

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO

División de Nuevas Creaciones

E. S. D.

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SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO
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Ref: Expediente 03-098070

Solicitud de patente a nombre de
KRAFT FOODS R & D, INC

Me refiero al oficio notificado en el asunto de la referencia, contentivo del concepto técnico N° 1723 para presentar un nuevo pliego de reivindicaciones de acuerdo a lo sugerido por el Examinador en el que se plantea una sola reivindicación independiente para el proceso de incorporar proteínas de suero lácteo en un producto alimenticio.

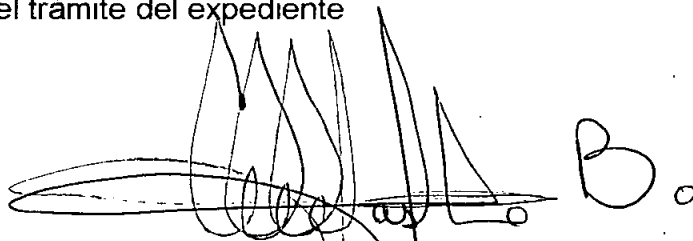
Estas reivindicaciones así planteadas obvian las objeciones planteadas en cuanto al documento D1, además que dicha anterioridad no enseña la mezcla e incubación del producto alimenticio con una transglutaminasa.

Por otra parte, modifico el título inicial por el siguiente:

PROCESO PARA LA PREPARACION DE UNA EMULSION GRASA ESTABILIZADA
CON PROTEINAS DE SUERO LACTEO.

En consecuencia, pido se continúe con el trámite del expediente

Cordialmente,


JERONIMO CASTILLO BONILLA
C.C. 79.462.057 Bogotá
T.P. 104167 C.S. Judicatura

Reivindicaciones

1. Un proceso para la preparación de una emulsión grasa estabilizada con proteínas de suero lácteo, caracterizado por
 - la acidificación de una solución acuosa de una o más proteínas de suero lácteo hasta por debajo de su PH isoelectrico,
 - la mezcla y homogeneización de la solución acidificada de proteínas de suero lácteo con una o más grasas para formar una emulsión grasa estabilizada con proteínas de suero lácteo, y
 - el tratamiento térmico de dicha emulsión grasa estabilizada con proteínas de suero lácteo a una temperatura superior a 80°C.
2. El proceso descrito en la reivindicación 1, en el cual la relación peso de proteínas de suero lácteo a peso de grasas está comprendida dentro del rango de 3:1 a 1:5 con base en materia seca.
3. El proceso descrito en la reivindicación 1 ó 2 en el cual el producto alimenticio resultante se mezcla e incuba con una trasglutaminasa.
4. El proceso descrito en una cualquiera de las reivindicaciones 1 a 3 caracterizado porque la base de producto alimenticio contiene caseína.
5. El proceso descrito en la reivindicación 4 caracterizado porque la relación peso de proteínas de suero lácteo a peso de caseína en el producto alimenticio resultante que contiene caseína está comprendida dentro del rango de >10:90 a 80:20, preferiblemente de 20:80 a 40:60.
6. El proceso descrito en una cualquiera de las reivindicaciones 1 a 5, caracterizado porque la base de producto alimenticio es una formulación de queso procesado.
7. El proceso descrito en una cualquiera de las reivindicaciones 1 y 2, caracterizado porque la base de producto alimenticio contiene proteínas cárnicas.
8. El proceso descrito en la reivindicación 7, en el cual la relación peso de proteína de suero lácteo a peso de proteínas cárnicas en el producto alimenticio resultante que contiene proteínas cárnicas está comprendida dentro del rango de 10:90 a 80:20, preferiblemente de 20:80 a 40:60.

9. El proceso descrito en las reivindicaciones 6 y 8 caracterizado porque el producto alimenticio resultante que contiene proteínas cárnicas incluye grasa animal.

10. El proceso descrito en una cualquiera de las reivindicaciones 7 a 9 caracterizado porque la base de producto alimenticio es base de carne procesada.

