CODEX ALIMENTARIUS COMMISSION E

Food and Agriculture Organization of the United Nations

World Health Organization

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Agenda Item 7 **CX/FA 21/52/12[1]**

May 2021

JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON FOOD ADDITIVES

Fifty-second Session

PROPOSALS FOR ADDITIONS AND CHANGES TO THE PRIORITY LIST OF SUBSTANCES PROPOSED FOR EVALUATION BY JECFA

Replies to CL 2019/41-FA of Colombia, Japan, CEFIC, EU Specialty Food Ingredients, ICBA, IOFI, ISC, and DSM Food Specialties

And

Replies to CL 2020/37-FA of Colombia, European Union, CCC, FoodDrinkEurope, IACM, IOFI and Intertek

Part A: Replies to CL 2019/41-FA, Annex 2 - Form for the submission of substances to be evaluated by JECFA.

Japan

Name of Substance(s):	Glutaminase from *Aspergillus niger*
Question(s) to be answered by JECFA *(Provide a brief justification of the request in case of re-evaluations)*	Safety evaluation and establishment of specifications

1. Proposal for inclusion submitted by:

Japan Ministry of Health, Labour and Welfare

2. Name of substance; trade name(s); chemical name(s), IUPAC name, C.A.S number (as applicable):

Name of substance: Glutaminase from *Aspergillus niger*

Trade name: Sumizyme GT

Chemical name: Glutaminase (L-glutamine amidohydrolase), CAS No. 9001-47-2 (EC 3.5.1.2)

3. Names and addresses of basic producers:

Shin Nihon Chemical Co., Ltd.

19-10 Showa-cho, Anjo

Aichi 446-0063, Japan

4. Identification of the manufacturer that will be providing data (Please indicate contact person):

Nobuo Okado
Director, Quality Assurance
Shin Nihon Chemical Co., Ltd.
19-10 Showa-cho, Anjo
Aichi 446-0063, Japan

The manufacturer is represented by:

Shahrzad Tafazoli, MASc (Eng.), MSc, PhD
Associate Director, Toxicology, Chemistry & Regulatory Affairs

[1]. This document is an updated version of CX/FA 20/52/12.

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5. Justification for use:

Glutaminase from *Aspergillus niger* is intended for use during food and beverage processing tocatalyse the hydrolysis of L-glutamine to L-glutamate. This enzyme is used in the manufacture of glutamic acid-rich yeast extracts and glutamic acid-rich protein hydrolysates. These ingredients can, in turn, be used in finished foods, such as fish products, gravies and sauces, plant protein products, snack foods, and soups and soup mixes to increase the L-glutamate content. L-glutamate has flavouring properties and imparts or enhances the savoury or umami taste of food/beverages or food ingredients. Thus, the technological purpose of this enzyme preparation is to increase the L-glutamate content of food/beverages and in food ingredients for the purpose of imparting or enhancing the flavour profile.

6. Food products and food categories within the GSFA in which the substance is used as a food additive or as an ingredient, including use level(s):

The food products, food categories, and maximum use levels that Glutaminase from *Aspergillus niger* is intended to be used are outlined in the table below.

GSFA Food Category	**Food Example**	**Maximum Use Level (mg TOS/kg)**
Yeast and like products (12.8), protein products other than from soybeans (12.10)	Yeast extracts	1,285.2
	Protein hydrolysates	1,285.2

Glutamic acid-rich yeast extracts and protein hydrolysates in which Glutaminase from *Aspergillus niger* are used can, in turn, be added to a wide range of foods. These foods include, but are not limited to, fish products, gravies and sauces, plant protein products, snack foods, and soups and soup mixes. Approximately 1 to 10 g of Glutaminase from *Aspergillus niger* is added per 1 kg of yeast extract to produce the glutamic acid-rich yeast extracts and protein hydrolysates (intermediate products).

These intermediate products, in turn, are added to foods at maximum use levels not exceeding 5%, equivalent to 50 g/kg food. Accordingly, the maximum levels of Glutaminase from *Aspergillus niger* that could potentially be present in final foods are minimal (i.e., not exceeding 64.3 mg TOS/kg food).

GSFA Food Category	**Food Example**	**Maximum Use Level (mg TOS/kg)**
Fish and fish products, including mollusks, crustaceans, and echinoderms (9.2, 9.3, 9.4)	Fish products, fish-based entrees	64.3
Seasonings and condiments (12.2.2)	Seasoning mixes (dashi)	64.3
Soups and broths (12.5)	Prepared and canned soups (excluding soups containing meat and poultry)	64.3
Sauces and like products (12.6)	Gravies, tomato-based sauces, white sauces	64.3
Salads (e.g. macaroni salad, potato salad) and sandwich spreads excluding cocoa- and nut-based spreads of food categories 04.2.2.5 and 05.1.3 (12.7)	Salad/ sandwich spreads	64.3
Soybean-based seasonings and condiments (12.9)	Soybean sauce	64.3
Protein products other than from soybeans (12.10)	Plant protein products, meat analogs	64.3
Ready-to-eat savouries (15.0)	Savoury snacks, such as potato chips, popcorn, pretzel, corn-based snacks	64.3

7. Is the substance currently used in food that is legally traded in more than one country? (please identify the countries); or, has the substance been approved for use in food in one or more country? (please identify the country(ies))

Glutaminase from *Aspergillus niger* is currently authorised for use in Japan [listed as "glutaminase" on Japan's specifications and standards for food additives 9th edition] and has been commercially marketed since 2009.

A food enzyme dossier regarding glutaminase derived from *Bacillus amyloliquefaciens* strain AE-GT was submitted for review to the European Commission under Regulation (EC) No 1332/2008. According to the Association of Manufacturers and Formulators of Enzyme Products (Amfep), glutaminase derived from *B. amyloliquefaciens* and *Bacillus subtilis* are currently marketed for use in food processing in the European Union (EU). In addition, glutaminase derived from *B. amyloliquefaciens* is currently permitted for use in food processing (uses not specified) in China as listed in the National Standard on Food Safety – Standard for Use of Food Additives GB 2760-2011.

8. Are you aware of any current impediments in international trade due to lack of a JECFA evaluation and/or Codex standard? If so, please provide details.

While there have been no impediments in international trade due to lack of a JECFA evaluation to date for glutaminase, the use of the glutaminase enzyme in the processing of glutamic acid-rich protein hydrolysates and yeast extracts is in significant consumer demand for the purpose of reducing sodium intakes and monosodium glutamate (MSG) uses in various food products. As a consequence, a JECFA evaluation will greatly impact trade moving forward.

9. Are you aware of risk assessments, either on-going or completed within the last 10 years, at a national or regional level for this additive? If so, please provide the name, address and contact details of the organization having performed the risk assessment.

We are not aware of any on-going assessments.

10. Please provide details if this food additive is of particular relevance to the livelihood and food safety in developing countries

This enzyme will not specifically impact food safety in the developing countries. The use of these ingredients in small quantities not only improves the flavour profile of finished products, but also reduces the intake of sodium or use of MSG in finished products. In addition, the enzyme is used in the processing of protein hydrolysates, which are rich in amino acids and peptides and can be used as a good source of readily absorbable protein in developing countries to prevent and combat malnutrition[2,3,4]. Protein hydrolysates, in turn, will also be added to plant-based protein products and meat analogues, among other food applications. In recent years, there has been an unprecedented demand for use of plant-based proteins, as an alternative and sustainable source of protein.

11. Please indicate the type of data that are available in the table below.

Ensure that the available data are directly relevant to the substance of interest in this request. In particular, for substances obtained from natural resources, characterization of the products in commerce and a relevant set of biochemical and toxicological data on such products are essential for JECFA to develop a specifications monograph and the related safety. Such data/information typically include: components of interest; all components of the final products; detailed manufacturing process; possible carryover of substances; etc.

	Data available? (Y / N)
Toxicological data	
(i) Metabolic and pharmacokinetic studies (please specify)	*N*

[2] https://www.sciencedirect.com/science/article/abs/pii/S0924224401000073
[3] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3210250/
[4] https://journals.sagepub.com/doi/abs/10.1177/147323000303100308

(ii) Short-term toxicity, long-term toxicity/carcinogenicity, reproductive toxicity, and developmental toxicity studies in animals and genotoxicity studies (please specify)	*Y (90-Day subchronic toxicity study, In vitro bacterial reverse mutation assay, In vitro chromosome aberration test, In vivo alkaline comet assay*
(iii) Epidemiological and/or clinical studies and special considerations (please specify)	*N*
(iv) Other data (please specify)	*Y (Data on allergenicity and toxigenicity potential)*
Technological data	
(i) Specifications for the identity and purity of the listed substances (specifications applied during development and toxicological studies; proposed specifications for commerce)	*Y*
(ii) Technological and nutritional considerations relating to the manufacture and use of the listed substance	*Y*
Dietary exposure assessment data	
(i) Levels of the listed substance used in food or expected to be used in food based on technological function and the range of foods in which they are used	*Y*
(ii) Estimation of dietary exposures based on food consumption data for foods in which the substance may be used.	*Y*
Other information: (please specify)	*N*

12. Specify earliest date when data can be made available to JECFA. (Data shall only be submitted in response to a JECFA call for data; **do NOT include any data intended for JECFA to this form**)

Already available.

CEFIC (Conseil Européen de l'industrie Chimique)

Name of Substance(s):	Pentasodium Triphosphate (INS 451(i))
Question(s) to be answered by JECFA *(Provide a brief justification of the request in case of re-evaluations)*	• **Align the assay as P2O5 to "not more than 59.0%"** In the Pentasodium Triphosphate monograph prepared at the 55th JECFA (2000) and published in FNP 52 Add 8 (2000) the Assay values expressed as P2O5 not less than 56.0 % and not more than 58.0 %. This maximum value of 58.0 % is not realistic because it is the theoretical P2O5 content of 100% pure Pentasodium Triphosphate. In practice this value might be often exceeded. We would request to align the maximum value to 59.0 % P_2O_5 as mentioned in the EU Commission Regulation No EU/231/2012[5] • **Align the maximum pH value to 10.2** In addition, the pH value in the FNP 52 Add 8 is 9.1 – 10.1 whereas the pH value in the EU legislation is 9.1 – 10.2. The difference in maximum value can mislead and we would request to align the maximum value to 10.2 as mentioned in the EU commission Regulation EU/231/2012

[5] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32012R0231&from=EN

1. Proposal for inclusion submitted by:

PAPA - the “Phosphoric Acid and Phosphate Association”, a Sector Group of Cefic.

Miguel Angel Prieto Arranz
PAPA Sector Group Manager
European Chemical Industry Council - Cefic aisbl
Rue Belliard 40, Box 15, B-1040 Brussels, Belgium
Tel. +32-2-436 94 68

map@cefic.be

2. Name of substance; trade name(s); chemical name(s):

Pentasodium Triphosphate (INS 451(i))

3. Names and addresses of basic producers:

Prayon S.A.
rue Joseph Wauters 144
4480 Engis
Belgique

4. Identification of the manufacturer that will be providing data

Frederic Martens
Prayon S.A.
rue Joseph Wauters 144
4480 Engis
Belgique

5. Justification for use:

Not applicable for this request

6. Food products and food categories within the GSFA in which the substance is used as a food additive or as an ingredient, including use level(s):

Not applicable for this request

7. Is the substance currently used in food that is legally traded in more than one country? (please identify the countries); or, has the substance been approved for use in food in one or more country? (please identify the country(ies))

Not applicable for this request

8. Are you aware of any current impediments in international trade due to lack of a JECFA evaluation and/or Codex standard? If so, please provide details.

Not applicable for this request

9. Are you aware of risk assessments, either on-going or completed within the last 10 years, at a national or regional level for this additive? If so, please provide the name, address and contact details of the organization having performed the risk assessment.

EFSA Re-evaluation of phosphoric acid–phosphates – di-, tri- and polyphosphates (E 338–341, E 343, E 450–452) as food additives and the safety of proposed extension of use (June 2019) [6]

10. Please provide details if this food additive is of particular relevance to the livelihood and food safety in developing countries

Not applicable for this request

11. Please indicate the type of data that are available in the table below.

Toxicological data

(i) Metabolic and pharmacokinetic studies

(ii) Short-term toxicity, long-term toxicity/carcinogenicity, reproductive toxicity, and developmental toxicity studies in animals and genotoxicity studies

(iii) Epidemiological and/or clinical studies and special considerations

[6] https://efsa.onlinelibrary.wiley.com/doi/epdf/10.2903/j.efsa.2019.5674

(iv) Other data

Not applicable for this request

Technological data

(i) Specifications for the identity and purity of the listed substances (specifications applied during development and toxicological studies; proposed specifications for commerce)

(ii) Technological and nutritional considerations relating to the manufacture and use of the listed substance

Not applicable for this request

Intake assessment data

(i) Levels of the listed substance used in food or expected to be used in food based on technological function and the range of foods in which they are used

(ii) Estimation of dietary intakes based on food consumption data for foods in which the substance may be used.

Not applicable for this request

Other information (as necessary/identified)

None

12. Date on which data could be submitted to JECFA.

Immediately.

EU Specialty Food Ingredients (Federation of European Specialty Food Ingredients Industries)

Name of Substance(s):	Lycopene (synthetic) INS 160d(i) and Lycopene from *Blakeslea trispora* , INS 160d(iii)
Question(s) to be answered by JECFA *(Provide a brief justification of the request in case of re-evaluations)*	Revise both JECFA specifications with regards to the parameter "solubility".

1. Proposal for inclusion submitted by:

European Specialty Food Ingredients

2. Name of substance; trade name(s); chemical name(s), IUPAC name, C.A.S number (as applicable):

Lycopene (synthetic), Lycopene from *Blakeslea trispora*
Ψ,Ψ-carotene

all-trans-lycopene
(all-E)-lycopene
(all-E)-2,6,10,14,19,23,27,31-octamethyl-
2,6,8,10,12,14,16,18,20,22,24,26,30-dotriacontatridecaene
CAS number: 502-65-8

3. Names and addresses of basic producers:

BASF SE, 67056 Ludwigshafen, Germany (for Lycopene (synthetic)
DSM Nutritional Products Europe Ltd., 4002 Basel, Switzerland (for Lycopene (synthetic), and Lycopene from *Blakeslea trispora*)

1. Identification of the manufacturer that will be providing data (Please indicate contact person):

Nicola Leinwetter
Head of Regulatory & External Affairs Asia Pacific / Human Nutrition, BASF SE
Phone: +65 6432 3263
Mobile: +65 9638 7840
E-Mail: nicola leinwetter@basf.com

Dirk Cremer
Sen. Regulatory Affairs Manager
Phone: +41 618157965
Mobile: +41 795722410
E-Mail: dirk.cremer@dsm.com

2. Justification for use:

Both lycopenes are approved food colours.

3. Food products and food categories within the GSFA in which the substance is used as a food additive or as an ingredient, including use level(s):

Both lycopenes are permitted in many food categories of the GSFA as this food colour is listed in table 3 of the GSFA.

