# CODEX ALIMENTARIUS COMMISSION ${f E}$





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Agenda Item 9a

CX/FA 11/43/18

January 2011

# JOINT FAO/WHO FOOD STANDARDS PROGRAMME CODEX COMMITTEE ON FOOD ADDITIVES

**Forty-third Session** 

Xiamen (Fujian Province), China, 14-18 March 2011

# PROPOSALS FOR ADDITIONS AND CHANGES TO THE PRIORITY LIST OF FOOD ADDITIVE PROPOSED FOR EVALUATION BY JECFA (REPLIES TO CL 2010/10-FA)

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

Denmark, Japan, Sudan, United States of America, CEFIC and ISDI

#### **DENMARK**

In response to CL 2010/10-FA, the Danish Veterinary and Food Administration would like to request the 43<sup>rd</sup> CCFA that two enzymes be included on the "Priority List of Food Additives Proposed for Evaluation by JECFA", in accordance with agenda item 9a, CX/FA 11/43/18.

For your information The Danish Veterinary and Food Administration has already approved the two enzymes after the SCF guidelines with all the necessary toxicological data.

# Annex 2: FORM ON WHICH INFORMATION ON THE COMPOUND TO BE EVALUATED BY JECFA ISPROVIDED

#### 1. Proposal for inclusion submitted by:

Danish Veterinary and Food Administration.

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

Compound: Serine proteinase from *Nocardiopsis prasina* expressed in *Bacillus licheniformis*.

Trade name: iZyme ® B

Chemical name: microbial chymotrypsin; CAS 37259-58-8, EC 3.4.21.1

#### 3. Names and addresses of basic producers:

Novozymes A/S Krogshøjvej 36 DK-2880 Bagsværd

Denmark

#### 4. Has the manufacturer made a commitment to provide data?

Novozymes A/S commits to provide data to support the proposal for inclusion of the serine proteinase in the list of substances to be evaluated by JECFA.

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

Novozymes A/S Krogshøjvej 36 DK-2880 Bagsværd

Denmark

Attn.: Christina Westphal

# cwch@novozymes.com

+45 4446 2491

#### 6. Justification for use:

The active enzyme is a serine proteinase/chymotrypsin (EC 3.4.21.1), which is used to hydrolyze proteins. It is an endoprotease with preferred cleavage site at Tyr+, Trp+, Phe+, Leu+ residues in proteins and therefore well suited for controlled hydrolysis of proteins.

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

The enzyme preparation is intended to be used as a processing aid for production of partly or extensively hydrolyzed proteins. The resulting protein hydrolyzate may in turn be used for various applications as ingredients in food and/or beverages.

The commercial product, iZyme B is standardized to an enzyme activity of 75 KPROT/g. The recommended dosage of iZyme B is up to 1500 KPROT/g per kg protein dry matter, corresponding to a dosage of up to 20g of iZyme B per kg processed protein. The resulting protein hydrolyzate will typically be used at levels up to 10% in food or 3.5% in beverages.

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

A US GRAS (Generally Recognized As Safe) self determination for the intended use has been done. iZyme B was approved in Denmark in 2010.

# 9. List of data available (please check, if available)

# 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
- (iv) Other data

The following studies were performed:

- 13 weeks oral toxicity study in rats
- Test for mutagenic activity (Ames Test)
- Human lymphocyte cytogenetic assay

The main conclusions of the safety studies can be summarized as follows:

Oral administration to rats of up to 5 ml/kg body weight/day (equivalent to 287469 PROT/kg body weight/day or 500.1 mg TOS¹/kg bw/day) for 13 weeks did not reveal any significant toxic effects attributable to the test substance and is considered the No Ob-served Adverse Effect Level (NOAEL).

The protease preparation showed no mutagenic activity in either a bacterial reverse mutation assay (Ames Test) or in investigations for both structural and numerical chromosome aberrations in human lymphocytes in vitro.

The safety studies described above were all performed on a liquid protease enzyme concentrate. This batch was obtained by mixing of 3 sub batches, each produced according to the description given in section 3, omitting stabilization and standardization.

<sup>&</sup>lt;sup>1</sup> TOS = Total Organic Solids, defined as: 100% - water - ash - diluents

# Technological data

(i) Specifications for the identity and purity of the listed compounds (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 compound

The protease enzyme preparation complies with the purity criteria recommended for enzyme preparations in the 6<sup>th</sup> edition of Food Chemicals Codex, 2008 (Online edition). In addition to this, the enzyme preparation also conforms to the General Specifications and Considerations for Enzyme Preparations Used in Food Processing (2006) as proposed by the Joint FAO/WHO Expert Committee on Food Additives in Combined Compendium of Food Additive Specifications, Online edition.

#### Intake assessment data

- (i) Levels of the listed compound 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 compound may be used.

iZyme B is to be used for production of protein hydrolysates in dosages up to a maximum of 20 g of iZyme B per kg processed protein. iZyme B will be standardized to an activity of 75KPROT/g and has an approximate content of 7.7% TOS (Total Organic Substances from the fermentation, mainly protein and carbohydrate components), giving an overestimate of 1.54 g TOS/kg protein hydrolysate.

Because the resulting protein hydrolysates may be used for a variety of applications as ingredients in food and/or beverages, the estimation of human consumption is based on the Budget method2.

In order to demonstrate a worst case calculation, an exaggerated human intake is estimated using the following assumptions.

- (a) It is assumed that all processed foods and beverages contain protein hydrolysates produced using iZyme B as a processing aid, used at the highest recommended dosage.
- (b) According to the Budget method, a conservative estimate for the food intake is 25 g per kg body weight per day of which processed food is 50% of the food intake or 12.5 g per kg body weight per day. It is further assumed that all processed food contains 10% protein hydrolysates.
- (c) Also according to the Budget method, a conservative estimate for the beverage (non-milk) intake is 100 ml per kg body weight per day of which processed beverages (soft drink) is 25% of the non-milk beverage intake or 25 g per kg body weight per day. It is further assumed that all processed beverages contain 3.5% protein hydrolysates.
- (d) The calculation is made assuming that all TOS remains in the final product. iZyme B contains 7.7% TOS.

Based on the estimated intakes for processed food of 12.5 g per kg body weight per day and for processed beverages of 25 g per kg body weight per day, the intake of iZyme B corresponds to 1540 x (0.0125 x 0.1 + 0.025 x 0.035) = 3.27 mg TOS per kg body weight per day.

Other information as necessary

# 10. Date on which data could be submitted to JECFA: November 2011

# Annex 2: FORM ON WHICH INFORMATION ON THE COMPOUND TO BE EVALUATED BY JECFA IS PROVIDED

# 1. Proposal for inclusion submitted by:

Danish Veterinary and Food Administration.

