



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



**World Health
Organization**

Viale delle Terme di Caracalla, 00153 Rome, Italy - Tel: (+39) 06 57051 - Fax: (+39) 06 5705 4593 - E-mail: codex@fao.org - www.codexalimentarius.org

Agenda Item 6

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JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON FOOD ADDITIVES

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PROPOSED DRAFT AMENDMENTS TO THE *INTERNATIONAL NUMBERING SYSTEM (INS) FOR FOOD ADDITIVES*

Comments at Step 3

Comments of Costa Rica, Japan, Malaysia, New Zealand, Peru, United States of America and IFAC

COSTA RICA

Costa Rica has no comments and thanks Iran for the development of the document.

JAPAN

Japan would like to thank Iran for chairing the electronic working group and developing discussion paper. Japan is pleased to provide the following comments in response to CX/FA 14/46/16. Addition is in **bold font** and deletion is in ~~strikethrough~~.

Specific Comments for Table 1

Amylases

Japan supports using specific names for six individual amylase types from different sources. Japan would like to propose the following changes;

INS No.	Name of Food Additive in INS	Name of Food Additive in JECFA	Technological Purpose
1100 (i)	alpha-Amylase from Aspergillus oryzae var.	alpha-Amylase from Aspergillus oryzae var.	Flour treatment agent
4100 (ii)	Carbohydrase from Bacillus licheniformis from Bacillus licheniformis	Carbohydrase from Bacillus licheniformis from Bacillus licheniformis	Flour treatment agent
4100 (iii)	alpha-Amylase from Bacillus megaterium expressed in Bacillus subtilis	alpha-Amylase from Bacillus megaterium expressed in Bacillus subtilis	Flour treatment agent
4100 (iv)	alpha-Amylase from Bacillus stearothermophilus expressed in Bacillus subtilis	alpha-Amylase from Bacillus stearothermophilus expressed in Bacillus subtilis	Flour treatment agent
1100 (vii)	alpha-Amylase from Bacillus stearothermophilus	alpha-Amylase from Bacillus stearothermophilus	Flour treatment agent
1100 (viii)	alpha-Amylase from Bacillus subtilis	alpha-Amylase from Bacillus subtilis	Flour treatment agent
1100 (iv)	alpha-Amylase from Bacillus megaterium expressed in Bacillus subtilis	alpha-Amylase from Bacillus megaterium expressed in Bacillus subtilis	Flour treatment agent
1100 (v)	alpha-Amylase from Bacillus stearothermophilus expressed in Bacillus subtilis	alpha-Amylase from Bacillus stearothermophilus expressed in Bacillus subtilis	Flour treatment agent
1100 (vi)	Carbohydrase from Bacillus licheniformis	Carbohydrase from Bacillus licheniformis	Flour treatment agent

Rationale for INS 1100(ii)

This is not “alpha-Amylase” but “Carbohydrase”. It should be assigned the last number.

The term “from Bacillus licheniformis” should be deleted because it is duplicated.

Rationale for INS 1100(iii)-(vi)

According to JECFA specification, both “alpha-Amylase from Bacillus megaterium expressed in Bacillus subtilis” and “alpha-Amylase from Bacillus stearothermophilus expressed in Bacillus subtilis” are produced by the controlled fermentation of Bacillus subtilis. Thus, Japan proposes that these two additives should be listed one after another after “alpha-Amylase from Bacillus subtilis”.

Specific Comments for Table 2

Potassium chloride(INS 508), Calcium chloride(INS 509)

According to JECFA specification, both potassium chloride and calcium chloride are freely soluble in water. Therefore these substances may not be appropriate for use as thickener in food. If the term “stabilizer synergist” and “thickener synergist” are to be incorporated, they should be clearly defined in the list in Section 2 of the Class names and the international numbering system for food additives (CAC/GL 36-1989).

If the term “stabilizer synergist”/“thickener synergist” is defined for substances exerting synergistic effect for the stabilizer/ thickener function, Japan supports the proposal.

Rationale

Japan is of the opinion that these substances may not have the functions of “stabilizer” or “thickener” by themselves. However, when potassium chloride or calcium chloride is used together with gellan gum, pectin or carrageenan, potassium chloride or calcium chloride can exert synergistic effect for the stabilizer/thickener function. For example, calcium chloride, together with carrageenan, is used in ice cream. Calcium chloride exerts synergistic effect for the stabilizer function. Japan is of the view that this function is not covered with the existing technological purpose.