4. Is the substance currently used in food that is legally traded in more than one country?

(please identify the countries); or, has the substance been approved for use in food in one or more country? (please identify the country(ies))
To the best of our knowledge and in addition to its GMP permission in the GSFA, lycopene is approved for colour use in Europe, Australia, Brasil, Columbia, China, and many more countries.

5. Are you aware of any current impediments in international trade due to lack of a JECFA evaluation and/or Codex standard? If so, please provide details.

Currently unidentified/not relevant as this is a request for specification revision of an already JECFA safety evaluated substance.

6. Are you aware of risk assessments, either on-going or completed within the last 10 years, at a national or regional level for this additive? If so, please provide the name, address and contact details of the organization having performed the risk assessment.

JECFA at its 67th (2006) and 71st (2009) session, and also The European Food Safety Authority (EFSA) of the Europe Union in 2008.

7. Please provide details if this food additive is of particular relevance to the livelihood and food safety in developing countries

Currently unidentified

8. Please indicate the type of data that are available in the table below.

Ensure that the available data are directly relevant to the substance of interest in this request. In particular, for substances obtained from natural resources, characterization of the products in commerce and a relevant set of biochemical and toxicological data on such products are essential for JECFA to develop a specifications monograph and the related safety. Such data/information typically include: components of interest; all components of the final products; detailed manufacturing process; possible carryover of substances; etc.

	Data available? (Y / N)
Toxicological data	
(i) Metabolic and pharmacokinetic studies (please specify)	Not applicable
(ii) Short-term toxicity, long-term toxicity/carcinogenicity, reproductive toxicity, and developmental toxicity studies in animals and genotoxicity studies (please specify)	Not applicable
(iii) Epidemiological and/or clinical studies and special considerations (please specify)	Not applicable
(iv) Other data (please specify)	Not applicable
Technological data	
(i) Specifications for the identity and purity of the listed substances (specifications applied during development and toxicological studies; proposed specifications for commerce)	Not applicable
(ii) Technological and nutritional considerations relating to the manufacture and use of the listed substance	Not applicable

Dietary exposure assessment data	
(i) Levels of the listed substance used in food or expected to be used in food based on technological function and the range of foods in which they are used	Not applicable
(ii) Estimation of dietary exposures based on food consumption data for foods in which the substance may be used.	Not applicable
Other information: (please specify) New information on solubility of lycopene as a existing parameter of the INS 160d(i) and INS 160d(iii) monograph. For more information see *.	Available

***Other information:**
This is to request a revision of the JECFA monograph for INS 160d(i) and 160d(iii) regarding the parameter "solubility". Presently the specifications require the use of chloroform when determining this parameter of the specifications. As the use of chloroform should be avoided where possible, and a more suitable alternative had been identified, the applicants wish to get the monographs revised regarding this parameter. The solubility data of lycopene in an alternative solvent are available. Chloroform had been evaluated by JECFA at its 23rd session (TRS Report 648), a toxicological monograph been prepared (FAS 14-JECFA 23/24) and the ADI been determined as: "not to be used".

9. Specify earliest date when data can be made available to JECFA. (Data shall only be submitted in response to a JECFA call for data; **d**o NOT include any data intended for JECFA to this form.)

December 2020

ICBA (International Council of Beverages Associations)

ICBA[7] has available (or soon to be available) new evidence – both toxicological and exposure assessments – that warrants a JECFA re-review of aspartame. An update to existing JECFA assessments would be reflective of today's consumer practices in key markets. ICBA requests that the Codex Committee on Food Additives (CCFA) re-prioritize aspartame for JECFA re-review.

The new data supplied by ICBA will allow JECFA to perform a highly refined intake assessment for aspartame in food category 14.1.4 based on the guidelines provided in Chapter 6 "Dietary Exposure Assessment of Chemicals in Food" of the WHO Principles and methods for the risk assessment of chemicals in food (EHC 240, 2009).

Name of Substance(s)	Aspartame
Question(s) to be answered by JECFA *(Provide a brief justification of the request in case of re-evaluation)*	ICBA is seeking a JECFA re-review not only based on a refined exposure assessment reflective of actual consumer practices but also on toxicological considerations. The new data shall comprise: • Refined intake assessments reflective of actual uses weighted according to market volume data to ensure quantitative representativeness for corresponding beverage types. • A systematic assessment of all available mechanistic data in the context of an overall carcinogenicity assessment for aspartame.

1. Proposal for inclusion submitted by:

Maia Jack, Ph.D.,
Chair, ICBA CCFA Task Force in c/o the International Council for Beverages Associations
Vice President Science and Regulatory Affairs (American Beverage Association)
1 202.463.6756
E-mail: mjack@ameribev.org

2. Name of substance; trade name(s); chemical name(s); IUPAC name, C.A.S. number (as applicable):

[7] The International Council of Beverages Associations (ICBA) represents the interests of the worldwide non-alcoholic beverage industry. ICBA members include national and regional beverage associations and international beverage companies that operate in more than 200 countries and territories and produce, distribute and sell a variety of non-alcoholic sparkling (carbonated) and still (non-carbonated) beverages including soft drinks, sports drinks, energy drinks, bottled waters, flavored and/or enhanced waters, ready-to-drink teas and coffees, 100% fruit or vegetable juices, nectars and juice drinks, and dairy-based beverages.

Substance: Aspartame
Trade Name: N/A
Chemical Name(s): 3-Amino-N-(alpha-carbomethoxy-phenethyl)-succinamic acid, N-L-alphaaspartyl-L-phenylalanine-1-methyl ester
Aspartame (CAS number 22839-47-0)

3. Names and addresses of basic producers:

Manufacturers include Ajinomoto, SinoSweet, HSWT, and others.

4. Identification of the manufacturer that will be providing data (Please indicate contact person):

Dietary Intake Assessment:
Nga Tran, Dr.P.H., M.P.H. (ntran@exponent.com; 202-772-4915)
Principal Scientist, Chemical Regulation & Food Safety
Exponent
1150 Connecticut Ave, NW
Washington, DC
www.exponent.com

Danika Martyn, Ph.D. (Danika.martyn@intertek.com; (303) 927-3344)
Senior Manager, Regulatory Affairs and Dietary Intakes, Food & Nutrition Group
Intertek Scientific & Regulatory Consultancy
2233 Argentia Road, Suite 201
Mississauga, Ontario, Canada L5N 2X7
www.intertek.com

Systematic Assessment of Mechanistic Data in context of overall carcinogenicity assessment:
Daniele Wikoff, Ph.D. (dwikoff@toxstrategies.com, 828.348.6833)
Health Sciences Practice Leader
ToxStrategies, Inc.
31 College Place, Suite B118
Asheville, NC 28801
https://toxstrategies.com/

5. Justification for use:

The use of **aspartame** is advantageous in beverage products and technologically justified.

Criteria for Low- and No-Calories Sweeteners (LNCS) in Section 3.2 of the Preamble to the GSFA.

Criteria	**Rationale**
Techno-logical Justifica-tion	Low- and no-calorie sweeteners are utilized for sugar replacement. LNCS provide desirable sweet taste in products according to consumer preferences.
Advantage	LNCS provide sweet taste without the calories.
Absence of Potential to Mislead consumer	As this category encompasses water-based carbonated, non-carbonated and powdered drinks or concentrates, sweeteners are expected. Each LNCS is appropriately labeled on the ingredient statement so that the consumer cannot be misled. LNCS do not change the nature (both product and process), freshness (e.g., quality of ingredients) or the nutritional quality of the product, including its fruit and vegetable content.

6. Food products and food categories within the GSFA in which the substance is used as a food additive or as an ingredient, including use level(s):

Among others, 14.1.4 Water-based flavoured drinks, including “sport,” “energy,” or “electrolyte” drinks and particulated drinks

Maximum use of aspartame at a level of 600 mg/kg as consumed in food category 14.1.4 with footnote Note 127 “On the served to the consumer basis”.

7. Is the substance currently used in food that is legally traded in more than one country? (please identify the countries); or, has the substance been approved for use in food in one or more country? (please identify the country(ies).

Yes. Worldwide. Australia, Brazil, Canada, China, European Union, United States of America, and hundreds of others.

8. Are you aware of any current impediments in international trade due to lack of a JECFA evaluation and/or Codex standard? If so, please provide details.

JECFA last evaluated aspartame safety in 1981. Consumption patterns may have changed since then, and more safety-related studies have been published as well. An update to the 1981 JECFA opinion will ensure that future impediments to international trade are not introduced for this critical sweetener.

9. Are you aware of risk assessments, either on-going or completed within the last 10 years, at a national or regional level for this additive? If so, please provide the name, address and contact details of the organization having performed the risk assessment.

The 2013 European Food Safety Authority (EFSA) opinion on aspartame. Scientific Opinion on the re-evaluation of aspartame (E 951) as a food additive. (EFSA Journal 2013;11(12):3496)

10. Please provide details if this food additive is of particular relevance to the livelihood and food safety in developing countries

Not Applicable

11. Please indicate the type of data that are available in the table below.

(Highlighted in Yellow)

Toxicological data

(i) Metabolic and pharmacokinetic studies (please specify)

(ii) Short-term toxicity, long-term toxicity/carcinogenicity, reproductive toxicity, and developmental toxicity studies in animals and genotoxicity studies

(iii) Epidemiological and/or clinical studies and special considerations

(iv) Other data

X -Mechanistic data in context of totality of evidence on potential carcinogenicity

The systematic assessment of all available mechanistic data in the context of an overall carcinogenicity assessment for aspartame has been completed. (*See* D.S. Wikoff, G.A. Chappell, S. Fitch, C.L. Doepker, and S.J. Borghoff. **2019**. Lack of potential carcinogenicity for aspartame – systematic evaluation and integration of mechanistic data into the totality of the evidence. *Food and Chemical Toxicology*. https://doi.org/10.1016/j.fct.2019.110866)

Technological data

(i) Specifications for the identity and purity of the listed substances (specifications applied during development and toxicological studies; proposed specifications for commerce)

(ii) Technological and nutritional considerations relating to the manufacture and use of the listed substance

Dietary exposure assessment data

(i) Levels of the listed substance used in food or expected to be used in food based on technological function and the range of foods in which they are used

X (brand-specific for identified beverage types in Brazil, Canada, Mexico and U.S.A.)

X (application of global reported levels in high intake markets such as U.S.A. and U.K. to set ceiling of possible intakes for the world and the European Union region, respectively.)

(ii) Estimation of dietary intakes based on food consumption data for foods in which the substance may be used.

X (adapted from guidance in EHC240 Chapter 6) – Individual survey data

An International Council of Beverages Associations (ICBA) member on behalf of the beverage industry already is in the process of conducting an intake assessment data with confidential brand-specific use level information and brand-specific market volume data.

Other information (as necessary/identified)

X – Brand-specific market volume data to seek quantitative “representativeness” weighting for levels utilized in the assessment when appropriate.

12. Specify earliest date when data can be made available to JECFA. (Data shall only be submitted in response to a JECFA call-for-data; do NOT include any data intended for JECFA to this form.)

Available now – Systematic assessment of mechanistic evidence in the context of all evidence streams relative to potential carcinogenicity

December 2020 – Intake assessments.

IOFI (International Organization of the Flavor Industry)

IOFI respectfully requests the addition of 61 new flavourings to the JECFA Priority List. These are included on Appendix IIa. IOFI also provides within this package Appendix IIb, which is a list of 68 flavourings that were previously submitted to CCFA for inclusion on the priority list. Finally, Appendix III of this package includes 4 flavourings for which updated specifications data have become available.

The required information for the flavours as requested in Annex II of CL 2019/41-FA are attached as Appendix_IIa_2020CCFA52, Appendix_IIb_2020CCFA52 and Appendix_IIc_CCFA52.

Name of Substance(s):	See Annex 3 for list of proposed substances
Question(s) to be answered by JECFA *(Provide a brief justification of the request in case of re-evaluations)*	Do the published specifications for the flavouring agents as listed in Annex 3 represent what is on global commerce? Data have been presented to IOFI that update specific specification values and identifiers which were submitted previously.

1. Proposal for inclusion submitted by:

International Organization of the Flavor Industry

2. Name of substance; trade name(s); chemical name(s), IUPAC name, C.A.S number (as applicable):

List of 61 new flavourings (See Appendix IIa for list of chemical names)
List of 68 previously submitted flavours (See Appendix IIb)
List of four (4) flavouring agents (See Appendix IIc for list of chemical names).

3. Names and addresses of basic producers:

International Organization of the Flavor Industry (IOFI). Flavor producers are members of the International Organization of the Flavor Industry (IOFI). All contacts can be made through IOFI.

4. Identification of the manufacturer that will be providing data (Please indicate contact person):

International Organization of the Flavor Industry (IOFI)
Brussels, Belgium
Sean V. Taylor, Ph.D. (Science Director)
1101 17th Street NW
Suite 700
Washington, DC 20036
P: 202-293-5800
staylor@vertosolutions.net

5. Justification for use:

The additions are flavouring agents previously evaluated using the Procedure by the Committee with status of No Safety Concern at current levels of dietary exposures. Their currently published specifications are impeding commerce because they do not reflect current materials in commerce.

6. Food products and food categories within the GSFA in which the substance is used as a food additive or as an ingredient, including use level(s):

Not applicable

7. Is the substance currently used in food that is legally traded in more than one country? (please identify the countries); or, has the substance been approved for use in food in one or more country? (please identify the country(ies))

Not applicable

8. Are you aware of any current impediments in international trade due to lack of a JECFA evaluation and/or Codex standard? If so, please provide details.

Not applicable

9. Are you aware of risk assessments, either on-going or completed within the last 10 years, at a national or regional level for this additive? If so, please provide the name, address and contact details of the organization having performed the risk assessment.

Not applicable

10. Please provide details if this food additive is of particular relevance to the livelihood and food safety in developing countries.

Not applicable

11. Please indicate the type of data that are available in the table below.

Ensure that the available data are directly relevant to the substance of interest in this request. In particular, for substances obtained from natural resources, characterization of the products in commerce and a relevant set of biochemical and toxicological data on such products are essential for JECFA to develop a specifications monograph and the related safety. Such data/information typically include: components of interest; all components of the final products; detailed manufacturing process; possible carryover of substances; etc.

	Data available? (Y / N)
Toxicological data	
(i) Metabolic and pharmacokinetic studies (please specify)	**Yes**
(ii) Short-term toxicity, long-term toxicity/carcinogenicity, reproductive toxicity, anddevelopmental toxicity studies in animals and genotoxicity studies (please specify)	**Yes**
(iii) Epidemiological and/or clinical studies and special considerations (please specify)	**Yes**
(iv) Other data (please specify)	
Technological data	
(i) Specifications for the identity and purity of the listed substances (specifications applied during development and toxicological studies; proposed specifications for commerce)	**Yes**
(ii) Technological and nutritional considerations relating to the manufacture and use of the listed substance	
Dietary exposure assessment data	
(i) Levels of the listed substance used in food or expected to be used in food based on technological function and the range of foods in which they are used	**Yes**
(ii) Estimation of dietary exposures based on food consumption data for foods in which the substance may be used.	**Yes**
Other information: (please specify)	

12. Specify earliest date when data can be made available to JECFA. (Data shall only be submitted in response to a JECFA call for data; **do NOT include any data intended for JECFA to this form**.)

