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Señor

SUPERINTENDENTE DE INDUSTRIA Y COMERCIO
DIVISION DE NUEVAS CREACIONES

SUPERINTENDENTE DE INDUSTRIA Y COMERCIO
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Trámite: 002 PATENTES 1 REGISTRO/ 444 RESPUESTA
Dependencia: 2020 DIVISION DE NUEVAS CREACIONES

E. _____ S. _____ D. _____

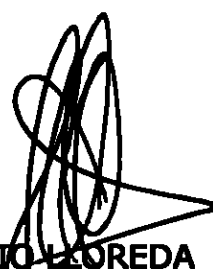
Re: P1.-UNILEVER N.V.-Solicitud de Patente de Invención para
"COMPOSICION ALIMENTICIA ADECUADA PARA ASAR
QUE COMPRENDE LECITINA DE GIRASOL".-Clase A23B.-
Expediente número 01-104.581.

1. Me refiero a mi solicitud de 6 de Diciembre de 2001 y al auto dictado por ese Despacho notificado por Estado el 28 de Febrero de 2002.
2. Anexos me permito presentar a usted:
 - (1) Copia auténtica debidamente certificada de la solicitud de patente presentada para el invento arriba nombrado **respecto de la cual reclamo prioridad**, a saber la solicitud europea número 00204763.7, junto con su traducción oficial LLC-0049-2001, correspondiente a las legalizaciones y reivindicaciones de dicho documento; y
 - (2) Documento que acredita el traspaso que los autores del invento de la referencia hacen a favor de mi representado de sus derechos sobre el mismo, debidamente apostillado, junto con la traducción oficial número 2002-03-08-077, debidamente legalizadas por el Ministerio de Relaciones Exteriores de Colombia bajo el número 428344 de 8 de Marzo de 2002, correspondientes a dicho documento de traspaso.
3. Anexa también acompaño copia debidamente autenticada por el Notario 6º del Circulo de Bogotá, de los documentos que acreditan la

calidad de Traductor Oficial del señor Gabriel Rueda Chadid, quien elaboró la traducción de la solicitud europea número 00204763.7, respecto de la cual se reivindica prioridad en el presente caso.

4. Ruego a usted tomar atenta nota de lo anterior y proceder de conformidad.

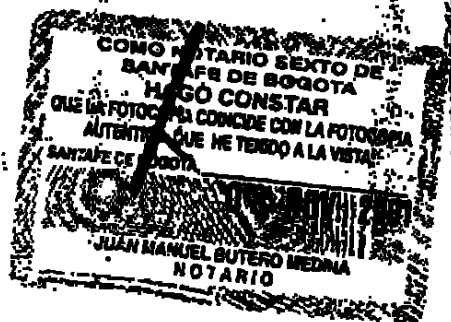
Señor Superintendente,



JOSE ANTONIO LLOREDA
T.P. 10.784
Código 231

31/3A

EL SUSCRITO JEFE DEL AREA DE
LEGALIZACIONES DE MINISTERIO DE
RELACIONES EXTERIORES



HACE CONSTAR

Que el señor Gabriel Rueda, se encuentra debidamente
registrado ante este Ministerio, como traductor e
intérprete oficial para los idiomas INGLÉS -ESPAÑOL,
ESPAÑOL - INGLÉS.

COMO NOTARIO SEXTO ENCARGADO
DE SANTA FE DE BOGOTA
HAGO CONSTAR
QUE LA FOTOCOPIA CONCORDA CON LA FOTOCOPIA
AUTENTICA QUE HE TENIDO A LA VISTA
SANTA FE DE BOGOTA

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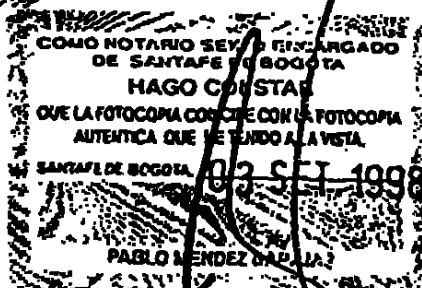
Para efectos de esta certificación el interesado presentó
copia autenticada de la certificación del Ministerio de
Justicia acerca de la vigencia de la resolución
1982.

COMO NOTARIO SEXTO ENCARGADO
DE SANTA FE DE BOGOTA
HAGO CONSTAR
QUE LA FOTOCOPIA CONCORDA CON LA FOTOCOPIA
AUTENTICA QUE HE TENIDO A LA VISTA
SANTA FE DE BOGOTA

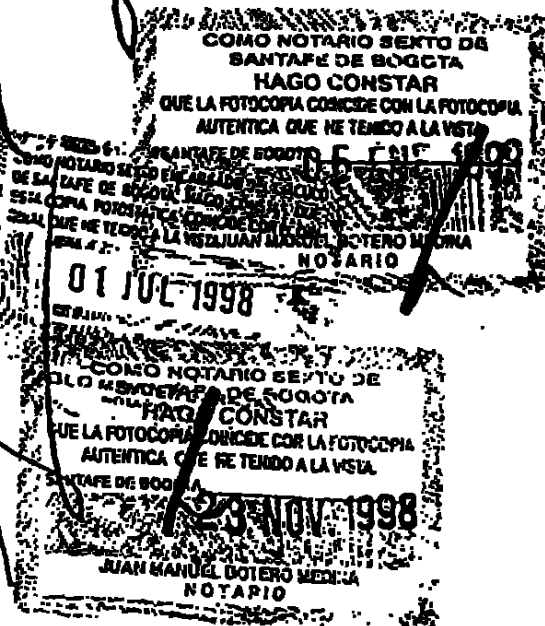
01 AGO 1998

Dada en Santafé de Bogotá, D.C., a los diez y nueve días
(19) del mes de diciembre de 1994.

Neibon Sánchez Torres
Jefe Área de Legalizaciones



NST/gcm.