<sup>&</sup>lt;sup>2</sup> ILSI Europe Food Chemical Intake Task Force, April 1997. An Evaluation of the Budget Method for Screening Food Additive Intake

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

Compound: Serine proteinase from Fusarium oxysporum expressed in Fusarium venenatum.

Trade name: Novozym ® 12001

microbial trypsin; CAS 9002-07-7, EC 3.4.21.4 Chemical name:

#### 3. Names and addresses of basic producers:

Novozymes A/S Krogshøjvej 36 DK-2880 Bagsværd

Denmark

# 4. Has the manufacturer made a commitment to provide data?

Novozymes A/S commits to provide data to support the proposal for inclusion of the serine proteinase in the list of substances to be evaluated by JECFA.

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

Novozymes A/S Krogshøjvej 36 DK-2880 Bagsværd Denmark

Attn.: Peter Hvass phva@novozymes.com +45 4446 3610

#### 6. Justification for use:

The active enzyme is a serine proteinase/trypsin (EC 3.4.21.4), which is used to hydrolyze proteins. It is an endoprotease with preferred cleavage site at Arginine and Lysine residues in proteins and therefore well suited for controlled hydrolysis of proteins.

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

The enzyme preparation is intended to be used as a processing aid for production of partly or extensively hydrolyzed proteins. The resulting protein hydrolyzate may in turn be used for various applications as ingredients in food and/or beverages.

The commercial product, Novozym 12001 is standardized to an enzyme activity of 60 KMTU/g. The recommended dosage of Novozym 12001 is up to 720 KMTU per kg protein dry matter, corresponding to a dosage of up to 12 g of Novozym 12001 per kg processed protein. The resulting protein hydrolyzate will typically be used at levels up to 10% in food or 3.5% in beverages.

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

A US GRAS (Generally Recognized As Safe) self determination for the intended use has been done. Novozym 12001 was approved in Denmark in 2008. The enzyme is included in the 2010 amendment to the French positive list.

#### 9. List of data available (please check, if available)

#### 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
- (iv) Other data

The following studies were performed:

- 13 weeks oral toxicity study in rats
- Test for mutagenic activity (Ames Test)
- Human lymphocyte cytogenetic assay

The main conclusions of the safety studies can be summarized as follows:

Oral administration to rats of up to 5 ml/kg body weight/day (equivalent to 603 KMTU/kg bw/day or 581mg TOS<sup>3</sup>/kg bw/day) for 13 weeks did not reveal any significant toxic effects attributable to the test substance and is considered the No Ob-served Adverse Effect Level (NOAEL).

The protease preparation showed no mutagenic activity in either a bacterial reverse mutation assay (Ames Test) or in investigations for both structural and numerical chromosome aberrations in human lymphocytes in vitro.

The safety studies described above were all performed on a liquid protease enzyme concentrate. This batch was obtained by mixing of 3 sub batches, each produced according to the description given in section 3, omitting stabilization and standardization.

## Technological data

- (i) Specifications for the identity and purity of the listed compounds (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 compound

The protease enzyme preparation complies with the purity criteria recommended for enzyme preparations in the 6<sup>th</sup> edition of Food Chemicals Codex, 2008 (Online edition). In addition to this, the enzyme preparation also conforms to the General Specifications and Considerations for Enzyme Preparations Used in Food Processing (2006) as proposed by the Joint FAO/WHO Expert Committee on Food Additives in Combined Compendium of Food Additive Specifications, Online edition.

#### Intake assessment data

- (i) Levels of the listed compound 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 compound may be used.

Novozym 12001 is to be used for production of protein hydrolysates in dosages up to a maximum of 12 g of Novozym 12001 per kg processed protein. Novozym 12001 has an activity of 60 KMTU/g and an approximate content of 4% TOS (Total Organic Substances from the fermentation, mainly protein and carbohydrate components), giving an overestimate of 480 mg TOS/kg protein hydrolysate.

Because the resulting protein hydrolysates may be used for a variety of applications as ingredients in food and/or beverages, the estimation of human consumption is based on the Budget method4.

In order to demonstrate a worst case calculation, an exaggerated human intake is estimated using the following assumptions.

It is assumed that all processed foods and beverages contain protein hydrolysates produced using Novozym 12001 as a processing aid, used at the highest recommended dosage.

According to the Budget method, a conservative estimate for the food intake is 25 g per kg body weight per day of which processed food is 50% of the food intake or 12.5 g per kg body weight per day. It is further assumed that all processed food contains 10% protein hydrolysates.

<sup>&</sup>lt;sup>3</sup> TOS = Total Organic Solids, defined as: 100% - water - ash - diluents

<sup>&</sup>lt;sup>4</sup> ILSI Europe Food Chemical Intake Task Force, April 1997. An Evaluation of the Budget Method for Screening Food Additive Intake

Also according to the Budget method, a conservative estimate for the beverage (non-milk) intake is 100 ml per kg body weight per day of which processed beverages (soft drink) is 25% of the non-milk beverage intake or 25 g per kg body weight per day. It is further assumed that all processed beverages contain 3.5% protein hydrolysates.

The calculation is made assuming that all TOS remains in the final product. Novozym 12001 contains 4% TOS.

Based on the estimated intakes for processed food of 12.5 g per kg body weight per day and for processed beverages of 25 g per kg body weight per day, the intake of Novozym 12001 corresponds to 480 x  $(0.0125 \times 0.1 + 0.025 \times 0.035) = 1.02$  mg TOS per kg body weight per day.

Other information as necessary

#### 10. Date on which data could be submitted to JECFA: November 2011

#### **JAPAN**

# Annex 2: FORM ON WHICH INFORMATION ON THE COMPOUND TO BE EVALUATED BY JECFA IS PROVIDED

- 1. Proposal for inclusion submitted by: JAPAN
- 2. Name of compound; trade name(s); chemical name(s): Titanium Dioxide; INS No. 171
- 3. Names and addresses of basic producers: N.A.
- 4. Has the manufacturer made a commitment to provide data: N.A.
- 5. Identification of the manufacturer that will be providing data:

Dr. Kyoko Sato, Head of the First Laboratory, Department of Food Additives, National Institute of Health Sciences, Tokyo Japan TEL: +81-3-3700-9403 FAX: +81-3-3700-9403 E-mail: ksato@nihs.go.jp

1EL. +01-3-3/00-3403 TAA. +01-3-3/00-3403 E-man. <u>ksato@mis.g</u>

- **6. Justification for use**: A colouring agent of white colour
- 7. Food products and food categories within the GSFA in which the compound is used as a food additive or as an ingredient, including use level(s):

Titanium dioxide (INS No. 171) is a food additive that is included in Table 3 of the GSFA, and as such may be used in the following foods under the conditions of good manufacturing practices (GMP) as outlined in the Preamble of the Codex GSFA. Note that food categories listed in the Annex to Table 3 were excluded accordingly.