December 1, 2020

Appendix IIa. Sixty-one (61) flavourings newly proposed for inclusion on the JECFA Priority List to be considered at the 52nd session of the Codex Committee on Food Additives

CCFA History	FEMA	CAS	PRINCIPAL NAME	STRUCTURAL CLASS
New 52nd	4902	22122-36-7	3-Methyl-2(5*H*)-furanone	III
New 52nd	4915	2142634-65-7	(5*Z*)-3,4-Dimethyl-5-propylidene-2(5*H*)-furanone	III
New 52nd	4927	934534-30-2	4,7-Decadienal	I
New 52nd	4887	56219-03-5	*cis*-9-Dodecenal	I
New 52nd	4918	68820-38-2	Tridec-5-enal	I
New 52nd	4886	126745-61-7	*cis*-6-Dodecenal	I
New 52nd	4904	115018-39-8	*trans*-Tetradec-4-enal	I
New 52nd	4905	2119671-25-7	2,6-Dimethylheptenyl formate	I

New 52nd	4885	68820-34-8	*trans*-5-Dodecenal	I
New 52nd	4898	41547-29-9	*trans*-5-Octenal	I
New 52nd	4891	2088117-65-9	(*E*)-3-Methyl-4-dodecenoic acid	I
New 52nd	4917	22032-47-9	(*Z*)-9-Dodecenoic acid	I
New 52nd	4926	65398-36-9	(*Z*)-8-Pentadecenal	I
New 52nd	4841	16676-96-3	*cis*-5-Dodecenyl acetate	I
New 52nd	4784	57548-36-4	(±)-4-Hydroxy-6-methyl-2-heptanone	i
New 52nd	4939	2180135-09-3	*S*-Methyl 5-(1-ethoxyethoxy)decanethioate	I
New 52nd	4894	116229-37-9	2-Mercapto-3-methyl-1-butanol	I
New 52nd	4883	556-27-4	*S*-Allyl-*L*-cysteine sulfoxide	II
New 52nd	4935	98139-71-0	3-Methylbutane-1,3-dithiol	III
New 52nd	4916	124831-34-1	2-Methyl-3-butene-2-thiol	I
New 52nd	4938	2180135-08-2	S-Methyl 5-(1-ethoxyethoxy)tetradecanethioate	I
New 52nd	4901	2097608-89-2	*O*-Ethyl *S*-(3-methylbut-2-en-1-yl)thiocarbonate	I
New 52nd	4900	64580-54-7	Hexyl propyl disulfide	I
New 52nd	4914	24963-39-1	bis-(3-Methyl-2-butenyl)disulfide	III
New 52nd	4889	3877-15-4	Methyl propyl sulfide	I
New 52nd	4903	26516-27-8	Ethyl 3-methyl-2-oxopentanoate	I
New 52nd	4804	61789-44-4	Mixture of Ricinoleic acid, Linoleic acid, and Oleic acid	
New 52nd	4930	159017-89-7	4-Isopropoxycinnamaldehyde	I
New 52nd	4888	1945993-01-0; 828265-08-3	Mixture of 5-hydroxy-4-(4´-hydroxy-3´-methoxyphenyl)-7-methylchroman-2-one and 7-hydroxy-4-(4´-hydroxy-3´-methoxyphenyl)-5-methylchroman-2-one	III
New 52nd	4879	21145-77-7	1-(3,5,5,6,8,8-Hexamethyl-5,6,7,8-tetrahydronaphthalen-2-yl)ethanone	II
New 52nd	4893	4912-58-7	2-Ethoxy-4-(hydroxymethyl)phenol	I
New 52nd	4892	4707-61-3	*cis*-2-Hexylcyclopropaneacetic acid	II
New 52nd	4890	27841-22-1	3-*p*-Menthen-7-al	I
New 52nd	4928	554-14-3	2-Methylthiophene	II
New 52nd	4839	163460-99-9 163461-01-6	Mixture of 3- and 4-butyl-2-thiophenecarboxyaldehyde	II
New 52nd	4813	1612888-42-2	2-(5-Isopropyl-2-methyltetrahydrothiophen-2-yl)ethanol	II
New 52nd	4884	1569-60-4	6-Methyl-5-hepten-2-ol	I
New 52nd	4827	6090-09-1	1-(4-Methyl-3-cyclohexen-1-yl)-ethanone	I
New 52nd	4869	886449-15-6	4-(*l*-Menthoxy)-2-butanone	II
New 52nd	4844	118026-67-8	(2*E*,4*E*)-2,4-Decadien-1-ol acetate	I
New 52nd	4747	91212-78-1	(±)-2,5-Undecadien-1-ol	II
New 52nd	4913	18478-46-1	3,7-Dimethyl-2-methyleneoct-6-en-1-ol	II
New 52nd	4785	25234-33-7	2-Octyl-2-dodecenal	II

New 52nd	4786	13893-39-5	2-Hexyl-2-decenal	II
New 52nd	4929	60857-05-8	4-Methylidene-2-(2-methylprop-1-enyl)oxane	III
New 52nd	4920	220462-51-9	1-Ethyl-2-(1-pyrrolylmethyl)pyrrole	III
New 52nd	4832	108715-62-4	2-(3-Benzyloxypropyl)pyridine	III
New 52nd	4829	616-45-5	2-Pyrrolidone	I
New 52nd	4818	1370711-06-0	*trans*-1-ethyl-2-methylpropyl 2-2-butenoate	I
New 52nd	4867	18374-76-0	(3*S*,5*R*,8*S*)-3,8-Dimethyl-5-prop-1-en-2-yl-3,4,5,6,7,8-hexahydro-2*H*-azulen-1-one	II
New 52nd	4840	38427-80-4	Tetrahydronootkatone	II
New 52nd	4807	1078-95-1	Pinocarvyl acetate	II
New 52nd	4906	36687-82-8	*L*-Carnitine tartrate	III
New 52nd	4868	61315-75-1	4-(4-Methyl-3-penten-1-yl)-2(5*H*)-furanone	III
New 52nd	4896	2186611-08-3	*N*-(2-Hydroxy-2-phenylethyl)-2-isopropyl-5,5-dimethylcyclohexane-1-carboxamide	III
New 52nd	4882	1857330-83-9	*N*-(4-(Cyanomethyl)phenyl)-2-isopropyl-5,5-dimethylcyclohexanecarboxamide	III
New 52nd	4899	1622458-34-7; 2079034-28-7	*N*-(1-((4-amino-2,2-dioxido-1*H*-benzo[c][1,2,6]thiadiazin-5-yl)oxy)-2-methylpropan-2-yl)-2,6-dimethylisonicotinamide	III
New 52nd	4880	2015168-50-8	2-(4-Ethylphenoxy)-*N*-(1*H*-pyrazol-3-yl)-*N*-(thiophen-2-ylmethyl)acetamide	III
New 52nd	4881	1857331-84-0	*N*-(3-Hydroxy-4-methoxyphenyl)-2-isopropyl-5,5-dimethylcyclohexanecarboxamide	III
New 52nd	4877	76733-95-4	(*E*)-3-(3,4-Dimethoxyphenyl)-*N*-[2-(3- methoxyphenyl)-ethyl]-acrylamide	III
New 52nd	4835	877207-36-8	2,4-Dihydroxy-*N*-[(4-hydroxy-3-methoxyphenyl)methyl]benzamide	III

ISC (International Stevia Council)

Name of Substance(s):	Steviol glycosides
Question(s) to be answered by JECFA *(Provide a brief justification of the request in case of re-evaluations)*	The request is for the completion of the safety evaluation of those steviol glycosides produced via novel technologies that was initiated during the 87th JECFA meeting including bioconversion, fermentation and glucosylation. Nine (9) separate monographs were submitted to JECFA for review at the 87th meeting to support a "framework" for future safety evaluations and for the preparation of specifications for each new technology. These monographs were evaluated by the Committee and as part of this process "A framework was adopted for developing specifications for steviol glycosides by four different methods of production". As a consequence, specifications for those steviol glycosides produced by novel production methods were developed. In addition, the Committee determined at the 87th meeting that "no safety issues exist for steviol glycosides produced by any one of these methods resulting in products with ≥95% purity as per existing specifications". While the Committee supported the fact that "no safety concerns exist" a formal safety opinion for each new technology was not conducted. The reevaluation is therefore requested to build upon the extensive work conducted by the JECFA at the 87th meeting regarding the safety of each of the individual dossiers produced using the novel technologies.

1. Proposal for inclusion submitted by:

International Stevia Council (ISC)

2. Name of substance; trade name(s); chemical name(s), IUPAC name, C.A.S number (as applicable):

Steviol Glycosides

3. Names and addresses of basic producers:

Cargill Incorporated, 15497 McGinty Road West, M.S. 163 - Wayzata, MN 55391 - USA
DSM Food Specialties, Alexander Fleminglaan 1, 2613 AX, Delft, The Netherlands
Daepyung Co., Ltd., Leaders Building 604, 14, Hwangsaeul-ro 311beon-gil, Bun Dang Gu, Sung Nam Si, Gyeonggi Do, Republic of Korea (ZIP: 13590)
HB Natural Ingredients, 18301 Von Karman Ave. Suite 910, Irvine, CA 92612 – USA
PureCircle Limited, 200 West Jackson Blvd. Suite 800, Chicago, IL 60606 - USA
SweeGen, Inc. 30321 Esperanza Avenue, Rancho Santa Margarita, CA 92688 – USA
Tate & Lyle, 5450 Prairie Stone Parkway, Hoffman Estates, Illinois, 60182 - USA

4. Identification of the manufacturer that will be providing data (Please indicate contact person):

Maria Teresa Scardigli - Executive Director, International Stevia Council - Global Office - Avenue de Tervuren 188A - 1150 - Brussels - Belgium - globaloffice@internationalsteviacouncil.org
Nicole Cuellar-Kingston, Principal Scientist, Scientific & Regulatory Affairs - Cargill Incorporated - Nicole_Cuellar-Kingston@cargill.com
Jeanine A. G. van de Wiel (PhD), Global Regulatory Affairs – Group Leader - DSM Food Specialties - Jeanine.Wiel-van-de@DSM.COM
Dongjoo (David) Kim, Senior Managing Director - Daepyung Co., Ltd. - djkim@daepyung.co.kr
Shyhyuan (CN) Liao (Ph.D.), VP, Applications, Technical Services and Regulatory Affairs, HB Natural Ingredients - cnliao@hbnaturalingredients.com
Sidd Pukayastha (PhD), VP, Head of Global Scientific & Regulatory Affairs - PureCircle Limited - Sidd.Purkayastha@purecircle.com
Hadi Omrani, Director, Technical & Regulatory Affairs – SweeGen, Inc. - hadi.omrani@sweegen.com
Susan M. Potter (PhD), Director, Regulatory and Scientific Affairs - Tate & Lyle – susan.potter@tateandlyle.com

5. Justification for use:

Sweetener. The benefits to the consumer would mirror those for other steviol glycosides currently permitted Internationally. Steviol glycosides produced through the novel technologies would be used in foods and beverages to replace sugar, which will benefit consumers seeking products that have reduced caloric content.

In addition, this would also include consumers with specific medical conditions that require reduced sugar intake, such as those with diabetes, as the consumption of steviol glycosides does not interfere with glucose homeostasis. The novel technologies are capable of selecting those minor glycosides that have more favourable sensory characteristics than the major glycosides, present within the leaf, prompting development of technologies that enhance the proportion of minor glycosides to modify the sensory profile of the articles of commerce (JECFA 87th report).

6. Food products and food categories within the GSFA in which the substance is used as a food additive or as an ingredient, including use level(s):

Details can be found within the GSFA reference for steviol glycosides at link:
http://www.fao.org/gsfaonline/groups/details.html?id=309

7. Is the substance currently used in food that is legally traded in more than one country? (please identify the countries); or, has the substance been approved for use in food in one or more country? (please identify the country(ies))

Steviol glycosides manufactured via bioconversion, fermentation and glucosylation have been approved on an international basis.

- Bioconversion products are approved in Australia/New Zealand, Canada, Ecuador, Columbia, Peru, Europe (EFSA positive safety opinion), Mexico and the United States
- Fermentation products are approved in Australia/New Zealand, Canada, the United States and Mexico
- Glucosylation products are approved in Japan, Malaysia, Korea, China, and the United States

8. Are you aware of any current impediments in international trade due to lack of a JECFA evaluation and/or Codex standard? If so, please provide details.

A JECFA evaluation and Codex standard is internationally recognized and is adopted by many countries around the world who currently do not have the recognized capability for scientific evaluation. Therefore, a Codex standard supports the global acceptance of those glycosides offering improved sensory quality, produced by the novel technologies, providing additional opportunities and a broader freedom to operate in a wider international marketplace.

9. Are you aware of risk assessments, either on-going or completed within the last 10 years, at a national or regional level for this additive? If so, please provide the name, address and contact details of the organization having performed the risk assessment.

A risk assessment for steviol glycosides meeting ≥95% purity was conducted at the 69th JECFA and other major International Regulatory Authorities, including EFSA, FSANZ, Health Canada and the FDA. In 2017, JECFA reassessed steviol glycosides from stevia rebaudiana Bertoni due to expansion of the SG specification. A risk assessment for the various new technologies including bioconversion, fermentation and glucosylation has also been conducted by International Regulatory authorities outlined in section 6 above. In 2017, JECFA reviewed the safety of rebaudioside A manufactured via fermentation using GM Yarrowia lipolyica and adopted a new specification.

10. Please provide details if this food additive is of particular relevance to the livelihood and food safety in developing countries.

From the expansion of the production of steviol glyocosides with improved sensory qualities via the new production methods, the economic opportunities will increase globally. The global footprint of steviol glycoside production will expand into new geographies resulting in new opportunities for local/regional entities.

11. Please indicate the type of data that are available in the table below.

Ensure that the available data are directly relevant to the substance of interest in this request. In particular, for substances obtained from natural resources, characterization of the products in commerce and a relevant set of biochemical and toxicological data on such products are essential for JECFA to develop a specifications monograph and the related safety. Such data/information typically include: components of interest; all components of the final products; detailed manufacturing process; possible carryover of substances; etc.

As per the outcome of the 87th meeting of the JECFA, a novel safety framework supported by 9 separate detailed product dossiers were submitted and reviewed by the Committee. These individual dossiers included all of the required technological and safety information and the safety of the different production technologies were assessed with the following comments:

"The Committee determined that no safety issues exist for steviol glycosides produced by any one of these methods resulting in products with ≥95% steviol glycosides as per existing specifications. The Committee indicated that the ADI of 0–4 mg/kg bw established at the sixty-ninth meeting of JECFA for steviol glycosides (expressed as steviol) applies to steviol glycosides produced by the four methods indicated in the annexes of the specifications monograph produced at the current meeting".