Ministerio de Justicia y del Derecho

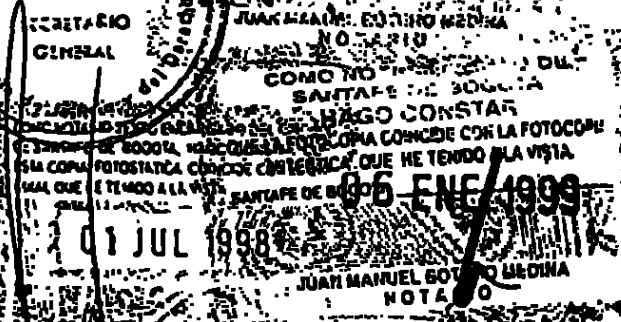
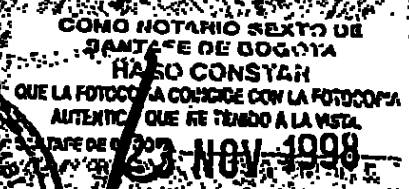
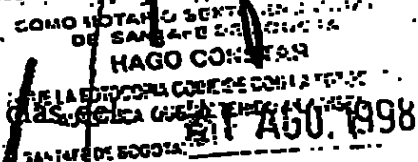
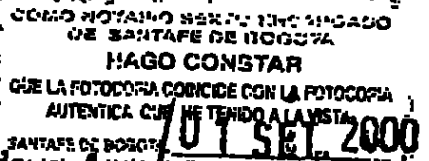
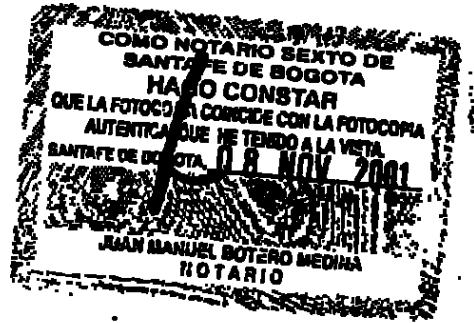
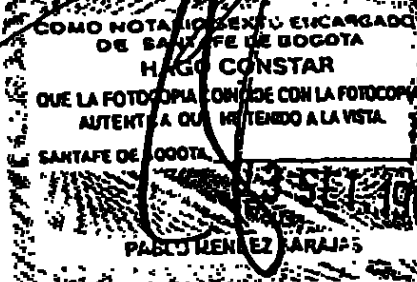
EL SECRETARIO GENERAL DEL MINISTERIO DE
JUSTICIA Y DEL DERECHO

CERTIFICA:

Por Resolución 5996 del 29 de noviembre de 1982, le fue expedida
licencia para ejercer funciones de Traductor e Intérprete Oficial en los
idiomas INGLES-ESPAÑOL, ESPAÑOL-INGLES a GABRIEL RUEDA
CHADID, identificado con la cédula de ciudadanía No. 17.124.145
expedida en Bogotá. Que dicha resolución se encuentra vigente en la
fecha.

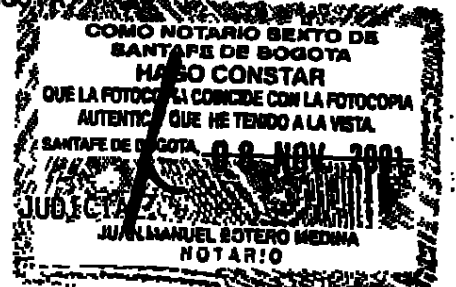
A solicitud del interesado, en Santafé de Bogotá D.C., a los 17 días
mes de noviembre de 1994.

JORGE LUIS SARDIÑA SARDIÑA



TRIBUNAL SUPERIOR DEL DISTRITO JUDICIAL DE SANTAFE DE BOGOTA
SECRETARIA GENERAL

LA SUSCRITA SECRETARIA DEL H. TRIBUNAL SUPERIOR DEL DISTRITO
DE SANTAFE DE BOGOTA,



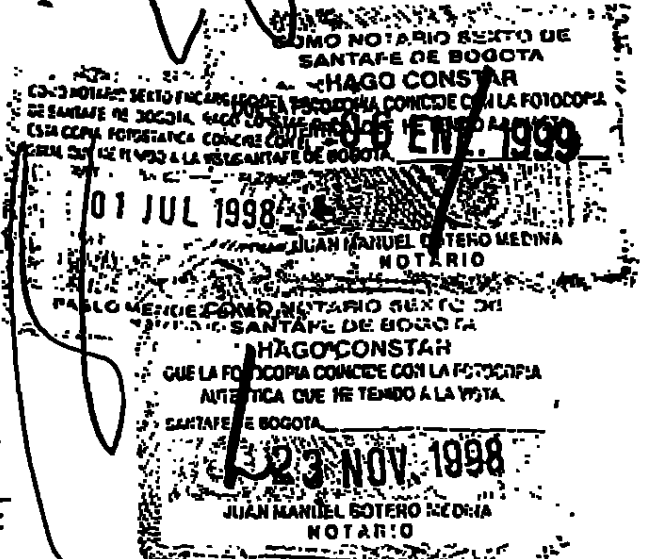
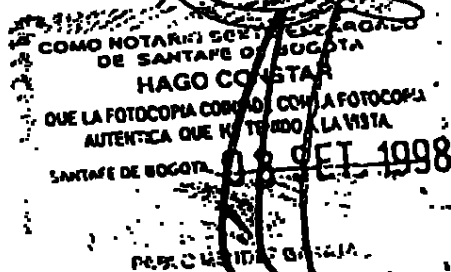
CERTIFICA:

Se el Acuerdo No. 183 de diciembre 3 de 1982 emanado de esta Corporación, por medio del cual dió posesión al señor GABRIEL RUEDA CHADIA, identificado con Cédula de Ciudadanía número 17.124.145 de Bogotá, como TRADUCTOR E INTERPRETE OFICIAL de los idiomas INGLES-ESPAÑOL, ESPAÑOL-INGLES, en virtud de la Resolución No. 5996, se AGO. 1998 VIGENTE.

Se expide en Santafé de Bogotá D.C., a dieciseis (16) de noviembre de mil novecientos noventa y cuatro (1994).