8. Is the compound currently used in food that is legally traded in more than one country:

Yes/ Titanium Dioxide is permitted for use in a wide range of countries (the European Union, the United State, and etc.).

## 9. List of data available:

# Technological data

(i) Revision of specifications

Changes of purity tests (aluminium oxide and silicon dioxide) and the assay.

The current purity tests for SiO2 uses a harmful chemical reagent, concentrated hydrofluoric acid and has poorly-reproducible.

Japan would like to propose an alternative method for the detection of Al<sub>2</sub>O<sub>3</sub>, SiO<sub>2</sub> and TiO<sub>2</sub> in titanium dioxide using inductively coupled plasma (ICP) atomic emission spectrometry without hydrofluoric acid.

#### 10.Date on which data could be submitted to JECFA: February 2011

#### **SUDAN**

# Annex 2: FORM ON WHICH INFORMATION ON THE COMPOUND TO BE EVALUATED BY JECFA IS PROVIDED

- **1. Proposal for inclusion submitted by**: Republic of Sudan, Sudanese Standards & Metrology Organization (SSMO)
- **2. Name of compound; trade name(s); chemical name(s):** *Acacia polyacantha* var. *Campylacantha* , kakamut gum, arabino- galactan protein complex;
- 3. Names and addresses of basic producers: Natural product from Republic of Sudan
- 4. Has the manufacturer made a commitment to provide data? Yes
- 5. Identification of the manufacturer that will be providing data (Please indicate contact person):

Data will be provided by Sudanese Standards & Metrology Organization (SSMO) - Contact Person is MAYADA M. E.A.ELKARIUM E.MAIL: maelkareem@hotmail.com

#### 6. Justification for use:

The gum from *Acacia polyacantha* is a natural product which belongs to *Acacia senegal* complex, that has been used in food industry in U.S.A, France, Finland & Italy. Mainly in confectionary.

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

It has got similar functional properties as Gum Arabic Acacia senegal. Therefore, it could be used in most of the products in which gum Arabic is used

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

Reference can be made to Leaf international Sweden, Finland, Italy, CNI France, KERRY Ingrediets UK & TIC USA. It has been used locally in Sudan in food and folk medicine for hundreds of years. The compound is currently used in confectionary which is legally traded in the countries mentioned above.

9. List of data available (please check, if available):

# Toxicological data

- (i) Metabolic and pharmacokinetic studies: Not Available
- (ii) Short-term toxicity, long-term toxicity/carcinogenicity, reproductive toxicity, and developmental Not available

Toxicity studies in animals and genotoxicity studies: there is cytogenetics toxicological studies

- (iii) Epidemiological and/or clinical studies and special considerations not available
- (iv) Other data

# Technological data

- (i) Specifications for the identity and purity of the listed compounds (specifications applied during development and toxicological studies; proposed specifications for commerce) fully available
- (ii) Technological and nutritional considerations relating to the manufacture and use of the listed compound: natural product used to function as emulsifier, stabilizer, thickener, bulking agent, soluble fiber, and binder.

### Intake assessment data:

(i) Levels of the listed compound used in food or expected to be used in food based on technological function and the range of foods in which they are used: Expected to be used at similar levels as gum arabic E414

(ii) Estimation of dietary intakes based on food consumption data for foods in which the compound may be used. Expected to be within the same range of gum arabic

## Other information as necessary

#### 10.Date on which data could be submitted to JECFA:

15 February 2011

Literature regarding:

1/ full botanical description

2/ detailed chemical analysis

3/ proposed specifications

4/ cytogenetic toxicological studies

5/ volume in international trade including importing countries

#### UNITED STATES OF AMERICA

This responds to CL 2010/10-FA (April 2010), Request for Information and Comments on Priority List of Food Additives Proposed for Evaluation by JECFA. The United States appreciates the opportunity to provide the following comments for consideration at the forthcoming 43<sup>rd</sup> Session of the Codex Committee on Food Additives (CCFA).

#### Addition to the JECFA Priority List

The United States proposes the addition of 52 flavors to the current listing of 133 flavors currently on the JECFA priority list.<sup>5</sup> The required information (as prescribed in Annex 2 of CL 2010/10-FA) for the flavors is included as an Appendix to this comment. The list of flavors is provided as a single table (Annex A) sorted by Chemical Group consisting of the 133 flavors currently on the Priority List plus the proposed 52 new flavors.

#### Appendix - Required Information based on Annex 2 of CL 2010/10-FA

List of 185 flavors (comprising 52 new proposals and 133 flavors currently on the Priority List)

- 1. Proposal for inclusion submitted by: United States of America
- 2. Name of compound; trade name(s); chemical name(s):

List of 185 flavors (see Annex A for list of chemical names)

# 3. Names and addresses of basic producers:

Producer contact information to be submitted. Flavor producers are members of the International Organization of the Flavour Industry (IOFI). All contacts can be made through IOFI.

- 4. Has the manufacturer made a commitment to provide data? Yes
- 5. Identification of the manufacturer that will be providing data (Please indicate contact person):

International Organization of the Flavour Industry (IOFI) Brussels, Belgium
Thierry Cachet, Ph.D. (Science Director)
6 Avenue des Arts
B1210 Brussels, Belgium
P: 0113222142052
tcachet@iofiorg.org

<sup>5</sup> Annex 3 of CL 2010/10-FA indicates that 134 flavors are currently on the JECFA Priority List. We propose that one of the flavors (Glucosyl steviol glycosides) currently on the JECFA Priority List be removed from consideration. Thus, only 133 flavors from the current JECFA Priority List are included in the 185 flavors (52 new flavors and 133 from the current JECFA Priority list) put forward for consideration in this proposal.

#### 6. Justification for use:

Flavoring ingredients in foods for human consumption

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

Natural occurrence, Food Categories and Use Levels to be submitted in response to JECFA's call for data.