PATENT SPECIFICATION

(11) 1440 182

1440 182

- (21) Application No. 20459/73 (22) Filed 18 May 1972
 (62) Divided out of No. 1440181
 (21) Application No. 21939/73 (22) Filed 8 May 1973
 (23) Complete Specification filed 17 Aug. 1973
 (44) Complete Specification published 23 June 1976
 (51) INT CL² A23L 1/19
 (52) Index at acceptance



A2B 1A 1B 1C 1H 1L 1N 1Z

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(54) OIL-IN-WATER EMULSIONS

(71) We, UNILEVER LIMITED, a company organised under the laws of Great Britain, of Unilever House, Blackfriars, London E.C.4, England, do hereby declare the invention for which we pray that a patent may be granted to us and the method by which it is to be performed, to be particularly described in and by the following statement:—

10 This invention relates to oil-in-water emulsions and processes for making them, and especially to oil-in-water emulsions of prolonged storage life which on whipping give a structure comparable with whipped dairy cream. Whipped dairy cream is a product which has been known for many years and which is very much appreciated by many people. The product is usually made some time before use by whipping a liquid fresh or pasteurized dairy cream after addition of sugar and/or whipping agents. Sometimes a sterilized canned dairy cream is used which is often a semi-solid product due to fat aggregation.

25 Because dairy cream is rather expensive, filled creams have been proposed; filled creams are creams in which milk fat is replaced partly or wholly by other fats. For this purpose hardened vegetable fats are usually proposed, because unhardened vegetable fats are usually too liquid and have a detrimental effect on the structure of the whipped product. Sometimes the product could not be whipped at all in the presence of liquid fats (see for example M. E. Schulz in *Milchwissenschaft*, 26 (1971) 481—6, particularly paragraph VIII, which discloses that oils and fats, particularly above their melting points, and emulsions containing free fat, are foam-destroying ingredients of food products).

45 In recent years two tendencies have developed in this field. The first is based on research findings indicating that polyunsaturated fatty acids termed PUFA here-

inafter have a favourable influence in the prevention and combatting of atherosclerosis and similar heart diseases. As a consequence manufacturers of fat-containing products are more and more developing and marketing products in which the fat contains a considerable proportion of polyunsaturated fatty acids, in particular linoleic acid. Thus, margarines, halvarines (which are margarine-like products containing about 40% fat instead of about 80% fat), and liquid coffee whiteners with a fat phase having a PUFA content of at least 40 mole % (i.e. at least 40% of the fatty acid radicals of the fat having two or more double bonds), are marketed in the Netherlands. In the literature also other products with high-PUFA fats have been described, for example yoghurt and cheese. However, in the preparation of whippable creams containing high-PUFA fats, serious difficulties can be encountered, because the higher PUFA content of the fat phase is accompanied by an increase of the proportion of liquid fat that decreases the whippability and the rigidity of the creams.

The second tendency is a result of changes in the distribution pattern of food products. In the past products such as milk, yoghurt, and cream, were offered by the milkman, who delivered the products to the consumer every day. Thus the shelf-life need only be a few days. With the introduction of self-service stores, refrigerators in many homes and centralized production in a few factories, a need arose for products having a longer keepability, i.e. 3 to 5 weeks at least at chilled cabinet temperatures (0—10°C) but preferably at room temperature (20—25°C). This tendency gives rise to the need for preserving methods because the storage life of dairy products is often limited due to microbiological spoilage. Because preserving agents are not permitted in many countries, the industry has to develop sterilization or pasteurization methods to prepare products

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to 5.5, a range of from 4.6 to 5.4 is preferable, particularly for emulsions containing a fat phase with a high PUFA content, the range of from 4.7 to 5.0 being most preferable both for rigidity and taste of the cream. However, if the storage life of the product is to be as long as possible a pH range of from 4.2 to 4.9 is preferable in view of better microbiological stability.