MARIA INES RODRIGUEZ TORRES
SECRETARIA

CRM./



UNILEVER N.V. 7584 (V)

REF: LLC-0049-2001. La presente es Traducción Oficial de un documento presentado originalmente en inglés. Esta traducción es elaborada por Gabriel Rueda Chadid (Traductor Oficial).

OFICINA EUROPEA DE PATENTES

CERTIFICADO

Los documentos adjuntos son fiel copia de la solicitud de patente Europea según la descripción que aparece en la siguiente página, presentada originalmente.

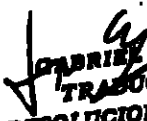
No. de Solicitud de la Patente 00204763.7

El Presidente de la Oficina Europea de Patentes

R C van Dijk

(Firmado)

LA HAYA, 05 / 12 / 01


GABRIEL RUEDA CHADID
TRADUCTOR OFICIAL
RESOLUCION 5994 DE NOV. 29-89
MINISTERIO DE JUSTICIA

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OFICINA EUROPEA DE PATENTES

Solicitud No.: 00204763.7
Fecha de Presentación: 21 / 12 / 00

Solicitante:
UNILEVER N.V.
3013 AL Rotterdam
NETHERLANDS

Título del Invento:
Composición alimenticia que debe freírse con poco aceite
y que contiene lecitina de girasol

Clasificación Internacional de la Patente:
A23D7/00, A23D9/00, A23J7/00, C07F9/10

Estados Contratantes Designados en la Fecha de la
Presentación:

AT/BE/CH/CY/DE/DK/ES/FI/FR/GB/GR/IE/IT/LI/LU/MC/NL/PT/SE/TR

Observaciones:


GABRIEL PINEDA CHADID
TRADUCTOR OFICIAL
RESOLUCION 1596 DE NOV. 29-88
MINISTERIO DE JUSTICIA

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REIVINDICACIONES

1. Composición alimenticia que debe ser freída en poco aceite conformada por triglicéridos, donde por lo menos el 60% por peso de los triglicéridos son de origen vegetal, y 0.05-3% por peso de lecitina de girasol.

2. La composición alimenticia que debe ser freída en poco aceite y que comprende 0.05-3% por peso de lecitina de girasol, donde dicha lecitina es hidrolizada o fraccionada.

3. Composición alimenticia de acuerdo con la reivindicación 2, donde la lecitina girasol es hidrolizada en un grado de hidrólisis para la lecitina de girasol entre 0.2 a 0.4.

4. Un producto alimenticio de acuerdo con la reivindicación 3, donde el grado de hidrólisis de la lecitina de girasol que es 0.3 a 0.36.

5. La composición alimenticia de acuerdo con una de las reivindicaciones 1-4, donde la composición alimenticia comprende:

- a) 30-100% por peso de fase grasosa,
- b) 0-70% por peso de fase acuosa.

6. La composición alimenticia de acuerdo con la reivindicación 5, donde dicha composición comprende:

- a) 40-100% por peso de fase grasosa,
- b) 0-60% por peso de fase acuosa.

7. La composición alimenticia de acuerdo con la reivindicación 6. donde dicha composición es una emulsión de aceite en agua que comprende:

- a) 60-80% por peso de fase grasosa,
- b) 10-40% por peso de fase acuosa.

8. Un proceso para la preparación de lecitina hidrolizada de girasol, donde el aceite de girasol se somete a una operación de desgomado hasta obtener la lecitina del girasol nativo, donde dicha lecitina se somete a hidrólisis, que se caracteriza por cuanto el tiempo de reacción durante la hidrólisis es de 0.1-3 horas.

9. El proceso de acuerdo con la reivindicación 8, donde el tiempo de reacción durante la hidrólisis es tal que el grado de dicho proceso de la lecitina de girasol hidrolizado es de 0.2 a 0.4.

10. El proceso de acuerdo con la reivindicación 9, donde el tiempo de reacción durante la hidrólisis es tal que el grado de dicho proceso de la lecitina de girasol hidrolizado es de 0.3 a 0.36.

11. El proceso de acuerdo con las reivindicaciones 9 o 10, donde la hidrólisis se realiza aplicando un proceso enzimático el cual emplea enzima A-2 de fosfolipasa.

La anterior es Traducción Oficial de un documento presentado originalmente en inglés. Esta traducción fue realizada por GABRIEL RUEDA CHADID (Traductor Oficial). Resolución 5986 del Minjusticia. por lo cual estampo mi Sello y Firmo.



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Bescheinigung

Certificate

Attestation

Die angehefteten Unterla-
gen stimmen mit der
ursprünglich eingereichten
Fassung der auf dem näch-
sten Blatt bezeichneten
europäischen Patentanmel-
dung überein.

The attached documents
are exact copies of the
European patent application
described on the following
page, as originally filed.

Les documents fixés à
cette attestation sont
conformes à la version
initialement déposée de
la demande de brevet
européen spécifiée à la
page suivante.

Patentanmeldung Nr. Patent application No. Demande de brevet n°

00204763.7

Der Präsident des Europäischen Patentamts;
Im Auftrag

For the President of the European Patent Office

Le Président de l'Office européen des brevets
p.o.