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

Yes (USA, EU, Japan)

# 9. List of data available (please check, if available)

## Toxicological data

- (i) Metabolic and pharmacokinetic studies Yes
- (ii) Short-term toxicity. long-term toxicity/carcinogenicity, reproductive toxicity, and developmental toxicity studies in animals and genotoxicity studies **Yes**
- (iii) Epidemiological and/or clinical studies and special considerations Yes
- (iv) Other data Yes where relevant

#### Technological data

- (i) Specifications for the identity and purity of the listed compounds (specifications applied during development and toxicological studies; proposed specifications for commerce)  $\mathbf{Yes}$
- (ii) Technological and nutritional considerations relating to the manufacture and use of the listed compound **Yes where relevant**

#### Intake assessment data

- (i) Levels of the listed compound 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 intakes based on food consumption data for foods in which the compound may be used. **Yes**

#### Other information as necessary

## 10. Date on which data could be submitted to JECFA:

December 31, 2011

Annex A. List of 185 flavors for inclusion on the JECFA Priority List

Chemical			FEMA			
Group	Priority	Order	No	CAS No	Name	
ALIPHATIC	C AND ARC	OMATIC A	AMIDES (			
				504-48-3;	(2E,6E/Z,8E)-N-(2-Methylpropyl)-2,6,8-	
	1	1	4668	2539457-4	decatrienamide	
					(2S,5R)-N-[4-2-Amino-2-oxoethyl)phenyl]-5-	
	1	2	4684	1119711-29-3	methyl-2-(propan-2-yl)cyclohexanecarboxamide	
					(1R,2S,5R)-N-(4-Methoxyphenyl)-5-methyl-2-(1-	
	1	3	4681	68489-09-8	methylethyl)cyclohexanecarboxamide	
					N-Cyclopropyl-5-methyl-2-	
	1	4	4693	73435-61-7	isopropylcyclohexanecarbonecarboxamide	
					N-(2-Methylcyclohexyl)-2,3,4,5,6-	
	1	5	4678	1003050-32-5	pentafluorobenzamide	
					3[(4-Amino-2,2-dioxido-1H-2,1,3-	
					benzothiadiazin-5-yl)oxy]-2,2-dimethyl-N-	
	1	6	4701	1093200-92-0	propylpropanamide	

Chemical			FEMA					
Group	Priority	Order	No	CAS No	Name			
ALIPHATIC THIOLS AND SULFIDES								
20	2	1	4694	616-31-9	3-Pentanethiol			
20	2	2	4698	33959-27-2	4-Mercapto-3-methyl-2-butanol			
20	2	3	4714	33441-50-8	Ethyl 2-Mercapto-2-methylpropionate			
20	2	4	4707	61837-77-2	1-(Methylthio)-3-octanone			
20	2	5	4670	88497-17-0	1,1-Propanedithiol			
20	2	6	4696	122861-78-3	1-Methyldithio-2-propanone			
20	2	7	4677	1064678-08-5	(±)-4-Methyl-2-propyl-1,3-oxathiane			
	SULFUR-SUBSTITUTED FURAN DERIVATIVES							
35	3	1	4320	333384-99-9	2-Methyl-3-furyl methylthiomethyl disulfide			
					2-Methyl-3-furyl 2-methyl-3-tetrahydrofuryl			
35	3	2	4545	252736-40-6	disulfide			
35	3	3	4535	99253-91-5	2-Tetrahydrofurfuryl 2-mercaptopropionate			
35	3	4	4538	94278-26-9	Methyl 3-(furfurylthio)propionate			
35	3	5	4501	915971-43-6	3-[(2-Methyl-3-furyl)thio]butanal			
35	3	6	4676	58066-86-7	1-(2-Furfurylthio)-propanone			
35	3	7	4683	26486-13-5	2-Methyl-4,5-dihydrofuran-3-thiol			
35	3	8	4686	252736-41-7	(±)-2-Methyltetrahydrofuran-3-thiol acetate			
35	3	9	4697	59303-05-8	5-Methylfurfurylmercaptan			
		L AND R		SUBSTANCES				
23	4	1	4537	4359-54-0	Furfural propyleneglycol acetal			
23	4	2	4542	13493-97-5	Furfuryl formate			
23	4	3	4539	39252-05-6	Furfuryl decanoate			
23	4	4	4544	3857-25-8	5-Methylfurfuryl alcohol			
23	4	5	4541	53282-12-5	(E)-Ethyl 3-(2-furyl)acrylate			
23	4	6	4540	1197-40-6	di-2-Furylmethane			
35	3	7	4543	4265-25-2	2-Methylbenzofuran			
				C COMPOUNDS				
34	5	1	4387	4861-58-9	2-Pentylthiophene			
34	5	2	4645	632-15-5	3,4-Dimethylthiophene			
34	5	3	4642	636-72-6	2-Thienylmethanol			
34	5	4	4643	13679-74-8	2-Acetyl-5-methylthiophene			
34	5	5	4646	94089-02-8	1-(2-Thienyl)ethanethiol			
34	5	6	4641	37645-62-8	2-Pentylthiazole			
34	5	7	4388	19961-52-5	5-Ethyl-2-methylthiazole			
34	5	8	4695	41803-21-8	, ,			
34	5	9	4647	53498-32-1	4,5-Dimethyl-2-isobutylthiazole			
34	5	10	4644	52558-99-3	4-Methyl-3-thiazoline			
		10		54717-14-5;	2(4)-Ethyl-4(2),6-dimethyldihydro-1,3,5-			
34	5	11	4667	54717-13-4	dithiazine (mixture of isomers)			
				0 1,7 2,7 20 1	4-Amino-5,6-dimethylthieno[2,3-D]pyramidin-			
				1033366-59-4	2(1H)-one (also covers the salt form 4-Amino-			
				(salt); 121746-	5,6-dimethylthieno[2,3-D]pyramidin-2(1H)-one			
34	5	12	4669	18-7 (free acid)	hydrochloride)			
AMINO AC					, , , , , , , , , , , , , , , , , , ,			
49	6	1	4675	73-32-5	1-Isoleucine			
49	6	2	4710	72-19-5	1-Threonine			
49	6	3	4190	3184-13-2	1-Ornithine monochlorohydrate/Ornithine			
49	6	4	4712	39537-23-0	L-Alanyl-L-Glutamine			
49	6	5	4692	14486-03-4	l-Methionylglycine			
49	6	6	4709	38837-70-6	Glutamyl-valyl-glycine			
					N-[N-[3-(3-hydroxy-4-methoxyphenyl) propyl-α-			
					aspartyl]-L-phenylalanine 1-methyl ester,			
49	6	7	4716	714229-20-6	monohydrate			
	PYRAZINE DERIVATIVES							
26	7	1	3296	38713-41-6	Isopropenylpyrazine			
26	7	2	4434	15707-34-3	5-Ethyl-2,3-dimethylpyrazine			
26	7	3	4100	38888-81-2;	3,5 and 3,6-Dimethyl-2-isobutylpyrazine			
20			.100	50000 01 <b>2</b> ,				

