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(54) Title: FLAVOUR EMULSION FOR FOOD AND BEVERAGE PRODUCTS

(57) Abstract: The present invention relates to a flavour emulsion useful as an ingredient in food and beverage products, a method of producing it and food and beverage products comprising the flavour emulsion of the invention. The flavour emulsion is useful for reducing the sugar and/or fat content of food and beverage products without detrimental effect on taste, sweetness, texture, and/or processability.

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FLAVOUR EMULSION FOR FOOD AND BEVERAGE PRODUCTS

Field of the invention

- 5 The present invention relates to a flavour emulsion useful as an ingredient in food and beverage products, a method of producing it and food and beverage products comprising the flavour emulsion of the invention.

Background

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- Flavour sweetness and mouthfeel are important characteristics of most food and beverage products. In many products, sugar and fat contribute significantly to these characteristics. Sugar contributes sweetness, increases viscosity, and imparts texture in many products, while fat may contribute with flavour and aromas as well as
- 15 creaminess and mouthfeel. For example, beverages containing cocoa and/or malt usually contain sugar and oils to achieve the sweetness, aroma and mouthfeel liked by consumers. For health reasons, there is a wish to reduce sugar and fat in many products by replacing it with other ingredients. Sugar, for example, may be replaced by artificial sweeteners to obtain similar sweetness as with sugar, however, artificial sweeteners do
- 20 not have the same effect on viscosity and texture as sugar. Likewise, the flavour, aroma and mouthfeel achieved by fat is difficult to achieve with other healthier ingredients. At the same time, many consumers wish to avoid additives perceived as artificial and not natural, such as e.g. artificial sweeteners. Furthermore, sugar may play an important role during the processing of ingredients for production of food and
- 25 beverage products, e.g. powdered beverage products, for example, sugar may affect the viscosity of the mixed ingredients and facilitate the processing of the ingredients. In sugar reduced products, there may be a need for other ingredients that can facilitate the processability in the same way as sugar. There is thus a need for improved solutions to replace sugar and fat in food and beverage products achieving similar sweetness,
- 30 aroma, flavour, texture and/or processability, and at the same time being perceived as natural.

Summary of the invention

The inventors have found that a flavour emulsion comprising specific amounts of milk fat and/or vegetable oil, non-fat milk solids and cocoa, and which has been heat treated, provides flavour, aroma, taste, texture and/or processability to food and beverage products, and may allow a reduction of fat and/or sugar in food and beverage products without detrimental effects on flavour, aroma, taste, sweetness perception, mouthfeel, texture, and/or processability.

Accordingly, the present invention relates to a flavour emulsion for food or beverage products, the flavour emulsion comprising 10-30% by weight of milk fat; 15-35% by weight of vegetable oil; 12-35 % by weight of non-fat milk solids; and 15-32 % by weight of cocoa solids; which ingredients have been mixed and heat treated at 85-115°C for 10-45 minutes.

In other aspects, the invention relates to a method of producing a flavour emulsion of the invention, a powdered cocoa and/or malt beverage, and a liquid ready to drink cocoa and/or malt beverage.

Detailed description of the invention

20 Flavour emulsion

The invention relates to a flavour emulsion useful as an ingredient in food and beverage products. The flavour emulsion may impart sweetness, flavour, aroma, texture, and/or mouthfeel to the product. The combination of ingredients and the heat treatment is essential for obtaining a stable homogeneous flavour emulsion with the desired flavour, aroma and texture.

The flavour emulsion of the present invention comprises 10-30% by weight milk fat, preferably 15-30% by weight. The milk fat may be from any suitable source, e.g. from a liquid or powdered fat-containing milk product, e.g. from milk, whole milk, cream, butter, butter milk, milk powder, whole milk powder, cream powder and/or butter milk powder. The milk fat is preferably in the form of anhydrous milk fat and/or butter oil. The flavour emulsion comprises 15-30% by weight vegetable oil, preferably 20-30% by weight. By vegetable oil is meant oil derived from any plant, except from cocoa.

The flavour emulsion may comprise cocoa fat, but in the context of the present invention, cocoa fat is considered as cocoa solids, not as vegetable oil. Vegetable oil may be any suitable vegetable oil, such as e.g. palm oil, corn oil, and/or sunflower oil. A preferred vegetable oil is coconut oil. The coconut oil is preferably refined,
5 deodorised and/or bleached. The total amount of milk fat and vegetable oil is preferably 30-50% by weight, more preferably 35-45%, even more preferably 45-55% by weight of the flavour emulsion.