Globular proteins are proteins which form stable colloidal solutions in water in the whole pH range of from 2.0 to 7.0, if required after addition of salt. Examples of these globular proteins are:

- 1) whey proteins, comprising beta-lactoglobulin, alpha-lactalbumin and serum albumin;
- 2) blood serum proteins, the main constituent (about 80%) of which is blood serum albumin;
- 3) egg-white proteins, of which the main components are ovalbumin, conalbumin and ovomucoid (*J.Sci.Fd.Agr.*, 17 (1966), p. 101—111);
- 4) soya whey proteins;
- 5) proteins from wheat germ; and
- 6) egg-yolk and similar lipoproteins.

The amount of globular protein in the aqueous phase is preferably from 1.0 to 2.5% by weight. Whey protein is preferable, because its heat stability is such that an emulsion containing whey protein can be pasteurised without appreciable coagulation of whey protein, and because it is a by-product in dairy manufacture having a high nutritional value which can be used in food manufacture. However the heat stability of whey protein and other globular proteins will be improved if at least part of the globular protein is present in the form of a complex with an anionic polysaccharide such as carrageenan, sodium alginate and carboxymethylcellulose (CMC). Because CMC is not permitted by food legislation in some countries and because the complexes of CMC and whey proteins have less buffering capacity, which is important for the taste of the product, complexes of globular proteins with algal anionic polysaccharides, such as carrageenan and sodium alginate are preferable. When very heat-sensitive globular proteins such as egg-white proteins are used, it is especially valuable to have substantially all globular protein present in the form of a complex with an algal anionic polysaccharide, but even for less heat-sensitive globular proteins to use of fully-complexed globular proteins is advantageous for improving the taste of the product. When a complex of a globular protein and an algal anionic polysaccharide is used in an emulsion according to the present invention, this provides a form of the invention described and claimed in British Patent Specification No.

23,339/72 (Serial No. 1,440,181) in which the preparation of the complexes is described in detail.

As stated above the presence of a substantial amount of coagulated protein, as for example in sour cream, destroys almost completely the whippability of the emulsion. Therefore the present emulsion contain globular protein in the absence of substantial amounts i.e. less than 20%, of coagulated protein. Less than 20% of coagulable protein by weight of the total protein content is not necessarily harmful for the whippability.

The non-protein emulsifier is preferably present in an amount of from 0.3 to 2.0% by weight of the emulsion, a range of from 0.5 to 1.0% being most preferable. Suitable emulsifiers that form a flocculate in water at the pH of the aqueous phase are nonionic emulsifiers such as partial fatty acid esters of polyalcohols, for example glycerol and propylene glycol, and glycerolactopalmitate. Preferably partial palmitic acid glycerides are used as an emulsifier. Both partial fatty acid glycerides having a monoglyceride content of above 90% (so-called "high monoglycerides") and partial fatty acid glycerides having about equal amounts of monoglycerides and diglycerides (so-called "mono/diglycerides") can be used.

Other ingredients which are usual in cream type products can be added in appropriate amounts, if desired, for example 0.05 to 0.5% of lecithin by weight of the emulsion, which is favourable for improving the rigidity of the whipped cream, and from 3 to 20% of monosaccharides and/or disaccharides by weight of the emulsion, which can be used for sweetening purposes. Artificial sweeteners can also be employed.

Thus, a particular embodiment of the invention is a low calorie cream, which is an oil-in-water emulsion containing:

- a) from 3 to 25% by weight of fat having an extrapolated melting dilatation of at least 1500 mm³/25g at 0°C, for example butter fat, interesterified palm kernel oil, hydrogenated fats and vegetable oils,
- b) from 0.5 to 2.0% by weight partial fatty acid glycerides,
- c) from 0.05 to 0.5% by weight of lecithin, and
- d) an aqueous phase having a pH of from 4.2 to 5.5 and containing from 3 to 20% by weight of the emulsion of mono- and/or di-saccharides and from 0.5 to 4% of its weight of whey protein of which by weight at least 60% is in the form of a complex with an algal anionic polysaccharide, the amount of coagulable protein being less than 20% by weight of the total protein.