Chamiaal	Chemical FEMA								
Group	Priority	Order	reivia No	CAS No	Name				
Group	11101111	Oruci	110	70303-42-3	Name				
26	7	4	3211	13925-08-1	2-Methyl-5-vinylpyrazine				
20	,	7	3211	38917-61-2,	2 Wednyt 5 vinytpyrazine				
26	7	5	4702	38917-62-3	5-Dimethyl-6,7-dihydro-5H-cyclopentapyrazine				
26	7	6	4632	72797-16-1	2-Ethoxy-3-isopropylpyrazine				
26	7	7	4633	35243-43-7	2-Ethoxy-3-ethylpyrazine				
26	7	8	4631	72987-62-3	2-Ethyl-3-methylthiopyrazine				
ALIPHATIO	ALIPHATIC AND AROMATIC ETHERS								
41	8	1	4291	4747-07-3	Methyl hexyl ether				
41	8	2	4592	24202-00-4	Myrcenyl methyl ether				
					3,6-Dimethyl-2,3,3A,4,5,7A-				
41	8	3	4315	70786-44-6	hexahydrobenzofuran				
41	8	4	4591	72845-33-1	Ethyl linalyl ether				
41	8	5	4593	14049-11-7	Linalool oxide pyranoid				
					5-Isopropyl-2,6-diethyl-2-methyltetrahydro-2H-				
41	8	6	4680	1120363-98-5	pyran				
41	8	7	4634	10484-56-7	Butyl beta-naphthyl ether				
41	8	8	4635	56011-02-0	Isoamyl phenethyl ether				
50	23	9	4536	1424-83-5	Nerolidol oxide				
41 EDOVEDES	8	10	4664	31147-36-1	Digeranyl ether				
EPOXIDES					Education to a short between standing to the				
57	9	1	4653	19464-94-9	Ethyl alpha-ethyl-beta-methyl-beta- phenylglycidate				
57	9	2	4654	37161-74-3	Methyl beta-phenylglycidate				
57	9	3	4655	1195-92-2	d-8-p-Menthene-1,2-epoxide				
57	9	4	4656	203719-53-3	L-8-p-Menthene-1,2-epoxide				
57	9	5	4657	42134-50-9	2,3-Epoxyoctanal				
57	9	6	4658	58936-30-4	2,3-Epoxyoctanal				
57	9	7	4659	102369-06-2	2,3-Epoxydecanal				
					EROCYCLIC DERIVATIVES				
44	10	1	4317	2167-14-8	1-Ethyl-2-pyrrolecarboxaldehyde				
44	10	2	4332	1192-58-1	1-Methyl-1H-pyrrole-2-carboxaldehyde				
44	10	3	4389	108-47-4	2,4-Dimethylpyridine				
44	10	4	4636	142896-11-5	2-Acetyl-4-isopropenylpyridine				
44	10	5	4637	142896-12-6					
44	10	6	4638	142896-09-1	2-Acetyl-4-isopropylpyridine				
44	10	7	4639	1628-89-3	2-Methoxypyridine				
44	10	8	4640	5263-87-6	6-Methoxyquinoline				
					1-(2-Hydroxyphenyl)-3-(pyridine-4-yl)propan-1-				
44	10	9	4721	1186004-10-3	one				
					1-(2-Hydroxy-4-isobutoxyphenyl)-3-(pyridine-4-				
44	10	10	4722	1190230-47-7	yl)propan-1-one				
					1-(2-Hydroxy-4-methoxyphenyl)-3-(pyridine-4-				
44	10	11	4723	1190229-37-8	yl)propan-1-one				
					3-(1-((3,5-Dimethylisoxazol-4-yl)methyl)-1H-				
44	10	12	1705	1110021 25 2	pyrazol-4-yl)-1-(3-hydroxybenzyl)-imidazolidine-				
44	10	12	4725	1119831-25-2	2,4-dione 3-(1-((3,5-Dimethylisoxazol-4-yl)methyl)-1H-				
					pyrazol-4-yl)-1-(3-hydroxybenzyl)-5,5-				
44	10	13	4726	1217341-48-4	dimethylimidazolidine-2,4-dione				
	44   10   13   4/26   121/341-48-4   dimethylimidazolidine-2,4-dione LINEAR αβ-UNSATURATED ALDEHYDES, ACIDS AND RELATED ALCOHOLS, ACETALS AND ESTERS								
47	11	1	4552	30418-89-4	trans-2-Nonenyl acetate				
47	11	2	4614	10297-72-0	Propyl sorbate				
47	11	3	4615	26001-58-1	cis-2-Octenol				
47	11	4	4617	74962-98-4	trans-2-Tridecenol				
47	11								
	PHENOL AND PHENOL DERIVATIVES								
24	12	1	4720	63550-99-2	Rebaudioside C				
			. = -		<u> </u>				

