisions were transferred from the following commodity standards to the GSFA the information on the use/function of the additives, as allowed by the relevant Codex committee, was lost: Codex STAN 279-1971 Butter, Codex STAN 280-1973 Milkfat products, Codex STAN 284 Whey cheeses and whey protein cheeses, Codex STAN 289-1995 Whey powders.

The eWG should ensure that additives provisions listed in the working document are limited to those already included in Codex commodity standards.

IDF would also like to make a general comment on its approach to responding to the eWG request for comments to CX/FA 12/44/9 and CX/FA 12/44/9 Add 1.

Central to IDF's approach in responding to the eWG's request has been the Food Categorisation System (FCS) and its hierarchical sub category organization where additives allowed in the parent categories are also allowed in the subsequent subcategories unless justifiably restricted.

For dairy products, the more specific products are found in the lower sub categories, and are the products for which the list of food additives allowed can be more restricted, by the relevant Codex standards. Conversely, the more general classes of products for which a greater range of additives is allowed are found in the higher, parent, categories.

An example of this is *Food Category 1.4: Creams (plain) and the like*, which covers plain fluid, semi-fluid and semi-solid cream and cream analogue products. Flavoured cream products are covered elsewhere. Its 4 sub categories; *1.4.1, 1.4.2, 1.4.3 and 1.4.4* cover specific cream products that are subcategorised on the basis of heat treatment, clotted nature and cream substitution. Subcategorisation in this manner allows for the restriction and specialisation of the additive provisions for these more specific and standardised products.

In reviewing the various proposals put forward by the eWG the IDF has relied heavily on the FCS and its hierarchical organisation of its sub categories within a food category coupled with the relevant commodity standard additive provisions, to give the eWG a consistent response across the dairy sector for IDF's recommendations for the inclusion or exclusion of ACRs, EMUs, STABs and THKs in Tables 1, 2 & 3.

Comments by food category

ACIDITY REGULATORS

FC 1.1.1 Milk and buttermilk (plain)

FC 1.1.1.1 Milk (plain)

Previous IDF comments to the eWG: accept, with note "for UHT goat's milk only."

FC 1.1.1.2 Buttermilk (plain)

The category 1.1.1 is listed in the annex to table 3 but excluding heat treated buttermilk ("01.1.1 Milk and buttermilk (plain) (EXCLUDING HEAT-TREATED BUTTERMILK)"). Therefore only provisions for non-heat-treated products should be considered, and IDF recommends that the use of the acidity regulators is not justified for use in non heat-treated buttermilk (plain).

FC 1.2.1 Fermented milks (plain)

IDF recommends that the use of Acidity Regulators is not justified, because acidity regulators are not justified in subcategory 1.2.1.1 (ACRs are not allowed in CODEX STAN 243-2003). The additives listed in document CX/FA 12/44/9 annex 1 shall not be allowed.

FC 1.2.1.1 Fermented milks (plain), not heat-treated after fermentation

IDF recommends that the use of Acidity Regulators is not justified because acidity regulators are not allowed in the Codex STAN 243-2003 for non heat treated fermented milks. The additives listed in document CX/FA 12/44/9 Annex 1 shall not be allowed.

FC 1.2.1.2 Fermented milks (plain), heat-treated after fermentation

IDF recommends that the use of all acidity regulators from table 3 is not justified in this category.

There is a one-to-one relationship between this category and the Codex STAN 243-2003 for fermented milks heat-treated after fermentation (the only additives allowed are tartrates and adipates, which are not table 3 additives).

FC 1.4.1 Pasteurized creams (plain)

IDF supports the eWG recommendation. Technological justification: to ensure product stability and the integrity of the emulsion and taking into consideration the fat content and the durability expected of the product.

However IDF would request clarification as whether FC 1.4.1 includes reconstituted and/or recombined cream, as CODEX STAN 288-1976 for Creams and prepared creams covers these products (i.e. see the definition of Prepared creams (2.4), Prepackaged liquid cream (2.4.1) Whipping cream (2.4.2) etc. the relevant Codex Standard 288-1976), as this may have a bearing regarding technological justification.

The ML for INS 501(ii) – Potassium Hydrogen Carbonate should be changed to GMP to be consistent with CODEX STAN 288-1976.

FC 1.4.2 Sterilized and UHT creams, whipping or whipped creams, and reduced fat creams (plain)

IDF supports the eWG recommendation. Technological justification: to ensure product stability and the integrity of the emulsion and taking into consideration the fat content and the durability expected of the product.

FC 1.6.6 Whey protein cheese

IDF supports the eWG recommendation.

FC 1.8.2 Dried whey and whey products, excluding whey cheeses

This food category has a one-to-one relationship with the CODEX STAN 289-1995 for Whey Powders. IDF notes that the specific food additive provisions for this FC, as contained in the Codex Standard 289-1995 were already incorporated into the GSFA in 2005 and 2006.

IDF does not support the eWG recommendation and recommends that the use of acidity regulators is not justified. Only the additives allowed in the standard as acidity regulators (Codex Stan 289-1995 as adopted in Alinorm 03/11 Appendix IV p 36) shall be included in this category.

The following additives were listed in CODEX STAN 289-1995 but under other technical functions than "acidity regulators" and should therefore not be listed in the Annex 1 of the CX/FA 12/44/9: i.e. INS 170(i) and 504(i) are listed as anticaking agents, 501(i), 332(i) and (ii), 501(ii), 500(i), (ii), (iii), 331(i) and (iii) are listed as stabilizers.