R C van Dijk

DEN HAAG, DEN
THE HAGUE, 05/12/01
LA HAYE, LE



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**Blatt 2 der Bescheinigung
Sheet 2 of the certificate
Page 2 de l'attestation**

Anmeldung Nr.:
Application no.:
Demande n°:

00204763.7 ✓

Anmeldetag:
Date of filing:
Date de dépôt:

21/12/00

Anmelder:
Applicant(s):
Demandeur(s):
UNILEVER N. V.
3013 AL Rotterdam
NETHERLANDS

Bezeichnung der Erfindung:
Title of the invention:
Titre de l'invention:

Food composition suitable for shallow frying comprising sunflower lecithin

In Anspruch genommene Priorität(en) / Priority(ies) claimed / Priorité(s) revendiquée(s)

Staat:
State:
Pays:

Tag:
Date:
Date:

Anmeldetag:
Filing date:
Date de dépôt:

Internationale Patentklassifikation:
International Patent classification:
Classification internationale des brevets:

A23D7/00, A23D9/00, A23J7/00, C07F9/10

Anmeldetag benannte Vertragsstaaten:
Contracting states designated at date of filing: AT/BE/CH/CY/DE/DK/ES/FI/FR/GB/GR/IE/IT/LU/LU/MC/NL/PT/SE/TR
Etats contractants désignés lors du dépôt:

Bemerkungen:
Remarks:
Remarques:

Food composition suitable for shallow frying comprising
sunflower lecithin

5 Field of the invention

The invention relates to food compositions suitable for shallow frying. The invention further relates to a process for hydrolysis of native lecithin, resulting in a product suitable
10 for addition to food compositions suitable for shallow frying.

Background of the invention

Food compositions suitable for shallow frying are well known.
15 Examples of such food compositions are butter, margarine, including liquid margarine, spreads, such as low fat spread and cooking milk. The food compositions are often multifunctional, i.e. they can be used for different purposes, e.g. baking and spreading on bread, next to suitability in frying.

20 When used in shallow frying, the spattering performance of the food compositions is important. Spattering during shallow frying should be avoided as much as possible.

25 Lecithin is well known to have an anti-spattering effect. The improvement of spattering performance is therefore an important reason for incorporation of lecithin in food compositions.

Lecithin is a widely used term for a complex mixture of
30 phosphatides produced from a variety of vegetable and animal sources. Examples of the phosphatides are phosphatidyl choline (PC), phosphatidyletanolamine (PE) and phosphatidylinositol (PI)

and phosphatidic acid (PA). Hydrolyzed phosphatides are designated by the prefix lyso-, for instance lyso-PC or LPC.

Vegetable lecithins are derived from crude vegetable oils or
5 fats, in which the lecithins are present as a colloidal solution. They are usually removed in a degumming step in which lecithin is precipitated, e.g. by injection of steam into the oil or fat or by injection of water or an aqueous solution.

10 The lecithins are available in the market as a very viscous substance containing 60-65 wt.% phosphatides, 30-35 wt.% oil and about 5% of other compounds, e.g. sterol. Such mixture is herein referred to as native lecithin.

15 Lecithins are usually designated depending of their origin. e.g. soybean lecithin, sunflower lecithin, rapeseed lecithin, canola lecithin, cotton seed lecithin, egg lecithin, etc.

By far the most important native lecithin is soybean lecithin,
20 which is derived from soya bean oil. Next to native soybean lecithin, also de-oiled soybean lecithin (from which the oil fraction has been removed) and hydrolyzed soybean lecithin are known and commercially available.

25 Due to the large predominance of soybean lecithin relative to the other lecithins, the skilled person generally uses the expression lecithin when actually soybean lecithin is meant.

The use of lecithin as anti-spattering agent in a food
30 composition is for instance illustrated in EP-B-265 003, which discloses a food composition with reduced fat content, wherein the fat phase has up to 75 wt.% fat. The emulsion comprises an

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emulsifier system with a mixture of phospholipids containing phospholipids containing phosphatidyl choline and phosphatidyl ethanolamine in a ratio exceeding 3:1. The lecithin emulsifier system is prepared by extracting soybean lecithin with a polar extraction solvent, for instance an alcohol.

According to US-3,505,074 the emulsifying properties of phosphatides, for example as anti-spattering agent in margarine is improved by partial hydrolysis of the phosphatides.

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EP-B-253 429 discloses a surface-active composition, which comprises at least 3% lysophosphatidylethanolamine and wherein the degree of hydrolysis of phosphatidylethanolamine and the degree of hydrolysis of phosphatidylcholine is higher than 1.5.

15 The surface-active composition, which is reported to give improved spattering performance, is prepared in a process, which involves fractionation and subsequent hydrolysis.

Alth ough the phosphatide compositions prepared according to the above prior art show good spattering performance, they have the disadvantage that they involve in their preparation additional process steps like fractionation and hydrolysis. A process step involving hydrolysis further has the potential disadvantage to increase the level of foaming of food compositions comprising the hydrolyzed lecithin. Therefore the use of native soybean lecithin is still very common in frying compositions.

We have found that although the spattering performance of native soybean lecithin may be sufficient in food compositions comprising 80 wt.% of a fatty phase, it is insufficient when food composition are prepared having a lower fat content, e.g. 70 wt.% fat, 60 wt.% fat or below.

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J. Hollo et al., JAOCS, Vol. 70, no. 10 (1993), 997-1001 discusses the fractionation, acylation and enzymatic hydrolysis of sunflower lecithin and its possibilities for utilization.

5 The hydrolysis time reported is 1 to 5 hours. No description of use of sunflower lecithin in food compositions is given.

S. Zmarlicki , Prezemysl-Spozywczy, 53 (11), 63-65 describes that a series of 23 protein-free dairy spreads were produced
10 having 0.4% sunflower lecithin as emulsifier. The spreads were produced using 40-80% anhydrous milk-fat, 0-30% sunflower oil (0-42.8% in the fat phase) and 0.02-0.04% commercial butter
flavouring and had good taste and flavour properties. The spreads have a high animal fat content and the spattering
15 performance in shallow frying is not mentioned.

Summary of the invention

An object for the invention is to improve the spattering
20 performance of the prior art food compositions, when used in shallow frying.

A further object of the invention is to provide a food
composition that has improved properties related to both
25 spattering performance and foaming.

Another object of the invention is to provide a food
composition having health benefits, for instance a lowering
effect on the level of blood cholesterol in humans.

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Yet another object of the invention is to provide a food composition that can be prepared from natural occurring ingredients with less process steps involved.