Specifications for those steviol glycosides produced by the different production methods were also developed as outlined below:

- Steviol Glycosides from Stevia rebaudiana Bertoni (revised from the specifications monograph for Steviol glycosides from Stevia rebaudiana Bertoni prepared at the eighty-fourth JECFA (INS 960a)).
- Steviol Glycosides from Fermentation (specifications for Rebaudioside A from multiple gene donors expressed in Yarrowia lipolytica (INS 960b(i)) prepared at the eighty-second JECFA were revised to include other steviol glycosides from Saccharomyces cerevisiae and Yarrowia lipolytica).
- Enzyme Modified Steviol Glycosides (new specifications).
- Enzyme Modified Glucosylated Steviol Glycosides (new specifications, tentative pending further information concerning the analytical methods).

Based upon the knowledge that the JECFA were able to develop full specifications for those steviol glycosides produced via bioconversion and fermentation and that tentative specifications were developed for the glucosylation product pending further information concerning the analytical methodology only indicates that the JECFA were comfortable in the knowledge that sufficient toxicological data, technological data and dietary exposure assessment data are available for the purpose of developing specifications.

	available? (Y / N)
Toxicological data	A full safety data package is available for steviol glycosides.
(i) Metabolic and pharmacokinetic studies (please specify)	
(ii) Short-term toxicity, long-term toxicity/carcinogenicity, reproductive toxicity, and developmental toxicity studies in animals and genotoxicity studies (please specify)	
(iii) Epidemiological and/or clinical studies and special considerations (please specify)	
(iv) Other data (please specify)	
Technological data	All technological data have previously been provided - Additional data is available upon request or upon publication of the JECFA 87th Meeting Report.
(i) Specifications for the identity and purity of the listed substances (specifications applied during development and toxicological studies; proposed specifications for commerce)	
(ii) Technological and nutritional considerations relating to the manufacture and use of the listed substance	
Dietary exposure assessment data	Data previously provided.
(i) Levels of the listed substance used in food or expected to be used in food based on technological function and the range of foods in which they are used	
(ii) Estimation of dietary exposures based on food consumption data for foods in which the substance may be used.	
Other information: (please specify)	

12. Specify earliest date when data can be made available to JECFA. (Data shall only be submitted in response to a JECFA call for data; **do NOT include any data intended for JECFA to this form**.)

Data is available and can be resubmitted immediately upon request.

Part B: Replies to CL 2019/41-FA Annex 4 - Confirmation of previous requests and data availability.

Colombia

Colombia according to the provisions of Table 1 "LIST OF SUBSTANCES USED AS FOOD ADDITIVES PROPOSED FOR ASSESSMENT BY JECFA" has the request for pending data to finalize the safety assessment and establish the specifications: Evaluation of JECFA84 for Additive Jagua (Genipin-Glycine) Blue, for which data availability was requested for December 2019.

So, Colombia is allowed to make the following indications in accordance with the Confirmation of Previous Requests table found in Annex 4 of Circular Letter CL 2019/41-FA.

Name of Substance (as it appears in Annex 3):	Jagua (Genipin-Glycine) Blue
Is the request still in effect? (yes / no)	Yes
Are the data available? (yes / no)	Yes, the data was provided by email on December 6, 2019, as indicated by JECFA to the following recipients: 1. Technical information to jecfa@fao.org addressed to Dr. Markus Lipp. 2. Toxicological information to jecfa@who.int addressed to Dr. Kim Petersen. 3. Complete information for the study to emails jecfa@fao.org and jecfa@who.int without recipient.
Change to data provider? (yes/no)	No

Japan

Name of Substance (as it appears in Annex 3):	Flavouring agents:(Ethyl 2-methyl pentanoate (No.214), cis-3-Hexen-1-ol (No.315), Menthol (No.427), l-Menthyl l-lactate (No.433), Myrcene (No.1327), Maltol (No.1480), 2-pentylfuran (No.1491), 3-(2-Furyl)acrolein (No.1497), 3-(5-Methyl-2-furyl)-butanal (No.1500), 2-Furyl methyl ketone (No.1503), 3-Acetyl-2,5-dimethylfuran (No.1506), (2-Furyl)-2-propanone (No.1508), 4-(2-furyl)-3-buten-2-one (No.1511), and Furfuryl methyl ether (No.1520))
Is the request still in effect? (yes / no)	Yes
Are the data available? (yes / no)	Yes Data on 2-pentylfuran (No.1491), 3-(2-Furyl)acrolein (No.1497), 3-Acetyl-2,5-dimethylfuran (No.1506), and 4-(2-furyl)-3-buten-2-one (No.1511) have already been submitted to IOFI as a response to the JECFA data call for 89th meeting, and will be provided by IOFI as compiled data with its available data. For the rest of the substances, data can be available upon the request from JECFA and will be provided through IOFI, as compiled data with its available data.
Change to data provider? (yes/no)	Yes, will be provided through IOFI

IOFI (International Organization of the Flavor Industry)

Name of Substance (as it appears in Annex 3):	Flavouring agents
Is the request still in effect? (yes / no)	Yes

Are the data available? (yes / no)	Yes, December 1, 2020
Change to data provider? (yes/no)	No

DSM Food Specialties

DSM Food Specialties would like to confirm the previous requests and data availability of the following substances used as processing aids, already included in the priority list of substances proposed for evaluation by JECFA:

- (No. 2) Acid prolyl endopeptidase from *Aspergillus niger* expressing a gene from *Aspergillus niger*
- (No. 9) Asparaginase from *Aspergillus niger* expressing a modified gene from *Aspergillus niger*
- (No. 17) Glucose oxidase from *Penicillium chrysogenum* expressed in *Aspergillus niger*
- (No. 22) Phosphatidyl inositol-specific phospholipase C from a genetically modified strain of *Pseudomonas fluorescens*
- (No. 24) Phospholipase A2 from pig pancreas expressed in *Aspergillus niger*
- (No. 29) Xylanase from *Talaromyces emersonii* expressed in *Aspergillus niger*

Herewith find enclosed the forms (Annex 4) for the abovementioned substances.

We would like to note that for one of these substances, Phosphatidyl inositol-specific phospholipase C from a genetically modified strain of *Pseudomonas fluorescens*, a JECFA call for data has been already received and the data relative to this enzyme will be submitted according to the deadline, namely by 15 February 2020.

We would like to bring to your consideration the fact that the data provider has changed. The contact persons, and their details, are different. The contact details in the previous requests are not valid anymore and we are not be able to receive communication from Codex when addressed to those persons.

Name of Substance (as it appears in Annex 3):	Acid prolyl endopeptidase from *Aspergillus niger* expressing a gene from *Aspergillus niger*
Is the request still in effect? (yes / no)	yes
Are the data available? (yes / no)	Yes, December 2020
Change to data provider? (yes/no)	Yes, DSM Food Specialties **Mrs. Paola Montaguti (paola.montaguti@dsm.com)**
Name of Substance (as it appears in Annex 3):	Asparaginase from *Aspergillus niger* expressing a modified gene from *Aspergillus niger*
Is the request still in effect? (yes / no)	yes
Are the data available? (yes / no)	Yes, December 2020
Change to data provider? (yes/no)	Yes, DSM Food Specialties **Mrs. Paola Montaguti (paola.montaguti@dsm.com)**
Name of Substance (as it appears in Annex 3):	Glucose oxidase from *Penicillium chrysogenum* expressed in *Aspergillus niger*
Is the request still in effect? (yes / no)	yes
Are the data available? (yes / no)	Yes, December 2020
Change to data provider? (yes/no)	Yes, DSM Food Specialties **Mrs. Paola Montaguti (paola.montaguti@dsm.com)**
Name of Substance (as it appears in Annex 3):	Phosphatidyl inositol-specific phospholipase C from a genetically modified strain of *Pseudomonas fluorescens*
Is the request still in effect? (yes / no)	yes
Are the data available? (yes / no)	Yes, **a JECFA call for data has been already received and the data for this enzyme will be submitted according to the deadline, namely by 15 February 2020**
Change to data provider? (yes/no)	Yes, DSM Food Specialties

	Dr. Jeanine van de Wiel (Jeanine.Wiel-van-de@dsm.com)
Name of Substance (as it appears in Annex 3):	Phospholipase A2 from pig pancreas expressed in *Aspergillus niger*
Is the request still in effect? (yes / no)	yes
Are the data available? (yes / no)	Yes, December 2020
Change to data provider? (yes/no)	Yes, DSM Food Specialties **Dr. Jeanine van de Wiel (Jeanine.Wiel-van-de@dsm.com)**
Name of Substance (as it appears in Annex 3):	Xylanase from *Talaromyces emersonii* expressed in *Aspergillus niger*
Is the request still in effect? (yes / no)	yes
Are the data available? (yes / no)	Yes, December 2020
Change to data provider? (yes/no)	Yes, DSM Food Specialties **Mrs. Paola Montaguti (paola.montaguti@dsm.com)**

ICBA (International Council of Beverages Associations)

Benzoic Acid and its salts (INS 210-212) – CL 2019/41-FA, Annex 3 'Priority list of substances proposed for evaluation by JECFA, forwarded to FAO and WHO for their follow-up'

	Substance(s)	***General information***	***Comments about the request***	***Priority****
3.	Benzoic acid and its salts (INS 210-212)	**Type of request**: Data pending – safety assessment **Proposed by**: CCFA49 **Year requested:** 2018 (CCFA50) **Data availability**: December 2020 **Data provider**: International Council of Beverages Associations (ICBA) Ms. Katherine Loatman (Kate@icba-net.org)	**Basis for request:** To confirm ICBA's commitment to provide new toxicological evaluation of benzoates. The studies include extended one-generational reproductive toxicity testing (EOGRT Study, OECD 443) and findings relative to benzoate's chemical-specific adjustment factor, default uncertainty factors and intake assessment assumptions. **Possible issues for trade**: Identified:	1
			CCFA50 suggested extending the interim level of 250 ppm (as benzoic acid) for the beverage category 14.1.4 to CCFA53.	

ICBA is pleased to **confirm** that the full data package – both the toxicological evaluation and the updated dietary intake assessment – should be ready for submission by January 2021, around JECFA's call-for-data deadline. In view of the one-year delay in submitting relevant data, ICBA requests that CCFA52 **extend** the ***interim*** 250 mg/L level for benzoates (as benzoic acid) in the 14.1.4. beverage category from CCFA53 (2021) **to CCFA54 (2022)**.

Part C: Replies to CL 2020/37-FA, Annex 2 - Form for the submission of substances to be evaluated by JECFA.

European Union

Name of Substance(s):	Chymosin from *Camelus dromedarius* expressed in *Aspergillus niger*
Question(s) to be answered by JECFA *(Provide a brief justification of the request in case of re-*	

1. Proposal for inclusion submitted by:

Danish Veterinary and Food Administration.

2. Name of substance; trade name(s); chemical name(s), IUPAC name, C.A.S number (as applicable):

Substance: Chymosin from dromedary camel (*Camelus dromedarius)* expressed in *Aspergillus niger (*formerly *Aspergillus niger var.awamori).*

Chemical name: Chymosin (rennin, aspartic proteinase);

CAS 9001-98-3, EC 3.4.23.4, IUBMB No: 3.4.23.4

3. Names and addresses of basic producers:

Chr-Hansen A/S 10-12 Bøge Alle DK-2970 Hørsholm Denmark

4. Identification of the manufacturer that will be providing data (Please indicate contact person):

Chr-Hansen A/S commits to provide data to support the proposal for inclusion of the chymosin in the list of substances to be evaluated by JECFA.

Contact of manufacturer:

Chr-Hansen A/S 10-12 Bøge Alle DK-2970 Hørsholm Denmark

Contact person:

Christina Westphal Christensen, Senior Regulatory Affairs Partner for food cultures & enzymes

dkchwe@chr-hansen.com

Mobile: +45 52 18 04 19

5. Justification for use:

The chymosin enzyme preparation is used as a processing aid during food manufacture to coagulate milk.

The chymosin catalyze the hydrolysis, at a very particular site in the amino acid chain, of κ-casein - the main protein in milk. This is the absolute first key step in all cheese-making, through which the liquid milk is coagulated (precipitated) and converted to a semi-solid form by the catalytic action of coagulants, such as chymosin. Therefore, the most important production process in which chymosin is used is the production of cheese.

Moreover, chymosin can be used in the production of fermented milk products, where it can be used to increase the viscosity of the preparation. Quarg (quark) is an example of fermented milk product in which coagulants, like chymosins, are used to increase the final viscosity of the product.

6. Food products and food categories within the GSFA in which the substance is used as a food additive or as an ingredient, including use level(s):

The enzyme preparation is not added to final foodstuffs as a food additive or as an ingredient, but it is used as a processing aid during food manufacturing. The chymosin is used in coagulation of milk during cheese-making and production of other fermented milk products.

The chymosin preparation is generally used following the Quantum Satis (QS) principle, i.e. at a level not higher than the necessary dosage to achieve the desired enzymatic reaction - according to Good Manufacturing Practice. The range of dosage recommended for the chymosin is comprised between 2 and 60 IMCU per kg milk, when expressed as International Milk Clotting Units, or between 0.004 and 0.13 mg of enzyme protein per kg milk.

7. Is the substance currently used in food that is legally traded in more than one country? (please identify the countries); or, has the substance been approved for use in food in one or more country? (please identify the country(ies))

The enzyme has been approved in: Denmark[8] (2009), France[9] (2010), Canada[10] (2010), Brazil[11] (2014), South Korea[12] (2018), Japan[13] (2019), Mexico[14] (2019).

Chr-Hansen A/S has also applied for inclusion of the enzyme in the upcoming European Union list of food enzymes, expected implemented in 2025[15].

8. Are you aware of any current impediments in international trade due to lack of a JECFA evaluation and/or Codex standard? If so, please provide details.

Not aware of any.

9. Are you aware of risk assessments, either on-going or completed within the last 10 years, at a national or regional level for this additive? If so, please provide the name, address and contact details

[8] Veterinary and Food Administration
[9] AFSSA - French Food Safety Agency
[10] Health Canada
[11] ANVISA - Agência Nacional de Vigilância Sanitária
[12] MFDS -Ministry of Food and Drug Safety
[13] MHLW - Ministy of Health, Labour and Welfare
[14] COFEPRIS: Comisión Federal para la Protección contra Riesgos Sanitarios;
[15] Regulation (EC) No. 1332/2008

of the organization having performed the risk assessment.

The enzyme has undergone a meticulous risk assessment for its use in dairy processing in the countries mentioned in section 7

10. Please provide details if this food additive is of particular relevance to the livelihood and food safety in developing countries

Not aware of any.

11. Please indicate the type of data that are available in the table below.

Ensure that the available data are directly relevant to the substance of interest in this request. In particular, for substances obtained from natural resources, characterization of the products in commerce and a relevant set of biochemical and toxicological data on such products are essential for JECFA to develop a specifications monograph and the related safety. Such data/information typically include: components of interest; all components of the final products; detailed manufacturing process; possible carryover of substances; etc.