Chemical			FEMA					
Group	Priority	Order	No	CAS No	Name			
24	12	2	4708	76426-35-2	3',7-Dihydroxy-4'-methoxyflavan			
24	12	3	4674	4192-90-9	Trilobatin			
				4049-38-1;				
				552-589;	2-(3,4-Dihydroxyphenyl)-5,7-dihydroxy-4-			
	24 12 4 4715 116301-03-2 chromanon							
		OHOL, AI	LDEHYDE	, ACID AND RELA	TED ACETALS AND ESTERS AND RELATED			
	SUBSTANCES							
33			4314	61810-55-7	Phenethyl decanoate			
33			2860	94-47-3	Phenethyl benzoate			
33			4625	6314-97-2	Phenylacetaldehyde diethyl acetal			
33			4629	5468-05-3	Phenylacetaldehyde propyleneglycol acetal			
33			4619		Propyl 4-tert-butylphenylacetate			
33			4620	122-99-6	2-Phenoxyethanol			
33			4618	23495-12-7	J J I I			
ALIPHATION AND RELA			N SATUR	ATED AND UNSA	TURATED ALCOHOLS, ALDEHYDES, ACIDS,			
40			4486	5694-82-6	Citral glyceryl acetal			
40			4612	26266-68-2	2-Ethyl-2-hexenal			
40			4616	13019-16-4	2-Hexylidenehexanal			
ALIPHATIC	C AND ALI	CYCLIC I						
45			4293	111-66-0	1-Octene			
45			4292	56700-78-8	trans-2,trans-4-Nonadiene			
45			4264	475-03-6	alpha-Ionene			
45			4650	691-38-3	4-Methyl-cis-2-pentene			
45			4651	124-11-8	1-Nonene			
45			4652	116963-97-4	1,3,5,7-Undecatetraene			
	- AND ALK	COXY-SU		ED BENZYL DERIY				
29		10111 50	4431	99-06-9	3-Hydroxybenzoic acid			
29			4430	99-50-3	3,4-Dihydroxybenzoic acid			
29			4435	673-22-3	2-Hydroxy-4-methoxybenzaldehyde			
29			4622	61683-99-6	· · · · · · · · · · · · · · · · · · ·			
29			4606	930587-76-1	4-Formyl-2-methoxyphenyl 2-hydroxypropanoate			
29			4627	6414-32-0	Anisaldehyde propyleneglycol acetal			
29			4700	614-60-8	o-trans-Coumaric acid			
	MENTHOL AND STRUCTURALLY RELATED SUBSTANCES							
19		0101411	4509	2230-90-2	Menthyl formate			
19			4510	86014-82-6	Menthyl propionate			
19			4524	68366-64-3	I-Menthyl butyrate			
19			4604	406179-71-3	Dimenthyl glutarate			
19			4718	28804-53-7	(±)2-[(2-p-Menthoxy)ethoxy]ethanol			
MALTOL A	ND RFI AT	red sur		2000 + 33 T	(=/= t(= p mention)/entoxylentation			
52		- LU 50D	4534	852997-28-5	Ethyl maltol isobutyrate			
	AND STRI	JCTI JR A I		TED SUBSTANCE				
16	IND DIKE		4525	929116-08-5	Pinocarvyl isobutyrate			
16			4515	929222-96-8	Carvyl palmitate			
16			4523	51200-86-3	6-Hydroxycarvone			
	AND STRIE	CTURAL		TED SUBSTANCES				
17	LID BINO		4088	24720-09-0	trans-alpha-Damascone			
17			4151	79-89-0	beta-Isomethylionone			
17			4299	141-10-6	Pseudoionone			
	CINNAMYL ALCOHOL AND RELATED SUBSTANCES							
22	2 / 12 0110	LINDR	4596	4353-01-9	Cinnamaldehyde propyleneglycol acetal			
22			4595	67634-23-5	2-Phenylpropanal propyleneglycol acetal			
22			4597	620-80-4	Ethyl alpha-acetylcinnamate			
22			4599	1205-17-0	3-(3,4-Methylenedioxyphenyl)-2-methylpropanal			
22			4598	15399-05-0	Ethyl 2-hydroxy-3-phenylpropionate			
	SATURATED ALIPHATIC ACYCLIC LINEAR PRIMARY ALCOHOLS, ALDEHYDES, AND ACIDS							
04	און וויוני ייי	TIC ACT	4010	123-63-7	Paraldehyde			
04	<u> </u>		4010	143-03-7	i araiuciiyuc			

	T	1			T			
Chemical	<b>D</b> • •		FEMA	GAGN	<b>3.7</b>			
Group	Priority	Order	No	CAS No	Name			
04			4432	25334-93-4	(+/-)-Acetaldehyde ethyl isopropyl acetal			
04			4335	10486-19-8	Tridecanal			
04			4528	6986-51-2	Acetaldehyde ethyl isobutyl acetal			
04			4336	638-53-9	Tridecanoic acid			
04			4527	5669-09-0	Acetaldehyde di-isobutylacetal			
4			4688	105-82-8	1-Dipropoxyethane			
04			4334	1002-84-2	Pentadecanoic acid			
		IC ACYC	LIC PRIM	ARY ALCOHOLS V	WITH BRANCHED-CHAIN ALIPHATIC			
ACYCLIC A	ACYCLIC ACIDS							
08			4347	850309-45-4	4-Methylpentyl isovalerate			
08			4346	180348-60-1	5-Methylhexyl acetate			
08			4343	25415-67-2	Ethyl 4-methylpentanoate			
08			4344	2983-38-2	Ethyl 2-ethylbutyrate			
08			4345	2983-37-1	Ethyl 2-ethylhexanoate			
MONOCYC	LIC AND I	BICYCLIC	CSECONE	OARY ALCOHOLS.	KETONES, AND RELATED ESTERS			
48			4513	21368-68-3	dl-Camphor			
48			4519	7787-20-4	1-Fenchone			
			.017	,,,,,,	2,2,6,7-Tetramethylbicyclo[4.3.0]nona-4,9(1)-			
48			4521	97866-86-9	dien-8-ol			
10			1321	77000 00 7	2,2,6,7-Tetramethylbicyclo[4.3.0]nona-4,9(1)-			
48			4522	97844-16-1	dien-8-one			
	ED AT IDHA	TIC ACV			RIMARY ALCOHOLS, ALDEHYDES, AND			
ACIDS	ED ALII IIA	IIIC ACI	CLIC DIA	ANCIED-CITAIN I	RIMART ALCOHOLS, ALDEHT DES, AND			
05			4261	19269-28-4	3-Methylhexanal			
05			4498	63885-09-6	6-Methylheptanal			
05					v 1			
			4433	30689-75-9	` '			
05	CECOND	ADVALO	4348	5988-91-0	3,7-Dimethyloctanal			
	SECOND.	AKY ALC		KETONES, AND RE				
37			4724	21862-63-5				
37			4706	35194-30-0	9-Decen-2-one			
37			4691	1009814-14-5	Yuzunone			
	37 4687 544409-58-7 (±)-3-Hydroxy-3-methyl-2,4-nonanedione							
	DROFURA	N AND FU		EDERIVATIVES				
50			4176	3511-32-8	5-Methyl-3(2H)-furanone			
50			4546		Ethyl 2,5-dimethyl-3-oxo-4(2H)-furyl carbonate			
50			4101	14400-67-0	2,5-Dimethyl-3(2H)-furanone			
50			4104	65330-49-6	2,5-Dimethyl-4-ethoxy-3(2H)-furanone			
50			4070	36871-78-0	4-Acetyl-2,5-dimethyl-3(2H)-furanone			
ALICYCLIC	C, ALICYC	LIC-FUSE	ED AND A	ROMATIC-FUSED	RING LACTONES			
					2-(2-Hydroxy-4-methyl-3-cyclohexenyl)propionic			
38			4140	57743-63-2	acid gamma-lactone			
					2-(2-Hydroxyphenyl) cyclopropanecarboxylic			
38			4270	5617-64-1	acid delta-lactone			
38			4438	591-11-7	beta-Angelicalactone			
38			4673	7370-44-7	delta-Hexadecalactone			
38			4685	7370-92-5	(±)-6-Octyltetrahydro-2H-pyran-2-one			
38			4195	87-41-2				
	ND BRANC	HED-CH						
LINEAR AND BRANCHED-CHAIN ALIPHATIC, UNSATURATED, UNCONJUGATED ALCOHOLS, ALDEHYDES, ACIDS, AND RELATED ESTERS								
14	-, -10100		4412	10340-23-5	cis-3-Nonen-1-ol			
14			4605	10340-23-3	trans-3-Nonen-1-ol			
14			4551	83334-93-4				
14			4413	3681-82-1				
14			4413	1775-43-5	trans-3-Hexenyl acetate cis-3-Hexenoic acid			
14			4553	13049-88-2	cis-3-Nonenyl acetate			
14			4554	76238-22-7	cis-6-Nonenyl acetate			
14			4671	71978-00-2	Z-5-Octenyl acetate			
14			4672	68820-35-9	(E)-4-Undecenal			

