CODEX ALIMENTARIUS COMMISSION E

Food and Agriculture Organization of the United Nations

World Health Organization

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Agenda Item 5h **CX/FA 14/46/15**

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JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON FOOD ADDITIVES

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PROPOSALS FOR NEW AND/OR REVISION OF FOOD ADDITIVE PROVISIONS (REPLIES TO CL 2013/8-FA PART B, POINT 5)

Comments of Australia, Chile, Japan, Thailand, ELC and OIV

AUSTRALIA

In regards to Part B, Point 5 of CL 2013/8-FA Australia wishes to submit the following proposals for new additive provisions and/or revision of food additive provisions of the GSFA in accordance with the Procedure for Consideration of the Entry and Review of Food Additive Provisions in the General Standard for Food Additives (Procedural Manual of the Codex Alimentarius Commission). These additives are proposed for use in food category 14.2.3 “Grape wines” and its sub-categories.

The following additives are proposed for consideration:

1. Erythorbic acid (INS 315)
   - Australia: permits the use of Erythorbic acid – Australia New Zealand Food Standards Code - Standard 1.3.1 Food Additives – Section 14.2.2 (Wine, sparkling wine and fortified wine) permitted at GMP. To prevent oxidation of colour and flavour components of juice and wine.
   - Chemically it acts in a similar manner to ascorbic acid and is traditionally used as an ascorbic acid replacement.
   - Also approvals for use in the USA and EU. JECFA evaluation 1990. ADI not specified.
2. Sodium Erythorbate (INS 316)
   - Australia: permits the use of Sodium Erythorbate – Australia New Zealand Food Standards Code - Standard 1.3.1 Food Additives – Section 14.2.2 (Wine, sparkling wine and fortified wine) permitted at GMP. To prevent oxidation of colour and flavour components of juice and wine.
   - Chemically it acts in a similar manner to ascorbic acid and is traditionally used as an ascorbic acid replacement.
   - Also approvals for use in the USA and EU. JECFA evaluation 1990. ADI not specified.
3. Sodium ascorbate (INS 301)
   - Australia permits the use of Sodium ascorbate – Australia New Zealand Food Standards Code - Standard 1.3.1 Food Additives – Section 14.2.2 (Wine, sparkling wine and fortified wine) permitted at GMP.
   - To prevent oxidation of colour and flavour components of juice and wine. Evaluated by JECFA 1981 – ADI not specified – Group ADI for ascorbic acid and its sodium, potassium and calcium salts.
   - Also permitted in the USA and New Zealand.
4. Calcium ascorbate (INS 302)
   - Australia permits the use of Calcium ascorbate – Australia New Zealand Food Standards Code - Standard 1.3.1 Food Additives – Section 14.2.2 (Wine, sparkling wine and fortified wine) permitted at GMP.

- To prevent oxidation of colour and flavour components of juice and wine. Evaluated by JECFA 1981 – ADI not specified – Group ADI for ascorbic acid and its sodium, potassium and calcium salts.
- Also permitted in the USA and New Zealand.

5. Calcium phosphates (INS 341)

- Australia permits the use of Calcium phosphates – Australia New Zealand Food Standards Code - Standard 1.3.1 Food Additives – Section 14.2.2 (Wine, sparkling wine and fortified wine) permitted at GMP. Also approved for use in the USA and New Zealand.
- JECFA evaluation 1982. Maximum tolerable daily intakes for phosphates, diphosphates and polyphosphates

6. Ammonium phosphates INS 342)

- Australia permits the use of Ammonia phosphates – Australia New Zealand Food Standards Code - Standard 1.3.1 Food Additives – Section 14.2.2 (Wine, sparkling wine and fortified wine) permitted at GMP.
- Diammonium phosphate (DAP) is primarily used as a yeast fermentation aid, but ammonium phosphates can also be used as an acidity regulator.
- Evaluated by JECFA 1982. Group MTDI for phosphorus from all sources expressed as P was developed.

The information required in the Consideration of the Entry and Review of Food Additive Provisions in the General Standard for Food Additives is below.