FC 2.1.1 Butter oil, anhydrous milkfat, ghee

The use of Acidity Regulators is not justified (one to one relationship with CODEX STAN 280-1973 for Milkfat products). The additives listed in the CX FA 12/44/9 annex1 were not allowed in the standard as acidity regulators but as antioxidants.

IDF notes that the specific food additive provisions for this FC, as contained in the Codex Standard 280 – 1973 were already incorporated into the GSFA in 2006.

FC 2.2.1 Butter

IDF does not support the eWG recommendation, and recommends that only a limited number of Acidity Regulators are technologically justified in this category, consistently with the Codex STAN 279-1971 for Butter (one-to-one relationship).

IDF notes that the specific food additive provisions for this FC, as contained in the Codex Standard 279 – 1971 were already incorporated into the GSFA in 2008.

EMULSIFIER, STABILIZER AND THICKENER

FC 1.1.1 Milk and buttermilk (plain)

IDF wishes to restrict the list of additives for this category and considers that only sodium citrates (INS 331(ii)) shall be allowed with the note mentioned in the eWG recommendation “For use in certain recombined, reconstituted or UHT heat-treated milks, from certain species only, e.g. goat’s milk.” Therefore IDF does not support the eWG recommendation.

FC 1.1.1.1 Milk (plain)

This category is not listed in the report from the eWG.

IDF wishes to restrict the list of additives for this category and considers that only sodium citrates shall be allowed, together with the note: “For use in UHT heat-treated milks, from certain species only, e.g. goat’s milk”.

Others additives listed in CX FA 12/44/9 Annex 2 are not justified.

FC 1.1.1.2 Buttermilk (plain)

This category is not listed in the report from the eWG.

IDF supports the justification of use of emulsifiers, stabilizers and thickeners, because this food category may include high heat treated buttermilk from all milking species. IDF recommends a note: "For use in certain UHT heat-treated buttermilks, for certain species only, e.g. goat milk."

FC 1.2 Fermented and renneted milk product

IDF does not support the eWG recommendation. The use of emulsifiers, stabilizers and thickeners is not justified in this category.

This food category is much broader than products included in Codex Standard 243-2003 for Fermented milks (ex: renneted milk). Therefore, the provisions for food additives listed under this category are not justified in all subcategories, and IDF would recommend that this category only allows additives allowed in all the subcategories (i.e. a bottom-up approach).

The Maximum Levels for the following food additives: INS 406, INS 407, INS 471 and INS 407a shall be changed to GMP to be consistent with CODEX STAN 243-2003.

FC 1.2.1 Fermented milks (plain)

IDF supports the eWG recommendation because all emulsifiers, stabilizers and thickeners from Table 3 are not technologically justified in all products within subcategories of this category. This food category is broader than products included in Codex Standard 243-2003.

The Maximum Levels for the food additive INS 331 (iii) shall be changed to GMP to be consistent with CODEX STAN 243-2003.

FC 1.2.1.1 Fermented milks (plain), not heat-treated after fermentation

Emulsifiers are not permitted in plain fermented milks non-heat treated after fermentation in Codex STAN 243-2003. Therefore the use of all emulsifiers, thickeners and stabilizers from Table 3 is not justified.

To avoid conflict with the CODEX STAN 243-2003 for plain, non-heat treated fermented milks 3, the following note shall be added to each food additive: "For use as a stabilizer or thickener in reconstituted, recombined products, only and then only when allowed by the legislation of the country of sale to the ultimate consumer".

The Maximum Levels for the food additive INS 416 shall be changed to GMP to be consistent with CODEX STAN 243-2003.

FC 1.2.1.2 Fermented milks (plain), heat-treated after fermentation

Emulsifiers are not permitted in plain fermented milks heat treated after fermentation in the Codex STAN 243-2003 therefore the use of all emulsifier, thickeners and stabilizers from Table 3 is not justified.

IDF notes that the following additives are not allowed in the Codex Standard 243-2003 for plain fermented milks: INS 322(i), INS 421, INS 501(i), INS 332(i), INS 331(i), and INS 332(ii).

The Maximum Levels for the following food additives: INS 400, 403, 404, 410, 412, 414, 416, 460(i), 440, 402, 401, 466 and INS 415 shall be changed to GMP to be consistent with CODEX STAN 243-2003.

FC 1.4.1 Pasteurized creams (plain)

IDF supports the eWG recommendation.

Technological justification: to ensure product stability and the integrity of the emulsion and taking into consideration the fat content and the durability expected of the product. With regard to the durability, special consideration should be given to the level of heat treatment applied since some minimally pasteurized products do not require the use of certain additives.

However IDF would request clarification as whether 1.4.1 includes reconstituted and/or recombined cream, as CODEX STAN 288-1976 covers these products (specially prepackaged cream), as this may have a bearing regarding technological justification.

The Maximum Levels for the food additives: INS 472a, 400, 403, 404, 410, 407, 472c, 414, 472b, 322(i), 460(i), 471, 402, 401, 466 and INS 331(iii) shall be changed to GMP to be consistent with CODEX STAN 288-1976.

FC 1.4.2 Sterilized and UHT creams, whipping or whipped creams, and reduced fat creams (plain)

IDF supports the eWG recommendation.