Data available? (Y/ N)

Toxicological data	
(i) Metabolic and pharmacokinetic studies (please specify)	***N***
(ii) Short-term toxicity, long-term toxicity/carcinogenicity, reproductive toxicity, and developmental toxicity studies in animals and genotoxicity studies (please specify)	***Y*** (please, see "Comments to the Toxicological data")
(iii) Epidemiological and/or clinical studies and special considerations (please specify)	***N***
(iv) Other data (please specify)	***N***
Comments to the Toxicological data: (ii) The following food toxicity program has been performed: • Test for mutagenic activity (Ames Test) performed in accordance with OECD Guideline 471 • *In Vitro* Mammalian Chromosomal Aberration Test in accordance with OECD Guideline 473 • Repeated dose 90-day oral toxicity study in Rodents performed in accordance with OECD Guideline 408	

	Data available? (Y/ N)
Technological data	
(i) Specifications for the identity and purity of the listed substances (specifications applied during development and toxicological studies; proposed specifications for commerce)	***Y***
(ii) Technological and nutritional considerations relating to the manufacture and use of the listed substance	***Y***

	Data available? (Y/ N)
Dietary exposure assessment data	
(i) Levels of the listed substance used in food or expected to be used in food based on technological function and the range of foods in which they are used	***Y***
(ii) Estimation of dietary exposures based on food consumption data for foods in which the substance may be used.	***Y***
	Data available? (Y/ N)
Other information: (please specify)	***Y (data available as required by JECFA guidelines)***

12. Specify earliest date when data can be made available to JECFA. (Data shall only be submitted in response to a JECFA call for data; do NOT include any data intended for JECFA to this form.)
September 2021

CCC (Calorie Control Council)

Name of Substance(s):	**THAUMATIN**
Question(s) to be answered by JECFA *(Provide a brief justification of the request in case of re-evaluations)*	A JECFA re-evaluation of the sweetener and flavor enhancer "THAUMATIN" to modify the existing definition to include a new manufacturing process and related specifications.

1. Proposal for inclusion submitted by:

The Calorie Control Council (CCC), 529 14th St NW, Suite 1280, Washington, DC 20045, USA.

2. Name of substance; trade name(s); chemical name(s), IUPAC name, C.A.S Number (as applicable):

Thaumatin consists of a mixture of proteins isolated from the African tree *Thaumatococcus daniellii* that are currently identified as CAS 53850-34-3, and approved for use as food additives in the European Union as E957 and in the United States as FEMA GRAS 3732 (extracted). A single-protein composition of thaumatin is also approved in the USA as FEMA GRAS 3814 (recombinant). NOMAD Bioscience's **THAUMATIN II** is also a single-protein constituent of commercially marketed thaumatin with US FDA GRAS marketing authorization (recombinant; NOMAD Bioscience GRN 738, GRN 910, GRN 920). Thaumatin compositions are marketed under various trade names including Talin®, San Sweet T-100® and Sunsweet T®.

3. Names and addresses of basic producers:

NOMAD Bioscience GmbH, Biozentrum Halle, Weinbergweg 22, D-06120 Halle/Saale, Germany

Naturex (division of Givaudan), Rue Pierre Bayle, 84130 Avignon, France

Beneo Palatinit GmbH, Maximilianstrasse 10, 68165 Mannheim, Germany

Natex Ltd., 44 Bedford Road, Sandy, Bedfordshire, SG19 1EP, United Kingdom

KF Specialty Ingredients Pty Ltd., 9 Garling Rd, Kings Park, Western Australia, 6005, Australia

4. Identification of the manufacturer that will be providing data (Please indicate contact person):

Manufacturer and representative:

NOMAD Bioscience GmbH, Biozentrum Halle, Weinbergweg 22, D-06120 Halle/Saale, Germany

Jurijus (Yuri) Gleba, Ph.D., Chief Executive Officer (gleba@nomadbioscience.com).

Manufacturer's US Representatives:

Kristi O. Smedley, Ph.D., Center for Regulatory Services Inc., Woodbridge, VA (smedley@cfr-services.com);

Daniel Tusé, Ph.D. DT/Consulting Group, Sacramento, CA (daniel@dt-cg.com).

Ray DeVirgiliis, MPH, Calorie Control Council, Washington, D.C. (rdevirgiliis@caloriecontrol.org)

5. Justification for use:

THAUMATIN II protein is a non-caloric natural sweetener and flavor enhancer produced recombinantly in green plants by NOMAD Bioscience. The vast majority of commercially available thaumatins are extracted from *Thaumatococcus daniellii* trees, which are not cultivated. Natural thaumatin mixtures are obtained by extraction of the aryls of the tree's fruit, which are harvested in the wild. Unpredictable supply and environmental concerns regarding current production practices have limited the expanded use of thaumatins, especially as sweeteners. NOMAD's manufacturing process does not deplete natural resources and can be scaled to meet increasing demand for thaumatin. THAUMATIN II is NOMAD Bioscience's single thaumatin-family protein produced recombinantly in green plants such as spinach, lettuce, red beet and *Nicotiana benthamiana*; all of which can be cultivated sustainably and in large scale. NOMAD's production process yields THAUMATIN II with the identical amino acid sequence as the thaumatin II (also referred to as thaumatin 2 or thaumatin B in the literature) in commercial products. NOMAD's process yields a highly pure product that meets the existing specifications and includes some trace impurities that have been demonstrated to be safe at the levels present.

NOMAD requests an opinion from JEFCA with respect to the possibility of modifying the definition and expanding the specification of the current thaumatin compositions to also include the specification of THAUMATIN II.

6. Food products and food categories within the GSFA in which the substance is used as a food

additive or as an ingredient, including use level(s):

Thaumatins are used extensively as additives to foods and beverages as detailed in the Codex Alimentarius General Standard for Food Additives (GSFA), Thaumatin 957 (online GSFA updated up to the 42nd Session of the Codex Alimentarius Commission, 2019: http://www.fao.org/gsfaonline/additives/details.html?id=145). Application rates vary widely depending on food class, and range from 1 to 400 ppm (mg/kg or mg/L).

7. Is the substance currently used in food that is legally traded in more than one country? (please identify the countries); or, has the substance been approved for use in food in one or more country? (please identify the country(ies)).

Thaumatin has been approved as a sweetener and/or flavor enhancer in the European Union (E957), the UK, Israel, Japan, Australia, New Zealand, Argentina, Brazil, China, South Korea, India, Turkey, Canada, Mexico and several other countries. In the United States, it is generally recognized as safe as a flavouring agent (FEMA GRAS 3732 (extracted) and FEMA GRAS 3814 (recombinant)). Only NOMAD Bioscience's THAUMATIN I and/or THAUMATIN II (individually or as mixtures) have received GRAS sweetener classification by FDA (GRN 738 in 2018 and GRN 910 in 2020 (process improvement).

8. Are you aware of any current impediments in international trade due to lack of a JECFA evaluation and/or Codex standard? If so, please provide details.

NOMAD Bioscience's THAUMATIN II product can be marketed in the United States. Although thaumatin II (thaumatin 2) is a component of thaumatin mixtures approved for marketing in the EU and is encompassed by the specification of E957, the process used by NOMAD for manufacturing THAUMATIN II recombinantly is different than the process employed to produce E957, albeit the thaumatin 2/THAUMATIN II proteins responsible for functionality are identical. The different processes yield thaumatin 2/II with different impurity profiles. NOMAD's product (THAUMATIN II and its associated impurities) has received GRAS classification by US FDA and is considered safe for use in all food classes defined for E957 and at the same rates of application (GRN 738). Thaumatin produced recombinantly has not been evaluated by EFSA. As such, it is NOMAD Bioscience's intent to seek review by JECFA of NOMAD's specification and safety determination, so that other regulatory jurisdictions can rely on this assessment.

9. Are you aware of risk assessments, either on-going or completed within the last 10 years, at a national or regional level for this additive? If so, please provide the name, address and contact details of the organization having performed the risk assessment.

Original (pre-marketing) studies including human clinical trials were conducted to determine the safety of thaumatins (reviewed by Joseph et al. 2019) and the results uniformly verified that thaumatin proteins are digested fully; contain no unusual amino acids or side chains; and are free of toxic, teratogenic, genotoxic or allergenic effects (JECFA 1986, pp 35-36 in PDF report at: https://apps.who.int/iris/handle/10665/37285). The European Union first approved thaumatin (E957) in 1984 based on safety studies conducted before then. To our knowledge, there have been no safety related effects reported post marketing in spite of the widespread use of thaumatin on multiple categories of food.

Since 2009, EFSA has been re-evaluating the safety of all food additives authorized for use in the EU. Sweeteners are the last category of additives under evaluation. The data input and public comment for sweeteners was concluded at the end of 2019, and decisions about maintenance or revision of safe use levels are in progress with implementation of any revisions still to be confirmed. Therefore, the re-evaluation of sweeteners including thaumatin is currently in progress within the EU. Thaumatin proteins are on the list for re-evaluation by EFSA. However, the safety evaluation focuses on the thaumatin protein(s) made by currently available methods and does not include NOMAD Bioscience's new plant-based recombinant manufacturing process, including its different specification.

In the USA, FDA has granted GRAS marketing allowance for thaumatin sweetener via GRN 738 (2018; to NOMAD Bioscience) and GRN 910 (process modification, 2020; to NOMAD Bioscience), and as a flavor enhancer via GRN 920 (2020; to NOMAD Bioscience). NOMAD's THAUMATIN II product has not yet been commercialized.

10. Please provide details if this food additive is of particular relevance to the livelihood and food safety in developing countries.

Most thaumatin is produced via extraction of the aryls of the fruit of the katemfe bush (*Thaumatococcus daniellii*) found in the rainforests of West Africa ranging from Sierra Leone to the Democratic Republic of Congo. The native bush is not cultivated and harvesting takes place from wild plants. This source is not scalable, and elimination of raw material harvesting would not impact the GDP of nations wherein the katemfe tree grows.

Consequently, due to anticipated demand for safe non-caloric sweeteners, several recombinant expression methods in bacteria, yeast, filamentous fungi and various temperate plants are in development. NOMAD Biosciences' plant-based manufacturing process is highly efficient and can be modularly reproduced in many world regions (greenhouse and field cultivation); therefore, the reliable commercial production of raw material for thaumatin proteins could be implemented in developing countries.

11. **Please indicate the type of data that are available in the table below.** Ensure that the available data are directly relevant to the substance of interest in this request. In particular, for substances obtained from natural resources, characterization of the products in commerce and a relevant set of biochemical and toxicological data on such products are essential for JECFA to develop a specifications monograph and the related safety. Such data/information typically include: components of interest; all components of the final products; detailed manufacturing process; possible carryover of substances; etc.

	Data available? (Y / N)
Toxicological data	
(i) Metabolic and pharmacokinetic studies (*digestion and metabolism studies*)	YES[1]
(ii) Short-term toxicity, long-term toxicity/carcinogenicity, reproductive toxicity, and developmental toxicity studies in animals and genotoxicity studies (*preclinical acute and chronic toxicity, teratogenicity, genotoxicity and allergenicity studies in vivo*)	YES[1]
(iii) Epidemiological and/or clinical studies and special considerations (*human occupational allergenicity/hypersensitivity and oral ingestion studies*)	YES[2]
(iv) Other data (*risk assessments based on published toxicological and dietary data*)	YES[3]
Technological data	
(i) Specifications for the identity and purity of the listed substances (specifications applied during development and toxicological studies; proposed specifications for commerce)	YES
(ii) Technological and nutritional considerations relating to the manufacture and use of the listed substance	YES
Dietary exposure assessment data	
(i) Levels of the listed substance used in food or expected to be used in food based on technological function and the range of foods in which they are used	YES
(ii) Estimation of dietary exposures based on food consumption data for foods in which the substance may be used.	YES
Other information: (please specify)	

[1] Thaumatin proteins are digested fully, contain no unusual amino acids or side chains, and are free of toxic, teratogenic, genotoxic or allergenic effects, as reported by Higginbotham et al. (1983) and summarized in JECFA (1986), pp 35-36 in PDF report at: https://apps.who.int/iris/handle/10665/37285).

[2] Clinical studies on allergenicity, occupational exposure, and oral intake of 100 mg/day were reported by Higginbotham et al. (1983) and showed no human toxicity.

[3] Risk assessments from consumption of Manufacturer's THAUMATIN II and host- and process-derived impurities were presented in support of Manufacturer's GRAS Notices GRN 738 (2018), GRN 910 (2020) and GRN 920 (2020).

12. **Specify earliest date when data can be made available to JECFA. (Data shall only be submitted in response to a JECFA call for data; do NOT include any data intended for JECFA to this form.)**

NOMAD Bioscience's technological data including details of THAUMATIN II upstream and downstream manufacturing process steps, physico-chemical and sensory characterization of THAUMATIN II and its sweetening and flavor-modifying properties in comparison to the native thaumatin 2 protein, and the product's full specification are currently available. Equally, dietary exposure assessment data including estimated levels of intake from consumption of various foods and beverages to which THAUMATIN II would be applied at various levels are also available. Toxicological data for thaumatin protein(s) themselves have been extensively published since the 1980s, including results of clinical studies, and therefore the safety of

thaumatin 2/THAUMATIN II is not in question. Neither JECFA nor the EU's SCF allocated a numerical ADI for thaumatin owing to its lack of toxicity combined with its being readily digested to normal food components (EFSA 2015).

Risk assessments based on the estimated daily intake of THAUMATIN II and associated host- and process-derived impurities in sweetening and flavor enhancer/modifier applications were included in Manufacturer's GRAS notices to FDA (GRN 738, 2018; GRN 910, 2020; GRN 920, 2020), for which Manufacturer received "No Questions" letters from FDA regarding Notifier's GRAS conclusions. An extensive body of literature was cited in these GRAS notices to document the low risk derived from consumption of THAUMATIN II and its low levels of impurities when the product is used as intended. We believe that collectively these data support THAUMATIN II's high safety margin and its functional performance relative to marketed thaumatin products.

All referenced data would be available at the next call for data by JECFA.

FoodDrinkEurope

Name of Substance(s):	Polyglycerol Esters of Interesterified Ricinoleic Acid, INS 476 (PGPR)
Question(s) to be answered by JECFA *(Provide a brief justification of the request in case of re-evaluations)*	Re-evaluation of ADI of 0-7.5 mg/kg bw, established at the 17th JECFA (1973). In 2017, the European Food Safety Authority (EFSA) has re-evaluated polyglycerol polyricinoleate (E 476) as a food additive, and considered that the available dataset give reason to revise the ADI of 7.5 mg/kg bw per day allocated by Scientific Committee for Foods (SCF) in 1978, to a new ADI of 25 mg/kg bw per day.

1. Proposal for inclusion submitted by:

FoodDrinkEurope
Avenue des Nerviens, 9-31
1040 Brussels
Belgium
www.fooddrinkeurope.eu

2. Name of substance; trade name(s); chemical name(s), IUPAC name, C.A.S number (as applicable):
Trade name: *not applicable, qualities of INS 476 will meet the JECFA specification*

Chemical Name: *1,2,3-Propanetriol, homopolymer, (9Z,12R)-12-hydroxy-9-octadecenoate*

CAS Number: *68936-89-0*

3. Names and addresses of basic producers:

Not applicable, qualities of INS 476 will meet the JECFA specification

4. Identification of the manufacturer that will be providing data (Please indicate contact person):

Not applicable, qualities of INS 476 will meet the JECFA specification

5. Justification for use:

As an emulsifier in several food categories (see 6.). INS 476 is used principally as a viscosity modifier. It is also used to maintain stable emulsions of oil and water systems at high water content.