ERYTHORBIC ACID

JECFA Specifications available at: http://www.fao.org/ag/agn/jecfa-additives/specs/Monograph1/additive-172-m1.pdf

A summary of the Joint FAO/WHO Expert Committee on Food Additives (JECFA) safety evaluation of the food additive erythorbic acid is available at http://apps.who.int/food-additives-contaminants-jecfa-database/chemical.aspx?chemID=2602

The food categories or sub-categories in which the additive is intended to be used

Erythorbic acid is proposed for use in food category 14.2.3 “Grape wines” and its sub-categories.

Technological need/justification for the additive

Oxidation, whether chemical or enzyme-induced, is a persistent problem throughout winemaking, which results from exposure of must, juice or wine to oxygen under certain conditions. Oxygen may be introduced to must, juice or wine at several production stages: crushing, fermentation, maturation and bottling/packaging. Immediately following harvesting and the crushing of berries, oxidation is primarily enzyme induced and is thought to be more rapid than non-enzymatic oxidation which predominates after fermentation. The enzymes (oxidases) primarily responsible for oxidation are tyrosinase and laccase, both present in the grape berry. The oxidases catalyse the transfer of oxygen to phenolic compounds in the juice; the grape-derived phenolic compounds are responsible for the characteristic aroma, colour and flavour of the wine. The chemical oxidation of wine is initiated by the reaction of phenolic compounds with dissolved. The oxidation of phenolic compounds induces colour changes in the must and wine, and the formation of acrid and bitter substances; other aroma compounds in juice and wine are also oxidized.

The flavour, aroma and colour of the must, juice and wine are permanently impaired such that oxidation is a problem that should be prevented.

Ascorbic acid (AA) has been used as an antioxidant in wine for many years (as well as in other food stuffs). It can be added as its naturally occurring form L-ascorbic acid (vitamin C) or as the optical isomer erythorbic acid. Its main roles are to prevent oxidative browning and pinking and to add freshness to a wines profile.

Erythorbic acid is an optical isomer of ascorbic acid (it differs in the organisation of the -OH and –H on the first carbon in the aliphatic chain after heterocyclic ring). It was traditionally used as an ascorbic acid replacement (i.e. to add freshness and as an antioxidant) in wine for cost reasons.

Chemically in most ways it acts in a manner similar to ascorbic acid except it has no vitamin C effect. Some current research in model wine systems suggests that samples with erythorbic acid suffered less oxidative browning however the erythorbic acid itself was consumed more quickly than ascorbic acid in equivalent

systems. It is difficult to determine if a similar effect will be apparent in the much more complex situation of real wines other than to say that there may be some differences in duration of their effectiveness.

In general the same regulations and conditions with regards to ascorbic acid apply, along with the warnings that sufficient SO2 be available when used to ensure that the by-products of its antioxidant function do not lead to browning and organoleptic deterioration.

The use of erythorbic acid in winemaking as a food additive is justified according to the requirements of 3.2 of the General Principles of the GSFA; specifically to enhance the keeping quality or stability of a food or to improve its organoleptic properties, provided that this does not change the nature, substance or quality of the food so as to deceive the consumer.

Maximum use levels for the food additive in the specified food categories:

Erythorbic acid has no Acceptable Daily Intake (ADI); therefore a level of GMP is appropriate. No toxicological problems exist for Erythorbic Acid. No consumer problems exist from the use of this additive and it is approved for use or sale in all major wine producing countries in the world.

SODIUM ERYTHORBATE

Identity of the food additive

Sodium erythorbate has been evaluated by JECFA and has an International Numbering System (INS) number 316 and a CAS 6381-77-7.

Sodium erythorbate has been assigned a functional class of antioxidant.

Synonyms include:

Sodium erythorbate was evaluated at the 37th JECFA (1990) and an ADI 'not specified' was established.

Sodium erythorbate (Sodium isoascorbate) is a food additive that is included in **Table 3**, of the GSFA and as such may be used in the foods in annex 2 under the conditions of good manufacturing practices (GMP) as outlined in the Preamble of the Codex GSFA

The JECFA specification for Sodium erythorbate was prepared at the 37th JECFA (1990), published in FNP 52 (1992) superseding specifications prepared at the 17th JECFA (1973), and published in FNP 4 (1978). Metals and arsenic specifications revised at the 61st JECFA (2003) and are provided in annex 2.