Technological justification: to ensure product stability and the integrity of the emulsion and taking into consideration the fat content and the durability expected of the product. With regard to the durability, special consideration should be given to the level of heat treatment applied since some minimally pasteurized products do not require the use of certain additives.

However IDF notes that under 1.4.2 the following provisions listed in Annex 2 of CX FA 12/44/9 are not included in the Codex STAN 288-1976: Oxidized starch, polydextroses, potassium carbonate, potassium hydrogen carbonate, tara gum, tragacanth gum and tricalcium citrate.

The Maximum Levels for the food additives: INS 472a, 406, 400, 403, 404, 170(i), 410, 407, 472c, 412, 414, 472b, 322(i), 460(i), 471, 440, 402, 401, 407a, 466, 332(ii), 331(iii) and INS 415 shall be changed to GMP to be consistent with CODEX STAN 288-1976.

FC 1.6.3 Whey cheeses

IDF supports the eWG recommendation.

IDF notes that the specific food additive provisions for this FC, as contained in the Codex Standard 284-1971 were already incorporated into the GSFA in 2006.

FC 1.6.6 Whey protein cheeses

IDF supports the eWG recommendation.

IDF notes that the specific food additive provisions for this FC, as contained in the Codex Standard 284 – 1971 were already incorporated into the GSFA in 2006.

FC 1.8.2 Dried whey and whey products, excluding whey cheeses

IDF notes that the specific food additive provisions for this FC, as contained in the Codex Standard 289 – 1995 were already incorporated into the GSFA in 2003.

Therefore IDF does not support the eWG recommendation. CODEX STAN 289-1995 as adopted (Alinorm 03/11 Appendix IV p 36) only allows certain stabilizers.

The following additives listed in the annex 2 of the CX FA 12/44/9 were not allowed in the standard as emulsifier, stabilizer or thickener:

- INS 1442 - Hydroxypropyl distarch phosphate (but allowed as anticaking agent),
- INS 460(i) - microcrystalline cellulose (not listed), and
- INS 460 (ii) - powdered cellulose (not listed).

FC 2.1.1 Butter

IDF supports the eWG recommendation. The additives listed in the CX FA 12/44/9 Annex 2 were listed as antioxidant, and should be removed.

IDF notes that the specific food additive provisions for this FC, as contained in the Codex Standard 279 – 1971 were already incorporated into the GSFA in 2008.

IFAC (INTERNATIONAL FOOD ADDITIVES COUNCIL)

The International Food Additives Council (IFAC) is an international association representing companies that produce high quality substances used globally as food additives and food ingredients. IFAC holds NGO status before Codex Alimentarius. IFAC appreciates the opportunity to provide comments on the CX/FA 12/44/9 and CX/FA 12/44/9 Add.1

CX/FA 12/44/9

Regarding CX/FA 12/44/9, IFAC would like to provide comments on the draft provisions for a number of food additives listed in this document. Our comments are provided in an attached Excel spreadsheet.

CX/FA 12/44/9, Add.1:

IFAC would like to provide the following comments:

Annex I: Acidity Regulators

For the following categories in CX/FA 12/44/9 Add.1, acidity regulators are recommended by the eWG to be not technologically justified. IFAC disagrees with this recommendation and would like to provide the following justification for the following categories for acidity regulators.

- 6.1 Whole, broken or flaked grain, including rice
 - This additive function is needed to reduce processing time, temperature, or both. In general, higher processing pH improves starch gellation, allowing for less harsh processing.
- 6.2.2 Starches
 - This additive function is needed to reduce processing time, temperature, or both. In general, higher processing pH improves starch gellation, allowing for less harsh processing.
- 9.1 Fresh fish and fish products, including molluscs, crustaceans, and echinoderms
 - Neutralization of pH is required to remove bitter taste in some species, as well as to assist with flavor, firmness, and shelf-life control. ***IFAC requests that the use of acidity regulators in the above categories be considered to be technologically justified.**

Annex II: Thickeners, Stabilizers, and Emulsifiers

For the following categories in CX/FA 12/44/9 Add.1, thickeners, stabilizers, and emulsifiers are recommended by the eWG for further discussion or not technologically justified. IFAC disagrees with this recommendation and would like to provide the following justification for the following categories for thickeners, stabilizers, and emulsifiers.

- 1.2.1 Fermented milks (plain)
- Thickeners, emulsifiers and stabilizers are commonly needed in fermented dairy products to stabilize the protein and optimize the viscosity, reduce wheying off, stabilize the fat phase, prevent foam formation, improve mouth feel, cooking and baking stability, and prevent physical spoilage during transport and storage.
- 4.2.2.1 Frozen vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), seaweeds, and nuts and seeds
 - Stabilization is needed in these products to maintain color (especially in potatoes) and to maintain the texture or firmness of the vegetables; Emulsifiers, stabilizers, and thickeners provide this stabilization.

***IFAC requests that the use of thickeners, stabilizers, and emulsifiers in the above categories be considered to be technologically justified.**

We appreciate the opportunity to provide comment.