- 5 One or more of these objects are attained according to the invention providing a food composition, comprising triglycerides, wherein least 70 wt.% of triglycerides is of vegetable origin, and 0.05-3 wt.% sunflower lecithin.
- 10 One or more of the objects is further attained by a food composition, suitable for shallow frying comprising 0.05-3 wt.% sunflower lecithin, wherein the sunflower lecithin is hydrolyzed or fractionated.
- 15 Hydrolyzed sunflower lecithin is herein understood to be sunflower lecithin, wherein the degree of hydrolyzation as defined in the examples is 0.05 or higher.
- The invention further provides an improved process for the
- 20 hydrolysis of lecithin, in which the hydrolysis time is reduced, wherein sunflower oil is subjected to a de-gumming operation to give native sunflower lecithin, wherein the native sunflower lecithin is subjected to hydrolysis, characterized that the reaction time during hydrolysis is 0.1-3 hour.

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Detailed description of the invention

- The following definitions will be used throughout the description and claims. Where ranges are mentioned, the
- 30 expression from a to b is meant to indicate from and including a, up to and including b, unless indicated otherwise. The term's 'oil' and 'fat' are used interchangeably.

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The food compositions according to the invention may be water-in-oil emulsions, for instance spreads or margarines, oil-in-water emulsions suitable for shallow frying, such as for instance cooking milk or may substantially consist of fat or oil.

The amounts of the oil and water phase in the product are not critical. For instance the food composition may comprise 30-100 wt.% fat phase and 0-70 wt.% aqueous phase. Preferably the food composition comprises 40-100 wt.% fat phase and 0-60 wt.% aqueous phase. More preferably the food composition is an oil in water emulsion comprising 60-90 wt.% fat phase and 10-40 wt.% aqueous phase.

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A fat phase content of around 80 wt.% is common for margarines, as well as around 70 or 60%. The invention also relates to products that have a practically 100% fat phase: Though in these food compositions primary spattering as hereunder defined may not be important, secondary spattering is improved.

The food composition according to the invention may be a liquid margarine. A liquid margarine is herein defined as a water-in-oil emulsion comprising generally from 1-40, preferably 5 to 30 wt.% water, based on total composition weight.

The fat phase may comprise any triglyceride oil, as long as at least 70 wt.% of triglycerides is of vegetable origin. A fat phase rich in triglycerides comprising (poly) unsaturated fatty acid residues is highly preferred. Therefore the fat is preferably selected from the group comprising sunflower oil, soybean oil, rapeseed oil, cottonseed oil, olive oil, corn oil,

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groundnut oil, maize oil, Linola oil, linseed oil, coconut oil, palmkernel oil and/or combinations thereof. These fats may be partially hydrogenated. The fat phase may comprise sucrose polyesters which are used as fat replacers, or may contain 5 functional ingredients, such as sterols or stanols, or esters thereof.

An amount of fat of animal origin, for instance butter fat may be advantageous, e.g. for taste, however, the total of these 10 fats should be below 30 wt.% of total triglycerides in the food composition.

Optionally the food composition comprises in addition to these fats a hard fat component selected from the group comprising: 15 hardened rapeseed oil, hardened soybean oil, hardened rapeseed oil, hardened cottonseed oil, hardened corn oil, hardened groundnut oil, palmoil, hardened palmoil, palmoil fractions, hardened palmoil fractions, butterfat or butterfat fractions. These fats are optionally partly or fully hydrogenated and/or 20 interestified to obtain the desired structuring properties. This hard fat may partly serve to impart structure and or stability to the products.

The fat phase may comprise ingredients which are common in 25 frying products, such as colorant, e.g. carotene, fat soluble flavours and vitamins, mono- and/or diglycerides, etc.

The optional aqueous phase of the food composition may comprise ingredients which are common in frying products, such as 30 proteins, flavours which are water soluble, emulsifiers, thickeners, salt, dairy ingredients, preservatives etc.

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The food compositions according to the invention may be packaged in usual manner. Margarines may be packed in a wrapper, tub or in a bottle. Other food products may be packed in bottles, tins, foil, paper, etc. or sold as such.

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The sunflower lecithin may be hydrolyzed or fractionated. Hydrolysis may be executed in a known manner, e.g. in an enzymatic process with phospholipase. However the reaction time may be shorter than a reaction time usual for soybean

10 lecithin.

Preferably the sunflower lecithin is hydrolyzed and the degree of hydrolysis of the sunflower lecithin is 0.2 to 0.4, more preferably 0.3 to 0.36.

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The invention further relates to a process for the preparation of hydrolyzed sunflower lecithin, wherein sunflower oil is subjected to a de-gumming operation to give native sunflower lecithin, wherein the native sunflower lecithin is subjected to

20 hydrolysis, characterized that the reaction time during hydrolysis is 0.1-3 hour.

Preferably the reaction time during hydrolysis is such that the degree of hydrolysis of the hydrolyzed sunflower lecithin is

25 0.2 to 0.4, more preferably from 0.3 to 0.36.

Under these conditions an improved spattering performance of food products with the hydrolysed sunflower lecithin is obtained.

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Preferably the hydrolysis process is conducted using an enzymatic process using phospholipase A-2 enzyme.

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The sunflower lecithin may also be fractionated, e.g. by extraction with an alcohol, for instance ethanol.

5 Food products according to the invention show reduced
spattering upon preferred use as shallow frying product.
Shallow frying products are defined as products used for
shallow frying, i.e. frying wherein the food product to be
fried is fried in a thin layer of frying product, i.e. the
10 product is not completely immersed in the frying product. An
example of shallow frying is frying of meat, fish or vegetables
in a pan. On the contrary, in deep frying, the food product to
be fried is usually completely immersed in the frying product.
An example of deep frying is the frying of potato chips in a
15 deep oil filled frying pan.

During shallow frying with a frying product comprising an
aqueous phase, such as margarine, generally spattering will
occur in two instances, separated in time. A first type of
20 spattering, generally referred to as primary spattering may
occur when the margarine is heated in the frying pan. Primary
spattering is a result of explosion-like evaporation of
superheated water droplets, originating from the aqueous phase
of the margarine. A second type of spattering occurs, when
25 water, or a food product that releases water, such as meat,
fish or vegetable is introduced into the heated frying product.
This type of spattering, again due to explosive evaporation of
superheated water, is called secondary spattering.