A summary of the Joint FAO/WHO Expert Committee on Food Additives (JECFA) safety evaluation of the food additive sodium erythorbate is available at: http://apps.who.int/food-additives-contaminants-jecfa-database/chemical.aspx?chemID=2641

The food categories or sub-categories in which the additive is intended to be used

Erythorbic acid is proposed for use in food category 14.2.3 “Grape wines” and its sub-categories.

Technological need/justification for the additive

Oxidation, whether chemical or enzyme-induced, is a persistent problem throughout winemaking, which results from exposure of must, juice or wine to oxygen under certain conditions. Oxygen may be introduced to must, juice or wine at several production stages: crushing, fermentation, maturation and bottling/packaging. Immediately following harvesting and the crushing of berries, oxidation is primarily enzyme induced and is thought to be more rapid than non-enzymatic oxidation which predominates after fermentation. The enzymes (oxidases) primarily responsible for oxidation are tyrosinase and laccase, both present in the grape berry. The oxidases catalyse the transfer of oxygen to phenolic compounds in the juice; the grape-derived phenolic compounds are responsible for the characteristic aroma, colour and flavour of the wine. The chemical oxidation of wine is initiated by the reaction of phenolic compounds with dissolved. The oxidation of phenolic compounds induces colour changes in the must and wine, and the formation of acrid and bitter substances; other aroma compounds in juice and wine are also oxidized.

The flavour, aroma and colour of the must, juice and wine are permanently impaired such that oxidation is a problem that should be prevented.

Ascorbic acid (AA) has been used as an antioxidant in wine for many years (as well as in other food stuffs). It can be added as its naturally occurring form L-ascorbic acid (vitamin C) or as the optical isomer erythorbic acid. Its main roles are to prevent oxidative browning and pinking and to add freshness to a wines profile.

Erythorbic acid is an optical isomer of ascorbic acid (it differs in the organisation of the -OH and –H on the first carbon in the aliphatic chain after heterocyclic ring). It was traditionally used as an ascorbic acid replacement (i.e. to add freshness and as an antioxidant) in wine for cost reasons.

Chemically in most ways it acts in a manner similar to ascorbic acid except it has no vitamin C effect. Some current research in model wine systems suggests that samples with erythorbic acid suffered less oxidative browning however the erythorbic acid itself was consumed more quickly than ascorbic acid in equivalent systems. It is difficult to determine if a similar effect will be apparent in the much more complex situation of real wines other than to say that there may be some differences in duration of their effectiveness.

In general the same regulations and conditions with regards to ascorbic acid apply, along with the warnings that sufficient SO2 be available when used to ensure that the by-products of its antioxidant function do not lead to browning and organoleptic deterioration.

The use of sodium erythorbate in winemaking as a food additive is justified according to the requirements of 3.2 of the General Principles of the GSFA; specifically to enhance the keeping quality or stability of a food or to improve its organoleptic properties, provided that this does not change the nature, substance or quality of the food so as to deceive the consumer.

Maximum use levels for the food additive in the specified food categories:

Sodium erythorbate acid has no Acceptable Daily Intake (ADI); therefore a level of GMP is appropriate. No toxicological problems exist for Sodium erythorbate. No consumer problems exist from the use of this additive and it is app roved for use or sale in all major wine producing countries in the world

SODIUM ASCORBATE (INS 301)

A summary of the Joint FAO/WHO Expert Committee on Food Additives (JECFA) safety evaluation of the food additive sodium ascorbate can be found at: http://apps.who.int/food-additives-contaminants-jecfa-database/chemical.aspx?chemID=2372

The food categories or sub-categories in which the additive is intended to be used

Sodium ascorbate is proposed for use in food category 14.2.3 “Grape wines” and its sub-categories.