<i>Emulsifiers, Stabilizers and Thickeners Worksheet</i>						
<i>Codex Draft Annex 2</i>						
GSFA Food Category No.	Food Category Title	INS	Additive name	Codex Max level	Comments on proposed Codex max level	Comments
1.2	Fermented and renneted milk products (plain), excluding food category 01.1.2 (dairy-based drinks)	440	Pectins		For EU, Canadian, Australia, New Zealand, and US alignment, GMP is proposed.	Pectins are missing in this category (GMP), as Pectins are approved GMP in all of the sub-categories.
1.2.1.2	Fermented milks (plain), heat-treated after fermentation	400	Alginic Acid	5000mg/kg	For EU, Canadian and US alignment, GMP is proposed.	Thickeners and stabilizers are advantageous in fermented dairy products for stabilization of the protein prior to heat treatment and optimization of viscosity, preventing physical spoilage during transport and storage, all while improving mouthfeel, cooking and baking stability.
		403	Ammonium Alginate	5000mg/kg	For EU, Canadian and US alignment, GMP is proposed.	Same as above.
		404	Calcium Alginate	5000mg/kg	For EU, Canadian and US alignment, GMP is proposed.	Same as above.
		410	Carob Bean Gum	5000mg/kg	For EU and Canadian alignment, GMP is proposed.	Same as above.
		407	Carrageenan	5000mg/kg in food category 01.2	For EU, Canadian and US alignment, GMP is proposed.	Same as above.
		412	Guar Gum	5000mg/kg	For EU and Canadian alignment, GMP is proposed.	Same as above.
		460(i)	Microcrystal line Cellulose (Cellulose Gel)	20000mg/kg	For EU, Canadian, and US alignment, GMP is proposed.	Same as above.

		440	Pectins	10000mg/kg	For EU, Canadian and US alignment, GMP is proposed.	Same as above.
		402	Potassium Alginate	5000mg/kg	For EU, Canadian, and US alignment, GMP is proposed.	Same as above.
		401	Sodium Alginate	5000mg/kg	For EU, Canadian, and US alignment, GMP is proposed.	Same as above.
		466	Sodium Carboxymethyl Cellulose (Cellulose Gum)	5000mg/kg	For EU, Canadian, and US alignment, GMP is proposed.	Same as above.
		471	Mono- and-di glycerides of fatty acids	5000 mg/kg in food Category 01.2	For EU, Canadian, and US alignment GMP is proposed.	Emulsifiers are advantageous in fermented dairy products for stabilization of the protein prior to heat treatment and optimization of viscosity, preventing physical spoilage during transport and storage, all while improving mouthfeel, cooking and baking stability.
		415	Xanthan Gum	5000mg/kg	For EU alignment, GMP is proposed.	Same as above.
1.4.1	Pasteurized cream (plain)	407	Carrageenan	5000 mg/kg	In order to prevent syneresis levels up to 5000 mg/kg are needed. For EU, Canadian, and US alignment, GMP is proposed.	Thickeners and stabilizers are important for use in pasteurized cream to optimize texture and stabilize structure for freeze-thaw stability and for controlled air incorporation.
		402	Potassium Alginate	1000 mg/kg	In order to prevent syneresis levels up to 5000 mg/kg are needed. For EU, Canadian, and US alignment, GMP is proposed.	Same as above.
		401	Sodium Alginate	1000 mg/kg	In order to prevent syneresis levels up to 5000 mg/kg are needed. For EU, Canadian, and US alignment, GMP is proposed.	Same as above.
		471	Mono- and-di glycerides of fatty acids	5000 mg/kg	For EU and US alignment, GMP is proposed.	Emulsifiers are important for use in pasteurized cream to optimize texture and stabilize structure for freeze-thaw stability and for controlled air incorporation.

		466	Sodium Carboxymethyl Cellulose (Cellulose Gum)	5000 mg/kg	For EU, Canadian, and US alignment, GMP is proposed	Same as above.
1.4.2	Sterilized and UHT creams, whipping or whipped creams, and reduced fat creams (plain)	400	Alginic Acid	5000 mg/kg	For EU, Australia, New Zealand, Canadian, and US alignment, GMP is proposed.	Thickeners and stabilizers are commonly used in pasteurized and UHT creams for optimized texture and stabilized structure, for freeze-thaw stability and for controlled air incorporation.
		403	Ammonium Alginate	5000 mg/kg	For EU, Australia, New Zealand, Canadian, and US alignment, GMP is proposed.	Same as above.
		404	Calcium Alginate	5000 mg/kg	For EU, Australia, New Zealand, Canadian, and US alignment, GMP is proposed.	Same as above.
		410	Carob Bean Gum	5000 mg/kg	For EU, Australia, New Zealand, and Canadian alignment, GMP is proposed.	Same as above.
		412	Guar Gum	5000 mg/kg	For EU, Australia, New Zealand, and Canadian alignment, GMP is proposed.	Same as above.

		407	Carrageenan	5000 mg/kg	For EU, Australia, New Zealand, Canadian, and US alignment, GMP is proposed.	Same as above.
		460(i)	Microcrystalline Cellulose (Cellulose Gel)	5000 mg/kg	For EU, Australia, New Zealand, and US alignment, GMP is proposed.	Same as above.
		440	Pectins	5000 mg/kg	For EU, Australia, New Zealand, Canadian and US alignment, GMP is proposed.	Same as above.
		402	Potassium Alginate	5000 mg/kg	For EU, Australia, New Zealand, Canadian, and US alignment, GMP is proposed.	Same as above.
		401	Sodium Alginate	5000 mg/kg	For EU, Australia, New Zealand, Canadian, and US alignment, GMP is proposed.	Same as above.
		466	Sodium Carboxymethyl Cellulose (Cellulose Gum)	5000 mg/kg	For EU, Australia, New Zealand, Canadian, and US alignment, GMP is proposed.	Same as above.
		471	Mono- and di-glycerides of fatty acids	5000 mg/kg	For EU, Australia, New Zealand, Canadian, and US alignment, GMP is proposed.	Emulsifiers, thickeners, and stabilizers are commonly used in pasteurized and UHT creams for optimized texture and stabilized structure, for freeze-thaw stability and for controlled air incorporation.
		472a	Acetic and fatty acid esters of glycerol	10000m g/kg	For EU, Australia, New Zealand, Canadian, and US alignment, GMP is proposed.	Emulsifiers, thickeners, and stabilizers are commonly used in pasteurized and UHT creams for optimized texture and stabilized structure, for freeze-thaw stability and for controlled air incorporation.