MALAYSIA

Annex 1

Table 2: Proposal for addition technological purposes

Malaysia notes that some of the currently assigned technological purposes under CAC/GL 36-1989 Rev. in 2013 for relevant food additives were left out as follows:

INS	Food Additive	Functional class	Technological purposes
343(i)	Monomagnesium dihydrogen phosphate	Anticaking agent	Anticaking agent
343(ii)	Magnesium hydrogen phosphate	Anticaking agent	Anticaking agent
343(iii)	Trimagnesium phosphate	Anticaking agent	Anticaking agent
450 (vi)	Dicalcium diphosphate	Firming agent	firming agent

Malaysia notes that some editorial error on proposal for addition technological purposes as currently assigned under CAC/GL 36-1989 Rev. in 2013 and would like to propose some editorial amendments as follows:

INS	Food Additive	Functional class	Technological purposes
343(i)	Monomagnesium dihydrogen phosphate	Flour treatment agent	flour treatment agent
343(ii)	Magnesium hydrogen phosphate	Flour treatment agent	flour treatment agent
343(iii)	Trimagnesium phosphate	Flour treatment agent	flour treatment agent
450 (vi)	Dicalcium diphosphate	Humectants	moisture-retention agent

NEW ZEALAND

New Zealand would like to thank Iran for the work undertaken by the eWG to prepare a proposal for changes and/or additions to the International Numbering System (INS) list and have the following comments to make:

Table 1: modification of an existing INS name or new INS number purpose

New Zealand supports the entries proposed in Table 1 with the following editorial changes:

Amylase entries – bacteria names to be shown in italics. The entry for 1100(ii) has duplicated the words ‘from *Bacillus licheniformis*’. This duplication should be removed. The current entry for ‘1100 Amylases’ now becomes a Parent additive and should be amended to be in line with Note 2 i.e. without a functional class or technological purpose.

INS No.	Name of Food Additive in INS		Technological Purpose	Notes
1100	Amylases		Flour treatment agent	
1100 (i)	alpha-Amylase from <i>Aspergillus oryzae</i> var.	alpha-Amylase from <i>Aspergillus oryzae</i> var.	Flour treatment agent	See Note 4
1100 (ii)	Carbohydrase from <i>Bacillus licheniformis</i> from <i>Bacillus licheniformis</i>	Carbohydrase from <i>Bacillus licheniformis</i> from <i>Bacillus licheniformis</i>	Flour treatment agent	See Note 4
1100 (iii)	alpha-Amylase from <i>Bacillus megaterium</i> expressed in <i>Bacillus subtilis</i>	alpha-Amylase from <i>Bacillus megaterium</i> expressed in <i>Bacillus subtilis</i>	Flour treatment agent	See Note 4
1100 (iv)	alpha-Amylase from <i>Bacillus stearothermophilus</i> expressed in <i>Bacillus subtilis</i>	alpha-Amylase from <i>Bacillus stearothermophilus</i> expressed in <i>Bacillus subtilis</i>	Flour treatment agent	See Note 4
1100 (v)	alpha-Amylase from <i>Bacillus stearothermophilus</i>	alpha-Amylase from <i>Bacillus stearothermophilus</i>	Flour treatment agent	See Note 4
1100 (vi)	alpha-Amylase from <i>Bacillus subtilis</i>	alpha-Amylase from <i>Bacillus subtilis</i>	Flour treatment agent	See Note 4

Table 2: Proposal for additional technological purposes

New Zealand supports the entries proposed in Table 2. We note that the entries for 508 Potassium chloride and 509 Calcium chloride were not discussed by the eWG. The proposal for the technological purpose of these two food additives is to act as ‘stabilizer synergist’ or ‘thickener synergist’. We would support these two technological purposes be added to Section 2 of CAC/GL 36-1989 under the functional classes of 25. Stabilizer and 27 Thickener respectively. Stabilizer and Thickener should remain as INS Functional classes for 508 Potassium chloride and 509 Calcium chloride. An editorial change is suggested for the entries for 508 and 509 – ‘Stabiliser’ should be replaced with ‘Stabilizer’ to be consistent with the current entries being spelt with a ‘z’ rather than a ‘s’.

It is noted that the functional class of Antioxidant has antioxidant synergist listed as a technological purpose.

PERU**General Comments:**

The Technical Committee on Food Additives took note; we will not give any opinion on this matter because we do not have any scientific evidence or support that allows us to comment on the matter.

It has requested to reserve its opinion until the videoconference.

Specific Comments: None

UNITED STATES OF AMERICA

The United States wishes to thank Iran for their hard work and leadership in chairing the electronic working group (eWG) for the INS. The United States appreciates the opportunity to provide the following comments for consideration at the forthcoming 46th Session of the Codex Committee on Food Additives (CCFA).