Technological need/justification for the additive

Oxidation, whether chemical or enzyme-induced, is a persistent problem throughout winemaking, which results from exposure of must, juice or wine to oxygen under certain conditions. Oxygen may be introduced to must, juice or wine at several production stages: crushing, fermentation, maturation and bottling/packaging. Immediately following harvesting and the crushing of berries, oxidation is primarily enzyme induced and is thought to be more rapid than non-enzymatic oxidation which predominates after fermentation. The enzymes (oxidases) primarily responsible for oxidation are tyrosinase and laccase, both present in the grape berry. The oxidases catalyse the transfer of oxygen to phenolic compounds in the juice; the grape-derived phenolic compounds are responsible for the characteristic aroma, colour and flavour of the wine. The chemical oxidation of wine is initiated by the reaction of phenolic compounds with dissolved. The oxidation of phenolic compounds induces colour changes in the must and wine, and the formation of acrid and bitter substances; other aroma compounds in juice and wine are also oxidized.The flavour, aroma and colour of the must, juice and wine are permanently impaired such that oxidation is a problem that should be prevented.

Ascorbic acid (and its calcium and sodium salts) has been used as an antioxidant in wine for many years (as well as in other food stuffs). Its main roles are to prevent oxidative browning and pinking and to add freshness to a wines profile. As a rough guide each 1 ppm of dissolved oxygen will require 6 ppm of Ascorbic acid which in turn will need 4 ppm of SO2 to scavenge reaction products. However it needs to be remembered that the levels and effectiveness of both the SO2 and ascorbic acid will be influenced by the phenolics in the wine. Typical levels of 100ppm ascorbic and >30ppm free SO2 would appear to offer beneficial effects.

The use of sodium ascorbate in winemaking as a food additive is justified according to the requirements of 3.2 of the General Principles of the GSFA; specifically to enhance the keeping quality or stability of a food or to improve its organoleptic properties, provided that this does not change the nature, substance or quality of the food so as to deceive the consumer.

Maximum use levels for the food additive in the specified food categories:

Sodium ascorbate has no Acceptable Daily Intake (ADI); therefore a level of GMP is appropriate. No toxicological problems exist for Sodium ascorbate. No consumer problems exist from the use of this additive and it is approved for use or sale around the world.

CALCIUM ASCORBATE (INS 302)

JECFA Specifications of calcium ascorbate are available at: http://www.fao.org/ag/agn/jecfa-additives/specs/Monograph1/Additive-073.pdf

The food categories or sub-categories in which the additive is intended to be used

Calcium ascorbate is proposed for use in food category 14.2.3 “Grape wines” and its sub-categories.

Technological need/justification for the additive

Oxidation, whether chemical or enzyme-induced, is a persistent problem throughout winemaking, which results from exposure of must, juice or wine to oxygen under certain conditions. Oxygen may be introduced to must, juice or wine at several production stages: crushing, fermentation, maturation and bottling/packaging. Immediately following harvesting and the crushing of berries, oxidation is primarily enzyme induced and is thought to be more rapid than non-enzymatic oxidation which predominates after fermentation. The enzymes (oxidases) primarily responsible for oxidation are tyrosinase and laccase, both present in the grape berry. The oxidases catalyse the transfer of oxygen to phenolic compounds in the juice; the grape-derived phenolic compounds are responsible for the characteristic aroma, colour and flavour of the wine. The chemical oxidation of wine is initiated by the reaction of phenolic compounds with dissolved. The oxidation of phenolic compounds induces colour changes in the must and wine, and the formation of acrid and bitter substances; other aroma compounds in juice and wine are also oxidized. The flavour, aroma and colour of the must, juice and wine are permanently impaired such that oxidation is a problem that should be prevented.

Ascorbic acid (and its calcium and sodium salts) has been used as an antioxidant in wine for many years (as well as in other food stuffs). Its main roles are to prevent oxidative browning and pinking and to add freshness to a wines profile. As a rough guide each 1 ppm of dissolved oxygen will require 6 ppm of Ascorbic acid which in turn will need 4 ppm of SO2 to scavenge reaction products. However it needs to be remembered that the levels and effectiveness of both the SO2 and ascorbic acid will be influenced by the phenolics in the wine. Typical levels of 100ppm ascorbic and >30ppm free SO2 would appear to offer beneficial effects.