Another particular embodiment of the invention is a whippable high-PUFA cream, which is an oil-in-water emulsion containing:

- 5 a) from 25 to 50% by weight of fat having a PUFA content of at least 30 mole % and containing from 15 to 60% of its weight of a fatty acid triglyceride hard-stock, i.e. triglyceride having a
10 melting point of at least 38°C,
b) from 0.5 to 2.0% by weight of partial fatty acid glycerides,
c) from 0.05 to 0.5% by weight of lecithin, and
15 d) an aqueous phase having a pH of from 4.2 to 5.5 and containing from 3 to 20% by weight of the emulsion of mono- and/or di-saccharides, and from 0.5 to 4% of its weight of whey protein of which by weight at least 60%
20 is in the form of a complex with an algal anionic polysaccharide, the amount of coagulable protein being less than 20% by weight of the total protein.

25 The invention also provides a whipped emulsion comprising a dispersed gas phase, prepared by whipping an oil-in-water emulsion according to the invention. Such whipping can be carried out by whipping
30 with a conventional household or industrial mixer using air as the gas to be dispersed, but also by applying a pressurised gas such as air, nitrogen and nitrous oxide, which whips the emulsion during the simultaneous
35 release of aqueous oil emulsion and gas such as is provided in aerosol-packaged creams and by whipped-cream equipment in use in ice cream shops.

The oil-in-water emulsions of the present
40 invention have the advantages that they show a good foam formation and are whippable in general within 2—3 minutes in contrast with many filled creams, i.e. creams containing vegetable fats, which often show rather
45 long whipping times (up to 10 minutes and more). The low pH of the emulsions gives the advantage that the storage properties of the emulsions can be made much better than for conventional dairy whipping cream, as
50 regards microbiological stability, formation of fat lumps, and viscosity.

The invention also provides a process for the preparation of an oil-in-water emulsion which comprises:

- 55 a) preparing an aqueous phase having a pH of from 4.2 to 5.5 and containing by weight of the aqueous phase, from 0.5 to 4% globular protein, the amount of coagulable protein being by weight
60 less 20% of the total protein, and optionally from 3 to 20% of mono-

and/or di-saccharides by weight of the emulsion,

- b) mixing the aqueous phase with a non-protein emulsifier of the type that forms
65 a flocculate at the pH of the aqueous phase in an amount sufficient to retain dispersed gas when the emulsion is whipped and with not more than 50%,
70 and preferably from 25 to 50%, of fat by weight of the emulsion at a temperature at which the fat is liquid, and optionally with from 0.05 to 0.5% of lecithin by weight of the emulsion,
c) homogenising the mixture at a temperature at which the fat is liquid, and
75 d) pasteurizing by heat, and packaging the emulsion obtained.

The non-protein emulsifier and the lecithin can be added to the aqueous phase, but pre-mixing with the fat is preferable to facilitate the emulsification of the fat.

By packaging is preferably meant filling
80 into a container which is subsequently sealed. The pasteurisation can be carried out continuously or batchwise before packaging, but when the emulsion is to be sold in bottles or
85 tins it is preferable that the unwhipped emulsion is packaged and then pasteurised while the package contents are moving with respect to the container. With substantially
90 all globular protein present in the form of a complex with an algal anionic polysaccharide, emulsions according to the present invention have been sterilised successfully.

The emulsion can be whipped and then packaged, for example when the whipped
95 emulsion is used as a topping on a ready-to-eat dessert. In such a process the emulsion is preferably cooled to from 0 to 10°C before
100 whipping. If the application of the whipped cream needs pasteurisation of the product, the emulsion can conveniently be pasteurised before the cooling.

The invention is illustrated by the following
105 Examples in which amounts are by weight unless stated otherwise.