		472b	Lactic and fatty acid esters of glycerol	10000mg/kg	For EU, Australia, New Zealand, Canadian, and US alignment, GMP is proposed.	Emulsifiers, thickeners, and stabilizers are commonly used in pasteurized and UHT creams for optimized texture and stabilized structure, for freeze-thaw stability and for controlled air incorporation.
		472c	Citric and fatty acid esters of glycerol	5000mg/kg	For EU, Australia, New Zealand, and Canadian alignment, GMP is proposed.	Emulsifiers, thickeners, and stabilizers are commonly used in pasteurized and UHT creams for optimized texture and stabilized structure, for freeze-thaw stability and for controlled air incorporation.
		415	Xanthan Gum	5000 mg/kg	For EU and Australia, New Zealand alignment, GMP is proposed.	Same as above.
6.4.1	Fresh pastas and noodles and like products	466	Sodium Carboxymethyl Cellulose (Cellulose Gum)	50000 mg/kg	For EU, Australia, New Zealand, Canadian, and US alignment, GMP in noodles is proposed.	Emulsifiers, thickeners, and stabilizers are commonly used in fresh pasta to improve bite and reduce cooking loss.
		472a, 472b, 472c	Acetic-, Lactic-, and Citric and fatty acids of glycerol	-	For EU, Australia, New Zealand, Canadian, and US alignment, GMP in noodles is proposed.	Same as above.
		415	Xanthan Gum	10000 mg/kg	For EU, Australia, New Zealand alignment, GMP in noodles is proposed.	Same as above.
9.2.1	Frozen fish, fish fillets, and fish products, including mollusks, crustaceans, and echinoderms	400	Alginic Acid	5000 mg/kg	For an adequate technological effect levels up to 7500 mg/kg are needed. For EU, Australia, New Zealand, Canadian, and US alignment, GMP is proposed.	Thickeners and stabilizers are used to protect the product from structure changes during the freeze-thaw cycles during handling and storage, by decreasing the freezing point depression.
		403	Ammonium Alginate	5000 mg/kg	For an adequate technological effect levels up to 7500 mg/kg are needed. For EU, Australia, New Zealand, Canadian, and US alignment, GMP is proposed.	Same as above.

		404	Calcium Alginate	5000 mg/kg	For an adequate technological effect levels up to 7500 mg/kg are needed. For EU, Australia, New Zealand, Canadian, and US alignment, GMP is proposed.	Same as above.
		407	Carrageenan	5000 mg/kg	For an adequate technological effect levels up to 7500 mg/kg are needed. For EU, Australia, New Zealand, Canadian, and US alignment, GMP is proposed.	Same as above.
		402	Potassium Alginate	5000 mg/kg	For an adequate technological effect levels up to 7500 mg/kg are needed. For EU, Australia, New Zealand, Canadian, and US alignment, GMP is proposed.	Same as above.
		401	Sodium Alginate	5000 mg/kg	For an adequate technological effect levels up to 7500 mg/kg are needed. For EU, Australia, New Zealand, Canadian, and US alignment, GMP is proposed.	Same as above.
		415	Xanthan Gum	160 mg/kg	For an adequate technological effect levels up to 5000 mg/kg are needed. For EU, Australia, New Zealand, and Canadian alignment, GMP is proposed.	Same as above.
9.2.2	Frozen battered fish, fish fillets, and fish products, including mollusks, crustaceans, and echinoderms	412	Guar Gum	2000 mg/kg	For EU, Australia, New Zealand, and Canadian alignment, GMP is proposed.	Thickeners and stabilizers are used in batters to improve adhesion, reduce fat uptake during frying and improve the crispiness of the batter. They also protect the product from structure changes during the freeze-thaw cycles during handling and storage, by decreasing the freezing point depression.
		407a	Processed Eucheuma Seaweeds	5000 mg/kg	For EU alignment, GMP is proposed.	Same as above.
10.2.1	Liquid egg products	404	Calcium Alginate	6000 mg/kg	For EU, Australia, New Zealand, Canadian, and US alignment, GMP is proposed.	Thickeners and stabilizers are used to restore the viscosity that is typically lost through pasteurisation of liquid egg products.

10.2.2	Frozen egg products	404	Calcium Alginate	6000 mg/kg	For EU, Australia, New Zealand, Canadian, and US alignment, GMP is proposed.	Thickeners and stabilizers are needed to provide freeze-thaw stability and restore lost viscosity that is typically lost through pasteurisation.
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MARINALG INTERNATIONAL

Marinalg International greatly appreciates the work that has been done to progress these provisions. We have examined those relating to the stabilisers covered by our Association and are enclosing our comments for your consideration.