The flavour emulsion further comprises 12-35% by weight of non-fat milk solids,
10 preferably 20-30% by weight of non-fat milk solids. The non-fat milk solids may be from any suitable source, e.g. from a liquid or powdered milk product such as e.g. milk, skim milk, whole milk, cream, butter milk, milk powder, skim milk powder, whole milk powder, cream powder and/or butter milk powder. If the non-fat milk solids are from liquid milk, the milk may be concentrated, e.g. by evaporation and/or
15 filtration, to achieve the desired level of solids in the flavour emulsion. In a preferred embodiment, the non-fat milk solids are derived from butter milk, e.g. butter milk powder. The source of non-fat milk solids, e.g. milk powder, may comprise milk fat. For the avoidance of doubt, in this case, the milk fat in itself is considered as milk fat and is not considered part of the non-fat milk solids for the purpose of this invention.

20

The flavour emulsion comprises 15-32 % by weight of cocoa solids, preferably 20-30% by weight of cocoa solids. The cocoa solids may be from any suitable source, preferred sources are cocoa powder, cocoa liquor and cocoa mass. The amount of cocoa solids is preferably at least 50% of the amount of non-fat milk solids. For the
25 avoidance of doubt, cocoa fat is considered as cocoa solids for the purpose of the present invention.

The ingredients of the flavour emulsion have been mixed and heat treated at 85-115°C for 10-45 minutes, preferably at 90-100°C for 15-40 minutes. The effect of heat
30 treatment is to ensure formation of the desired flavour and aroma characteristics, e.g. by Maillard reactions in the mixture, as well as to achieve the desired effect on texture in the final product. The heat treatment may further help to ensure homogeneity and stability of the flavour emulsion and the final product.

The flavour emulsion may further comprise oligosaccharide. In a preferred embodiment, the flavour emulsion comprises 10-20 % by weight of oligosaccharide. Any suitable oligosaccharide may be used, such as e.g. fructooligosaccharides and/ or galactooligosaccharides. Oligosaccharides may be used to achieve the desired taste and/or mouthfeel of the flavour emulsion.

In a preferred embodiment, the invention relates to a flavour emulsion for food or beverage products, the flavour emulsion comprising 10-30% by weight of milk fat, 5-35% by weight of coconut oil, 12-35 % by weight of butter milk solids, and 15-32 % by weight of cocoa solids, which ingredients have been mixed and heat treated at 85-115°C for 10-45 minutes.

Method of producing a flavour emulsion

The present invention further relates to a method of producing a flavour emulsion of the invention, the method comprising mixing the following ingredients: 10-30 % by weight of milk fat, 15-55 % by weight of vegetable oil, 12-35 % by weight of non-fat milk solids, and 15-32 % of cocoa solids; and heat treating the mixture at 85-115°C for 10-45 minutes. The milk fat may be in any suitable form, e.g. in the form of a liquid or powdered fat-containing milk product, e.g. milk, whole milk, cream, butter, butter milk, milk powder, whole milk powder, cream powder and/or butter milk powder. The milk fat is preferably in the form of anhydrous milk fat and/or butter oil. Vegetable oil may be any suitable vegetable oil, such as e.g. palm oil, corn oil, and/or sunflower oil. A preferred vegetable oil is coconut oil. The coconut oil is preferably refined, deodorised and/or bleached. The total amount of milk fat and vegetable oil is preferably 30-50% by weight, more preferably 35-45% by weight.

The flavour emulsion further comprises 12-35% by weight of non-fat milk solids, preferably 20-30% by weight of non-fat milk solids. The non-fat milk solids may be from any suitable source, e.g. from a liquid or powdered milk product such as e.g. milk, skim milk, whole milk, cream, butter milk, milk powder, skim milk powder, whole milk powder, cream powder and/or butter milk powder. In a preferred embodiment, the non-fat milk solids are derived from butter milk, e.g. butter milk powder. The source of non-fat milk solids, e.g. milk powder, may comprise milk fat.