Chemical			FEMA				
Group	Priority	Order	No	CAS No	Name		
ALLYL EST	ΓERS						
03	03 4074 6321-45-5 Allyl valerate		Allyl valerate				
03		4072 20474-93-5 Allyl crotonate					
TERTIARY	ALCOHOL	LS AND R	ELATED	ESTERS			
15	15 4682 23333-91-7 Octahydro-4,8A-dimethyl-4A(2H)-naphthol						
PRIMARY .	PRIMARY ALCOHOLS, ALDEHYDES, CARBOXYLIC ACIDS, AND RELATED ESTERS WITH A SECOND						
OXYGENATED FUNCTIONAL GROUP							
47			4699	85993-25-5	Ferrous 1-lactate		
47			4719	110-15-6	Succinic acid		

#### CEFIC

# Annex 2: FORM ON WHICH INFORMATION ON THE COMPOUND TO BE EVALUATED BY JECFA IS PROVIDED

- 1. Proposal for inclusion submitted by: CEFIC
- **2.** Name of compound; trade name(s); chemical name(s): Magnesium dihydrogen diphosphate (MgH2P2O7) proposed INS number: INS 450ix
- 3. Names and addresses of basic producers: Chemische Fabrik Budenheim KG
- 4. Has the manufacturer made a commitment to provide data? YES
- 5. Identification of the manufacturer that will be providing data (Please indicate contact person):

Thomas Janssen: thomas.janssen@budenheim.com

6. Justification for use:

Flexible leavening agent with ability to enhance the nutrition profile of baked goods

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

Food category: 06.6, 07

Use level: <20g/kg (as P2O5; likewise for "fine bakery wares" from EC directive 95/2)

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

(Please identify the countries); or, has the compound been approved for use in food in one or more country? (Please identify the country (ies)): NO

9. List of data available (please check, if available)

#### Toxicological data

- (i) Metabolic and pharmacokinetic studies yes
- (ii) Short-term toxicity, long-term toxicity/carcinogenicity, reproductive toxicity, and developmental toxicity studies in animals and genotoxicity studies yes
- (iii) Epidemiological and/or clinical studies and special considerations yes
- (iv) Other data yes

#### Technological data

- (i) Specifications for the identity and purity of the listed compounds (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

Compound - yes

#### Intake assessment data

(i) Levels of the listed compound 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 intakes based on food consumption data for foods in which the compound may be used. – yes

# Other information as necessary

#### 10. Date on which data could be submitted to JECFA: December 2010

#### **ISDI**

The International Special Dietary Foods Industries (ISDI) represents at Codex Alimentarius the manufacturers of special dietary foods and hence is highly involved and interested in contributing to any work that will relate to nutrition products.

ISDI would like to support the inclusion of the following additives in the priority list of substances for JECFA review:

- Xantham gum INS 415
- Pectin INS 440
- OSA-modified starch (Starch sodium octenyl succinate) INS 1450

You will find attached the relevant information supporting that request, based on CL 2010/10-FA. These nominations are being submitted at CCFA in anticipation that the recommendations in Document CX/FA 11/43/5 will be accepted.

INFORMATION ON XANTHAN GUM (INS 415) REQUESTED FOR JECFA EVALUATION FOR USE IN INFANT FORMULA AND FORMULAE FOR SPECIAL MEDICAL PURPOSES INTENDED FOR INFANTS

- 1. Proposal for inclusion submitted by: International Special Dietary Foods Industries (ISDI)
- 2. Name of compound; trade name(s); chemical name(s):

Xanthan Gum; trade name is NovaXan 200<sup>TM</sup>; IUPAC Name is 9H-xanthene.

INS No. 415; CAS#: 11138-66-2; E415

3. Names and addresses of basic producers (of the infant formula):

Abbott Nutrition 625 Cleveland Avenue Columbus OH 43215, USA

- 4. Has the manufacturer made a commitment to provide data? Yes.
- 5. Identification of the manufacturer that will be providing data (Please indicate contact person):

Lisa Craig, Ph.D. Director, Regulatory Affairs Abbott Nutrition 625 Cleveland Avenue Columbus OH 43215, USA Phone: 614-624-3696

Phone: 614-624-3696 Fax: 614-727-3696

E-mail: lisa.craig@abbott.com

## **6.** Justification for use:

Xanthan gum increases the thickness (viscosity) of infant formula, which improves the physical characteristics of the formula. The thickening of infant formula can result in improvements in infant feeding tolerance.

# 7. Food products and food categories within the GSFA in which the compound is used, including use level(s):

Proposed for use as a thickener up to 1 g/kg, as consumed, in food category 13.1 infant formulae, follow-on formulae and formulae for special medical purposes for infants.

8. Is the compound currently used in food that is legally traded in more than one country? (Please identify the countries); or, has the compound been approved for use in 2 or more countries (please identify the countries)?

Xanthan gum is permitted in infant formula in the USA and Russia, and is permitted for use in formula for special medical purposes in the EU.

# 9. List of data available (please check, if available):

# Toxicological data

- $\sqrt{(i)}$  Metabolic and pharmacokinetic studies
- $\sqrt{\text{(ii)}}$  Short-term toxicity
- $\sqrt{\text{(iii)}}$  Epidemiological and/or clinical studies and special considerations
- $\sqrt{\text{(iv)}}$  Other data
- absence of allergens data

# Technological data

 $\sqrt{(i)}$  Specifications for the identity and purity of the listed compounds

(specifications applied during development and toxicological studies; proposed specifications for commerce)

 $\sqrt{\text{(ii)}}$  Technological and nutritional considerations relating to the manufacture and use of the listed compound

#### Intake assessment data

- $\sqrt{(i)}$  Levels of the listed compound used in food or expected to be used in food based on technological function and the range of foods in which they are used
- $\sqrt{\text{(ii)}}$  Estimation of dietary intakes based on food consumption data for foods in which the compound may be used

## Other information as necessary

#### 10. Date on which data could be submitted to JECFA:

December 1, 2011

# INFORMATION ON PECTIN (INS 440) REQUESTED FOR JECFA EVALUATION FOR USE IN INFANT FORMULA AND FORMULAE FOR SPECIAL MEDICAL PURPOSES INTENDED FOR INFANTS