	<i>Codex Draft Annex 2</i>				<i>EU Legislation and justification for alignment</i>	
Food Category Title	INS	Additive name	Codex Max level	Comments on proposed Codex max level	EU Legislation Regulation 1333/2008 Annex II	Comments
					Category No and Max level	
Fermented milks (plain), heat-treated after fermentation	400	Alginic Acid	5000mg/kg	For EU alignment, GMP is proposed	Category No 01.3 Unflavoured fermented milk products, heat-treated after fermentation: INS 400 is approved quantum satis	Thickeners and stabilizers are advantageous in fermented dairy products for stabilization of the protein prior to heat treatment and optimization of viscosity, preventing physical spoilage during transport and storage, all while improving mouthfeel, cooki
	403	Ammonium Alginate	5000mg/kg	For EU alignment, GMP is proposed	Category No 01.3 Unflavoured fermented milk products, heat-treated after fermentation: INS 403 is approved quantum satis	Same as above.

	404	Calcium Alginate	5000mg/kg	For EU alignment, GMP is proposed	Category No 01.3 Unflavoured fermented milk products, heat-treated after fermentation: INS 404 is approved quantum satis	Same as above.
	407	Carrageenan	5000mg/kg in food category 01.2	For EU alignment, addition of carrageenan as GMP in Food category 01.2.1.2 is proposed	Category No 01.3 Unflavoured fermented milk products, heat-treated after fermentation: INS 407 is approved quantum satis	Same as above.
	402	Potassium Alginate	5000mg/kg	For EU alignment, GMP is proposed	Category No 01.3 Unflavoured fermented milk products, heat-treated after fermentation: INS 402 is approved quantum satis	Same as above.
	401	Sodium Alginate	5000mg/kg	For EU alignment, GMP is proposed	Category No 01.3 Unflavoured fermented milk products, heat-treated after fermentation: INS 401 is approved quantum satis	Same as above.
Pasteurized cream (plain)	407	Carrageenan	500 mg/kg	In order to prevent syneresis levels up to 5000 mg/kg is needed. For EU alignment, GMP is proposed	Category No 01.6.1 Unflavoured pasteurised cream (excluding reduced fat creams): INS 407	Thickeners and stabilizers are important for use in pasteurized cream to optimize texture and stabilize structure for freeze-thaw stability and for controlled air incorporation.

					is approved quantum satis	
	402	Potassium Alginate	1000 mg/kg	In order to prevent syneresis levels up to 5000 mg/kg is needed. For EU alignment, GMP is proposed	Category No 01.6.1 Unflavoured pasteurised cream (excluding reduced fat creams): INS 402 is approved quantum satis	Same as above.
	401	Sodium Alginate	1000 mg/kg	In order to prevent syneresis levels up to 5000 mg/kg is needed. For EU alignment, GMP is proposed	Category No 01.6.1 Unflavoured pasteurised cream (excluding reduced fat creams): INS 401 is approved quantum satis	Same as above.
Sterilized and UHT creams, whipping or whipped creams, and reduced fat creams (plain)	400	Alginic Acid	5000 mg/kg	For EU alignment, GMP is proposed	Category No 01.6.3 Other creams: INS 400 is approved quantum satis	Thickeners and stabilizers are commonly used in pasteurized and UHT creams for optimized texture and stabilized structure, for freeze-thaw stability and for controlled air incorporation.
	403	Ammonium Alginate	5000 mg/kg	For EU alignment, GMP is proposed	Category No 01.6.3 Other creams: INS 403 is approved quantum satis	Same as above.

	404	Calcium Alginate	5000 mg/kg	For EU alignment, GMP is proposed	Category No 01.6.3 Other creams: INS 404 is approved quantum satis	Same as above.
	407	Carrageenan	5000 mg/kg	For EU alignment, GMP is proposed	Category No 01.6.3 Other creams: INS 407 is approved quantum satis	Same as above.
	402	Potassium Alginate	5000 mg/kg	For EU alignment, GMP is proposed	Category No 01.6.3 Other creams: INS 402 is approved quantum satis	Same as above.
	401	Sodium Alginate	5000 mg/kg	For EU alignment, GMP is proposed	Category No 01.6.3 Other creams: INS 401 is approved quantum satis	Same as above.
Frozen fish, fish fillets, and fish products, including mollusks, crustaceans, and echinoderms	400	Alginic Acid	5000 mg/kg	For an adequate technological effect levels up to 7500 mg/kg is needed. For EU alignment, GMP is proposed	Category No 9.2 Processed fish and fishery products including mollusks and crustaceans: INS 400 is approved quantum satis	Thickeners and stabilizers are used to protect the product from structure changes during the freeze-thaw cycles during handling and storage, by decreasing the freezing point depression.
	403	Ammonium Alginate	5000 mg/kg	For an adequate technological effect levels up to 7500 mg/kg is needed. For EU alignment, GMP is proposed	Category No 9.2 Processed fish and fishery products including mollusks and crustaceans: INS 403 is approved quantum satis	Same as above.