The use of calcium ascorbate in winemaking as a food additive is justified according to the requirements of 3.2 of the General Principles of the GSFA; specifically to enhance the keeping quality or stability of a food or to improve its organoleptic properties, provided that this does not change the nature, substance or quality of the food so as to deceive the consumer.

Maximum use levels for the food additive in the specified food categories:

Calcium ascorbate has no Acceptable Daily Intake (ADI); therefore a level of GMP is appropriate. No toxicological problems exist for Calcium ascorbate. No consumer problems exist from the use of this additive and it is approved for use or sale around the world

AMMONIUM PHOSPHATES

Ammonium phosphates (INS 342) including Diammonium phosphate (DAP)) (INS 342ii)

Identity of the food additive

INS:	342ii
Chemical names:	DIAMMONIUM HYDROGEN ORTHOPHOSPHATE; DIAMMONIUMHYDROGEN TETRAOXO PHOSPHATE; DIAMMONIUM HYDROGENPHOSPHATE
Synonyms:	DIBASIC AMMONIUM PHOSPHATE; DIAMMONIUM PHOSPHATE
Functional class:	ACIDITY REGULATOR; DOUGH CONDITIONER; RAISING AGENT; YEASTFOOD
Latest evaluation:	1982
Tolerable Intake:	MTDI 70 mg/kg b.w (as P)
Comments:	Group MTDI for phosphorus from all sources, expressed as P
Report:	TRS 683-JECFA 26/25
Specifications:	COMPENDIUM ADDENDUM 10/FNP 52 Add.10/34 (METALS LIMITS) (2002)

Tox monograph: FAS 17-JECFA 26/151

Previous status: 1982, FNP 25-JECFA 26/11. R; COMPENDIUM/485 1980, FNP 17-JECFA 24/30. N

A summary of the Joint FAO/WHO Expert Committee on Food Additives (JECFA) safety evaluation of the food additive phosphoric acid and phosphate salts are available at: http://www.inchem.org/documents/jecfa/jecmono/v17je22.htm

The food categories or sub-categories in which the additive is intended to be used

Ammonium phosphate is proposed for use in food category 14.2.3 “Grape wines” and its sub-categories.

Technological need/justification for the additive

Ammonium phosphates can be used as an acidity regulator, but their prime function on wine is as a yeast adjunct in the GSFA Ammonium belong to the additive group Phosphates with the functional classes of Acidity regulator and Flour treatment agent. Because the viticulturist attempts to balance a long list of priorities in order to produce fruit to specification, most attention will focus on those factors that cannot be modified once the fruit has been harvested.

Therefore, yeast nutrients, especially nitrogen, might not be optimised for fermentation and may need to be added in the winery. At the time of inoculation, yeast is subjected to a range of stresses to which the cell must adapt in order to exploit its new environment. Some of the known stresses are osmotic pressure, oxidative conditions, sulphite toxicity and temperature shock. A common practice amongst winemakers is to make a standard addition of diammonium phosphate (DAP) to the juice or must (100-300mg/L) at inoculation. In practice, the maximum addition of DAP is limited by the concomitant concentration of soluble phosphate remaining in the wine, which is set at 400mg P/L (Australian and New Zealand Food Standard 4.5.1). This concentration of phosphate-P would correspond to a maximum of 1.7g/L.

The use of ammonium phosphate in winemaking as a food additive is justified according to the requirements of 3.2 of the General Principles of the GSFA; specifically to enhance the keeping quality or stability of a food or to improve its organoleptic properties, provided that this does not change the nature, substance or quality of the food so as to deceive the consumer.

Ammonium phosphates have a technological function as acidity regulator and (flour treatment agent). In addition, diammonium phosphate can be used as a yeast adjunct. In this case, it is a processing aid, but Codex treats yeast nutrients as being category 3 (those compounds that because of carry-over residues, would seem to usually be considered only as food additives).

Maximum use levels for the food additive in the specified food categories:

Products in food food category 14.2.3 “Grape wines” and its sub-categories. Should contain no more than 400 mg/l of soluble phosphates expressed as phosphorous.