6. Food products and food categories within the GSFA in which the substance is used as a food additive or as an ingredient, including use level(s):

GSFA Provisions for Polyglycerol esters of interesterified ricinoleic acid

Number	Food Category	Max Level	Notes
06.5	Cereal and starch based desserts (e.g. rice pudding, tapioca pudding)	5,000 mg/kg	
05.3	Chewing gum	500 mg/kg	
05.1.4	Cocoa and chocolate products	5,000 mg/kg	Note 101
05.1.1	Cocoa mixes (powders) and cocoa mass/cake	5,000 mg/kg	Note 97
05.2	Confectionery including hard and soft candy, nougats, etc. other than food categories 05.1, 05.3 and 05.4	3,000 mg/kg	Note XS309R
09.2.4.1	Cooked fish and fish products	1,000 mg/kg	Note 412
01.7	Dairy-based desserts (e.g. pudding, fruit or flavoured yoghurt)	5,000 mg/kg	Note XS243
05.4	Decorations (e.g. for fine bakery wares), toppings (non-fruit) and sweet sauces	5,000 mg/kg	
08.4	Edible casings (e.g. sausage casings)	5,000 mg/kg	Note 365
03.0	Edible ices, including sherbet and sorbet	5,000 mg/kg	
10.2	Egg products	1,000 mg/kg	
10.4	Egg-based desserts (e.g. custard)	1,000 mg/kg	
12.6.1	Emulsified sauces and dips (e.g. mayonnaise, salad dressing, onion dip)	5,000 mg/kg	
02.3	Fat emulsions mainly of type oil-in-water, including mixed and/or flavoured products based on fat emulsions	10,000 mg/kg	
02.2.2	Fat spreads, dairy fat spreads and blended spreads	4,000 mg/kg	Note 359
02.4	Fat-based desserts excluding dairy-based dessert products of food category 01.7	2,000 mg/kg	
04.1.2.11	Fruit fillings for pastries	2,000 mg/kg	
04.1.2.9	Fruit-based desserts, including fruit-flavoured water-based desserts	2,000 mg/kg	
05.1.5	Imitation chocolate, chocolate substitute products	3,000 mg/kg	Note 366
01.5.2	Milk and cream powder analogues	5,000 mg/kg	Note XS251
12.6.3	Mixes for sauces and gravies	5,000 mg/kg	Note 127
06.4.3	Pre-cooked pastas and noodles and like products	500 mg/kg	Note 194
01.6.4	Processed cheese	500 mg/kg	

http://www.fao.org/gsfaonline/additives/details.html?id=191

7. Is the substance currently used in food that is legally traded in more than one country? (please identify the countries); or, has the substance been approved for use in food in one or more country? (please identify the country(ies))

A Mintel GNPD (Global New Product Database) search performed on 18 December 2020 provided the following results (search criteria: Super Category: Foods; Date: less than one year ago; Ingredient: Polyglycerol Esters of Interesterified Ricinoleic Acid):

- *Overall 3,605 results, of which*
  - *2,019 in category Chocolate Confectionary*
  - *799 in category Bakery*
  - *417 in category Desserts and Ice Cream*
  - *210 in category Snacks*
  - *Plus, other categories like Dairy, Sugar & Gum Confectionary, Sweet Spreads and Breakfast Cereals*
- *Regional split:*
  - *Europe (most results in UK, Poland, Germany, and Spain, but including most other countries): 1,196 results.*
  - *Asia Pacific (most results in Australian, China, India, and Malaysia, but including most other countries): 1,010 results*
  - *Latin America: (most results in Brazil, Mexico, Argentina, and Colombia, but including most other countries) 883 results.*
  - *Middle East and Africa: (most results in South Africa, Nigeria, Egypt, and Israel, but including most other countries) 368 results.*
  - *North America (USA and Canada): 148 results*

Several countries have implemented food additive regulations following Codex GSFA, including the Codex food categorization system, permitted food additives per food category, and the respective conditions of use. These countries consequently do also allow the addition of INS 476 to food categories as per the

Codex GSFA, under the same conditions of use. As two recent examples please find in the Annex to this document extracts from the Gulf Cooperation Council (GCC), and Thailand.

Other countries that have not implemented Codex GSFA do however as well permit the use of INS 476 to several food categories. One example is the European Union (link to the online database of EU food additives)

8. Are you aware of any current impediments in international trade due to lack of a JECFA evaluation and/or Codex standard? If so, please provide details.

   We are not aware of any current impediments, but the higher ADI in the EU might in the future result in amended regulations with higher acceptable use levels for INS 476 in the EU, hampering trade of products with such higher INS 476 level.

9. Are you aware of risk assessments, either on-going or completed within the last 10 years, at a national or regional level for this additive? If so, please provide the name, address and contact details of the organization having performed the risk assessment.

   European Food Safety Authority
   Via Carlo Magno 1A
   43126 Parma – ITALY
   Reference: EFSA (2017). EFSA ANS Panel (EFSA Panel on Food Additives and Nutrient Sources added to Food); Scientific Opinion on re-evaluation of polyglycerol polyricinoleate (E 476) as a food additive. EFSA Journal 2017;15(3):4743, 54 pp.
   https://efsa.onlinelibrary.wiley.com/doi/epdf/10.2903/j.efsa.2017.4743

10. Please provide details if this food additive is of particular relevance to the livelihood and food safety in developing countries.

    Not applicable

11. Please indicate the type of data that are available in the table below.

Ensure that the available data are directly relevant to the substance of interest in this request. In particular, for substances obtained from natural resources, characterization of the products in commerce and a relevant set of biochemical and toxicological data on such products are essential for JECFA to develop a specifications monograph and the related safety. Such data/information typically include: components of interest; all components of the final products; detailed manufacturing process; possible carryover of substances; etc.

	Data available? (Y / N)
Toxicological data	
(i) Metabolic and pharmacokinetic studies (please specify)	*Y* *EFSA 2017*
(ii) Short-term toxicity, long-term toxicity/carcinogenicity, reproductive toxicity, and developmental toxicity studies in animals and genotoxicity studies (please specify)	*Y* *EFSA 2017*
(iii) Epidemiological and/or clinical studies and special considerations (please specify)	*Y* *EFSA 2017*
(iv) Other data (please specify)	*Grieco R, 1974. Summary of Unilever Biological Studies on a Polyglycerol - Polyricinoleic acid emulsifier (Admul W.O.L.): Submission of Admul W.O.L. for U.S. Food Additive Petition. Research Report. Lever Brothers Research Center, Edgewater.*
Technological data	
(i) Specifications for the identity and purity of the listed substances (specifications applied during development and toxicological studies; proposed specifications for commerce)	*Y* *Link to JECFA monograph*
(ii) Technological and nutritional considerations relating to the manufacture and use of the listed substance	*INS 476 can be used to maintain stable emulsions of oil and water systems at high water content. Therefore, it can contribute to fat reduction in emulsified products.*

Dietary exposure assessment data	
(i) Levels of the listed substance used in food or expected to be used in food based on technological function and the range of foods in which they are used	*Y* *EFSA 2017*
(ii) Estimation of dietary exposures based on food consumption data for foods in which the substance may be used.	*Y* *EFSA 2017*
Other information: (please specify)	*Not applicable*

11. Specify earliest date when data can be made available to JECFA. (Data shall only be submitted in response to a JECFA call for data; do NOT include any data intended for JECFA to this form.)

    Toxicological and technological data is available and can be submitted on request. In case dietary exposure assessment data is required that is different from the data included in the EFSA 2017 paper, then this can likely be provided within 6 months after the request, provided that relevant data required for the dietary exposure assessment is available.

ANNEX

Gulf Cooperation Council (GCC)

With the 2020 revision of GSO Standard 2500/2015, GCC member countries implement the provisions of the Codex alimentarius GSFA. The amendments have been notified to the WTO on 30 September 2020 under the SPS and TBT agreements.

FOOD CATEGORIES THAT ARE PERMITTED TO CONTAIN PGPR IN GCC. EXTRACT FROM GSO FDS 2005:2020

POLYGLYCEROL ESTERS OF INTERESTERIFIED RICINOLEIC ACID			
INS 476	**Polyglycerol esters of interesterified ricinoleic acid**	**Functional Class: Emulsifier**	
FoodCatNo	**FoodCategory**	**MaxLevel**	**Note**
01.5.2	Milk and cream powder analogues	5000 mg/kg	
01.7	Dairy-based desserts (e.g. pudding, fruit or flavoured yoghurt)	5000 mg/kg	
02.2.2	Fat spreads, dairy fat spreads and blended spreads	4000 mg/kg	
02.3	Fat emulsions mainly of type oil-in-water, including mixed and/or flavoured products based on fat emulsions	10000 mg/kg	
02.4	Fat-based desserts excluding dairy-based dessert products of food category 01.7	2000 mg/kg	
03.0	Edible ices, including sherbet and sorbet	5000 mg/kg	
04.1.2.9	Fruit-based desserts, including fruit-flavoured water-based desserts	2000 mg/kg	
04.1.2.11	Fruit fillings for pastries	2000 mg/kg	
05.1.1	Cocoa mixes (powders) and cocoa mass/cake	5000 mg/kg	97
05.1.4	Cocoa and chocolate products	5000 mg/kg	101
05.1.5	Imitation chocolate, chocolate substitute products	3000 mg/kg	366
05.2	Confectionery including hard and soft candy, nougats, etc. other than food categories 05.1, 05.3 and 05.4	3000 mg/kg	
05.3	Chewing gum	500 mg/kg	
05.4	Decorations (e.g. for fine bakery wares), toppings (non-fruit) and sweet sauces	5000 mg/kg	
06.4.3	Pre-cooked pastas and noodles and like products	500 mg/kg	194
06.5	Cereal and starch based desserts (e.g. rice pudding, tapioca pudding)	5000 mg/kg	
08.4	Edible casings (e.g. sausage casings)	5000 mg/kg	365

FoodCatNo	FoodCategory	MaxLevel	Note
09.2.4.1	Cooked fish and fish products	1000 mg/kg	412
10.2	Egg products	1000 mg/kg	
10.4	Egg-based desserts (e.g. custard)	1000 mg/kg	
12.6.1	Emulsified sauces and dips (e.g. mayonnaise, salad dressing, onion dip)	5000 mg/kg	
12.6.3	Mixes for sauces and gravies	5000 mg/kg	127

Thailand

An updated food additive regulation has been published on 9 October 2020, in which the authorizations have been further aligned with Codex alimentarius GSFA.

FOOD CATEGORIES THAT ARE PERMITTED TO CONTAIN PGPR IN THAILAND

Annex I 426

POLYGLYCEROL ESTERS OF INTERESTERIFIED RICINOLEIC ACID
(พอลิกลีเซอรอลเอสเตอร์ของกรดริซิโนเลอิคที่ถูกอินเตอร์เอสเทอริไฟด์)

INS: 476 Synonym: Glyceran esters of condensed castor oil fatty acids; Polyglycerol esters of polycondensed fatty acids from castor oil Functional Class: Emulsifier

FoodCatNo	Food Category	Maximum use Levels (mg/kg)	Notes	Year Adopted
01.5.2	Milk and cream powder analogues	5000	XS251	2559
01.6.4	Processed cheese	500		2563
01.7	Dairy-based desserts	1500	XS243	2561
02.2.2	Fat spreads, dairy fat spreads and blended spreads for spread or raw materials	4000	359	2559
02.3	Fat emulsions mainly of type oil-in-water	10000		2559
02.4	Fat-based desserts	2000		2559
04.1.2.9	Fruit-based desserts	1000		2561
04.1.2.11	Fruit fillings	2000		2559
05.1.1	Cocoa mixes (powders), cocoa mass and cocoa cake	5000	97	2559
05.1.4	Cocoa and chocolate products	5000	101	2559
05.1.5	Imitation chocolate, chocolate substitute products	3000	366	2559
05.2	Confectionery including candy, nougats and marzipans	3000	XS309R	2559
05.3	Chewing gum	500		2561
05.4	Decorations, toppings and sweet sauces	5000		2559
06.4.3	Pre-cooked pastas and noodles and like products	500	194	2559
06.5	Cereal and starch based desserts	2000		2561
08.4	Edible casings	5000	365	2561
09.2.4.1	Cooked fish and fish products	1000	412	2563
10.2	Egg products	1000		2563
10.4	Egg-based desserts	1000		2563
12.6.1	Emulsified sauces and dips	5000		2563
12.6.3	Mixes for sauces and gravies	5000	127	2563

IACM (International Association of Color Manufacturers)

Name of Substance(s):	*Butterfly Pea Flower Extract*
Question(s) to be answered by JECFA *(Provide a brief justification of the request in case of re-evaluations)*	*Safety assessment and establishment of specifications for use as a color*

1. Proposal for inclusion submitted by: International Association of Color Manufacturers on behalf of Sensient Colors LLC

2. Name of substance; trade name(s); chemical name(s), IUPAC name, C.A.S number (as applicable): Butterfly Pea Flower Extract, proposed INS number 163(xi)
3. Names and addresses of basic producers: Sensient Colors LLC, 2526 Baldwin St. St. Louis, MO 63106
4. Identification of the manufacturer that will be providing data (Please indicate contact person): IACM or its member company can provide the available published data in a submission dossier. IACM contact is Sarah Codrea, Executive Director, IACM, 1101 17th St NW, Suite 700, Washington, DC 20036, email scodrea@iacmcolor.org. Sensient contact is Sue Ann McAvoy, Sensient Colors LLC. 2526 Baldwin St. St Louis, MO. 63106, email: sueann.mcavoy@sensient.com,
5. Justification for use: Used as a food color
6. Food products and food categories within the GSFA in which the substance is used as a food additive or as an ingredient, including use level(s): Butterfly pea flower extract is not currently listed in the GSFA
7. Is the substance currently used in food that is legally traded in more than one country? (please identify the countries); or, has the substance been approved for use in food in one or more country? (please identify the country(ies)) Yes, butterfly pea flower extract is currently approved for use in Canada as an anthocyanin and Thailand and pending publication in the CFR in the US as an exempt from certification color
8. Are you aware of any current impediments in international trade due to lack of a JECFA evaluation and/or Codex standard? If so, please provide details. While there have been no impediments in international trade due to lack of a JECFA evaluation to date for butterfly pea flower extract, the use of a greater number of globally approved naturally derived color extracts is in significant demand. Therefore, a JECFA evaluation will positively impact trade moving forward.
9. Are you aware of risk assessments, either on-going or completed within the last 10 years, at a national or regional level for this additive? If so, please provide the name, address and contact details of the organization having performed the risk assessment. Health Canada, US FDA
10. Please provide details if this food additive is of particular relevance to the livelihood and food safety in developing countries The plant source for this color is currently being grown in Thailand and the Philippines.
11. Please indicate the type of data that are available in the table below.