	404	Calcium Alginate	5000 mg/kg	For an adequate technological effect levels up to 7500 mg/kg is needed. For EU alignment, GMP is proposed	Category No 9.2 Processed fish and fishery products including mollusks and crustaceans: INS 404 is approved quantum satis	Same as above.
	407	Carrageenan	5000 mg/kg	For an adequate technological effect levels up to 7500 mg/kg is needed. For EU alignment, GMP is proposed	Category No 9.2 Processed fish and fishery products including mollusks and crustaceans: INS 407 is approved quantum satis	Same as above.
	402	Potassium Alginate	5000 mg/kg	For an adequate technological effect levels up to 7500 mg/kg is needed. For EU alignment, GMP is proposed	Category No 9.2 Processed fish and fishery products including mollusks and crustaceans: INS 402 is approved quantum satis	Same as above.
	401	Sodium Alginate	5000 mg/kg	For an adequate technological effect levels up to 7500 mg/kg is needed. For EU alignment, GMP is proposed	Category No 9.2 Processed fish and fishery products including mollusks and crustaceans: INS 401 is approved quantum satis	Same as above.
Frozen battered fish, fish fillets, and fish products, including mollusks, crustaceans, and echinoderms						

	407a	Processed Eucheuma Seaweeds	5000 mg/kg	For EU alignment, GMP is proposed	Category No 9.2 Processed fish and fishery products including mollusks and crustaceans: INS 407a is approved quantum satis	Thickeners and stabilizers are used in batters to improve adhesion, reduce fat uptake during frying and improve the crispiness of the batter. They also protect the product from structure changes during the freeze-thaw cycles during handling and storage, b
Liquid egg products	404	Calcium Alginate	6000 mg/kg	For EU alignment, GMP is proposed	Category No 10.2 Processed eggs and egg products: INS 404 is approved quantum satis	Thickeners and stabilizers are used to restore the viscosity that is typically lost through pasteurisation of liquid egg products.
Frozen egg products	404	Calcium Alginate	6000 mg/kg	For EU alignment, GMP is proposed	Category No 10.2 Processed eggs and egg products: INS 404 is approved quantum satis	Thickeners and stabilizers are needed to provide freeze-thaw stability and restore lost viscosity that is typically lost through pasteurisation.

OIV (INTERNATIONAL ORGANISATION OF VINE AND WINE)

During the 43rd Session of the Codex Committee on Food Additives (CCFA), the Committee agreed to establish an electronic Working Group (e-WG), led by the United States of America, to develop a horizontal approach for the consideration of these provisions for use by the p-WG on the GSFA when recommending final adoption or discontinuation of the food additives provisions in Table 1 and 2 of the “acidity regulators” and “emulsifiers, stabilizers, thickeners” in Table 3. A list of the additives to be considered was presented in Appendix X of REP11/FA

The International Organisation of Vine and Wine (OIV) has expressed interest in participating in this eWG and actively participated in the preparation of this paper

The OIV would like to thank the United States of America for preparing this document CX/FA 12/44/9-Add.1 which compiles all outstanding electronic working group (eWG) recommendations.

Regarding the Food Category No 14.2.3 Grape wines, The OIV supports the eWG’s recommendations are provided in Annex 1 and Annex 2 for “acidity regulators” and for “emulsifiers, stabilizers, thickeners,” respectively.

The OIV would like to provide specific comments (detailed below) at Step 3 and 6 on the draft and proposed draft provisions for Table 1 and 2 of Table 3 food additives with “acidity regulators” (Annex 1) and “emulsifier, stabilizer and thickener” function (Annex 2) of the document CX/FA 12/44/9, for food category 14.2.3 Grape wines and sub-categories.

ACIDITY REGULATORS

Food Category No. 14.2.3 Grape wines

Additive	INS	Step	Year	Max Level	Notes
ASCORBIC ACID, L-	300	4		250 mg/kg	
CALCIUM CARBONATE	170(i)	7		3500 mg/kg	
CALCIUM MALATE, D,L	352(ii)	7		GMP	
CITRIC ACID	330	4		4000 mg/kg	
FUMARIC ACID	297	7		3000 mg/kg	109
LACTIC ACID, L-, D- and DL-	270	4		4000 mg/kg	
MALIC ACID, DL-	296	4		4000 mg/kg	
POTASSIUM CARBONATE	501(i)	7		5000 mg/kg	
POTASSIUM HYDROGEN CARBONATE	501(ii)	7		5000 mg/kg	

New Provisions (see below)

L(+) TARTARIC ACID	334			4000 mg/kg	
POTASSIUM L(+)	336ii				

TARTRATE

Regarding the Draft and proposed draft food additive provisions for "Acidity Regulators" in the Food Category 14.2.3. as it presented in document CX/FA 12/44/9, the OIV would like to make the following comments:

Ascorbic acid, L- :

The OIV admit Ascorbic acid in the wine making process as acidity regulators but the maximal limit in wines is fixed at **300 mg/L (300 mg/kg)**.

Fumaric acid :

The OIV has not recognized the use of Fumaric acid in the acidification of wines.

The OIV is awarded that Fumaric acid is allowed in some regulation for the wine making process.

Calcium Malate, D-L :

The OIV has not recognized the use of Calcium Malate, D-L in the acidification of wines.

The OIV considers that the 44th CCFA should recommend to revoke the use of Calcium Malate, D-L for grape wines (category 14.2.3.) or. to discuss further this provision providing technical justification.

NEW PROVISIONS**L(+) tartaric acid (INS No 334)**

The OIV has admitted the addition of L(+) tartaric acid (INS No334) in wines in order to increase the titration acidity and the actual acidity (decreasing pH) by adding organic acids.