Example 1

A fat phase of 32 parts maize oil, 8 parts
110 interesterified palm kernel oil and 1 part C₁₆ distilled monoglyceride was made at 60°C. An aqueous phase of 5 parts cream containing 40% milk fat, 5 parts sugar and 49 parts of a suspension of a complex of sodium alginate and undenatured whey protein,
115 which suspension contained 2% protein, was made by mixing the ingredients at 60°C. The complex had been prepared as follows: 0.2% sodium alginate was added to cheese whey adjusted with caustic soda to a pH of
120 9 and dissolved while stirring for 15 minutes. Subsequently the pH was decreased to 3.0 by addition of hydrochloric acid. The preci-

erties of the whipped cream were slightly better than those of the cream according to Example 8.

Example 10

- 5 A recombined dairy cream was made by mixing at about 60°C 30% butter, 1% partial palmitic acid glyceride having a mono-
glyceride content of more than 90%, 10% sucrose, and 59% of an aqueous phase having
10 a pH of 4.95 and containing 1% of its weight of whey protein in the form of a complex with sodium alginate prepared as described in Example 1. The mixture was homogenised
15 filled into bottles which were sealed and pasteurised while the contents were moving with respect to the container (10 min. at 90°C). After storing overnight at 5°C the

emulsion was whipped in 2 minutes and gave a whipped cream having an overrun of 250%, a penetrometer value of 22 and a good rigidity.

Examples 11 and 12

The procedure of Example 10 was repeated with the exception that 24% maize oil and 6% of the hard-stock used in Example 8 were used instead of butter. The PUFA content of that fat was about 41%. An aqueous phase was used containing in addition 0.60% of its weight of free protein incorporated by addition of partially hydrolysed wheat gluten (Example 11) or 0.54% of its weight of dried egg white containing 80% egg white protein (Example 12). The pH of the aqueous phase was 4.95 (Example 11) and 4.8 (Example 12).

	Example 11	Example 12
Whipping time	4 minutes	2 minutes
Overrun	178%	165%
Penetrometer value	23.5	25
Rigidity	good	reasonable

Example 13

- Edible emulsions were made following the procedure of Example 8 by mixing a fat mixture containing 20% maize oil, 5% of the hard-stock used in Example 8, 4.7% butter, 0.95% glycerol monopalmitate, 0.05% Myverol 18-98 and 0.1% lecithin with 10% sucrose and an aqueous phase containing 0.89% of its weight of whey protein in the form of a complex with sodium alginate prepared as described in Example 1 and 1.05% of its weight of free whey protein incorporated by adding the appropriate amount of an electro dialysed whey concentrate containing 35% protein. A series of samples of different pH in the range of 4.3 to 5.5 at intervals of 0.2 were made. After whipping the products having a pH within the range of 4.6 to 5.4 gave creams having an overrun varying from 245% to 285% and a penetrometer value varying from 32 mm to 36 mm.

Example 14

- 65 A fat phase containing 32% maize oil, 8% interesterified palm kernel oil and 0.5% of a distilled, fully hardened sunflower seed fatty acid monoglyceride having a monoglyceride content of at least 90% and 59.5%
70 of an aqueous phase having a pH of 4.2 and containing 2% of its weight of whey protein in the form of a complex with sodium alginate prepared as described in Example 1 were separately heated to 65–
75 70°C, and then mixed. The mixture was homogenised at 175 and 100 kg/cm², filled into bottles which were sealed and pasteurised at different temperatures (70, 80, 90

and 100°C) for 10 minutes. The products were whipped after storing over-night at 5°C. Overrun from 157 to 167%, and penetrometer values from 28 to 31 were obtained and the piping properties were good. The whipped products did not give serum drainage.