For the avoidance of doubt, in this case, the milk fat in itself is considered as milk fat and is not considered part of the non-fat milk solids for the purpose of this invention. Some ingredients used in the method of the invention may thus contribute both milk fat and non-fat milk solids to the product.

5

The ingredients may be mixed in any suitable way, e.g. using conventional mixing and/or homogenisation equipment. The ingredients are preferably mixed at a temperature of 65°C or below. The mix of ingredients is heat treated at 85-115°C for 10-45 minutes, preferably at 90-100°C for 15-40 minutes. Heat treatment may be performed by any suitable method, e.g. batch wise, e.g. in a jacketed tank equipped for heating and cooling as well as stirring, or in a continuous process, e.g. in a continuous heat exchanger. In a preferred embodiment, the ingredient mixture is heated to the heat treatment temperature at a heating rate of between 1 and 15°C per minute, preferably between 3 and 8°C per minute. It has been found that a heating rate in this interval improves stability of the flavour emulsion and minimizes undesirable protein aggregation. In another preferred embodiment, the mixture is cooled after the heat treatment to 60°C or below, more preferably to 40°C or below, even more preferably to 15°C or below. In a further preferred embodiment, the mixture is cooled after the heat treatment to between 2 and 60°C, preferably between 2 and 40°C, more preferably between 2 and 15°C. The mixture is preferably agitated while being cooled. It has been found that the cooling improves the stability of the flavour emulsion and the texture obtained in the final product.

In a preferred embodiment, the invention relates to a method of producing a flavour emulsion for food and beverage products, the method comprising mixing the following ingredients: 10-30% by weight of milk fat, 15-30% by weight of coconut oil, 12-35 % by weight of butter milk solids, and 15-32 % by weight of cocoa solids; and heat treating the mixture at 85-115°C for 10-45 minutes. In a further preferred embodiment, the invention relates to a method of producing a flavour emulsion for food and beverage products, the method comprising mixing the following ingredients: 10-30% by weight of milk fat, 15-30% by weight of coconut oil, 12-35 % by weight of butter milk solids, and 15-32 % by weight of cocoa solids; and heat treating the mixture at 85-115°C for 10-45 minutes; wherein the ingredients are mixed at a temperature of 65°C or below, and heated to the heat treatment temperature at a rate of between 3 and

8°C per minute.

The flavour emulsion of the present invention is useful as an ingredient in food and/or beverage products, e.g. as an ingredient in a cocoa beverage or a cocoa and malt beverage. It may be used to replace sugar and/or fat, completely or partly, and still achieve a good sweetness, flavour, aroma and texture. Other uses may e.g. be in coffee mixes, chocolate milk, ice cream, chocolate, and/or chocolate cake.

Powdered cocoa and/or malt beverage product

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In one embodiment, the invention relates to a powdered cocoa and/or malt beverage comprising 8-30 % by weight of the flavour emulsion of the invention. A powdered cocoa and/or malt beverage is a product in powder form, which can be used to prepare a cocoa and/or malt beverage by reconstitution in a liquid such as e.g. water or milk.

15 Further to the flavour emulsion of the invention, a powdered cocoa and/or malt beverage may e.g. comprise 10-30 % by weight of skim milk powder and/or 20-60 % by weight of malt extract. The powdered cocoa and/or malt beverage powder may comprise further ingredients useful as ingredients of cocoa and/or malt beverages, such as e.g. sweeteners, e.g. sugar, fat, e.g. milk fat and/or vegetable oil, buffer salt, stabilizers, flavours and additional cocoa solids.

20

In one embodiment, the invention relates to a powdered cocoa and/or malt beverage comprising 8-30 % by weight of the flavour emulsion of the invention, 10-30 % by weight of skim milk powder and 20-60 % by weight of malt extract.

25

A powdered cocoa and/or malt beverage product may be prepared by using conventional methods for producing powdered cocoa and malt beverage products, e.g. the method disclosed in US6541056B1. The flavour emulsion of the invention may e.g. be mixed with malt extract before being mixed with the remaining ingredients, e.g. as disclosed in US6541056B1.