30 Values for primary spattering (SV1) and secondary spattering
(SV2) are herein determined according to the method illustrated
in the examples.

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The invention is now illustrated by the following, non-limiting examples

5 Examples

Determination of spattering value in a spattering test

Primary spattering (SV1) was assessed under standardised conditions in which an aliquot of a food product was heated in a glass dish and the amount of fat spattered onto a sheet of paper held above the dish was assessed after the water content of the food product had been evaporated by heating.

15 Secondary spattering (SV2) was assessed under standardised conditions in which the amount of fat spattered onto a sheet of paper held above the dish is assessed after injection of a quantity of 10 ml water into the dish.

20 In assessment of both primary and secondary spattering value, 25 g food product was heated in a 15 cm diameter glass dish on an electric plate to about 205 °C. The fat that spattered out of the pan by force of expanding evaporating water droplets was caught on a sheet of paper situated at 25 cm above the pan (SV1 test). Subsequently a quantity of 10 ml water was injected into the dish and again the fat that spattered out of the pan by force of expanding evaporating water droplets was caught on a sheet of paper situated above the pan (SV2 test).

30 The images obtained were compared with a set of standard pictures number 0-10 whereby the number of the best resembling picture was recorded as the spattering value. 10 indicates no

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spattering and zero indicates very bad spattering. The general indication is as follows.

Score	Comments
10	Excellent
8	Good
6	Passable
4	Unsatisfactory for SV1, almost passable for SV2
2	very poor

5 Typical results for household margarines (80 wt.% fat) are 8.5 for primary spattering (SV1) and 4.6 for secondary spattering (SV2) under the conditions of the above mentioned test.

Example 1

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Hydrolysis of sunflower lecithin

In a 1 liter stainless steel vessel, equipped with an Ultra turrax stirrer and placed in a waterbath (Lauda), heated at 50 degrees C, 420 g sunflower lecithin in 272 g demineralized water was prepared. The mixture was stirred until a watercontinuous mixture was obtained and then the pH was adjusted to 7.0 with 25% ammonia solution.

20 To the mixture 42 ml demineralized water and 0.035 ml enzyme solution Lecithase (Novo Nordisk Co., Denmark) were added. The resulting sludge was heated to 50 degrees C and stirred at 70 rpm.

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The hydrolysis of lecithin was followed by taking samples from the sludge and measuring the degree of hydrolysis. The results are given in table 1.

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Table 1: Results of hydrolysis of sunflower lecithin

Reaction time (min.)	0	30	60	90	120
Degree of hydrolysis	0.03	0.26	0.33	0.47	0.46
SV 1	8	7.75	8	7.75	7.75
SV 2	7	6.75	7.5	7	7

10 The degree of hydrolysis was defined as the ratio between lyso-PE and (lyso-PE + PE). Phosphatide amounts herein are determined by ^{31}P -NMR (nuclear magnetic resonance) analysis. SV1 and SV2 were determined in a food composition prepared according to example 2.

15

Example 1 shows that an optimum spattering performance for sunflower lecithin is reached at a hydrolysis time of 60 minutes. This is a very short hydrolysis time compared to the hydrolysis of soybean lecithin, where hydrolysis times of 10-12 20 hours are needed under conditions of example 1.

Example 2

Preparation food composition

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A food composition with the following composition was prepared:

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80 wt.% fat blend (fats solids profile: $N_{10}=35$, $N_{20}=20.0$, $N_{30}=8.5$ and $N_{40}=0$), 0.48 wt. % lecithin, 0.04 wt. % saturated monoglyceride (Hymono 8903), 0.96 wt. % salt, 1.06 wt.% sour whey powder and 17.46 wt.% tap water. The pH of the mixture was adjusted at 4.6 with 10% citric acid.

A pre-mix of the ingredients was passed through a Votator line with 3 scraped surface heat exchangers (A-units) one stirred crystallizer (C-unit) and a resting tube (B-unit) in a A-A-C-A-B sequence, the A units and C unit were operated at 500 rpm. The food composition leaving the B-unit had a temperature of 11 degrees C and was packed in wrappers.

15 The lecithins designated as Bolec were obtained from Unimills, Zwijndrecht, Netherlands and having an acetone insoluble fraction of 62 wt.% (a measure indicative of total phospholipid content).

20 Native sunflower lecithin was obtained from Cereol Novenyollajipari RT, Magyarorszag, Budapest, Hungary, having an acetone insoluble fraction of 56.5 wt.%.

Hydrolyzed sunflower lecithin was obtained according to the procedure in example 1, with a reaction time of 60 minutes.

N-values of the fat blend may be determined by means of NMR, using the method described in "Fette, Seifen, Anstrichmittel" 80, (1978), 180-186.

30 The results of the spattering performance test are given in table 2.

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Table 2: Spattering performance for 80 wt. % fat food composition

Spattering perf.	Native soybean lecithin (Bolec ZT)	Native sunflower lecithin	Hydrolyzed soybean lecithin (Bolec MT)	Hydrolyzed sunflower lecithin
SV1	8.75	8.0	8.0	8.0
SV2	5.5	7.0	7.25	7.5

5 Table 2 shows that the spattering performance SV 2 is improved. The spattering performance SV1 for native lecithins was comparable taking into account that the total phospholipid content of the soybean lecithin was about 10% higher (acetone insoluble fraction 62 instead of 56.5%).

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Example 3

Preparation of a food composition

15 Example 2 was repeated, however with the following composition:

70 % fat blend (as in example 2), 0.4% lecithin, 0.05% saturated monoglyceride (Hymono 8903), 0.7% salt, 0.3% sour whey powder, pH 4.6

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The results of the spattering performance test are given in table 3.