Example 15

The procedure of Example 10 was repeated with the exception that 24% maize oil and 6% of the hard-stock used in Example 8 were used instead of 30% butter. The aqueous phase had a pH of 4.8 and contained 1% of whey protein but complexed with carrageenan instead of sodium alginate. The complex was prepared by dissolving 0.2% carrageenan in cheese whey adjusted at pH 6.4 by stirring for 15 minutes at 60°C. The complex was formed after cooling to 20°C and acidifying to pH 2 with hydrochloric acid. The complex was isolated by centrifuging, redispersing in water and spray-drying the dispersion yielding a powder containing 30% protein. After whipping for 3 minutes the overrun was 194%, the penetrometer value more than 36 mm and the rigidity was rather low.

WHAT WE CLAIM IS:—

1. An oil-in-water emulsion which has been pasteurised by heat comprising not more than 50% by weight fat and an aqueous phase having a pH of from 4.2 to 5.5 and containing from 0.5 to 4% globular protein as hereinbefore defined by weight of the aqueous phase, less than 20% of the total amount of protein being coagulable and a

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DIVISIÓN DE NUEVAS CREACIONES**

2020

Bogotá, D.C., 11 de marzo de 2008

Abogado

JERONIMO CASTILLO BONILLA

ASUNTO

Radicación 03-98070
Trámite 011
Evento 379
Actuación 430
Oficio 4234
Folios 008

Patente de Invención

☒

Patente de Modelo de Utilidad

☐

Vía Nacional

☐

Vía PCT (fase nacional)

☒

Cap. I

☐

Cap. II

☒

No. Sol. Internacional:

PCT/US2004/018256

Fecha de Presentación Internacional:

junio 09 de 2004

Como resultado del examen de fondo, realizado con fundamento en el artículo 45 de la Decisión 486 de la Comisión de la Comunidad Andina, se le comunica:

1. Documentos estudiados

1.1. Descripción: Folios: 30 a 37

1.2. Reivindicaciones: Folios: 38 a 39 (como se radicó inicialmente)
Folios: 79 a 80 (modificadas)

1.3. Prioridad: 09 de abril de 2001, EP. No. 011078524

2. Objeto de la invención

- La Invención se titula **“PROCESO PARA LA PREPARACIÓN DE UNA EMULSIÓN GRASA ESTABILIZADA CON PROTEÍNAS DE SUERO LÁCTEO”** (folio 78)

La **reivindicación independiente 1** define un “proceso para la preparación de una emulsión grasa estabilizada con proteínas de suero láctico...”

- El problema planteado en esta solicitud consiste en desarrollar un proceso encaminado a la obtención de una emulsión grasa estabilizada con proteínas de suero lácteo, la cual permita introducir una mayor cantidad de proteínas de suero lácteo en un determinado producto alimenticio.

La solicitud en estudio presenta un proceso para preparar una emulsión grasa estabilizada con proteínas de suero láctico que comprende acidificar una solución acuosa que contiene proteínas de suero lácteo, mezcla y homogenizar dicho solución acuosa acidificada con una o más grasas y finalmente realizar un tratamiento térmico a la mezcla resultante.

- El objeto de la invención se catalogó como A23J 3/08 según la Clasificación Internacional de Patentes (IPC).

3. De la solicitud de Patente (según el caso)

3.1. Reivindicaciones (artículo 30 D 486)

- La reivindicación 3 señala un proceso de acuerdo con las reivindicaciones 1 ó 2 en donde el producto alimenticio resultante se mezcla e incuba con una transglutaminasa. Sin embargo, las reivindicaciones 1 ó 2 no mencionan ningún producto alimenticio, por lo cual existe una falsa dependencia. Es importante aclarar que la reivindicación dependiente es aquella que hace referencia a una anterior y contiene todas las características de aquella y solo puede referirse a características particulares de un elemento de la reivindicación independiente. En este caso, la reivindicación 3 adiciona elementos no contemplados en la reivindicación inicial, lo cual es inaceptable.

Lo mismo ocurre en las reivindicaciones 4 y 5, las cuales señalan una base de producto alimenticio que contiene caseína; en la reivindicación 6 que establece una base de producto alimenticio constituida por una formulación de queso; en las reivindicaciones 7, 8 y 9 donde se relaciona una base de producto alimenticio que contiene proteínas cárnicas y en la reivindicación 10 que hace referencia a una base de carne procesada. La reivindicación independiente no menciona ninguna base de producto alimenticio.