DIAMMONIUM HYDROGEN PHOSPHATE

JECFA Specifications for diammonium hydrogen phosphate are available at: http://www.fao.org/ag/agn/jecfa-additives/specs/Monograph1/Additive-150.pdf

CALCIUM HYDROGEN PHOSPHATE

JECFA Specifications for calcium hydrogen phosphate are available at: http://www.fao.org/ag/agn/jecfa-additives/specs/Monograph1/Additive-085.pdf

CHILE

We are requesting that at the 46th CCFA the GSFA Working Group revise Food Category Number 14.1.4, (Water-based flavoured drinks, including "sport," "energy," or "electrolyte" drinks and particulated drinks) to revise footnote 168. which currently lists only INS 999(i), Quillaia extract type 1. We would request that note 168 be revised to remove "Quillaia extract type 1 (INS 999(i)) only." This change will permit the use of both type 1 and type 2 quillaia extracts. Since this provision and footnote were added to the GSFA in 2007 a purer type 2 extract has become commercially available and is better suited as an emulsifier for this food category than the type 1 extract. Quillaia extract type 2 was evaluated by the 65th JECFA and JECFA specifications have been published. (CCFA has asked JECFA to consider a minor specification revision for type 2 quillaia extracts as a high priority at its next meeting).

Rational for proposed revision for use of quillaia extract type 2 in food category 14.1.4 “Water-based flavoured drinks, including "sport," "energy," or "electrolyte" drinks and particulated drinks”

Max. Use Level: 50 mg/kg

Step 3

Technical Justification and Safety Aspects

JECFA Specifications for quillaia extract - type 2

Revised specifications for the semi-purified type 2 extract were prepared at the 65th JECFA and published in FNP 52 Add 13 (2005), superseding specifications prepared at the 61st JECFA (2003) and published in FNP 52 Add 11 (2003). This revision will not affect the existing specifications. The 45th CCFA (2013) requested that JECFA consider increasing the loss-on-drying specification for type 2 quillaia extract to 90 percent as a high priority.

Joint FAO/WHO Expert Committee on Food Additives (JECFA) Safety Evaluation

The Committee conducted a thorough safety review of type 1 (unpurified) and 2 (semi-purified) extracts. In its most recent evaluation the Committee noted that there was no difference between type-1 and type-2 extracts with respect to acute toxicity when expressed in relation to the quillaia saponin content of the extracts. A group ADI of 0-1 mg quillaia saponins/kg body weight for quillaia extracts types 1 & 2 was established by the 65th JECFA (2005). The committee estimated that the possibility of exceeding the ADI by any individual was only 0.0015 – 0.01%.

Proposed Food Categories of Use

Quillaia extract type 2 is proposed for use in food category number 14.1.4, Water-based flavoured drinks, including "sport," "energy," or "electrolyte" drinks and particulated drinks. The 39th CCFA (2007) adopted provisions to the GSFA including quillaia extracts in category 14.1.4 as an emulsifier with a maximum use level of 50 mg /kg. Note 168 clarified the use level is expressed on a saponin basis and that it applied only to type 1 extracts. This revision will permit the use of quillaia extract type 2 in this drink category. In 2007 when the note was adopted it was believed that only type 1 quillaia was commercially available in the marketplace. Since then a purer type 2 extract has become commercially available and is better suited as an emulsifier in drinks than the type 1 extract.

Technological Need/Justification

Quillaia extracts are useful as foaming agents and emulsifiers due to the native saponin content. Quillaia extract type 2 is semi-purified to remove residual impurities present in the form of carbohydrates, polyphenols and tannins. The removal of these native impurities improves the functionality of the saponins to the point where quillaia extract type 2 can produce stabile emulsions in commercial beverages. CCFA has previously determined that use of type 1 extracts is technically justified, and the technological need/justification for the use of type 2 extracts is identical. Quillaia is naturally derived from a plant source making it one of the few natural emulsifiers available in the marketplace.

Recommendation to 46th CCFA Session

Revise note 168 to remove "Quillaia extract type 1 (INS 999(i)) only." This change will permit the use of both type 1 and 2 quillaia extracts.

JAPAN

Japan does not submit revised maximum levels (100 mg/kg as Al) for aluminum ammonium sulphate (INS 523) in food categories 7.1.2 “Cracker, excluding sweet crackers” and 7.1.3 “Other ordinary bakery products (e.g., bagels, pita, English muffins) this time.