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Table 3: Spattering performance for 70 wt. % fat food composition

Spattering perf.	Native soybean lecithin (Bolec ZT)	Native sunflower lecithin	Hydrolyzed soybean lecithin (Bolec MT)	Hydrolyzed sunflower lecithin
SV1	7.25	7.0	7.0	7.0
SV2	6.0	6.75	6.25	7.5

5 Table 3 shows that the spattering performance SV 2 is improved. The spattering performance SV1 for native lecithins was comparable taking into account that the total phospholipid content of the soybean lecithin was about 10% higher (acetone insoluble fraction 62 instead of 56.5%).

EPO - DG 1

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Claims

1. Food composition, suitable for shallow frying, comprising triglycerides, wherein least 60 wt.% of triglycerides is of vegetable origin, and 0.05-3 wt.% sunflower lecithin.
2. Food composition, suitable for shallow frying comprising 0.05-3 wt.% sunflower lecithin, wherein the sunflower lecithin is hydrolyzed or fractionated.
3. Food composition according to claim 2, wherein the sunflower lecithin is hydrolyzed and the degree of hydrolysis of the sunflower lecithin is 0.2 to 0.4.
4. Food product according to claim 3, wherein the degree of hydrolysis of the sunflower lecithin is 0.3 to 0.36.
5. Food composition according to any of claims 1-4, wherein the food composition comprises:
 - a) 30-100 wt.% fat phase
 - b) 0-70 wt.% aqueous phase.
6. Food composition according to claim 5, wherein the food composition comprises:
 - a) 40-100 wt.% fat phase
 - b) 0-60 wt.% aqueous phase.
7. Food composition according to claim 6, wherein the food composition is an oil in water emulsion comprising:
 - c) 60-90 wt.% fat phase
 - d) 10-40 wt.% aqueous phase.

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8. Process for the preparation of hydrolyzed sunflower lecithin, wherein sunflower oil is subjected to a de-gumming operation to give native sunflower lecithin, wherein the native sunflower lecithin is subjected to hydrolysis, characterized that the reaction time during hydrolysis is 0.1-3 hour.
9. Process according to claim 8, wherein the reaction time during hydrolysis is such that the degree of hydrolysis of the hydrolyzed sunflower lecithin is 0.2 to 0.4.
10. Process according to claim 9, wherein the reaction time during hydrolysis is such that the degree of hydrolysis of the hydrolyzed sunflower lecithin is 0.3 to 0.36.
11. Process according to claim 9 or 10, wherein the hydrolysis is conducted using an enzymatic process using phospholipase A-2 enzyme.

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Abstract

(44)

The invention concerns a food composition, suitable for shallow frying, comprising triglycerides, wherein least 60 wt.% of triglycerides is of vegetable origin, and 0.05-3 wt.% sunflower lecithin. The invention further concerns a process for the preparation of hydrolyzed sunflower lecithin.

Unilever ~~CA~~
01-104.581
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TRADUCCION OFICIAL No. 2002-03-08-077

INSTRUMENTO DE CESION

Legalización de un Documento en inglés y español de Cesión a UNILEVER NV de
Weena 455, 3013 AL Rotterdam, Holanda para solicitar y obtener una patente de
invención en COLOMBIA para el proyecto de:

**COMPOSICION DE COMIDA APROPIADA PARA FREIR LECITINA DE
GIRASOL**

(firma ilegible) 5-12-2001

Cor't HOOFT,

(firma ilegible) 2-1-2002

Marcelle van den KOMMER

(firma ilegible) 27-01-2002

Jacobus Cornelis SEGERS

51 / 55

Visto por mí, Victor Joseph Antonius Johannes Clemens van Heeswijk, notario civil in Rotterdam, Holanda, para la legalización de las firmas colocadas en el documento adjunto de:

- Señor Cor't Hooft, c/o Diverseylever, Maarssenbroeksedijk 2, 3606 AN Maarssen, Holanda;
- Señora Marcelle van den Kommer, residente en Groenhovenweg 3, 2803 DA Gouda, Holanda; y
- Señor Jacobus Cornelis Segers, c/o Unilever Research Vlaardingen Laboratory, Olivier van Noortlaan 120, 3133 AT Vlaardingen, Holanda.

Rotterdam, 1 de febrero de 2002

Hay un sello de tinta y otro repujado.

APOSTILLA

(CONVENCIÓN DE LA HAYA DEL 5 DE OCTUBRE DE 1961)

1. PAÍS: HOLANDA

ESTE DOCUMENTO PÚBLICO

2. HA SIDO FIRMADO POR

Señor V.J.A.J.C. van Heeswijk

3. ACTUANDO COMO

NOTARIO

TRADUCTOR OFICIAL
RESOLUCION 2177

Antita Ederio de Tamayo
ANTITA EDERIO DE TAMAYO

4. LLEVA EL SELLO/ESTAMPILLA DE Señor V.J.A.J.C. van Heeswijk
Rotterdam

CERTIFICADO

5. EN ROTTERDAM
6. EL DÍA 04-02-2002
7. POR EL SECRETARIO DEL TRIBUNAL DISTRITAL
(Griffier van de Arrondissementsrechtbank)
8. NO. 116486
9. SELLO/ESTAMPILLA
Hay un sello rojo, redondo.

10. FIRMA
(ilegible)

MINISTERIO DE RELACIONES
EXTERIORES
COPIA FIRMADA APARECE EN EL
DOCUMENTO DESEMPAÑA
LAS FUNCIONES INDICADAS
4 28344

NO SE ASUME
RESPONSABILIDAD DEL TEXTO
2002 MAR - 8 A 11:30
JEFE DE LEGAL BAJOS
SANTAFÉ DE BOGOTÁ D.C.

Traducido a mi mejor saber y entender, este día 8 de febrero de 2002 en la
ciudad de Santafé de Bogotá, por Anita Escobar de Tamayo, Traductora Oficial,
Res. 2177 de 1989, Ministerio de Justicia, República de Colombia.