Therefore the OIV considers that the 44th CCFA should recommend the addition of **L(+) tartaric acid in the list of Acidity regulators for the Food Category 14.2.3 Grape wines.**

Potassium L(+) Tartrate (INS No 336ii)

For de-acidification, the OIV has admitted the addition, in wines, of neutral potassium tartrate, potassium hydrogen carbonate or calcium carbonate containing possibly small quantities of the calcium double salt of L(+) tartaric and L(-)malic acids for decreasing the acidity and the actual acidity (increase of the pH).

Therefore the OIV considers that the 44th CCFA should recommend the addition of **Potassium L(+)** Tartrate (INS No 336ii) in the list of Acidity regulators for the Food Category 14.2.3 Grape wines.

"Emulsifiers, Stabilizers and Thickeners"**Food Category No. 14.2.3 Grape wines**

Additive	INS	Step	Year	Max Level	Notes
CALCIUM CARBONATE	170(i)	7		3500 mg/kg	
CAROB BEAN GUM	410	7		GMP	
GELLAN GUM	418	7		GMP	
GUAR GUM	412	7		GMP	
GUM ARABIC (ACACIA GUM)	414	7		300 mg/kg	
GUM ARABIC (ACACIA GUM)	414	4		GMP	
KARAYA GUM	416	7		GMP	
KONJAC FLOUR	425	7		GMP	
MONO- AND DI-GLYCERIDES OF FATTY ACIDS	471	7		18 mg/kg	
PECTINS	440	7		GMP	
POTASSIUM CARBONATE	501(i)	7		5000 mg/kg	
POTASSIUM HYDROGEN CARBONATE	501(ii)	7		5000 mg/kg	
TARA GUM	417	7		GMP	
TRAGACANTH GUM	413	7		GMP	
XANTHAN GUM	415	7		GMP	
New Provisions (see below)					
SODIUM CARBOXYMETHYL CELLULOSE	466			100 mg/kg	
CALCIUM TARTRATE	354			200 mg/kg	
D,L-TARTARIC ACID					
D,L POTASSIUM TARTRATE					

Food Category No. 14.2.3.2 Sparkling and semi-sparkling grape wines

Additive	INS	Step	Year	Max Level	Notes
CALCIUM ALGINATE	404	7		GMP	
POTASSIUM ALGINATE	402	7		GMP	

Food Category No. 14.2.3.2 Fortified grape wine, grape liquor wine, and sweet grape wine

Additive	INS	Step	Year	Max Level	Notes
CALCIUM SULFATE	516	7		2000 mg/kg	

Regarding the Draft and proposed draft food additive provisions for "Emulsifiers, Stabilizers and Thickeners" in the Food Category 14.2.3. as it presented in document CX/FA 12/44/9, the OIV would like to make the following comments:

Gum Arabic (acacia gum) INS no 414 :

The addition of gum Arabic to wine is admitted by the OIV for the following technical objectives:

- a) To avoid copper haze.
- b) To protect wine against light iron haze.
- c) To prevent the precipitation of substances such as pigments that, in the wine, are in the colloidal state.

The OIV recommends also that the dose used shall not exceed 0.3 g/l.

Therefore the OIV considers that the 44th CCFA should recommend to revoke the maximum level GMP for the Gum Arabic for the Category 14.2.3 and to keep the maximum level at 300 mg/kg

Carob bean gum

Gellan Gum

Guar Gum

Karaya Gum

Konjac flour

Pectins

Tara Gum

Tragacanth Gum

Xanthan Gum

The OIV has not recognized the use of Carob bean Gum, Gellan Gum, Guar Gum, Karaya Gum, Konjac flour, Pectins, Tara Gum, Tragacanth Gum, Xanthan Gum as Emulsifiers, Stabilizers and Thickeners.

The OIV considers that the 44th CCFA should recommend to revoke the use of Carob bean Gum, Gellan Gum, Guar Gum, Karaya Gum, Konjac flour, Pectins, Tara Gum, Tragacanth Gum, Xanthan Gum for grape wines (category 14.2.3.) or to discuss further this provision providing technical justification.

NEW PROVISIONS

Sodium carboxymethyl cellulose INS no 466

The OIV has admitted the addition of Sodium Carboxymethyl cellulose to white and sparkling wines in order to contribute to the tartaric stabilisation. The OIV recommends that the dose of Sodium Carboxymethyl cellulose used must be under 100 mg/L

Therefore the OIV considers that the 44th CCFA should recommend the addition of Sodium Carboxymethyl cellulose (INS No 466) in the list of Emulsifiers, Stabilizers and Thickeners for the Food Category 14.2.3 Grape wines.

Calcium tartrate (INS No 384)

The OIV has admitted the addition of Calcium tartrate (INS No 384) to white and sparkling wines in order to contribute to the tartaric stabilisation of wine by decreasing the content of potassium hydrogenotartrate and calcium tartrate. The OIV recommends that the dose used must be inferior to 200g/hl (200 mg/kg).

Therefore the OIV considers that the 44th CCFA should recommend the addition of Calcium tartrate in the list of Emulsifiers, Stabilizers and Thickeners for the Food Category 14.2.3 Grape wines.

D,L-Tartaric acid (CAS No: 133-37-9)

The OIV has admitted the addition of Addition of D,L-tartaric acid or the potassium-salts of D,L tartaric acid in must in order to contribute to the reduction of excessive levels of calcium

Therefore the OIV considers that the 44th CCFA should recommend the addition of D,L-tartaric acid or D,L Potassium Tartrate in the list of Emulsifiers, Stabilizers and Thickeners for the Food Category 14.2.3 Grape wines.