- 1. Proposal for inclusion submitted by: International Special Dietary Foods Industries (ISDI)
- 2. Name of compound; trade name(s); chemical name(s):

Pectin (no other commonly used chemical names or synonyms)

Chemical Identification: INS 440

CAS Number 9000-69-5

JECFA evaluation: 25<sup>th</sup> JECFA (1981);

ADI not specified

# 3. Names and addresses of basic producers (of the infant formula):

Mead Johnson Nutrition 2400 West Lloyd Expressway Evansville, IN. 47721-0001 USA

## 4. Has the manufacturer made a commitment to provide data? Yes.

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

Peter Van Dael, PhD Vice President, Global Regulatory and Nutrition Sciences Mead Johnson Nutrition 2400 West Lloyd Expressway Evansville, IN. 47721-0001 USA

<u>peter.vandael@mjn.com</u> Phone: +1 812 429-5185 Mobile: +1 812 568-1253

## 6. Justification for use:

Pectin is used as a gelling agent, thickener, stabilizer, and emulsifier. In FSMP formulations may lack the natural emulsification properties of whole protein, which provides stability. Stabilizers are therefore a technological requirement for these products to ensure both palatability and prevention of separation of the formula after reconstitution.

# 7. Food products and food categories within the GSFA in which the compound is used, including use level(s):

Proposed use is as an emulsifier in food category 13.1 infant formulae, follow-on formulae and formulae for special medical purposes for infants.

Proposed use levels are up to a maximum of 1 g per 100 mL of product ready for consumption (consistent with current EU maximum level and product category of use).

GSFA Food Products and Food Categories in which the compound is currently used:

Food Category No.	Food Category	Max Level	Year Adopted
14.1.2.1	Fruit juice	GMP	2005
14.1.2.3	Concentrates for fruit juice	GMP	2005
14.3.1	Fruit nectar	GMP	2005
14.1.3.3	Concentrates for fruit nectar	GMP	2005

# 8. Is the compound currently used in food that is legally traded in more than one country? (please identify the countries); or, has the compound been approved for use in 2 or more countries (please identify the countries)?

The additive pectin is currently permitted in special medical purpose infant formula products in the EU and affiliated countries, and in the USA the FDA has no objection to its use in exempt formula products.

# 9. List of data available (please check, if available):

#### Toxicological data

- √(i) Metabolic
- $\sqrt{\text{(ii)}}$  Short-term toxicity, long-term toxicity, reproductive toxicity, developmental toxicity studies in animals
- $\sqrt{\text{(iii)}}$  Epidemiological and/or clinical studies and special considerations
- $\sqrt{\text{(iv)}}$  Other data
- analytical methodology

# Technological data

 $\sqrt{(i)}$  Specifications for the identity and purity of the listed compounds (specifications applied during development and toxicological studies; proposed specifications for commerce)

 $\sqrt{\text{(ii)}}$  Technological and nutritional considerations relating to the manufacture and use of the listed compound

#### Intake assessment data

- $\sqrt{(i)}$  Levels of the listed compound used in food or expected to be used in food based on technological function and the range of foods in which they are used
- $\sqrt{\text{(ii)}}$  Estimation of dietary intakes based on food consumption data for foods in which the compound may be used

## Other information as necessary

#### 10. Date on which data could be submitted to JECFA: December 2011

# INFORMATION ON OSA-MODIFIED STARCH (INS 1450) REQUESTED FOR JECFA EVALUATION FOR USE IN INFANT FORMULA AND FORMULAE FOR SPECIAL MEDICAL PURPOSES INTENDED FOR INFANTS

# 1. Proposal for inclusion submitted by:

International Special Dietary Foods Industries (ISDI)

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

Octenyl succinic anhydride (OSA) modified starch; starch sodium octenyl succinate;

Trade name is N-Creamer 46.

INS No. 1450; CAS# 66829-29-6; E1450

#### 3. Names and addresses of basic producers (of the infant formula):

Abbott Nutrition

625 Cleveland Avenue

Columbus OH 43215, USA

Mead Johnson Nutrition

2400 West Lloyd Expressway

Evansville, IN USA

47721-0001

**PBM Products** 

204 N. Main St.

Gordonsville, VA 22942

#### 4. Has the manufacturer made a commitment to provide data? Yes.

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

Lisa Craig, Ph.D.

Director, Regulatory Affairs

Abbott Nutrition

625 Cleveland Avenue

Columbus OH 43215, USA

Phone: 614-624-3696 Fax: 614-727-3696

E-mail: lisa.craig@abbott.com

#### 6. Justification for use:

OSA modified starch can be used as an emulsifier in infant formula manufactured with a hydrolyzed protein source. Hydrolyzed proteins have different hydrophobic/hydrophilic characteristics than intact

proteins; OSA modified starch stabilizes the hydrolyzed protein to create a more homogeneous mixture (stable emulsion), thus improving the delivery of nutrients to infants.

# 7. Food products and food categories within the GSFA in which the compound is used, including use level(s):

Proposed use is as an emulsifier in food category 13.1 infant formulae, follow-on formulae and formulae for special medical purposes for infants. Proposed use levels are 9 g/100 g in infant formula powder or ~12 g/liter, as consumed, and 2 g/100 ml or 20 g/liter in ready-to-feed formula. The maximum use level of OSA modified starch in formula is therefore up to 20 g/liter, as consumed.

8. Is the compound currently used in food that is legally traded in more than one country? (please identify the countries); or, has the compound been approved for use in 2 or more countries (please identify the countries)?

OSA Modified Starch is permitted in infant formula in the USA and Russia, and is permitted for use in formula for special medical purposes in the EU.

# 9. List of data available (please check, if available):

# Toxicological data

- √(i) Metabolic
- $\sqrt{\text{(ii)}}$  Short-term toxicity
- $\sqrt{\text{(iii)}}$  Epidemiological and/or clinical studies and special considerations
- $\sqrt{\text{(iv)}}$  Other data
- · analytical methodology

## Technological data

- $\sqrt{(i)}$  Specifications for the identity and purity of the listed compounds (specifications applied during development and toxicological studies; proposed specifications for commerce)
- $\sqrt{\text{(ii)}}$  Technological and nutritional considerations relating to the manufacture and use of the listed compound

## Intake assessment data

- $\sqrt{(i)}$  Levels of the listed compound used in food or expected to be used in food based on technological function and the range of foods in which they are used
- $\sqrt{\rm (ii)}$  Estimation of dietary intakes based on food consumption data for foods in which the compound may be used

## Other information as necessary

10. Date on which data could be submitted to JECFA: December 1, 2011