TRADUCTOR OFICIAL
RESOLUCION 2177

Anita Escobar de Tamayo
ANITA ESCOBAR DE TAMAYO



Seen by me, Victor Joseph Antonius Johannes Clemens van Heeswijk, civil law notary in Rotterdam, the Netherlands, for legalisation of the signatures placed on the attached document of:

- Mr Cor 't Hooft, c/o Diverseylever, Maarssenbroeksedijk 2, 3606 AN Maarssen, the Netherlands;
- Mrs Marcelle van den Kommer, residing at Groenhovenweg 3, 2803 DA Gouda, the Netherlands; and
- Mr Jacobus Cornelis Segers, c/o Unilever Research Vlaardingen Laboratory, Olivier van Noordlaan 120, 3133 AT Vlaardingen, the Netherlands.

Rotterdam, 1 February 2002



APOSTILLE

(Convention de la Haye du 5 octobre 1961)

1. Country: The NETHERLANDS

This public document

2. has been signed by

mr V.J.A.J.C. van Heeswijk

3. acting in the capacity of
notary

4. bears the stempel of

mr V.J.A.J.C. van Heeswijk te Rotterdam

Certified

5. at ROTTERDAM 6. on 04-02-2002

7. by the clerk of the District Court

(Griffier van de Arrondissementsrechtbank)

8. N° 116486

9. Stempel:

10. Signature:

ASSIGNMENT
INSTRUMENTO DE CESIÓN

JOSE LLORENTE & CA
01-104.581
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F 7584 (V) / 02

I/We, the undersigned,
Yo, *infraescrita*,

Cor 't HOOFT, of DIVERSEY LEVER, Maarssenbroeksedijk 2, 3606 AN Maarssen, The Netherlands
And Marcelle van den KOMMER and Jacobus Cornelis SEGERS, both from UNILEVER
RESEARCH VLAARDINGEN, OLIVIER VAN Noortlaan 120, 3133 AT Vlaardingen, The Netherlands

hereby assign to:
transfiero, por el presente a:

UNILEVER NV of Weena 455, 3013 AL Rotterdam, Netherlands

my/our entire right to apply for and to obtain a patent in:
todos mis derechos para solicitar y obtener un patente de invencion en:

COLOMBIA

on an invention by me/us entitled:
para un proyecto hecha por mí, a saber:

FO D COMPOSITION SUITABLE FOR SHALLOW FRYING COMPRISING SUNFLOWER LECITHIN

Dated this day of 2001
Fecha *de* *de* 20

Cor 't HOOFT

5-12-2001

Marcelle van den KOMMER

2-1-2002

Jacobus Cornelis SEGERS

27-01-2002

Notarise/Apostille/Legalise

2do. EXAMEN DE FORMA PATENTE DE INVENCION

Folio 59

Radicación no 01 - 104531

Concepto Técnico no 1666 Clasificación Internacional de Patentes: A23 D 9/013

Practicado el examen de acuerdo a lo establecido en el Art. 38 de la Decisión 486 se determinó que esta solicitud de Patente de Invención:

- SI ☒ NO ☐ Contiene un resumen de la invención (Art.26-e).
- SI ☒ NO ☐ Contiene el título o nombre de la invención (Art.27-d).
- SI ☒ NO ☐ Contiene la descripción de la invención (Art.26-b).
- SI ☐ NO ☐ NO ES APLICABLE ☒ Contiene los dibujos necesarios para comprender la invención (Art.26-d)
- SI ☒ NO ☐ Contiene una o más reivindicaciones. (Art.26-c).
- SI ☐ NO ☒ NO ES APLICABLE ☐ Han sido desarrollados los productos y/o procedimientos a partir de recursos genéticos o de sus productos derivados de los que cualquiera de los Países Miembros es país de origen. (Art. 26- h).
- SI ☐ NO ☒ NO ES APLICABLE ☐ Los productos y/o procedimientos han sido obtenidos o desarrollados a partir de los conocimientos tradicionales de las comunidades indígenas, afroamericanas, o locales de los países miembros, de acuerdo a lo establecido en la Decisión 391 y sus modificaciones y reglamentaciones vigentes.(Art.26-i).
- SI ☐ NO ☒ La invención se refiere a un producto relativo a un material biológico. (Art.26-J).
- SI ☒ NO ☐ NO ES APLICABLE ☐ La prioridad coincide con la materia reivindicada.
- SI ☒ NO ☐ CUMPLE LOS REQUISITOS TÉCNICOS

OBSERVACIONES Y OTROS:

EXAMINADOR TÉCNICO
202043

Bogotá D. C., 2002-08-22

2020
Bogotá D.C.

Doctor
JOSÉ ANTONIO LLOREDÁ
Apoderado

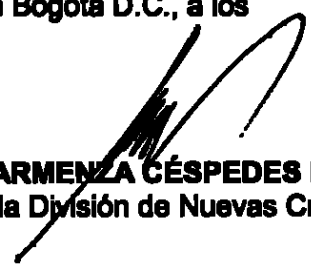
REFERENCIA:	Radicación No.	01-104581
	Trámite	002
	Evento	001
	Actuación	416
	Oficio No.	1666
	Folios	001

Teniendo en cuenta que la solicitud de privilegio de patente que se tramita bajo el expediente indicado en la referencia, reúne los requisitos de forma establecidos en los artículos 26 y 27 de la Decisión 486 de la Comisión de la Comunidad Andina, y en las demás disposiciones vigentes sobre la materia, se envía el extracto de la solicitud a la Oficina de Comunicaciones para efecto de su publicación en la Gaceta de Propiedad Industrial, conforme lo establece el artículo 40 de la misma Decisión. De acuerdo con lo anterior éste se publicará a partir del 6 de junio de 2003.

Cúmplase

Dado en Bogotá D.C., a los

26 ABR. 2002


ALIX CARMENZA CÉSPEDES DE VERGEL
Jefe de la División de Nuevas Creaciones

Bogotá, DC, El extracto de esta solicitud fue publicado en el número de
la Gaceta de Propiedad Industrial, de fecha . El término hábil señalado por la
ley expiró el y SI ___ NO ___ se presentaron oposiciones por parte de terceros.