30

Liquid cocoa and/or malt beverage

In a further embodiment, the invention relates to a liquid ready-to-drink cocoa and/or

malt beverage comprising 8-30 % by dry weight of the flavour emulsion of the invention. A liquid ready-to-drink cocoa and/or malt beverage is a cocoa and/or malt beverage in liquid form, which is ready to be consumed without reconstitution or further preparation. The liquid ready-to-drink cocoa and/or malt beverage powder may
5 comprise further ingredients known in the art as ingredients of cocoa and/or malt beverages, such as e.g. sweeteners, e.g. sugar, buffer salts, stabilizers, and additional cocoa solids.

In one embodiment, the invention relates to a liquid ready-to-drink cocoa and/or malt
10 beverage comprising 8-30 % by dry weight of the flavour emulsion of the invention, 10-30 % by dry weight of non-fat milk solids and 20-60 by dry weight of malt extract.

EXAMPLES

15

Some abbreviations used in the examples:

AMF = Anhydrous Milk Fat, BMP = Butter Milk Powder, FCMP = Full Cream Milk Powder, MPC = Milk Protein Concentrate, FOS = Fructooligosaccharide

20 **Example 1. Flavour emulsion and powdered cocoa and malt beverage products**

A number of flavour emulsions were produced with the ingredients given in tables 1, 2 and 3. The flavour emulsions were produced by a mixing process to obtain a mixture of 400 g. The mixing process was composed of two phases: the dry powders mixing
25 and the oil mixing.

The dry powders mixing phase was performed by adding cocoa powders, milk powders, oligosaccharides, and malt extract under high agitation for 5 minutes at room temperature and pressure.

30

The oil-mixing phase was performed by melting and mixing sunflower lecithin with coconut oil, anhydrous milk fat, and/or cocoa mass at 60°C for 5 minutes.

The dry mix powders-mix was then incorporated in the oil-mix under high agitation at

60 °C for 5 minutes.

This final mixture was then heated to 115 °C for 10 min, then cooled down to 70 °C to form the flavour emulsion. The flavour emulsion was then stored between 4-25 °C

5 until use in beverage.

Table 1: Composition (% by weight) of flavour emulsions produced in example 1.

Ingredients	Sample 2	Sample 3	Sample 4	Sample 6	Sample 8	Sample 10	Sample 11
<i>Fats</i>							
Hydrogenated Palm Kernel Oil	40	35	46	46	41		
Milk Fat						23	22
Coconut Oil (Fully Hydrogenated)						23	22
<i>Cocoa</i>							
Cocoa Mass	14	16			9		
Cocoa Powder (10-12 % fat)			7	7	5	10	28
<i>Milk Powder</i>							
Buttermilk Powder				25	26	26	28
Skimmed milk powder	25	30	25				
<i>Others</i>							
Malt extract	21	19	21	21	18	18	
Soy Lecithin	0,5	0,5	0,5	0,5	0,5	0,5	0,5

10 Table 2: Composition (% by weight) of flavour emulsions produced in example 1.

Ingredients	Sample	Sample	Sample	Sample	Sample	Sample	Sample
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	16	17	18	19	23	24	25
<i>Fats</i>							
Cream Powder		25					
AMF			23	23	20	20	10
Coconut Oil (Fully Hydrogenated)	37	28					
Coconut Oil			23	23	21	28	33
<i>Cocoa</i>							
Cocoa Mass					7		
Cocoa Powder (10-12 % fat)	28	26	10	26	22		11
Cocoa Powder (20 % fat)						22	11
<i>Milk Powder</i>							
FCMP		20					15
MPC	35						
BMP			26	28	30	30	20
<i>Others</i>							
Malt extract			18				
Soy Lecithin	0,5	0,5	0,5	0,5	0,5	0,6	0,5

Table 3: Composition (% by weight) of flavour emulsions produced in example 1.

Ingredients	Sample 52-1	Sample 52-2	Sample 49	Sample 51
AMF	16	16	14	16
Coconut Oil (Fully Hydrogenated)	28	28	30	28
Cocoa Powder (10-12 % fat)	25	25	26	28
BMP	16	16	16	28
FOS	15	15	15	

The produced flavour emulsions were used to produce sugar reduced cocoa and malt beverages, which were compared to a reference beverage without flavour emulsion. The compositions of the beverages are given in tables 4-7 with results of sensory evaluation (* = similar to reference, F = Flavour differs from reference/unpleasant, S = Sweetness insufficient compared to reference, C= Flavour Emulsion texture differs from reference/Solubility issues.