    Ensure that the available data are directly relevant to the substance of interest in this request. In particular, for substances obtained from natural resources, characterization of the products in commerce and a relevant set of biochemical and toxicological data on such products are essential for JECFA to develop a specifications monograph and the related safety. Such data/information typically include: components of interest; all components of the final products; detailed manufacturing process; possible carryover of substances; etc.

	Data available? (Y / N)
Toxicological data	
(v) Metabolic and pharmacokinetic studies (please specify)	Yes- Bacterial Reverse Mutation Test.
(vi) Short-term toxicity, long-term toxicity/carcinogenicity, reproductive toxicity, and developmental toxicity studies in animals and genotoxicity studies (please specify)	Yes Genotoxicity, 28-Day and 90-day oral rodent studies
(vii) Epidemiological and/or clinical studies and special considerations (please specify)	Based on the findings in the study Oral rodent studies, the highest dose level tested, i.e., 3500 mg/kg bw/day was tolerated and considered to be the NOAEL.
(viii) Other data (please specify)	
Technological data	
(iii) Specifications for the identity and purity of the listed substances (specifications applied during development and toxicological studies; proposed specifications for commerce)	Yes

(iv) Technological and nutritional considerations relating to the manufacture and use of the listed substance	Yes
Dietary exposure assessment data	
(iii) Levels of the listed substance used in food or expected to be used in food based on technological function and the range of foods in which they are used	Yes
(iv) Estimation of dietary exposures based on food consumption data for foods in which the substance may be used.	Yes
Other information: (please specify)	

12. Specify earliest date when data can be made available to JECFA. (Data shall only be submitted in response to a JECFA call for data; **do NOT include any data intended for JECFA to this form**.)

IACM or its member company can provide this data by December 2021.

IOFI (International Organization of the Flavor Industry)

Name of Substance(s):	**See Appendix_IIb_2021CCFA52 for substances to be evaluated by the Procedure for the Safety Evaluation of Flavouring Agents.** **See Appendix_IIc_2021CCFA52.for substances that have updates to the online edition of "Specifications for Flavourings"**
Question(s) to be answered by JECFA *(Provide a brief justification of the request in case of re-evaluations)*	**1. Are the substances in Appendix IIa and IIb of no safety concern at the current levels of exposure?** **2. Do the published specifications for the flavouring agents as listed in Appendix IIc represent what is in global commerce?**

1. Proposal for inclusion submitted by:

   International Organization of the Flavor Industry

2. Name of substance; trade name(s); chemical name(s), IUPAC name, C.A.S number (as applicable):

   See Appendix_IIa_2021CCFA52 and Appendix_IIb_2021CCFA52 for substances to be evaluated by the Revised Procedure for the Safety Evaluation of Flavouring Agents.

   See Appendix_IIc_2021CCFA52.for substances that have updates to the online edition of "Specifications for Flavourings

3. Names and addresses of basic producers:

   International Organization of the Flavor Industry (IOFI). Flavor producers are members of the International Organization of the Flavor Industry (IOFI). All contacts can be made through IOFI.

4. Identification of the manufacturer that will be providing data (Please indicate contact person):

   Sean V. Taylor, Ph.D. (staylor@vertosolutions.net)

5. Justification for use:

   The listed flavouring ingredients are used to improve the quality and enjoyment of food for human consumption.

6. Food products and food categories within the GSFA in which the substance is used as a food additive or as an ingredient, including use level(s):

   Food Categories and Use Levels will be submitted for all new flavouring agents and candidates.

7. Is the substance currently used in food that is legally traded in more than one country?

(please identify the countries); or, has the substance been approved for use in food in one or more country? (please identify the country(ies))

Yes (United Sates, European Union, Latin America and Japan)

8. Are you aware of any current impediments in international trade due to lack of a JECFA evaluation and/or Codex standard? If so, please provide details.

We are currently unaware of any impediments to international trade due to a lack of JECFA evaluation and/or Codex standard for the ingredients listed.

9. Are you aware of risk assessments, either on-going or completed within the last 10 years, at a national or regional level for this additive? If so, please provide the name, address and contact details of the organization having performed the risk assessment.

We are currently unaware of ongoing risk assessments at a national or regional level for these flavourings.

10. Please provide details if this food additive is of particular relevance to the livelihood and food safety in developing countries

11. Please indicate the type of data that are available in the table below.

Ensure that the available data are directly relevant to the substance of interest in this request. In particular, for substances obtained from natural resources, characterization of the products in commerce and a relevant set of biochemical and toxicological data on such products are essential for JECFA to develop a specifications monograph and the related safety. Such data/information typically include: components of interest; all components of the final products; detailed manufacturing process; possible carryover of substances; etc.

	Data available? (Y / N)
Toxicological data	
(i) Metabolic and pharmacokinetic studies (please specify)	**Y**
(ii) Short-term toxicity, long-term toxicity/carcinogenicity, reproductive toxicity, and developmental toxicity studies in animals and genotoxicity studies (please specify)	**Y**
(iii) Epidemiological and/or clinical studies and special considerations (please specify)	**N**
(iv) Other data (please specify)	**N**
Technological data	
(i) Specifications for the identity and purity of the listed substances (specifications applied during development and toxicological studies; proposed specifications for commerce)	**Y**
(ii) Technological and nutritional considerations relating to the manufacture and use of the listed substance	**Y**
Dietary exposure assessment data	
(i) Levels of the listed substance used in food or expected to be used in food based on technological function and the range of foods in which they are used	**Y**
(ii) Estimation of dietary exposures based on food consumption data for foods in which the substance may be used.	**Y**
Other information: (please specify)	

12. Specify earliest date when data can be made available to JECFA. (Data shall only be submitted in response to a JECFA call for data; do **NOT** include any data intended for JECFA to this form.)

The earliest date that the data can be made available to JECFA is December 1, 2021.

Appendix IIb. Sixty-eight (68) flavourings previously submitted to the Codex Committee on Food Additives for inclusion on the JECFA Priority list.

CCFA History	FEMA	CAS	PRINCIPAL NAME	STRUCTURAL CLASS
Submitted at the 43rd CCFA	4074	6321-45-5	Allyl valerate	II

Submitted at the 43rd CCFA	4072	20474-93-5	Allyl crotonate	II
Submitted at the 45th CCFA	4688	105-82-8	1,1-Dipropoxyethane	I
Submitted at the 43rd CCFA	4432	25334-93-4	(+/-) Acetaldehyde ethyl isopropyl acetal	I
Submitted at the 43rd CCFA	4528	6986-51-2	Acetaldehyde ethyl isobutyl acetal	I
Submitted at the 43rd CCFA	4527	5669-09-0	Acetaldehyde di-isobutylacetal	I
Submitted at the 43rd CCFA	4335	10486-19-8	Tridecanal	I
Submitted at the 43rd CCFA	4334	1002-84-2	Pentadecanoic acid	I
Submitted at the 43rd CCFA	4336	638-53-9	Tridecanoic acid	I
Submitted at the 43rd CCFA	4010	123-63-7	Paraldehyde	III
Submitted at the 45th CCFA	4685	7370-92-5	(±)-6-Octahyltetrahydro-2H-pyran-2-one	I
Submitted at the 45th CCFA	4673	7370-44-7	*delta*-Hexadecalactone	I
Submitted at the 45th CCFA	4749	35852-42-7	4-Methylpentyl 4-methylvalerate	I
Submitted at the 45th CCFA	4346	180348-60-1	5-Methylhexyl acetate	I
Submitted at the 45th CCFA	4347	850309-45-4	4-Methylpentyl isovalerate	I
Submitted at the 45th CCFA	4343	25415-67-2	Ethyl 4-methylpentanoate	I
Submitted at the 45th CCFA	4344	2983-38-2	Ethyl 2-ethylbutyrate	I
Submitted at the 45th CCFA	4345	2983-37-1	Ethyl 2-ethylhexanoate	I
Submitted at the 45th CCFA	4735	13552-95-9	(4*Z*,7*Z*)-Trideca-4,7-dienal	I
Submitted at the 45th CCFA	4682	23333-91-7	Octahydro-4,8a-dimethyl-4a(2*H*)-naphthol	I
Submitted at the 45th CCFA	4742	917750-72-2	1-(2-Hydroxy-4-methylcyclohexyl)ethanone	III
Submitted at the 45th CCFA	4687	544409-58-7	(±)-3-Hydroxy-3-methyl-2,4-nonanedione	II
Submiited at the 51st CCFA	4836	137363-86-1	10% solution of 3,4-dimethyl-2,3-dihydrothiophene-2-thiol	III
Submiited at the 51st CCFA	4842	911212-28-7	2,4,5-Trithiaoctane	III
Submiited at the 51st CCFA	4817	38634-59-2	*S*-[(methylthio)methyl]thioacetate	I
Submiited at the 51st CCFA	4870	17564-27-1	2-Ethyl-4-methyl-1,3-dithiolane	II
Submiited at the 51st CCFA	4828	729602-98-6	1,1-Propanedithioacetate	III
Submiited at the 51st CCFA	4824	1658479-63-0	2-(5-Isopropyl-2-methyl-tetrahydrothiophen-2-yl)-ethyl acetate	III
Submiited at the 51st CCFA	4843	1838169-65-5	3-(Allyldithio) butan-2-one	III
Submiited at the 51st CCFA	4822	61407-00-9	2,6-Dipropyl-5,6-dihydro-2H-thiopyran-3-carboxaldehyde	II
Submiited at the 51st CCFA	4823	33368-82-0	1-Propenyl 2-propenyl disulfide	II

Submiited at the 51st CCFA	4782	1679-06-7; 1633-90-5	2(3)-Hexanethiol	I
Submiited at the 51st CCFA	4779	1416051-88-1	(±)-2-Mercapto-5-methylheptan-4-one	I
Submiited at the 51st CCFA	4792	548740-99-4	(±)-3-Mercapto-1-pentanol	I
Submiited at the 51st CCFA	4791	22236-44-8	3-(Acetylthio)hexanal	III
Submiited at the 51st CCFA	4769	851768-51-9	5-Mercapto-5-methyl-3-hexanone	I
Submiited at the 51st CCFA	4730	1241905-19-0	*O*-Ethyl S-1-methoxyhexan-3-yl carbonothioate	III
Submiited at the 51st CCFA	4734	1256932-15-6	3-(Methylthio)-decanal	I
Submiited at the 51st CCFA	4733	1006684-20-3	(±)-2-Mercaptoheptan-4-ol	III
Submiited at the 51st CCFA	4761	75631-91-3	Prenyl thioisovalerate	I
Submiited at the 51st CCFA	4760	53626-94-1	Prenyl thioisobutyrate	I
Submitted at the 45th CCFA	4745	62439-41-2	(±)-6-Methoxy-2,6-dimethylheptanal	I
Submitted at the 45th CCFA	4765	1367348-37-5	Ethyl 5-formyloxydecanoate	III
Submitted at the 45th CCFA	4719	110-15-6	Succinic acid	I
Submiited at the 51st CCFA	4871	1962956-83-7	2-Phenoxyethyl 2-(4-hydroxy-3-methoxyphenyl)acetate	I
Submiited at the 51st CCFA	4826	10525-99-8	3-Phenylpropyl 2-(4-hydroxy-3-methoxy-phenyl)acetate	I
Submiited at the 51st CCFA	4810	60563-13-5	Ethyl-2-(4-hydroxy-3-methoxy-phenyl)acetate	I
Submitted at the 45th CCFA	4750	65405-77-8	*cis*-3-Hexenyl salicylate	I
Submitted at the 45th CCFA	4700	614-60-8	*o*-trans-Coumaric acid	III
Submitted at the 43rd CCFA	4622	61683-99-6	Piperonal propyleneglycol acetal	III
Submitted at the 43rd CCFA	4606	930587-76-1	4-Formyl-2-methoxyphenyl 2-hydroxypropanoate	I
Submitted at the 43rd CCFA	4627	6414-32-0	Anisaldehyde propyleneglycol acetal	III
Submitted at the 43rd CCFA	4435	673-22-3	2-Hydroxy-4-methoxybenzaldehyde	I
Submitted at the 43rd CCFA	4430	99-50-3	3,4-Dihydroxybenzoic acid	I
Submitted at the 43rd CCFA	4431	99-06-9	3-Hydroxybenzoic acid	I
Submitted at the 43rd CCFA	4618	23495-12-7	2-Phenoxyethyl propinate	III
Submitted at the 43rd CCFA	4625	6314-97-2	Phenylacetaldehyde diethyl acetal	I
Submitted at the 43rd CCFA	4629	5468-05-3	Phenylacetaldehyde propyleneglycol acetal	III
Submitted at the 43rd CCFA	4620	122-99-6	2-Phenoxyethanol	III
Submitted at the 43rd CCFA	4619	92729-55-0	Propyl 4-tert-butylphenylacetate	I
Submitted at the 43rd CCFA	4314	61810-55-7	Phenethyl decanoate	I

Submitted at the 43rd CCFA	2860	94-47-3	Phenethyl benzoate	I
Submitted at the 43rd CCFA	4438	591-11-7	*beta*-Angelicalactone	I
Submitted at the 43rd CCFA	4195	87-41-2	Phthalide	III
Submitted at the 45th CCFA	4768	67936-13-4	2,6,10-Trimethyl-9-undecenal	I
Submitted at the 45th CCFA	4612	645-62-5	2-Ethyl-2-hexenal	II
Submitted at the 45th CCFA	4616	13019-16-4	2-Hexylidenehexanal	II
Submitted at the 45th CCFA	4486	5694-82-6	Citral glyceryl acetal	I

Appendix IIc - Priority additions list of 29 compounds proposed for specifications modification by JECFA Priority List to be considered at the 52nd session of the Codex Committee on Food Additives

History	FEMA No	JECFA No	CAS	Principle Name	Most recent Specification Evaluation	Status	Update
Old	3862	489		S-Methyl hexanethioate	2003 (session 61)	Full	CAS number should be 2432-77-1; update the chemical formula and molecular weight
Old	4047	1383	67746-30-9	(E)-2-hexenal diethyl acetal	2004 (Session 63)	Full	The specification requires clarity. 92% 2E-isomer and 3-5% 2Z-isomer
Old	3333	1170	551-08-6	3-Butylidenephthalide	2003 (Session 61)	Full	The assay value is currently not reflective of the material in commerce.
Old	2962	755		Isopulegol	2000 (Session 55)	Full	The currently listed CAS number is for the L-isomer but the substance is a mixture of D and L-isomers, which are better represented by CAS 7786-67-6
Old	3658	1233	470-67-7	1,4-Cineole	2003 (Session 61)	Full	The Specific Gravity and Refractive index do not reflect the material currently in commerce.
Old	3791	1166	4430-31-3	Octahydrocoumarin	2003 (Session 61)	Full	Specific gravity in the database does not reflect the material currently in commerce.
Old	3849	1411	195863-84-4	3-(l-Menthoxy)-2-methylpropane-1,2-diol	2004 (Session 63)	Full	Specific gravity in the database does not reflect the material currently in commerce.
Old	4053	1416	42822-86-6	p-Menthane-3,8-diol	2004 (Session 63)	Full	Specific gravity in the database does not reflect the material currently in commerce.
Old	3927	808	645-13-6	p-Isopropylacetophenone	2001 (Session 57)	Full	Clarity on the positional isomer description
Old	2005	810	100-06-1	Acetanisole	2001 (Session 57)	Full	Clarity on the positional isomer description
Old	3839	1343	502-61-4	Farnesene (alpha and beta)	2004 (Session 63)	Full	The CAS number 688330-26-9 better described the mixture of alpha and beta-farnesene
Old	3478	511		1-Butanethiol	1999 (Session 53)	Full	The CAS number currently in the database does not represent 1-Butanethiol. The CAS no. That does is 109-79-5
Old	3886	1226		8-Ocimenyl acetate	2003 (Session 61)	Full	The CAS number for this substance is 197098-61-0. There currently is not one listed in the database.
Old	3790	493		Methylthio 2-(propionyloxy)propionate	2002 (Session 59)	Full	The CAS number for this substance is 93940-60-4. There currently is not one listed in the database.
Old	3503	520		2, 3, or 10-Mecaptopinane	2000 (Session 55)	Full	The CAS numbers for this substance are 23832-18-0; 6588-78-9; 72361-41-2. There currently is not one listed in the database.