Adicionalmente, el producto alimenticio y la base de producto alimenticio de las reivindicaciones dependientes 3 a 10, son elementos involucrados en un proceso para incorporar proteínas de suero lácteo en un producto alimenticio, dicho proceso no hace parte de la invención a proteger.

Así las cosas, las reivindicaciones 3 a 10 deben ser eliminadas del capítulo en cuestión.

En conclusión, el capítulo reivindicatorio no cumpliría con el requisito de claridad de acuerdo con el artículo 30 de la Decisión 486.

4. Determinación del Estado de la Técnica

Considerando que la fecha de presentación de la primera solicitud de patente de la cual se reivindica prioridad es: 09 de abril de 2001, se buscaron documentos del estado de la técnica relacionados, con fecha de publicación anterior a esta.

Nº	Documento	Título	Fecha de publicación
D1	GB 1440182	"OIL IN WATER EMULSIONS"	23 de junio de 1976

5. Análisis de patentabilidad (según requisito) (artículo 14 D486)

5.1 Novedad (artículo 16 D486)

Respecto a la solicitud en estudio

La reivindicación independiente 1 define un proceso para la preparación de una emulsión grasa estabilizada con proteínas de suero láctico, que comprende:

- La acidificación de una solución acuosa de una o más proteínas de suero lácteo hasta por debajo de su pH isoelectrico.
- La mezcla y homogeneización de la solución acidificada de proteínas de suero lácteo con una o más grasas para formar una emulsión grasa estabilizada con proteínas de suero láctico, y
- El tratamiento térmico de dicha emulsión grasa estabilizada con proteínas de suero láctico a una temperatura superior a 80 °C.

Respecto al estado de la técnica

El documento GB 1440182 (llamado D1 de aquí en adelante), divulga un proceso para obtener una emulsión grasa estabilizada con proteínas de suero láctico que comprende: acidificar una solución acuosa con una o más proteínas de suero lácteo hasta alcanzar un valor de pH por debajo del punto isoelectrico; mezclar y homogenizar la solución acuosa acidificada de proteínas con una o más grasas obteniendo una mezcla grasa estabilizada con proteínas de suero láctico y realizar un tratamiento térmico a la dicha mezcla a una temperatura superior de 80 °C. (folio 83, líneas 52 - 78; folio 82, líneas 10-17; folio 84, líneas 65-85, ejemplo 14)

De acuerdo con lo anteriormente expuesto, todas las etapas del procedimiento, señaladas en la reivindicación 1, ya eran conocidas en D1.

En conclusión, la materia de invención propuesta con la solicitud en estudio se encuentra afectada en su novedad de acuerdo con el artículo 16 de la Decisión 486.

6. Conclusión:

Los requisitos de patentabilidad de la presente solicitud se encuentran afectados así:

N°	Documento	Reivindicaciones afectadas	Requisito que afecta
D2	GB 1440182	1-2	Novedad

En cumplimiento del artículo 45 de la Decisión 486 de la Comisión de la Comunidad Andina, se le indica que debe dar respuesta dentro del término de 60 días contados a partir de la fecha de notificación de la presente comunicación. En caso de no dar respuesta al presente requerimiento, o si a pesar de la respuesta subsistieran los impedimentos para la concesión, se denegará la patente.

Notifíquese el presente oficio conforme a lo dispuesto en el numeral 5.2, literal e), del capítulo quinto del título primero de la Circular Única N° 10 de 2001.



ALIX CARMENZA CÉSPEDES DE VERGEL
Jefe de División de Nuevas Creaciones

El anterior requerimiento fue notificado por fijación en lista, de fecha
28 MAR. 2008

CONCEPTO TÉCNICO No. 595

EXAMINADOR TÉCNICO
Código No. 202076