The beverages were produced by a mixing process to obtain a paste of between 400-500 g. The mixing process was composed of two phases: the wet ingredients mixing and the powders mixing.

The dry powders mixing phase was performed by adding cocoa powder, skimmed milk powder, sugar, and vanillin under high agitation for 5 minutes at room temperature and pressure.

The wet ingredients-mixing phase was performed by mixing malt extract, water, and flavour emulsion at 70°C for 3 minutes.

The dry mix powders-mix was then incorporated in the wet ingredients-mix under high agitation at 70°C for 10 minutes to obtain a paste.

The paste is dried by vacuum oven and milled before being collected.

The sensorial properties of the cocoa beverage powder reconstituted in hot water were judged by trained panellists.

Table 4. Composition (g) of coca-malt beverages produced in example 1. Sample numbers refer to the flavour emulsions used for each beverage composition.

	Reference	Sample 2	Sample 3	Sample 4	Sample 6
Malt extract	34	34	34	34	34
Sugar	20	16	16	16	16
Skim milk powder	22	16	24	18	19
Cocoa	6	6	4	4	4

Powder (10-12 % fat)					
Palm Oil	12				
Flavor Vanillin	0,04	0,04	0,04	0,04	0,04
Water	3	3	3	3	3
Flavour Emulsion		26	24	24	23
Total	100	101	105	99	99
Added Sugars Reduction		23%	20%	21%	20%
Sensory comment		F	C	S	C

5 Table 5. Composition (g) of coca-malt beverages produced in example 1. Sample numbers refer to the flavour emulsions used for each beverage composition. The reference for sensory evaluation was the same as in Table 4.

	Sample 8	Sample 10	Sample 11	Sample 16	Sample 17
Malt extract	34	34	34	34	34
Sugar	17	17	18	17	15
Skim milk powder	18	18	19	24	25
Cocoa Powder (10-12 % fat)	5	4	0,03		
Palm Oil					
Flavor Vanillin	0,04	0,04	0,04	0,04	0,04
Water	3	3	3	3	3
Flavour Emulsion	24	23	24	24	23

Total	100	99	98	101	100
Added Sugars Reduction	20%	18%	10%	17%	24%
Sensory comment	S	*	*	F	F

Table 6. Composition (g) of cocoa-malt beverages produced in example 1. Sample numbers refer to the flavour emulsions used for each beverage composition. The reference for sensory evaluation was the same as in Table 4.

	Sample 10	Sample 11	Sample 18	Sample 19	Sample 52-1	Sample 52-2
Malt Extract	34	34	34	34	46	42
Sugar	14	15	14	14	10	11
Skim milk powder	16	19	21	21	15	17
Cocoa Powder 10-12% Fat	4		3		10	10
Palm oil					5	5
Vanillin	0,04	0,04	0,04	0,04		
Water	3	3	3	3	2	2
Vitamins, minerals					2	2
Flavour emulsion	23	24	23	23	10	11
Total	94	94	99	94	100	100
Added Sugars Reduction	31%	26%	32%	32%	16%	20%
Sensory comment	*	*	*	*	*	*

Table 7. Composition (g) of cocoa-malt beverages produced in example 1. Sample numbers refer to the flavour emulsions used for each beverage composition. The reference for sensory evaluation was the same as in Table 4.

	Sample 49	Sample 51
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Malt Extract	35	35
Sugar	12	13
Skim milk powder	16	13
Cocoa Powder 10-12% Fat		
Palm oil		
Vanillin	0.04	0.04
Water	2	2
Vitamins, minerals		
Flavour emulsion	22	21
Total	87	85
Added Sugars Reduction	39%	36%
Sensory comment	*	*

Example 2. Processability of sugar reduced product

5

Two different sugar reduced cocoa and malt beverage products were produced, with and without the flavour emulsion of the invention, and compared to a reference product without sugar reduction. The ingredients of the flavour emulsion is given in Table 6 and the composition of the cocoa and malt beverage products are given in Table 7.