Old	3865	571		Methyl 3-methyl-1-butenyl disulfide	2003 (Session 61)	Full	The CAS number for this substance is 233666-09-6. There is currently not one listed in the database.
Old	3752	933		Potassium 2-(1'-ethoxy)ethoxypropanoate	2001 (Session 57)	Full	The CAS number for this substance is 100743-68-8. There is currently not one listed in the database.
Old	3806	444	156329-82-2	(-)-Menthol 1- and 2-propylene glycol carbonate	1998 (Session 51)	Full	The CAS number currently listed in the database has been deleted by the registry. The current CAS No. is 30304-82-6.
Old	2611	930	598-82-3	Lactic acid	2001 (Session 57)	Full	The CAS number currently listed in the database has been deleted by the registry. The CAS Nos. that represent this substance are 10326-41-7; 79-33-4; 50-21-5
Old	2044	9	7439-76-7	Allyl 10-undecenoate	1996 (Session 46)	Full	There is a typographical error in the CAS number. It should be 7493-76-7
Old	2514	54	1005-86-2	Geranyl formate	2003 (Session 61)	Full	There is a typographical error in the CAS number. It should be 105-86-2
Old	2031	4	142-91-8	Allyl heptanoate	1996 (Session 46)	Full	There is a typographical error in the CAS number. It should be142-19-8.
Old	2040	1	2408-70-0	Allyl propionate	2000 (Session 55)	Full	There is a typographical error in the CAS number. It should be 2408-20-0
Old	3353	1272	151824	3-Hexenyl formate (cis and trans mixture)	2003 (Session 61)	Full	There is a data error in the CAS number field. The correct CAS number is 33467-73-1.
Old	3493	135	34942-91-1	trans-3-Heptenyl acetate	1997 (Session 49)	Full	The CAS number for the trans-isomer is 1576-77-8
Old	4479	1973	5413-49-0	Ethyl levulinate propylene glycol	2010 (Session 73)	Full	The correct CAS number is 57197-36-1.
Old	2721	216	2412-24-1	Methyl 4-methylvalerate	2000 (Session 55)	Full	The correct CAS number is 2412-80-8
Old	2390	273	1321-89-7	2,6-Dimethyloctanal	2001 (Session 57)	Full	The correct CAS number is 7779-07-9
Old	3809	506	109-79-5	Menthone-8-thioacetate	1999 (Session 53)	Full	The current CAS number in the database is for a different substance. The correct CAS number is 94293-57-9.

Part D: Replies to CL 2020/37-FA Annex 4 - Confirmation of previous requests and data availability.

Colombia

Confirmation of previous request and data availability	
Name of Substance	Jagua (Genipin-Glycine) Blue
Is the request still in effect? (yes / no)	YES
Are the data available? (yes / no)	All requested documents were presented. The information requested in page 8 of CL 2020/37-FA, is available since December 2019 • Characterization of the low molecular weight components of the "blue polymer"; • A validated method for the determination of dimers; and • Data on concentrations of dimers from five batches of the commercial products
Change to data provider? (yes/no)	NO

Intertek

Confirmation of previous request and data availability	
Name of Substance (as it appears in Annex 3):	Rosemary extract
Is the request still in effect? (yes / no)	Yes Rosemary extract (INS 392) was first evaluated by the Joint FAO/WHO Expert Committee on Food Additives (JECFA) at its 82nd meeting in 2016. Although the Committee established an acceptable daily intake (ADI) for rosemary extract at the 82nd meeting, the ADI was designated as 'temporary' pending a request for provision of additional data pertaining to the reproductive and developmental toxicity of rosemary extract. Data in response to the request were submitted to the Committee and evaluated at the 87th meeting (June 2019). Since the 52nd Meeting of the Codex Committee on Food Additives (CCFA), which was originally scheduled to take place from 2 to 6 March 2020, was subsequently postponed, and is currently scheduled to be held from 8 to 12 March 2021. To-date, the outcomes of the 87th JECFA meeting have not been considered by CCFA; however, the *Summary and Conclusions* report from the 87th JECFA meeting (as issued on 26 June 2019) indicates that *"the new studies provided evidence for the absence of reproductive toxicity, but not for the absence of developmental toxicity*". It is further stated that while the temporary ADI as previously set will be retained, JECFA requests submission of additional studies on the developmental toxicity of rosemary extract and studies to elucidate whether the effects noted on rodent pup thyroid hormone levels in the study evaluated at the 87th meeting can be replicated. The data are requested by the end of 2021. Based on the Committee's request for the submission of the additional data by end of 2021, it is therefore expected that the requested data would be scheduled for evaluation at the JECFA meeting in June 2022. Although rosemary extract is presently not listed in Table 1 (LIST OF SUBSTANCES USED AS FOOD ADDITIVES PROPOSED FOR EVALUATION BY JECFA) of Annex 3 (PRIORITY LIST OF SUBSTANCES PROPOSED FOR EVALUATION BY JECFA) of CL 2020/37-FA, Table 1 appears to

	be identical to Table 1 of CL 2019/41-FA, and therefore, appears not to have been updated following the 87th JECFA. As such, although a request for rosemary extract is not presently included in Annex 3 of CL 2020/37-FA, this is to confirm that the data providers are committed to providing the additionally requested data for rosemary extract in time for evaluation by JECFA at the meeting in June 2022. Specifically, the data providers are in the process of conducting 2 studies to address the Committee's request from the 87th meeting of JECFA. At this stage it is anticipated that the final report for 1 of the 2 studies will be completed by December 2021; the audited draft for the other study is anticipated to be available January 2022. While the data providers are aware that the additional information is requested to be submitted by the end of 2021, since the second study will be completed soon thereafter, we would like to request a short extension to the provision of the data to take account of the completion of the second study, so that the JECFA evaluation can take place at the designated time of June 2022.
Are the data available? (yes / no)	*<If yes, specify the earliest date on which the data can be made available>* Yes; data to be provided by end of 2021/beginning of 2022.
Change to data provider? (yes / no)	*<If yes, specify the new data provider including contact person>* No

IOFI (International Organization of the Flavor Industry)

Confirmation of previous request and data availability	
Name of Substance (as it appears in Annex 3):	**See Annex 2 and Appendix IIa for updated request.**
Is the request still in effect? (yes / no)	**Yes, for the groups of flavourings that JECFA did not evaluate at the 89th meeting.**
Are the data available? (yes / no)	***Yes, the data are available***
Change to data provider? (yes/no)	**Yes**

Appendix IIa. Sixty-one (61) flavourings newly proposed for inclusion on the JECFA Priority List to be considered at the 52nd session of the Codex Committee on Food Additives

CCFA History	FEMA	CAS	PRINCIPAL NAME	STRUCTURAL CLASS
New 52nd	4902	22122-36-7	3-Methyl-2(5*H*)-furanone	III
New 52nd	4915	2142634-65-7	(5*Z*)-3,4-Dimethyl-5-propylidene-2(5*H*)-furanone	III
New 52nd	4927	934534-30-2	4,7-Decadienal	I
New 52nd	4887	56219-03-5	*cis*-9-Dodecenal	I
New 52nd	4918	68820-38-2	Tridec-5-enal	I
New 52nd	4886	126745-61-7	*cis*-6-Dodecenal	I
New 52nd	4904	115018-39-8	*trans*-Tetradec-4-enal	I
New 52nd	4905	2119671-25-7	2,6-Dimethylheptenyl formate	I
New 52nd	4885	68820-34-8	*trans*-5-Dodecenal	I
New 52nd	4898	41547-29-9	*trans*-5-Octenal	I
New 52nd	4891	2088117-65-9	(*E*)-3-Methyl-4-dodecenoic acid	I
New 52nd	4917	22032-47-9	(*Z*)-9-Dodecenoic acid	I
New 52nd	4926	65398-36-9	(*Z*)-8-Pentadecenal	I
New 52nd	4841	16676-96-3	*cis*-5-Dodecenyl acetate	I
New 52nd	4784	57548-36-4	(±)-4-Hydroxy-6-methyl-2-heptanone	i
New 52nd	4939	2180135-09-3	*S*-Methyl 5-(1-ethoxyethoxy)decanethioate	I

New 52nd	4894	116229-37-9	2-Mercapto-3-methyl-1-butanol	I
New 52nd	4883	556-27-4	*S*-Allyl-*L*-cysteine sulfoxide	II
New 52nd	4935	98139-71-0	3-Methylbutane-1,3-dithiol	III
New 52nd	4916	124831-34-1	2-Methyl-3-butene-2-thiol	I
New 52nd	4938	2180135-08-2	S-Methyl 5-(1-ethoxyethoxy)tetradecanethioate	I
New 52nd	4901	2097608-89-2	*O*-Ethyl *S*-(3-methylbut-2-en-1-yl)thiocarbonate	I
New 52nd	4900	64580-54-7	Hexyl propyl disulfide	I
New 52nd	4914	24963-39-1	bis-(3-Methyl-2-butenyl)disulfide	III
New 52nd	4889	3877-15-4	Methyl propyl sulfide	I
New 52nd	4903	26516-27-8	Ethyl 3-methyl-2-oxopentanoate	I
New 52nd	4804	61789-44-4	Mixture of Ricinoleic acid, Linoleic acid, and Oleic acid	
New 52nd	4930	159017-89-7	4-Isopropoxycinnamaldehyde	I
New 52nd	4888	1945993-01-0; 828265-08-3	Mixture of 5-hydroxy-4-(4´-hydroxy-3´-methoxyphenyl)-7-methylchroman-2-one and 7-hydroxy-4-(4´-hydroxy-3´-methoxyphenyl)-5-methylchroman-2-one	III
New 52nd	4879	21145-77-7	1-(3,5,5,6,8,8-Hexamethyl-5,6,7,8-tetrahydronaphthalen-2-yl)ethanone	II
New 52nd	4893	4912-58-7	2-Ethoxy-4-(hydroxymethyl)phenol	I
New 52nd	4892	4707-61-3	*cis*-2-Hexylcyclopropaneacetic acid	II
New 52nd	4890	27841-22-1	3-*p*-Menthen-7-al	I
New 52nd	4928	554-14-3	2-Methylthiophene	II
New 52nd	4839	163460-99-9 163461-01-6	Mixture of 3- and 4-butyl-2-thiophenecarboxyaldehyde	II
New 52nd	4813	1612888-42-2	2-(5-Isopropyl-2-methyltetrahydrothiophen-2-yl)ethanol	II
New 52nd	4884	1569-60-4	6-Methyl-5-hepten-2-ol	I
New 52nd	4827	6090-09-1	1-(4-Methyl-3-cyclohexen-1-yl)-ethanone	I
New 52nd	4869	886449-15-6	4-(*l*-Menthoxy)-2-butanone	II
New 52nd	4844	118026-67-8	(2*E*,4*E*)-2,4-Decadien-1-ol acetate	I
New 52nd	4747	91212-78-1	(±)-2,5-Undecadien-1-ol	II
New 52nd	4913	18478-46-1	3,7-Dimethyl-2-methyleneoct-6-en-1-ol	II
New 52nd	4785	25234-33-7	2-Octyl-2-dodecenal	II
New 52nd	4786	13893-39-5	2-Hexyl-2-decenal	II
New 52nd	4929	60857-05-8	4-Methylidene-2-(2-methylprop-1-enyl)oxane	III
New 52nd	4920	220462-51-9	1-Ethyl-2-(1-pyrrolylmethyl)pyrrole	III
New 52nd	4832	108715-62-4	2-(3-Benzyloxypropyl)pyridine	III
New 52nd	4829	616-45-5	2-Pyrrolidone	I
New 52nd	4818	1370711-06-0	*trans*-1-ethyl-2-methylpropyl 2-2-butenoate	I
New 52nd	4867	18374-76-0	(3*S*,5*R*,8*S*)-3,8-Dimethyl-5-prop-1-en-2-yl-3,4,5,6,7,8-hexahydro-2*H*-azulen-1-one	II
New 52nd	4840	38427-80-4	Tetrahydronootkatone	II
New 52nd	4807	1078-95-1	Pinocarvyl acetate	II
New 52nd	4906	36687-82-8	*L*-Carnitine tartrate	III
New 52nd	4868	61315-75-1	4-(4-Methyl-3-penten-1-yl)-2(5*H*)-furanone	III
New 52nd	4896	2186611-08-3	*N*-(2-Hydroxy-2-phenylethyl)-2-isopropyl-5,5-dimethylcyclohexane-1-carboxamide	III

New 52nd	4882	1857330-83-9	*N*-(4-(Cyanomethyl)phenyl)-2-isopropyl-5,5-dimethylcyclohexanecarboxamide	III
New 52nd	4899	1622458-34-7; 2079034-28-7	*N*-(1-((4-amino-2,2-dioxido-1*H*-benzo[c][1,2,6]thiadiazin-5-yl)oxy)-2-methylpropan-2-yl)-2,6-dimethylisonicotinamide	III
New 52nd	4880	2015168-50-8	2-(4-Ethylphenoxy)-*N*-(1*H*-pyrazol-3-yl)-*N*-(thiophen-2-ylmethyl)acetamide	III
New 52nd	4881	1857331-84-0	*N*-(3-Hydroxy-4-methoxyphenyl)-2-isopropyl-5,5-dimethylcyclohexanecarboxamide	III
New 52nd	4877	76733-95-4	(*E*)-3-(3,4-Dimethoxyphenyl)-*N*-[2-(3- methoxyphenyl)-ethyl]-acrylamide	III
New 52nd	4835	877207-36-8	2,4-Dihydroxy-*N*-[(4-hydroxy-3-methoxyphenyl)methyl]benzamide	III