Table 1: Modification of an existing INS name or new INS number purpose

Pearlescent pigments

The United States supports the inclusion of the pearlescent pigments in the INS list as proposed in Table 1 of Annex 1 of CX/FA 14/46/16:

<u>Proposed INS No.</u>	<u>Proposed INS Name</u>
176	Potassium aluminium silicate-based pearlescent pigments (PAS-BPP)
176(i)	Potassium aluminium silicate-based pearlescent pigments coated with titanium dioxide, Type I
176(ii)	Potassium aluminium silicate-based pearlescent pigments coated with iron oxide, Type II
176(iii)	Potassium aluminium silicate-based pearlescent pigments coated with titanium dioxide and iron oxide, Type III

However, we note that the Joint FAO/WHO Expert Committee on Food Additives (JECFA) names for these pigments as presented in Table 1 of Annex 1 of CX/FA 14/46/16 are in error. The correct JECFA names for these additives, as presented in the Compendium of Food Additive Specifications, FAO JECFA Monographs 14, from the 77th JECFA, do not include the description of the pigment (e.g. "coated with titanium dioxide"). As such, the INS names proposed in CX/FA 14/46/16 do not correspond with the JECFA name for these additives. The United States is of the opinion that the proposed INS names that include the description of the pigment (e.g., "coated with titanium dioxide") are appropriate, and are more informative than listing only the pigment type (e.g., "Type I"), as in the JECFA name. As such, the United States proposes that the CCFA: 1) endorse the proposed INS names for these pigments; and 2) request that JECFA consider revising the JECFA names for these pigments to reflect the INS names proposed in CX/FA 14/46/16.

Amylases

The United States supports the inclusion of the six alpha-Amylase enzymes listed in Table 1 of Annex 1 of CX/FA 14/46/16 in the INS, as they reflect the more specific names used in Table 3 of the General Standard for Food Additives (GSFA).

We note that the name for the proposed INS 1100(ii) appears to contain a typographical error in that the phrase "from Bacillus licheniformis" is repeated in the name. We believe that the proposed name for INS 1100(ii) should be "Carbohydrase from Bacillus licheniformis."

Additionally, for consistency with the general approach taken by the CCFA (CX/FA 11/43/16 and REP 11/FA, para. 145), the United States recommends listing the "parent" additive, Amylases (INS 1100), in bold font in the INS without an associated functional class or technological purpose. Thus, the entries for Amylases in the INS would be:

<u>Proposed INS No.</u>	<u>Proposed Name of Food Additive in INS (with corrections)</u>
1100	Amylases
1100(i)	alpha-Amylase from <i>Aspergillus oryzae</i> var.
1100(ii)	Carbohydrase from <i>Bacillus licheniformis</i> from <i>Bacillus licheniformis</i>
1100(iii)	alpha-Amylase from <i>Bacillus megaterium</i> expressed in <i>Bacillus subtilis</i>
1100(iv)	alpha-Amylase from <i>Bacillus stearothermophilus</i> expressed in <i>Bacillus subtilis</i>
1100(v)	alpha-Amylase from <i>Bacillus stearothermophilus</i>
1100(vi)	alpha-Amylase from <i>Bacillus subtilis</i>

Table 2: Proposal for additional technological purposes

The United States supports the inclusion of the additional technological purpose

"Antimicrobial preservative" for the additive Lauric arginate ethyl ester (INS 243) in the INS.

INTERNATIONAL FOOD ADDITIVES COUNCIL (IFAC)

The International Food Additives Council (IFAC) appreciates the opportunity to comment on CX/FA 14/46/16, Proposals for Changes and/or Additions to the International Numbering System for Food Additives (CAC/GL 36-1989). IFAC is an international association representing companies that produce high quality substances used worldwide as food additives and has NGO status before the Codex Alimentarius.

Regarding Table 2: Proposal for additional technological purposes, IFAC would like to provide the following comments. The additions that IFAC would like to add are bolded and underlined.

Table 2: Proposal for additional technological purposes

INS #	Food Additives	CAC/GL 36-1989		Notes
		INS Class	Functional Technological Purposes	
342(i)	Ammonium dihydrogen phosphate	Acidity regulator Flour treatment agent Stabilizer Thickener <u>Raising agent</u>	Acidity regulator Flour treatment agent Stabilizer Thickener <u>Raising agent</u>	Note 7
342(ii)	Diammonium hydrogen phosphate	Acidity regulator Flour treatment agent Stabilizer Thickener <u>Raising agent</u>	Acidity regulator Flour treatment agent Stabilizer Thickener <u>Raising agent</u>	Note 7
343(ii)	Magnesium hydrogen phosphate	Acidity regulator Emulsifying salt Flour treatment agent Stabilizer Thickener <u>Raising agent</u>	Acidity regulator Emulsifying salt Flour treatment agent Stabilizer Thickener <u>Raising agent</u>	Notes 7 and 9

This added function is present for these additives in the Eighth edition of the Food Chemical Codex (FCC). Additionally, the added function for ammonium dihydrogen phosphate and diammonium hydrogen phosphate are listed in the Joint FAO/WHO Expert Committee on Food Additives (JECFA) monographs for these additives. As harmonization of food additive standards is important on a global level, it would be beneficial to add these technological functions to the INS list for these food additives. We understand these additives are also used as raising agents in products currently on the market including "hard" biscuits and cookies (e.g., Chips Ahoy), in various regions of the world.

IFAC appreciates the opportunity to provide comment.