As mentioned in REP13/FA para 87, Japan intended to submit revised maximum levels for aluminum ammonium sulphate in food categories 7.1.2 and 7.1.3 based on the total diet study carried out from 2011 to 2013 at the 46th session.

The total diet study carried out in Japan showed that the JECFA PTWI (2 mg/kg bw/week) is likely to be exceeded in young children at 95th percentile consumption levels. Japan is now reviewing the standards for aluminum-containing food additives. However, it will take more time to consider whether aluminium-free food additives can substitute for aluminium-containing food additives or not.

According to the food industry, it is hard to replace with other aluminum-free food additives and a level of 100 mg/kg as Al may not be sufficient because intended effects cannot be achieved.

Therefore, based on the review result, Japan may propose new maximum levels as necessary.

THAILAND

Sodium carboxy methyl cellulose (INS 466)

Food Category No. 14.1.2

Food or Food category: Fruit and vegetable juices

Max Level (mg/kg): 2,000

Comment:

It is used as thickener and stabilizer in varieties of fruit juices, vegetable juices, mixed fruit and vegetable juices as well as low acid fruit juices with or without pulp.

CMC maintain a uniform dispersion of two or more components.

The level at 2,000 mg/kg is needed for technological justification.

Gellan gum (INS 418)

Food Category No. 14.1.2.1

Food or Food category: Fruit juices

Max Level (mg/kg): 200

Notes: With the new note “use in Chinese plum juices only”

Comment:

It is used as thickener and stabilizer in fruit juices such as Chinese plum juices. Gellan gum enhances colloidal stability in fruit juices and suspends pulp without significantly increasing viscosity. Moreover, gellan gum provides good products stability during storage, great mouth feel and creates products with excellent appearance. Although pectin is currently allowed to use in this category in GSFA, it does not provide desired colloidal characteristics of product and storage stability.

Trisodium citrate (INS 331(iii))

Food Category No. 14.1.2.1

Food or Food category: Fruit juices

Max Level (mg/kg): 500

Notes: With the new note “use in Chinese plum juices only”

Comment:

It is used in combination with gellan gum in fruit juices such as Chinese plum, as a sequestrant and acidity regulator.

Calcium lactate (INS 327)

Food Category No. 14.1.2.1

Food or Food category: Fruit juices

Max Level (mg/kg): 1,500

Notes: With the new note “use in Chinese plum juices only”

Comment:

It is used in combination with gellan gum in fruit juices such as Chinese plum, as acidity regulator.

INTERNATIONAL ORGANISATION OF VINE AND WINE (OIV)

The OIV would like to propose new additive provisions of the GSFA concerning **erythorbic acid** in category 14.2.3 and sub-categories (Grape wines). The OIV is awarded that erythorbic acid is already listed in Table II of the GSFA (Document FA/45 INF/01).

The OIV resolution Oeno 18/2000 modified by Oeno 4/2007 indicates that Isoascorbic acid, or D-ascorbic acid or erythorbic acid has the same antioxidant power as ascorbic acid and can be used for the same oenological purpose.

This acid exhibits the same appearance and the same solubility properties as ascorbic acid.

It is, optically, the reverse of ascorbic acid and has, under the same conditions, a specific rotatory power of:

20 °C

[α] between -20 and -21.5°

D

With the exception of rotatory power, this acid should exhibit the same properties as ascorbic acid, respond in the same way to the identifying reactions, and pass the same tests and responds to the same quantitative analysis.

FEDERATION OF EUROPEAN SPECIALITY FOOD INGREDIENTS INDUSTRIES (ELC)

The ELC, Federation of European Specialty Food Ingredients Industries, wishes to make a proposal for the inclusion of a substance, Mg-pyrophosphate (INS450(ix) into the GSFA, in the framework of a proposal for new additive provisions of the GSFA, in response to Codex Circular CL 2013/8 FA.

According to section 5 of the CAC Procedural Manual we submit the following proposal for the inclusion of INS 450(ix) in the General Standard for Food Additives (GSFA) at step 1 of the procedure.