10

Table 6: Ingredients of Flavour Emulsion

Ingredients	%
Milk Fat	16
Coconut Oil RBD	28
Cocoa Powder 10-12% Fat	25
Fructooligosaccharides	15
Buttermilk Powder	16

Table 7: Composition of cocoa and malt beverage products

	Reference	Sugar reduced	Sugar reduced with flavour emulsion
Malt extract	35	45	48
Sugar White	20	0	0
Skim milk powder	23	30	20
Cocoa Powder 10-12%	12	15	11
Palm Oil	10	10	0
Flavour emulsion	0	0	21
Total	100	100	100

The process for processing the wet mix was as in example 1. The wet mixes were then analysed for viscosity on the rheometer at constant temperature (65 °C) with varying shear rate. The results were as below:

	Viscosity at 0 s⁻¹	Consistency	Flow index, <i>n</i>
	(Pa·s)	Coefficient, <i>k</i>	
Ref	933	1804	-0,49
Sugar reduced	2722	2492	-0,70
Sugar reduced with flavour emulsion	1180	4720	-0,56

Viscosity across all shear rates for the full sugar reference and sugar reduced sample with flavour emulsion were very close, which can be seen by similar consistency coefficients and flow indices, while the viscosity of the sugar reduced without flavour emulsion was almost three times higher in viscosity than the full sugar reference.

High viscosity wet mixes result in difficulties in further processing and loss of capacity in the processing line. The use of flavour emulsion helps in achieving similar

processability and line capacity as for the full sugar product.

Claims

1. A flavour emulsion for food or beverage products, the flavour emulsion comprising:
5 10-30% by weight of milk fat;
15-35% by weight of vegetable oil;
12-35 % by weight of non-fat milk solids; and
15-32 % by weight of cocoa solids;
which ingredients have been mixed and heat treated at 85-115°C for 10-45 minutes.
10
2. The flavour emulsion of claim 1, wherein the vegetable oil is coconut oil.
3. The flavour emulsion of any one of claims 1 or 2, wherein the non-fat milk solids are derived from butter milk.
15
4. The flavour emulsion of any one of claims 1-3 further comprising 10-20 % by weight of oligosaccharide.
5. A powdered cocoa and/or malt beverage comprising 8-30 % by weight of the
20 flavour emulsion of any one of claims 1-4.
6. A powdered cocoa and/or malt beverage according to claim 5 further comprising:
10-30 % by weight of skim milk powder; and
20-60 % by weight of malt extract.
25
7. A liquid ready-to-drink cocoa and/or malt beverage comprising 8-30 % by dry weight of the flavour emulsion of any one of claims 1-4.
8. A liquid ready-to-drink cocoa and/or malt beverage according to claim 7 further
30 comprising:
10-30 % by dry weight of non-fat milk solids; and
20-60 by dry weight of malt extract.
9. A method of producing a flavour emulsion for food and beverage products, the

method comprising:

a) mixing the following ingredients:

10-30% by weight of milk fat;

15-30% by weight of vegetable oil;

5 12-35 % by weight of non-fat milk solids; and

15-32 % by weight of cocoa solids; and

b) heat treating the mixture of step a) at 85-115°C for 10-45 minutes.

10 10. The method of claim 9 further comprising 10-20 % by weight of oligosaccharide in the mixture of step a).

11. The method of any one of claims 9-10 wherein the milk fat is in the form of anhydrous milk fat and/or butter oil.

15 12. The method of any one of claims 9-11 wherein the ingredients are mixed at a temperature of 65°C or below in step a).

20 13. The method of any one of claims 9-12 wherein the mixture of step a) is heated to the heat treatment temperature of step b) at a heating rate of between 1 and 15°C per minute, preferably between 3 and 8°C per minute.

14. The method of any one of claims 9-13 wherein the mixture is cooled after the heat treatment to 60°C or below, more preferably to 40°C or below, even more preferably to 15°C or below.

25 15. The method of claim 14 wherein the mixture is agitated while being cooled.

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2020/069887

A. CLASSIFICATION OF SUBJECT MATTER		
INV.	A23D7/005	A23G1/36
	A23G1/56	A23L2/385
		A23G1/40
		A23L2/56
		A23G1/46
		A23L2/60
		A23G1/48
ADD.		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols)		
A23D C11C A23G A23L		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)		
EPO-Internal, WPI Data		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 293 194 A2 (UNILEVER PLC [GB]; UNILEVER NV [NL]) 30 November 1988 (1988-11-30) example 1	1,3-15
A	----- example 1	2
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Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016		Authorized officer Granet, Nicolas

INTERNATIONAL SEARCH REPORT

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