The enclosed information comprises:

1. Specification information

The additive INS 450(ix) Magnesium dihydrogen diphosphate has an effective Codex-accepted JECFA specification. The functional classes are raising agent and acidity regulator.

2. Summary of the JECFA evaluation of the additive

The additive INS 450(ix) has been evaluated by JECFA in June 2012 and the same MTDI of 70 mg/kg BW as phosphorous likewise for all food phosphates has been assigned to this substance. At that time, the requested authorisations for food categories were exceeding existing authorisations of the GROUP phosphates and therefore of potential concern . The phosphorous-derived MTDI was considered by JECFA to be likely overconservative. A generic concern on the knowledge of magnesium intakes from all food sources was expressed.

3. Intended food-categories

The intended use categories for the use of INS 450(ix) comprise the following:

Food category number	Category name
6.4.2	Dried pastas and noodles and like products
6.6	Batters (e.g., for breading or batters for fish or poultry)
7.2	Fine bakery wares

The proposed use in category 6.6 will affect the following commodity standard as well: CODEX STAN 166-1989 CODEX STANDARD FOR QUICK FROZEN FISH STICKS (FISH FINGERS), FISH PORTIONS AND FISH FILLETS - BREADED OR IN BATTER for the use in breading / batter portion as a raising agent only at the proposed use level of category 6.6

4. Technological justification, reflecting the general principles for the use of additives

Chemical leavening by using raising agents is a traditional way of bringing volume into baked goods. Raising agents are used now for more than 100 years. Natural leavening (yeast) causes a strong flavor which is undesirably in certain baked goods if other tastes should be perceived. The only known alternative to natural leavening is chemical leavening (raising). It also brings more standardization with regard to volume of baked goods. INS 450(ix) is used as a raising agent in baked goods and provides excellent potential in certain bakery application as a affirmed by selected customers and as provided in the CTA made available to JECFA. The substance is capable of substituting INS 541, sodium aluminum phosphate acidic, in most applications, due to its excellent technical performance and taste and thus may contribute to reduce aluminium contents in processed foodstuffs. The maximum use levels proposed (as phosphorous) are lower or equal compared to existing maximum use levels of phosphates in the same food categories and its use will not negatively impact the intake of phosphorous or magnesium. Phosphorous is the component JECFA has assigned as the toxicological relevant substance in all food phosphates, including INS 450(ix), but

except INS 541, which is expressed as aluminium. The proposed uses therefore meet the requirements as laid down in section 3.2 of the preamble of the GSFA.

5. Maximum use levels in the specified food categories

Proposed maximum use levels of INS 450(ix):

Food category number	Category name	Proposed maximum use level	Notes
6.4.2	Dried pastas and noodles and like products	0.9 g / kg	33
6.6	Batters (e.g., for breading or batters for fish or poultry)	5.6 g / kg	33
7.2	Fine bakery wares	7.0 g / kg	33

6. A justification for the maximum use level and an exposure scenario for its use

The maximum use levels are equal or below the current existing provisions for phosphates in the GSFA. The substance's use will allow to reduce the maximum use levels as phosphorous compared to other permitted phosphates, such as INS341(i), INS343(i), INS450(i) or INS450(vii). In particular in category 7.2 its use could lead to a calculatory reduction of phosphorous intake since it is used as an alternative to INS341(i), INS 343(i), INS450(i) and INS450(vii) which are used at higher levels. The proposed maximum use levels are close to the actual use levels which are necessary to achieve the desired technological function. A separate file containing the exposure assessment concerning its use categories 6.4 (6.4.2) and 7.2. is enclosed. The proposed uses indicate that the MTDI is not exceeded. There is no sufficient data on consumption of category 6.6 since it is not consumed as such, but used with foodstuffs of other categories. The proposed use level is equal to the existing entry for phosphates.

7. A statement that consumers will not be misled by the use of the additive

There is no possibility that the use of this additive as a raising agent if properly labeled in prepackaged foods would mislead the consumer since he expects chemical leavening agents in fine bakery wares because its use is common.

An Excel file with an exposure calculation for INS 450(ix) using the Food Additive Intake Model is also available upon request.